



Acid sulfate soils and estuarine water quality of the Mackay district

Volume 2: Decoded Borehole Descriptions



Acid sulfate soils and estuarine water quality of the Mackay district

Volume 2: Decoded borehole descriptions

December 2005

Peter G Muller and Alistair J Coutts



Land Resources Bulletin
Acid sulfate soils and
estuarine water quality
of the Mackay district
Department of Natural Resources and Mines
Brisbane 2005

© State of Queensland (Department of Natural Resources and Mines) 2005

QNRM04169
ISBN 1 920920 74 9 (v. 2)
ISBN 1 920920 76 5 (set)

This publication should be cited as follows:

Muller, P.G. & Coutts, A.J. 2005, *Acid Sulfate Soils and Estuarine Water Quality of the Mackay District*, vol 2, *Decoded borehole descriptions*, Department of Natural Resources and Mines, Brisbane, Australia.

Disclaimer

This publication is for general distribution. The Natural Heritage Trust and Mackay City Council provided significant funding for this project and their support is gratefully acknowledged.

This report is intended to provide information only on the subject under review. There are limitations inherent in land resource studies, such as accuracy in relation to map scale and assumptions regarding socioeconomic factors in relation to land evaluation. Readers are advised against relying solely on the information in this report, and before acting on it, they should be satisfied they have received adequate information and advice.

While all care has been taken in the preparation of this report, neither the Department of Natural Resources and Mines, nor its officers or staff accept any responsibility for any loss or damage that may result from any inaccuracy or omission in the information contained in it.

For copies of this CD, please contact your nearest NR&M service centre.
Visit <www.nrm.qld.gov.au> for contact details.

Please address written requests to:
Director, Product Services
GPO Box 2454
Brisbane Q 4001

or

Peter G Muller
Department of Natural Resources and Mines
22–30 Wood St
Mackay Qld 4740

Acknowledgments

The authors gratefully acknowledge the assistance of the many people who made significant contributions during the course of the study, especially:

- The Natural Heritage Trust and Mackay City Council for providing the funds that made this project possible, and all landowners who supported the study by providing access to their properties.
- Don Malcolm, Justin Adams and Col Ahern for technical support and advice on acid sulfate soils, and interpretation of data throughout the project, and Don Malcolm, Justin Adams and John Ross who also refereed this report.
- Irene Champion for identifying the many plant specimens sampled over the survey area
- Ian Grant and Graham Wobcke for organising soil analyses and data reports.
- Sheryl Crofts for cartographic work on the acid sulfate soil maps.
- Sam Spence for typing this report.

Contents

1. Introduction
2. Decoded borehole descriptions
3. References

Introduction

Volume 2 of Acid sulfate soils and estuarine water quality of the Mackay district presents the land and soil data and field pH tests for each of the boreholes examined in the project. Nearly all of these sites were analysed for actual acid sulfate soils (AASS) and/or potential acid sulfate soils (PASS) using an appropriate laboratory method, as detailed in volume 1 of this report. The analytical data are presented in volume 3: Tabulated laboratory data.

Location details of the sites are presented in the Australian Metric Grid (AMG) coordinates, based on the AGD 84 datum, because all the reference maps for the Mackay district are based on this datum. There are programs available for converting these coordinates to the latest GDA 94 datum.

Detailed data about the land and land surface features, including the geology, landform element and pattern, elevation, microrelief, surface condition, surface coarse fragments and slope were recorded. 'No record' on the data sheets indicates that data were not recorded. All landscape data are based on the parameters of McDonald et al. (1990).

The soil was classified using the Australian Soil Classification (Isbell 1996), and the two or three dominant species and structure of each stratum of the vegetation present at a site were recorded using the methodology of Walker and Hopkins (1990). The soil profile was analysed in detail with the soil horizons, colour, texture, structure, coarse fragments, segregations, boundaries and moisture status described according to McDonald and Isbell (1990). Each layer or horizon of the soil profile is shown in the soil profile description along with the depth over which it extends. Where a buried soil was interpreted, a number is prefixed to the horizon notation to indicate this (e.g. 2B₂₁).

The field pH (pH_F) and peroxide oxidised field pH (pH_{FOX}) were measured every 0.25 m down the profile in ASS layers, and at intervals of 0.5 m within the profile in non-ASS layers. The methodology for these field tests is outlined in Ahern et al. (1998). The pH was measured using a TPS-Ionode brand WP84 portable pH meter.

Other notes relevant to the site, together with the depth, pH and conductivity of the watertable are shown below the field pH tests.

A total of 586 sites were described for this project.

Project: MWQ Site: 1

Location: 727385 mE 7660090 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Common 10-20%, medium pebbles 6-20mm, Gravel
 Surface Condition: Firm

Classifications

ASC: Eutrophic, Mottled-subnatric, Brown, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
FILL	0.00 to 0.50	Mix of gravel, crusher dust, ash and soil; clear to;
A1	0.50 to 0.70	Very dark greyish brown (10YR32) moist colour; silty clay loam; very few < 2% medium 2-6 mm ferruginous nodules segregations; gradual to;
B1?	0.70 to 0.90	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm faint yellow mottles; medium clay; clear to;
B21	0.90 to 1.80	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent grey mottles; medium heavy clay; abrupt to;
B22	1.80 to 2.00	Light grey (10YR71) moist colour; many 20-50% coarse 15-30mm faint grey, few 2-10% medium 5-15mm distinct brown mottles; medium heavy clay; abrupt to;
2B21i	2.00 to 2.25	Grey (10YR51) moist colour; very few < 2% coarse 15-30mm prominent red, common 10-20% coarse 15-30mm prominent grey, few 2-10% medium 5-15mm prominent brown mottles; light medium clay; clear to;
2B22ia	2.25 to 3.25	Greyish brown (10YR52) moist, dark greyish brown (10YR42) moist colour; common 10-20% medium 5-15mm distinct yellow jarositic (from pyrite), common 10-20% coarse 15-30mm prominent brown mottles; silty light clay; massive structures; very few < 2% fine < 2 mm ferruginous nodules segregations; abrupt to;
2Cu	3.25 to 4.10	Dark grey (2.5Y41) moist colour; very few < 2% fine < 5mm prominent brown mottles, root mottles present; fine sandy light clay; massive structures; sharp to;
3C1	4.10 to 4.90	Grey (2.5Y51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm angular quartz coarse fragments; single grain structures; diffuse to;
3C2	4.90 to 5.40	Greyish brown (2.5Y52) moist colour; coarse sand; common 10-20% small pebbles 2-6mm angular quartz and large pebbles 20-60mm subrounded gravel coarse fragments; single grain structures. End of profile (EOP).

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.80	5.9	5.2	
1.00	6.9	5.1	
1.25	7.0	2.9	
1.50	6.5	2.8	
1.75	6.6	5.0	
2.00	6.8	5.0	
2.25	5.8	3.8	
2.50	5.2	3.0	
2.75	4.9	3.2	
3.00	4.8	3.0	
3.25	4.8	1.9	
3.50	6.2	2.3	
3.75	6.4	2.6	
4.00	7.2	2.7	
4.25	6.5	2.9	
4.50	6.7	2.9	
4.75	6.8	2.3	
5.00	7.2	5.0	
5.30	7.8	5.7	

Project: MWQ Site: 2

Location: 729590 mE 7665220 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Humose-mottled, Mesotrophic, Grey, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tall closed forest (12.01-20m)
 Species: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.20	Black (10YR21) moist colour; abrupt to;
A1	0.20 to 0.40	Black (10YR21) moist colour; sandy clay loam; massive structures; gradual
B2	0.40 to 1.30	Grey (10YR51) moist colour; common 10-20% coarse 15-30mm prominent brown, common 10-20% medium 5-15mm distinct yellow mottles; coarse sandy clay loam, heavy; massive structures; clear to;
2B2ia	1.30 to 1.80	Grey (10YR61) moist colour; very few < 2% fine < 5mm faint yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent pale mottles; coarse sandy clay loam; massive structures; very few < 2% fine < 2 mm calcareous nodules segregations formed in tubes; sharp to;
2C1u	1.80 to 1.90	Dark grey (2.5Y40) moist colour; sandy loam; massive structures; gradual to;
2C2u	1.90 to 2.30	Dark grey (2.5Y40) moist colour; coarse sandy loam; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; massive structures; gradual to;
3Cu?	2.30 to 2.80	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; diffuse to;
4C1u?	2.80 to 3.50	Grey (2.5Y60) moist colour; coarse sand; few 2-10% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; diffuse to;
4C2	3.50 to 5.00	Light grey (10YR72) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subangular andesite coarse fragments; single grain structures;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.30	5.2	4.1	
0.60	4.5	4.1	
0.80	4.8	3.9	
1.00	4.7	4.2	
1.25	4.7	4.1	
1.50	4.7	3.5	
1.75	4.2	2.3	
2.00	5.7	1.5	
2.25	5.8	1.6	
2.50	5.9	1.6	
2.75	5.6	1.7	
3.00	5.7	1.6	
3.25	5.7	2.2	
3.50	5.8	2.7	
3.75	5.8	3.6	
4.00	5.9	4.4	
4.25	5.9	3.8	
4.50	5.9	4.2	

Notes:

Horizon – 2C1u: Melaleuca wood and roots
 Soil Freshwater Swamps

Project: MWQ Site: 3

Location: 726230 mE 7648940 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none Microrelief
 Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Eutrophic, Mottled-mesonatric, Grey, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Corymbia tessellaris (Moreton Bay ash); Eucalyptus polycarpa;
 Saccharum officinarum (Sugar cane)
 Lower Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Dark greyish brown (10YR42) moist colour; few 2-10% fine < 5mm prominent brown mottles; fine sandy clay loam; moderate 5-10mm subangular blocky structures; moderately moist; clear to;
B21	0.20 to 0.40	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm distinct yellow mottles; medium clay; moist;
B22	0.40 to 1.20	Grey (5Y51) moist colour; few 2-10% coarse 15-30mm prominent brown mottles; medium heavy clay; moist; clear to;
B23	1.20 to 2.20	Greyish brown (10YR52) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% coarse 15-30mm distinct yellow mottles; fine sandy light medium clay; few 2-10% medium 2-6 mm and coarse 6-20mm manganiferous nodules and soft segregations; moderately moist; clear to;
B24	2.20 to 2.70	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm prominent yellow mottles; fine sandy light medium clay; many 20-50% coarse 6-20 mm ferromanganiferous nodules segregations; moderately moist; clear to;
B25	2.70 to 3.10	Light grey (5Y72) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy light medium clay; very few < 2% large pebbles 20-60mm subrounded andesite coarse fragments; very few < 2% medium 2-6 mm ferromanganiferous nodules segregations; moist; clear to;
BC1	3.10 to 3.60	Light olive grey (5Y62) moist colour; common 10-20% coarse 15-30mm distinct yellow mottles; fine sandy light medium clay; moist; clear to;

BC2	3.60 to 4.00	Strong brown (7.5YR56) moist colour; many 20-50% very coarse > 30mm prominent grey mottles; fine sandy light clay; very few < 2% medium 2-6 mm ferruginous nodules segregations; moist; clear to;
BC3	4.00 to 4.70	Light grey (5Y72) moist colour; common 10-20% very coarse > 30mm prominent brown mottles; fine sandy medium clay; moist; clear to;
2B?	4.70 to 5.00	Yellowish brown (10YR56) moist colour; very few < 2% fine < 5mm prominent grey mottles; clay loam; coarse sandy; very few < 2% small pebbles 2-6mm subrounded gravel and large pebbles 20-60mm subangular granite coarse fragments; wet;

Field Tests

Depth	pH _F	pH _{FOX}	pH _F (pH using electrode probe), (m) pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.2	
0.30	5.8	4.5	
0.60	6.7	5.1	
0.80	6.5	5.1	
1.00	6.7	5.0	
1.50	7.1	7.5	
2.00	7.3	7.7	
2.50	6.9	7.5	
3.00	7.4	7.2	
3.50	6.8	5.6	
4.00	6.9	6.4	
4.50	7.0	6.3	
4.75	6.9	6.4	

Project: MWQ Site: 4

Location: 726910 mE 7648730 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none Microrelief
 Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting, Recently cultivated

Classifications

ASC: Eutrophic, Mottled-mesonatric, Grey, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark greyish brown (10YR42) moist colour; few 2-10% fine < 5mm distinct orange mottles; loam; fine sandy; massive structures; moist; gradual to;
A2j	0.10 to 0.20	Greyish brown (10YR52) moist, white (10YR81) dry colour; few 2-10% fine < 5mm distinct orange mottles; loam; fine sandy; massive structures; moist; clear to;
B21	0.20 to 1.00	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm distinct yellow mottles; medium clay; strong columnar structures; moderately moist; clear to;
B22	1.00 to 1.60	Light brownish grey (2.5Y62) moist colour; many 20-50% coarse 15-30mm distinct yellow mottles; sandy light medium clay with sand from cracks between columns; strong columnar structures; moderately moist; clear to;
B23	1.60 to 2.80	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm prominent grey, common 10-20% medium 5-15mm distinct yellow mottles; sandy light medium clay with sand from cracks between columns; strong columnar structures; moderately moist; clear
B24g	2.80 to 3.50	Greenish grey (5G51) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% coarse 15-30mm faint yellow mottles; sandy medium clay; very few < 2% small pebbles 2-6mm subrounded gravel coarse fragments; strong columnar structures; moist; clear to;
C2	3.50 to 5.50	Brown (10YR53) moist colour; sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	2.4	
0.30	6.0	3.7	
0.60	6.3	4.1	
1.00	8.0	6.0	
1.50	8.0	5.9	
2.00	8.1	6.2	
2.50	7.9	5.8	
3.00	7.8	6.6	
3.50	7.9	6.2	
4.00	8.0	5.9	
4.50	7.6	6.2	
5.00	7.5	6.7	
5.50	7.8	6.2	

Project: MWQ Site: 5

Location: 726130 mE 7663910 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Endohypersodic, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Corymbia tessellaris (Moreton Bay ash); Eucalyptus polycarpa
 Lower Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; medium clay; strong <2mm subangular blocky structures; moderately moist; gradual to;
B21	0.10 to 0.30	Very dark grey (10YR31) moist colour; few 2-10% medium 5-15mm prominent brown mottles; medium clay; strong <2mm lenticular structures; moderately moist; clear to;
B22	0.30 to 1.10	Grey (10YR51) moist colour; common 10-20% coarse 15-30mm distinct grey, very few < 2% medium 5-15mm prominent brown mottles; medium clay; lenticular structures; moist; abrupt to;
2B21	1.10 to 1.25	Light brownish grey (10YR62) moist colour; few 2-10% medium 5-15mm faint grey, common 10-20% medium 5-15mm prominent brown mottles; sandy light clay; moist; clear to;
2B22	1.25 to 1.50	Light brownish grey (2.5Y62) moist colour; common 10-20% coarse 15-30mm distinct yellow mottles; sandy light clay; moist; clear to;
2C	1.50 to 1.80	Light brownish grey (2.5Y62) moist colour; few 2-10% medium 5-15mm distinct gley mottles; sandy clay loam; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; moist; abrupt to;
3C	1.80 to 2.00	Very pale brown (10YR73) moist colour; few 2-10% coarse 15-30mm distinct brown mottles; sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; wet; sharp to;
4C1	2.00 to 3.20	Light grey (2.5Y72) moist colour; many 20-50% very coarse > 30mm prominent gley mottles; fine sand; single grain structures; wet; clear to;
4C2	3.20 to 4.50	Greenish grey (5GY51) moist colour; few 2-10% very coarse > 30mm prominent brown mottles; fine sand; single grain structures; moist; diffuse to;
4C3?	4.50 to 4.80	Light olive brown (2.5Y54) moist colour; few 2-10% medium 5-15mm distinct gley mottles; fine sand; single grain structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	4.9	
0.30	7.6	5.8	
0.60	7.6	5.7	
0.80	7.5	5.5	
1.00	7.6	5.4	
1.25	7.6	5.9	
1.50	7.8	5.9	
1.75	7.6	6.0	
2.00	7.2	6.4	
2.25	7.6	6.5	
2.50	7.5	6.3	
2.75	7.6	6.8	
3.00	7.4	8.5	
3.25	8.0	6.6	
3.50	7.8	8.5	
3.75	7.6	7.1	
4.00	7.9	7.2	
4.25	7.0	8.0	
4.50	7.9	6.7	
4.75	7.6	6.7	

Project: MWQ Site: 6

Location: 725990 mE 7664810 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 09-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Backplain

Runoff: No record

Elevation: 4 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Endohypersodic, Self-mulching, Brown, VERTOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Chionanthus ramiflora

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; silty light medium clay; strong 2-5mm parting to strong <2mm subangular blocky structures; moist; clear to;
B21	0.10 to 0.60	Black (2.5Y20) moist colour; medium clay; strong <2mm lenticular structures; moist; gradual to;
B22	0.60 to 1.50	Grey (10YR61) moist colour; few 2-10% medium 5-15mm distinct brown, very few < 2% fine < 5mm distinct gley mottles; medium clay; common 10-20% medium 2-6 mm and very coarse 20-60mm calcareous nodules and soft and manganiferous soft segregations; moist;
2B2	1.50 to 1.90	Greenish grey (5GY61) moist colour; sandy light medium clay; moist; sharp to;
3C1	1.90 to 2.40	Light grey (10YR71) moist colour; fine sand; single grain structures; wet; sharp to;
3C2	2.40 to 2.60	Brown (10YR53) moist colour; fine sand; single grain structures; wet; clear to;
3C3	2.60 to 3.80	Light brownish grey (2.5Y63) moist colour; common 10-20% coarse 15-30mm faint brown, few 2-10% medium 5-15mm faint grey mottles; fine sand; single grain structures; wet; abrupt to;
3C4	3.80 to 4.00	Light brownish grey (2.5Y62) moist colour; common 10-20% coarse 15-30mm distinct brown mottles; fine sand; few 2-10% small pebbles 2-6mm subrounded granite coarse fragments at 3.95m; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	8.0	6.4	
0.30	7.7	6.0	
0.60	7.9	6.4	
0.80	7.6	6.3	
1.00	7.9	8.2	
1.25	7.7	5.9	
1.50	7.5	6.3	
1.75	8.8	8.9	
2.00	8.7	6.3	
2.25	8.7	5.9	
2.50	7.3	6.2	
2.75	7.3	5.9	
3.00	7.2	5.7	
3.25	7.2	5.8	
3.50	7.2	6.0	
3.75	7.1	5.8	
4.00	7.2	6.1	

Notes:

Horizon – 3C4 EOP - sand would not hold – went to 5.7m

Project: MWQ Site: 7

Location: 726430 mE 7660300 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Vertic, Mottled-subnatric, Black, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; fine sandy clay loam; very few < 2% medium pebbles 6-20mm coarse fragments; weak 2-5mm columnar structures; moderately moist;
A2j	0.30 to 0.40	Dark brown (10YR33) moist, light grey (10YR71) dry colour; fine sandy clay loam; massive structures; moderately moist; abrupt to;
B21	0.40 to 1.10	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm prominent orange, few 2-10% fine < 5mm faint grey mottles; medium clay; very few < 2% coarse 6-20 mm manganiferous concretions segregations; moderately moist; diffuse to;
B22	1.10 to 1.80	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm distinct orange mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded gravel coarse fragments; lenticular structures; few 2-10% coarse 6-20 mm manganiferous concretions segregations; moderately moist;
B22k	1.80 to 2.20	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; light medium clay; common 10-20% coarse 6-20mm calcareous nodules and medium 2-6 mm manganiferous concretions and soft segregations; moderately moist; gradual to;
B23	2.20 to 2.60	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct orange mottles; light medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; diffuse to;
B24	2.60 to 3.30	Dark brown (10YR33) moist colour; many 20-50% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; medium clay; common 10-20% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
2C	3.30 to 3.50	Brown (10YR43) moist colour; fine sand; massive structures; moist; sharp to;

3B21	3.50 to 4.20	Dark greyish brown (2.5Y42) moist colour; many 20-50% medium 5-15mm prominent grey, common 10-20% fine < 5mm distinct grey mottles; medium clay; moderately moist; diffuse to;
3B22g	4.20 to 5.00	Brown (10YR43) moist colour; many 20-50% coarse 15-30mm prominent gley, few 2-10% fine < 5mm distinct orange, very few < 2% fine < 5mm distinct grey mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
4C	5.00 to 5.50	Pale brown (10YR63) moist colour; sand, light; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	3.7	
0.30	5.9	4.3	
0.60	6.0	4.9	
1.00	6.9	6.0	
1.50	7.6	6.8	
2.00	7.8	8.8	
2.50	7.8	8.4	
3.00	7.8	8.2	
3.50	7.3	7.5	
4.00	7.6	7.8	
4.50	7.8	8.2	
5.00	7.4	8.0	
5.50	7.2	6.6	

Project: MWQ Site: 8

Location: 725070 mE 7666280 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; silty light medium clay; strong 2-5mm parting to strong <2mm subangular blocky structures; moderately moist; clear to;
B2	0.10 to 0.50	Black (10YR21) moist colour; very few < 2% medium 5-15mm distinct orange mottles; medium clay; strong 2-5mm lenticular structures; moderately moist;
2B21ia	0.50 to 1.10	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent orange, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; moist; clear to;
2B22ia	1.10 to 1.30	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; moist;
2B23ia	1.30 to 1.80	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent orange, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; fine sandy light medium clay; moist;
3D1	1.80 to 2.30	Grey (10YR51) moist colour; common 10-20% medium 5-15mm distinct brown mottles; fine sandy light medium clay; moist; diffuse to;
3D2	2.30 to 3.30	Greenish grey (5GY61) moist colour; few 2-10% medium 5-15mm prominent brown, few 2-10% medium 5-15mm distinct gley, few 2-10% medium 5-15mm faint grey mottles; fine sandy light medium clay; very few < 2% medium 2-6mm and coarse 6-20 mm calcareous nodules and soft and fine <2mm manganiferous soft segregations; moist;
3D3	3.30 to 3.50	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% medium 5-15mm distinct gley mottles; fine sandy light medium clay; very few < 2% medium 2-6 mm calcareous nodules segregations; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	3.4	
0.30	5.0	2.9	
0.60	4.4	2.3	
0.80	5.3	2.6	
1.00	4.5	2.4	
1.25	4.2	2.7	
1.50	4.2	3.0	
1.75	4.3	3.1	
2.00	4.6	3.2	
2.25	5.8	6.9	
2.50	7.4	2.4	
2.75	7.6	8.5	
3.00	7.4	6.6	
3.25	8.1	6.8	
3.50	7.5	6.5	

Notes:
 Horizon – 3D3 EOP - Too hard to hand auger

Project: MWQ Site: 9

Location: 725420 mE 7667130 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 11-Jun-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Supratidal flat

Runoff: No record

Elevation: 2.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft, Surface flake

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.05	Very dark grey (2.5Y31) moist colour; light clay; strong 2-5mm parting to strong <2mm subangular blocky structures; clear to;
A12?	0.05 to 0.30	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct grey mottles; light clay; weak 5-10mm subangular blocky structures; gradual to;
C1u	0.30 to 1.00	Dark grey (5Y41) moist colour; light clay with 2 thin 1cm sand lenses at 0.9m; massive structures; diffuse to;
C2u	1.00 to 2.35	Dark grey (2.5Y40) moist colour; light clay with thin sand lenses at 1.9 and 2.1m; massive structures;
2C	2.35 to 2.60	Sand.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	5.2	
0.30	6.7	1.9	
0.60	6.7	1.3	
0.80	6.4	1.0	
1.00	7.1	1.0	
1.25	6.4	1.1	
1.50	6.6	1.4	
1.75	6.5	1.4	
2.00	6.5	1.3	
2.25	6.5	1.4	

Notes:

Horizon - A12? wood at 0.2 m

Horizon - C1u thick root (5mm)

Horizon - C2u thick root (5mm) at 1.3m

Horizon - 2C EOP - did not hold in gouge auger,

Project: MWQ Site: 10

Location: 727720 mE 7648890 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated, Hard setting

Classifications

ASC: Eutrophic, Mottled-mesonatric, Grey, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Eucalyptus polycarpa
 Lower Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; very few < 2% large pebbles 20-60mm subrounded rhyolite coarse fragments; massive structures; moderately moist; abrupt to;
A2j	0.10 to 0.15	Dark greyish brown (10YR42) moist, white (10YR82) dry colour; very few < 2% fine < 5mm faint orange mottles; clay loam; fine sandy; massive structures; moderately moist; sharp to;
B21	0.15 to 0.40	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm distinct orange mottles; heavy clay; strong 20-50mm prismatic parting to strong 10-20mm angular blocky structures; moderately moist; gradual to;
B22	0.40 to 0.70	Greyish brown (2.5Y52) moist colour; few 2-10% medium 5-15mm faint yellow, many 20-50% fine < 5mm distinct orange mottles; heavy clay; moderately moist; diffuse to;
B23	0.70 to 1.30	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent orange, common 10-20% medium 5-15mm faint yellow mottles; fine sandy light medium clay; moderately moist;
B24	1.30 to 2.70	Pale yellow (5Y73) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; powdery structure; moderately moist; abrupt to;
B25k	2.70 to 3.00	Light grey (2.5Y72) moist colour; common 10-20% medium 5-15mm prominent brown mottles; medium heavy clay; many 20-50% very coarse 20-60 mm calcareous soft segregations; moderately moist; clear to;
B26g	3.00 to 3.60	Light brownish grey (2.5Y62) moist colour; many 20-50% very coarse > 30mm prominent gley, common 10-20% coarse 15-30mm prominent brown mottles; medium heavy clay; moderately moist;

B27g	3.60 to 4.50	Greenish grey (5GY51) moist colour; many 20-50% coarse 15-30mm prominent brown, very few < 2% fine < 5mm green mottles; sandy medium clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; moderately moist; gradual to;
B28g	4.50 to 5.00	Yellowish brown (10YR56) moist colour; many 20-50% very coarse > 30mm prominent gley mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; moderately moist;

Field Tests

Depth	pH _F	pH _{FOX}	pH _F (pH using electrode probe), (m) pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	3.9	
0.30	5.4	4.4	
0.60	5.8	4.3	
0.80	7.1	5.4	
1.00	7.5	5.8	
1.50	8.3	7.1	
2.00	8.5	5.7	
2.50	5.9	5.1	
3.00	8.4	7.1	
3.50	8.3	8.0	
4.00	8.7	7.9	
4.50	8.4	7.1	
5.00	8.0	6.7	

Notes:

Observation H2O EC - 23mS/cm

Project: MWQ Site: 11

Location: 725290 mE 7655340 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Sulfuric, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light medium clay; dry;
B2	0.30 to 0.50	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown mottles; silty medium clay; moderately moist; abrupt to;
2B21	0.50 to 1.00	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), many 20-50% coarse 15-30mm prominent red, few 2-10% medium 5-15mm prominent brown mottles; silty light clay; moist; gradual to;
2B22	1.00 to 1.25	Grey (10YR51) moist colour; few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% coarse 15-30mm prominent red, few 2-10% fine < 5mm prominent brown mottles; silty light clay; moist; gradual to;
2Cu	1.25 to 1.70	Grey (10YR51) moist colour; very few < 2% medium 5-15mm prominent brown mottles only above 1.5m; silty light clay; moist; sharp
3D	1.70 to 2.25	Light grey (2.5Y72) moist colour; common 10-20% medium 5-15mm prominent brown mottles; coarse sandy light clay; very few < 2% large pebbles 20-60mm subrounded acid volcanic coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.8	3.6	
0.30	5.0	3.2	
0.60	4.6	3.3	
0.80	4.8	3.7	
1.00	4.6	3.3	
1.25	4.9	3.5	
1.50	4.9	3.5	
1.75	4.8	4.0	
2.00	4.5	4.1	
2.25	4.6	4.1	

Notes:

Horizon – 3D EOP – couldn't auger below 2.25m due to watertable suction and too hard for VVC

Project: MWQ Site: 12

Location: 724720 mE 7655400 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 4.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Eutrophic, Mottled-mesonatric, Grey, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark greyish brown (10YR42) moist colour; very few < 2% fine < 5mm distinct orange mottles; fine sandy clay loam; massive structures; moderately moist;
A2j	0.10 to 0.25	Light brownish grey (10YR62) moist, light grey (10YR72) dry colour; very few < 2% fine < 5mm distinct orange mottles; fine sandy clay loam; massive structures; moderately moist; sharp to;
B21	0.25 to 0.70	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm distinct brown mottles; medium heavy clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; moderately moist; gradual to;
B22	0.70 to 1.10	Light brownish grey (2.5Y62) moist colour; few 2-10% medium 5-15mm distinct grey, many 20-50% coarse 15-30mm prominent brown mottles; fine sandy light medium clay; moderately moist; gradual to;
B23	1.10 to 1.40	Light grey (2.5Y72) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sandy light medium clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; moderately moist; clear to;
B24?	1.40 to 1.70	Light grey (2.5Y72) moist colour; very few < 2% fine < 5mm prominent brown mottles; coarse sandy light clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; moderately moist; sharp to;
2C	1.70 to 1.80	Light grey (10YR72) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded rhyolite and subangular quartz coarse fragments; single grain structures; wet; abrupt to;
3C	1.80 to 2.80	Light brownish grey (10YR62) moist colour; coarse sandy loam; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite and subangular quartz coarse fragments; massive structures; wet; sharp to;

4C	2.80 to 3.00	Light brownish grey (2.5Y62) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; sandy loam; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; wet; sharp to;
5C	3.00 to 3.20	Greenish grey (5GY61) moist colour; coarse sand; few 2-10% small pebbles 2-6mm subangular granite and quartz coarse fragments; single grain structures; wet; sharp to;
6C	3.20 to 3.40	Yellowish brown (10YR56) moist colour; coarse sand; few 2-10% small pebbles 2-6mm subangular quartz and subrounded rhyolite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.8	7.5	1.75	7.2	5.9
0.30	7.9	6.5	2.00	6.8	6.0
0.60	8.2	6.3	2.25	7.4	6.2
0.80	8.2	6.3	2.50	7.2	6.1
1.00	8.1	6.5	2.75	7.4	6.0
1.25	8.0	6.5	3.00	7.8	8.1
1.50	8.3	6.6	3.25	7.4	5.9

pHF (pH using electrode probe), (m)
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 3C2 3mm root
 Horizon – 6C EOP - too hard for vibro-corer
 Observation H2O EC - 3.3 mS/cm; pH - 6.4

Project: MWQ Site: 13

Location: 724100 mE 7655530 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 6.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: No record
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
FILL	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm faint brown mottles; medium clay; very few < 2% large pebbles 20-60mm angular microdiorite coarse fragments; moderately moist; abrupt to;
A2j	0.25 to 0.55	Light brownish grey (10YR62) moist, light grey (10YR72) dry colour; many 20-50% fine < 5mm distinct brown mottles; medium clay; very few < 2% large pebbles 20-60mm angular microdiorite coarse fragments; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist;
B21	0.55 to 0.80	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent brown mottles; silty medium heavy clay; gradual to;
B22	0.80 to 2.60	Greyish brown (2.5Y52) moist colour; few 2-10% fine < 5mm distinct brown, very few < 2% medium 5-15mm distinct gley mottles; silty medium clay; lenticular structures; very few < 2% coarse 6-20mm calcareous nodules and medium 2-6 mm manganiferous concretions and soft segregations; abrupt to;
2B2	2.60 to 3.30	Greyish brown (2.5Y52) moist colour; few 2-10% medium 5-15mm faint olive-brown mottles; sandy light clay; very few < 2% large pebbles 20-60mm subrounded rhyolite coarse fragments;
3B2	3.30 to 4.00	Light grey (2.5Y72) moist colour; many 20-50% coarse 15-30mm prominent brown, common 10-20% coarse 15-30mm distinct yellow mottles; coarse sandy light clay; very few < 2% large pebbles 20-60mm subrounded rhyolite coarse fragments;
4C	4.00 to 5.00	Light grey (10YR72) moist colour; coarse sandy loam; few 2-10% large pebbles 20-60mm subrounded rhyolite coarse fragments; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	4.7	
0.30	6.3	4.8	
0.60	5.8	4.8	
0.80	6.2	4.3	
1.00	6.7	4.5	
1.50	8.0	8.0	
2.00	8.1	7.7	
2.50	7.8	6.8	
3.00	8.0	7.4	
3.50	7.7	6.8	
4.00	7.7	7.3	
4.50	7.4	7.1	
5.00	7.5	6.7	

Notes:

Observation H2O EC - 3.7 mS/cm; pH - 7.1

Project: MWQ Site: 14

Location: 726230 mE 7651580 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Endohypersodic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Eucalyptus tessellaris
 Lower Stratum: Mimosa pudica (common Sensitive plant)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm prominent brown mottles; silty light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; strong 5-10mm parting to strong 2-5mm subangular blocky structures; moderately moist; clear to;
B21	0.25 to 0.60	Very dark grey (10YR31) moist colour; very few < 2% medium 5-15mm faint brown mottles; silty medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; diffuse to;
B22	0.60 to 1.20	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct brown, few 2-10% fine < 5mm prominent red mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded feldspar coarse fragments; lenticular structures; moist;
B23	1.20 to 2.70	Grey (10YR51) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded feldspar coarse fragments;
2C	2.70 to 3.20	Grey (10YR61) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm subrounded microdiorite, tuff and quartz coarse fragments; single grain structures; abrupt to;
3B2?	3.20 to 3.70	Greenish grey (5GY61) moist colour; many 20-50% coarse 15-30mm distinct yellow mottles; coarse sandy light clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and tuff coarse fragments; massive structures; abrupt to;
4C	3.70 to 4.20	Grey (5Y61) moist colour; few 2-10% coarse 15-30mm distinct gley mottles; coarse sand; very few < 2% medium pebbles 6-20mm and large pebbles 20-60mm subrounded microdiorite and rhyolite coarse fragments; single grain structures; wet; sharp to;
5B2?	4.20 to 4.40	Greenish grey (5G61) moist colour; coarse sandy light clay; very few < 2% medium pebbles 6-20mm subrounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	3.0	
0.30	5.3	3.4	
0.60	5.3	3.3	
0.80	5.4	3.6	
1.00	5.4	4.6	
1.25	5.8	4.1	
1.50	5.3	4.3	
1.75	5.7	4.0	
2.00	5.6	4.4	
2.25	5.7	4.8	
2.50	5.8	5.3	
2.75	5.7	4.9	
3.00	6.5	5.7	
3.25	6.4	6.7	
3.50	7.0	6.9	
3.75	6.3	6.7	
4.00	6.2	6.4	
4.25	6.8	7.4	

Notes:

Horizon – 5B2? EOP - VVC could not penetrate below 4.4m
 Observation H2O EC - 22.3 mS/cm

Project: MWQ Site: 15

Location: 720220 mE 7653150 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Element: prior stream
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Mottled, Eutrophic, Grey, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Lower Stratum: Mimosa pudica (common Sensitive plant)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty clay loam; weak 5-10mm subangular blocky structures; very few < 2% fine < 2 mm manganiferous nodules and sioft segregations; gradual to;
B21	0.30 to 0.60	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent orange mottles; silty light clay; weak structures; gradual to;
B22	0.60 to 1.80	Grey (10YR51) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy light clay; very few < 2% medium 2-6 mm manganiferous soft segregations; gradual to;
B23	1.80 to 3.25	Grey (10YR61) moist colour; common 10-20% coarse 15-30mm prominent brown mottles; fine sandy light clay with a 5cm sand lens at 2.05m; moist
2Cu	3.25 to 4.30	Dark grey (2.5Y41) moist colour; silty light clay with a thin fine sandy lens at 3.7m; massive structures; wet; sharp to;
3Cu	4.30 to 5.00	Grey (10YR61) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
4C	5.00 to 5.10	Dark grey (2.5Y41) moist colour; silty light clay; few 2-10% small pebbles 2-6mm subrounded microdiorite coarse fragments; massive structures; wet; sharp to;
5C	5.10 to 5.25	Grey (10YR51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded quartz and microdiorite coarse fragments; single grain structures; wet; sharp to;
6C	5.25 to 5.50	Dark grey (2.5Y41) moist colour; silty light clay; massive structures; wet; sharp to;
7D	5.50 to 5.60	Greenish grey (5GY51) moist colour; fine sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.8	3.8	3.00	5.6	3.8
0.30	5.9	4.4	3.25	4.6	1.9
0.60	6.5	4.9	3.50	5.4	2.0
0.80	6.8	5.5	3.75	6.1	2.1
1.00	6.9	6.8	4.00	5.9	2.0
1.25	7.0	5.9	4.25	6.3	2.0
1.50	7.2	7.0	4.50	6.5	1.9
1.75	6.9	5.5	4.75	6.3	2.0
2.00	6.9	5.3	5.00	5.7	2.0
2.25	6.6	4.9	5.25	6.4	2.5
2.50	6.7	4.8	5.50	6.4	4.9
2.75	6.2	4.4			

pH_F (pH using electrode probe), (m)
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.61 mS/cm; pH - 5.6

Project: MWQ Site: 16

Location: 727215 mE 7657240 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Jun-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm distinct dark mottles; medium clay; weak 5-10mm parting to weak 2-5mm subangular blocky structures; moderately moist; clear to;
B21ia	0.10 to 0.50	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent red, common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm faint yellow jarositic (from pyrite) mottles; fine sandy light clay; moderately moist; gradual to;
B22ia	0.50 to 0.60	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; silty light clay; moderately moist; sharp to;
2A1	0.60 to 0.80	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown mottles; light medium clay; massive structures; moist; diffuse to;
2B21i	0.80 to 1.70	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent brown mottles; silty light clay; moist;
2B22ia	1.70 to 2.05	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct brown mottles; silty light clay; wet; abrupt to;
2Cu	2.05 to 4.00	Dark grey (N40) moist colour; silty light clay; massive structures; wet; sharp to;
3D	4.00 to 4.10	Greenish grey (5G51) moist colour; coarse sandy loam; massive structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.5	3.1	
0.30	4.3	3.4	
0.60	4.4	2.9	
0.80	6.3	3.2	
1.00	6.3	3.8	
1.25	5.4	2.7	
1.50	4.4	2.6	
1.75	4.3	2.4	
2.00	5.0	2.7	
2.25	5.9	2.4	
2.50	5.7	1.6	
2.75	5.6	1.6	
3.00	6.0	1.4	
3.25	6.2	1.6	
3.50	5.9	1.6	
3.75	6.3	1.7	
4.00	6.5	1.8	
0.4.10	7.0	2.0	

Notes:

Horizon – 2Cu 5mm root
 Horizon – 3D EOP - could not penetrate further
 Observation H2O EC - 16.9 mS/cm; pH -4.6

Project: MWQ Site: 17

Location: 726950 mE 7657850 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: No record
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Melaleuca viridiflora (Broad-leaved tea-tree)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty light clay; moderate 5-10mm subangular blocky structures; moderately moist; clear to;
B2	0.20 to 0.40	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm distinct brown mottles; light medium clay; moderately moist; abrupt to;
2B2	0.40 to 0.60	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm distinct brown mottles; fine sandy clay loam; massive structures; moderately moist; diffuse to;
3B2	0.60 to 0.90	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent grey mottles; fine sandy loam; massive structures; very few < 2% medium 2-6 mm manganiferous soft segregations; moist; diffuse to;
4B2	0.90 to 1.30	Light grey (10YR71) moist colour; common 10-20% fine < 5mm distinct pale, common 10-20% fine < 5mm prominent brown mottles; fine sand; single grain structures; moist; diffuse to;
5B2	1.30 to 1.75	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct yellow mottles; fine sandy loam; single grain structures; moist; diffuse to;
6B21	1.75 to 2.10	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm distinct yellow mottles; clay loam; fine sandy; massive structures; wet; diffuse to;
6B22	2.10 to 2.50	Grey (10YR51) moist colour; few 2-10% medium 5-15mm distinct brown mottles; fine sandy light clay; massive structures; wet; abrupt to;
7Cu	2.50 to 2.80	Grey (2.5Y51) moist colour; sand; single grain structures; wet; abrupt to;
8Cu	2.80 to 3.00	Dark grey (2.5Y41) moist colour; silty light clay; massive structures; wet; abrupt to;
9Cu	3.00 to 3.10	Dark grey (2.5Y41) moist colour; sand; single grain structures; wet; sharp to;

10Cu	3.10 to 3.25	Very dark grey (2.5Y31) moist colour; silty light clay; massive structures; wet; sharp to; a thin 5mm fine sand and coarse sand lens;
11Cu	3.25 to 3.40	Dark grey (5Y41) moist colour; light clay; few 2-10% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; abrupt to;
12D	3.40 to 3.75	Olive grey (5Y42) moist colour; sandy heavy clay; very few < 2% small pebbles 2-6mm subrounded feldspar coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.4	4.3	2.00	4.1	3.0
0.30	5.4	4.3	2.25	4.2	3.2
0.60	5.5	4.4	2.50	4.4	1.4
0.80	5.1	4.3	2.75	5.4	1.7
1.00	5.0	4.3	3.00	6.1	1.6
1.25	4.4	3.9	3.25	6.1	1.5
1.50	4.0	3.3	3.50	6.4	2.8
1.75	3.9	2.8	3.75	6.4	5.6

pH_F (pH using electrode probe), (m)
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 10Cu Organic matter and wood.
 Horizon – 12D EOP - VVC could not penetrate further and too hard to hand auger
 Observation H2O EC - 11.4 mS/cm; pH - 4.2

Project: MWQ Site: 18

Location: 726490 mE 7658150 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: No record
 SG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; moderate 2-5mm cast structures; dry; abrupt to;
2B21	0.30 to 1.20	Light olive grey (5Y62) moist colour; common 10-20% fine < 5mm prominent brown, common 10-20% fine < 5mm distinct grey mottles; sandy medium clay; very few < 2% coarse 6-20 mm calcareous soft segregations; moderately moist; diffuse to;
2B22	1.20 to 2.10	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sandy light clay; moist; sharp
3C	2.10 to 2.30	Light brownish grey (10YR62) moist colour; few 2-10% medium 5-15mm prominent brown mottles; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; sharp to;
4B2	2.30 to 2.80	Dark greyish brown (10YR42) moist colour; common 10-20% medium 5-15mm prominent grey mottles; medium heavy clay; moist; sharp to;
5C	2.80 to 3.10	Dark greenish grey (5GY41) moist colour; common 10-20% medium 5-15mm distinct brown mottles; coarse sand; very few < 2% small pebbles 2-6mm subrounded rhyolite coarse fragments; single grain structures; wet; sharp to;
6D	3.10 to 5.00	Dark greyish brown (10YR42) moist colour; many 20-50% medium 5-15mm distinct grey mottles; heavy clay; very few < 2% fine < 2 mm manganiferous nodules and soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	3.4	
0.30	7.0	5.5	
0.60	7.2	6.1	
1.00	8.0	6.8	
1.50	8.1	8.0	
2.00	7.4	6.6	
2.50	7.0	6.1	
3.00	7.6	6.4	
3.50	7.3	7.5	
4.00	7.0	7.5	
4.50	7.4	6.3	
5.00	7.5	7.5	

Notes:

Observation H2O EC - 11.1 mS/cm; pH 6.4

Project: MWQ Site: 19

Location: 726540 mE 7656380 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Grey, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; dry; abrupt to;
B21	0.20 to 0.40	Light olive brown (2.5Y54) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sandy light medium clay; gradual to;
B22	0.40 to 0.70	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm faint yellow mottles; fine sandy light medium clay; few 2-10% fine <2mm and medium 2-6 mm ferruginous nodules and manganiferous nodules and soft segregations; gradual to;
B23	0.70 to 1.70	Light brownish grey (2.5Y62) moist colour; common 10-20% coarse 15-30mm prominent brown mottles; fine sandy light medium clay; sharp to;
2C	1.70 to 1.90	Greyish brown (10YR52) moist colour; few 2-10% fine < 5mm faint red mottles; sand; single grain structures; sharp to;
3B	1.90 to 2.80	Greenish grey (5GY51) moist colour; common 10-20% coarse 15-30mm faint gley mottles; fine sandy light clay; sharp to;
4C1	2.80 to 3.00	Grey (5Y51) moist colour; fine sand; single grain structures; clear to;
4C2	3.00 to 3.50	Grey (5Y51) moist colour; sand; single grain structures; sharp to;
5D	3.50 to 5.00	Dark greyish brown (2.5Y42) moist colour; common 10-20% medium 5-15mm prominent gley mottles; fine sandy medium heavy clay; very few < 2% fine <2 mm manganiferous nodules segregations;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	5.0	
0.30	6.7	5.6	
0.60	8.0	7.8	
1.00	8.2	6.8	
1.50	8.3	7.0	
2.00	7.9	6.1	
2.50	7.5	6.1	
3.00	7.4	5.1	
3.50	7.2	6.3	
4.00	6.4	6.6	
4.50	6.8	5.6	
5.00	6.6	5.9	

Notes:

Horizon – 2C to 5D Coarse fragments - pyrite flakes
 Observation H2O EC - 65 mS/cm; pH - 7.0

Project: MWQ Site: 20

Location: 722930 mE 7660970 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Ha
 GSG: No record
 PPF: No record

Vegetation

Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.10	Brown (10YR43) moist colour; fine sand; single grain structures; dry; abrupt to;
A2	0.10 to 0.70	Brown (10YR53) moist, pale brown (10YR63) dry colour; fine sand; single grain structures; moderately moist; gradual to;
A3	0.70 to 1.30	Brown (10YR43) moist colour; fine sand; single grain structures; moderately moist; clear to;
B2	1.30 to 1.90	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; moist; abrupt to;
2C	1.90 to 2.10	Brown (10YR43) moist colour; fine sandy loam, light; massive structures; moist; abrupt to;
3B2	2.10 to 2.70	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm faint grey mottles; clay loam; fine sandy, heavy; massive structures; moist; abrupt to;
4C1	2.70 to 3.10	Brown (10YR43) moist colour; clayey fine sand; single grain structures; moist; clear to;
4C2	3.10 to 3.50	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent brown mottles; clayey sand; single grain structures; moist; sharp
5B2?	3.50 to 3.90	Dark grey (2.5Y40) moist colour; common 10-20% medium 5-15mm prominent orange mottles; silty light clay with fine sand lenses; weak 5-10mm subangular blocky structures; moist; sharp to;
6Cu	3.90 to 4.30	Very dark grey (2.5Y30) moist colour; silty light clay with thin sand lenses and a 3cm sand lens at 4.1m; massive structures; moist; sharp to;
7C	4.30 to 4.40	Grey (10YR51) moist colour; sand; few 2-10% medium pebbles 6-20mm rounded gravel coarse fragments; single grain structures; moist;
8Cu	4.40 to 4.90	Dark grey (N40) moist colour; silty light clay; massive structures; moist; sharp to;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	5.3	
0.60	6.5	5.7	
1.00	6.1	5.4	
1.50	5.5	4.5	
2.00	5.7	5.3	
2.50	6.1	5.0	
3.00	6.4	5.3	
3.50	6.4	5.0	
3.75	6.2	3.6	
4.00	6.4	1.4	
4.25	6.3	1.6	
4.50	6.6	1.3	
4.75	6.9	1.3	
4.90	6.8	1.4	

Notes:

Horizon – 8Cu EOP - VVC could not penetrate into sand @ 4.9m
 Observation Hole collapsed before a water sample could be taken

Project: MWQ Site: 21

Location: 724610 mE 7660395 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; silty loam; clear to;
B21	0.25 to 0.70	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light medium clay; very few < 2% fine <2 mm manganiferous soft segregations; diffuse to;
B22	0.70 to 1.20	Brown (10YR43) moist colour; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct orange mottles; silty light medium clay; very few < 2% fine <2 mm manganiferous nodules and medium 2-6 mm manganiferous soft segregations; diffuse to;
B23	1.20 to 2.00	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% medium 5-15mm distinct grey mottles; silty light medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; diffuse to;
B24	2.00 to 2.40	Grey (5Y51) moist colour; few 2-10% medium 5-15mm prominent brown, common 10-20% medium 5-15mm faint gley mottles; silty light clay; abrupt to;
2Cu	2.40 to 3.30	Dark grey (N40) moist colour; silty light clay; massive structures; sharp to;
3C1u	3.30 to 3.80	Grey (2.5Y50) moist colour; sand with clay lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; abrupt to;
3C2u	3.80 to 4.60	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and medium pebbles 6-20mm rounded gravel coarse fragments; single grain structures; abrupt to;
4Cu	4.60 to 4.70	Olive yellow (2.5Y66) moist colour; coarse sand; many 20-50% large pebbles 20-60mm rounded gravel coarse fragments; single grain structures; abrupt to;
5C	4.70 to 5.00	Grey (10YR61) moist colour; coarse sand; very few < 2% large pebbles 20-60mm rounded gravel coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	4.0	
0.30	5.9	4.2	
0.60	6.2	4.9	
1.00	6.8	6.0	
1.50	7.8	6.7	
2.00	8.1	6.2	
2.50	7.1	1.6	
2.75	6.9	1.3	
3.00	6.7	1.3	
3.25	6.7	1.6	
3.50	7.1	1.7	
3.75	6.9	1.9	
4.00	7.3	1.8	
4.25	7.4	1.8	
4.50	7.3	1.8	
4.75	7.3	4.6	
5.00	7.4	2.2	

Notes:

Observation H2O EC - 2.9 mS/cm; pH 6.4

Project: MWQ Site: 22

Location: 726760 mE 7651770 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Jun-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tereticornis (Blue gum); Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (2.5Y20) moist colour; few 2-10% fine < 5mm faint grey, common 10-20% fine < 5mm prominent orange mottles; silty light clay; weak 5-10mm angular blocky structures; moderately moist; sharp to;
B21	0.15 to 0.45	Grey (10YR61) moist colour; many 20-50% very coarse > 30mm prominent red, few 2-10% medium 5-15mm prominent dark, few 2-10% medium 5-15mm distinct brown mottles; light medium clay; moist
B22	0.45 to 0.90	Dark grey (10YR41) moist colour; few 2-10% medium 5-15mm prominent yellow jarositic (from pyrite), few 2-10% medium 5-15mm prominent brown, few 2-10% medium 5-15mm prominent red, few 2-10% medium 5-15mm prominent dark mottles; light clay; moist; gradual to;
B23	0.90 to 1.50	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% medium 5-15mm prominent brown mottles; light clay; moist; gradual to;
B24	1.50 to 1.80	Grey (10YR61) moist colour; few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm prominent brown mottles; fine sandy light clay; moist; clear to;
2D1	1.80 to 2.50	Light grey (10YR71) moist colour; few 2-10% medium 5-15mm prominent brown mottles; sandy light clay; very few < 2% small pebbles 2-6mm subangular quartz and medium pebbles 6-20mm and large pebbles 20-60mm subangular and angular acid volcanic coarse fragments; moist; diffuse to;
2D2g	2.50 to 4.30	Greenish grey (5G51) moist colour; few 2-10% fine < 5mm distinct grey, few 2-10% coarse 15-30mm prominent olive green, few 2-10% fine < 5mm prominent pale mottles; sandy light clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; moist; diffuse to;
2D3	4.30 to 5.00	Light greenish grey (5G71) moist colour; very few < 2% fine < 5mm prominent pale mottles; coarse sandy light clay; few 2-10% small pebbles 2-6mm subangular quartz coarse fragments; moist

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.5	4.8	
0.30	6.3	5.0	
0.60	4.8	3.9	
0.80	4.8	3.4	
1.00	5.0	3.2	
1.25	4.4	3.5	
1.50	4.8	3.3	
1.75	4.5	3.5	
2.00	4.1	3.2	
2.50	3.9	3.3	
3.00	5.1	3.2	
3.50	6.3	6.3	
4.00	6.3	5.7	
4.50	6.3	5.4	
5.00	6.2	5.0	

Notes:
 Observation H2O EC - 26 mS/cm; pH 3.5

Project: MWQ Site: 23

Location: 7269 0 mE 7651370 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 19-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Plain

Runoff: No record

Elevation: 3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Hard setting

Classifications

ASC: Sodic, Eutrophic, Grey, DERMOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Eucalyptus tereticornis (Blue gum)

Lower Stratum: Sporobolus species; Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange, very few < 2% fine < 5mm faint yellow mottles; silty light clay; weak 5-10mm subangular blocky structures; dry; abrupt to;
2B21i	0.15 to 0.45	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent red, few 2-10% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct brown mottles; light medium clay; weak 5-10mm subangular blocky structures; dry; clear to;
2B22ia	0.45 to 0.60	Dark greyish brown (10YR42) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent brown mottles; medium heavy clay; dry;
2B23ia	0.60 to 1.50	Very dark grey (2.5Y30) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), very few < 2% fine < 5mm distinct brown mottles; silty light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist;
2B24ia	1.50 to 1.90	Greyish brown (10YR52) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), very few < 2% fine < 5mm distinct brown, few 2-10% medium 5-15mm distinct grey mottles; fine sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded feldspar coarse fragments; massive structures; moist; abrupt to;
3D	1.90 to 2.50	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent olive-brown, few 2-10% fine < 5mm distinct yellow mottles; sandy light medium clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz, gravel and sandstone coarse fragments; moist

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	4.1	
0.30	5.0	4.0	
0.60	4.3	2.9	
0.80	3.8	3.1	
1.00	4.1	2.9	
1.25	3.7	2.7	
1.50	4.1	3.0	
1.75	3.8	3.1	
2.00	4.3	3.4	
2.25	4.4	3.6	
2.50	4.9	3.9	

Notes:

Horizon – 3D EOP - rock stopped hand auger

Project: MWQ Site: 24

Location: 726690 mE 7651320 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 20-Jun-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Swamp

Runoff: No record

Elevation: 2.7 m

Microrelief: No microrelief

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Excoecaria agallocha (Blind-your-eye mangrove)

Lower Stratum: Eleocharis species; Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark grey (10YR31) moist colour; silty light clay with a sand lens; massive structures; wet; clear to;
B21	0.30 to 0.60	Grey (10YR61) moist colour; common 10-20% fine < 5mm prominent brown mottles; fine sandy light clay; massive structures; wet; clear to;
B22ia	0.60 to 0.75	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% medium 5-15mm distinct yellow jarositic (from pyrite) mottles; fine sandy light clay; massive structures; wet; clear to;
B23ia	0.75 to 0.95	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% fine < 5mm distinct yellow jarositic (from pyrite) mottles; silty light clay; massive structures; wet; gradual to;
2Cu	0.95 to 1.85	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; abrupt to;
3Dg	1.85 to 2.10	Dark greenish grey (5G41) moist colour; coarse sandy light clay; very few < 2% small pebbles 2-6mm subangular quartz and subrounded sandstone coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	3.0	
0.30	4.9	2.7	
0.60	4.6	2.7	
0.80	4.3	2.5	
1.00	4.9	2.9	
1.25	5.5	2.6	
1.50	5.6	2.5	
1.75	5.2	1.2	
2.00	4.9	1.5	
2.09	5.9	1.6	

Notes:

Horizon - 3Dg EOP - Gouge auger could not penetrate the coarse sandy clay
Observation H2O EC - 26 mS/cm; pH 4.5

Project: MWQ Site: 25

Location: 726880 mE 7650550 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Jun-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Eutrophic, Mottled-mesonatric, Grey, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; clear to;
A2j	0.15 to 0.30	Dark greyish brown (10YR42) moist, light grey (10YR71) dry colour; fine sandy clay loam; massive structures; sharp to;
B21	0.30 to 0.50	Dark greyish brown (10YR42) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm prominent red mottles; fine sandy light medium clay; moderately moist; gradual to;
B22	0.50 to 1.20	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent red, few 2-10% fine < 5mm distinct brown mottles; fine sandy light medium clay; moderately moist; diffuse to;
B23	1.20 to 2.30	Light olive grey (5Y62) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% fine < 5mm faint grey mottles; fine sandy light clay; moist;
2C1	2.30 to 2.50	Greenish grey (5GY51) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; clayey sand; few 2-10% large pebbles 20-60mm subrounded acid volcanic coarse fragments; wet;
2C2	2.50 to 3.20	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded acid volcanic and quartz coarse fragments; wet; abrupt to;
2C3	3.20 to 3.70	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded acid volcanic and quartz coarse fragments; wet; abrupt to;
2C4k	3.70 to 4.50	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded acid volcanic and quartz coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	4.5	
0.30	5.9	4.8	
0.60	5.8	4.1	
0.80	5.6	3.8	
1.00	6.3	3.9	
1.25	5.6	4.4	
1.50	6.3	4.7	
1.75	6.0	5.6	
2.00	6.3	4.5	
2.25	6.4	5.0	
2.50	6.1	5.6	
2.75	7.2	5.1	
3.00	7.3	5.6	
3.25	7.5	5.5	
3.50	7.3	5.6	
3.75	7.2	5.7	
4.00	7.3	5.8	
4.25	7.3	2.5	
4.50	7.4	2.4	

Notes:

Horizon – 2C4k EOP - sand did not hold in VVC, tube went to 5m
 Observation H2O EC - 16.1 mS/cm; pH 5.5

Project: MWQ Site: 26

Location: 728700 mE 7659930 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Jun-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: No microrelief
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Aegiceras corniculatum (River mangrove); Avicennia marina (grey mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm distinct brown mottles; sandy light clay; moist; diffuse to;
B21	0.20 to 1.10	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; sandy light clay; wet; clear to;
Cu	1.10 to 1.60	Grey (N50) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; wet; sharp to;
2C	1.60 to 1.70	Grey (10YR51) moist colour; fine sand; wet;
3Cu	1.70 to 1.80	Dark grey (N40) moist colour; sandy light clay; sharp to;
4C	1.80 to 2.50	Grey (10YR51) moist colour; fine sand; wet;
5C	2.50 to 2.70	Very dark grey (2.5Y30) moist colour; silty light clay; wet; sharp to;
6C	2.70 to 3.80	Grey (10YR61) moist colour; sand; few 2-10% small pebbles 2-6mm subrounded quartz and microdiorite coarse fragments; wet; diffuse to;
7C	3.80 to 4.60	Grey (10YR61) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded quartz and microdiorite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	7.1	6.0	
0.30	7.0	5.8	
0.60	7.0	5.6	
0.80	7.0	5.5	
1.00	6.8	5.4	
1.25	6.8	3.0	
1.50	6.4	1.2	
1.75	6.9	1.4	
2.00	7.4	1.6	
2.25	7.1	1.6	
2.50	7.0	1.4	
2.75	7.3	1.4	
3.00	7.3	1.5	
3.25	7.5	1.7	
3.50	7.8	2.7	
3.75	7.6	1.9	
4.00	7.7	1.9	
4.25	7.8	3.6	
4.50	7.6	5.3	

Notes:

Horizon – 7C EOP - stone jammed in end of VVC tube
 Observation H2O EC - 21.7 mS/cm; pH 6.6

Project: MWQ Site: 27

Location: 728000 mE 7668860 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 03-Jul-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft, Loose

Classifications

ASC: Basic, Arenic, Bleached-orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Mid Stratum: Acacia leptocarpa (North coast wattle); Banksia integrifolia (coast banksia);
 Livistona decipiens
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.20	Very dark brown (10YR22) moist colour; fine sand; single grain structures; dry; clear to;
A12	0.20 to 0.80	Dark brown (10YR33) moist colour; fine sand; single grain structures; dry; gradual to;
A2e	0.80 to 1.40	Brown (10YR53) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; clear to;
B2?	1.40 to 1.60	Yellowish brown (10YR54) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sand; single grain structures; moderately moist; diffuse to;
2C	1.60 to 2.55	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite and rhyolite and subrounded quartz coarse fragments; massive structures; moist; sharp
3C	2.55 to 2.95	Grey (10YR61) moist colour; few 2-10% medium 5-15mm distinct grey mottles; sand with clay streaks; very few < 2% small pebbles 2-6mm rounded rhyolite and subrounded quartz coarse fragments; massive structures; wet; sharp to;
4C	2.95 to 3.20	Greyish brown (2.5Y52) moist colour; fine sand with coarse sand lenses; massive structures; wet; abrupt to;
5C	3.20 to 3.30	Greyish brown (2.5Y52) moist colour; fine sand; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm rounded rhyolite, microdiorite and phyllite coarse fragments; massive structures; wet; sharp to;

6C1	3.30 to 4.00	Very pale brown (10YR73) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded microdiorite and quartz and subrounded shell coarse fragments; massive structures; wet; gradual to;
6C2	4.00 to 4.30	Very pale brown (10YR73) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm subrounded rhyolite, microdiorite, shell and quartz and rounded shell coarse fragments; massive structures; wet; clear to;
7C	4.30 to 4.70	Brown (10YR53) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded shell, microdiorite and quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	3.5	
0.60	6.3	4.5	
1.00	6.9	4.3	
1.50	6.4	4.4	
2.00	6.8	4.3	
2.50	7.1	4.2	
2.75	7.6	5.5	
3.00	7.9	5.7	
3.25	8.7	6.1	
3.50	7.9	6.5	
4.00	8.3	6.3	
4.50	8.4	6.4	
4.69	7.8	6.7	

Notes:

Horizon – 7C EOP - Rock at 4.7 m; Oyster shell fragments

Project: MWQ Site: 28

Location: 728260 mE 7668540 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 02-Jul-2001

Landscape

Geology: Qm - Quaternary marine
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Tidal flat
Element: Intertidal flat
Runoff: No record
Elevation: 2 m
Microrelief: No microrelief
Microrelief Component: No record
Drainage: No record
Slope: 0 %
Surface Coarse Fragments: No coarse fragments
Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
GSG: No record
PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense *Ceriops tagal* (yellow mangrove, spurred mangrove); *Excoecaria agallocha* (Blind-your-eye mangrove); *Avicennia marina* (grey mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.35	Very dark grey (10YR31) moist colour; sandy light clay; massive structures; gradual
C1u	0.35 to 0.85	Dark grey (5Y41) moist colour; sandy light clay; very few < 2% medium pebbles 6-20mm rounded microdiorite and quartz coarse fragments; massive structures; diffuse to;
C2u	0.85 to 1.50	Dark grey (2.5Y40) moist colour; sandy light clay; very few < 2% medium pebbles 6-20mm rounded microdiorite coarse fragments; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	3.4	
0.30	6.7	5.5	
0.60	6.7	1.4	
0.80	6.8	1.4	
1.00	6.8	1.6	
1.25	7.2	1.4	
1.50	6.9	0.9	

Notes:

Horizon - C2u EOP - Gravel/sand at 1.5m
Observation H2O EC - 39 mS/cm; pH 6.3

Project: MWQ Site: 29

Location: 726510 mE 7669450 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Jul-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Plain
 Element: Valley-flat
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Acidic-sodic, Kurosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark) (Long-leaved paperbark)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass); Macroptilium atropurpureum (siratro)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sand; single grain structures;
A2j	0.20 to 0.40	Dark greyish brown (10YR42) moist, light grey (10YR72) dry colour; fine sand; single grain structures; abrupt to;
B21	0.40 to 0.70	Dark greyish brown (10YR42) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sandy light medium clay; 2-5mm columnar structures;
B22	0.70 to 0.80	Dark greyish brown (10YR42) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy light medium clay; few 2-10% fine <2 mm manganiferous soft segregations; clear to;
2B21	0.80 to 1.30	Light brownish grey (10YR62) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; clayey fine sand; single grain structures; few 2-10% fine <2 mm manganiferous soft segregations; clear to;
3B21	1.30 to 1.60	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm prominent orange mottles; fine sandy clay loam, heavy; massive structures;
3B22	1.60 to 1.90	Light grey (10YR71) moist colour; common 10-20% coarse 15-30mm prominent brown, common 10-20% medium 5-15mm prominent orange mottles; fine sandy clay loam; massive structures; abrupt to;
3C	1.90 to 3.00	Light grey (10YR71) moist colour; very few < 2% medium 5-15mm distinct orange mottles; fine sandy clay loam, heavy; very few < 2% large pebbles 20-60mm rounded coarse fragments; massive structures;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	4.3	3.9	
0.30	3.9	4.9	
0.60	4.2	3.9	
1.00	4.9	5.8	
1.50	4.8	4.5	
2.00	4.5	4.6	
2.50	4.3	4.7	
3.00	4.5	5.0	

Notes:

Horizon – 3C EOP - rock @ 3.0 m stopped hand auger
 Observation H2O EC - 0.66 mS/cm; pH 4.5

Project: MWQ Site: 30

Location: 727640 mE 7669510 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Jul-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense Melaleuca leucadendra (Long-leaved paperbark); Acacia leptocarpa (North coast wattle)

Profile

Horizon	Depth (m)	Description
C?	0.00 to 0.20	Yellowish brown (10YR54) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded rhyolite and andesite coarse fragments; single grain structures; dry; clear to;
2C	0.20 to 2.10	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm subrounded rhyolite and granite and rounded rhyolite coarse fragments; single grain structures; moderately moist parting to wet at 1.2m; sharp to;
3C	2.10 to 2.70	Brown (10YR53) moist colour; fine sand parting to sand at 2.5m; single grain structures; wet; diffuse to;
4C	2.70 to 4.40	Light brownish grey (10YR62) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded basalt coarse fragments; single grain structures; wet; abrupt to;
5C	4.40 to 4.55	Light brownish grey (10YR62) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded granite, andesite, rhyolite and quartz and subrounded basalt coarse fragments; single grain structures; wet; abrupt to;
6C	4.55 to 5.10	Light brownish grey (10YR62) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	5.2	
0.30	6.5	5.0	
0.60	6.4	4.9	
0.80	6.3	4.8	
1.00	6.7	5.1	
1.50	7.0	4.8	
2.00	7.4	5.1	
2.50	7.3	5.3	
3.00	7.6	4.9	
3.50	7.3	4.8	
4.00	7.8	5.1	
4.50	7.8	5.0	
5.00	7.7	5.2	

Notes

Horizon - B1?

Project: MWQ Site: 31

Location: 727380 mE 7669350 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Jul-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Fibric, Histic-sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, closed or dense
 Species: *Ceriops tagal* (yellow mangrove, spurred mangrove); *Bruguiera exaristata* (Rib-fruited mangrove); *Excoecaria agallocha* (Blind-your-eye mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark reddish brown (5YR32) moist colour; light clay, fibric; massive structures; wet; sharp to;
C1u	0.20 to 0.80	Dark grey (10YR41) moist colour; silty light clay; massive structures; wet; diffuse to;
C2u	0.80 to 1.30	Dark grey (N40) moist colour; silty light clay; massive structures; wet; abrupt to;
2Cu	1.30 to 1.60	Dark grey (2.5Y40) moist colour; sandy loam; massive structures; wet

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	4.7	
0.30	6.4	5.1	
0.60	5.8	4.8	
0.80	6.1	1.5	
1.00	6.4	1.4	
1.25	6.1	1.4	
1.50	6.2	1.6	

Notes:

Horizon – 2Cu EOP - sand layers below 1.5m
 Observation H2O EC - 28.5 mS/cm; pH 5.7

Project: MWQ Site: 32

Location: 727560 mE 7668980 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Jul-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: No microrelief
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, Shell
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: *Ceriops tagal* (yellow mangrove, spurred mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark grey (10YR41) moist colour; sandy light clay, fibric; massive structures;
C1	0.20 to 0.70	Grey (5Y51) moist colour; sandy light clay; few 2-10% medium pebbles 6-20mm rounded and large pebbles 20-60mm subrounded igneous rock (unidentified) coarse fragments; massive structures; diffuse to;
C2u	0.70 to 1.50	Dark grey (5Y41) moist colour; fine sandy light clay; few 2-10% large pebbles 20-60mm subrounded igneous rock and very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.0	5.1	
0.30	6.6	5.3	
0.60	6.7	4.8	
0.80	6.7	0.9	
1.00	6.7	1.5	
1.25	6.7	1.4	
1.50	6.8	1.6	

Notes:

Horizon – C2u EOP - could not gouge below 1.5 m - gravelly sand material would not hold in auger
 Observation H2O EC - 39.5 mS/cm; pH 6.1

Project: MWQ Site: 33

Location: 727060 mE 7669290 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 20-Jul-2001

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Swale

Runoff: No record

Elevation: 7.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications

ASC: Haplic, Dystrophic, Red, KANDOSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Panicum maximum var. maximum (Guinea grass); Macroptilium atropurpureum (siratro); Rhynchelytrum repens

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.50	Dark brown (7.5YR32) moist colour; loamy fine sand; single grain structures; dry; clear to;
B21	0.50 to 1.00	Yellowish red (5YR46) moist colour; clayey fine sand; massive structures; dry; gradual to;
B22	1.00 to 1.20	Yellowish red (5YR46) moist colour; fine sandy loam, light; massive structures; dry; diffuse to;
2B2	1.20 to 1.60	Red (2.5YR46) moist colour; fine sandy clay loam, light; massive structures; moderately moist; diffuse to;
3B2	1.60 to 2.00	Red (2.5YR46) moist colour; clay loam; fine sandy, light; massive structures; moderately moist; diffuse to;
4B2	2.00 to 2.60	Red (2.5YR46) moist colour; very few < 2% fine < 5mm faint yellow mottles; fine sandy light clay; massive structures; moderately moist; clear to;
5B2	2.60 to 3.50	Yellowish red (5YR56) moist colour; many 20-50% fine < 5mm distinct yellow mottles; fine sandy clay loam; massive structures; moderately moist; clear to;
6B2	3.50 to 3.90	Strong brown (7.5YR56) moist colour; few 2-10% fine < 5mm prominent brown, common 10-20% fine < 5mm distinct yellow mottles; fine sandy loam; massive structures; moist; clear to;
7B2	3.90 to 5.20	Brownish yellow (10YR66) moist colour; common 10-20% coarse 15-30mm prominent grey, very few < 2% medium 5-15mm prominent brown mottles; fine sand with subangular sand grains; single grain structures; moist

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	6.4	
0.60	6.1	6.9	
1.00	5.3	7.1	
1.50	5.6	5.0	
2.00	6.4	5.1	
2.50	6.4	5.0	
3.00	6.4	5.3	
3.50	6.4	5.4	
4.00	6.6	5.7	
4.50	6.7	5.6	
5.00	6.7	5.6	

Project: MWQ Site: 34

Location: 727170 mE 7668860 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 20-Jul-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Avicennia marina (grey mangrove); Excoecaria agallocha (Blind-your-eye mangrove); Bruguiera exaristata (Rib-fruited mangrove); Lumnitzera racemosa (Black mangrove)

Lower Stratum: Paspalum vaginatum (Saltwater couch); Eleocharis species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; silty light clay; moderate <2mm subangular blocky structures; moist; sharp to;
B2Ia	0.10 to 0.60	Grey (5Y61) moist colour; common 10-20% medium 5-15mm prominent dark, very few < 2% fine < 5mm faint yellow jarositic (from pyrite) mottles; fine sandy light clay; massive structures; moist; clear to;
Cu	0.60 to 1.15	Dark grey (5Y41) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	1.15 to 3.45	Dark grey (2.5Y41) moist colour; fine sand; single grain structures; wet
3C1u?	3.45 to 4.20	Dark grey (2.5Y41) moist colour; sand with 2 x 5cm clay lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet
3C2u?	4.20 to 4.50	Dark grey (2.5Y41) moist colour; sand; few 2-6% medium pebbles 6-20mm and large pebbles 20-60mm rounded microdiorite coarse fragments; single grain structures; wet

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	3.9	
0.30	6.0	3.4	
0.60	6.0	3.6	
0.80	6.0	3.8	
1.00	5.7	1.2	
1.25	5.9	1.4	
1.50	6.8	1.6	
1.75	6.7	1.5	
2.00	6.8	1.6	
2.25	6.6	1.4	
2.50	6.5	1.5	
2.75	6.7	1.7	
3.00	6.9	1.4	
3.25	6.5	1.7	
3.50	7.0	1.4	
3.75	6.2	1.0	
4.00	6.4	1.2	
4.25	6.1	1.1	
4.50	6.2	1.3	

Notes:

Horizon – 3C2u?EOP - stone stopped VVC tube @ 4.5m
Observation H2O EC - 11 mS/cm; pH 5.7

Project: MWQ Site: 35

Location: 727410 mE 7668820 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Jul-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Acacia leptocarpa (North coast wattle); Melaleuca leucadendra in wet swales
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sand; single grain structures; moderately moist; clear to;
B2	0.30 to 1.10	Dark yellowish brown (10YR44) moist colour; fine sand; single grain structures; moderately moist; clear to;
2C	1.10 to 1.20	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and rhyolite coarse fragments; moderately moist; sharp to;
3C	1.20 to 1.35	Pale brown (10YR63) moist, light grey (10YR72) dry colour; fine sand; single grain structures; moderately moist; sharp to;
4C	1.35 to 1.80	Light brownish grey (2.5Y62) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded rhyolite and quartz coarse fragments; single grain structures; moist; sharp to;
5C	1.80 to 2.25	Grey (10YR61) moist colour; sand; single grain structures; wet; sharp to;
6Cu	2.25 to 2.40	Very dark grey (5Y31) moist colour; silty light clay; massive structures; moist; sharp to;
7Cu	2.40 to 2.75	Very dark grey (2.5Y30) moist colour; coarse sandy loam; massive structures; wet; sharp to;
8Cu	2.75 to 3.05	Very dark grey (10YR31) moist colour; silty light clay; massive structures; moist; sharp to;
9Cu	3.05 to 3.35	Dark grey (2.5Y40) moist colour; coarse sandy loam; massive structures; wet; abrupt to;
10Cu	3.35 to 3.85	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;

11Cu	3.85 to 4.50	Very dark grey (2.5Y30) moist colour; silty light clay with thin fine sand lenses; very few < 2% small pebbles 2-6mm rounded rhyolite coarse fragments; massive structures; sharp to;
12Cu	4.50 to 4.90	Dark grey (5Y41) moist colour; silty light clay; moderate 2-5mm lenticular structures; moist

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.1	5.0	2.50	6.5	1.2
0.30	6.6	5.3	2.75	6.8	0.9
0.60	6.1	5.0	3.00	6.5	0.9
0.80	6.7	5.3	3.25	7.4	1.3
1.00	6.8	5.4	3.50	7.9	1.5
1.25	7.1	5.2	3.75	7.1	1.3
1.50	6.4	5.4	4.00	6.7	1.3
1.75	6.4	5.6	4.25	6.5	1.2
2.00	6.6	5.4	4.50	6.7	1.2
2.25	6.3	0.9	4.75	6.9	1.8

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 11Cu Melaleuca wood
 Horizon – 12Cu EOP - VVC was going in slowly so stopped hole at 4.9m

Project: MWQ Site: 36

Location: 726590 mE 7669120 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Jul-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Paspalum vaginatum (Saltwater couch); Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty light clay; moderate 2-5mm subangular blocky structures; wet; sharp to;
B21i	0.10 to 0.55	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent orange mottles; silty light clay; moderate 5-10mm prismatic parting to moderate 5-10mm subangular blocky structures; wet
B22ia	0.55 to 0.70	Dark grey (10YR41) moist colour; few 2-10% medium 5-15mm distinct orange, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; silty light clay; massive structures; wet; abrupt to;
C1u	0.70 to 1.20	Dark grey (5Y41) moist colour; many 20-50% coarse 15-30mm prominent grey mottles; silty light clay; massive structures; wet; diffuse to;
C2u	1.20 to 1.60	Dark grey (5Y41) moist colour; few 2-10% medium 5-15mm prominent grey mottles; fine sandy light clay; massive structures; wet; sharp to;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	2.4	
0.30	4.1	3.3	
0.60	4.1	3.0	
0.80	4.1	3.1	
1.00	4.1	1.0	
1.25	4.2	0.9	
1.50	4.5	0.9	

Notes:

Horizon - C2u EOP - fine sand at 1.6m would not hold in gouge auger
 Soil Bogged 4 times in attempting to drive to this site

Project: MWQ Site: 37

Location: 729190 mE 7665140 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Jul-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Paspalum vaginatum (Saltwater couch); Sporobolus virginicus (Marine couch); Cyperus species

Profile

Horizon	Depth (m)	Description
O1	0.00 to 0.05	Dark brown (10YR33) moist colour; abrupt to;
A1	0.05 to 0.20	Black (2.5Y20) moist colour; few 2-10% fine < 5mm prominent brown mottles; medium clay; moderate <2mm subangular blocky structures; moist; clear to;
B21i	0.20 to 0.50	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent orange, few 2-10% medium 5-15mm prominent dark mottles; medium clay; weak 2-5mm subangular blocky structures; moist; clear to;
B22i	0.50 to 0.80	Grey (10YR61) moist colour; very few < 2% medium 5-15mm prominent dark, many 20-50% coarse 15-30mm prominent orange mottles; sandy medium clay; massive structures; very few < 2% medium 2-6 mm ferruginous nodules segregations; moist; gradual to;
B23i	0.80 to 1.10	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent orange, very few < 2% medium 5-15mm prominent brown mottles; fine sandy light clay; massive structures; wet; abrupt to;
C1u	1.10 to 1.30	Dark grey (10YR41) moist colour; fine sandy light clay; massive structures; wet; abrupt to;
C2u	1.30 to 1.60	Dark grey (2.5Y40) moist colour; sandy light clay; massive structures; wet; sharp to;
3Cu?	1.60 to 2.20	Dark grey (2.5Y40) moist colour; sand with a thin clay lens at 2.2m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; diffuse to;
4Cu?	2.20 to 2.90	Grey (10YR51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; clear to;

5C	2.90 to 3.40	Grey (10YR61) moist colour; sand; very few < 2% medium pebbles 6-20mm rounded microdiorite and granite coarse fragments at 3.2m; single grain structures; wet; abrupt to;
6C	3.40 to 3.70	Grey (10YR61) moist colour; fine sand; single grain structures; wet; abrupt to;
7C	3.70 to 4.40	Coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz, few 2-10% medium pebbles 6-20mm rounded microdiorite, at 4.3m, coarse fragments; single grain structures; wet; sharp to;
8C	4.40 to 4.80	Grey (10YR61) moist colour; coarse sand; single grain structures; wet; sharp to;
9Cu	4.80 to 5.30	Grey (10YR51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded microdiorite and subrounded quartz coarse fragments; single grain structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.05	3.8	3.4	2.75	6.8	1.9
0.10	3.6	1.4	3.00	5.9	1.3
0.30	3.5	3.1	3.25	6.1	4.0
0.60	3.8	3.5	3.50	6.7	5.1
0.80	5.0	4.2	3.75	6.9	4.8
1.00	3.6	3.1	4.00	6.1	4.5
1.25	4.9	3.1	4.25	6.2	5.1
1.50	5.1	1.5	4.50	6.2	4.1
1.75	5.7	1.2	4.75	6.2	4.0
2.00	5.9	1.3	5.00	6.2	1.8
2.25	6.1	1.4	5.25	6.2	1.8
2.50	6.7	1.6			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 11.8 mS/cm; pH 5.0

Project: MWQ Site: 38

Location: 729500 mE 7664840 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Jul-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 4 %
 Surface Coarse Fragments: Common 10-20%, cobbles 60-200mm, Andesite
 Surface Condition: Soft

Classifications

ASC: Acidic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Ficus species
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; diffuse to;
B2	0.25 to 0.80	Very dark brown (10YR22) moist colour; clayey fine sand; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm rounded pumice coarse fragments; single grain structures; dry; clear to;
C	0.80 to 1.10	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; abrupt to;
2B21	1.10 to 1.30	Light yellowish brown (10YR64) moist colour; common 10-20% medium 5-15mm prominent orange, few 2-10% medium 5-15mm distinct pale mottles; clayey fine sand, heavy; massive structures; moist; abrupt to;
3B22	1.30 to 2.10	Yellowish brown (10YR54) moist colour; common 10-20% medium 5-15mm distinct pale, common 10-20% fine < 5mm prominent brown mottles; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; few 2-10% fine <2 mm manganiferous soft segregations; moist; diffuse to;
4C1	2.10 to 3.50	Pale brown (10YR63) moist colour; sand with a 1cm thin band of silty light clay at 2.75m; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded granite and rhyolite and subrounded quartz coarse fragments; single grain structures; wet; gradual to;
5C	3.50 to 4.10	Coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded rhyolite and microdiorite and subrounded quartz coarse fragments; single grain structures; wet

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	4.0	
0.30	5.1	3.9	
0.60	4.7	4.4	
0.80	5.8	5.1	
1.00	5.3	5.4	
1.25	5.1	4.7	
1.50	5.3	4.4	
2.00	6.0	6.3	
2.50	5.8	6.0	
3.00	6.3	5.8	
3.50	6.2	6.1	
4.00	6.4	6.2	

Notes:

Horizon – 5C EOP - VVC stopped by rock
 Observation H2O EC - 0.12 mS/cm; pH 5.5

Project: MWQ Site: 39

Location: 726440 mE 7668960 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 21-Jul-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Plain

Runoff: No record

Elevation: 2.8 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications

ASC: Acidic-sodic, Sulfuric, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense Melaleuca leucadendra (Long-leaved paperbark); Livistona decipiens; Eucalyptus tessellaris

Mid Stratum: Livistona decipiens; Acacia leptocarpa (North coast wattle); Melaleuca viridiflora (Broad-leaved tea-tree); Myoporum acuminatum (Boobiialla)

Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm faint brown mottles; clay loam; fine sandy, light; weak 2-5mm cast structures; moderately moist; abrupt to;
B21i	0.20 to 0.70	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown, very few < 2% fine < 5mm distinct red mottles; fine sandy light clay; moderately moist; gradual to;
B22ia	0.70 to 1.00	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; fine sandy light clay; massive structures; wet; abrupt to;
Cu	1.00 to 1.50	Grey (5Y51) moist colour; fine sandy light clay; massive structures; wet; sharp to;
3Cu	1.50 to 2.70	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; diffuse to;
4Cu?	2.70 to 3.80	Dark grey (2.5Y40) moist colour; sand with a 3cm clay lense at 3m; single grain structures; wet; diffuse to;
5Cu	3.80 to 4.50	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz and granite coarse fragments; single grain structures; wet; diffuse to;
6Cu	4.50 to 5.00	Dark grey (2.5Y40) moist colour; sand; wet.

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	3.8	3.8	2.75	6.9	1.6
0.30	3.4	3.5	3.00	6.9	1.1
0.60	3.3	2.9	3.25	6.7	1.4
0.80	3.2	3.0	3.50	7.0	1.3
1.00	4.0	2.9	3.75	7.6	1.7
1.25	4.1	1.5	4.00	7.3	1.4
1.50	4.1	1.9	4.25	6.9	1.5
1.75	6.2	1.7	4.50	6.9	1.5
2.00	6.2	1.7	4.75	7.5	1.4
2.25	6.1	1.7	5.00	7.4	1.3
2.50	6.9	1.3			

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 3Cu Bark at 2.3 m

Observation H2O EC - 15.5 mS/cm; pH 4.4

Project: MWQ Site: 40

Location: 726680 mE 7668700 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2 m
 Microrelief: No microrelief
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Shell
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, closed or dense Ceriops tagal (yellow mangrove, spurred mangrove); Avicennia marina (grey mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; clear to;
C1	0.15 to 0.80	Dark greenish grey (5GY41) moist colour; silty light clay; massive structures; wet; diffuse to;
C2	0.80 to 1.40	Very dark grey (5Y31) moist colour; silty light clay with a thin sand lens; massive structures; wet; diffuse to;
C3	1.40 to 2.55	Dark grey (5Y41) moist colour; fine sandy light clay with a 5cm sand lens at 2.2m; massive structures; wet; sharp to;
2C	2.55 to 2.60	Dark grey (5Y41) moist colour; fine sand; single grain structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	3.5	
0.30	6.4	0.7	
0.60	6.1	0.5	
0.80	6.2	0.8	
1.00	6.3	1.0	
1.25	6.3	0.9	
1.50	6.1	0.9	
1.75	6.0	0.8	
2.00	6.1	1.0	
2.25	6.0	1.2	
2.50	6.4	0.6	
2.60	6.6	1.0	

Notes:

Horizon – 2C EOP - sand would not hold in gouge auger
 Observation H2O EC - 40.3 mS/cm; pH 6.4

Project: MWQ Site: 41

Location: 728720 mE 7668170 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Plain
 Runoff: No record
 Elevation: 2.8
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Acacia leptocarpa (North coast wattle); Alphitonia excelsa (Red ash, soapbush)
 Mid Stratum: Lantana camara (Lantana); Myoporum acuminatum (Boobialla)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass); Themeda quadrivalvis

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
C1	0.40 to 0.80	Brown (10YR53) moist, light yellowish brown (2.5Y64) dry colour; fine sand; single grain structures; dry; diffuse to;
C2	0.80 to 1.25	Brown (10YR53) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; abrupt to;
2C	1.25 to 2.20	Brown (10YR53) moist colour; sand; few 2-10% small pebbles 2-6mm andesite and rhyolite and subrounded quartz and shell coarse fragments; single grain structures; diffuse to;
3C	2.20 to 4.50	Brown (10YR53) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded rhyolite and andesite and subrounded quartz and shell coarse fragments; single grain structures.

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.9	5.4	
0.30	6.3	5.3	
0.60	6.6	5.4	
1.00	6.9	5.3	
1.50	7.5	5.5	
2.00	7.7	5.7	
2.50	7.9	5.7	
3.00	8.0	5.8	
3.50	7.9	6.1	
4.00	8.3	6.4	
4.50	8.3	6.0	

Notes:
 Horizon – 3C Gravels throughout plus a layer at 4.5m; EOP - sand fell out of VVC tube, went into 5.1 m

Project: MWQ Site: 42

Location: 726740 mE 7669810 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 02-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Rises

Element: Valley-flat

Runoff: No record

Elevation: 5.8 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Hard setting

Classifications

ASC: Acidic-sodic, Kurosolic, Oxyaquic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.10	Yellowish brown (10YR56) moist colour; clayey fine sand; single grain structures; moderately moist; sharp to;
A1	0.10 to 0.40	Very dark greyish brown (10YR32) moist colour; loamy fine sand, heavy; single grain structures; moist; clear to;
A2	0.40 to 0.65	Greyish brown (10YR52) moist, light brownish grey (10YR62) dry colour; fine sand; single grain structures; moist; abrupt to;
B2	0.65 to 0.80	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sandy light medium clay; moist;
2B	0.80 to 1.20	Dark greyish brown (10YR42) moist colour; many 20-50% coarse 15-30mm prominent pale mottles; fine sand; single grain structures; moist; abrupt to;
3B	1.20 to 1.40	Light yellowish brown (10YR64) moist colour; common 10-20% medium 5-15mm distinct grey mottles; fine sandy loam, light; massive structures; wet; abrupt to;
4B	1.40 to 1.60	Brown (10YR53) moist colour; common 10-20% coarse 15-30mm prominent dark mottles; loamy fine sand; massive structures; very few < 2% coarse 6-20 mm manganiferous nodules segregations; moist; clear to;
5D	1.60 to 2.80	White (5Y81) moist colour; fine sandy loam, light; massive structures; moderately cemented pan concretionary massive structure; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.8	4.2	
0.30	4.7	4.5	
0.60	5.1	4.3	
0.80	4.6		
1.00	4.7	4.6	
1.50	4.7	4.9	
2.00	5.4	5.1	
2.50	5.3	5.2	
2.75	5.6	5.2	

Notes:

Horizon – 5D EOP - too hard too dig by hand auger

Observation H2O EC - 19 mS/cm; pH 5.3

Project: MWQ Site: 43

Location: 726250 mE 7669160 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 02-Aug-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Hard setting

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense

Species: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris

Mid Stratum: Tree, 6.01-12m, isolated clumps Livistona decipiens; Myoporum acuminatum (Boobiialla)

Lower Stratum: Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
P2	0.00 to 0.05	Black (5YR21) moist colour; silty clay loam, sapric; massive structures; moderately moist; sharp to;
A1	0.05 to 0.30	Black (10YR21) moist colour; silty light clay; weak 2-5mm cast parting to moderate 10-20mm parting to moderate 2-5mm subangular blocky structures; moderately moist; clear to;
B1ia	0.30 to 0.50	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct grey, common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm faint yellow jarositic (from pyrite) mottles; light medium clay; moist; abrupt to;
B21ia	0.50 to 0.90	Grey (10YR51) moist colour; common 10-20% fine < 5mm distinct yellow jarositic (from pyrite), very few < 2% fine < 5mm distinct red, many 20-50% coarse 15-30mm prominent brown mottles; silty light clay; moist; clear to;
C1u	0.90 to 1.10	Grey (10YR51) moist colour; silty light clay; massive structures; wet; sharp to;
2D1	1.10 to 1.65	Light greenish grey (5BG71) moist colour; fine sandy clay loam, light; massive structures; moist; sharp to;
2D2	1.65 to 2.00	Light greenish grey (5GY71) moist colour; many 20-50% very coarse > 30mm prominent brown, few 2-10% coarse 15-30mm prominent gley mottles; fine sandy clay loam, light; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.05	4.3		
0.10	4.2	3.2	
0.30	4.1	2.9	
0.60	3.4	2.9	
0.80	3.4	2.6	
1.00	3.5	2.6	
1.25	3.8	3.6	
1.50	4.4	1.3	
1.75	4.6	3.9	
2.00	5.9	5.3	

Notes:

Horizon – 2D2 EOP - would not core further
 Observation H2O EC - 13.6 mS/cm; pH 3.7

Project: MWQ Site: 44

Location: 726140 mE 7668650 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No recor
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm, Periodic cracking

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; silty medium clay; weak 2-5mm platy structures; moist; abrupt to;
B21i	0.10 to 0.40	Light brownish grey (2.5Y62) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% fine < 5mm prominent dark mottles; medium clay; weak 5-10mm subangular blocky structures; few 2-10% medium 2-6mm and coarse 6-20 mm ferruginous concretions segregations; moist;
B22i	0.40 to 0.55	Dark grey (5Y41) moist colour; few 2-10% fine < 5mm distinct brown, few 2-10% fine < 5mm distinct yellow mottles; silty light medium clay; moist; gradual to;
C1u	0.55 to 1.50	Very dark grey (5Y31) moist colour; silty light clay; massive structures; wet; sharp to;
2C1u	1.50 to 1.80	Very dark grey (5Y31) moist colour; fine sandy light clay with a thin fine sand lens at 1.5m; massive structures; wet; sharp to;
3C1u	1.80 to 2.00	Dark grey (2.5Y40) moist colour; coarse sand with a thin fine sand lens at 1.8m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subangular and rounded andesite and very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4C1u	2.00 to 2.10	Dark grey (2.5Y40) moist colour; clay loam; fine sandy; massive structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	4.3	
0.30	4.5	3.4	
0.60	4.0	3.1	
0.80	4.7	1.2	
1.00	4.7	0.8	
1.25	5.2	0.8	
1.50	5.4	1.4	
1.75	5.6	0.8	
2.00	6.8	1.5	
2.09	5.4	1.3	

Notes:

Horizon – 3C1u gravel lens at 1.9-1.95 m
 Horizon – 4C1u EOP - rock? At 2.1m VVC could not penetrate further
 Observation H2O EC - 48.3 mS/cm; pH 6

Project: MWQ Site: 45

Location: 726290 mE 7668440 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.8
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: *Livistona decipiens*; *Excoecaria agallocha* (Blind-your-eye mangrove)
 Mid Stratum: *Myoporum acuminatum* (Boobialla); *Livistona decipiens*
 Lower Stratum: *Cynodon dactylon* (Couch); *Sporobolus* species; *Cyperus* species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown mottles; fine sandy light medium clay; weak 2-5mm subangular blocky structures; moist; abrupt to;
B21i	0.15 to 0.70	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent orange, common 10-20% fine < 5mm distinct brown, few 2-10% fine < 5mm prominent dark mottles; fine sandy medium clay; moist; diffuse to;
B22ia	0.70 to 0.90	Greyish brown (10YR52) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct brown mottles; fine sandy light clay; wet; clear to;
C1u	0.90 to 1.60	Dark grey (5Y41) moist colour; fine sandy light clay; massive structures; wet; sharp to;
2C1u	1.60 to 2.30	Dark grey (5Y41) moist colour; clayey fine sand; very few < 2% medium pebbles 6-20mm subangular andesite coarse fragments; single grain structures; wet; abrupt to;
2C2u	2.30 to 4.50	Dark grey (2.5Y40) moist colour; fine sand with 2cm clay lenses at 3.3 and 3.4m; single grain structures; wet; sharp to;
3C1	4.50 to 4.70	Dark grey (2.5Y40) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and andesite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.4	2.2	
0.30	4.1	2.9	
0.60	3.6	2.7	
0.80	3.5	1.3	
1.00	3.4	1.2	
1.25	3.7	1.9	
1.50	4.1	1.0	
1.75	5.0	1.3	
2.00	5.3	1.6	
2.25	5.9	1.5	
2.50	6.7	1.6	
2.75	6.3	1.5	
3.00	6.6	1.1	
3.25	6.8	1.1	
3.50	5.8	1.1	
3.75	5.9	1.2	
4.00	6.1	1.5	
4.25	6.6	1.9	
4.50	7.5	1.5	
4.60	7.0	1.7	

Notes:

Horizon – B22ia 4mm root tube at 0.8m
 Horizon – 2C1u Wood at 2.3m; Coarse fragments at 2.2m
 Horizon – 3C1 wood at 4.6m; EOP - sand did not hold in end of tube
 Observation H2O EC - 20.5 mS/cm; pH 4.6

Project: MWQ Site: 46

Location: 725920 mE 7668520 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Aug-2001

Landscape

Geology: Cza - Unconsolidated Cainozoic
 Substrate Lithology: Unconsolidated material (unidentified) alluvial/colluvial sediments
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 3.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Igneous rock (unidentified)
 Surface Condition: Hard setting

Classifications

ASC: Vertic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Eucalyptus tessellaris; Livistona decipiens
 Lower Stratum: Cynodon dactylon (Couch); Sporobolus species; Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; clay loam; fine sandy, light; massive structures; dry; abrupt to;
A2j	0.10 to 0.15	Light grey (10YR71) dry colour; clay loam; fine sandy, light; massive structures; dry; sharp to;
B21	0.15 to 0.40	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown, very few < 2% fine < 5mm faint orange mottles; fine sandy light medium clay; moderately moist; clear to;
B22	0.40 to 0.90	Grey (10YR51) moist colour; medium clay; lenticular structures; moist; abrupt to;
B23	0.90 to 2.30	Light grey (10YR71) moist colour; many 20-50% coarse 15-30mm prominent orange, few 2-10% coarse 15-30mm prominent brown, few 2-10% medium 5-15mm distinct yellow mottles; fine sandy light clay to fine sandy clay loam, heavy at 2.2m; moderately moist; sharp to;
B24k	2.30 to 3.40	Grey (10YR61) moist colour; common 10-20% coarse 15-30mm prominent brown, few 2-10% coarse 15-30mm prominent orange mottles; medium clay; few 2-10% medium pebbles 6-20mm angular andesite coarse fragments; lenticular structures; common 10-20% medium 2-6mm and coarse 6-20 mm calcareous nodules and soft segregations; moist; abrupt to;
BC	3.40 to 3.70	Grey (5Y61) moist colour; common 10-20% coarse 15-30mm prominent brown mottles; light medium clay; abundant 50-90% medium pebbles 6-20mm and large pebbles 20-60mm angular andesite coarse fragments; wet; sharp to;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.5	4.3	
0.30	5.6	4.5	
0.60	6.4	5.3	
0.80	7.5	6.0	
1.00	7.4	6.3	
1.50	8.0	6.3	
2.00	7.6	6.1	
2.50	6.8	6.2	
3.00	6.9	6.1	
3.50	7.1	6.3	
3.70	7.5	5.9	

Notes:
 Horizon - BC R -EOP
 Observation H2O EC - 31.9 mS/cm; pH 7.2

Project: MWQ Site: 47

Location: 725470 mE 7668970 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: *Livistona decipiens*
 Lower Stratum: *Cynodon dactylon* (Couch); *Cyperus* species; *Brachiaria mutica* (Para grass); *Setaria* species; *Sporobolus* species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm faint brown mottles; silty light medium clay; weak 5-10mm parting to weak 2-5mm subangular blocky structures; moderately moist; clear to;
B21	0.10 to 0.50	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm distinct brown mottles; silty medium clay; moist; gradual to;
B22	0.50 to 1.40	Grey (10YR51) moist colour; few 2-10% medium 5-15mm prominent brown, common 10-20% very coarse > 30mm faint dark, few 2-10% fine < 5mm prominent orange mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded unconsolidated material (unidentified) coarse fragments; moist; abrupt to;
2B21	1.40 to 1.75	Grey (10YR51) moist colour; few 2-10% coarse 15-30mm distinct grey, few 2-10% coarse 15-30mm distinct yellow mottles; light clay; moist; clear
2B22k	1.75 to 2.20	Light grey (10YR71) moist colour; common 10-20% coarse 15-30mm prominent orange mottles; sandy light clay; very few < 2% medium pebbles 6-20mm subangular unconsolidated material (unidentified) coarse fragments; very few < 2% medium 2-6 mm calcareous nodules and soft segregations; moist; abrupt to;
2B23k	2.20 to 2.75	Yellowish brown (10YR56) moist colour; common 10-20% medium 5-15mm prominent grey, common 10-20% medium 5-15mm prominent gley mottles; fine sandy medium clay; common 10-20% medium pebbles 6-20mm angular andesite and rounded unconsolidated material (unidentified) coarse fragments; few 2-10% medium 2-6 mm calcareous nodules and soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.8	
0.30	6.3	5.2	
0.60	6.7	5.7	
0.80	7.2	5.8	
1.00	7.6	6.0	
1.25	6.9	6.3	
1.50	6.9	6.8	
1.75	6.9	6.1	
2.00	8.0	6.5	
2.50	7.8	6.4	
2.75	6.9	6.1	

Notes:
 Horizon – 2B23kEOP - Rock

Project: MWQ Site: 48

Location: 725550 mE 7668735 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; silty light clay; weak 2-5mm subangular blocky structures; wet; gradual to;
B21i	0.30 to 0.65	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent brown, very few < 2% fine < 5mm distinct red mottles; silty light clay; strong 5-10mm prismatic parting to strong 2-5mm subangular blocky structures; wet; abrupt to;
B22ia	0.65 to 1.10	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), very few < 2% fine < 5mm distinct brown mottles; silty light clay; weak 2-5mm subangular blocky structures; wet; abrupt to;
C1u	1.10 to 1.30	Dark grey (10YR41) moist colour; silty light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	3.0	
0.30	5.3	3.7	
0.60	4.2	2.9	
0.80	4.0	3.2	
1.00	3.9	2.5	
1.25	4.6	2.2	

Notes:

Horizon – C1u EOP - Gouge auger would not go deeper
 Observation H2O EC - 11.4 mS/cm; pH 5.2

Project: MWQ Site: 49

Location: 725220 mE 7668660 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: *Livistona decipiens*
 Mid Stratum: *Melaleuca viridiflora* (Broad-leaved tea-tree)
 Lower Stratum: *Imperata cylindrica* (Blady grass); *Sporobolus* species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark brown (10YR22) moist colour; moderate 2-5mm cast structures; sharp to;
B21	0.05 to 0.25	Very dark brown (10YR22) moist colour; very few < 2% fine < 5mm distinct grey mottles; light medium clay; moderate 5-10mm lenticular parting to moderate 5-10mm subangular blocky structures; moderately moist; clear to;
B22i	0.25 to 0.90	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% coarse 15-30mm prominent dark mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; lenticular structures; moist
B23ia	0.90 to 1.15	Grey (5Y51) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), many 20-50% coarse 15-30mm prominent brown, few 2-10% medium 5-15mm prominent dark mottles; light medium clay; moist; abrupt to;
2D1	1.15 to 1.80	Grey (5Y51) moist colour; common 10-20% medium 5-15mm distinct brown, very few < 2% fine < 5mm prominent orange, very few < 2% coarse 15-30mm prominent dark mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded detrital sedimentary rock (unidentified) coarse fragments; very few < 2% coarse 6-20 mm ferruginous nodules and fine <2mm manganiferous soft segregations; moist; clear to;
2D2k	1.80 to 2.20	Olive grey (5Y52) moist colour; few 2-10% fine < 5mm faint brown mottles; light medium clay; very few < 2% medium pebbles 6-20mm angular detrital sedimentary rock (unidentified) coarse fragments; few 2-10% medium 2-6 mm and coarse 6-20mm calcareous nodules and soft segregations; moist;

2D3	2.20 to 2.50	Grey (5Y51) moist colour; very few < 2% medium 5-15mm prominent orange, very few < 2% fine < 5mm faint brown mottles; light clay; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm angular andesite and subrounded detrital sedimentary rock coarse fragments; moist; clear to;
2D4	2.50 to 2.80	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm prominent grey mottles; light medium clay; very few < 2% medium pebbles 6-20mm subrounded andesite coarse fragments; very few < 2% fine <2 mm and medium 2-6mm manganiferous soft segregations; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.8	4.5	1.50	6.9	8.2
0.30	5.7	4.3	1.75	7.2	8.4
0.60	4.8	3.8	2.00	6.8	5.8
0.80	5.7	5.7	2.25	7.0	6.0
1.00	6.1	5.5	2.50	6.8	6.1
1.25	6.4	5.6	2.75	6.8	5.9

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 2D4 EOP - rock at 2.8m
 Observation H2O EC - 16.8 mS/cm; pH 6.9

Project: MWQ Site: 50

Location: 725680 mE 7667870 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Acidic-sodic, Kurosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Livistona decipiens
 Lower Stratum: Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; clay loam; fine sandy; moderate 2-5mm cast structures; moderately moist; abrupt to;
A2j	0.15 to 0.30	Dark greyish brown (10YR42) moist, light grey (10YR72) dry colour; clay loam; fine sandy; weak 2-5mm cast structures; moderately moist; sharp to;
B2	0.30 to 0.50	Brown (10YR53) moist colour; many 20-50% fine < 5mm prominent orange, few 2-0% fine < 5mm prominent grey mottles; fine sandy medium clay; moderately moist; diffuse to;
2B2	0.50 to 1.25	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; clay loam; fine sandy; massive structures; moist; abrupt to;
3C1	1.25 to 1.80	Light brownish grey (2.5Y62) moist colour; few 2-10% medium 5-15mm prominent brown, very few < 2% fine < 5mm distinct grey mottles; fine sand; single grain structures; wet; clear to;
4C1u	1.80 to 3.80	Dark grey (2.5Y40) moist colour; fine sand with 1cm clay lens at 2.1, 2.3 and 3.0m; single grain structures; wet; abrupt to;
5D1	3.80 to 4.30	Greenish grey (5GY51) moist colour; few 2-10% medium 5-15mm distinct yellow mottles; sand with a 4cm clay plug at 3.8m; very few < 2% small pebbles 2-6mm rounded quartz and feldspar coarse fragments; single grain structures; wet;
6D1	4.30 to 4.60	Greenish grey (5GY51) moist colour; common 10-20% fine < 5mm distinct grey, few 2-10% fine < 5mm prominent brown, very few < 2% fine < 5mm faint pale mottles; fine sandy medium clay; massive structures; moderately moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.7	4.4	2.25	8.0	1.7
0.30	5.7	4.7	2.50	7.4	1.6
0.40	5.1		2.75	7.0	1.8
0.60	5.4	4.8	3.00	7.9	1.7
0.80	5.0	4.8	3.25	7.9	1.9
1.00	5.3	4.5	3.50	8.0	1.9
1.25	5.2	4.4	3.75	7.6	1.7
1.50	5.8	4.3	4.00	7.2	2.2
1.75	7.0	4.1	4.25	7.2	5.9
2.00	6.7	1.7	4.50	7.3	6.0

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 4C1u Mangrove root at 2.5 and 3.2 m
 Horizon – 6D1 EOP - VVC would not penetrate further
 Observation H2O EC and pH - could not sample

Project: MWQ Site: 51

Location: 725570 mE 7668170 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Paspalum vaginatum (Saltwater couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; common 10-20% medium 5-15mm distinct brown mottles; silty light clay; moderately moist; abrupt to;
B21	0.15 to 0.60	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent red mottles; silty light clay; moist; abrupt to;
B22ia	0.60 to 0.90	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm prominent red mottles; silty light clay; moist; abrupt to;
C1u	0.90 to 1.10	Greyish brown (10YR52) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	1.10 to 1.70	Grey (10YR61) moist colour; few 2-10% coarse 15-30mm faint grey mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and rhyolite coarse fragments; single grain structures; wet;
3Cu	1.70 to 2.30	Dark grey (2.5Y40) moist colour; fine sand, clay lense at 2m; single grain structures; wet; sharp to;
3C2u	2.30 to 2.70	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4Cu	2.70 to 2.85	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; abrupt to;
5D1	2.85 to 3.10	Dark grey (2.5Y40) moist colour; medium clay; moderate <2mm lenticular structures; moist; abrupt to;
5D2	3.10 to 3.30	Dark greenish grey (5G41) moist colour; many 20-50% coarse 15-30mm prominent grey mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded andesite coarse fragments; weak <2mm lenticular structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.6	
0.30	4.5	3.5	
0.60	4.2	2.7	
0.80	4.3	2.6	
1.00	4.4	2.4	
1.25	4.6	1.5	
1.50	4.7	1.9	
1.75	4.7	1.5	
2.00	5.2	1.9	
2.25	5.2	2.0	
2.50	6.1	1.8	
2.75	5.6	2.0	
3.00	6.1	1.9	
3.25	6.3	1.8	

Notes:

Horizon - 4Cu Mangrove root at 2.7m
 Horizon - 5D2 EOP - VVC could not penetrate deeper
 Location Narrow channel that joins the 2 wetlands
 Observation H2O EC - 4.9 mS/cm; pH 4.4

Project: MWQ Site: 52

Location: 725540 mE 7668190 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Livistona decipiens
 Mid Stratum: Lantana camara (Lantana)
 Lower Stratum: Imperata cylindrica (Blady grass); Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown mottles; fine sandy light clay; weak 2-5mm cast structures; moderately moist; abrupt to;
B21	0.25 to 0.45	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm prominent orange, common 10-20% medium 5-15mm distinct yellow, few 2-10% medium 5-15mm distinct grey mottles; fine sandy medium clay to a clay loam fine sandy; moist; clear to;
2B22ia	0.45 to 0.80	Greyish brown (10YR52) moist colour; many 20-50% coarse 15-30mm prominent brown, common 10-20% medium 5-15mm prominent red, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; fine sandy light medium clay; moist; gradual to;
2B23ia	0.80 to 1.50	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; fine sandy light clay becoming clay loam; fine sandy; moist; abrupt to;
2C1u	1.50 to 1.65	Grey (10YR51) moist colour; very few < 2% medium 5-15mm distinct grey mottles; silty light clay; wet; abrupt to;
3C1	1.65 to 2.20	Grey (10YR61) moist colour; very few < 2% fine < 5mm faint grey mottles; fine sand with a thin clay lens at 1.7m; single grain structures; wet; sharp to;
4C1u	2.20 to 3.00	Dark grey (7.5YR40) moist colour; silty light clay with thin sand lenses at 2.25 and 2.3m; massive structures; wet; sharp to;
5D1	3.00 to 3.40	Greenish grey (5GY51) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium clay; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm angular unconsolidated material (unidentified) coarse fragments; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.7	4.4	
0.30	4.9	4.1	
0.60	4.6	3.7	
0.80	4.5	3.5	
1.00	4.5	3.4	
1.25	4.7	3.6	
1.50	4.7	3.3	
1.75	5.1	4.1	
2.00	6.6	4.4	
2.25	5.3	1.8	
2.50	5.9	1.2	
2.75	6.2	1.2	
3.00	6.5	2.1	
3.25	6.8	5.2	

Notes:

Horizon – 5D1 EOP - VVC would not penetrate further
 Observation H2O EC - 1.83 mS/cm; pH 4.4

Project: MWQ Site: 53

Location: 725130 mE 7667770 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Massive, Brown, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Livistona decipiens; Melaleuca viridiflora (Broad-leaved tea-tree);
 Melaleuca dealbata (Swamp tea-tree); Eucalyptus tessellaris
 Lower Stratum: Cynodon dactylon (Couch); Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm distinct brown mottles; medium clay; weak 10-20mm subangular blocky structures; moderately moist; clear to;
B21	0.10 to 0.40	Black (10YR21) moist colour; few 2-10% medium 5-15mm distinct brown mottles; medium heavy clay; lenticular structures; moderately moist; clear to;
B22	0.40 to 0.70	Grey (10YR51) moist colour; few 2-10% very coarse > 30mm prominent dark, many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moist; gradual to;
B23ia	0.70 to 1.30	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent yellow jarositic (from pyrite) mottles; silty light clay; moist; abrupt to;
2B21ia	1.30 to 1.65	Grey (10YR61) moist colour; few 2-10% fine < 5mm prominent yellow, few 2-10% fine < 5mm prominent brown mottles; fine sandy light clay; common 10-20% medium pebbles 6-20mm subrounded andesite coarse fragments; moist; abrupt to;
3D1	1.65 to 2.05	Greenish grey (5GY61) moist colour; common 10-20% fine < 5mm distinct grey, common 10-20% fine < 5mm distinct gley, very few < 2% medium 5-15mm prominent brown mottles; fine sandy light medium clay; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm subangular andesite coarse fragments; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.8	3.5	
0.30	4.5	3.6	
0.60	4.2	3.7	
0.80	4.2	2.7	
1.00	4.0	3.3	
1.25	4.0	3.3	
1.50	4.1	3.9	
1.75	4.3	3.3	
2.00	5.8	5.3	

Notes:

Horizon – 3D1 EOP - Rock at 2.05m; original land surface just overlying bedrock
 Observation H2O EC - 11.1 mS/cm; pH 4.2

Project: MWQ Site: 54

Location: 725830 mE 7668010 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classification

ASC: Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Paspalum vaginatum (Saltwater couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent brown mottles; fine sandy light medium clay; weak 5-10mm subangular blocky structures; abrupt to;
B21	0.15 to 0.50	Grey (10YR61) moist colour; very few < 2% fine < 5mm prominent red, many 20-50% medium 5-15mm distinct brown mottles; fine sandy light medium clay; diffuse to;
B22	0.50 to 0.90	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent grey, common 10-20% medium 5-15mm prominent brown mottles; sandy light clay; clear to;
2C1u	0.90 to 1.60	Grey (10YR51) moist colour; fine sand; single grain structures; abrupt to;
2C2u	1.60 to 2.50	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; abrupt to;
3C1u	2.50 to 3.20	Dark grey (2.5Y40) moist colour; sand; single grain structures;
4C1u	3.20 to 3.60	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; sharp to;
5Cu	3.60 to 3.80	Dark grey (2.5Y40) moist colour; medium clay; weak 2-5mm lenticular structures; abrupt to;
6D1	3.80 to 4.00	Olive (5Y53) moist colour; common 10-20% fine < 5mm prominent grey mottles; medium heavy clay; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite coarse fragments; weak 2-5mm lenticular structures; very few < 2% fine < 2 mm calcareous soft segregations;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.6	2.9	
0.30	5.1	3.8	
0.60	5.5	4.2	
0.80	4.5	2.7	
1.00	4.8	2.7	
1.25	5.0	1.0	
1.50	5.0	1.0	
1.75	5.5	1.0	
2.00	5.7	1.0	
2.25	5.7	1.2	
2.50	5.8	1.0	
2.75	5.8	1.3	
3.00	6.6	1.3	
3.25	6.1	1.5	
3.50	6.3	1.6	
3.75	6.2	1.2	
4.00	6.3	6.1	

Notes:

Horizon – 2C2u wood fragments at 1.6m
 Horizon – 4C1u wood fragments at 3.2m
 Horizon – 6D1 EOP - too tight for VVC
 Observation H2O EC - 14.5 mS/cm; pH 4.4

Project: MWQ Site: 55

Location: 726050 mE 7667810 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 4-Aug-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Supratidal flat

Runoff: No record

Elevation: 2.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Cryptogam surface, Saline

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Dark greyish brown (2.5Y42) moist colour; fine sandy light clay; massive structures; moist; sharp to;
B2	0.05 to 0.40	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent dark, common 10-20% fine < 5mm prominent brown mottles; silty light clay; moderate 10-20mm parting to strong 2-5mm subangular blocky structures; many 20-50% medium 2-6 mm manganiferous soft segregations; wet;
C1u	0.40 to 1.20	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; clear to;
C2u	1.20 to 2.75	Very dark grey (5Y31) moist colour; silty light clay; massive structures; wet; abrupt to;
C3u	2.75 to 2.95	Black (2.5Y20) moist colour; silty light clay; massive structures; wet; gradual to;
2D	2.95 to 3.20	Greenish grey (5G51) moist colour; sandy medium heavy clay; very few < 2% small pebbles 2-6mm rounded gravel coarse fragments; massive structures; very few < 2% coarse 6-20 mm calcareous nodules segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	7.9	
0.30	6.5	6.0	
0.60	6.2	1.6	
0.80	5.9	1.3	
1.00	6.0	1.7	
1.25	6.0	1.4	
1.50	6.0	1.0	
1.75	6.1	0.6	
2.00	6.1	1.5	
2.25	6.1	1.4	
2.50	6.1	1.1	
2.75	6.3	1.3	
3.00	6.5	1.7	
3.20	6.4	1.9	

Notes:

Horizon - 2D EOP - too tight for VVC
 Observation H2O EC - 46.4 mS/cm; pH 7.0

Project: MWQ Site: 56

Location: 724660 mE 7668180 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Levee
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Eutrophic, Black, DERMOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Livistona decipiens; Terminalia sericocarpa (Damson, sovereignwood);
 Pittosporum ferrugineum (Rusty Pittosporum)
 Lower Stratum: Tussock grass
 Species: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; very few < 2% fine < 5mm distinct brown mottles; silty medium clay; weak 2-5mm cast parting to moderate 20-50mm parting to moderate 2-5mm subangular blocky structures; moderately moist; diffuse to;
B2	0.30 to 1.20	Black (2.5Y20) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium heavy clay; few 2-10% fine <2 mm manganiferous nodules segregations; moderately moist;
2B21	1.20 to 1.60	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm prominent brown mottles; medium clay; moderately moist; gradual to;
2B22	1.60 to 2.00	Grey (10YR61) moist colour; few 2-10% coarse 15-30mm prominent brown, common 10-20% medium 5-15mm prominent brown, few 2-10% medium 5-15mm distinct grey, very few < 2% fine < 5mm distinct pale mottles; medium clay; very few < 2% fine <2 mm gypseous crystals segregations; moderately moist; gradual to;
2B23	2.00 to 2.50	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent brown, very few < 2% fine < 5mm distinct yellow mottles; light medium clay; very few < 2% fine <2 mm gypseous crystals segregations; moist; gradual to;
2B24ia	2.50 to 2.70	Dark grey (N40) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% coarse 15-30mm prominent brown, few 2-10% medium 5-15mm prominent pale mottles; silty light clay; very few < 2% medium pebbles 6-20mm subangular andesite coarse fragments; wet; abrupt to;

2Cu	2.70 to 2.80	Dark grey (N40) moist colour; silty light clay; wet; sharp to;
3C	2.80 to 3.20	Dark greenish grey (5BG41) moist colour; very few < 2% fine < 5mm distinct pale mottles; fine sandy clay loam; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm subangular andesite coarse fragments; wet

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	3.3	
0.30	5.9	3.2	
0.60	6.2	5.2	
0.80	6.4	7.1	
1.00	6.5	6.4	
1.25	6.7	6.1	
1.50	6.8	5.4	
1.75	6.3	5.3	
2.00	5.2	4.7	
2.25	3.5	1.8	
2.50	3.8	1.2	
2.60	4.2		
2.75	5.0	0.7	
3.00	6.5	1.7	

Notes:

Horizon - 3C EOP - hand auger stopped by bedrock?
 Observation H2O EC - 2.7 mS/cm; pH 5.9

Project: MWQ Site: 57

Location: 724310 mE 7668360 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 6.2 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tereticornis (Blue gum)
 Lower Stratum: Brachiaria mutica (Para grass); Sporobolus species

Profile

Depth (m)	Description
A1 0.00 to 0.05	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct brown mottles; light clay; weak 5-10mm subangular blocky structures; moist; sharp
B21 0.05 to 0.60	Grey (10YR61) moist colour; common 10-20% fine < 5mm distinct brown mottles; medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moist;
B22k 0.60 to 1.20	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct brown mottles; medium clay; few 2-10% fine <2mm, coarse 6-20mm and very coarse 20-60mm calcareous nodules and soft and manganiferous soft segregations; moist;
B23 1.20 to 1.80	Light brownish grey (10YR62) moist colour; few 2-10% medium 5-15mm distinct yellow mottles; light clay; very few < 2% fine <2 mm manganiferous nodules and soft segregations; moist; gradual to;
B24k 1.80 to 2.20	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent gley mottles; light medium clay; few 2-10% medium 2-6 mm calcareous concretions and soft segregations; moist; gradual to;
B25 2.20 to 2.50	Grey (10YR61) moist colour; few 2-10% coarse 15-30mm distinct brown, many 20-50% medium 5-15mm prominent gley mottles; light clay; very few < 2% fine <2 mm calcareous soft segregations; moist; gradual to;
B26 2.50 to 3.50	Light brownish grey (2.5Y62) moist colour; common 10-20% coarse 15-30mm prominent brown, common 10-20% medium 5-15mm prominent gley mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular unconsolidated material (unidentified) coarse fragments; very few < 2% fine <2 mm manganiferous concretions segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.8	5.8	
0.60	6.7	5.9	
1.00	6.6	6.2	
1.50	7.3	8.9	
2.00	7.4	6.6	
2.50	7.5	6.7	
3.00	7.3	6.1	
3.50	7.2	8.6	

Notes:
 Horizon – B26 EOP - gravel lens at 3.5m
 Observation H2O EC - 3.2 mS/cm; pH 7.3

Project: MWQ Site: 58

Location: 724620 mE 7667915 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 16-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Backplain

Runoff: No record

Elevation: 3.8 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Endocalcareous-endohypersodic, Self-mulching, Black, VERTOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Maccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1p	0.00 to 0.01	Black (10YR21) moist colour; medium heavy clay; strong 2-5mm parting to weak <2mm subangular blocky structures; dry; sharp to;
A2p	0.01 to 0.20	Medium heavy clay; massive structures; dry;
B21	0.20 to 0.65	Black (10YR21) moist colour; medium clay; strong lenticular structures; moderately moist; diffuse to;
B22	0.65 to 1.10	Grey (5Y61) moist colour; many 20-50% very coarse > 30mm prominent dark, very few < 2% fine < 5mm distinct brown mottles; medium clay; very few < 2% small pebbles 2-6mm rounded acid volcanic coarse fragments; moist; diffuse to;
B23k	1.10 to 1.90	Grey (5Y61) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm distinct gley mottles; medium clay; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm subangular acid volcanic coarse fragments; common 10-20% medium 2-6 mm and coarse 6-20mm calcareous nodules and soft and manganiferous soft segregations; moist; diffuse to;
B24k	1.90 to 3.25	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subangular acid volcanic coarse fragments; common 10-20% fine <2 mm, medium 2-6mm, coarse 6-20mm and very coarse 20-60mm calcareous nodules and soft and manganiferous soft segregations; moist; diffuse to;
B25	3.25 to 4.10	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; sandy light medium clay; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subangular acid volcanic coarse fragments; few 2-10% fine <2 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.6	
0.60	6.8	6.1	
1.00	7.2	6.0	
1.50	7.3	10.0	
2.00	7.5	8.5	
2.50	8.0	9.0	
3.00	7.8	7.9	
3.50	8.2	8.9	
4.00	7.5	9.1	

Notes:

Horizon – B25 EOP - rock at 4.1m

Observation H2O EC - 1.8 mS/cm; pH 7.7

Project: MWQ Site: 59

Location: 724800 mE 7667745 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Surface crust

Classifications

ASC: Sulfuric, Epipedal, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.07	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium heavy clay; weak 5-10mm parting to moderate 2-5mm subangular blocky structures; moderately moist; clear to;
B2	0.07 to 0.45	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown mottles; lenticular structures; moist; abrupt to;
2B21	0.45 to 0.55	Black (10YR21) moist colour; few 2-10% fine < 5mm prominent red, few 2-10% fine < 5mm prominent orange, very few < 2% fine < 5mm distinct yellow mottles; lenticular structures; moist; abrupt to;
2B22ia	0.55 to 0.90	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent red, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), very few < 2% coarse 15-30mm prominent dark mottles; light medium clay; moist; clear to;
2B23ia	0.90 to 1.30	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm prominent brown mottles; light clay; moist; gradual to;
3B24ia	1.30 to 1.70	Grey (5Y61) moist colour; few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), very few < 2% medium 5-15mm distinct grey, few 2-10% medium 5-15mm prominent brown, very few < 2% coarse 15-30mm prominent yellow mottles; light clay; moist; gradual to;
3D	1.70 to 3.30	Grey (5Y61) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent grey mottles; sandy light medium clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subangular acid volcanic coarse fragments; few 2-10% small pebbles 2-6mm and medium 2-6 mm calcareous nodules and manganiferous soft segregations; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.3	
0.30	5.5	4.0	
0.60	4.5	3.3	
0.80	4.2	3.5	
1.00	4.4	2.5	
1.25	4.3	2.5	
1.50	4.3	2.8	
1.75	4.8	3.5	
2.00	5.1	3.7	
2.25	6.4	6.9	
2.50	6.5	5.7	
2.75	6.6	7.5	
3.00	6.9	6.2	
3.25	7.0	7.9	

Notes:

Horizon – 3D EOP - rock at 3.3 m
 Observation H2O EC - 9.4 mS/cm; pH 5.6

Project: MWQ Site: 60

Location: 725490 mE 7666410 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 17-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Backplain

Runoff: No record

Elevation: 3.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications

ASC: Endohypersodic, Epipedal, Aquic, VERTOSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; very few < 2% fine < 5mm distinct orange mottles; light medium clay; moderate 2-5mm subangular blocky structures; moist; abrupt to;
B21	0.05 to 0.40	Black (10YR21) moist colour; common 10-20% medium 5-15mm prominent grey mottles; light medium clay; lenticular structures; moist; diffuse to;
B22	0.40 to 1.00	Grey (2.5Y60) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% medium 5-15mm prominent grey mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; very few < 2% fine <2 mm and medium 2-6mm calcareous nodules and soft segregations; moist;
B23	1.00 to 2.00	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% medium 5-15mm prominent grey mottles; light medium clay; very few < 2% medium pebbles 6-20mm subrounded andesite and quartz coarse fragments; very few < 2% fine <2 mm manganiferous soft segregations; moist;
B24	2.00 to 2.10	Grey (5Y61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light clay; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm subrounded andesite coarse fragments; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.8	5.5	
0.30	7.1	5.6	
0.60	6.8	5.6	
0.80	6.8	5.4	
1.00	6.9	5.7	
1.25	7.2	5.5	
1.50	7.1	5.5	
1.75	7.2	8.4	
2.00	7.3	5.5	

Notes:

Horizon – B24 EOP - rock at 2.1m

Location Soccer ground - Eaglemount Heights

Observation H2O EC - 1.3 mS/cm; pH 7.8

Project: MWQ Site: 61

Location: 724435 mE 7667035 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.7 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Endocalcareous-endohypersodic, Epipedal, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tereticornis (Blue gum)
 Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Neptunia gracilis (Sensitive plant); Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; moderate 2-5mm subangular blocky structures; moderately moist; clear to;
B21	0.10 to 0.45	Black (10YR21) moist colour; few 2-10% fine < 5mm faint orange mottles; medium clay; moist; gradual to;
B22	0.45 to 0.75	Grey (10YR51) moist colour; many 20-50% fine < 5mm distinct brown, common 10-20% fine < 5mm distinct yellow mottles; medium clay; very few < 2% medium 2-6 mm calcareous nodules segregations; moist; diffuse to;
B23	0.75 to 1.25	Grey (2.5Y50) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% medium 5-15mm distinct grey, few 2-10% medium 5-15mm distinct gley mottles; medium clay; very few < 2% medium pebbles 6-20mm subrounded andesite coarse fragments; very few < 2% fine < 2mm and medium 2-6mm calcareous nodules segregations; moist; clear to;
B24	1.25 to 1.75	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm distinct yellow, many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm prominent gley mottles; fine sandy medium clay; very few < 2% medium pebbles 6-20mm subrounded andesite coarse fragments; very few < 2% fine < 2mm and medium 2-6 mm calcareous nodules segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	4.9	
0.30	7.8	5.2	
0.60	7.1	5.7	
0.80	6.9	5.8	
1.00	6.9	4.8	
1.25	7.2	5.8	
1.50	7.6	6.1	
1.75	7.3	5.9	

Notes:
 Horizon – B24 EOP - rock at 1.75
 Location Norths football club

Project: MWQ Site: 62

Location: 725340 mE 7666670 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Sulfuric, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.02	Black (10YR21) moist colour; medium clay; moderate <2mm subangular blocky structures; dry; sharp to;
B2	0.02 to 0.70	Black (10YR21) moist colour; few 2-10% fine < 5mm prominent brown mottles; medium clay; very few < 2% large pebbles 20-60mm angular quartz coarse fragments; lenticular structures; moderately moist; gradual to;
2B21i	0.70 to 1.30	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent brown mottles; light medium clay; very few < 2% large pebbles 20-60mm angular quartz coarse fragments; moist; diffuse to;
2B22ia	1.30 to 1.75	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct brown, few 2-10% fine < 5mm distinct gley mottles; light medium clay; moist; abrupt to;
3D1ia	1.75 to 1.95	Grey (5Y61) moist colour; very few < 2% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct brown, few 2-10% fine < 5mm distinct gley mottles; light medium clay; moist; clear to;
3D2	1.95 to 2.75	Greyish brown (2.5Y52) moist colour; very few < 2% fine < 5mm distinct brown, few 2-10% medium 5-15mm distinct gley mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded unconsolidated material (unidentified) coarse fragments; very few < 2% fine < 2 mm and very coarse 20-60mm calcareous soft segregations from 2.5m only; moist; clear to;
4C	2.75 to 4.00	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm distinct pale, few 2-10% fine < 5mm distinct gley mottles; clay loam; sandy; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm angular granodiorite coarse fragments; massive structures; few 2-10% fine < 2 mm calcareous nodules and soft segregations; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.8	4.5	
0.30	5.3	3.9	
0.60	4.7	4.1	
0.80	4.5	3.8	
1.00	4.2	3.5	
1.25	4.6	3.7	
1.50	4.7	3.9	
1.75	5.5	5.0	
2.00	6.5	5.9	
2.25	7.0	5.8	
2.50	7.2	5.9	
2.75	7.4	6.0	
3.00	7.6	6.4	
3.25	6.1	6.1	
3.50	7.8	7.0	
3.75	8.4	6.6	
4.00	8.1	6.4	

Notes:

Horizon – 4C EOP - 3.45 pm on Friday; weathered granodiorite; Coarse fragments full of FeS2 flakes

Project: MWQ Site: 63

Location: 724565 mE 7665970 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Epipedal, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (2.5Y20) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium clay; weak 5-10mm parting to moderate 2-5mm subangular blocky structures; moderately moist;
B2	0.05 to 0.90	Black (7.5YR20) moist colour; very few < 2% fine < 5mm distinct grey, very few < 2% fine < 5mm distinct brown mottles; medium clay; lenticular structures; moist; gradual to;
2B21i	0.90 to 1.75	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, very few < 2% coarse 15-30mm prominent orange mottles; light medium clay; moist; diffuse to;
2B22i	1.75 to 2.00	Grey (5Y51) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent grey mottles; fine sandy light clay; moist
2C1u	2.00 to 4.00	Very dark grey (2.5Y30) moist colour; few 2-10% fine < 5mm prominent grey mottles; silty light clay with 1mm bands of fine sand every 2 to 5cm; massive structures; wet; sharp to;
3C1u	4.00 to 4.20	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4D1	4.20 to 4.40	Greenish grey (5G61) moist colour; few 2-10% fine < 5mm distinct gley mottles; sandy light medium clay; very few < 2% medium pebbles 6-20mm subangular rhyolite coarse fragments; massive structures; few 2-10% medium 2-6mm calcareous nodules and soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	3.3	
0.30	5.9	4.8	
0.60	6.2	5.2	
0.80	6.4	5.3	
1.00	5.9	5.1	
1.25	5.0	3.5	
1.50	4.9	3.3	
1.75	4.3	2.7	
2.00	5.0	2.8	
2.25	5.3	1.9	
2.50	5.7	1.2	
2.75	5.9	1.6	
3.00	6.2	1.4	
3.25	6.9	1.4	
3.50	6.4	1.4	
3.75	6.6	1.4	
4.00	6.8	1.4	
4.10	1.5		
4.25	7.0	1.8	
4.40	7.3	6.1	

Notes:

Horizon – 4D1 EOP - rock at 4.4m
 Observation H2O EC - 5.6 mS/cm; pH 6.3

Project: MWQ Site: 64

Location: 724690 mE 7665705 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Endocalcareous-endohypersodic, Epipedal, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch); Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.01	Black (7.5YR20) moist colour; medium clay; moderate 2-5mm subangular blocky structures; moderately moist; abrupt to;
B21	0.01 to 0.50	Black (7.5YR20) moist colour; medium heavy clay; very few < 2% medium pebbles 6-20mm subrounded andesite coarse fragments; lenticular structures; very few < 2% coarse 6-20 mm calcareous nodules segregations; moist; clear to;
B22	0.50 to 1.75	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium heavy clay; few 2-10% fine <2mm, coarse 6-20mm and very coarse 20-60mm calcareous nodules and soft and manganiferous soft segregations; moist; abrupt to;
B23	1.75 to 1.95	Yellowish brown (10YR56) moist colour; many 20-50% very coarse > 30mm prominent grey, common 10-20% coarse 15-30mm prominent red mottles; medium clay; few 2-10% fine <2mm and medium 2-6 mm calcareous nodules and manganiferous soft segregations; moist
B24	1.95 to 2.80	Light grey (10YR71) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; common 10-20% medium 2-6 mm calcareous nodules and soft and manganiferous soft segregations; moist; gradual to;
B25	2.80 to 3.60	Light grey (2.5Y72) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct grey mottles; medium clay; very few < 2% fine <2 mm calcareous nodules and soft segregations; moist; clear to;
2B2	3.60 to 4.10	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent orange mottles; sandy medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moist; clear to;
3C	4.10 to 4.50	Coarse sandy loam; very few < 2% medium pebbles 6-20mm angular granite coarse fragments; massive structures; common 10-20% medium 2-6 mm manganiferous and calcareous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.2	5.3	
0.30	7.3		
0.60	7.3	9.0	
0.80	7.3		
1.00	7.2	6.3	
1.50	7.1	6.2	
2.00	7.5	9.0	
2.50	7.3	6.9	
3.00	7.3	6.1	
3.50	7.3	6.0	
4.00	7.8	6.0	
4.50	8.0	9.3	

Notes:

Horizon – 3C EOP - too hard to dig by hand auger
 Observation H2O EC - 2.3 mS/cm; pH 8.1

Project: MWQ Site: 65

Location: 725125 mE 7667405 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 22-Aug-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Backplain

Runoff: No record

Elevation: 2.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications

ASC: Sulfuric, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Livistona decipiens

Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)

Lower Stratum: Paspalum vaginatum (Saltwater couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty light clay; weak 10-20mm parting to weak 2-5mm subangular blocky structures; sharp to;
2B21i	0.15 to 0.80	Grey (10YR51) moist colour; few 2-10% fine < 5mm prominent red, many 20-50% medium 5-15mm prominent brown mottles; light medium clay; very few < 2% medium 2-6 mm ferruginous tubules segregations; gradual to;
2B22i	0.80 to 1.20	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct grey mottles; silty light clay; massive structures; abrupt to;
2C1u	1.20 to 1.75	Dark grey (2.5Y40) moist colour; very few < 2% fine < 5mm distinct gley mottles; silty light clay; massive structures; sharp to;
3C1u	1.75 to 1.90	Dark grey (2.5Y40) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded andesite coarse fragments; single grain structures; abrupt to;
4C	1.90 to 2.10	Dark grey (2.5Y40) moist colour; coarse sand; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm subrounded andesite and large pebbles 20-60mm rounded shell coarse fragments; single grain structures; sharp to;
5D	2.10 to 2.40	Greenish grey (5GY51) moist colour; common 10-20% medium 5-15mm distinct gley mottles; sand; very few < 2% small pebbles 2-6mm subrounded andesite coarse fragments; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.9	2.3	
0.30	4.5	2.7	
0.60	4.3	2.8	
0.80	3.8	2.5	
1.00	3.8	2.4	
1.25	3.9	2.3	
1.50	5.8	1.2	
1.75	6.1	0.9	
1.85	6.3	1.7	
2.00	6.7	1.6	
2.25	6.8		

Notes:

Horizon - 4C	Oyster shell fragments
Horizon - 5D	EOP - too tight for VVC
Observation	H2O EC - 17.4 mS/cm; pH 6.5

Project: MWQ Site: 66

Location: 724735 mE 7667350 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Mesotrophic, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; dry; clear to;
B2	0.30 to 0.60	Yellowish brown (10YR54) moist colour; many 20-50% fine < 5mm prominent brown, very few < 2% fine < 5mm distinct dark mottles; fine sandy clay loam, light; moist; gradual to;
2B2	0.60 to 0.85	Yellowish brown (10YR56) moist colour; many 20-50% fine < 5mm prominent grey, few 2-10% fine < 5mm prominent red mottles; clay loam; fine sandy; massive structures; moist; clear to;
3B2	0.85 to 1.40	Grey (10YR61) moist colour; common 10-20% fine < 5mm prominent brown mottles; fine sand; single grain structures; moist; abrupt to;
3C1	1.40 to 1.80	Grey (10YR61) moist colour; fine sand; single grain structures; wet; sharp to;
3C2u	1.80 to 2.85	Grey (2.5Y50) moist colour; fine sand; single grain structures; wet; abrupt to;
4C1u	2.85 to 3.05	Grey (2.5Y50) moist colour; sand with a clay lens; common 10-20% small pebbles 2-6mm subrounded quartz and medium pebbles 6-20mm rounded andesite coarse fragments; single grain structures; wet;
5D?	3.05 to 3.30	Dark greenish grey (5BG41) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy light medium clay; very few < 2% medium pebbles 6-20mm subrounded andesite coarse fragments; weak 2-5mm lenticular structures; few 2-10% fine < 2 mm manganiferous soft segregations; moist

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	3.5	
0.30	5.3	2.8	
0.60	5.5	3.7	
0.80	6.0	4.0	
1.00	6.4	4.2	
1.25	6.8	4.5	
1.50	6.8	3.1	
1.75	7.0	3.5	
2.00	7.2	1.8	
2.25	6.9	1.9	
2.50	7.5	1.8	
2.75	7.8	1.8	
3.00	7.7	2.0	
3.25	8.0	8.1	

Notes:

Horizon – 3C2u Wood at 1.85 m
 Horizon – 5D EOP - VVC could not penetrate any further
 Observation H2O EC - 0.4 mS/cm; pH 6.6

Project: MWQ Site: 67

Location: 724735 mE 7666905 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.28	Black (7.5YR20) moist colour; silty light clay; moderate 10-20mm parting to moderate 2-5mm subangular blocky structures; moist; abrupt to;
B21	0.28 to 0.50	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm distinct grey mottles; silty light clay; strong 5-10mm parting to strong 2-5mm subangular blocky structures; wet; abrupt to;
B22ia	0.50 to 0.70	Dark grey (7.5YR40) moist colour; common 10-20% fine < 5mm distinct yellow, common 10-20% fine < 5mm distinct brown mottles; silty light clay; strong 5-10mm parting to strong 2-5mm subangular blocky structures; wet; clear to;
C1u	0.70 to 2.45	Dark grey (2.5Y40) moist colour; silty light clay; weak 10-20mm subangular blocky in upper 0.3m then massive structures; wet; sharp to;
2D	2.45 to 2.60	Greenish grey (5GY51) moist colour; sandy medium clay; few 2-10% small pebbles 2-6mm subrounded unconsolidated material (unidentified) coarse fragments; weak 10-20mm subangular blocky in the upper 0.3m parting to massive structures; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	3.8	
0.30	4.7	3.6	
0.60	5.9	3.9	
0.80	5.8	3.7	
1.00	5.6	3.6	
1.25	5.6	2.8	
1.50	5.4	1.5	
1.75	5.4	0.9	
2.00	5.6	1.0	
2.25	5.5	1.6	
2.50	6.3	1.6	

Notes:

Horizon – 2D EOP - gouge auger could not penetrate deeper
 Location Salt pan
 Observation H2O EC - 50.2 mS/cm

Project: MWQ Site: 68

Location: 724370 mE 7665530 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Endocalcareous-endohypersodic, Self-mulching, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.02	Black (7.5YR20) moist colour; medium clay; strong 2-5mm subangular blocky structures; dry; abrupt to;
B21	0.02 to 0.40	Black (7.5YR20) moist colour; medium clay; lenticular structures; very few < 2% coarse 6-20 mm calcareous nodules segregations; moist;
B22	0.40 to 1.40	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent gley mottles; medium clay; few 2-10% medium 2-6mm and very coarse 20-60mm calcareous nodules and manganiferous soft segregations; moist;
2B2	1.40 to 2.30	Light brownish grey (10YR62) moist colour; common 10-20% medium 5-15mm prominent gley, common 10-20% medium 5-15mm prominent yellow mottles; medium clay; few 2-10% fine <2mm and medium 2-6mm calcareous nodules and soft and manganiferous soft segregations; moist; abrupt to;
2C1	2.30 to 3.10	Light grey (2.5Y72) moist colour; few 2-10% fine < 5mm prominent gley, few 2-10% fine < 5mm prominent yellow, few 2-10% fine < 5mm prominent brown mottles; sandy light medium clay; few 2-10% fine <2mm and medium 2-6mm calcareous nodules and soft and manganiferous soft segregations; moist; abrupt to;
2C2	3.10 to 4.00	Greenish grey (5G61) moist colour; common 10-20% medium 5-15mm prominent gley mottles; sandy light medium clay; few 2-10% medium pebbles 6-20mm angular andesite coarse fragments; very few < 2% fine <2 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	7.5	6.0	
0.30	7.0	6.2	
0.60	6.9	6.0	
0.80	6.9	6.2	
1.00	7.1	8.3	
1.50	6.9	8.4	
2.00	7.0	8.3	
2.50	7.6	8.7	
3.00	6.8	6.5	
3.50	7.4	5.9	
4.00	6.8	6.2	

Notes:

Horizon – 2B2 patches of weathered rock throughout, bits of feldspar
 Horizon – 2C1 bits of feldspar and quartz
 Horizon – 2C2 EOP - soil would not hold in #4 and too tight for VVC
 Observation H2O EC - 3.8 mS/cm; pH 7.1

Project: MWQ Site: 69

Location: 724940 mE 7665900 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Sulfuric, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1p	0.00 to 0.01	Black (7.5YR20) moist colour; medium clay; moderate 2-5mm subangular blocky structures; dry; sharp to;
A2p	0.01 to 0.20	Medium clay; massive structures; moderately moist; clear to;
B21	0.20 to 0.65	Black (7.5YR20) moist colour; very few < 2% fine < 5mm faint brown mottles; medium clay; lenticular structures; moist; clear to;
B22?	0.65 to 0.95	Black (10YR21) moist colour; few 2-10% medium 5-15mm prominent grey, few 2-10% medium 5-15mm prominent brown mottles; light medium clay; moist; abrupt to;
2B21i	0.95 to 1.40	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent red mottles; light medium clay; moist; abrupt to;
2B22ia	1.40 to 1.70	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct red, few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent brown mottles; light medium clay; moist; abrupt to;
2C	1.70 to 2.00	Dark grey (10YR41) moist colour; light medium clay; very few < 2% medium pebbles 6-20mm subangular unconsolidated material (unidentified) coarse fragments; moist; sharp to;
3D1	2.00 to 2.10	Grey (5Y61) moist colour; few 2-10% fine < 5mm prominent gley, common 10-20% medium 5-15mm prominent pale mottles; sandy light clay; moist; sharp
3D2	2.10 to 2.70	Brown (10YR53) moist colour; few 2-10% fine < 5mm distinct grey, few 2-10% fine < 5mm prominent pale, very few < 2% fine < 5mm distinct yellow, few 2-10% fine < 5mm distinct gley mottles; sandy light clay; moist; abrupt to;
3D3	2.70 to 3.00	Greenish grey (5GY61) moist colour; common 10-20% medium 5-15mm

prominent brown mottles; medium clay; many 20-50% medium pebbles 6-20mm and large pebbles 20-60mm angular unconsolidated material (unidentified) coarse fragments; common 10-20% medium 2-6mm and coarse 6-20 mm calcareous soft segregations; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.4	2.7	1.65	4.5	2.2
0.30	6.1	3.3	1.75	4.5	2.8
0.60	5.9	3.3	2.00	4.3	2.4
0.80	4.6	2.6	2.25	5.7	4.3
1.00	4.5	2.4	2.50	6.2	4.7
1.25	5.3	2.8	2.75	6.9	5.6
1.50	4.9	2.7	3.00	6.8	8.6

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 2B22ia Jarosite started @ 1.4m, but most between 1.6 and 1.7 m
 Horizon – 3D1 and 3D2 weathered rock
 Horizon – 3D3 EOP - discontinued hand augering
 Observation H2O EC - 15.2 mS/cm; pH 5.7

Project: MWQ Site: 70

Location: 724453 mE 7665775 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Sulfuric, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Black (7.5YR20) moist colour; medium clay; massive structures; dry; clear to;
B2	0.20 to 1.00	Black (7.5YR20) moist colour; very few < 2% fine < 5mm distinct grey, very few < 2% fine < 5mm distinct brown mottles; medium clay; lenticular structures; moist; abrupt to;
2B21i	1.00 to 1.70	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% medium 5-15mm prominent red, common 10-20% coarse 15-30mm prominent dark mottles; light medium clay; massive structures; few 2-10% fine <2 mm gypseous crystals segregations; moist; clear to;
2B22ia	1.70 to 2.20	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent brown, very few < 2% fine < 5mm prominent red, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; massive structures; moist; clear to;
2C1	2.20 to 3.30	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
3D	3.30 to 3.50	Greenish grey (5G61) moist colour; few 2-10% medium 5-15mm distinct gley mottles; sandy light medium clay; few 2-10% medium pebbles 6-20mm subrounded andesite and angular quartz coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	4.2	
0.30	6.5	4.5	
0.60	6.6	4.7	
0.80	6.3	4.7	
1.00	5.8	4.3	
1.25	5.2	3.4	
1.50	5.4	3.0	
1.75	5.0	3.1	
2.00	4.9	2.9	
2.25	5.1	3.6	
2.50	5.8	3.2	
2.75	6.2	1.1	
3.00	6.3	1.4	
3.25	6.4	1.3	
3.50	7.6	2.1	

Notes:
 Horizon – B2 mottles at bottom of horizon only
 Horizon – 2B21i Segregations in thin bands throughout
 Horizon – 3D EOP - Too hard for VVC to penetrate

Project: MWQ Site: 71

Location: 725840 mE 7667060 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 3.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch); Cyperus species; Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; fine sandy loam; few 2-10% medium pebbles 6-20mm subrounded andesite and rhyolite coarse fragments; massive structures; dry; abrupt to;
A2j	0.15 to 0.25	Very dark greyish brown (10YR32) moist, light grey (10YR71) dry colour; few 2-10% fine < 5mm prominent brown mottles; fine sandy loam; common 10-20% medium pebbles 6-20mm subrounded andesite and rhyolite coarse fragments; massive structures; dry; sharp to;
B21	0.25 to 0.50	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct brown, common 10-20% fine < 5mm prominent grey mottles; medium clay; many 20-50% medium pebbles 6-20mm and large pebbles 20-60mm rounded andesite and rhyolite coarse fragments; massive structures; moderately moist; gradual to;
B22	0.50 to 1.50	Light grey (2.5Y72) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; many 20-50% medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded andesite and rhyolite coarse fragments; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.6	5.7	
0.30	6.9	6.0	
0.60	8.8	7.0	
0.80	9.5	6.7	
1.00	9.9	6.7	
1.25	9.7	7.1	
1.50	9.9	7.1	

Notes:

Horizon – B22 EOP - sheared thread off the auger extension, left adaptor and 10cm jarret auger head in
 Observation Did not sample Water table

Project: MWQ Site: 72

Location: 725920 mE 7667305 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft, Saline

Classifications

ASC: Fibric, Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense Bruguiera exaristata (Rib-fruited mangrove); Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; silty light clay; weak 2-5mm subangular blocky structures; wet; abrupt to;
B21	0.15 to 0.50	Greenish grey (5GY51) moist colour; silty light clay; massive structures; wet; gradual to;
C1u	0.50 to 2.40	Dark grey (5Y41) moist colour; silty light clay with a lot of very fine (1-2mm) fine sand lenses; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	4.2	
0.30	6.9	5.0	
0.60	6.9	1.3	
0.80	6.9	1.6	
1.00	6.9	1.4	
1.25	7.0	1.4	
1.50	7.0	1.7	
1.75	6.9	1.8	
2.00	6.9	1.8	
2.25	7.0	1.8	

Notes:

Horizon - C1u EOP - sand @ 2.4 m would not hold in end of gauge auger
 Observation H2O EC 42.9 mS/cm; pH 7.0

Project: MWQ Site: 73

Location: 726680 mE 7667530 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 28-Aug-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Supratidal flat

Runoff: No record

Elevation: 2.7 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft, Saline

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Avicennia marina (Grey mangrove); Ceriops tagal (Yellow mangrove);

Bruguiera species

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Greyish brown (2.5Y52) moist colour; few 2-10% fine < 5mm faint brown mottles; clayey fine sand; massive structures; sharp to;
2B2i	0.05 to 0.40	Grey (5Y61) moist colour; few 2-10% fine < 5mm prominent orange, few 2-10% medium 5-15mm prominent orange mottles; fine sandy light clay; massive structures; gradual to;
2C1u	0.40 to 1.25	Very dark grey (10YR31) moist colour; silty light clay with a thin 1cm fine sand lens at 0.7m; massive structures; sharp to;
3C1u	1.25 to 1.40	Dark grey (2.5Y40) moist colour; fine sand; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.2	5.1	
0.30	6.9	4.6	
0.60	6.9	1.7	
0.80	7.0	1.7	
1.00	7.0	1.7	
1.25	7.3	1.2	
1.40	7.4	1.5	

Notes:

Horizon - 3C1u EOP - sample would not hold in end of VVC, rock stopped VVC @ 2.1 m

Observation H2O EC - 69.3 mS/cm; pH 7.4

Observation mangroves starting to colonise this area - only about 1 m high and few small bare areas

Project: MWQ Site: 74

Location: 724980 mE 7666680 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Natric, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Pandanus whitei
 Mid Stratum: Lantana camara (Lantana)
 Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam, light; weak 2-5mm cast structures; abrupt
A2j	0.30 to 0.40	Brown (10YR53) moist, light grey (10YR72) dry colour; fine sandy loam; massive structures; sharp to;
2B2i	0.40 to 1.10	Brown (10YR53) moist colour; common 10-20% coarse 15-30mm prominent brown, very few < 2% fine < 5mm prominent red, common 10-20% coarse 15-30mm prominent grey mottles; fine sandy light clay with sand lenses; massive structures; gradual to;
3B2i	1.10 to 1.40	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent brown, very few < 2% fine < 5mm prominent dark mottles; fine sandy clay loam with thin clay lenses; massive structures; clear to;
4B2	1.40 to 1.90	Grey (10YR61) moist colour; common 10-20% coarse 15-30mm prominent pale mottles; fine sand with thin clay lenses; single grain structures; sharp to;
4C1u	1.90 to 2.50	Dark grey (2.5Y40) moist colour; sand; single grain structures; sharp to;
4C2u	2.50 to 4.60	Very dark grey (2.5Y30) moist colour; fine sand with many clay lenses 1-2cm thick; sharp to;
5Cu	4.60 to 4.85	Grey (10YR51) moist colour; sand with a few thin clay lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; sharp to;
6Cu	4.85 to 5.05	Very dark grey (2.5Y30) moist colour; silty light clay with 2 x 3-4cm thick fine sand and sand lenses; very few < 2% small pebbles 2-6mm rounded andesite and subrounded feldspar coarse fragments; massive structures; sharp to;

7D 5.05 to 5.20 Greenish grey (5G61) moist colour; few 2-10% medium 5-15mm distinct grey mottles; very few < 2% small pebbles 2-6mm subrounded granite coarse fragments; strong 2-5mm lenticular structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.9	2.9	2.75	7.8	1.4
0.30	6.9	3.4	3.00	7.4	1.6
0.60	7.0	4.4	3.25	7.8	1.6
0.80	6.9	4.0	3.50	7.4	1.4
1.00	6.5	4.2	3.75	6.6	1.4
1.25	6.7	3.7	4.00	6.9	1.6
1.50	7.1	3.3	4.25	7.1	1.7
1.75	7.4	3.4	4.50	7.0	1.5
2.00	7.8	1.7	4.75	7.6	1.7
2.25	7.6	1.6	5.00	6.7	1.3
2.50	7.4	1.7	5.20	7.5	2.1

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon - 4B2 mottles- grey from the clay lenses; mangrove root at 1.6 - 1.8 m
 Horizon - 4C2u Mangrove root at 2.5 and 3.1 m
 Horizon - 5Cu large wood fragment at 4.75 m; thin wood fragment @ 4.65 m
 Horizon - 6Cu large wood fragments at 4.95 m
 Observation H₂O EC - 3.2 mS/cm; pH 7.0

Project: MWQ Site: 75

Location: 728225 mE 7665685 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 9-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Acidic-sodic, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Digitaria decumbens (Pangola); Brachiaria mutica (Para grass); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (7.5YR20) moist colour; many 20-50% fine < 5mm prominent orange mottles; silty light clay; weak 5-10mm subangular blocky structures; sharp to;
2B21i	0.25 to 0.80	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% fine < 5mm prominent red mottles; light clay; gradual to;
2B22	0.80 to 1.40	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent brown mottles; light clay; weak 2-5mm subangular blocky structures; clear to;
2Cu	1.40 to 1.80	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; sharp to;
3Cu	1.80 to 2.10	Dark grey (5Y41) moist colour; fine sandy loam; massive structures; sharp to;
4C1u	2.10 to 2.50	Dark grey (2.5Y40) moist colour; fine sand with a clay lens at 2.4m and sand lenses at 2.3m; single grain structures; sharp to;
4C2u	2.50 to 3.30	Dark grey (2.5Y40) moist colour; fine sand with a 10cm coarse sand lens at 2.5m and a 1cm clay lens at 3.1m; single grain structures; gradual to;
4C3u	3.30 to 3.90	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; sharp to;
4C4u	3.90 to 4.50	Dark grey (2.5Y40) moist colour; sand with a 10cm fine sand lens at 4.1m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; sharp to;
5D	4.50 to 5.00	Greenish grey (5GY51) moist colour; clayey fine sand; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	2.2	
0.30	4.9	2.8	
0.60	4.6	2.9	
0.80	4.4	3.2	
1.00	4.3	3.0	
1.25	4.5	3.0	
1.50	4.8	1.2	
1.75	5.1	1.1	
2.00	5.4	1.1	
2.25	5.9	0.9	
2.50	5.6	0.6	
2.75	6.3	1.0	
3.00	6.2	0.9	
3.25	6.5	0.9	
3.50	6.1	1.3	
3.75	5.9	1.1	
4.00	6.7	1.1	
4.25	6.1	1.2	
4.50	7.0	1.0	
4.75	6.6	1.3	

Notes:

Horizon – 4C1u Wood @ 2.25 m
 Location Dam 150 m to north - ASS with J on dam wall - pH 3.0, pH fox 1.1;
 Dam water pH 5.5, EC
 Observation H2O EC - 7.0 mS/cm; pH 5.9

Project: MWQ Site: 76

Location: 728685 mE 7665970 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Aug-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft, Loose

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch); Chloris gayana (Rhodes grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Black (2.5Y20) moist colour; sand mainly fine sand with 10-20% medium sand grains; very few < 2% small pebbles 2-6mm subrounded quartz and feldspar coarse fragments; single grain structures; dry; clear to;
C1	0.40 to 1.00	Pale brown (10YR63) moist, light grey (10YR72) dry colour; sand, fine sand with 10-20% medium sand grains; very few < 2% small pebbles 2-6mm subrounded quartz and feldspar coarse fragments; dry; abrupt to;
C2	1.00 to 1.20	Light grey (10YR72) moist, white (10YR82) dry colour; very few < 2% fine < 5mm distinct orange mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded feldspar coarse fragments; single grain structures; dry; abrupt to;
2B2	1.20 to 1.60	Light grey (10YR71) moist colour; common 10-20% fine < 5mm prominent brown mottles; clay loam; fine sandy; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; sharp to;
3B2	1.60 to 2.35	Light grey (10YR71) moist colour; common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm prominent orange, few 2-10% medium 5-15mm distinct yellow mottles; fine sand with 1cm clay lenses at 1.75, 1.9, and 2.1m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet;
4C1u	2.35 to 4.00	Dark grey (2.5Y40) moist colour; fine sand with 1cm coarse sand lenses at 3.25 and 3.5 m and a 5mm clay lens at 3.8m; very few < 2% small pebbles 2-6mm rounded and subrounded quartz and diorite coarse fragments; single grain structures; wet; sharp to;
4C2u	4.00 to 4.35	Dark grey (2.5Y40) moist colour; sand with 5mm clay lenses at 4.1 and 4.2m; very few < 2% small pebbles 2-6mm subrounded quartz and diorite coarse fragments; single grain structures; wet; gradual to;
4C3u	4.35 to 5.20	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded and subrounded quartz and diorite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.9	3.2	2.75	6.0	0.9
0.30	4.8	3.2	3.00	5.9	1.1
0.60	5.6	3.9	3.25	6.0	1.0
0.80	5.9	4.0	3.50	6.3	1.1
1.00	6.2	4.1	3.75	5.8	1.2
1.25	5.7	4.3	4.00	6.2	1.2
1.50	5.5	3.9	4.25	6.1	1.2
1.75	6.0	4.0	4.50	6.5	1.3
2.00	5.4	3.2	4.75	6.0	1.2
2.25	5.6	1.9	5.00	6.4	1.2
2.50	5.6	0.9	5.20	6.4	1.2

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.1 mS/cm; pH 5.3
 Observation Dune crests 1.0m above swale

Project: MWQ Site: 77

Location: 728645 mE 7666245 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Aug-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Chloris gayana (Rhodes grass); Brachiaria mutica (Para grass); Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sandy light clay; massive structures; moderately moist; sharp to;
2B2i	0.25 to 1.10	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent red, few 2-10% medium 5-15mm distinct grey mottles; light medium clay; very few < 2% medium 2-6 mm ferruginous tubules segregations; moderately moist; sharp to;
3C	1.10 to 1.30	Grey (5Y51) moist colour; very few < 2% fine < 5mm distinct brown mottles; sand with a 1cm clay lens at 1.2m; very few < 2% small pebbles 2-6mm rounded diorite coarse fragments; single grain structures; wet; sharp to;
4C1u	1.30 to 3.55	Dark grey (2.5Y40) moist colour; fine sand with 5-10cm medium to coarse sand lenses at 2.55 and 2.9m and 1cm clay lens at 2.6, 2.7 and 2.8m; very few < 2% small pebbles 2-6mm rounded diorite and subrounded quartz coarse fragments; single grain structures; moist; sharp to;
4C2u	3.55 to 3.75	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and diorite coarse fragments; single grain structures; moist; sharp to;
5C1u	3.75 to 4.30	Grey (2.5Y50) moist colour; fine sand with 2-5cm clay lenses at 3.75 and 4.0m; very few < 2% feldspar coarse fragments; single grain structures; moist; sharp to;
5C2u	4.30 to 4.50	Grey (2.5Y50) moist colour; sand; single grain structures; moist; sharp to;
5C3u	4.50 to 5.00	Grey (2.5Y50) moist colour; fine sand; single grain structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
	0.10	5.3	1.3
	0.30	4.6	2.4
	0.60	4.5	2.1
	0.80	4.4	1.9
	1.00	4.4	1.8
	1.25	4.6	1.8
	1.50	4.6	0.9
	1.75	4.7	1.0
	2.00	5.1	0.8
	2.25	5.9	0.9
	2.50	6.0	1.0
	2.75	6.3	1.0
	3.00	5.9	1.1
	3.25	5.8	1.2
	3.50	6.0	1.1
	3.75	5.9	1.1
	4.00	5.8	1.1
	4.25	6.3	0.9
	4.50	6.1	1.2
	4.75	6.4	1.1
	5.00	6.3	1.2

Notes:

Horizon – 5C1u organic debris layers @ 4.15 m
 Observation H2O EC - 1.9 mS/cm; pH 5.1

Project: MWQ Site: 78

Location: 728430 mE 7666805 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Fibric, Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; abrupt to;
B2i	0.10 to 0.90	Grey (5Y51) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm distinct dark mottles; fine sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; gradual to;
C1u	0.90 to 1.55	Dark grey (2.5Y40) moist colour; common 10-20% medium 5-15mm distinct dark mottles; silty light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
2Cu	1.55 to 1.70	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3Cu	1.70 to 2.13	Very dark grey (2.5Y30) moist colour; few 2-10% medium 5-15mm distinct dark mottles; silty light clay; very few < 2% small pebbles 2-6mm rounded diorite and subrounded quartz coarse fragments; massive structures; wet
4Cu	2.13 to 2.25	Very dark grey (2.5Y30) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	3.8	
0.30	6.2	4.2	
0.60	5.7	3.1	
0.80	5.7	2.3	
1.00	5.7	0.6	
1.25	5.8	0.8	
1.50	5.8	0.4	
1.60	6.3	0.4	
1.75	5.8	0.6	
2.00	5.8	0.6	
2.20	6.0	0.7	

Notes:

Horizon – 4Cu EOP - gauge auger could not go further into the sand
 Observation H2O EC - 49 mS/cm; pH 5.8

Project: MWQ Site: 79

Location: 727980 mE 7666290 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Sporobolus virginicus (Marine couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; silty light clay; moderate 2-5mm subangular blocky structures; moist; sharp to;
2A1	0.10 to 0.30	Black (2.5Y20) moist colour; very few < 2% fine < 5mm faint brown mottles; sandy light medium clay with 10-20% medium sand grains; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; weak 20-50mm subangular blocky structures; moist; sharp to;
2B2i	0.30 to 0.65	Greenish grey (5GY51) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm distinct grey mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; abrupt to;
2C1u	0.65 to 0.95	Dark grey (5Y41) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; sharp to;
3C1u	0.95 to 1.35	Grey (10YR51) moist and grey (5Y51) moist colour; alternating bands of coarse sand and silty light clay 2 to 5cm thick; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz coarse fragments; massive structures; sharp to;
4C1u	1.35 to 3.90	Dark grey (2.5Y41) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz, trachyte and andesite coarse fragments; single grain structures; sharp to;
5C1u	3.90 to 4.20	Dark grey (5Y41) moist colour; alternating 1cm bands of silty light clay and coarse sand; single grain structures; sharp to;
6C1u	4.20 to 4.50	Grey (10YR51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz, trachyte and andesite coarse fragments; single grain structures; sharp to;

7D1	4.50 to 4.70	Dark greenish grey (5GY41) moist colour; light clay with 2mm bands of fine sand; massive structures; sharp to;
7D2	4.70 to 5.00	Olive grey (5Y42) moist colour; silty light clay; massive structures; few 2-10% fine <2 mm ferromanganiferous nodules segregations;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.3	2.6	2.75	6.7	1.0
0.30	5.3	2.0	3.00	6.3	0.8
0.60	5.2	3.2	3.25	6.3	1.0
0.80	5.1	2.6	3.50	6.2	1.4
1.00	4.6	2.7	3.75	6.7	1.0
1.25	4.8	1.2	4.00	6.3	0.6
1.50	5.5	1.2	4.25	6.7	0.9
1.75	5.5	1.2	4.50	5.8	1.5
2.00	6.0	1.1	4.75	5.8	4.3
2.25	6.6	0.8	5.00	6.0	4.6
2.50	6.6	0.8			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 10.9 mS/cm; pH 5.4

Project: MWQ Site: 8o

Location: 729385 mE 7666895 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; fine sandy light medium clay with a few medium to coarse sand grains; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; weak 10-20mm subangular blocky structures; sharp to;
B2i	0.10 to 0.80	Yellowish brown (10YR56) moist colour; many 20-50% fine < 5mm prominent grey, very few < 2% fine < 5mm distinct orange, very few < 2% fine < 5mm distinct red mottles; sandy light medium clay with many coarse sand grains; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; clear to;
C1u	0.80 to 1.15	Greyish brown (10YR52) moist colour; common 10-20% medium 5-15mm prominent dark mottles; silty light clay with a coarse sand lens; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; abrupt to;
C2u	1.15 to 1.70	Dark grey (5Y41) moist colour; very few < 2% coarse 15-30mm distinct dark, very few < 2% medium 5-15mm distinct gley mottles; silty light clay; massive structures; sharp to;
2C1u	1.70 to 2.20	Very dark grey (2.5Y30) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded andesite and quartz coarse fragments; single grain structures;
2C2u	2.20 to 2.85	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded diorite and subangular quartz coarse fragments; single grain structures; sharp to;
3C1u	2.85 to 3.80	Very dark grey (2.5Y30) moist colour; fine sand with a 5cm coarse sand lens at 3.05m and 1-2cm clay lenses below 3.4m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures;
4C1u	3.80 to 4.85	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded andesite and diorite and subrounded quartz coarse fragments at 4.2-4.4m; single grain structures; sharp to;

5C1	4.85 to 5.10	Very dark grey (2.5Y30) moist and black (2.5Y20) moist colour at 5.0-5.1m; silty light clay; massive structures; abrupt to;
6D	5.10 to 5.20	Dark greenish grey (5G41) moist colour; few 2-10% fine < 5mm prominent dark mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.6	5.5	2.75	5.9	0.8
0.30	6.5	5.3	3.00	5.7	1.2
0.60	6.2	5.2	3.25	5.8	1.2
0.80	6.0	4.9	3.50	6.0	1.2
1.00	5.8	4.2	3.75	6.0	1.2
1.25	5.7	1.3	4.00	6.4	1.1
1.50	5.5	0.9	4.25	6.1	1.2
1.75	5.4	1.0	4.50	6.4	0.7
2.00	6.0	0.7	4.75	6.6	1.2
2.25	6.6	1.2	5.00	5.9	1.1
2.50	6.2	0.8	5.15	6.1	1.3

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 3C1u 1 cm organic material @ 3.4 m
 Observation H2O EC - 42.9 mS/cm; pH 6.1

Project: MWQ Site: 81

Location: 729685 mE 7667325 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Ceriops tagal (Yellow mangrove); Excoecaria agallocha (Blind-your-eye mangrove); Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; very few < 2% fine < 5mm distinct brown mottles; clay loam; fine sandy, light; weak 2-5mm subangular blocky structures; moist;
B21i	0.10 to 0.60	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent brown mottles; clay loam; fine sandy; weak 2-5mm subangular blocky structures in upper B21; moist; clear to;
B22i	0.60 to 1.00	Grey (5Y61) moist colour; common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm distinct yellow mottles; clay loam; fine sandy; wet; abrupt to;
C1u	1.00 to 1.80	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; very few < 2% medium 2-6 mm ferruginous nodules segregations; wet; sharp to;
2Cu	1.80 to 2.27	Dark grey (2.5Y40) moist colour; fine sand with 1cm clay lenses; single grain structures; wet; sharp to;
3Cu	2.27 to 2.50	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
4Cu	2.50 to 2.80	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; abrupt to;
5Cu	2.80 to 2.95	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
6Cu	2.95 to 3.60	Dark grey (2.5Y40) moist colour; fine sand with a 1cm fine sand lens at 3.5m; single grain structures; wet; abrupt to;
7Cu	3.60 to 4.05	Dark grey (2.5Y40) moist colour; sand with a 1cm clay lens at 3.7m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;

8Cu	4.05 to 4.30	Dark grey (5Y41) moist colour; fine sand with a 1cm clay lens at 4.2m; single grain structures; wet; sharp to;
9C1u	4.30 to 4.80	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and andesite coarse fragments; single grain structures; wet;
9C2	4.80 to 5.00	Grey (10YR51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and andesite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.1	4.3	2.75	5.9	1.4
0.30	5.3	3.6	3.00	6.1	1.5
0.60	4.5	3.4	3.25	6.0	1.6
0.80	3.9	3.0	3.50	6.0	1.5
1.00	4.3	2.2	3.75	6.6	1.6
1.25	4.5	1.6	4.00	7.3	1.6
1.50	4.7	1.3	4.25	7.3	1.5
1.75	4.8	0.8	4.50	7.6	1.6
2.00	5.9	1.0	4.75	7.5	1.6
2.25	5.5	1.4	5.00	7.3	1.6
2.50	5.9	1.3			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 8Cu 5 mm OM layer @ 4.05 & 4.15 m
 Observation H2O EC - 32.8 mS/cm; pH 5.3

Project: MWQ Site: 82

Location: 729860 mE 7666210 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 6.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.15	Black (10YR21) moist colour; sand; very few < 2% small pebbles 2-6mm subangular quartz and diorite coarse fragments; single grain structures; dry; clear to;
A12	0.15 to 0.60	Very dark greyish brown (10YR32) moist colour; sand; single grain structures; dry; diffuse to;
B2	0.60 to 1.00	Dark yellowish brown (10YR34) moist colour; sand; very few < 2% small pebbles 2-6mm subangular feldspar coarse fragments; single grain structures; moderately moist; sharp to;
2A1	1.00 to 1.20	Black (10YR21) moist colour; loamy sand; very few < 2% small pebbles 2-6mm subangular quartz and feldspar coarse fragments; single grain structures; moderately moist; abrupt to;
2B2	1.20 to 1.60	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm subangular quartz and feldspar coarse fragments; single grain structures; moderately moist; clear to;
2C1	1.60 to 3.30	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite and rhyolite and subrounded quartz and feldspar coarse fragments; single grain structures; moist; abrupt to;
2C2	3.30 to 4.37	Light grey (10YR72) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded andesite and feldspar and subangular quartz coarse fragments; single grain structures; wet; sharp to;
3C1u	4.37 to 4.50	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
4C1u	4.50 to 5.05	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and diorite and rounded andesite coarse fragments; single grain structures; wet; sharp to;
4C2u	5.05 to 5.15	Dark grey (2.5Y40) moist colour; sand; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite, rhyolite and quartz coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.8	5.6	
0.60	8.1	5.6	
1.00	8.1	5.0	
2.00	8.2	5.5	
3.00	8.4	5.5	
4.00	8.3	5.7	
4.25	8.1	3.9	
4.50	7.7	2.3	
4.75	7.6	2.3	
5.00	7.6	2.2	

Notes:

Observation could not sample H2O as hole filled in

Project: MWQ Site: 83

Location: 730210 mE 7666910 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Sep-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swamp
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Basic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, closed or dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Nauclea orientalis (Leichhardt tree, cheesewood); Alphitonia excelsa (Red ash, soapbush)
 Lower Stratum: Cyperus species

Profile

Horizon	Depth (m)	Description
O1	0.00 to 0.02	
A1	0.02 to 0.15	Black (7.5YR20) moist colour; sandy loam; very few < 2% small pebbles 2-6mm subrounded quartz and feldspar coarse fragments; weak 2-5mm cast structures; moist; clear to;
A12	0.15 to 0.70	Black (10YR21) moist colour; loamy sand; very few < 2% small pebbles 2-6mm subrounded quartz and feldspar coarse fragments; single grain structures; wet; sharp to;
2C1	0.70 to 1.80	Grey (10YR51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded diorite and trachyte and subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
3C	1.80 to 2.10	Grey (10YR61) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded andesite coarse fragments; single grain structures; wet; sharp to;
4C	2.10 to 2.25	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
5C	2.25 to 2.55	Dark grey (5Y41) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and large pebbles 20-60mm subrounded quartz and feldspar and rounded diorite coarse fragments; single grain structures; wet; abrupt to;
6C	2.55 to 2.75	Dark grey (5Y41) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;

7C	2.75 to 3.05	Dark grey (5Y41) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded quartz and rounded shell coarse fragments; single grain structures; wet; sharp to;
8C	3.05 to 3.30	Dark grey (5Y41) moist colour; fine sand with a 2cm clay lens at 3.05m; few 2-10% small pebbles 2-6mm subrounded quartz and rounded shell coarse fragments; single grain structures; wet; abrupt to;
9C	3.30 to 3.60	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded trachyte, andesite and shell and subrounded quartz coarse fragments; single grain structures; wet; sharp to;
10C	3.60 to 4.20	Grey (5Y51) moist colour; fine sand with few medium and coarse sand grains with a 1cm clay lens at 3.8m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
11C	4.20 to 5.00	Grey (5Y51) moist colour; sand with thin coarse sand lenses and a 1cm clay lens at 4.3m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded trachyte, andesite and shell and subrounded quartz and feldspar coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	7.1	3.4	2.75	7.8	2.0
0.30	6.9	4.2	3.00	7.8	3.5
0.60	6.7	3.4	3.25	7.7	2.4
0.80	6.9	4.5	3.50	7.9	3.2
1.00	6.8	4.8	3.75	7.7	2.0
1.25	7.0	3.5	4.00	7.6	3.2
1.50	7.0	1.7	4.25	7.7	3.1
1.75	7.2	1.8	4.35	2.6	
2.00	7.2	1.7	4.50	7.6	2.7
2.25	7.7	1.8	4.75	7.8	3.5
2.50	7.8	2.1	5.00	7.9	3.2

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 1.5 mS/cm; pH 6.7

Project: MWQ Site: 84

Location: 728250 mE 7667430 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 05-Sep-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Shell

Surface Condition: Soft

Classifications

ASC: Fibric, Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense

Species: Rhizophora stylosa (Red mangrove); Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.10	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm distinct grey mottles; light medium clay; massive structures; wet;
A12	0.10 to 0.40	Very dark brown (10YR22) moist colour; very few < 2% fine < 5mm distinct grey mottles; fine sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; gradual to;
C1u	0.40 to 1.40	Very dark grey (5Y31) moist colour; fine sandy light clay with thin sand lenses throughout; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz coarse fragments; massive structures; wet; abrupt to;
2C1u	1.40 to 1.80	Very dark grey (5Y31) moist colour; sand with 2-3cm clay lenses at 1.6 and 1.7m; few 2-10% small pebbles 2-6mm subrounded quartz and very few <2% large pebbles 20-60mm rounded andesite coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	0.7	
0.30	6.6	1.3	
0.60	6.6	1.2	
0.80	6.7	0.9	
1.00	6.5	1.0	
1.25	6.5	1.3	
1.50	6.5	1.3	
1.75	6.7	1.1	

Notes:

Horizon – 2C1u EOP - gouge auger would not penetrate further

Observation H2O EC - 45.4 mS/cm; pH 6.0

Project: MWQ Site: 85

Location: 723610 mE 7672220 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Acidic-sodic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; light medium clay; moderately moist; sharp to;
B21i	0.10 to 0.50	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% coarse 15-30mm prominent red, very few < 2% fine < 5mm distinct yellow mottles; light medium clay; moist;
B22ia	0.50 to 0.80	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent brown, few 2-10% fine < 5mm prominent yellow jarositic (from pyrite) mottles; light clay; moderate 2-5mm subangular blocky structures; moist; clear to;
B23ia	0.80 to 1.30	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent yellow jarositic (from pyrite), very few < 2% fine < 5mm distinct brown mottles; silty light clay; moderate 2-5mm subangular blocky structures; wet; abrupt to;
C1u	1.30 to 1.50	Grey (10YR51) moist colour; silty light clay; massive structures; wet; sharp to;
2C1u	1.50 to 2.80	Dark grey (2.5Y40) moist colour; sand with a coarse sand lens and clay lenses; very few < 2% small pebbles 2-6mm subrounded andesite and quartz coarse fragments; single grain structures; wet; sharp to;
3C1u	2.80 to 3.05	Dark grey (2.5Y40) moist colour; silty light clay with 1mm sand lenses; massive structures; wet; sharp to;
3C2u	3.05 to 3.40	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; wet; abrupt to;
4Cu	3.40 to 3.90	Dark grey (2.5Y40) moist colour; fine sand with clay lenses; single grain structures; wet; sharp to;
5C1u	3.90 to 4.18	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; wet; sharp to;

6Cu 4.18 to 5.30 Dark grey (2.5Y40) moist colour; silty light clay with 1mm fine sand lenses; very few < 2% small pebbles 2-6mm subrounded shell coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.7	1.8	3.00	5.3	1.1
0.30	3.9	2.1	3.25	5.7	1.0
0.60	3.2	1.6	3.50	6.0	1.3
0.80	3.1	1.6	3.75	6.3	1.1
1.00	2.9	1.5	4.00	6.3	1.1
1.25	3.2	1.1	4.25	6.5	1.4
1.50	3.6	1.3	4.50	6.6	1.3
1.75	3.8	1.0	4.75	6.7	1.0
2.00	4.1	1.2	5.00	6.7	1.2
2.25	4.2	1.1	5.25	6.7	0.9
2.50	4.4	1.2	3.00	5.3	1.1
2.75	5.1	1.4			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 6Cu Shell very thin and brittle, OM, wood and mangrove root layers every 0.2m
 Observation Melaleucas are regrowth
 Observation H2O EC 11.7 mS/cm

Project: MWQ Site: 86

Location: 723000 mE 7672365 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Avicennia marina (Grey mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.10	Black (2.5Y20) moist colour; few 2-10% fine < 5mm faint grey mottles; silty light medium clay; moderate 2-5mm subangular blocky structures; moderately moist; abrupt to;
A12	0.10 to 0.30	Very dark grey (2.5Y30) moist colour; very few < 2% fine < 5mm distinct brown, few 2-10% fine < 5mm prominent grey mottles; silty light medium clay; moderate 2-5mm subangular blocky structures; moist; sharp to;
B2i	0.30 to 0.80	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct brown mottles; silty light clay; massive structures; wet; sharp to;
2Cu	0.80 to 5.30	Alternating bands of very dark grey (2.5Y31) silty clay 1-5cm thick and grey (2.5Y50) fine sand 1-5mm thick; massive to single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.5	4.0	
0.30	4.7	3.0	
0.60	4.2	3.2	
0.80	4.4	2.4	
1.00	5.3	1.3	
1.25	5.7	1.2	
1.50	6.1	1.0	
1.75	6.2	1.5	
2.00	6.6	1.4	
2.25	6.5	1.6	
2.50	6.9	1.9	
2.75	6.7	1.5	
3.00	6.7	1.6	
3.25	6.8	1.8	
3.50	6.9	1.5	
3.75	6.9	2.0	
4.00	7.2	1.6	
4.25	6.9	1.7	
4.50	6.9	1.9	
4.75	7.1	1.9	
5.00	7.1	1.5	
5.25	7.2	2.4	

Notes:

Horizon – 2Cu Wood at 2.85m, old mangrove roots at 3.4 and 4.5m
 Observation H2O EC - 48.2 mS/cm; pH 5.9

Project: MWQ Site: 87

Location: 721840 mE 7673105 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 08-Sep-2001

Landscape

Geology: Qm - Quaternary marine
Lithology: Unconsolidated material (unidentified)
Landform Pattern: Tidal flat
Element: Intertidal flat
Runoff: No record
Elevation: 2.5 m
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 0 %
Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Shell
Surface Condition: Soft

Classifications

ASC: Fibric, Sulfidic, Intertidal, HYDROSOL
GSG: No record
PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
Species: *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; silty light clay; weak 2-5mm subangular blocky structures; moist; clear to;
C1	0.10 to 1.40	Very dark grey (10YR31) moist colour; silty light clay; weak 2-5mm subangular blocky structures; wet; gradual to;
C2	1.40 to 2.50	Very dark grey (10YR31) moist colour; silty light clay with fine sand lenses at 2.0 and 2.4m; massive structures; wet;

Field Tests

Depth	EC (dS/m)	Dispersion	pH-A	pH-B	pH-C	pH-D	pH-C (pH using electrode probe), pH-D (pH of hydrogen peroxide extract)
0.10	6.2	4.8					
0.30	6.2	4.6					
0.60	6.2	1.0					
0.80	6.2	0.7					
1.00	6.2	1.3					
1.25	6.2	1.4					
1.50	6.2	1.0					
1.75	6.1	0.6					
2.00	6.1	0.7					
2.25	6.1	0.5					
2.50	6.2	0.6					

Notes:

Horizon - C2 EOP - sand would not hold in gouge auger
Observation H2O EC - 55.3 mS/cm; pH 6.4

Project: MWQ Site: 88

Location: 723835 mE 7672430 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Sep-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sand; single grain structures; moderately moist; abrupt to;
A2	0.15 to 0.25	Few 2-10% medium 5-15mm distinct dark mottles; fine sand; single grain structures; moderately moist; sharp to;
2A1	0.25 to 0.50	Black (2.5Y20) moist colour; fine sandy loam; single grain structures; moderately moist; clear to;
2A2e	0.50 to 0.75	Grey (10YR51) moist, light grey (10YR71) dry colour; very few < 2% fine < 5mm distinct orange mottles; fine sand; single grain structures; moderately moist; sharp to;
2B2	0.75 to 1.40	Dark yellowish brown (10YR44) moist colour; many 20-50% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent brown mottles; medium clay with sand lenses throughout; very few < 2% manganiferous segregations; moist; sharp to;
3Cu	1.40 to 1.65	Grey (10YR51) moist colour; very few < 2% fine < 5mm prominent brown mottles; sand with a 2cm and a 9cm clay lens; very few < 2% small pebbles 2-6mm rounded trachyte coarse fragments; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; wet; sharp to;
4Cu	1.65 to 2.20	Light brownish grey (2.5Y62) moist colour; fine sand; single grain structures; wet; abrupt to;
5Cu	2.20 to 3.10	Grey (2.5Y50) moist colour; fine sand with a 2cm sand lens at 2.6m; single grain structures; wet; abrupt to;
6C1	3.10 to 3.40	Grey (10YR61) moist colour; many 20-50% medium 5-15mm distinct brown mottles; fine sand; single grain structures; wet; abrupt to;
6C2	3.40 to 4.60	Light yellowish brown (2.5Y64) moist colour; very few < 2% coarse 15-30mm prominent brown mottles; fine sand; single grain structures; wet; sharp to;

6C3	4.60 to 5.00	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent grey mottles; sand; single grain structures; wet; sharp to;
7Cu	5.00 to 5.30	Grey (2.5Y50) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.3	2.0	2.75	6.5	1.5
0.30	6.1	1.9	3.00	6.5	1.9
0.60	6.4	3.3	3.25	6.6	2.2
0.80	5.0	2.5	3.50	6.5	4.3
1.00	5.8	2.3	3.75	6.5	4.4
1.25	4.9	3.3	4.00	6.4	4.1
1.50	6.2	2.7	4.25	6.6	4.8
1.75	6.4	2.4	4.50	6.5	4.2
2.00	6.4	1.6	4.75	6.9	2.4
2.25	6.5	1.5	5.00	6.6	1.7
2.50	6.3	1.4	5.25	6.7	1.9

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.4 mS/cm; pH 6.3

Project: MWQ Site: 89

Location: 723740 mE 7672695 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 11-Sep-2001

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Dune

Runoff: No record

Elevation: 6.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.20	Black (10YR21) moist colour; loamy fine sand; single grain structures; dry; clear to;
A12	0.20 to 0.60	Brown (7.5YR44) moist, yellowish brown (10YR54) dry colour; fine sand; single grain structures; dry; abrupt to;
A2	0.60 to 1.40	Light yellowish brown (10YR64) moist, very pale brown (10YR83) dry colour; fine sand; single grain structures; moderately moist; sharp to;
B21?s	1.40 to 1.55	Yellowish red (5YR46) moist colour; clayey fine sand; massive structures; moderately moist; abrupt to;
B22s	1.55 to 1.90	Strong brown (7.5YR58) moist colour; fine sand; massive structures; moist; abrupt to;
C1	1.90 to 2.50	Light brownish grey (10YR62) moist colour; very few < 2% fine < 5mm distinct brown, very few < 2% fine < 5mm distinct orange mottles; fine sand; single grain structures; moist; abrupt to;
C2	2.50 to 3.55	Light brownish grey (10YR62) moist colour; few 2-10% fine < 5mm prominent orange, many 20-50% coarse 15-30mm distinct brown mottles; fine sand; single grain structures; wet; abrupt to;
2C1	3.55 to 3.80	Yellowish brown (10YR54) moist colour; few 2-10% fine < 5mm prominent brown, few 2-10% medium 5-15mm faint pale mottles; sand; single grain structures; wet; abrupt to;
2C2	3.80 to 5.20	Yellowish brown (10YR54) moist colour; fine sand with a 4cm clayey sand lens at 3.8m; very few < 2% medium pebbles 6-20mm rounded rhyolite coarse fragments; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	8.1	5.9	
0.60	7.6	5.7	
1.00	7.6	5.8	
1.50	7.3	5.1	
2.00	7.6	5.6	
2.50	7.7	5.8	
3.00	7.3	5.8	
3.50	7.3	5.8	
4.00	7.2	7.5	
4.50	7.4	7.5	
5.00	7.6	5.8	

Notes:

Observation No water sample taken as hole filled in

Project: MWQ Site: 90

Location: 723475 mE 7672995 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated

Classifications

ASC: Acidic-sodic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.20	Very dark brown (10YR22) moist colour; sandy loam; massive structures; dry; sharp to;
Fill	0.20 to 0.40	Dark yellowish brown (10YR44) moist colour; few 2-10% medium 5-15mm distinct pale, few 2-10% fine < 5mm distinct orange mottles; sand; dry; sharp to;
A1	0.40 to 0.50	Very dark brown (7.5YR22) moist colour; common 10-20% fine < 5mm prominent orange mottles; silty light clay; moderate 2-5mm subangular blocky structures; moderately moist; sharp to;
B2i	0.50 to 1.00	Grey (7.5YR50) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moist;
Cu	1.00 to 1.55	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
2C1u	1.55 to 2.80	Very dark grey (2.5Y30) moist colour; fine sand with clay lenses between 1.55 and 2.0m; single grain structures; wet; diffuse to;
2C2u	2.80 to 3.50	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded diorite and quartz coarse fragments; single grain structures; wet; clear to;
2C3u	3.50 to 4.60	Grey (2.5Y50) moist colour; fine sand; single grain structures; wet; clear to;
2C4u	4.60 to 5.00	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	1.8	
0.30	5.2	1.9	
0.60	3.9	2.9	
0.80	3.8	1.8	
1.00	3.8	2.6	
1.25	5.1	2.2	
1.50	5.3	1.1	
1.75	6.4	1.0	
2.00	6.1	1.2	
2.25	6.9	1.2	
2.50	6.6	1.3	
2.75	6.9	1.2	
3.00	6.9	1.4	
3.25	6.9	0.9	
3.50	6.9	1.3	
3.75	6.8	1.4	
4.00	6.8	1.4	
4.25	7.1	1.4	
4.50	7.0	1.4	
4.75	7.2	1.5	
5.00	7.3	1.5	

Notes:

Horizon – 2C1u Wood @ 2.1 m
 Observation H2O EC - 0.3 mS/cm; pH 6.4

Project: MWQ Site: 91

Location: 722870 mE 7673445 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.28	Black (10YR21) moist colour; loamy fine sand; single grain structures; dry; clear to;
A2	0.28 to 0.50	Few 2-10% fine < 5mm prominent orange mottles; fine sand; single grain structures; moderately moist; sharp to;
B2	0.50 to 0.65	Grey (10YR61) moist colour; many 20-50% fine < 5mm prominent orange mottles; fine sandy light medium clay; moist;
2BC	0.65 to 1.70	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm prominent orange, common 10-20% very coarse > 30mm prominent orange mottles; fine sand; single grain structures; wet; abrupt to;
3Cu	1.70 to 2.10	Light brownish grey (2.5Y62) moist colour; fine sand with sand lenses from 1.8 to 1.95m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4C1u	2.10 to 2.30	Grey (5Y51) moist colour; fine sand; single grain structures; wet; abrupt to;
4C2u	2.30 to 2.60	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and diorite coarse fragments; single grain structures; wet; sharp to;
4C3u	2.60 to 2.85	Dark grey (5Y41) moist colour; fine sand; single grain structures; wet; sharp to;
4C4u	2.85 to 3.10	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and diorite coarse fragments; single grain structures; wet; sharp to;
4C5u	3.10 to 5.30	Dark grey (5Y41) moist colour; fine sand with a 3cm coarse sand lens at 3.2m; very few < 2% small pebbles 2-6mm subrounded quartz and diorite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.9	3.6	2.75	6.6	1.8
0.30	5.5	3.7	3.00	6.8	1.8
0.60	6.8	4.9	3.25	6.9	1.8
0.80	7.2	5.3	3.50	6.9	1.8
1.00	6.9	5.2	3.75	6.8	1.8
1.25	6.9	5.0	4.00	6.8	1.8
1.50	6.8	3.2	4.25	7.0	1.9
1.75	6.6	2.5	4.50	7.0	1.9
2.00	6.3	1.7	4.75	7.1	1.9
2.25	6.4	1.9	5.00	7.2	2.1
2.50	6.5	1.8	5.25	7.5	1.9

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water as hole collapsed in

Project: MWQ Site: 92

Location: 723470 mE 7673305 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated

Classifications

ASC: Basic, Arenic, Bleached-Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; few 2-10% medium 5-15mm prominent pale, very few < 2% fine < 5mm distinct orange mottles; fine sand; single grain structures; moist; sharp to;
A1	0.40 to 0.60	Black (10YR21) moist colour; fine sand; single grain structures; moist; abrupt to;
A2e	0.60 to 0.90	Few 2-10% medium 5-15mm faint yellow, very few < 2% fine < 5mm distinct orange mottles; fine sand; single grain structures; moist; abrupt to;
B2	0.90 to 2.40	Yellowish brown (10YR54) moist colour; few 2-10% medium 5-15mm prominent orange mottles in upper 10cm only; fine sand; single grain structures; wet; sharp to;
2C	2.40 to 2.60	Brownish yellow (10YR66) moist colour; few 2-10% coarse 15-30mm prominent orange mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3C	2.60 to 4.80	Brownish yellow (10YR66) moist colour; very few < 2% coarse 15-30mm prominent orange mottles; fine sand with a 5cm medium sand lens at 3.7m; very few < 2% small pebbles 2-6mm subrounded quartz and unconsolidated material (unidentified) coarse fragments; single grain structures; wet; abrupt to;
4C	4.80 to 5.00	Light brownish grey (2.5Y63) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and diorite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	4.5	
0.60	7.5	4.9	
1.00	7.2	5.5	
1.50	7.2	5.7	
2.00	7.7	5.8	
2.50	7.4	5.3	
3.00	7.5	5.6	
3.50	7.5	5.5	
4.00	7.2	7.1	
4.50	7.5	6.6	
5.00	7.6	5.4	

Notes:
 Observation H2O EC - 0.3 mS/cm; pH 7.1

Project: MWQ Site: 93

Location: 723310 mE 7673280 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 3-Aug-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated

Classifications

ASC: Spolic, ANTHROPOSOL / Humose, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark brown (10YR22) moist colour; very few < 2% fine < 5mm distinct brown, very few < 2% fine < 5mm prominent pale mottles; loamy fine sand; single grain structures; moist; sharp to;
A2	0.25 to 0.65	Very few < 2% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct orange mottles; fine sand; single grain structures; moist; sharp to;
2A1	0.65 to 1.20	Black (2.5Y20) moist colour; fine sandy light clay with silt; moist; sharp to;
2B2	1.20 to 1.60	Grey (5Y51) moist colour; common 10-20% fine < 5mm prominent brown mottles; silty light clay; wet; sharp to;
3Cu	1.60 to 1.90	Grey (10YR51) moist colour; fine sand with 1-2cm silty clay lenses; massive structures; wet; abrupt to;
4C	1.90 to 2.10	Grey (10YR61) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and feldspar coarse fragments; single grain structures; wet; sharp to;
5B2	2.10 to 2.35	Yellowish brown (10YR56) moist colour; fine sand with 1cm sand lens at 2.2m; very few < 2% small pebbles 2-6mm subangular diorite coarse fragments; single grain structures; wet; abrupt to;
5C	2.35 to 3.60	Light brownish grey (2.5Y63) moist colour; fine sand with 1cm sand lenses at 2.9 and 3.1m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
6C1	3.60 to 4.00	Light yellowish brown (10YR64) moist colour; common 10-20% medium 5-15mm distinct orange mottles; sand; very few < 2% small pebbles 2-6mm subrounded diorite, quartz and feldspar coarse fragments; single grain structures; wet; sharp to;
6C2	4.00 to 4.80	Yellowish brown (10YR54) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz, andesite and feldspar coarse fragments; single grain structures; wet

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.9	3.0	2.50	6.8	5.2
0.30	7.3	3.7	2.75	6.8	4.9
0.60	6.9	3.6	3.00	6.9	5.0
0.80	6.1	2.7	3.25	6.8	4.9
1.00	6.3	2.7	3.50	6.6	4.9
1.25	6.3	3.2	3.75	6.7	4.8
1.50	6.1	3.0	4.00	6.6	4.7
1.75	6.4	2.6	4.25	6.7	4.7
2.00	6.6	3.0	4.50	6.8	4.8
2.25	6.8	4.5			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 6C2 EOP - dairy pump was getting too hot
 Observation H2O EC - 0.3 mS/cm; pH 6.3

Project: MWQ Site: 94

Location: 723100 mE 7673170 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Surface flake

Classifications

ASC: Natric, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Alphitonia excelsa (Red ash, soapbush)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.08	Black (2.5Y20) moist colour; silty light clay; weak 2-5mm parting to strong <2mm subangular blocky structures; dry; sharp to;
A12	0.08 to 0.18	Black (2.5Y20) moist colour; silty light clay; weak 10-20mm parting to weak 2-5mm subangular blocky structures; moderately moist; abrupt to;
B2i	0.18 to 0.65	Grey (10YR61) moist colour; many 20-50% fine < 5mm prominent brown, few 2-10% coarse 15-30mm prominent dark mottles; light medium clay; moist; clear to;
Cu	0.65 to 1.20	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; clear to;
2C1u	1.20 to 1.80	Dark grey (5Y41) moist colour; fine sand with 2cm clay lenses at 1.3,1.4 and 1.5m; very few < 2% small pebbles 2-6mm subangular andesite and subrounded quartz coarse fragments; single grain structures; wet; gradual to;
2C2u	1.80 to 4.30	Dark grey (5Y41) moist colour; sand with 1cm clay lenses at 2.7, 2.9, 3.8 and 4.1m; very few < 2% small pebbles 2-6mm subrounded diorite and quartz coarse fragments; single grain structures; wet; sharp to;
3Cu	4.30 to 4.40	Very dark grey (10YR31) moist colour; silty light clay with fine sand bands; massive structures; wet; sharp to;
4Cu	4.40 to 5.20	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.0	2.1	2.75	7.9	1.9
0.30	6.8	3.9	3.00	7.9	1.7
0.60	7.1	3.8	3.25	7.6	2.2
0.80	8.0	2.3	3.50	7.8	1.9
1.00	7.8	1.6	3.75	7.9	1.9
1.25	7.3	1.8	4.00	8.1	2.2
1.50	7.0	1.7	4.25	7.9	2.0
1.75	7.5	2.0	4.50	8.4	2.3
2.00	7.6	1.7	4.75	8.1	2.3
2.25	8.1	2.1	5.00	8.1	1.9
2.50	8.1	2.1	5.20	8.1	2.2

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 2C2u Wood at 3.9 m
 Observation H2O EC - 0.8 mS/cm; pH 6.1

Project: MWQ Site: 95

Location: 722695 mE 7673175 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 14-Sep-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 2.8 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Mid Stratum: Avicennia marina (Grey mangrove); Ceriops tagal (Yellow mangrove)

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm prominent dark mottles; silty light medium clay; massive structures; wet; sharp to;
B2	0.20 to 0.60	Grey (2.5Y50) moist colour; many 20-50% medium 5-15mm prominent orange, few 2-10% fine < 5mm prominent dark mottles; silty light clay; massive structures; wet; sharp to;
Cu	0.60 to 1.60	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	1.60 to 2.90	Alternating bands of very dark grey (2.5Y30) silty light clay 5-10mm thick and dark grey (2.5Y40) fine sand 2-5mm thick; massive to single grain structures; wet; sharp to;
3C1u	2.90 to 3.80	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and andesite coarse fragments; single grain structures; wet; clear to;
3C2u	3.80 to 4.40	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and diorite coarse fragments; single grain structures; wet; sharp to;
3C3u	4.40 to 4.76	Dark grey (2.5Y40) moist colour; sand with clay lenses between 4.6 and 4.7m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded shell, quartz and diorite coarse fragments; single grain structures; wet; sharp to;
4Cu	4.76 to 5.10	Dark grey (2.5Y40) moist colour; silty light clay; very few < 2% small pebbles 2-6mm subangular shell coarse fragments; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.3	4.1	2.75	6.1	1.5
0.30	5.6	4.3	3.00	6.3	1.6
0.60	6.1	4.2	3.25	5.7	1.4
0.80	5.5	1.5	3.50	6.6	1.8
1.00	5.4	1.3	3.75	6.3	1.6
1.25	5.5	1.3	4.00	6.4	1.4
1.50	5.3	1.4	4.25	6.5	1.6
1.75	5.3	1.3	4.50	6.5	2.1
2.00	5.3	1.6	4.75	6.4	1.9
2.25	5.8	1.6	5.00	6.4	1.8
2.50	5.6	1.4			

pHF (pH using electrode probe),

pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - Cu Few mangrove root remnants

Horizon - 3C1u Wood at 3.3 m

Horizon - 3C2u Mangrove root at 3.9 m, OM at 4.2 m

Observation H2O EC - 42.5 mS/cm; pH 5.6

Project: MWQ Site: 96

Location: 722685 mE 7673660 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 4.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated, Loose, Soft

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cyperus rotundus (Nutgrass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sand; few 2-10% medium pebbles 6-20mm rounded andesite coarse fragments; single grain structures; moderately moist;
Fill	0.20 to 0.50	Very dark greyish brown (10YR32) moist, light yellowish brown (10YR64) dry colour; few 2-10% fine < 5mm prominent orange mottles; fine sand with clods of clay and sandy light medium clay; single grain structures; moist; clear to;
Fill	0.50 to 0.70	Light yellowish brown (10YR64) moist colour; common 10-20% medium 5-15mm distinct dark mottles; fine sand; single grain structures; wet; sharp to;
Fill	0.70 to 0.90	Light grey (10YR72) moist colour; sand; single grain structures; wet; sharp to;
Fill	0.90 to 1.10	Greyish brown (10YR52) moist colour; fine sand; very few < 2% small pebbles 2-6mm subangular quartz and feldspar coarse fragments; single grain structures; wet; sharp to;
Fill	1.10 to 1.20	Yellowish brown (10YR56) moist colour; few 2-10% medium 5-15mm distinct grey mottles; fine sand; very few < 2% small pebbles 2-6mm subangular feldspar and quartz coarse fragments; single grain structures; wet; abrupt to;
C?	1.20 to 1.50	Light brownish grey (2.5Y62) moist colour; fine sand; very few < 2% small pebbles 2-6mm subangular quartz and andesite coarse fragments; single grain structures; wet; abrupt to;
2C	1.50 to 1.90	Light grey (10YR71) moist colour; sand; few 2-10% small pebbles 2-6mm subangular quartz and andesite coarse fragments; single grain structures; wet; sharp to;

3C1u	1.90 to 3.10	Grey (2.5Y50) moist colour; fine sand with a 10cm sand lens at 2.9m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite and subrounded quartz coarse fragments; single grain structures;
3C2u	3.10 to 5.00	Dark grey (2.5Y40) moist colour; fine sand; single grain structures;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.8	3.0	2.75	6.4	1.9
0.30	5.6	2.7	3.00	6.5	1.9
0.60	5.4	3.5	3.25	6.2	1.9
0.80	6.1	3.5	3.50	6.2	1.9
1.00	5.9	4.3	3.75	6.5	2.0
1.25	6.1	2.7	4.00	6.4	1.9
1.50	6.0	2.9	4.25	6.5	2.0
1.75	6.1	2.3	4.50	6.4	2.0
2.00	5.9	1.8	4.75	6.7	2.0
2.25	6.2	2.0	5.00	6.8	2.0
2.50	6.1	2.0			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation Hole collapsed preventing water sample being taken
 Soil Anthrosol over a Hydrosol

Project: MWQ Site: 97

Location: 722690 mE 7674220 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Plain
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated, Soft, Loose

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.55	Very dark brown (10YR22) moist colour; few 2-10% medium 5-15mm prominent pale mottles; loamy fine sand; single grain structures; sharp to;
C1	0.55 to 1.30	Light grey (2.5Y72) moist colour; few 2-10% medium 5-15mm distinct yellow, very few < 2% fine < 5mm prominent orange mottles; fine sand; single grain structures; clear to;
C2	1.30 to 2.00	Light brownish grey (2.5Y62) moist colour; fine sand; very few < 2% small pebbles 2-6mm subangular quartz and diorite coarse fragments; single grain structures;
2Cu	2.00 to 5.20	Dark grey (5Y41) moist colour; fine sand with a 10cm sand lens at 3.2 and 3.6m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and diorite and subangular andesite coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.9	3.5	
0.30	4.0	3.2	
0.60	5.4	4.2	
0.80	4.7	4.5	
1.00	5.2	4.8	
1.25	5.7	4.4	
1.50	6.1	4.3	
1.75	6.4	3.9	
2.00	6.4	2.7	
2.25	6.2	1.8	
2.50	5.8	1.7	
2.75	5.8	1.7	
3.00	5.8	1.7	
3.25	5.8	1.6	
3.50	5.8	1.8	
3.75	5.8	1.8	
4.00	6.0	1.8	
4.25	6.2	1.8	
4.50	6.5	1.9	
4.75	6.4	2.0	
5.00	6.5	1.8	
5.20	6.0	1.9	

Notes:

Observation Could not sample water as hole collapsed

Project: MWQ Site: 98

Location: 723100 mE 7674250 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Plain
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Spolic, ANTHROPOSOL / Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.28	Very dark greyish brown (10YR32) moist colour; common 10-20% medium 5-15mm prominent yellow mottles; fine sand; single grain structures; moist;
A1	0.28 to 0.50	Black (2.5Y20) moist colour; loamy fine sand; single grain structures; moist; sharp to;
C	0.50 to 1.70	Light brownish grey (10YR62) moist colour; very few < 2% fine < 5mm faint orange, very few < 2% fine < 5mm faint brown mottles; fine sand; single grain structures; wet; sharp to;
2C1	1.70 to 2.30	Light brownish grey (2.5Y62) moist colour; common 10-20% coarse 15-30mm distinct brown mottles; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded granite and subrounded quartz coarse fragments; single grain structures; wet; sharp to;
2C2	2.30 to 3.40	Greyish brown (2.5Y52) moist colour; very few < 2% medium 5-15mm prominent orange, few 2-10% medium 5-15mm distinct pale, very few < 2% coarse 15-30mm distinct brown mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded feldspar coarse fragments; single grain structures; wet; gradual to;
2C3	3.40 to 4.60	Light brownish grey (10YR62) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular and subrounded quartz and feldspar coarse fragments; single grain structures; wet; sharp to;
3C	4.60 to 5.20	Light yellowish brown (10YR64) moist colour; fine sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded quartz and rounded rhyolite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.8	4.2	
0.60	6.5	5.2	
1.00	6.2	5.4	
1.50	6.1	5.4	
2.00	6.2	4.9	
2.50	6.2	4.4	
3.00	6.3	5.7	
3.50	6.2	5.4	
4.00	6.2	5.2	
4.50	6.3	5.3	
5.00	6.6	5.4	

Notes:
 Observation H2O EC - 0.3 mS/cm; pH 5.7

Project: MWQ Site: 99

Location: 722800 mE 7673830 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 19-Sep-2001

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Dune

Runoff: No record

Elevation: 5.3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1.5 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Loose, Soft

Classifications

ASC: Spolic, ANTHROPOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.50	Dark brown (10YR33) moist colour; few 2-10% medium 5-15mm distinct brown mottles; fine sand; very few < 2% small pebbles 2-6mm subangular andesite coarse fragments; single grain structures; sharp to;
Fill	0.50 to 0.65	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm prominent orange, very few < 2% fine < 5mm prominent brown, common 10-20% fine < 5mm distinct brown mottles; clayey fine sand; very few < 2% small pebbles 2-6mm subangular basalt coarse fragments; single grain structures; sharp to;
B2	0.65 to 1.50	Yellowish brown (10YR55) moist colour; many 20-50% coarse 15-30mm distinct yellow, very few < 2% fine < 5mm prominent dark mottles; fine sand; very few < 2% small pebbles 2-6mm subangular feldspar coarse fragments; single grain structures; sharp to;
C	1.50 to 2.35	Grey (10YR61) moist colour; few 2-10% very coarse > 30mm prominent grey mottles; fine sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; sharp to;
2Cu	2.35 to 5.10	Grey (2.5Y50) moist colour; fine sand with 8cm sand lenses at 2.9, 3.6 and 4.1m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and andesite coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	3.9	
0.30	5.1	3.9	
0.60	5.6	1.8	
0.80	5.4	4.2	
1.00	5.5	4.8	
1.25	5.4	4.6	
1.50	5.6	3.3	
1.75	6.1	3.2	
2.00	5.7	2.8	
2.25	5.9	2.4	
2.50	5.9	1.8	
2.75	5.9	1.8	
3.00	6.0	1.8	
3.25	6.0	1.8	
3.50	5.9	1.8	
3.75	6.1	1.9	
4.00	6.2	2.0	
4.25	6.1	1.9	
4.50	6.1	2.0	
4.75	5.9	2.0	
5.00	6.2	2.0	

Notes:

Horizon – 2Cu FeS₂ Flakes
 Observation H₂O EC - 0.3 mS/cm; pH 5.2

Project: MWQ Site: 100

Location: 723075 mE 7673900 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 6.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Few 2-10%, medium pebbles 6-20mm, Andesite
 Surface Condition: Loose, Soft

Classifications

ASC: Spolic, ANTHROPOSOL / Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.40	Mix of very dark greyish brown (10YR32) moist, light yellowish brown (10YR64) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular andesite and quartz coarse fragments; single grain structures; moderately moist;
A1	0.40 to 0.55	Black (10YR21) moist colour; very few < 2% fine < 5mm distinct brown mottles; fine sand; massive structures; moist; abrupt to;
A2	0.55 to 0.70	Very few < 2% fine < 5mm distinct brown mottles; fine sand; single grain structures; moist; clear to;
B21	0.70 to 1.20	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sand; single grain structures; wet; sharp to;
2C	1.20 to 1.65	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm distinct brown mottles; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and unconsolidated material coarse fragments; single grain structures; wet;
3C	1.65 to 1.75	Grey (5Y61) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded granodiorite coarse fragments; single grain structures; wet; sharp to;
4C1	1.75 to 3.40	Light brownish grey (2.5Y62) moist colour; few 2-10% very coarse > 30mm faint brown, few 2-10% very coarse > 30mm distinct grey mottles; fine sand with a 10cm sand lens at 2.5m; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded granite, rhyolite and quartz coarse fragments; single grain structures; wet; clear to;
4C2	3.40 to 4.10	Light brownish grey (2.5Y63) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded andesite and quartz coarse fragments; single grain structures; wet; sharp to;

5C 4.10 to 5.00 Light brownish grey (2.5Y62) moist colour; sand with 5-10cm coarse sand lenses at 4.15 and 4.55m and a 10cm fine sand lens at 4.2m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded rhyolite and subrounded quartz, granite and andesite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	7.1	4.2	
0.60	5.9	4.8	
1.00	5.9	5.0	
1.50	6.1	4.6	
2.00	6.1	5.2	
2.50	6.1	5.5	
3.00	6.3	5.2	
3.50	6.2	5.2	
4.00	6.3	5.3	
4.25	6.2	4.2	
4.50	6.2	3.7	
4.75	6.1	3.7	
5.00	6.5	3.7	

Notes:

Observation H2O EC - 0.2 mS/cm; pH 5.9

Project: MWQ Site: 101

Location: 723070 mE 7673425 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Andesite
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Dark brown (7.5YR32) moist colour; fine sand; single grain structures; dry; sharp to;
B21	0.20 to 0.50	Dark brown (7.5YR34) moist colour; fine sand; single grain structures; moderately moist; clear to;
B22	0.50 to 0.80	Strong brown (7.5YR56) moist colour; fine sand; single grain structures; moderately moist; clear to;
B3	0.80 to 1.00	Yellowish brown (10YR54) moist colour; fine sand with a few medium sands; single grain structures; moist; sharp to;
BC	1.00 to 1.70	Light brownish grey (2.5Y62) moist colour; few 2-10% medium 5-15mm distinct yellow mottles; fine sand; single grain structures; wet; clear to;
2C1	1.70 to 2.60	Grey (5Y61) moist colour; very few < 2% fine < 5mm distinct brown, few 2-10% medium 5-15mm faint brown mottles; fine sand with a 1cm silty light clay lens at 2.35 m; single grain structures; wet;
2C2u	2.60 to 5.10	Dark grey (2.5Y40) moist colour; fine sand with a 5cm sand lens at 4.1m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded quartz and andesite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	3.6	
0.30	5.1	3.2	
0.60	4.8	3.1	
0.80	5.7	3.8	
1.00	6.0	4.2	
1.25	6.3	4.7	
1.50	6.1	5.0	
1.75	6.3	4.8	
2.00	6.0	3.9	
2.25	6.2	3.1	
2.50	6.1	2.8	
2.75	6.5	2.2	
3.00	6.4	2.1	
3.25	6.8	2.1	
3.50	6.6	2.3	
3.75	6.7	2.3	
4.00	7.0	2.3	
4.25	6.8	2.2	
4.50	6.5	2.3	
4.75	6.7	2.1	
5.00	6.7	2.4	

Notes:

Observation Could not sample water

Project: MWQ Site: 102

Location: 723165 mE 7674735 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 20-Sep-2001

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Swale

Runoff: No record

Elevation: 4.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Loose, Soft

Classifications

ASC: Solic, ANTHROPOSOL / Basic, Arenic, Orthic, TENOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Lower Stratum: Cyperus rotundus (Nutgrass)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.50	Very dark greyish brown (10YR32) moist colour; very few < 2% fine < 5mm distinct dark mottles; fine sand; single grain structures; dry; sharp to;
Fill	0.50 to 0.65	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; moderately moist; sharp to;
A1	0.65 to 0.90	Black (2.5Y20) moist colour; fine sandy loam; massive structures; moderately moist; clear to;
A2	0.90 to 1.20	Fine sand; single grain structures; moist; clear to;
B2	1.20 to 1.70	Pale brown (10YR63) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sand; single grain structures; wet;
C	1.70 to 2.30	Light brownish grey (10YR62) moist colour; fine sand; single grain structures; wet; sharp to;
2C1	2.30 to 2.70	Grey (10YR61) moist colour; very few < 2% fine < 5mm distinct brown mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded andesite coarse fragments; single grain structures; wet;
2C2	2.70 to 4.45	Grey (2.5Y50) moist colour; fine sand with a 5cm sand lens at 3.5m; single grain structures; wet; sharp to;
2C3	4.45 to 4.90	Grey (10YR61) moist colour; many 20-50% fine < 5mm distinct brown mottles; fine sand; single grain structures; wet; sharp to;

3C 4.90 to 5.30 Light yellowish brown (10YR64) moist colour; sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.8	3.8	2.75	5.9	2.5
0.30	6.2	4.2	3.00	5.9	2.0
0.60	5.8	4.5	3.25	5.9	1.9
0.80	5.7	2.4	3.50	6.0	1.9
1.00	5.9	3.1	3.75	6.4	1.8
1.25	5.7	4.5	4.00	6.4	1.9
1.50	5.5	4.8	4.25	6.4	2.0
1.75	5.7	5.1	4.50	6.2	2.1
2.00	6.0	4.7	4.75	6.3	2.1
2.25	5.9	4.8	5.00	6.4	3.4
2.50	6.0	3.1	5.25	6.3	4.6

pH_F (pH using electrode probe),

pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon - B2 Few FeS₂ flakes

Horizon - C Many FeS₂ flakes from here to 4.9 m

Horizon - 2C2 Layers of OM - leaves at 2.7 m

Observation H₂O EC - 0.4 mS/cm; pH 5.3

Project: MWQ Site: 103

Location: 722900 mE 7675110 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated, Soft

Classifications

ASC: Spolic, ANTHROPOSOL / HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch); Cyperus rotundus (Nutgrass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; fine sand with lumps of clay; single grain parting to massive structures; dry; sharp to;
A2e	0.15 to 0.30	Light brownish grey (10YR62) moist, white (10YR82) dry colour; fine sand with lumps of clay; single grain parting to massive structures; dry; sharp to;
2A1	0.30 to 0.45	Black (2.5Y20) moist colour; common 10-20% fine < 5mm prominent orange mottles; sandy light medium clay; massive structures; moderately moist;
2B2	0.45 to 0.60	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent orange mottles; sandy light medium clay; massive structures; moderately moist;
3BC	0.60 to 1.10	Greyish brown (2.5Y52) moist colour; common 10-20% medium 5-15mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded rounded quartz and subrounded unconsolidated material and andesite coarse fragments; single grain structures; moist; abrupt to;
3C	1.10 to 1.60	Dark greyish brown (2.5Y42) moist colour; sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded quartz, andesite and trachyte and rounded rhyolite coarse fragments; single grain structures; wet; sharp to;
4Cu	1.60 to 1.80	Dark grey (2.5Y40) moist colour; sand with a 2cm clay lens at 1.6m; very few < 2% small pebbles 2-6mm subrounded quartz and medium pebbles 6-20mm rounded rhyolite coarse fragments; single grain structures; wet; sharp to;
5Cu	1.80 to 3.30	Very dark grey (2.5Y30) moist colour; silty light clay; very few < 2% medium pebbles 6-20mm rounded tuff coarse fragments; massive structures; wet; sharp to;

6D 3.30 to 3.70 Dark greenish grey (5G41) moist colour; medium clay; few 2-10% medium pebbles 6-20mm subangular trachyte coarse fragments; moderate 2-5mm lenticular structures; very few < 2% medium 2-6 mm calcareous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	4.8	2.4	2.00	5.5	0.9
0.30	4.5	3.1	2.25	5.8	1.0
0.60	6.1	2.5	2.50	5.9	1.3
0.80	5.0	2.7	2.75	6.1	1.0
1.00	5.1	2.2	3.00	6.5	1.1
1.25	6.5	2.6	3.25	6.3	1.1
1.50	6.2	2.7	3.50	6.7	1.7
1.75	5.6	0.7	3.70	6.9	3.2

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon - 4Cu Few mangrove roots
 Horizon - 5Cu Full of mangrove roots
 Horizon - 6D EOP - too tight for VVC
 Observation H2O EC - 1.6 mS/cm; pH 5.7

Project: MWQ Site: 104

Location: 722780 mE 7674840 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Acidic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.30	Very dark brown (10YR22) moist colour; fine sand; single grain structures; dry; sharp to;
B2	0.30 to 0.70	Brownish yellow (10YR66) moist colour; fine sand; single grain structures; moderately moist; abrupt to;
C	0.70 to 1.40	Light grey (10YR71) moist, white (10YR81) dry colour; very few < 2% fine < 5mm faint brown mottles; fine sand; single grain structures; moist; abrupt to;
2B21	1.40 to 2.45	Light brownish grey (2.5Y62) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% medium 5-15mm distinct grey mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded rhyolite coarse fragments; single grain structures; wet; sharp to;
2B22	2.45 to 2.85	Grey (10YR61) moist colour; common 10-20% very coarse > 30mm distinct yellow mottles; sand; very few < 2% small pebbles 2-6mm rounded andesite and subrounded quartzcoarse fragments; single grain structures; wet
3C1u	2.85 to 3.70	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; diffuse to;
3C2u	3.70 to 4.75	Dark grey (2.5Y40) moist colour; fine sand with a 2cm clay plug at 4.5m; single grain structures; sharp to;
3C3u	4.75 to 5.00	Dark grey (2.5Y40) moist colour; fine sand with a 3cm clay plug at 4.8m; abundant 50-90% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite and shell coarse fragments; single grain structures;
4Cu	5.00 to 5.15	Very dark grey (2.5Y30) moist colour; fine sandy light clay; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm rounded andesite and shell coarse fragments; massive structures;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.5	3.1	2.75	6.2	5.2
0.30	4.8	3.4	3.00	6.5	2.0
0.60	4.9	4.5	3.25	6.5	2.0
0.80	5.7	4.9	3.50	6.7	2.1
1.00	6.1	5.2	3.75	6.5	2.1
1.25	6.3	5.4	4.00	6.4	2.1
1.50	6.3	5.6	4.25	6.7	2.0
1.75	6.0	5.6	4.50	7.0	2.2
2.00	6.0	5.7	4.75	7.2	5.5
2.25	6.4	4.7	5.00	7.4	3.8
2.50	6.4	3.2	5.10	7.6	2.0

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – B2 FeS2 flakes through B2, C, 2B21, 2B22, 3C1u, 3C2u and 3C3u horizons
 Observation Could not sample water

Project: MWQ Site: 105

Location: 722825 mE 7674500 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 4.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.50	Black (10YR21) moist colour; mix of pale and dark fine sand; single grain structures; sharp to;
A1	0.50 to 0.70	Very dark grey (10YR31) moist colour; fine sand; single grain structures; clear to;
B2?	0.70 to 2.00	Grey (5Y51) moist colour; common 10-20% medium 5-15mm prominent brown mottles; fine sand; single grain structures; sharp to;
2C1u	2.00 to 3.80	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; diffuse to;
2C2u	3.80 to 5.25	Dark grey (2.5Y40) moist colour; sand with a 5mm clay plug at 5.1m; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.6	4.8	
0.30	6.7	3.3	
0.60	6.0	2.3	
0.80	6.3		
1.00	6.6	3.3	
1.25	6.7	3.8	
1.50	6.9	2.5	
1.75	7.2	2.4	
2.00	7.2	2.5	
2.25	7.5	1.7	
2.50	7.3	1.8	
2.75	7.3	1.7	
3.00	7.3	1.6	
3.25	7.4	1.6	
3.50	7.5	1.6	
3.75	7.3	1.8	
4.00	7.5	1.8	
4.25	7.4	1.8	
4.50	7.5	1.9	
4.75	7.6	2.0	
5.00	7.8	2.0	
5.25	7.9	1.9	

Notes:
 Observation H2O EC - 0.7 mS/cm; pH 6.4

Project: MWQ Site: 106

Location: 723405 mE 7674720 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 25-Sep-2001

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Pit

Runoff: No record

Elevation: 8.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Loose, Soft

Classifications

ASC: Scalpic, ANTHROPOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
E	0.00 to 1.50	Fine sand; single grain structures;
B21	1.50 to 2.10	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; diffuse to;
B22	2.10 to 3.00	Yellowish brown (10YR55) moist, very pale brown (10YR73) dry colour; few 2-10% medium 5-15mm distinct orange, very few < 2% medium 5-15mm distinct dark mottles; fine sand; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; dry; gradual to;
B23	3.00 to 3.40	Brownish yellow (10YR66) moist colour; few 2-10% coarse 15-30mm prominent pale, few 2-10% medium 5-15mm prominent dark, common 10-20% medium 5-15mm prominent orange mottles; fine sand; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; moist; sharp to;
B24	3.40 to 3.75	Yellowish brown (10YR56) moist colour; common 10-20% coarse 15-30mm prominent pale, few 2-10% medium 5-15mm distinct dark mottles; fine sand; single grain structures; common 10-20% fine <2 mm manganiferous soft segregations; wet; sharp to;
B25	3.75 to 5.00	Dark yellowish brown (10YR44) moist colour; common 10-20% very coarse > 30mm prominent pale, few 2-10% very coarse > 30mm prominent orange mottles; fine sand; single grain structures; very many > 50% fine <2 mm manganiferous soft segregations; wet; sharp to;
B26	5.00 to 6.50	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; few 2-10% fine <2 mm manganiferous soft segregations; wet;
2B	6.50 to 6.70	Yellowish brown (10YR54) moist colour; very few < 2% medium 5-15mm prominent orange mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; few 2-10% fine <2 mm manganiferous soft segregations; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
1.50	5.8	4.7	
2.00	6.5	5.6	
2.50	6.4	6.7	
3.00	6.7	6.0	
3.50	6.6	8.1	
4.00	6.8	8.4	
4.50	6.6	8.3	
5.00	6.8	6.2	
5.50	6.6	6.5	
6.00	6.8	8.2	
6.50	6.9	8.5	

Notes:

Horizon - E Soil excavated; pyrite flakes through all horizons
 Observation Could not sample

Project: MWQ Site: 107

Location: 722415 mE 7674610 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft, Saline

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Rhizophora stylosa (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (5Y21) moist colour; silty light clay; massive structures; wet; clear to;
C11	0.20 to 1.00	Very dark grey (10YR31) moist colour; very few < 2% medium 5-15mm distinct grey mottles; silty light clay; massive structures; wet; abrupt to;
C12	1.00 to 2.00	Dark grey (5Y41) moist colour; silty light clay; massive structures; wet; diffuse to;
C13	2.00 to 3.30	Dark grey (2.5Y40) moist colour; silty light clay with a 5mm fine sand lens at 3.1m; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.3	
0.30	5.9	4.3	
0.60	6.0	1.3	
0.80	5.9	1.0	
1.00	5.9	1.2	
1.25	5.9	1.3	
1.50	5.9	0.8	
1.75	6.0	1.2	
2.00	6.0	1.4	
2.25	6.0	1.2	
2.50	6.0	1.3	
2.75	6.0	0.9	
3.00	5.9	1.5	
3.25	5.8	1.7	

Notes:

Horizon - C13 EOP - fine sand would not hold in gouge auger
 Observation H2O EC - 49.6 mS/cm; pH 6.0

Project: MWQ Site: 108

Location: 724605 mE 7671890 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: footslope
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, Granite
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.40	Dark & light brown fine sand with lumps of clay; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm subangular unconsolidated material (unidentified) coarse fragments; dry; sharp to;
A1	0.40 to 0.70	Dark greyish brown (10YR42) moist colour; fine sand; single grain structures; dry; abrupt to;
B2	0.70 to 1.40	Yellowish brown (10YR56) moist colour; fine sand; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; dry;
2BC	1.40 to 1.60	Pale brown (10YR63) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded diorite and rhyolite coarse fragments; single grain structures; moderately moist; abrupt;
3B2	1.60 to 2.10	Yellowish brown (10YR56) moist colour; common 10-20% medium 5-15mm prominent pale, few 2-10% medium 5-15mm prominent orange mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and unconsolidated material (unidentified) coarse fragments; single grain structures; moist;
4B2	2.10 to 2.75	Strong brown (7.5YR56) moist colour; common 10-20% medium 5-15mm prominent pale mottles; clayey fine sand with sand lenses; very few < 2% small pebbles 2-6mm subrounded quartz and medium pebbles 6-20mm subangular andesite coarse fragments; single grain structures; wet; sharp to;
5C	2.75 to 3.80	Light brownish grey (10YR62) moist colour; few 2-10% medium 5-15mm distinct orange mottles; fine sand with 2cm sand lenses at 3.4, 3.55 & 3.65m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
6C	3.80 to 4.00	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm distinct orange mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and andesite coarse fragments; wet; sharp to;

7Cu	4.00 to 4.20	Dark grey (2.5Y40) moist colour; sand with a 5cm of fine sand lens at 4.15m; very few < 2% small pebbles 2-6mm subrounded quartz and andesite coarse fragments; single grain structures; wet; sharp to;
8Cu	4.20 to 4.40	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; wet; abrupt to;
9Cu	4.40 to 5.25	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.4	
0.60	6.2	5.0	
1.00	5.5	4.5	
1.50	6.5	5.1	
2.00	6.6	5.7	
2.50	5.7	4.5	
3.00	6.1	5.3	
3.50	6.5	5.7	
3.75	6.8	5.3	
4.00	6.7	1.7	
4.25	5.5	1.5	
4.50	6.3	1.2	
4.75	6.5	1.3	
5.00	6.4	1.1	
5.25	6.6	1.1	

Notes:

Observation Could not sample water

Project: MWQ Site: 109

Location: 727960 mE 7667510 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 26-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.15	Mix of pale and light brown coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; sharp to;
A1	0.15 to 0.45	Black (10YR21) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; sharp to;
2A1	0.45 to 0.80	Black (2.5Y20) moist colour; silty light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; abrupt to;
2B2	0.80 to 1.40	Grey (5Y51) moist colour; few 2-10% medium 5-15mm distinct brown, few 2-10% fine < 5mm prominent orange, few 2-10% fine < 5mm prominent grey, few 2-10% medium 5-15mm prominent dark mottles; light medium clay with 1mm coarse sand lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist; gradual to;
3C	1.40 to 1.70	Dark grey (5Y41) moist colour; light medium clay with 2cm coarse sand lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; wet; sharp to;
4C1	1.70 to 2.05	Dark grey (2.5Y40) moist colour; fine sand with many 1-5cm very dark grey clay lenses and a 5cm layer of pale coarse sand at 1.75m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
4C2	2.05 to 3.30	Grey (2.5Y50) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.3	2.0	
0.30	5.0	1.9	
0.60	4.9	2.3	
0.80	4.2	1.6	
1.00	4.4	2.2	
1.25	4.8	2.2	
1.50	4.5	1.6	
1.75	4.9	1.3	
2.00	4.9	1.1	
2.25	5.7	1.4	
2.50	6.0	1.5	
2.75	5.5	1.4	
3.00	5.4	1.6	
3.25	5.6	1.5	

Notes:

Horizon – 4C1 Layer of mangrove debris at 1.7m
 Horizon – 4C2 Tube stopped at 4.3 m; last metre of sand did not hold in tube
 Observation H2O EC - 0.3 mS/cm; pH 5.2

Project: MWQ Site: 110

Location: 727290 mE 7667730 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 26-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus alba (Poplar gum)
 Mid Stratum: Acacia leptocarpa (North coast wattle)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sand; single grain structures; dry; clear to;
B2	0.30 to 0.75	Olive yellow (2.5Y66) moist colour; fine sand; very few < 2% large pebbles 20-60mm rounded andesite coarse fragments; single grain structures; dry; abrupt to;
2BC1	0.75 to 1.05	Light grey (2.5Y72) moist colour; few 2-10% medium 5-15mm prominent orange mottles; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular and subrounded quartz and andesite coarse fragments; single grain structures; dry; sharp to;
2BC2	1.05 to 1.60	Light brownish grey (10YR62) moist colour; common 10-20% medium 5-15mm prominent orange mottles; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and andesite coarse fragments; single grain structures; dry; sharp to;
3Cu	1.60 to 2.12	Grey (10YR51) moist colour; very few < 2% fine < 5mm prominent orange mottles; fine sand with thin clay lenses; single grain structures; wet; sharp to;
4C	2.12 to 2.25	Light grey (10YR72) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
5Cu	2.25 to 2.95	Very dark grey (10YR31) moist colour; silty light clay with thin clay lenses; massive structures; wet; sharp to;
6Cu	2.95 to 3.30	Grey (10YR51) moist colour; fine sand with thin clay lenses; very few < 2% small pebbles 2-6mm subrounded quartz and diorite coarse fragments; single grain structures; wet; sharp to;

7D 3.30 to 3.75 Greenish grey (5G51) moist colour; common 10-20% fine < 5mm distinct gley mottles; medium heavy clay with fine sand veins; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm subangular andesite and subrounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	4.8	
0.60	6.5	4.6	
1.00	5.9	4.7	
1.50	4.3	3.2	
1.75	3.5	2.9	
2.00	3.7	2.9	
2.25	3.6	2.5	
2.50	3.5	1.1	
2.75	4.4	1.2	
3.00	4.9	1.5	
3.25	5.4	1.6	
3.50	5.6	1.8	
3.75	6.1	2.5	

Notes:

Horizon – 5Cu Many mangrove roots
 Horizon – 7D EOP - too tight for VVC
 Observation H2O EC - 11.3 mS/cm; pH 3.6

Project: MWQ Site: 111

Location: 729350 mE 7666255 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Avicennia marina (Grey mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (2.5Y20) moist colour; common 10-20% very coarse > 30mm prominent orange mottles; light clay; moderate 2-5mm subangular blocky structures; moist; sharp to;
B21i	0.15 to 0.50	Grey (2.5Y60) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% coarse 15-30mm prominent red mottles; silty light clay; moderate 2-5mm subangular blocky structures; moist; clear to;
B22i	0.50 to 0.90	Grey (2.5Y50) moist colour; common 10-20% medium 5-15mm prominent brown mottles; silty light clay; moist; clear to;
Cu	0.90 to 1.30	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	1.30 to 1.50	Dark grey (2.5Y40) moist colour; clayey fine sand; massive structures; wet; sharp to;
3C1u	1.50 to 2.70	Dark grey (2.5Y40) moist colour; sand with a 5mm clay lens at 2.6m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and andesite coarse fragments; single grain structures; wet; abrupt to;
3C2u	2.70 to 3.20	Grey (2.5Y50) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz and andesite coarse fragments; single grain structures; wet; clear to;
3C3u	3.20 to 5.20	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and large pebbles 20-60mm rounded quartz, diorite, andesite and rhyolite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.9	3.3	2.75	5.8	1.9
0.30	4.3	2.8	3.00	5.8	1.8
0.60	3.8	2.6	3.25	6.0	2.0
0.80	4.0	2.7	3.50	6.0	1.9
1.00	4.5	2.9	3.75	5.9	1.9
1.25	5.1	1.4	4.00	5.8	1.9
1.50	5.8	1.2	4.25	6.0	1.8
1.75	5.7	1.6	4.50	6.1	1.7
2.00	5.7	1.6	4.75	6.1	2.0
2.25	5.8	1.8	5.00	6.1	3.0
2.50	5.9	1.9	5.20	6.1	2.1

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 20.9 mS/cm; pH 5.6

Project: MWQ Site: 112

Location: 729120 mE 7667135 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Sep-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, sparse
 Species: Eucalyptus tessellaris
 Mid Stratum: Tree Acacia leptocarpa (North coast wattle); Alphitonia excelsa (Red ash, soapbush); Exocarpos latifolius (native cherry)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sand; single grain structures; dry; diffuse to;
C	0.20 to 1.20	Brown (10YR53) moist, very pale brown (10YR73) dry colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; single grain structures; dry; sharp to;
2C	1.20 to 1.60	Light grey (10YR72) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz and granite coarse fragments; single grain structures; moist; abrupt to;
3B	1.60 to 2.15	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; coarse sand with thin 5-10mm light clay lenses; very few < 2% small pebbles 2-6mm subrounded quartz and andesite coarse fragments; single grain structures; wet; sharp to;
4Cu	2.15 to 3.33	Very dark grey (5Y31) moist colour; silty light clay with a 3cm coarse clay sand lens at 2.2m; massive structures; wet; sharp to;
5Cu	3.33 to 3.50	Dark grey (2.5Y40) moist colour; clayey fine sand; massive structures; wet; sharp to;
6Cu	3.50 to 4.50	Dark grey (2.5Y40) moist colour; coarse sand with a clay plug at 3.8m; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and andesite coarse fragments; single grain structures; wet; sharp to;
7Cu	4.50 to 4.55	Very dark grey (10YR31) moist colour; silty light clay with 1mm fine sand lenses throughout; very few 2% medium pebbles 6-20mm rounded andesite coarse fragments; massive structures; wet; sharp to;
8Cu	4.55 to 4.90	Dark grey (2.5Y40) moist colour; fine sand with a 5mm sand lens at 4.8m; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.2	4.6	3.00	5.0	1.3
0.60	5.8	4.8	3.25	5.1	1.3
1.00	5.3	3.7	3.50	6.2	1.7
1.50	4.9	4.1	3.75	5.9	1.8
1.75	5.0	3.9	4.00	6.3	1.8
2.00	5.2	3.6	4.25	6.2	1.9
2.25	5.2	2.1	4.50	5.3	1.2
2.50	4.2	1.4	4.75	6.0	1.8
2.75	4.7	1.2			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 8Cu EOP - couldn't get the last 10 cm
 Observation H2O EC - 36.1 mS/cm; pH 4.6

Project: MWQ Site: 113

Location: 729350 mE 7667225 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Shell
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense
 Species: *Cerriops tagal* (Yellow mangrove); *Avicennia marina* (Grey mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; few 2-10% medium 5-15mm distinct orange, few 2-10% medium 5-15mm prominent grey mottles; mix of fine sandy light clay and fine sandy clay loam, heavy; weak 5-10mm subangular blocky structures; moist; clear to;
B2	0.15 to 0.70	Very dark grey (10YR31) moist colour; many 20-50% coarse 15-30mm prominent orange, common 10-20% coarse 15-30mm distinct grey mottles; fine sandy light clay and fine sandy clay loam; weak 5-10mm subangular blocky structures; moist; abrupt to;
Cu	0.70 to 1.70	Very dark grey (2.5Y30) moist colour; few 2-10% medium 5-15mm prominent brown mottles; fine sandy light clay with 5mm fine sand lenses; massive structures; wet; sharp to;
2Cu	1.70 to 2.00	Dark grey (2.5Y40) moist colour; fine sandy loam; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	5.0	
0.30	6.1	4.6	
0.60	6.1	1.0	
0.80	6.2	1.4	
1.00	6.2	1.3	
1.25	6.2	1.7	
1.50	6.3	1.4	
1.75	6.1	1.6	
2.00	6.1	1.4	

Notes:

Horizon – 2Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 50.1 mS/cm; pH 6.5

Project: MWQ Site: 114

Location: 725030 mE 7670260 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Sep-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Hard setting

Classifications

ASC: Endohypersodic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Livistona decipiens
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.20	Grey (10YR61) moist colour; common 10-20% fine < 5mm prominent brown mottles; light medium clay; moderately moist;
B21	0.20 to 0.40	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm faint yellow mottles; medium clay; moderately moist;
B22	0.40 to 1.10	Grey (5Y51) moist colour; few 2-10% fine < 5mm faint orange, common 10-20% medium 5-15mm prominent brown, few 2-10% coarse 15-30mm prominent grey mottles; medium clay; moderately moist;
B23	1.10 to 1.60	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct yellow, very few < 2% medium 5-15mm prominent brown mottles; light medium clay; moist;
B24	1.60 to 2.90	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent gley, few 2-10% fine < 5mm distinct brown, common 10-20% medium 5-15mm faint red mottles; light medium clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm angular and subangular unconsolidated material (unidentified) coarse fragments; moist; abrupt to;
B25	2.90 to 3.50	Yellowish brown (10YR56) moist colour; common 10-20% medium 5-15mm prominent grey, few 2-10% fine < 5mm prominent orange, few 2-10% fine < 5mm prominent red mottles; light medium clay; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm angular and subangular acid volcanic coarse fragments; moist; abrupt to;
B26	3.50 to 3.60	Reddish brown (5YR44) moist colour; many 20-50% fine < 5mm prominent red, few 2-10% fine < 5mm prominent grey mottles; light medium clay; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm angular and subangular acid volcanic coarse fragments; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	5.3	
0.60	6.6	6.1	
1.00	6.8	6.4	
1.50	7.2	6.6	
2.00	7.0	6.9	
2.50	7.0	7.3	
3.00	6.9	6.4	
3.50	7.9	6.6	

Notes:

Horizon – B26 EOP - rock @ 3.6 m
 Observation H2O EC - 16.5 mS/cm; pH 7.4

Project: MWQ Site: 115

Location: 726750 mE 7671830 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Sep-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Rhizophora apiculata (Tall-stilted mangrove)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.13	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; silty light clay; strong 10-20mm cast parting to moderate 2-5mm subangular blocky structures; moist; sharp to;
A12	0.13 to 0.30	Black (2.5Y20) moist colour; few 2-10% fine < 5mm distinct brown, very few < 2% fine < 5mm distinct yellow mottles; silty light clay; moderate 10-20mm parting to moderate 2-5mm subangular blocky structures; wet; abrupt to;
C1	0.30 to 1.30	Dark grey (2.5Y40) moist colour; common 10-20% medium 5-15mm distinct brown mottles; silty light clay; massive structures; wet; abrupt to;
C2	1.30 to 2.00	Dark grey (5Y41) moist colour; silty light clay; massive structures; wet; diffuse to;
C3	2.00 to 3.42	Dark grey (7.5YR40) moist colour; silty light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.2	3.9	
0.30	6.6	2.4	
0.60	6.2	1.6	
0.80	6.3	1.3	
1.00	6.2	1.4	
1.25	6.0	1.5	
1.50	6.1	1.6	
1.75	6.3	1.5	
2.00	6.3	1.8	
2.25	6.4	1.5	
2.50	6.4	1.9	
2.75	6.4	1.8	
3.00	6.4	1.6	
3.25	6.4	1.8	

Notes:

Horizon - C3 EOP - full extent of gouge augers
 Observation H2O EC - 57.9 mS/cm; pH 6.3

Project: MWQ Site: 116

Location: 727415 mE 7669725 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-Oct-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Levee
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Acid volcanic
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Eucalyptus polycarpa
 Mid Stratum: Acacia leptocarpa (North coast wattle); Cupaniopsis anacardioides (Tuckeroo); Xanthorrhoea johnsonii (Blackboy, grasstree); Pittosporum ferrugineum (Rusty Pittosporum); Exocarpos latifolius (Native cherry)
 Lower Stratum: Brachiaria mutica (Para grass); Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz, acid volcanic and rhyolite coarse fragments; single grain structures; dry; clear to;
B2?	0.30 to 1.10	Yellowish brown (10YR56) moist colour; very few < 2% medium 5-15mm distinct orange mottles; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; moderately moist; clear to;
C?	1.10 to 1.60	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
2Cu?	1.60 to 2.50	Grey (5Y51) moist colour; clayey sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
3C	2.50 to 3.10	Grey (5Y61) moist colour; very few < 2% medium 5-15mm distinct brown mottles; coarse sand; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
4Cu?	3.10 to 3.60	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
5C	3.60 to 5.20	Light yellowish brown (10YR64) moist colour; coarse sand with 10cm fine sand lens at 3.8m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and acid volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.5	4.1	
0.60	7.2	4.9	
1.00	7.0	5.4	
1.50	7.1	3.6	
1.75	7.5	4.1	
2.00	7.1	4.4	
2.25	6.8	4.6	
2.50	6.5	4.5	
2.75	7.0	4.7	
3.00	6.5	5.1	
3.25	7.0	4.1	
3.50	6.9	4.6	
3.75	6.8	5.2	
4.00	6.7	5.4	
4.50	6.5	5.3	
5.00	6.9	5.4	

Notes:
 Observation Could not sample water

Project: MWQ Site: 117

Location: 725650 mE 7670760 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-Oct-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Saline, Surface flake

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark greyish brown (10YR42) moist colour; few 2-10% fine < 5mm distinct grey, very few < 2% fine < 5mm distinct brown mottles; light medium clay; weak 2-5mm subangular blocky structures; very few < 2% fine < 2 mm manganiferous soft segregations; moist; abrupt to;
B2	0.10 to 0.35	Grey (5Y51) moist colour; many 20-50% fine < 5mm prominent brown mottles; light clay; weak 5-10mm parting to weak 2-5mm subangular blocky structures; wet; sharp to;
2Cu	0.35 to 2.24	Very dark grey (10YR31) moist colour; very few < 2% medium 5-15mm distinct grey mottles; silty light clay; massive structures; wet; abrupt to;
3D	2.24 to 2.50	Dark greenish grey (5BG41) moist colour; few 2-10% fine < 5mm distinct dark mottles; light medium clay; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm angular unconsolidated material (unidentified) coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.7	8.0	
0.30	6.7	5.8	
0.60	6.3	1.5	
0.80	6.3	1.5	
1.00	6.3	1.5	
1.25	6.3	1.7	
1.50	6.3	1.2	
1.75	6.3	1.5	
2.00	6.3	1.5	
2.25	6.3	1.7	
2.50	6.4	1.9	

Notes:

Horizon - 2Cu Many mangrove roots
 Horizon - 3D EOP - gouge hit a rock
 Observation H2O EC - 99.3 mS/cm; pH 6.6

Project: MWQ Site: 118

Location: 725210 mE 7670915 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 03-Oct-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense

Species: Rhizophora apiculata (Tall-stilted mangrove); Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.20	Black (10YR21) moist colour; silty light clay; weak 2-5mm subangular blocky structures; moist; gradual to;
A12	0.20 to 0.80	Black (10YR21) moist colour; few 2-10% coarse 15-30mm distinct grey mottles; silty light clay; massive structures; wet; gradual to;
C2u	0.80 to 1.65	Dark grey (5Y41) moist colour; few 2-10% coarse 15-30mm distinct brown mottles; light clay; massive structures; wet; diffuse to;
C3u	1.65 to 3.00	Dark grey (5Y41) moist colour; light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	2.4	
0.30	6.5	2.0	
0.60	6.7	1.7	
0.80	6.7	1.4	
1.00	6.6	1.1	
1.25	6.5	1.8	
1.50	6.5	1.5	
1.75	6.4	1.8	
2.00	6.6	1.5	
2.25	6.4	1.8	
2.50	6.4	1.8	
2.75	6.4	2.0	
3.00	6.4	1.8	

Notes:

Horizon - C3u EOP - gouge was full
Observation H2O EC - 53.4 mS/cm; pH 6.6

Project: MWQ Site: 119

Location: 724380 mE 7671035 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 03-Oct-2001

Landscape

Geology: Cza - Unconsolidated Cainozoic
 Substrate Lithology: Unconsolidated material (unidentified) alluvial/colluvial sediments
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 4.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Acidic-sodic, Kurosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus alba (Poplar gum)
 Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; clear to;
A2j	0.40 to 0.80	Dark greyish brown (10YR42) moist, light grey (10YR71) dry colour; clayey fine sand; single grain structures; dry; sharp to;
B21	0.80 to 1.40	Grey (10YR61) moist colour; common 10-20% fine < 5mm distinct brown, few 2-10% fine < 5mm distinct orange, very few < 2% fine < 5mm distinct red mottles; fine sandy light clay; moderately moist; clear
B22	1.40 to 1.90	Light grey (2.5Y70) moist colour; very few < 2% fine < 5mm prominent brown mottles; fine sandy medium clay; moderately moist; abrupt to;
B23	1.90 to 2.80	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent gley mottles; fine sandy light medium clay; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	4.1	
0.60	5.2	4.1	
1.00	4.7	4.4	
1.50	5.3	4.7	
2.00	6.0	5.8	
2.50	6.5	5.8	
2.75	6.5	5.9	

Notes:

Horizon - B23 EOP - rock @ 2.8 m
 Observation Could not sample water

Project: MWQ Site: 120

Location: 724080 mE 7670200 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Oct-2001

Landscape

Geology: No record
 Substrate Lithology: Acid volcanic
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 4.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Few 2-10%, cobbles 60-200mm, Igneous rock (unidentified)
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Chromosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane); Nauclea orientalis (Leichhardt tree, cheesewood)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy, heavy; few 2-10% cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; moderate 2-5mm subangular blocky parting to moderate 2-5mm cast structures; dry; abrupt to;
B21	0.15 to 0.60	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sandy medium clay; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; moderate 2-5mm cast parting to moderate 2-5mm subangular blocky structures; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; gradual to;
B22	0.60 to 1.10	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent orange mottles; fine sandy medium clay; few 2-10% small pebbles 2-6mm subangular igneous rock (unidentified) coarse fragments; moderate 2-5mm subangular blocky structures; few 2-10% medium 2-6 mm manganiferous soft segregations; moist; clear to;
B23	1.10 to 1.60	Grey (2.5Y50) moist colour; common 10-20% fine < 5mm distinct yellow, common 10-20% fine < 5mm distinct yellow, few 2-10% fine < 5mm prominent orange mottles; fine sandy medium heavy clay; few 2-10% small pebbles 2-6mm subangular igneous rock (unidentified) coarse fragments; moderate 20-50mm prismatic structures; very few < 2% medium 2-6 mm manganiferous soft segregations; moist; gradual to;
B24	1.60 to 2.40	Greenish grey (5G51) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct grey, very few < 2% fine < 5mm distinct pale mottles; fine sandy medium clay; very few < 2% large pebbles 20-60mm subangular chert coarse fragments; very few < 2% medium 2-6 mm calcareous nodules and soft segregations; moist;

2BC?	2.40 to 3.60	Light olive grey (5Y62) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% fine < 5mm distinct gley, few 2-10% fine < 5mm distinct pale mottles; fine sandy medium clay; very few < 2% cobbles 60-200mm angular igneous rock (unidentified) coarse fragments; very few < 2% medium 2-6 mm calcareous nodules and soft (at 3.3m) and manganiferous soft segregations; wet; abrupt to;
2C?	3.60 to 4.20	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm distinct grey mottles; sandy clay loam; very few < 2% cobbles 60-200mm angular igneous rock (unidentified) coarse fragments; very few < 2% medium 2-6 mm manganiferous soft segregations; wet.

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.3	3.0	
0.60	7.3	6.8	
1.00	6.5	7.5	
1.50	6.6	6.3	
2.00	7.1	6.7	
2.50	7.6	6.5	
3.00	7.7	7.0	
3.50	7.4	8.1	
4.00	7.8	8.3	

Notes:

Horizon – 2C EOP - too hard to hand auger
 Observation H2O EC - 1.3 mS/cm; pH 7.5

Project: MWQ Site: 121

Location: 723200 mE 7670145 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Oct-2001

Landscape

Geology: Cza - Unconsolidated Cainozoic
 Substrate Lithology: Unconsolidated material (unidentified) alluvial/colluvial sediments
 Landform Pattern: Low hills
 Element: Valley-flat
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.8 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm, Periodic cracking

Classifications

ASC: Endohypersodic, Epipedal, Grey, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane); Pandanus whitei

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Black (10YR21) moist colour; common 10-20% fine < 5mm faint brown mottles; medium clay; moderate 10-20mm parting to weak 2-5mm subangular blocky structures; moist;
B21	0.40 to 1.20	Greyish brown (2.5Y52) moist colour; few 2-10% fine < 5mm distinct yellow, few 2-10% fine < 5mm faint grey mottles; medium clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subangular quartz and unconsolidated material (unidentified) coarse fragments; very few < 2% medium 2-6 mm manganiferous soft segregations; moist; clear to;
B22	1.20 to 1.60	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent brown mottles; medium clay; very few < 2% medium pebbles 6-20mm subangular unconsolidated material (unidentified) coarse fragments; moist; clear to;
B23	1.60 to 2.10	Greenish grey (5G51) moist colour; common 10-20% medium 5-15mm prominent brown mottles; medium clay; very few < 2% large pebbles 20-60mm subangular siltstone coarse fragments; moist; clear to;
B24	2.10 to 2.30	Strong brown (7.5YR56) moist colour; common 10-20% medium 5-15mm prominent gley mottles; fine sandy light medium clay; moist; abrupt to;
2BC?	2.30 to 2.50	Strong brown (7.5YR56) moist colour; fine sandy clay loam, light; very few < 2% medium pebbles 6-20mm subangular detrital sedimentary rock (unidentified) coarse fragments; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	4.1	
0.60	7.4	7.8	
1.00	7.6	9.3	
1.50	7.9	6.5	
2.00	7.5	6.7	
2.50	8.1	6.8	

Notes:

Horizon – 2BC EOP - rock @ 2.5 m
 Observation Dry hole

Project: MWQ Site: 122

Location: 721050 mE 7671005 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Oct-2001

Landscape

Geology: Cza - Unconsolidated Cainozoic
 Substrate Lithology: Unconsolidated material (unidentified) alluvial/colluvial sediments
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; fine sandy loam; massive structures; dry; abrupt to;
A21j	0.15 to 0.45	Brown (10YR53) moist, light grey (10YR71) dry colour; few 2-10% fine < 5mm distinct brown mottles; fine sandy loam; massive structures; dry; abrupt to;
A22j	0.45 to 0.80	Light brownish grey (10YR62) moist, white (10YR81) dry colour; common 10-20% medium 5-15mm prominent brown mottles; fine sandy clay loam; massive structures; few 2-10% coarse 6-20 mm ferruginous nodules segregations; moderately moist; sharp to;
B21	0.80 to 1.10	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent brown mottles; fine sandy medium clay; very few < 2% medium 2-6 mm ferruginous nodules segregations; dry; abrupt to;
B22	1.10 to 1.70	Yellowish brown (10YR58) moist colour; many 20-50% coarse 15-30mm prominent grey mottles; fine sandy light medium clay; moderately moist; abrupt to;
2B2	1.70 to 4.20	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm prominent gley mottles; fine sandy clay loam; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.6	4.1	
0.60	6.1	5.2	
1.00	7.2	6.3	
1.50	8.4	6.4	
2.00	8.6	6.7	
2.50	8.3	6.7	
3.00	8.9	6.8	
3.50	8.5	6.9	
4.00	7.6	6.7	

Notes:

Horizon - 2B2 EOP - rock @ 4.2 m
 Observation H2O EC - 25.3 mS/cm; pH 7.6

Project: MWQ Site: 123

Location: 721540 mE 7671315 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 05-Oct-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 2.9 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragment

Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.22	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; silty light clay; weak 10-20mm parting to weak 2-5mm subangular blocky structures; dry; sharp to;
2B21i	0.22 to 0.70	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm prominent red mottles; light medium clay; moderately moist; abrupt to;
2B22ia	0.70 to 1.50	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent yellow jarositic (from pyrite) mottles; silty light clay; massive structures; wet; sharp to;
2C1u	1.50 to 3.50	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm distinct grey mottles; silty light clay; massive structures; wet; sharp to;
2C2u	3.50 to 4.30	Dark grey (2.5Y40) moist colour; silty light clay; wet; sharp to;
3D	4.30 to 4.50	Dark greenish grey (5G41) moist colour; few 2-10% medium 5-15mm faint gley mottles; fine sandy medium heavy clay; massive structures; very few < 2% coarse 6-20 mm and common 10-20% medium 2-6mm calcareous nodules segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	3.7	
0.30	4.9	3.9	
0.60	4.5	3.8	
0.80	4.3	3.8	
1.00	4.1	3.1	
1.25	4.1	3.0	
1.50	4.3	3.1	
1.75	4.3	2.0	
2.00	4.4	1.7	
2.25	4.5	1.7	
2.50	5.0	1.5	
2.75	5.9	1.7	
3.00	6.3	1.9	
3.25	6.6	2.1	
3.50	6.7	2.3	
3.75	6.9	2.5	
4.00	7.2	2.6	
4.25	7.1	2.4	
4.50	7.9	2.7	

Notes:

Horizon – 2C1u many mangrove roots & a piece of wood @ 2.3 m

Horizon – 2C2u few mangrove roots

Horizon – 3D EOP - VVC would not penetrate deeper

Observation H2O EC - 16.0 mS/cm; pH 4.1

Project: MWQ Site: 124

Location: 720330 mE 7671585 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Oct-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, closed or dense
 Species: *Ceriops tagal* (Yellow mangrove); *Excoecaria agallocha* (Blind-your-eye mangrove); *Bruguiera exaristata* (Rib-fruited mangrove); *Lumnitzera racemosa* (Black mangrove)
 Lower Stratum: *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm faint brown, few 2-10% fine < 5mm distinct brown mottles; silty light clay; weak 5-10mm parting to weak 2-5mm subangular blocky structures; moist; clear to;
B2i	0.20 to 0.65	Dark greyish brown (10YR42) moist colour; few 2-10% medium 5-15mm prominent brown, common 10-20% fine < 5mm distinct brown, very few < 2% medium 5-15mm distinct grey mottles; silty light clay; weak 2-5mm subangular blocky structures; moist; abrupt to;
C1u	0.65 to 1.25	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; abrupt to;
C2u	1.25 to 2.25	Very dark grey (2.5Y31) moist colour; silty light clay with thin lenses of fine sand; massive structures; wet; abrupt to;
2Cu	2.25 to 3.00	Dark grey (7.5YR40) moist colour; sandy clay loam; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	4.7	
0.30	6.6	5.1	
0.60	6.5	4.8	
0.80	6.5	1.8	
1.00	6.5	3.4	
1.25	6.5	1.8	
1.50	6.5	2.0	
1.75	6.6	2.2	
2.00	6.5	1.9	
2.25	6.5	1.8	
2.50	6.6	1.8	
2.75	6.4	1.8	
3.00	6.5	2.4	

Notes:

Horizon – 2Cu EOP - gouge auger would not penetrate into fine sand
 Observation H2O EC - 60.0 mS/cm; pH 6.6

Project: MWQ Site: 125

Location: 722330 mE 7670880 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Oct-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Plain
 Element: Valley-flat
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Debil-debil, normal gilgai
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.8 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Surface crust

Classifications

ASC: Endohypersodic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cassia species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (2.5Y20) moist colour; light medium clay; strong 20-50mm parting to moderate 5-10mm subangular blocky structures; dry; abrupt to;
B21	0.20 to 0.50	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm faint brown mottles; light medium clay; strong 5-10mm subangular blocky structures; moderately moist; gradual to;
B22	0.50 to 1.10	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; lenticular structures; moderately moist; clear to;
B23	1.10 to 1.50	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent orange, few 2-10% coarse 15-30mm prominent dark mottles; light medium clay; lenticular structures; very few < 2% fine <2 mm gypseous crystals segregations; moist; clear to;
B24	1.50 to 1.75	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct brown, few 2-10% medium 5-15mm prominent dark mottles; light clay; very few < 2% fine <2 mm gypseous crystals segregations; moist; sharp to;
2B21	1.75 to 2.10	Grey (2.5Y60) moist colour; many 20-50% fine < 5mm prominent orange mottles; light medium clay; very few < 2% fine <2 mm gypseous crystals segregations; moist; abrupt to;
2B22	2.10 to 3.00	Brown (10YR53) moist colour; common 10-20% fine < 5mm distinct grey, few 2-10% fine < 5mm prominent red, very few < 2% fine < 5mm distinct yellow mottles; light clay; very few < 2% fine <2 mm manganiferous soft segregations; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	3.6	
0.30	6.5	6.3	
0.60	7.1	6.2	
0.80	6.8	5.7	
1.00	6.2	5.3	
1.25	5.2	4.2	
1.50	4.8	3.8	
1.75	4.4	3.4	
2.00	5.0	3.9	
2.25	6.2	5.3	
2.50	6.7	7.5	
2.75	6.5	8.2	
3.00	6.5	8.0	

Notes:

Horizon – 2B22 EOP - large rock @ 3.0 m
 Observation H2O EC - 22.3 mS/cm; pH 6.7

Project: MWQ Site: 126

Location: 720990 mE 7671630 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Oct-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Surface crust, Saline

Classifications

ASC: Sulfuric, Crusty, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A11?	0.00 to 0.05	Very dark grey (10YR31) moist colour; silty light medium clay; massive structures; moderately moist; abrupt to;
B21?	0.05 to 0.25	Very dark grey (10YR31) moist colour; silty light medium clay; strong 20-50mm lenticular parting to moderate 5-10mm lenticular structures; moist; clear to;
B22i	0.25 to 0.50	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent orange, few 2-10% fine < 5mm prominent dark, few 2-10% fine < 5mm prominent red mottles; silty light clay; moist; abrupt to;
B23ia	0.50 to 0.80	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite) mottles; silty light clay; massive structures; wet; abrupt to;
C1u	0.80 to 2.40	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
C2u	2.40 to 2.50	Dark grey (2.5Y40) moist colour; many 20-50% coarse 15-30mm prominent gley mottles; silty light clay with 2 x 3cm bands of 2D; massive structures; wet; sharp to;
2D?	2.50 to 3.00	Greenish grey (5G51) moist colour; medium clay; very few < 2% medium pebbles 6-20mm subrounded andesite coarse fragments; weak 2-5mm lenticular structures; very few < 2% medium 2-6 mm calcareous nodules and soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	5.7	
0.30	4.3	2.8	
0.60	5.7	2.6	
0.80	5.3	1.1	
1.00	5.1	1.3	
1.25	5.1	1.3	
1.50	5.4	1.4	
1.75	5.5	1.5	
2.00	5.7	1.5	
2.25	5.9	1.7	
2.50	6.2	1.4	
2.75	6.2	1.7	
3.00	6.3	1.7	

Notes:

Horizon - C1u many mangrove roots
 Horizon - 2D EOP - too hard for VVC to penetrate; few roots that look like mangroves
 Observation H2O EC - 89.4 mS/cm; pH 5.0

Project: MWQ Site: 127

Location: 723065 mE 7671445 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 09-Oct-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Plain

Runoff: No record

Elevation: 2.9 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (10YR21) moist colour; very few < 2% fine < 5mm faint brown mottles; medium clay; strong 10-20mm parting to strong 5-10mm subangular blocky structures; dry; sharp to;
2B21i	0.20 to 0.70	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent orange, common 10-20% coarse 15-30mm prominent red mottles; light clay; moist; abrupt to;
2B22ia	0.70 to 1.20	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent red, common 10-20% medium 5-15mm prominent orange, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; massive structures; moist;
2C1u	1.20 to 4.25	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
2C2u	4.25 to 4.30	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm prominent gley mottles; silty light clay with bits of 3D; few 2-10% medium pebbles 6-20mm subrounded andesite coarse fragments; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	3.7	
0.30	3.8	3.4	
0.60	3.5	3.1	
0.80	3.4	2.9	
1.00	4.0	2.5	
1.25	5.3	2.5	
1.50	5.1	1.4	
1.75	5.4	1.4	
2.00	5.8	1.3	
2.25	6.0	1.1	
2.50	6.2	1.3	
2.75	6.3	1.4	
3.00	6.5	1.2	
3.25	6.7	1.4	
3.50	6.8	1.6	
3.75	6.8	1.6	
4.00	6.8	1.5	
4.25	6.9	1.3	

Notes:

Horizon – 2C2u EOP - VVC lost vacuum

Observation H2O EC - 30.7 mS/cm; pH 5.4

Project: MWQ Site: 128

Location: 719110 mE 7671680 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Oct-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Digitaria decumbens (Pangola); Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; common 10-20% fine < 5mm prominent orange mottles; medium clay; strong 5-10mm parting to strong 2-5mm subangular blocky structures; dry; abrupt to;
B2	0.05 to 0.80	Black (10YR21) moist colour; many 20-50% fine < 5mm prominent orange mottles; medium heavy clay; strong 20-50mm parting to moderate 5-10mm subangular blocky parting to strong 10-20mm lenticular structures at 0.6m; moderately moist; abrupt to;
2B21?	0.80 to 1.15	Grey (10YR51) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown, very few < 2% fine < 5mm distinct red mottles; light medium clay; moist; clear to;
2B22?	1.15 to 1.40	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct brown, very few < 2% fine < 5mm prominent yellow-brown mottles; light clay; moist; abrupt to;
2B23ia	1.40 to 1.80	Greyish brown (2.5Y52) moist colour; very few < 2% fine < 5mm faint yellow jarositic (from pyrite), very few < 2% fine < 5mm distinct yellow mottles; light clay; moist; gradual to;
3B21?	1.80 to 2.60	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light clay; very few < 2% medium pebbles 6-20mm and large pebbles 20-60mm subrounded acid volcanic coarse fragments; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	3.2	
0.30	4.5	3.6	
0.60	4.1	3.3	
0.80	3.6	3.3	
1.00	3.3	2.8	
1.25	3.4	2.6	
1.50	3.4	2.7	
1.75	3.2	2.7	
2.00	3.7	3.1	
2.25	3.9	2.9	
2.50	4.0	3.6	

Notes:

Horizon - 3B21? EOP - rock at 2.6 m
 Observation H2O EC - 29.5 mS/cm; pH 4.1

Project: MWQ Site: 129

Location: 719395 mE 7671280 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Oct-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Sulfuric, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; silty light medium clay; strong 2-5mm subangular blocky structures; dry; abrupt to;
B2	0.05 to 0.50	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty medium clay; strong 5-10mm parting to strong 2-5mm subangular blocky parting to lenticular structures at depth; moderately moist;
2B21i	0.50 to 0.90	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent brown mottles; fine sandy light medium clay; moist; gradual to;
2B22i	0.90 to 1.30	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct yellow-brown mottles; silty light clay; wet; sharp to;
2B23ia	1.30 to 2.05	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent yellow jarositic (from pyrite), common 10-20% medium 5-15mm distinct brown, few 2-10% fine < 5mm distinct yellow-brown mottles; silty light clay; massive structures; wet; sharp to;
2Cu	2.05 to 3.00	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
3Cu	3.00 to 3.10	Very dark grey (2.5Y30) moist colour; clayey sand; common 10-20% medium pebbles 6-20mm rounded shell and basalt coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.6	2.9	
0.30	5.9	2.4	
0.60	6.5	4.7	
0.80	6.3	4.2	
1.00	4.4	3.4	
1.25	3.9	2.8	
1.50	3.9	2.1	
1.75	3.9	2.0	
2.00	3.9	1.5	
2.25	4.4	1.0	
2.50	5.6	1.2	
2.75	6.1	1.2	
3.00	6.4	1.6	

Notes:

Horizon – 3Cu EOP - VVC went to 4.3 m; sandy - shelly- gravelly material would not hold in
 Observation H2O EC - 17.1 mS/cm; pH 5.8

Project: MWQ Site: 130

Location: 718890 mE 7671110 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Oct-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Melanic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; silty light medium clay; moderate 2-5mm subangular blocky structures; dry; sharp to;
B21	0.40 to 1.50	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist;
B22	1.50 to 2.00	Grey (10YR51) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; very few < 2% small pebbles 2-6mm rounded and medium pebbles 6-20mm subrounded gravel coarse fragments; moist; sharp to;
2C	2.00 to 2.25	Dark greyish brown (10YR42) moist colour; coarse sandy loam; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm rounded gravel coarse fragments; wet; sharp to;
3B2	2.25 to 3.00	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; wet; sharp to;
4C	3.00 to 3.10	Greyish brown (10YR52) moist colour; coarse sand; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm rounded gravel coarse fragments; single grain structures; wet; sharp to;
5B2	3.10 to 3.40	Grey (10YR51) moist colour; common 10-20% medium 5-15mm distinct brown mottles; medium clay; wet; sharp to;
6C	3.40 to 3.75	Greyish brown (10YR52) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; single grain structures; wet; sharp to;
7B2	3.75 to 5.00	Grey (2.5Y50) moist colour; very few < 2% fine < 5mm distinct brown mottles; fine sandy light medium clay; very few < 2% large pebbles 20-60mm rounded gravel coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	4.7	
0.60	6.2	4.8	
1.00	7.3	7.2	
1.50	7.0	6.0	
2.00	6.9	6.0	
2.50	6.9	6.0	
3.00	6.9	6.0	
3.50	7.0	6.1	
4.00	6.9	6.3	
4.50	6.9	6.2	
5.00	7.1	6.0	

Notes:
 Observation H2O EC - 9.3 mS/cm; pH 7.0

Project: MWQ Site: 131

Location: 719580 mE 7674750 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Oct-2001

Landscape

Geology: Cza - Unconsolidated Cainozoic
 Substrate Lithology: Unconsolidated material (unidentified) alluvial/colluvial sediments
 Landform Pattern: Rises
 Element: Plain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Manganic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; common 10-20% fine < 5mm prominent orange mottles; clay loam; fine sandy; massive structures; dry; abrupt to;
A2j	0.15 to 0.25	Dark grey (10YR41) moist, light grey (10YR71) dry colour; common 10-20% fine < 5mm prominent orange mottles; clay loam; fine sandy; massive structures; dry; sharp to;
B21	0.25 to 0.50	Dark greyish brown (2.5Y42) moist colour; common 10-20% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent yellow mottles; fine sandy medium heavy clay; moderate 10-20mm subangular blocky structures; moderately moist;
B22	0.50 to 0.80	Light yellowish brown (2.5Y64) moist colour; common 10-20% medium 5-15mm prominent grey, common 10-20% medium 5-15mm prominent yellow-brown mottles; medium clay; many 20-50% medium 2-6 mm and coarse 6-20mm manganiferous nodules and soft segregations; moderately moist; clear to;
B23	0.80 to 1.50	Light brownish grey (10YR62) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown, few 2-10% medium 5-15mm distinct gley mottles; medium clay; very few < 2% small pebbles 2-6mm rounded gravel coarse fragments; few 2-10% medium 2-6 mm Calcareous nodules and soft and manganiferous nodules segregations; moist; gradual to;
B24	1.50 to 3.00	Brownish yellow (10YR66) moist colour; few 2-10% medium 5-15mm prominent gley, few 2-10% fine < 5mm distinct grey mottles; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.1	
0.60	6.6	7.7	
1.00	6.6	5.5	
1.50	6.5	5.7	
2.00	7.1	7.9	
2.50	7.3	6.0	
3.00	6.1	8.6	

Notes:

Horizon - B24 EOP - too hard & dry to dig
 Observation No water

Project: MWQ Site: 132

Location: 719910 mE 7674575 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Oct-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Surface crust, Saline

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.13	Dark brown (10YR33) moist colour; very few < 2% fine < 5mm distinct brown mottles; light medium clay; weak 2-5mm subangular blocky structures; moist; abrupt to;
B2i	0.13 to 0.30	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm distinct orange mottles; light clay; massive structures; moist; sharp to;
C1u	0.30 to 0.70	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
C2u	0.70 to 1.25	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
C3u	1.25 to 1.55	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
2D	1.55 to 2.00	Dark greenish grey (5GY41) moist colour; common 10-20% medium 5-15mm distinct grey mottles; fine sandy medium clay; very few < 2% medium pebbles 6-20mm subangular andesite coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	7.8	
0.30	4.6	2.2	
0.60	5.3	0.9	
0.80	5.6	0.4	
1.00	5.7	0.9	
1.25	5.9	0.7	
1.50	6.0	1.2	
1.75	6.1	1.2	
2.00	6.3	1.4	

Notes:

Horizon – C1u few mangrove roots
 Horizon – C2u many mangrove roots
 Horizon – C3u few mangrove roots
 Horizon – 2D few mangrove roots; EOP - too hard for gouge
 Observation H2O EC - 104.5 mS/cm; pH 5.8

Project: MWQ Site: 133

Location: 720020 mE 7675520 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Oct-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 5.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Shell
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense
 Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded shell and subangular andesite coarse fragments; single grain structures; dry; abrupt to;
B2	0.40 to 1.20	Dark yellowish brown (10YR44) moist colour; sand; very few < 2% small pebbles 2-6mm rounded andesite coarse fragments; single grain structures; dry; diffuse to;
C	1.20 to 1.80	Very pale brown (10YR74) moist colour; few 2-10% medium 5-15mm faint yellow mottles; fine sand; very few < 2% small pebbles 2-6mm rounded quartz and subangular andesite coarse fragments; single grain structures; dry; abrupt to;
2B2	1.80 to 2.00	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent pale mottles; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite coarse fragments; single grain structures; moderately moist; sharp to;
2C	2.00 to 2.30	Light grey (2.5Y72) moist, white (10YR81) dry colour; very few < 2% fine < 5mm distinct orange mottles; fine sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; single grain structures; moderately moist; sharp to;
3B2	2.30 to 3.05	Yellowish brown (10YR56) moist colour; many 20-50% coarse 15-30mm prominent grey mottles; clayey fine sand with a few small balls of clay; very few < 2% small pebbles 2-6mm rounded acid volcanic coarse fragments; single grain structures; moist; sharp to;
4B2ia	3.05 to 3.20	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), few 2-10% medium 5-15mm prominent brown mottles; fine sandy loam with a tongue of silty light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; sharp

5Cu	3.20 to 5.10	Dark grey (2.5Y40) moist colour; silty light medium clay; massive structures; moist; sharp to;
6D	5.10 to 5.20	Greenish grey (5BG51) moist colour; common 10-20% medium pebbles 6-20mm subangular andesite coarse fragments;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.5	3.9	3.25	4.0	0.9
0.60	7.5	5.2	3.50	4.2	0.2
1.00	7.6	5.4	3.75	4.9	1.0
1.50	7.4	5.2	4.00	5.6	0.7
2.00	7.1	4.9	4.25	5.9	0.9
2.50	4.7	3.4	4.50	6.2	0.7
2.75	5.2	4.4	4.75	6.4	0.9
3.00	4.2	2.0	5.00	6.7	1.4

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 1.5 mS/cm; pH 4.0

Project: MWQ Site: 134

Location: 718630 mE 7673040 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Oct-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Melanic, Sulfuric, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense Archontophoenix alexandrae (Alexandra palm); Melaleuca leucadendra (Long-leaved paperbark); Terminalia sericocarpa (Damson, sovereignwood)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm faint brown mottles; silty medium clay; strong 2-5mm subangular blocky structures; dry;
B2	0.40 to 0.80	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown mottles; medium heavy clay; strong subangular blocky structures; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2B21i	0.80 to 1.40	Grey (2.5Y50) moist colour; many 20-50% medium 5-15mm distinct brown, few 2-10% coarse 15-30mm prominent yellow-brown mottles; light medium clay; massive structures; moist; gradual to;
2B22ia	1.40 to 1.70	Dark grey (2.5Y40) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% fine < 5mm distinct brown mottles; light clay; massive structures; moist; abrupt to;
2Cu	1.70 to 3.40	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
3Cu	3.40 to 3.90	Very dark grey (2.5Y30) moist colour; coarse sand with 5cm silty light clay lenses at 3.4, 3.6 and 3.8m; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; massive structures; wet; sharp to;
4D	3.90 to 4.00	Dark greenish grey (5G41) moist colour; medium clay; very abundant >90% medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.1	3.3	
0.30	7.1	4.9	
0.60	6.6	7.0	
0.80	5.8	7.0	
1.00	5.8	4.7	
1.25	4.3	2.8	
1.50	4.7	3.2	
1.75	5.3	2.0	
2.00	5.5	1.3	
2.25	5.7	1.1	
2.50	5.9	1.1	
2.75	6.1	1.6	
3.00	6.2	1.4	
3.25	6.3	1.4	
3.50	6.8	1.3	
3.75	6.5	1.7	
4.00	6.8	6.5	

Notes:

Horizon – 4D EOP - something hard stopped the VVC
 Observation H2O EC - 1.0 mS/cm; pH 5.9
 Horizon – 3Cu and 4D Gravels are mixed acid and intermediate volcanic rocks

Project: MWQ Site: 135

Location: 719490 mE 7672960 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Oct-2001

Landscape

Geology: Cza - Unconsolidated Cainozoic
 Substrate Lithology: Unconsolidated material (unidentified) alluvial/colluvial sediments
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; many 20-50% fine < 5mm prominent orange mottles; clay loam; massive structures; dry; abrupt to;
A2j	0.10 to 0.15	Dark grey (10YR41) moist, light grey (10YR71) dry colour; many 20-50% fine < 5mm prominent orange mottles; clay loam; massive structures; dry; sharp to;
B21	0.15 to 0.50	Dark greyish brown (2.5Y42) moist colour; common 10-20% fine < 5mm prominent yellow-brown, common 10-20% fine < 5mm prominent grey mottles; medium clay; strong columnar structures; dry; clear to;
B22	0.50 to 0.90	Grey (10YR51) moist colour; common 10-20% medium 5-15mm distinct yellow-brown mottles; medium clay; moderately moist; clear to;
B23	0.90 to 1.20	Light brownish grey (10YR62) moist colour; many 20-50% fine < 5mm distinct yellow-brown mottles; fine sandy light medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moist;
B24k	1.20 to 1.50	Grey (10YR51) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown, very few < 2% medium 5-15mm prominent red mottles; fine sandy medium clay; very few < 2% medium pebbles 6-20mm subrounded rhyolite coarse fragments; very few < 2% medium 2-6 mm calcareous nodules and soft segregations; moist; clear to;
B25	1.50 to 2.10	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown mottles; fine sandy medium clay; moist; diffuse to;
B26	2.10 to 2.90	Light brownish grey (10YR62) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, common 10-20% medium 5-15mm prominent grey mottles; fine sandy light clay; moist; gradual to;
B27	2.90 to 3.20	Greenish grey (5G51) moist colour; common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm prominent orange mottles; fine sandy light clay; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm and subrounded rounded rhyolite and andesite coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.1	
0.30	6.4		
0.60	5.8	5.3	
1.00	6.1	5.4	
1.50	7.1	5.8	
2.00	7.8	5.6	
2.50	7.8	5.9	
3.00	8.3	5.9	

Notes:

Horizon – B27 EOP - rock at 3.2 m
 Observation H2O EC - 28.9 mS/cm; pH 7.0

Project: MWQ Site: 136

Location: 719990 mE 7673190 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 31-Oct-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 2.6 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense *Ceriops tagal* (Yellow mangrove);

Bruguiera exaristata (Rib-fruited mangrove); *Avicennia marina* (Grey mangrove);

Rhizophora species

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.10	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light clay; weak 5-10mm cast parting to weak 2-5mm subangular blocky structures; moist; sharp
A12	0.10 to 0.38	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown, few 2-10% fine < 5mm distinct grey mottles; silty light clay; massive structures; moist; abrupt to;
Cu	0.38 to 1.38	Dark grey (2.5Y40) moist colour; few 2-10% very coarse > 30mm prominent dark mottles; silty light clay; massive structures; moist; sharp to;
2Cu	1.38 to 1.65	Very dark grey (2.5Y30) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	4.2	
0.30	6.4	2.2	
0.60	6.4	1.9	
0.80	6.4	1.9	
1.00	6.3	2.1	
1.25	6.3	1.9	
1.50	6.2	1.7	

Notes:

Horizon - 2Cu EOP - sand would not hold in gouge auger

Observation H2O EC - 64.9 mS/cm; pH 6.4

Project: MWQ Site: 137

Location: 720350 mE 7675170 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Oct-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense Rhizophora stylosa (Red mangrove);
 Ceriops tagal (Yellow mangrove); Avicennia marina (Grey mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; very few < 2% fine < 5mm distinct orange mottles; fine sandy light clay; weak 5-10mm cast structures; moist; sharp to;
C1u	0.30 to 0.65	Very dark grey (2.5Y30) moist colour; fine sandy light clay; massive structures; wet; sharp to;
2C1u	0.65 to 0.95	Black (10YR21) moist colour; silty light clay; massive structures; wet; sharp to;
3C1u	0.95 to 1.45	Dark grey (2.5Y40) moist colour; fine sandy light clay with a silty light clay lens at 1.25-1.30m; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	0.7	
0.30	6.2	0.8	
0.60	6.2	1.0	
0.80	6.3	1.1	
1.00	6.2	1.2	
1.25	6.4	0.8	
1.45	6.5	1.1	

Notes:

Horizon - 3C1u EOP - sand at 1.45 m would not hold in gouge auger
 Observation H2O EC - 56.6 mS/cm; pH 6.4

Project: MWQ Site: 138

Location: 718845 mE 7675430 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 01-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Rises

Element: Valley-flat

Runoff: No record

Elevation: 4 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Periodic cracking, Hard setting

Classifications

ASC: Melanic, Dermosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; moderate subangular blocky structures; dry; abrupt to;
B2	0.10 to 0.45	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; moderate subangular blocky structures; dry; sharp to;
2C	0.45 to 0.60	Brown (10YR53) moist colour; fine sand; single grain structures; moderately moist; sharp to;
3B2	0.60 to 1.50	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy light medium clay; moist; sharp to;
4C1	1.50 to 3.00	Light grey (2.5Y72) moist colour; common 10-20% coarse 15-30mm prominent gley, few 2-10% medium 5-15mm faint brown mottles; clayey fine sand, heavy; single grain structures; wet; diffuse to;
4C2	3.00 to 3.30	Light brownish grey (2.5Y63) moist colour; few 2-10% coarse 15-30mm prominent gley mottles; fine sandy clay loam, light; massive structures; wet; diffuse
5B2	3.30 to 3.80	Dark yellowish brown (10YR46) moist colour; common 10-20% coarse 15-30mm prominent gley, few 2-10% coarse 15-30mm distinct pale mottles; fine sandy light clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
2.50	7.3	5.8	
3.00	7.3	5.9	
3.50	7.6	6.3	

Notes:

Horizon – 5B2 EOP - VVC could not penetrate

Observation H2O EC - 4.6 mS/cm; pH 6.9

Project: MWQ Site: 139

Location: 719150 mE 7676055 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 02-Nov-2001

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Dunecrest

Runoff: No record

Elevation: 4.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense

Eucalyptus intermedia; Eucalyptus tessellaris

Mid Stratum: Planchonia careya (Cockatoo apple)

Lower Stratum: Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; fine sand; single grain structures; dry; clear to;
C	0.15 to 1.20	Light brownish grey (10YR62) moist, light grey (10YR72) dry colour; fine sand; single grain structures; dry; sharp to;
2B2	1.20 to 1.40	Yellowish brown (10YR54) moist colour; few 2-10% medium 5-15mm distinct brown mottles; sand with large coarse sand grains poorly sorted; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded andesite and igneous rock coarse fragments; single grain structures; dry; sharp to;
2C	1.40 to 1.70	Light grey (10YR72) moist, white (10YR82) dry colour; fine sand; single grain structures; dry; sharp to;
3C	1.70 to 2.00	Light grey (10YR72) moist, white (10YR82) dry colour; common 10-20% fine < 5mm prominent orange mottles; fine sand; common 10-20% large pebbles 20-60mm subrounded rhyolite and small pebbles 2-6mm and medium pebbles 6-20mm igneous rock coarse fragments; single grain structures; dry; abrupt to;
4B2	2.00 to 2.25	Yellowish brown (10YR56) moist colour; common 10-20% medium 5-15mm distinct yellow, many 20-50% coarse 15-30mm prominent pale mottles; clayey fine sand; single grain structures; moderately moist; sharp to;
5B2	2.25 to 2.45	Dark yellowish brown (10YR46) moist colour; few 2-10% fine < 5mm distinct pale, very few < 2% fine < 5mm distinct orange mottles; fine sand with coarse sand grains and 1cm grey clay lenses; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist;

6B2	2.45 to 2.75	Very dark grey (2.5Y30) moist colour; few 2-10% fine < 5mm distinct brown, few 2-10% fine < 5mm prominent gley mottles; light clay with 2mm sand lenses; very few < 2% medium pebbles 6-20mm subangular shell and andesite coarse fragments; moist;
7B21	2.75 to 2.90	Grey (10YR61) moist colour; few 2-10% fine < 5mm faint grey mottles; fine sand; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded shell coarse fragments; single grain structures; wet; sharp to;
7B22	2.90 to 3.10	Grey (10YR61) moist colour; few 2-10% fine < 5mm prominent brown mottles; fine sand; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm rounded shell coarse fragments; single grain structures; wet; sharp to;
8Cu	3.10 to 4.30	Very dark grey (2.5Y30) moist colour; silty light clay with a 2cm fine sand lens at 4.25m; wet; clear to;
9D	4.30 to 4.70	Greenish grey (5BG51) moist colour; very few < 2% fine < 5mm prominent brown, few 2-10% fine < 5mm prominent grey mottles; fine sandy medium clay; very few < 2% small pebbles 2-6mm rounded andesite coarse fragments; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.9	3.3	3.25	6.2	1.0
0.60	6.6	4.3	3.50	6.2	1.0
1.00	7.0	4.4	3.75	6.5	0.9
1.50	6.8	4.5	4.00	6.2	1.0
2.00	6.1	4.3	4.25	6.5	1.2
2.50	6.3	3.7	4.50	6.3	1.2
2.75	6.5	5.2	4.69	6.4	1.5
3.00	6.2	4.5			

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 8Cu Common mangrove roots

Horizon - 9D EOP - too hard for VVC to penetrate

Observation Could not sample water

Project: MWQ Site: 140

Location: 718900 mE 7676180 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Poached

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; many 20-50% fine < 5mm prominent orange mottles; silty light medium clay; moderate 20-50mm parting to weak 5-10mm subangular blocky structures; dry;
B21i	0.10 to 0.40	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent dark, many 20-50% fine < 5mm prominent red, few 2-10% fine < 5mm prominent brown mottles; silty light medium clay; strong 50-100mm prismatic parting to moderate 20-50mm angular blocky structures; dry;
B22i	0.40 to 0.60	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent brown, very few < 2% medium 5-15mm distinct orange mottles; silty light clay; moist; abrupt to;
B22ia	0.60 to 1.10	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct brown, very few < 2% fine < 5mm distinct red mottles; silty light clay; massive structures; wet; abrupt to;
C1u	1.10 to 1.30	Dark grey (10YR41) moist colour; fine sandy light clay; massive structures; wet; sharp to;
2Cu	1.30 to 1.80	Dark grey (10YR41) moist colour; fine sand with a 4cm silty light clay lens at 1.6m; single grain structures; wet; sharp to;
3D1	1.80 to 2.00	Grey (5Y61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sandy medium clay; moderate 5-10mm subangular blocky structures; few 2-10% coarse 6-20 mm manganiferous concretions segregations; abrupt to;
3D2	2.00 to 2.50	Greenish grey (5G61) moist colour; many 20-50% coarse 15-30mm prominent brown, very few < 2% medium 5-15mm prominent red mottles; fine sandy medium heavy clay; very few < 2% medium pebbles 6-20mm subangular rhyolite coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.6	4.4	
0.30	4.0	3.2	
0.60	3.7	3.1	
0.80	3.6	3.0	
1.00	3.6	2.9	
1.25	3.8	1.8	
1.50	3.7	1.5	
1.75	3.8	1.4	
2.00	4.5	3.8	
2.25	5.5	6.2	
2.50	5.8	6.1	

Notes:
 Horizon – 3D2 EOP - too hard for VVC
 Observation H2O EC - 43.9 mS/cm; pH 3.2

Project: MWQ Site: 141

Location: 718725 mE 7676930 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Nov-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Planchonia careya (Cockatoo apple)
 Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; fine sand; single grain structures; dry; clear to;
B2	0.20 to 1.25	Yellowish brown (10YR54) moist, pale brown (10YR63) dry colour; fine sand; single grain structures; dry; gradual to;
2C	1.25 to 1.50	Pale brown (10YR63) moist, very pale brown (10YR73) dry colour; sand; single grain structures; moderately moist; sharp to;
3C	1.50 to 2.00	Brown (10YR53) moist colour; fine sand; many 20-50% small pebbles 2-6mm rounded shell coarse fragments; single grain structures; wet; sharp to;
4Cu	2.00 to 3.15	Dark grey (2.5Y40) moist colour; fine sand with a 5mm silty light clay lens at 2.4m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded shell coarse fragments; single grain structures; wet; abrupt to;
5Cu	3.15 to 3.30	Grey (2.5Y50) moist colour; fine sandy light clay; very few < 2% medium pebbles 6-20mm rounded sandstone coarse fragments; massive structures; wet; sharp to;
6D	3.30 to 4.00	Dark yellowish brown (10YR46) moist colour; many 20-50% coarse 15-30mm prominent gley mottles; fine sandy medium clay with PASS in root channel; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; massive structures; very few < 2% fine <2 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	3.2	
0.30	6.0	4.3	
0.60	6.5	4.5	
0.80	6.6	4.8	
1.00	6.5	4.5	
1.25	6.6	4.8	
1.50	6.7	4.8	
1.75	7.6	10.0	
2.00	7.8	9.7	
2.25	7.5	2.2	
2.50	7.4	4.0	
2.75	7.4	2.2	
3.00	7.1	2.1	
3.25	7.2	1.4	
3.50	7.5	5.8	
3.75	7.4	5.3	
4.00	7.6	5.9	

Notes:
 Horizon – 6D EOP - too hard for VVC to penetrate
 Observation Could not sample water

Project: MWQ Site: 142

Location: 718545 mE 7676075 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Nov-2001

Landscape

Geology: Cza - Unconsolidated Cainozoic
 Substrate Lithology: Unconsolidated material (unidentified) alluvial/colluvial sediments
 Landform Pattern: Plain
 Element: Plain
 Runoff: No record
 Elevation: 5.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Melacic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (Blue gum)
 Lower Stratum: Imperata cylindrica (Blady grass); Stenotaphrum secundatum (buffalo grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; clear to;
A2e	0.20 to 0.50	Pale brown (10YR63) moist, white (10YR82) dry colour; fine sand; single grain structures; dry; sharp to;
B21	0.50 to 1.20	Olive yellow (2.5Y65) moist colour; many 20-50% medium 5-15mm prominent orange mottles; fine sandy light clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; diffuse to;
B22	1.20 to 1.90	Light grey (10YR71) moist colour; common 10-20% medium 5-15mm prominent brown, many 20-50% coarse 15-30mm prominent red mottles; fine sandy light medium clay; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; clear to;
B23	1.90 to 3.40	Light grey (10YR71) moist colour; many 20-50% coarse 15-30mm prominent brown, very few < 2% coarse 15-30mm prominent red mottles; fine sandy light clay; moist;
B24	3.40 to 5.00	Greenish grey (5GY61) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; clay loam; fine sandy, light; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.8	3.6	
0.60	7.0	4.9	
1.00	5.3	3.9	
1.50	5.1	3.8	
2.00	4.5	3.8	
2.50	4.8	3.6	
3.00	4.3	3.6	
3.50	4.2	3.1	
4.00	4.2	3.2	
4.50	4.0	2.7	
5.00	4.1	3.9	

Notes:
 Observation H2O EC - 0.7 mS/cm; pH 4.6

Project: MWQ Site: 143

Location: 719810 mE 7675335 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Oct-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; common 10-20% fine < 5mm distinct orange mottles; silty light clay, fibric; massive structures; dry; sharp to;
B21i	0.10 to 0.60	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent red, common 10-20% coarse 15-30mm prominent dark, few 2-10% fine < 5mm distinct brown mottles; silty light clay; very few < 2% medium pebbles 6-20mm subangular rhyolite coarse fragments; moderately moist; abrupt to;
B22ia	0.60 to 1.00	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct brown mottles; silty light clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded haematitic siltstone and rhyolite and subrounded unconsolidated material (unidentified) coarse fragments; massive structures; moist; abrupt to;
B23i	1.00 to 1.40	Olive brown (2.5Y44) moist colour; many 20-50% fine < 5mm prominent grey, few 2-10% fine < 5mm distinct yellow mottles; silty light clay; very few < 2% small pebbles 2-6mm rounded haematitic siltstone coarse fragments; massive structures; moist; sharp to;
2B2	1.40 to 1.55	Dark greenish grey (5G41) moist colour; few 2-10% fine < 5mm faint brown, very few < 2% fine < 5mm distinct red mottles; silty light clay; common 10-20% large pebbles 20-60mm angular siltstone coarse fragments; massive structures; moist; sharp to;
2C	1.55 to 1.70	Greenish grey (5G51) moist colour; many 20-50% fine < 5mm distinct brown mottles; silty light clay; very abundant > 90% siltstone coarse fragments; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.1	
0.30	3.9	3.0	
0.60	3.3	2.7	
0.80	3.4	2.9	
1.00	3.3	2.6	
1.25	5.1	3.8	
1.50	5.4	2.3	
1.70	6.0	6.8	

Notes:

Horizon - 2C EOP - would not penetrate further into weathered rock
 Observation H2O EC - 56.1 mS/cm; pH 4.8

Project: MWQ Site: 144

Location: 718190 mE 7673120 mN ZONE 55 (AGD 84)
 Described Muller, PG
 Date: 08-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse
 Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Dermosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint orange mottles; silty light medium clay; strong 2-5mm subangular blocky structures; dry; diffuse to;
B21	0.30 to 1.00	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown mottles; silty medium clay; strong 5-10mm subangular blocky structures; diffuse to;
B22	1.00 to 1.60	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown, few 2-10% fine < 5mm distinct brown mottles; silty medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; abrupt to;
B23y	1.60 to 2.10	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct brown mottles; medium clay; common 10-20% medium 2-6mm gypseous crystals and very few < 2% medium 2-6 mm manganiferous soft segregations
B24	2.10 to 3.40	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, common 10-20% medium 5-15mm prominent gley mottles; medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moist; sharp to;
2Cu	3.40 to 3.70	Very dark grey (2.5Y30) moist colour; silty light medium clay; common 10-20% medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded gravel coarse fragments; massive structures; wet; sharp to;
3Cu	3.70 to 3.80	Very dark grey (2.5Y30) moist colour; sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; single grain structures; wet; sharp to;

4Cu	3.80 to 4.00	Very dark grey (2.5Y30) moist colour; silty light clay; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; massive structures; wet; sharp to;
5C	4.00 to 4.30	Very dark grey (5Y31) moist colour; coarse sand; abundant 50-90% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	2.9	
0.60	6.6	4.2	
1.00	7.2	5.6	
1.50	6.3	7.1	
2.00	6.1	7.7	
2.50	5.8	5.7	
3.00	5.7	6.0	
3.25	5.8	6.5	
3.50	6.0	5.3	
3.75	6.4	1.8	
4.00	6.1	1.8	
4.25	6.4	2.2	

Notes:

- Horizon - 2Cu Pyritic soup
- Horizon - 5C EOP - rock stopped tube
- Observation H2O EC - 1.0 mS/cm; pH 6.5

Project: MWQ Site: 145

Location: 718445 mE 7676750 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft, Surface crust, Saline

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Avicennia marina (Grey mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; silty light clay; weak 2-5mm cast structures; moderately moist; sharp to;
2C	0.10 to 0.45	Light brownish grey (10YR62) moist colour; few 2-10% fine < 5mm faint grey mottles; clay loam; fine sandy; massive structures; moist; clear to;
3C1u	0.45 to 0.80	Very dark grey (10YR31) moist colour; silty light clay with blobs of white fine sand 1-2 cm in diameter; massive structures; wet; clear to;
3C2u	0.80 to 1.30	Very dark grey (10YR31) moist colour; silty light clay with 2 pale fine sand lenses; massive structures; wet; abrupt to;
3C3u	1.30 to 3.10	Very dark grey (2.5Y30) moist colour; thin 1-10mm alternating silty light clay and fine sand bands; massive structures; wet; sharp to;
4D	3.10 to 3.20	Dark greenish grey (5G41) moist colour; fine sandy loam; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	4.2	
0.30	4.4	3.8	
0.60	4.6	1.3	
0.80	5.4	1.2	
1.00	5.6	1.4	
1.25	5.8	1.3	
1.50	5.9	1.5	
1.75	6.0	1.2	
2.00	6.4	1.4	
2.25	6.0	1.3	
2.50	6.1	1.4	
2.75	6.1	1.4	
3.00	6.1	1.1	
3.20	7.4	1.7	

Notes:

Horizon – 3C1u many fine roots
 Horizon – 3C2u Few large mangrove roots
 Horizon – 4D EOP - sand would not hold in auger
 Observation H2O EC - 59.6 mS/cm; pH 6.2

Project: MWQ Site: 146

Location: 717855 mE 7671310 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Mound/depression microrelief
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Humose, Kandosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense Archontophoenix alexandrae (Alexandra palm); Terminalia sericocarpa (Damson, sovereignwood)
 Mid Stratum: Arytera divaricata (Rose tamarind); Hibiscus tiliaceus (Cotton tree / cowtucker); Cleidian spiciflorum

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; silty light medium clay; weak 2-5mm cast structures; dry;
B21	0.15 to 0.60	Very dark brown (10YR22) moist colour; silty light medium clay; weak 2-5mm cast structures; dry; diffuse to;
B22	0.60 to 1.30	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown mottles; silty medium clay; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; diffuse to;
B23	1.30 to 2.20	Dark grey (7.5YR40) moist colour; common 10-20% fine < 5mm distinct brown mottles; medium clay; very few < 2% fine <2 mm manganiferous soft segregations; moist; diffuse to;
B24	2.20 to 2.80	Grey (7.5YR50) moist colour; common 10-20% medium 5-15mm prominent brown mottles; light medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; wet; abrupt to;
2B2i	2.80 to 3.00	Dark grey (7.5YR40) moist colour; few 2-10% fine < 5mm prominent yellow mottles; light medium clay; wet;
2Cu	3.00 to 3.60	Very dark grey (2.5Y30) moist colour; silty light clay with a 5cm gravel lens at 3.35m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded gravel coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	3.7	
0.60	6.6	4.2	
1.00	6.7	4.4	
1.50	6.0	5.4	
1.75	6.3	5.7	
2.00	6.8	5.9	
2.25	6.4	5.9	
2.50	6.1	5.9	
2.75	6.0	6.8	
3.00	6.2	3.8	
3.25	6.1	1.8	
3.50	6.3	1.7	

Notes:

Horizon - 2Cu EOP - rock @ 3.6 m
 Observation H2O EC 2.8 mS/cm; pH 6.8

Project: MWQ Site: 147

Location: 726110 mE 7663755 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking

Classifications

ASC: Endohypersodic, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Cynodon dactylon (Couch); Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Dark grey (10YR41) moist colour; medium clay; strong 10-20mm subangular blocky structures; few 2-10% fine <2 mm calcareous nodules segregations; dry;
2B21	0.30 to 0.70	Black (7.5YR20) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium clay; strong lenticular structures; moderately moist; clear to;
2B22	0.70 to 0.90	Grey (10YR51) moist colour; few 2-10% medium 5-15mm prominent dark mottles; medium clay; lenticular structures; few 2-10% medium 2-6 mm calcareous nodules segregations; moderately moist; sharp to;
3B2	0.90 to 1.25	Grey (10YR51) moist colour; clay loam with a thin 1cm sand lens at 1.1m; sandy; moist; sharp to;
4B2	1.25 to 2.00	Greenish grey (5GY61) moist colour; many 20-50% medium 5-15mm prominent yellow mottles; sandy loam, heavy; moist; sharp to;
5C1	2.00 to 2.60	Greenish grey (5GY61) moist colour; fine sand; single grain structures; wet; abrupt to;
5C2	2.60 to 3.00	Greenish grey (5GY61) moist colour; common 10-20% fine < 5mm faint brown mottles; fine sand; single grain structures; weakly to moderately cemented densipan, broken, massive structure at 3.0m; wet; abrupt to;
6B2	3.00 to 4.75	Dark yellowish brown (10YR44) moist colour; many 20-50% medium 5-15mm prominent gley mottles; clayey fine sand, heavy; single grain structures; moderately cemented densipan, broken, massive structure at 3.8-4.0m and 4.2-4.4m; wet;
7D	4.75 to 4.90	Greenish grey (5GY61) moist colour; few 2-10% fine < 5mm distinct gley mottles; medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	4.7	
0.60	7.2	6.4	
1.00	7.3	6.0	
1.50	7.6	6.6	
2.00	7.2	6.4	
2.50	7.9	7.4	
3.00	7.6	6.7	
3.50	7.4	6.7	
4.00	7.7	6.6	
4.50	7.7	6.9	
4.90	7.7	6.7	

Notes:

Horizon – 7D EOP too hard for VVC
 Observation H2O EC - 9.2mS/cm; pH 7.6

Project: MWQ Site: 148

Location: 717855 mE 7671310 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Low hills
 Element: Valley-flat
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Andesite
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Terminalia sericocarpa (Damson, sovereignwood)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; light medium clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded andesite coarse fragments; moderate 2-5mm cast structures; dry; gradual to;
B21	0.25 to 0.60	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; medium clay; very few < 2% medium pebbles 6-20mm subrounded andesite coarse fragments; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; diffuse to;
B22	0.60 to 1.50	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm distinct orange mottles; light medium clay; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist; diffuse to;
B23	1.50 to 2.50	Dark grey (5Y41) moist colour; many 20-50% fine < 5mm distinct orange mottles; medium clay; very few < 2% medium pebbles 6-20mm rounded andesite coarse fragments; few 2-10% medium 2-6mm manganiferous soft and very few < 2% fine < 2 mm calcareous nodules and soft segregations; moist; gradual to;
B24?	2.50 to 2.90	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm distinct brown mottles; light medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; wet; abrupt to;
2C1u	2.90 to 3.40	Black (2.5Y20) moist colour; silty light medium clay; very few < 2% medium pebbles 6-20mm rounded andesite coarse fragments; wet;
2C2u	3.40 to 4.25	Very dark grey (2.5Y30) moist colour; silty light clay; common 10-20% medium pebbles 6-20mm rounded andesite coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	2.7	
0.60	6.2	4.7	
1.00	7.6	8.1	
1.50	7.5	6.3	
2.00	6.4	5.4	
2.25	6.3	5.6	
2.50	5.9	5.7	
2.75	5.7	5.5	
3.00	5.9	2.8	
3.25	5.8	1.3	
3.50	6.0	1.3	
3.75	6.3	1.3	
4.00	6.2	1.3	
4.25	6.2	1.3	

Notes:

Horizon – 2C2u EOP - VVC could not penetrate further – rock; very few mangrove roots
 Observation H2O EC - 0.8 mS/cm; pH 6.8

Project: MWQ Site: 149

Location: 717060 mE 7671325 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Low hills
 Element: Valley-flat
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Melanic, Eutrophic, Black, DERMOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Archontophoenix alexandrae (Alexandra palm); Terminalia sericocarpa (Damson, sovereignwood)
 Mid Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (10YR21) moist colour; silty light clay; moderate 2-5mm cast structures; dry; diffuse to;
B21	0.20 to 1.25	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty medium clay; moderate 2-5mm subangular blocky structures; very few < 2% fine < 2 mm manganiferous soft segregations; dry; gradual to;
B22	1.25 to 2.75	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct brown mottles; medium clay; few 2-10% medium pebbles 6-20mm angular charcoal and very few < 2% medium pebbles 6-20mm rounded andesite coarse fragments; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist;
B23	2.75 to 3.50	Grey (2.5Y50) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; clear to;
2B2i	3.50 to 3.95	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm distinct brown mottles; light medium clay; moist;
2C1u	3.95 to 5.00	Dark grey (2.5Y40) moist colour; light clay; strong 20-50mm prismatic parting to moderate 5-10mm lenticular structures with slickensides; moist;
2C2u	5.00 to 5.55	Dark grey (2.5Y40) moist colour; light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	2.5	
0.60	6.2	4.8	
1.00	6.8	4.0	
1.50	6.9	6.4	
2.00	6.3	8.1	
2.50	6.6	8.1	
3.00	6.3	5.8	
3.50	5.4	5.4	
3.75	5.6	2.5	
4.00	5.9	1.4	
4.25	5.8	1.2	
4.50	6.1	1.5	
4.75	6.2	1.5	
5.00	6.4	1.5	
5.25	6.4	1.7	

Notes:

Horizon - 2C1u Few bits of wood
 Horizon - 2C3u Lot of wood at 5.5 m
 Observation H2O EC - 1.3 mS/cm; pH 6.8

Project: MWQ Site: 150

Location: 716880 mE 7678450 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Nov-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Duneslope
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; loamy fine sand; single grain structures; dry; clear to;
B21	0.15 to 1.80	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; abrupt to;
B22	1.80 to 2.10	Pale brown (10YR63) moist, very pale brown (10YR73) dry colour; very few < 2% fine < 5mm distinct grey, few 2-10% medium 5-15mm prominent orange mottles; fine sand; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; abrupt to;
B23	2.10 to 2.30	Greyish brown (2.5Y53) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sand with small bits of sand; moist; gradual to;
2C1	2.30 to 3.00	Grey (5Y51) moist colour; fine sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded shell coarse fragments; single grain structures; wet; clear to;
2C2	3.00 to 3.80	Dark grey (5Y41) moist colour; common 10-20% medium 5-15mm distinct brown mottles; fine sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded shell coarse fragments; single grain structures; wet;
2C3	3.80 to 5.80	Dark grey (2.5Y40) moist colour; fine sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded shell coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	3.5	
0.30	6.3		
0.60	6.7	5.2	
0.80	7.2		
1.00	7.1	5.3	
1.25	6.9		
1.50	7.1	5.5	
1.75	7.2		
2.00	6.7	5.4	
2.25	7.5	5.9	
2.50	7.8	7.7	
2.75	8.0	7.0	
3.00	8.1	7.5	
3.25	8.1	8.0	
3.50	8.5	7.5	
3.75	8.5	7.0	
4.00	8.4	7.3	
4.25	8.3	7.1	
4.50	8.6	6.9	
4.75	7.9	6.6	
5.00	8.2	7.0	
5.25	8.2	6.6	

Notes:

Observation Could not sample water

Project: MWQ Site: 151

Location: 717410 mE 7678390 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 16-Nov-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 2.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Shell

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense

Species: *Cerriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (2.5Y30) moist colour; few 2-10% fine < 5mm prominent dark, common 10-20% medium 5-15mm prominent grey mottles; silty light clay; massive structures; wet; sharp to;
C1u	0.10 to 0.45	Grey (2.5Y50) moist colour; many 20-50% coarse 15-30mm prominent dark mottles; silty light clay; massive structures; wet; abrupt to;
C2u	0.45 to 0.70	Dark grey (7.5YR40) moist colour; light medium clay; massive structures; wet; sharp to;
2Cu	0.70 to 1.50	Dark grey (7.5YR40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	4.9	
0.30	6.2	1.1	
0.60	6.4	1.5	
0.80	6.5	1.8	
1.00	6.9	1.8	
1.25	6.8	1.9	
1.50	6.5	1.8	

Notes:

Horizon - 2Cu EOP - could not recover any more

Observation H2O EC - 61.6 mS/cm; pH 6.9

Project: MWQ Site: 152

Location: 717905 mE 7677585 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Nov-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Natric, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca dealbata (Swamp tea-tree); Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (Blue gum)
 Lower Stratum: Brachiaria mutica (Para grass); Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (2.5Y20) moist colour; very few < 2% fine < 5mm distinct brown mottles; loamy fine sand; single grain structures; moderately moist; abrupt to;
A2j	0.15 to 0.20	Dark grey (10YR41) moist, white (10YR81) dry colour; fine sand; single grain structures; moderately moist; sharp to;
B2	0.20 to 0.75	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sandy light medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2C	0.75 to 1.35	Grey (10YR61) moist colour; few 2-10% medium 5-15mm faint grey, very few < 2% fine < 5mm distinct brown mottles; fine sand; very few < 2% large pebbles 20-60mm subangular igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
3Cu	1.35 to 1.55	Grey (10YR51) fine sand with thin very dark grey (10YR31) silty light clay lenses; massive structures; wet; sharp to;
4Cu	1.55 to 1.95	Dark grey (2.5Y40) moist colour; few 2-10% very coarse > 30mm distinct dark mottles; fine sand; very few < 2% large pebbles 20-60mm subrounded andesite coarse fragments; single grain structures; wet; sharp to;
5D	1.95 to 3.70	Olive brown (2.5Y44) moist colour; many 20-50% medium 5-15mm prominent red, many 20-50% medium 5-15mm prominent grey mottles drops out by 3.5m; fine sandy medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	2.7	
0.30	6.1	3.4	
0.60	5.9	3.3	
0.80	6.3	2.1	
1.00	6.5	3.2	
1.25	6.6	2.1	
1.50	6.8	2.4	
1.75	7.5	0.9	
2.00	6.1	1.8	
2.25	5.8	5.4	
2.50	5.8	6.0	
2.75	5.7	6.4	
3.00	5.8	5.4	
3.25	5.7	6.4	
3.50	5.8	6.6	
3.70	6.0	6.6	

Notes:

Horizon – 3Cu Few mangrove roots
 Horizon – 4Cu Few bits of wood
 Horizon – 5D EOP - Red mottle drops out by 3.5 m; mangrove root @ 2.4 m
 Observation H2O EC - 0.7 mS/cm; pH 6.1

Project: MWQ Site: 153

Location: 718550 mE 7671215 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 20-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Low hills

Element: Valley-flat

Runoff: No record

Elevation: 4 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications

ASC: Melanic-vertic, Eutrophic, Black, DERMOSOL

GSG: No record

PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Black (10YR21) moist colour; very few < 2% fine < 5mm faint brown mottles; silty light medium clay; very few < 2% large pebbles 20-60mm subangular andesite coarse fragments; moderate 2-5mm cast parting to weak 2-5mm subangular blocky structures; dry; diffuse to;
B21	0.40 to 1.20	Black (10YR21) moist colour; very few < 2% fine < 5mm faint brown mottles; silty light clay; weak 2-5mm cast parting to strong 2-5mm subangular blocky structures; moderately moist; gradual to;
B22	1.20 to 1.50	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct brown, few 2-10% fine < 5mm distinct grey mottles; medium clay; weak 2-5mm cast parting to strong 2-5mm subangular blocky structures; moderately moist; clear to;
B23	1.50 to 1.80	Black (7.5YR20) moist colour; very few < 2% fine < 5mm prominent pale mottles; medium clay; strong lenticular structures; moderately moist; sharp to;
2B2i	1.80 to 2.30	Dark grey (7.5YR40) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% coarse 15-30mm prominent dark mottles; light medium clay; moist; clear to;
2Cu	2.30 to 4.15	Dark grey (2.5Y40) moist colour; silty light clay with very thin <1mm fine sand lenses throughout; massive structures; sharp to;
3Cu	4.15 to 4.16	coarse sand; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	3.3	
0.30	6.1	3.5	
0.60	6.1	3.5	
0.80	6.5	3.5	
1.00	6.7	4.0	
1.25	6.8	4.0	
1.50	6.7	3.9	
1.75	6.0	3.7	
2.00	5.8	4.6	
2.25	4.9	4.2	
2.50	4.9	2.5	
2.75	4.5	1.7	
3.00	4.9	1.6	
3.25	5.9	1.4	
3.50	6.3	1.5	
3.75	6.8	2.7	
4.00	7.1	2.8	
4.15	7.2	2.1	

Notes:

Horizon – 2Cu Few mangrove roots

Horizon – 3Cu EOP - gravels stopped VVC; coarse sand – “pyritic soup”

Observation H2O EC - 2.7 mS/cm; pH 7.2

Project: MWQ Site: 154

Location: 719160 mE 7670975 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 21-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Low hills

Element: Valley-flat

Runoff: No record

Elevation: 4 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca dealbata (Swamp tea-tree); Melaleuca viridiflora (Broad-leaved tea-tree); Eucalyptus tereticornis (Blue gum)

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; clay loam; fine sandy; dry; abrupt to;
A2j	0.15 to 0.20	Dark greyish brown (10YR42) moist, white (10YR81) dry colour; few 2-10% fine < 5mm distinct orange mottles; clay loam; fine sandy; dry; sharp to;
B21	0.20 to 0.40	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; strong 20-50mm columnar structures; dry;
B22	0.40 to 0.70	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium clay; moderately moist; abrupt to;
B23	0.70 to 0.90	Light olive brown (2.5Y54) moist colour; common 10-20% medium 5-15mm prominent grey, very few < 2% fine < 5mm distinct orange mottles; medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; abrupt to;
B24	0.90 to 2.25	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; very few < 2% small pebbles 2-6mm rounded acid volcanic coarse fragments; very few < 2% medium 2-6 mm manganiferous soft segregations; moist;
B25	2.25 to 2.70	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic coarse fragments; few 2-10% medium 2-6 mm manganiferous soft segregations; moist;
B26	2.70 to 3.10	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moist; sharp to;

B27k	3.10 to 4.70	Grey (5Y61) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; few 2-10% medium 2-6mm manganiferous soft and medium 2-6mm, coarse 6-20mm and very coarse 20-60mm calcareous nodules and soft segregations; moist;
B28k	4.70 to 5.00	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; many 20-50% fine < 2 mm, medium 2-6mm and coarse 6-20mm manganiferous nodules and soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	2.8	
0.60	7.1	6.3	
1.00	8.0	5.7	
1.50	8.1	5.9	
2.00	8.1	5.9	
2.50	8.1	6.2	
3.00	8.1	8.2	
3.50	8.7	8.5	
4.00	8.7	9.1	
4.50	7.9	8.4	
5.00	8.7	9.1	

Notes:

Observation H2O EC - 18.5 mS/cm; pH 7.4

Project: MWQ Site: 155

Location: 719105 mE 7671080 mN; ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Oct-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Aegiceras corniculatum (River mangrove); Rhizophora stylosa (Red mangrove);
 Avicennia marina (Grey mangrove)
 Lower Stratum: Acanthus ilicifolius (Holly mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.12	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct grey, very few < 2% fine < 5mm distinct orange mottles; silty light medium clay; weak 2-5mm cast structures; moist; abrupt to;
B2	0.12 to 0.90	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm prominent orange, few 2-10% medium 5-15mm faint dark, few 2-10% fine < 5mm distinct brown mottles; silty light clay; massive structures; very few < 2% fine < 2 mm manganiferous soft segregations formed along an old root channel; wet; clear to;
Cu	0.90 to 3.50	Dark grey (7.5YR40) moist colour; silty light clay with 2 x 1mm fine sand lenses at 3.1 and 3.2m; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	5.1	
0.30	6.4	5.4	
0.60	6.3	4.5	
0.80	6.1	4.1	
1.00	6.2	1.5	
1.25	6.6	1.3	
1.50	6.7	1.4	
1.75	6.8	2.2	
2.00	6.9	2.4	
2.25	6.9	2.1	
2.50	7.0	2.2	
2.75	6.9	3.7	
3.00	7.0	2.0	
3.25	7.0	2.9	
3.50	7.1	2.3	

Notes:
 Horizon - Cu EOP - filled all 3 gouge augers
 Observation H2O EC - 32.0 mS/cm; pH 7.5

Project: MWQ Site: 156

Location: 716740 mE 7671350 mN; ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Terrace flat
 Runoff: No record
 Elevation: 6.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Recently cultivated

Classifications

ASC: Haplic, Mesotrophic, Black, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; dry; diffuse to;
B21	0.40 to 0.90	Black (10YR21) moist colour; fine sandy light medium clay; abrupt to;
B22	0.90 to 1.30	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm faint brown mottles; medium clay; moderate 2-5mm subangular blocky structures; sharp to;
2C	1.30 to 1.50	Very dark greyish brown (10YR32) moist colour; sandy loam; massive structures; sharp to;
3B2	1.50 to 2.15	Very dark greyish brown (10YR32) moist colour; many 20-50% fine < 5mm distinct grey mottles; fine sandy light clay; sharp to;
4C1	2.15 to 3.10	Very dark greyish brown (10YR32) moist colour; coarse sand; Common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded gravel coarse fragments; single grain structures; diffuse to;
4C2	3.10 to 3.75	Coarse sand; abundant 50-90% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; single grain structures; sharp to;
5B2	3.75 to 4.00	Dark grey (2.5Y40) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; sandy light clay; few 2-10% medium pebbles 6-20mm rounded gravel coarse fragments; massive structures; sharp to;
6C	4.00 to 4.30	Abundant 50-90% medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	3.2	
0.60	6.2	3.5	
1.00	6.5	6.3	
1.50	6.7	5.0	
2.00	6.1	5.4	
2.50	7.0	5.3	
3.00	6.8	5.4	
3.50	6.6	5.4	
4.00	6.8	3.8	

Notes:

Horizon – 6C EOP - rocks stopped VVC; horizon was all stones
 Observation H2O EC - 0.7 mS/cm; pH 6.8

Project: MWQ Site: 157

Location: 724475 mE 7665465 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.8 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Endohypersodic, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (2.5Y20) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium heavy clay; strong 2-5mm subangular blocky structures; dry;
B21	0.05 to 0.35	Black (7.5YR20) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium heavy clay; strong 10-20mm subangular blocky structures; moderately moist; clear to;
B22	0.35 to 1.05	Black (7.5YR20) moist colour; very few < 2% fine < 5mm distinct orange, very few < 2% fine < 5mm faint yellow mottles; medium clay; very few < 2% small pebbles 2-6mm rounded gravel coarse fragments; lenticular structures; moderately moist; gradual to;
B23	1.05 to 1.40	Very dark grey (2.5Y30) moist colour; common 10-20% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct gley, few 2-10% fine < 5mm prominent yellow-brown mottles; light medium clay; lenticular structures; very few < 2% coarse 6-20mm calcareous concretions segregations; moderately moist; gradual to;
2B21i	1.40 to 2.10	Grey (2.5Y50) moist colour; many 20-50% fine < 5mm prominent yellow-brown, few 2-10% medium 5-15mm prominent dark, few 2-10% fine < 5mm distinct grey mottles; light clay; very few < 2% medium pebbles 6-20mm rounded acid volcanic coarse fragments; very few < 2% coarse 6-20 mm calcareous concretions segregations; moist; clear to;
2B22i	2.10 to 2.40	Dark grey (2.5Y40) moist colour; common 10-20% medium 5-15mm prominent brown, very few < 2% fine < 5mm distinct red mottles; light clay with 1mm fine sand lenses; very few < 2% small pebbles 2-6mm rounded acid volcanic coarse fragments; moist; clear to;
2Cu	2.40 to 3.65	Very dark grey (2.5Y30) moist colour; silty light clay with 1mm fine sand lenses and a 1cm sand lens at 3.55m and a 2cm coarse sand lens at 3.63m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;

3C 3.65 to 3.90 Dark greenish grey (5G41) moist colour; many 20-50% fine < 5mm prominent pale, few 2-10% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct gley mottles; sandy light medium clay; very abundant > 90% granodiorite coarse fragments; massive structures; few 2-10% medium 2-6mm calcareous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.3	4.1	2.00	5.9	6.0
0.30	5.7	4.4	2.25	6.0	5.5
0.60	6.3	5.6	2.50	5.9	4.8
0.80	6.9	5.9	2.75	6.1	2.0
1.00	7.1	5.9	3.00	6.1	1.6
1.25	6.9	5.8	3.25	6.1	1.4
1.50	6.0	5.8	3.50	6.1	1.4
1.75	5.9	5.8	3.75	6.8	1.8

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 2Cu Coarse fragments in coarse sand lens
 Horizon – 3C EOP - VVC could not penetrate further
 Observation H2O EC - 3.9 mS/cm; pH 7.0

Project: MWQ Site: 158

Location: 722810 mE 7675765 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Nov-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sand; single grain structures; dry; gradual to;
C1?	0.20 to 1.20	Dark brown (10YR33) moist colour; fine sand; single grain structures; dry; abrupt to;
C2?	1.20 to 1.40	Brown (10YR53) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; fine sand; single grain structures; moist; sharp to;
2B2	1.40 to 1.70	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, common 10-20% fine < 5mm distinct gley mottles; fine sandy light clay with a 5cm fine sand lens at 1.65m; massive structures; moist; sharp to;
3C	1.70 to 2.15	Grey (10YR61) moist colour; few 2-10% coarse 15-30mm distinct grey, very few < 2% medium 5-15mm distinct brown mottles; fine sand with a 2mm silty light clay lens at 2.0 and 2.15m; single grain structures; moist; sharp to;
4C1u	2.15 to 3.10	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; diffuse to;
4C2u	3.10 to 3.40	Dark grey (2.5Y40) moist colour; fine sand; few 2-10% small pebbles 2-6mm subrounded shell coarse fragments; single grain structures; wet; sharp to;
4C3u	3.40 to 3.50	Dark grey (2.5Y40) moist colour; fine sand; abundant 50-90% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite and shell coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	3.6	
0.60	6.5	4.0	
1.00	5.0	2.6	
1.50	6.0	3.3	
1.75	7.0	4.0	
2.00	6.6	4.9	
2.25	6.3	1.9	
2.50	6.8	1.6	
2.75	6.8	1.8	
3.00	7.0	2.8	
3.25	7.2	2.6	
3.50	7.5	6.9	

Notes:

Horizon - 4C3u EOP - gravel layer @ 3.5 m stopped VVC; Acid neutralised by shell
 Observation H2O pH 6.7; could not measure EC

Project: MWQ Site: 159

Location: 724515 mE 7665275 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 22-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Rises

Element: Valley-flat

Runoff: No record

Elevation: 3.7 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Granodiorite

Surface Condition: Periodic cracking, Surface crust

Classifications

ASC: Endohypersodic, Epipedal, Black, VERTOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; strong 2-5mm subangular blocky structures; clear to;
B21	0.05 to 0.25	Black (7.5YR20) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium heavy clay; moderate 5-10mm subangular blocky parting to strong 2-5mm lenticular structures; clear to;
B22	0.25 to 0.95	Black (7.5YR20) moist colour; medium heavy clay; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; strong lenticular structures; sharp to;
B23	0.95 to 1.40	Grey (2.5Y60) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; medium clay; clear to;
B24	1.40 to 1.85	Grey (2.5Y50) moist colour; very few < 2% fine < 5mm prominent brown mottles; medium clay; very few < 2% medium pebbles 6-20mm subrounded granodiorite coarse fragments; moist; sharp to;
2B2?	1.85 to 2.10	Grey (10YR51) moist colour; few 2-10% fine < 5mm distinct grey, common 10-20% medium 5-15mm prominent brown mottles; fine sandy clay loam; common 10-20% large pebbles 20-60mm rounded granodiorite coarse fragments; massive structures; wet; abrupt to;
3BC	2.10 to 2.50	Light olive brown (2.5Y54) moist colour; few 2-10% fine < 5mm distinct grey, very few < 2% medium 5-15mm prominent brown mottles; fine sandy clay loam, light; massive structures; many 20-50% fine < 2 mm manganiferous soft segregations; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	3.9	
0.30	6.1	4.7	
0.60	6.7	7.4	
0.80	6.9	6.4	
1.00	7.0	6.2	
1.25	6.3	7.8	
1.50	6.2	7.9	
1.75	6.1	7.9	
2.00	6.5	5.9	
2.25	6.4	7.3	
2.50	6.7	6.6	

Notes:

Horizon - 3BC EOP - stopped augering as no ASS lies beneath
Observation H2O EC - 9.9 mS/cm; pH 6.8

Project: MWQ Site: 160

Location: 724480 mE 7671685 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Nov-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Pit
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: No record
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Acacia leptocarpa (North coast wattle)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.75	Strong brown (7.5YR46) moist, dark brown (7.5YR32) dry colour; few 2-10% medium 5-15mm prominent yellow mottles; sand; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm subrounded quartz and igneous rock (unidentified) and rounded andesite coarse fragments; single grain structures; moderately moist; clear to;
C?	0.75 to 0.95	Light grey (10YR72) moist, white (10YR82) dry colour; very few < 2% fine < 5mm distinct brown mottles; coarse sand; very few < 2% small pebbles 2-6mm subangular andesite and subrounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
2C1u	0.95 to 1.50	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent grey, common 10-20% coarse 15-30mm distinct pale mottles; silty light clay with 2-5cm fine sand lenses throughout; single grain structures; wet; abrupt to;
2C2u	1.50 to 1.70	Dark grey (5Y41) moist colour; few 2-10% medium 5-15mm distinct dark, many 20-50% very coarse > 30mm distinct pale mottles; fine sand; single grain structures; wet; sharp to;
2D1	1.70 to 2.55	Grey (5Y61) moist colour; clay loam; sandy; massive structures; wet; sharp to;
2D2	2.55 to 3.10	Greenish grey (5GY61) moist colour; common 10-20% medium 5-15mm prominent red, few 2-10% medium 5-15mm prominent dark mottles; sandy light clay; massive structures; wet; abrupt to;
2D3	3.10 to 3.50	Red (2.5YR46) moist colour; common 10-20% medium 5-15mm prominent grey, many 20-50% coarse 15-30mm prominent brown mottles; sandy light clay; massive structures; wet; gradual to;
2D4	3.50 to 4.25	Light olive brown (2.5Y54) moist colour; common 10-20% medium 5-15mm prominent grey, common 10-20% coarse 15-30mm prominent pale mottles; sandy light clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.6	3.9	2.25	4.4	1.4
0.30	4.8	3.7	2.50	4.7	2.9
0.60	4.7	3.7	2.75	5.0	3.3
0.80	4.9	4.1	3.00	5.2	1.8
1.00	4.4	3.7	3.25	5.3	3.6
1.25	4.0	0.9	3.50	5.6	4.2
1.50	3.8	0.9	3.75	5.5	4.4
1.75	3.9	1.2	4.00	5.8	4.7
2.00	4.2	1.3	4.25	5.6	4.4

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - Fill Road Base
 Horizon - 2D1&2 Very few mangrove roots
 Horizon - 2D4 EOP - did not bother going deeper
 Observation H2O EC - 56.1 mS/cm; pH 4.6

Project: MWQ Site: 161

Location: 726780 mE 7663050 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Surface crust

Classifications

ASC: Haplic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Brachiaria mutica (Para grass); Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.02	Black (2.5Y20) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium clay; strong 5-10mm parting to weak 2-5mm subangular blocky structures; sharp to;
B21	0.02 to 0.15	Black (7.5YR20) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium clay; strong 20-50mm subangular blocky parting to strong 2-5mm lenticular structures;
B22	0.15 to 0.50	Black (7.5YR20) moist colour; medium clay; lenticular structures; sharp to;
2B21i	0.50 to 0.80	Grey (10YR51) moist colour; few 2-10% medium 5-15mm prominent dark, many 20-50% coarse 15-30mm prominent brown, very few < 2% fine < 5mm prominent red, few 2-10% fine < 5mm distinct orange mottles; medium clay; clear to;
2B22ia	0.80 to 1.00	Grey (10YR51) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent brown mottles; light medium clay; abrupt to;
2Cu	1.00 to 1.15	Grey (10YR51) moist colour; light clay; common 10-20% large pebbles 20-60mm and cobbles 60-200mm rounded intermediate volcanic and subrounded acid volcanic coarse fragments; moist; sharp
3C	1.15 to 1.70	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm prominent grey mottles; coarse sandy loam with light clay (mottle); very abundant > 90% large pebbles 20-60mm subangular igneous rock (unidentified) coarse fragments; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.5	3.4	
0.30	5.3	4.4	
0.60	6.2	5.0	
0.80	6.6	5.4	
1.00	6.6	5.5	
1.10	6.4	5.2	
1.25	6.3	5.7	
1.50	6.7	5.8	
1.70	7.0	6.1	

Notes:

Observation Dry hole
 Horizon – R Rock stopped auger

Project: MWQ Site: 162

Location: 726360 mE 7662550 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Nov-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 6.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty clay loam, light; massive structures; dry; clear to;
A2j	0.15 to 0.25	Dark greyish brown (10YR42) moist, light grey (10YR71) dry colour; many 20-50% fine < 5mm distinct orange mottles; silty clay loam, light; massive structures; very few < 2% fine < 2 mm manganiferous concretions segregations; dry; sharp to;
B21	0.25 to 0.80	Dark greyish brown (2.5Y42) moist colour; common 10-20% fine < 5mm distinct orange, common 10-20% medium 5-15mm distinct orange mottles; medium heavy clay; few 2-10% medium 2-6 mm manganiferous concretions segregations; dry; gradual to;
B22	0.80 to 1.25	Dark greyish brown (2.5Y42) moist colour; common 10-20% fine < 5mm distinct yellow mottles; medium heavy clay; very few < 2% small pebbles 2-6mm rounded gravel coarse fragments; few 2-10% fine < 2 mm coarse 6-20mm manganiferous and calcareous concretions segregations; moderately moist;
B23k	1.25 to 1.90	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; medium clay; common 10-20% medium 2-6 mm and coarse 6-20mm manganiferous soft and calcareous concretions segregations; abrupt to;
2B2	1.90 to 2.10	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm prominent yellow-brown, many 20-50% fine < 5mm distinct grey mottles; sandy light medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; sharp to;
3C	2.10 to 2.70	Pale brown (10YR63) moist colour; clayey coarse sand; sharp to;
4B2	2.70 to 2.90	Light grey (10YR72) moist colour; few 2-10% fine < 5mm distinct yellow, very few < 2% fine < 5mm distinct orange mottles; clay loam; coarse sandy; very few < 2% large pebbles 20-60mm subrounded igneous rock (unidentified) coarse fragments; abrupt to;

5BC	2.90 to 3.30	Pale yellow (2.5Y74) moist colour; common 10-20% fine < 5mm prominent pale, few 2-10% fine < 5mm distinct orange mottles; sandy light medium clay; gradual to;
5C	3.30 to 4.30	Yellowish brown (10YR54) moist colour; common 10-20% medium 5-15mm prominent grey, many 20-50% medium 5-15mm prominent brown mottles; sandy light clay to clay loam sandy; very few < 2% fine < 2 mm manganiferous soft segregations;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.8	3.5	
0.60	6.5	5.4	
1.00	6.9	6.7	
1.50	7.3	8.3	
2.00	7.6	5.9	
2.50	7.5	6.1	
3.00	7.3	6.1	
3.50	7.1	6.2	
4.00	7.2	6.2	

Notes:

Observation H2O EC - 10.3 mS/cm; pH 7.2

Project: MWQ Site: 163

Location: 730335 mE 7666240 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 27-Nov-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Swamp

Runoff: No record

Elevation: 2.7 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Hard setting, Poached

Classifications

ASC: Acidic-sodic, Sulfidic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Cyperus species; Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (5Y21) moist colour; many 20-50% fine < 5mm prominent orange mottles; light clay; weak 2-5mm parting to weak <2mm subangular blocky structures; moderately moist;
B21i	0.15 to 0.50	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent orange, very few < 2% fine < 5mm prominent pale mottles; light medium clay; moderately moist; abrupt to;
B22i	0.50 to 0.80	Greyish brown (10YR52) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent yellow mottles; light clay; moist; abrupt to;
C1u	0.80 to 0.95	Dark grey (10YR41) moist colour; silty light clay; massive structures; wet; sharp to;
C2u	0.95 to 1.65	Very dark grey (2.5Y30) moist colour; silty light clay with a 3cm coarse sand lens at 1.5m and thin <1cm fine sand lenses throughout; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; sharp to;
2C1u	1.65 to 1.80	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; clear to;
2C2u	1.80 to 2.10	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and andesite coarse fragments; single grain structures; wet; gradual to;
2C3u	2.10 to 2.80	Dark grey (2.5Y40) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and andesite coarse fragments; single grain structures; wet; sharp to;
2C4u	2.80 to 3.05	Dark grey (2.5Y40) moist colour; coarse sand; abundant 50-90% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded andesite and quartz coarse fragments; single grain structures; wet; sharp to;

2C5u	3.05 to 3.55	Grey (5Y51) moist colour; coarse sand with a 6cm sand lens at 3.2m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded quartz and andesite coarse fragments; single grain structures; wet; clear to;
2C6u	3.55 to 3.90	Grey (5Y51) moist colour; fine sand; very few < 2% medium pebbles 6-20mm subrounded and rounded quartz and andesite coarse fragments; single grain structures; wet; abrupt to;
2C7u	3.90 to 4.55	Dark grey (5Y41) moist colour; sand with a 5cm silty light clay lens; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded and rounded quartz and andesite coarse fragments; single grain structures; wet; sharp to;
2C8u	4.55 to 4.75	Dark grey (5Y41) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded andesite coarse fragments; single grain structures; wet; abrupt to;
2C9u	4.75 to 5.75	Dark grey (5Y41) moist colour; coarse sand with a 5cm silty light clay plug at 5.7m; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and andesite coarse fragments, 10cm gravel lens at 4.8m; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	4.2	0.8	2.75	5.9	1.5
0.30	3.9	1.9	3.00	6.3	1.6
0.60	3.6	2.0	3.25	6.3	1.7
0.80	4.0	1.2	3.50	6.1	1.5
1.00	4.5	0.9	3.75	6.3	1.6
1.25	5.0	0.7	4.00	6.4	1.6
1.50	5.4	0.7	4.25	6.3	1.6
1.75	6.0	1.3	4.50	6.0	1.1
2.00	6.1	1.5	4.75	6.7	1.3
2.25	6.0	1.5	5.00	6.4	1.5
2.50	5.9	1.5			

pH_F (pH using electrode probe),
pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.8 mS/cm; pH 4.9

Horizon - C2u Big lump of wood at 1.2 m + few mangrove roots

Horizon - 2C7u Lump of wood @ 4.55 m

Project: MWQ Site: 164

Location: 730445 mE 7665860 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Nov-2001

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Melaleuca leucadendra (Long-leaved paperbark);
 Cupaniopsis anacardioides (Tuckeroo)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.45	Black (10YR21) moist, dark greyish brown (10YR42) dry colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; clear to;
C1	0.45 to 1.40	Brown (10YR53) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock coarse fragments; single grain structures; dry; diffuse to;
C2	1.40 to 1.90	Pale brown (10YR63) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; diffuse
C3	1.90 to 2.30	Light brownish grey (10YR62) moist, white (10YR81) dry colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) and quartz coarse fragments; single grain structures; moderately moist; sharp to;
2BC	2.30 to 2.95	Very pale brown (10YR73) moist colour; few 2-10% coarse 15-30mm prominent orange, few 2-10% medium 5-15mm distinct yellow mottles; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp
3Cu	2.95 to 3.10	Grey (10YR61) moist colour; fine sand; single grain structures; wet; sharp to;
4Cu	3.10 to 3.23	Very dark grey (2.5Y30) moist colour; sandy fibric peat with thin fine sand and light clay lenses; massive structures; wet; sharp to;
5C1u	3.23 to 3.75	Dark grey (2.5Y40) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite and quartz coarse fragments; single grain structures; wet; gradual to;
5C2u	3.75 to 4.28	Grey (10YR51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic, andesite and subrounded quartz coarse fragments; single grain structures; wet; abrupt to;

6C1u	4.28 to 4.60	Grey (5Y51) moist colour; fine sand though not well sorted; very few < 2% small pebbles 2-6mm rounded andesite and subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
6C2u	4.60 to 5.10	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded andesite, acid volcanic and subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.2	4.5	3.50	6.2	0.8
0.60	6.2	5.2	3.75	6.2	1.6
1.00	6.1	5.5	4.00	6.5	1.6
1.50	6.5	4.8	4.25	6.3	1.8
2.00	7.0	5.1	4.50	6.4	1.9
2.50	6.7	5.4	4.75	6.4	1.9
3.00	6.5	1.8	5.00	6.4	1.9
3.25	6.3	1.6			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon - 3Cu 5 cm layer of OM @ 3.0 m
 Horizon - 4Cu mainly layers of wood
 Horizon - 5C1u 5 mm layer of OM @ 3.3 m
 Horizon - 5C2u Lump of wood @ 4.2
 Observation Could not sample water

Project: MWQ Site: 165

Location: 728775 mE 7665485 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Melaleuca leucadendra;
 Pandanus whitei
 Lower Stratum: Sporobolus virginicus (Marine couch); Paspalum vaginatum (Saltwater couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (2.5Y20) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sandy light clay; dry; sharp to;
B21i	0.20 to 0.60	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent grey, common 10-20% medium 5-15mm prominent yellow-brown mottles; fine sandy light medium clay; moderately moist;
B22i	0.60 to 1.10	Grey (10YR51) moist colour; very few < 2% fine < 5mm faint yellow jarositic (from pyrite), many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct grey mottles; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moderately moist; sharp to;
B23ia	1.10 to 1.30	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm prominent brown mottles; coarse sandy light clay with a 3cm coarse sand lens at 1.14m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; sharp
2B2	1.30 to 1.50	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm distinct yellow, common 10-20% medium 5-15mm distinct grey mottles; coarse sand with a 2cm fine sand lens at 1.4m and a 1cm silty light clay lens at 1.5m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3C1u	1.50 to 2.90	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded andesite and subrounded quartz coarse fragments; single grain structures; wet; clear to;
3C2u	2.90 to 3.20	Grey (5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; clear to;

3C3u	3.20 to 4.50	Grey (5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded intermediate volcanic coarse fragments; single grain structures; wet; abrupt to;
3C4u	4.50 to 5.40	Grey (5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic, quartz and andesite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.3	2.4	2.75	5.8	1.6
0.30	4.2	3.1	3.00	5.7	2.1
0.60	3.3	2.6	3.25	5.7	1.7
0.80	3.2	2.8	3.50	5.7	1.6
1.00	3.1	2.8	3.75	5.6	1.7
1.25	3.8	1.2	4.00	5.5	1.5
1.50	4.0	1.4	4.25	5.8	1.4
1.75	4.8	1.4	4.50	5.8	1.4
2.00	5.4	1.6	4.75	6.0	1.5
2.25	5.7	1.6	5.00	6.0	1.4
2.50	5.9	1.5			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water

Project: MWQ Site: 166

Location: 728865 mE 7664700 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Humose, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (2.5Y20) moist colour; common 10-20% medium 5-15mm prominent pale mottles; light medium clay; massive structures; dry; sharp to;
2A1	0.15 to 0.40	Very dark grey (10YR31) moist colour; few 2-10% medium 5-15mm distinct orange, few 2-10% fine < 5mm distinct orange mottles; medium heavy clay; massive structures; moderately moist; clear to;
2B21i	0.40 to 1.00	Grey (5Y61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm distinct dark mottles; fine sandy light medium clay; massive structures; moist; gradual to;
2Cu	1.00 to 1.40	Very dark grey (2.5Y30) moist colour; few 2-10% medium 5-15mm distinct brown, few 2-10% medium 5-15mm distinct grey mottles; silty light clay; massive structures; wet; sharp to;
3C1u	1.40 to 1.65	Dark grey (2.5Y40) moist colour; fine sand with coarse sand and silty light clay lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3C2u	1.65 to 2.00	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
3C3u	2.00 to 2.12	Grey (5Y51) moist colour; fine sand; single grain structures; wet; sharp to;
3C4u	2.12 to 3.15	Grey (5Y51) moist colour; coarse sand; very few < 2% small pebbles 2-

6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;

3C5u	3.15 to 3.55	Grey (5Y51) moist colour; fine sand; single grain structures; wet; clear to;
3C6u	3.55 to 5.00	Grey (5Y51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.0	2.6	2.75	5.8	1.5
0.30	5.0	3.7	3.00	5.5	1.4
0.60	4.7	3.0	3.25	5.4	1.6
0.80	5.1	2.7	3.50	5.5	0.9
1.00	4.6	2.9	3.75	5.6	1.6
1.25	4.4	1.3	4.00	5.5	1.6
1.50	4.6	1.2	4.25	5.5	1.8
1.75	5.0	1.4	4.50	5.4	2.0
2.00	5.2	1.4	4.75	5.5	2.0
2.25	5.3	1.6	5.00	5.6	1.5
2.50	5.4	1.6			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 3C1u Very fine mangrove roots in ZLC
 Horizon - 3C2u Lump of mangrove @ 1.85 m
 Horizon - 3C3u Mangrove root & fragments throughout
 Horizon - 3C5u Big lump of Meleluca, 2 cm layer of wood fragments @ 3.15 m
 Horizon - 3C6u Thin layer of wood fragments at 4.05 & 3.8 m
 Observation H2O EC - 22.4 mS/cm; pH 5.1

Project: MWQ Site: 167

Location: 728345 mE 7664325 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Humose, Sulfidic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (2.5Y20) moist colour; many 20-50% fine < 5mm distinct orange mottles; medium clay; moderate 50-100mm prismatic parting to weak 20-50mm parting to weak 5-10mm subangular blocky structures; moderately moist;
2B2	0.20 to 1.10	Grey (5Y61) moist colour; few 2-10% fine < 5mm faint yellow, very few < 2% medium 5-15mm prominent yellow-brown mottles; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moderately moist; sharp to;
3C	1.10 to 1.20	Grey (10YR51) moist colour; sand with 2 x 1cm silty light clay lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4Cu	1.20 to 1.45	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
5C1u	1.45 to 2.60	Dark grey (2.5Y40) moist colour; sand with a 3cm coarse sand lens at 2.6 m; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5C2u	2.60 to 3.30	Grey (10YR51) moist colour; fine sand with sand grains (poorly sorted); very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
5C3u	3.30 to 4.80	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
6C	4.80 to 5.10	Light brownish grey (2.5Y62) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock, large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.7	3.9	2.75	5.4	1.8
0.30	6.2	4.9	3.00	5.5	1.7
0.60	6.2	4.9	3.25	5.4	1.6
0.80	6.6	5.0	3.50	5.8	1.7
1.00	6.4	5.3	3.75	5.5	1.7
1.25	5.9	3.4	4.00	5.7	1.8
1.50	5.8	1.7	4.25	5.6	1.7
1.75	5.8	1.7	4.50	5.4	1.5
2.00	5.5	1.1	4.75	5.5	1.5
2.25	5.5	1.6	5.00	5.9	4.3
2.50	5.7	1.7			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 5C1u 10 cm layer of wood fragments at 1.95m, 1 long mangrove root, 1 lump of Meleluca at 2.05m
 Horizon – 5C3u 5cm layer of wood fragments at 3.75 & 4.6m
 Observation H2O EC - 26.9 mS/cm; pH 5.9

Project: MWQ Site: 168

Location: 727910 mE 7665020 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Humose, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, closed or dense Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove); Schinus terebinthifolia (broad-leaved pepper tree)
 Lower Stratum: Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (2.5Y20) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; weak 2-5mm cast parting to weak 2-5mm subangular blocky structures; moderately moist; abrupt to;
2B2	0.20 to 0.80	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; sandy light clay; massive structures; moderately moist;
3B2	0.80 to 1.05	Grey (10YR61) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; clayey sand; single grain structures; moist; sharp to;
3C	1.05 to 1.65	Light brownish grey (10YR62) moist colour; few 2-10% medium 5-15mm distinct grey mottles; sand; very few < 2% small pebbles 2-6mm subrounded granite coarse fragments; single grain structures; moist; sharp to;
4C	1.65 to 1.80	Very dark grey (10YR31) moist colour; fine sandy light clay with 2cm dark grey fine sand lenses at 1.68 and 1.75m; massive parting to single grain structures; wet; sharp to;

5C	1.80 to 3.90	Dark grey (2.5Y40) moist colour; sand with 2cm silty light clay lens at 3.28m and 2 x 2mm light clay lenses at 3.8m; very few < 2% small pebbles 2-6mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
6C	3.90 to 4.00	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm distinct grey mottles; sand; common 10-20% medium pebbles 6-20mm rounded andesite coarse fragments; single grain structures; wet; sharp to;
7D	4.00 to 4.20	Very dark grey (5Y31) moist colour; common 10-20% fine < 5mm distinct brown mottles; medium clay; strong 20-50mm prismatic parting to weak 2-5mm subangular blocky structures; few 2-10% fine < 2 mm manganiferous soft segregations; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	4.7	2.0	2.25	5.4	1.5
0.30	4.3	2.6	2.50	5.2	1.6
0.60	4.1	2.8	2.75	5.4	1.5
0.80	3.8	2.5	3.00	5.6	1.5
1.00	3.9	2.9	3.25	5.6	1.6
1.25	4.5	1.4	3.50	5.5	1.7
1.50	5.1	1.4	3.75	5.4	1.6
1.75	5.0	1.2	4.00	5.6	2.1
2.00	5.3	1.5	4.19	5.8	7.0

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water
 Horizon - 5C Sand
 Horizon - 7D EOP - stones stopped VVC

Project: MWQ Site: 169

Location: 728150 mE 7664670 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Drainage depression
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Ceriops tagal (Yellow mangrove); Aegiceras corniculatum (River mangrove); Excoecaria agallocha (Blind-your-eye mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (7.5YR20) moist colour; few 2-10% fine < 5mm faint grey mottles; silty light clay; moderate 2-5mm platy structures; moderately moist; abrupt to;
C1	0.15 to 0.70	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct grey mottles; silty light clay; moist; sharp to;
C2u	0.70 to 1.05	Very dark grey (5Y31) moist colour; silty light clay with 3 x 2cm dark grey sand lenses; massive structures; wet; sharp to;
2Cu	1.05 to 1.50	Dark grey (5Y41) moist colour; sand with 1cm light clay lenses every 10cm; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3Cu	1.50 to 2.05	Dark grey (5Y41) moist colour; sand with a 1cm light clay lens at 1.7m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite and subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4Cu	2.05 to 2.30	Dark grey (2.5Y40) moist colour; fine sandy light clay with 4 x 3cm sand lenses; massive structures; wet; sharp to;
5C1	2.30 to 2.70	Grey (5Y61) moist colour; sand with 2 x 2cm light clay plugs; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
5C2	2.70 to 5.30	Light brownish grey (10YR62) moist colour; coarse sand; many 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz, andesite and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.3	2.9	2.75	5.8	4.6
0.30	4.9	3.5	3.00	5.9	4.6
0.60	5.0	3.6	3.25	6.0	4.9
0.80	5.3	2.4	3.50	6.3	4.8
1.00	5.5	1.4	3.75	6.1	5.1
1.25	5.6	1.4	4.00	6.6	5.0
1.50	5.6	1.5	4.25	6.2	5.1
1.75	5.6	1.5	4.50	6.1	5.0
2.00	6.0	1.6	4.75	6.2	5.0
2.25	5.7	1.8	5.00	6.1	5.1
2.50	5.8	3.7			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 32.7 mS/cm; pH 5.8
 Horizon - 3Cu Few bits of wood at 2.0 m

Project: MWQ Site: 170

Location: 729065 mE 7663840 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Avicennia marina (Grey mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (5Y31) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; moderate 5-10mm parting to strong 2-5mm subangular blocky structures; moderately moist; sharp to;
2A1	0.10 to 0.15	Black (2.5Y20) moist colour; silty light clay; massive structures; moderately moist; sharp to;
3B2i	0.15 to 0.50	Grey (5Y61) moist colour; few 2-10% fine < 5mm distinct yellow, many 20-50% fine < 5mm prominent brown mottles; fine sandy light clay with fine sand lenses; massive structures; moist; sharp to;
4BC	0.50 to 1.05	Very dark greyish brown (10YR32) moist colour; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct yellow-brown, very few < 2% fine < 5mm distinct yellow mottles; silty light clay with grey blobs of fine sand with yellow brown and yellow mottles; massive structures; very few < 2% fine < 2 mm manganiferous soft segregations; moist; sharp to;
5C	1.05 to 5.80	Very dark grey (5Y31) moist colour; silty light clay with thin 1mm- cm dark olive grey fine sand lenses throughout; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.5	3.1	
0.30	3.7	2.6	
0.60	3.2	2.1	
0.80	3.1	1.4	
1.00	3.1	1.4	
1.25	3.6	1.2	
1.50	4.6	1.0	
1.75	4.9	1.1	
2.00	5.1	1.0	
2.25	5.1	1.0	
2.50	5.2	0.9	
2.75	5.3	1.1	
3.00	5.3	1.0	
3.25	5.7	1.0	
3.50	5.4	1.1	
3.75	5.5	1.0	
4.00	5.5	0.9	
4.25	5.6	1.2	
4.50	5.6	1.4	
4.75	5.6	1.1	
5.00	5.5	1.1	

Notes:

Observation H2O EC - 75.3 mS/cm; pH 5.5

Project: MWQ Site: 171

Location: 729000 mE 7664250 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 30-Nov-2001

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Dunecrest

Runoff: No record

Elevation: 4.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 2 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Melaleuca dealbata (swamp tea-tree)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (10YR21) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
2A1	0.20 to 0.40	Black (10YR21) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; clear to;
B21	0.40 to 0.80	Dark yellowish brown (10YR36) moist, yellowish brown (10YR56) dry colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; moderately moist; clear to;
B22	0.80 to 1.40	Yellowish brown (10YR56) moist, brownish yellow (10YR66) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock coarse fragments; moderately moist; abrupt to;
B23	1.40 to 1.60	Dark yellowish brown (10YR46) moist colour; common 10-20% medium 5-15mm distinct yellow mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
2BC	1.60 to 2.30	Grey (10YR61) moist colour; few 2-10% fine < 5mm prominent brown, common 10-20% fine < 5mm distinct grey mottles; sandy medium clay; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; massive structures; moist; sharp to;
3BC	2.30 to 2.85	Light brownish grey (10YR62) moist colour; few 2-10% fine < 5mm prominent brown, very few < 2% coarse 15-30mm prominent brown mottles; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
4C1u	2.85 to 3.10	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4C2u	3.10 to 3.35	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;

5Cu	3.35 to 3.80	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded quartz and rounded andesite coarse fragments; single grain structures; wet; sharp to;
6Cu	3.80 to 4.00	Very dark grey (2.5Y30) moist colour; fine sand with 5cm lens of silty light clay at 1.95m and fine sand and silty light clay layers from 3.8 to 3.85m; massive structures; wet; sharp to;
7Cu	4.00 to 5.30	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm subrounded quartz and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.1	3.8	2.75	5.9	2.9
0.30	5.7	4.4	3.00	5.7	0.9
0.60	5.9	4.6	3.25	5.6	0.7
0.80	6.2	4.5	3.50	5.9	1.2
1.00	5.7	4.6	3.75	6.2	1.3
1.25	5.5	4.4	4.00	5.6	0.9
1.50	5.4	4.3	4.25	6.0	1.4
1.75	4.5	4.1	4.50	5.8	0.9
2.00	4.5	3.6	4.75	5.7	1.7
2.25	5.2	3.9	5.00	5.9	1.6
2.50	6.0	3.7			

pH_F (pH using electrode probe),
pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon - 4C1u Huge lump of wood at 3.05 m
Horizon - 4C2u 5 cm layer of plant remains at 3.2 m
Horizon - 5Cu 10 cm gravel layer at 3.35 m
Observation Could not sample water

Project: MWQ Site: 172

Location: 729740 mE 7665410 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Nov-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Swamp
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Humose, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, closed or dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Pandanus whitei; Schinus terebinthifolia (Broad-leaved pepper tree)
 Lower Stratum: Paspalum vaginatum (Saltwater couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; clay loam; fine sandy; moderate 2-5mm cast structures; dry; sharp to;
B21i	0.15 to 0.37	Grey (10YR61) moist colour; very few < 2% fine < 5mm distinct red, common 10-20% fine < 5mm prominent yellow-brown, common 10-20% medium 5-15mm faint grey mottles; clay loam; fine sandy; massive structures; moderately moist;
B22i	0.37 to 0.60	Grey (10YR61) moist colour; very few < 2% fine < 5mm distinct red, common 10-20% fine < 5mm prominent yellow-brown, common 10-20% medium 5-15mm faint grey mottles; fine sandy light clay; massive structures; moderately moist;
B22ia	0.60 to 0.90	Grey (10YR51) moist colour; few 2-10% medium 5-15mm distinct grey, few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), many 20-50% medium 5-15mm prominent yellow-brown mottles; sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moist; abrupt to;
Cu	0.90 to 1.10	Grey (10YR61) moist colour; few 2-10% medium 5-15mm faint grey mottles; sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; moist; sharp
2Cu	1.10 to 1.25	Dark grey (10YR41) moist colour; silty light clay; massive structures; wet; sharp to;
3C1u	1.25 to 1.40	Grey (2.5Y50) moist colour; fine sand; single grain structures; wet; abrupt to;
3C2u	1.40 to 1.80	Grey (2.5Y60) moist colour; coarse sand with 5cm fine sand lenses at 1.6 and 1.7m; very few < 2% small pebbles 2-6mm rounded granite and quartz coarse fragments; single grain structures; wet; abrupt to;

3C3u	1.80 to 3.30	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz and andesite coarse fragments; single grain structures; wet; diffuse to;
3C4u	3.30 to 4.40	Grey (2.5Y60) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; gradual
4C1	4.40 to 5.40	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4C2	5.40 to 5.60	Light brownish grey (10YR62) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded andesite and igneous rock (unidentified) coarse fragments; single grain structures; wet.

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.9	1.5	2.75	4.3	1.3
0.30	4.2	3.0	3.00	4.2	1.4
0.60	4.3	2.4	3.25	4.3	1.7
0.80	3.4	2.0	3.50	4.6	1.6
1.00	3.7	2.8	3.75	4.6	1.8
1.25	3.9	3.0	4.00	4.8	1.6
1.50	4.0	1.7	4.25	5.2	1.9
1.75	3.9	1.3	4.50	5.4	2.6
2.00	4.0	1.6	4.75	5.6	2.4
2.25	4.0	1.2	5.00	5.7	2.6
2.50	4.2	1.6	5.25	5.6	2.9

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 17.1 mS/cm; pH 3.9
 Horizon 3C4u Wood fragments @ 4.2 m

Project: MWQ Site: 173

Location: 727635 mE 7665355 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 04-Dec-2001

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Plain

Runoff: No record

Elevation: 3 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Hard setting

Classifications

ASC: Humose, Kandosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Setaria incrassata

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light clay; weak 2-5mm subangular blocky structures; moderately moist;
2B21i?	0.20 to 1.00	Grey (5Y61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; medium clay; massive structures; moderately moist; abrupt to;
2B22i	1.00 to 1.30	Grey (5Y61) moist colour; common 10-20% fine < 5mm prominent yellow-brown mottles; fine sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moderately moist; sharp to;
3B2	1.30 to 1.70	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; diffuse to;
4C1	1.70 to 2.00	Grey (10YR61) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
4C2u	2.00 to 3.40	Dark grey (2.5Y40) moist colour; sand with 3cm silty light clay lens at 2.2m; very few < 2% small pebbles 2-6mm subrounded quartz and rounded andesite coarse fragments; single grain structures; wet; sharp to;
5D	3.40 to 3.80	Dark greenish grey (5G41) moist colour; common 10-20% fine < 5mm distinct grey mottles; fine sandy medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.5	2.5	
0.30	5.0	4.1	
0.60	4.4	3.7	
0.80	3.8	3.3	
1.00	3.9	3.6	
1.25	4.9	3.0	
1.50	5.6	3.3	
1.75	5.8	3.3	
2.00	5.8	1.8	
2.25	6.2	1.8	
2.50	6.4	1.9	
2.75	6.0	1.8	
3.00	6.0	1.8	
3.25	6.6	2.1	
3.50	6.2	5.1	
3.75	5.8	5.4	

Notes:

Observation Could not sample water
Horizon – 5D EOP - too hard for VVC

Project: MWQ Site: 174

Location: 729810 mE 7664660 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Paspalum vaginatum (Saltwater couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.06	Black (2.5Y20) moist colour; silty clay loam; moderate 2-5mm subangular blocky structures; abrupt to;
2A1	0.06 to 0.17	Black (10YR21) moist colour; coarse sandy loam; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; clear to;
2B2	0.17 to 0.85	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm prominent yellow-brown mottles; coarse sandy loam; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; abrupt to;
3Cu	0.85 to 1.00	Very dark grey (2.5Y30) moist colour; few 2-10% medium 5-15mm distinct grey mottles; coarse sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; sharp to;
4Cu	1.00 to 1.20	Very dark grey (10YR31) moist colour; coarse sandy loam; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures;
5Cu	1.20 to 1.40	Very dark grey (2.5Y30) moist colour; silty light clay with grains of coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; sharp to;
6Cu	1.40 to 1.75	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm

and medium pebbles 6-20mm rounded quartz and igneous rock coarse fragments; single grain structures; clear to;

7C1	1.75 to 2.90	Grey (10YR51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock, rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; clear to;
7C2	2.90 to 3.18	Grey (10YR51) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures;
7C3	3.18 to 5.00	Grey (10YR61) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures.

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.3	3.0	2.75	6.0	1.5
0.30	5.7	3.7	3.00	5.9	1.8
0.60	5.2	3.5	3.25	6.2	2.1
0.80	5.2	2.5	3.50	6.0	3.0
1.00	5.9	3.3	3.75	5.9	3.5
1.25	6.0	1.5	4.00	5.8	4.0
1.50	6.2	1.5	4.25	6.1	4.7
1.75	6.2	1.4	4.50	6.2	4.7
2.00	6.3	1.4	4.75	6.0	3.2
2.25	6.2	1.3	5.00	6.0	2.0
2.50	5.9	1.4			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 1.9 mS/cm; pH 6.3

Project: MWQ Site: 175

Location: 728310 mE 7663210 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.05 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Rhizophora species; Bruguiera exaristata (Rib-fruited mangrove); Aegiceras corniculatum (River mangrove); Osbornia octodonta (Myrtle mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.11	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint grey mottles; fine sandy light clay; massive structures; wet; abrupt to;
B2i	0.11 to 0.65	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm prominent orange, few 2-10% medium 5-15mm distinct grey mottles; fine sandy light clay with blobs of fine sand; massive structures; wet; clear to;
Cu	0.65 to 1.25	Black (10YR21) moist colour; fine sandy light clay; massive structures; wet; sharp to;
2Cu	1.25 to 1.55	Very dark grey (10YR31) moist colour; fine sand with a 1cm fine sandy light clay lens at 1.35m; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	3.8	
0.30	5.5	3.8	
0.60	5.8	3.2	
0.80	6.2	1.4	
1.00	6.0	0.8	
1.25	6.1	0.7	
1.50	6.1	0.8	

Notes:

Horizon - 2Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 46.9 mS/cm; pH 6.8

Project: MWQ Site: 176

Location: 730010 mE 7665490 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Swamp
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Humose-acidic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Cyperus species

Profile

Horizon	Depth (m)	Description
O1	0.00 to 0.00	Sapric; dry; sharp to;
A1	0.00 to 0.13	Black (10YR21) moist colour; many 20-50% fine < 5mm prominent orange mottles; silty clay loam; strong 2-5mm cast structures; dry; abrupt to;
A2e	0.13 to 0.28	Very dark greyish brown (10YR32) moist, white (10YR81) dry colour; common 10-20% fine < 5mm distinct orange mottles; fine sandy light clay; moderately moist;
2B21i	0.28 to 0.50	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct dark mottles; fine sandy medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist;
2B22i	0.50 to 1.00	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct grey mottles; fine sandy medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist; sharp
3B2ia	1.00 to 1.20	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct grey mottles; silty light clay; wet
4Cu	1.20 to 1.40	Grey (5Y61) moist colour; common 10-20% fine < 5mm faint grey mottles; sandy light clay with thin coarse sand lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; wet;

5Cu 1.40 to 2.00 Very dark grey (2.5Y30) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded andesite and subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.9	1.2	
0.30	3.9	1.7	
0.60	3.4	2.0	
0.80	2.8	1.6	
1.00	2.9	1.6	
1.15	2.7	1.6	
1.25	3.2	1.7	
1.50	3.5	0.2	
1.75	3.4	0.6	
2.00	3.4	0.6	

Notes:

Observation H2O EC - 11.7 mS/cm; pH 4.0
 Horizon - 5Cu EOP - wet sand would not hold in auger

Project: MWQ Site: 177

Location: 728260 mE 7660985 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 06-Dec-2001

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Dunecrest

Runoff: No record

Elevation: 4.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: Very few < 2%, stones 200-600mm

Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Casuarina equisetifolia (Beach casuarina); Hibiscus tiliaceus (Cotton tree / cowlflower)

Lower Stratum: Panicum maximum var. maximum (Guinea grass); Cassia tomentella (velvet cassia, tomentella, velvet bean tree); Lantana camara (Lantana)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.18	Black (10YR21) moist colour; fine sand; single grain structures; dry; clear to;
C	0.18 to 0.90	Pale brown (10YR63) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; sharp to;
2C	0.90 to 1.15	Brown (10YR53) moist, very pale brown (10YR73) dry colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
3C	1.15 to 1.60	Brown (10YR53) moist, pale brown (10YR63) dry colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; sharp to;
4B2	1.60 to 1.70	Grey (10YR51) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; clay loam; fine sandy with a 1cm fine sandy light clay lens; massive structures; moderately moist; sharp to;
5C1	1.70 to 2.15	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; abrupt to;
5C2	2.15 to 3.90	Brown (10YR53) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; diffuse
5C3	3.90 to 5.40	Pale brown (10YR63) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and igneous rock coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
	0.10	5.8	4.1
	0.60	7.2	5.7
	1.00	6.5	5.4
	1.50	5.3	4.6
	2.00	5.8	4.6
	2.50	5.6	5.0
	3.00	6.2	5.7
	3.50	6.4	5.7
	4.00	6.4	5.7
	4.50	6.4	5.8
	5.00	6.3	5.7
	5.40	6.5	6.0

Notes:

Observation Could not sample water

Project: MWQ Site: 178

Location: 727855 mE 7661155 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Rhizophora species; Avicennia marina (Grey mangrove); Aegiceras corniculatum (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark brown (7.5YR22) moist colour; fine sandy light clay; massive structures; wet; clear to;
B2	0.10 to 0.65	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sandy light clay; massive structures; wet; gradual
Cu	0.65 to 1.90	Very dark grey (2.5Y30) moist colour; fine sandy light clay with few coarse sand grains throughout and 2 x 5cm coarse sand lenses at 1.6 and 1.7m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; sharp to;
2Cu	1.90 to 2.20	Very dark grey (2.5Y30) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	2.2	
0.30	5.9	3.2	
0.60	6.3	1.4	
0.80	6.3	1.7	
1.00	6.5	1.5	
1.25	6.4	1.2	
1.50	6.3	1.3	
1.75	6.6	1.1	
2.00	6.6	1.2	
2.20	6.6	1.7	

Notes:

Horizon - 2Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 49.1 mS/cm; pH 6.4

Project: MWQ Site: 179

Location: 727295 mE 7661180 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Very few < 2%, boulders 600mm-2m, Andesite
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker); Ceriops tagal (Yellow mangrove); Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sandy loam with thin clay lenses; single grain structures; dry; clear to;
C1	0.25 to 0.45	Dark greyish brown (10YR42) moist, pale brown (10YR63) dry colour; fine sand; single grain structures; dry; sharp to;
2B2	0.45 to 0.55	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct grey mottles; light clay; massive structures; moderately moist; sharp to;
3C	0.55 to 0.90	Brown (10YR53) moist, pale brown (10YR63) dry colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
4B2	0.90 to 1.50	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm prominent brown, common 10-20% fine < 5mm distinct grey mottles; fine sandy light clay; massive structures; moist; abrupt to;
4Cu	1.50 to 2.30	Very dark grey (10YR31) moist colour; silty light clay with a 3cm fine sand lens at 1.7 m; massive structures; wet; sharp to;
5Cu	2.30 to 3.60	Grey (10YR51) moist colour; coarse sand with a 5cm very dark grey coarse sand lens at 2.3m, a 5cm sand lens at 2.35m and a 3cm clay plug at 2.5m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and andesite coarse fragments; single grain structures; wet; sharp to;
6C	3.60 to 4.00	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.7	5.5	2.00	5.4	0.9
0.30	5.7	3.4	2.25	5.5	0.4
0.40	5.3	3.2	2.50	6.1	1.1
0.60	6.0	4.4	2.75	6.3	1.2
0.80	5.7	4.3	3.00	6.6	1.2
1.00	5.5	3.2	3.25	6.7	1.2
1.25	5.5	3.5	3.50	6.7	1.3
1.50	5.3	1.1	3.75	6.7	3.2
1.75	5.3	0.7	4.00	5.9	4.1

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 5Cu common mangrove roots especially at 2.1 - 2.3m
 Horizon – 6C EOP - jammed a large rock in the end of the tube
 Observation Could not sample water

Project: MWQ Site: 180

Location: 726525 mE 7661645 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Mesotrophic, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker)
 Lower Stratum: Brachiaria mutica (Para grass); Paspalum vaginatum (Saltwater couch);
 Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; loamy fine sand; massive structures; moderately moist; clear to;
B21	0.15 to 0.45	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct dark mottles; fine sandy loam, light; massive structures; moderately moist; gradual to;
B22	0.45 to 1.20	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent orange mottles; loamy fine sand with a thin 5cm clay lens at 0.8m; massive structures; moist; sharp to;
2B2	1.20 to 2.70	Dark grey (2.5Y41) moist colour; common 10-20% medium 5-15mm prominent orange mottles; fine sandy light clay with a few 1-2mm fine sand lenses; massive structures; moist;
2Cu	2.70 to 3.10	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
3Cu	3.10 to 3.55	Very dark grey (2.5Y30) moist colour; coarse sand with a 5cm light clay lens at 3.2 and 3.3m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
4C1	3.55 to 4.20	Grey (10YR51) moist colour; coarse sand with a 1cm light clay lens at 3.7m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; diffuse
4C2	4.20 to 4.50	Light brownish grey (10YR62) moist colour; coarse sand; few 2-10% cobbles 60-200mm rounded andesite and common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.3	2.2	2.50	5.5	1.0
0.30	5.8	2.4	2.75	5.6	1.0
0.60	6.3	3.9	3.00	5.6	0.7
0.80	6.7	4.0	3.25	5.8	1.2
1.00	7.1	4.3	3.50	5.7	1.0
1.25	6.8	4.5	3.75	6.1	4.0
1.50	6.7	4.2	4.00	6.2	3.0
1.75	6.8	4.5	4.25	7.0	4.6
2.00	6.2	4.2	4.50	6.0	4.3
2.25	5.3	1.0			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 4C2 EOP - VVC stopped by rocks
 Observation H2O EC - 20.0 mS/cm; pH 6.0

Project: MWQ Site: 181

Location: 727000 mE 7661830 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.05 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, mid-dense
 Species: Avicennia marina (Grey mangrove); Ceriops tagal (Yellow mangrove);
 Rhizophora species; Aegiceras corniculatum (River mangrove); Excoecaria agallocha
 (Blind-your-eye mangrove); Osbornia octodonta (Myrtle mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm faint brown mottles; fine sandy light clay; weak 5-10 mm prismatic structure parting to moderate 2-5 mm subangular blocky structure with weak 2-5mm cast structures; moist; clear to;
B2	0.20 to 0.95	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent orange, few 2-10% fine < 5mm faint brown, few 2-10% fine < 5mm distinct grey mottles; fine sandy light clay with a few pockets of sand; massive structures; moist; gradual to;
Cu	0.95 to 1.50	Very dark grey (10YR31) moist colour; fine sandy light clay with 2-3cm pockets of dark grey sand throughout; massive structures; wet; sharp to;
2Cu	1.50 to 2.15	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	4.2	
0.30	6.0	4.2	
0.60	5.7	4.3	
0.80	5.7	3.9	
1.00	5.7	0.9	
1.25	6.0	0.9	
1.50	5.7	1.1	
1.75	5.9	1.0	
2.00	5.8	1.1	

Notes:

Horizon – 2Cu EOP
 Observation H2O EC - 41.5 mS/cm; pH 6.0

Project: MWQ

Site:182

Location: 725795 mE 7663840 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 12-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Backplain

Runoff: No record

Elevation: 5 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: Few 2-10%, cobbles 60-200mm, Andesite

Surface Condition: Firm

Classifications

ASC: Endocalcareous-endohypersodic, Black, VERTOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker)

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; sandy light clay; common 10-20% medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; moderately moist;
2B2	0.15 to 0.30	Black (7.5YR20) moist colour; few 2-10% medium 5-15mm distinct grey mottles; medium clay; lenticular structures; few 2-10% coarse 6-20 mm calcareous soft and nodules segregations; moderately moist; gradual to;
3B21	0.30 to 0.80	Black (7.5YR20) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium heavy clay; lenticular structures; moderately moist; diffuse to;
3B22	0.80 to 1.50	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm prominent yellow mottles; medium heavy clay; common 10-20% coarse 6-20 mm calcareous nodules segregations; moist; diffuse to;
3B23	1.50 to 2.30	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct yellow mottles; medium heavy clay; many 20-50% coarse 6-20 mm calcareous soft and nodules segregations; moist; sharp to;
4B21	2.30 to 2.80	Light grey (10YR72) moist colour; common 10-20% medium 5-15mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; common 10-20% coarse 6-20 mm manganese soft segregations; wet;
4B22	2.80 to 3.40	Light brownish grey (2.5Y62) moist colour; few 2-10% coarse 15-30mm prominent brown mottles; clayey sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;

5BC	3.40 to 4.35	Light brownish grey (2.5Y62) moist colour; common 10-20% very coarse > 30mm prominent brown mottles; clayey fine sand; massive structures; wet;
6D	4.35 to 4.60	Grey (5Y61) moist colour; many 20-50% very coarse > 30mm prominent brown, common 10-20% very coarse > 30mm prominent red, few 2-10% coarse 15-30mm prominent yellow mottles; medium clay; moderate 5-10mm parting to moderate 2-5mm lenticular structures; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	4.5	
0.60	5.6	4.8	
1.00	6.5	7.5	
1.50	6.5	5.3	
2.00	6.0	5.4	
2.50	6.7	8.1	
3.00	6.6	5.7	
3.50	6.3	5.6	
4.00	6.4	5.6	
4.50	6.9	6.0	

Notes:

Horizon - 3B23 Most CaCO₃ is between 2.0 -2.4 m
Observation H₂O EC - 2.4 mS/cm; pH 6.6

Project: MWQ Site: 183

Location: 724900 mE 7662185 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 5.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Endocalcareous-endohypersodic, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; medium clay; few 2-10% large pebbles 20-60mm subrounded igneous rock (unidentified) coarse fragments; moderately moist;
B21	0.15 to 0.90	Black (7.5YR20) moist colour; medium clay; very few < 2% small pebbles 2-6mm subrounded unconsolidated material (unidentified) coarse fragments; lenticular structures; moderately moist;
B22	0.90 to 1.40	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded unconsolidated material (unidentified) coarse fragments; few 2-10% coarse 6-20 mm calcareous concretions segregations; moist; abrupt to;
B23	1.40 to 1.70	Dark yellowish brown (10YR46) moist colour; many 20-50% fine < 5mm prominent grey mottles; medium clay; few 2-10% large pebbles 20-60mm and cobbles 60-200mm subrounded andesite coarse fragments; very few < 2% fine < 2 mm manganiferous soft and concretions segregations; wet; sharp to;
2BC	1.70 to 2.30	Dark greenish grey (5G41) moist colour; many 20-50% fine < 5mm prominent pale, many 20-50% fine < 5mm prominent brown mottles; fine sandy light medium clay; wet; gradual to;
2C	2.30 to 2.70	Grey (5Y51) moist colour; many 20-50% fine < 5mm prominent brown, common 10-20% fine < 5mm prominent pale mottles; clay loam; sandy; very abundant > 90% granodiorite coarse fragments;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	2.9	
0.30	7.2	6.9	
0.60	7.3	6.7	
0.80	6.9	5.7	
1.00	6.9	5.7	
1.25	6.8	5.8	
1.50	6.3	5.7	
1.75	6.8	5.9	
2.00	7.3	5.8	
2.25	6.8	6.3	
2.50	7.0	6.2	
2.70	6.9	6.2	

Notes:

Horizon - 2C EOP - rock @ 2.7 m; C horizon has the original fabric of the rock
 Observation H2O EC - 0.8 mS/cm; pH 7.2

Project: MWQ Site: 184

Location: 726290 mE 7662165 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.01 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, mid-dense
 Species: *Ceriops tagal* (Yellow mangrove); *Avicennia marina* (Grey mangrove); *Aegiceras corniculatum* (River mangrove); *Excoecaria agallocha* (Blind-your-eye mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.08	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light clay; moderate 2-5mm subangular blocky structures; wet;
B2	0.08 to 0.48	Dark grey (5Y41) moist colour; many 20-50% medium 5-15mm prominent orange mottles; light clay; weak 5-10 mm parting to weak 2-5mm subangular blocky structures in upper 20 cm only; wet;
C	0.48 to 2.05	Very dark grey (10YR31) moist colour; light clay with a 3 cm sand lens at 1.5 m; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	4.0	
0.30	6.2	4.2	
0.60	6.3	3.1	
0.80	6.3	1.0	
1.00	6.2	1.0	
1.25	6.2	0.8	
1.50	6.1	0.5	
1.75	6.3	0.8	
2.00	6.1	0.7	

Notes:

Horizon - C EOP - sand horizon @ 2.05 m would not hold in gouge auger; bits of wood between 1.8 & 2.0 m
 Observation H2O EC - 48.9 mS/cm; pH 6.3

Project: MWQ Site: 185

Location: 723415 mE 7660885 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 12-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Plain

Runoff: No record

Elevation: 4 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Hard setting

Classifications

ASC: Haplic, Mesotrophic, Black, KANDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; fine sandy clay loam; massive structures; dry; clear to;
B21	0.15 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; dry; abrupt to;
B22	0.30 to 0.40	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct brown mottles; fine sandy clay loam, light; massive structures; moderately moist; abrupt to;
B23?	0.40 to 0.90	Very dark greyish brown (10YR32) moist colour; silty clay loam, light; massive structures; moderately moist; sharp to;
2C	0.90 to 2.10	Dark brown (10YR33) moist colour; sand; single grain structures; dry; clear to;
2BC?	2.10 to 2.60	Greyish brown (2.5Y52) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; sand; single grain structures; moist; clear to;
3Cu	2.60 to 2.97	Grey (10YR51) moist colour; sand with a 6cm very dark grey silty light clay lens at 2.9m; single grain structures; wet; sharp to;
4Cu	2.97 to 3.15	Grey (7.5YR50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded andesite, quartz and granodiorite coarse fragments; single grain structures; wet; gradual to;
5C1	3.15 to 3.60	Brown (7.5YR44) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; diffuse to;

5C2	3.60 to 4.05	Strong brown (7.5YR46) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and large pebbles 6-20mm subrounded intermediate volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet;
6C	4.05 to 5.10	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz, andesite and acid volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	2.8	
0.60	5.9	3.5	
1.00	6.5	4.3	
1.50	6.4	4.2	
2.00	7.1	5.1	
2.50	6.2	4.9	
2.75	6.4	2.0	
3.00	6.9	1.6	
3.25	6.6	3.5	
3.50	6.7	4.2	
4.00	6.1	4.6	
4.50	6.2	5.0	
5.00	6.1	5.1	

Notes:

Observation H2O EC - 10.1 mS/cm; pH 6.3

Project: MWQ Site: 186

Location: 723760 mE 7660800 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Levee
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Eutrophic, Black, DERMOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (10YR21) moist colour; silty clay loam, heavy; moderate 5-10mm parting to strong 2-5mm subangular blocky structures; dry; gradual to;
B2	0.20 to 0.90	Very dark greyish brown (10YR32) moist colour; silty light clay; strong subangular blocky structures; moderately moist; sharp to;
2C	0.90 to 1.20	Very dark greyish brown (10YR32) moist colour; clayey fine sand; single grain structures; moist; sharp to;
3C	1.20 to 1.40	Very dark greyish brown (10YR32) moist colour; silty clay loam; massive structures; moderately moist; sharp to;
4C	1.40 to 1.60	Brown (10YR43) moist colour; clayey sand; single grain structures; moist; abrupt to;
5C1	1.60 to 3.60	Yellowish brown (10YR54) moist colour; coarse sand with 10 cm sand lenses at 2.0 and 2.9m; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;
5C2	3.60 to 5.10	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) and medium 6-20mm rounded acid volcanic coarse fragments; single grain structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	3.4	
0.60	6.4	3.5	
1.00	6.2	3.5	
1.50	6.7	3.5	
2.00	7.0	5.1	
2.50	6.9	5.1	
3.00	5.9	5.3	
3.50	6.1	5.2	
3.75	5.9	3.5	
4.00	6.0	4.9	
4.50	6.6	5.2	
5.00	6.5	5.2	

Notes:

Observation H2O EC - 9.8 mS/cm; pH 6.0

Project: MWQ Site: 187

Location: 723765 mE 7661370 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.05 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Shell
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, mid-dense
 Species: Aegiceras corniculatum (River mangrove); Excoecaria agallocha (Blind-your-eye mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.12	Very dark grey (10YR31) moist colour; silty light clay with a few coarse sand grains; weak 2-5mm cast structures; moist; abrupt to;
B2	0.12 to 0.32	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent orange mottles; silty light clay with a few coarse sand grains; massive structures; wet; clear to;
Cu	0.32 to 0.90	Very dark grey (7.5YR30) moist colour; silty light clay with 6 cm of sandy light clay above the 2C; massive structures; wet; clear to;
2Cu	0.90 to 1.20	Very dark grey (7.5YR30) moist colour; sand with a silty light clay plug; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	4.4	
0.30	5.8	3.5	
0.60	5.9	1.3	
0.80	6.0	1.4	
1.00	6.5	1.0	
1.20	6.2	1.6	

Notes:

Horizon - 2Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 42.7 mS/cm; pH 6.2

Project: MWQ Site: 188

Location: 723445 mE 7660620 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Levee
 Runoff: No record
 Elevation: 6.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Basic, Regolithic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist, dark greyish brown (10YR42) dry colour; clayey fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and feldspar coarse fragments; single grain structures; moist; diffuse to;
B21	0.20 to 0.65	Dark brown (10YR33) moist, brown (10YR53) dry colour; clayey fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and feldspar coarse fragments; single grain structures; dry; diffuse to;
B22	0.65 to 1.00	Dark brown (10YR33) moist, brown (10YR53) dry colour; clayey fine sand with a thin lens of fine sandy loam; very few < 2% small pebbles 2-6mm subrounded quartz and feldspar coarse fragments; single grain structures; dry; abrupt to;
2C	1.00 to 5.20	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded and subrounded intermediate volcanic, quartz, feldspar and igneous rock (unidentified) coarse fragments; single grain structures; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	4.6	
0.60	5.6	4.4	
1.00	5.6	5.0	
1.50	7.0	5.3	
2.00	7.2	5.3	
2.50	6.9	5.4	
3.00	6.8	5.2	
3.50	7.2	5.8	
4.00	7.0	5.5	
4.50	6.7	5.4	
5.00	7.0	5.4	

Notes:
 Observation Water below 5.2 m

Project: MWQ Site: 189

Location: 723995 mE 7661185 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Dec-2001

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Levee
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Regolithic, Chernic-leptic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; silty clay loam; weak 5-10mm cast parting to moderate 2-5mm subangular blocky structures; clear to;
2B21	0.40 to 0.60	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; fine sandy clay loam, light with a thin fine sand lens at 0.6m; massive structures; sharp to;
2B22	0.60 to 0.80	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; fine sandy loam; massive structures; abrupt to;
3C	0.80 to 1.00	Dark brown (10YR33) moist, brown (10YR53) dry colour; clayey fine sand, heavy; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; sharp to;
4C	1.00 to 1.75	Brown (10YR53) moist, pale brown (10YR63) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; abrupt to;
5C1	1.75 to 3.00	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; gradual to;
5C2	3.00 to 3.80	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	3.0	
0.60	6.1	3.9	
1.00	7.5	5.8	
1.50	6.4	6.1	
2.00	6.3	5.2	
2.50	5.8	6.4	
3.00	6.0	5.1	
3.50	6.5	5.3	
3.75	6.8	5.6	

Notes:

Horizon – 5C2 EOP - gravels below 3.8 m too coarse to hold in tube
 Observation H2O EC - 21.2 mS/cm; pH 6.1

Project: MWQ Site: 190

Location: 725935 mE 7662130 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Backplain
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Haplic, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; very few < 2% fine < 5mm faint orange mottles; medium clay; weak 2-5mm cast parting to strong <2mm subangular blocky structures; moist; clear to;
B21	0.10 to 0.40	Very dark brown (10YR22) moist colour; very few < 2% fine < 5mm faint orange mottles; medium clay; lenticular structures; moist;
B22	0.40 to 0.60	Very dark greyish brown (10YR32) moist colour; very few < 2% fine < 5mm faint orange mottles; medium clay; moderately moist; clear to;
B23	0.60 to 0.80	Very dark greyish brown (10YR32) moist colour; many 20-50% fine < 5mm distinct orange mottles; medium clay; moderately moist;
2B2i	0.80 to 1.70	Grey (10YR51) moist colour; many 20-50% fine < 5mm distinct yellow-brown, very few < 2% fine < 5mm distinct dark mottles; medium clay; moderately moist; diffuse to;
2B22i	1.70 to 2.50	Dark grey (7.5YR40) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct grey mottles; silty medium clay; very few < 2% medium pebbles 6-20mm rounded pumice coarse fragments; moist;
2Cu	2.50 to 4.80	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; mangrove roots; wet;
3Cu	4.80 to 5.50	Dark grey (2.5Y40) moist colour; coarse sand with a 2cm silty light clay lens at 5.1m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.7	1.9	3.00	5.5	0.6
0.30	5.2	1.9	3.25	5.7	0.6
0.60	5.9	3.2	3.50	5.7	0.9
0.80	6.2	4.7	3.75	5.8	1.1
1.00	6.7	4.6	4.00	5.8	1.0
1.25	6.6	4.6	4.25	5.8	1.1
1.50	6.3	4.6	4.50	5.9	1.0
1.75	6.0	4.4	4.75	6.1	0.8
2.00	5.8	4.7	5.00	6.7	1.2
2.25	5.3	4.0	5.25	6.5	2.3
2.50	5.1	0.9	5.50	7.1	3.4
2.75	5.3	0.9			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 11.0 mS/cm; pH 6.3

Project: MWQ Site: 191

Location: 722740 mE 7661105 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.30	Very dark brown (10YR22) moist colour; fine sandy clay loam; massive structures; moist; clear to;
B2	0.30 to 0.60	Brown (10YR53) moist moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% fine < 5mm distinct grey mottles; mix of brown sand and mottled very dark greyish brown fine sandy clay loam; single grain structures; sharp to;
2B21i	0.60 to 1.30	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm prominent brown, very few < 2% fine < 5mm distinct red mottles; medium clay; moderately moist; sharp to;
2B22ia	1.30 to 1.55	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm prominent brown mottles; silty light clay; massive structures; wet; abrupt to;
3B2ia	1.55 to 1.70	Dark grey (7.5YR40) moist colour; few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm prominent orange mottles; fine sand; single grain structures; wet; sharp to;
4Cu	1.70 to 2.70	Dark grey (2.5Y40) moist colour; silty light clay with a 2cm sand lens at 2.5 and 2.6m; massive structures; wet; sharp to;
5Cu	2.70 to 2.90	Very dark grey (2.5Y30) moist colour; coarse sand with a 5cm silty light clay lens at 2.85m; very few < 2% small pebbles 2-6mm subrounded andesite and quartz coarse fragments; single grain structures; wet; sharp to;
6C1	2.90 to 3.20	Olive grey (5Y52) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded andesite and quartz coarse fragments; single grain structures; wet; sharp to;

6C2	3.20 to 4.60	Olive grey (5Y52) moist colour; sand with a 5cm coarse sand lens at 4.45m; very few < 2% small pebbles 2-6mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
6C3	4.60 to 5.20	Greyish brown (2.5Y52) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.9	2.7	2.75	6.4	1.2
0.30	4.3	2.3	3.00	7.6	3.1
0.60	5.6	3.6	3.25	7.6	4.6
0.80	5.8	3.9	3.50	7.4	4.4
1.00	5.5	3.7	3.75	7.3	4.7
1.25	3.4	2.1	4.00	7.3	4.9
1.50	2.2	1.0	4.25	6.7	4.5
1.75	4.2	1.2	4.50	6.9	3.4
2.00	5.5	1.3	4.75	6.7	1.6
2.25	5.8	1.2	5.00	6.5	5.1
2.50	6.3	1.5			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 3B2ia Lots of mangrove leaves and OM
 Horizon – 4Cu Huge lump of wood at 1.8m
 Horizon – 6C3 1 cm layer of organic material & mangrove twig at 4.75m
 Observation H2O EC - 4.8 mS/cm; pH 4.9

Project: MWQ Site: 192

Location: 722320 mE 7661250 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Common 10-20%, cobbles 60-200mm, Gravel
 Surface Condition: Hard setting

Classifications

ASC: Haplic, Eutrophic, Brown, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.25	Brown (10YR43) moist colour; clay loam; fine sandy; very abundant > 90% cobbles 60-200mm rounded gravel coarse fragments; moderately moist; sharp to;
B21	0.25 to 0.60	Brown (10YR43) moist colour; few 2-10% fine < 5mm distinct grey mottles; clay loam; fine sandy; moderately moist;
B22	0.60 to 1.10	Brown (10YR43) moist colour; light medium clay; moderately moist; sharp to;
2B	1.10 to 1.40	Brown (10YR43) moist colour; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded andesite coarse fragments; single grain structures; dry; gradual to;
3C1	1.40 to 1.80	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; dry;
3C2	1.80 to 5.80	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded acid volcanic and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.30	6.3	3.5	
0.60	6.4	3.4	
1.00	6.3	4.0	
1.50	7.0	4.9	
2.00	6.9	5.0	
2.50	6.6	4.9	
3.00	7.2	5.2	
3.50	7.4	5.2	
4.00	7.3	5.4	
4.50	7.4	5.4	
5.00	7.5	5.4	
5.50	7.9	5.4	

Notes:

Horizon – 3C2 Moisture changes from moderately moist to wet below 3.5 m
 Observation H2O EC - 0.6 mS/cm; pH 7.3

Project: MWQ Site: 193

Location: 723005 mE 7661725 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Common 10-20%, large pebbles 20-60mm, Diorite
 Surface Condition: Hard setting

Classifications

ASC: Eutrophic, Chromosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; very few < 2% medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; abrupt to;
B21	0.15 to 0.50	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint orange mottles; light medium clay; gradual to;
B22	0.50 to 1.10	Dark greyish brown (2.5Y42) moist colour; very few < 2% fine < 5mm distinct yellow mottles; medium clay; very few < 2% medium pebbles 6-20mm rounded unconsolidated material (unidentified) coarse fragments; gradual to;
B23	1.10 to 2.00	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent yellow mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded unconsolidated material (unidentified) coarse fragments; very few < 2% medium 2-6 mm manganiferous soft and calcareous soft and very coarse 20-60mm calcareous nodules segregations; diffuse to;
B24	2.00 to 3.20	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; sandy light clay; very few < 2% medium pebbles 6-20mm subangular unconsolidated material (unidentified) coarse fragments; few 2-10% medium 2-6 mm manganiferous soft segregations; sharp to;
2B2	3.20 to 3.70	Brown (10YR53) moist colour; common 10-20% medium 5-15mm prominent brown mottles; clayey sand; single grain structures;
3B2	3.70 to 4.90	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm distinct brown mottles; light medium clay; sharp to;
4C	4.90 to 5.20	Light brownish grey (2.5Y62) moist colour; very few < 2% fine < 5mm distinct brown mottles; coarse sand; few 2-10% small pebbles 2-6mm subrounded and quartz and feldspar coarse fragments; single grain structures; sharp to;
5B2	5.20 to 5.40	Dark grey (10YR41) moist colour; mottles; light medium clay;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	3.0	
0.60	6.2	5.5	
1.00	6.7	5.5	
1.50	7.0	5.8	
2.00	7.3	8.1	
2.50	7.7	7.9	
3.00	7.8	7.8	
3.50	6.8	8.1	
4.00	7.1	5.6	
4.50	6.9	6.0	
5.00	6.7	5.8	
5.30	7.0	8.3	

Notes:

Horizon - B21 Calcareous segregations at 1.7m only
 Observation H2O EC - 1.4 mS/cm; pH 6.8

Project: MWQ Site: 194

Location: 723010 mE 7660635 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Levee
 Runoff: No record
 Elevation: 7.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Basic, Regolithic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.50	Very dark greyish brown (10YR32) moist colour; loamy fine sand, heavy; moist; clear to;
B2	0.50 to 1.10	Dark brown (10YR33) moist, brown (10YR53) dry colour; clayey fine sand; moderately moist; clear to;
C	1.10 to 1.70	Dark brown (10YR33) moist, brown (10YR53) dry colour; fine sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; dry; gradual to;
2C	1.70 to 5.50	Brown (10YR53) moist, very pale brown (10YR73) dry colour; sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded and subrounded quartz and igneous rock (unidentified) coarse fragments; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.4	
0.60	5.4	5.0	
1.00	5.5	5.1	
1.50	6.1	5.1	
2.00	6.7	5.7	
2.50	6.8	5.5	
3.00	6.9	5.5	
3.50	7.3	5.6	
4.00	6.9	5.7	
4.50	7.4	5.8	
5.00	7.1	5.6	
5.50	7.1	6.1	

Notes:

Observation Water deeper than 5.5 m

Project: MWQ Site: 195

Location: 724900 mE 7660910 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 6.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Few 2-10%, cobbles 60-200mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Basic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sandy loam; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm subangular igneous rock (unidentified) coarse fragments; massive structures; moderately moist; abrupt to;
2A1	0.30 to 0.50	Very dark greyish brown (10YR32) moist colour; clayey fine sand, heavy; single grain structures; moderately moist; clear to;
C1	0.50 to 1.50	Brown (10YR43) moist, pale brown (10YR63) dry colour; sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and cobbles 60-200mm rounded andesite and subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry; diffuse to;
C2	1.50 to 3.50	Brown (10YR53) moist, pale brown (10YR63) dry colour; sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded subrounded andesite and igneous rock (unidentified) coarse fragments; single grain structures; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.7	
0.60	5.5	4.8	
1.00	5.7	4.7	
1.50	5.9	5.0	
2.00	6.1	5.2	
2.50	6.5	5.2	
3.00	6.2	5.1	
3.50	6.3	5.3	

Notes:

Horizon - C2 EOP - rock at 3.5 m
 Observation Water greater depth than 3.5 m

Project: MWQ Site: 196

Location: 721970 mE 7661130 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Backplain
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Dermosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty light medium clay; moderate 2-5mm subangular blocky structures; moderately moist; diffuse to;
B21	0.20 to 0.80	Very dark greyish brown (10YR32) moist colour; silty medium clay; moderately moist; diffuse to;
B22	0.80 to 1.30	Dark brown (7.5YR33) moist colour; very few < 2% fine < 5mm faint brown mottles; silty medium clay; moderately moist; diffuse to;
B23	1.30 to 1.80	Dark brown (10YR33) moist colour; common 10-20% fine < 5mm distinct grey mottles; silty medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; diffuse to;
B24	1.80 to 2.40	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moist; clear to;
2B2i?	2.40 to 2.90	Dark grey (2.5Y40) moist colour; few 2-10% medium 5-15mm distinct brown, very few < 2% fine < 5mm distinct pale mottles; light clay; moist; abrupt to;
2Cu	2.90 to 4.00	Very dark grey (2.5Y30) moist colour; silty light clay with a few thin 2-3mm fine sand lenses; massive structures; wet; sharp to;
3Cu	4.00 to 4.15	Grey (5Y51) moist colour; fine sand; single grain structures; wet; abrupt to;
4C1	4.15 to 4.60	Yellowish brown (10YR55) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; diffuse
4C2	4.60 to 5.30	Yellowish brown (10YR55) moist colour; coarse sand with 2 x 3cm silty light clay lenses at 4.6 and 4.9m; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.4	2.8	2.75	5.9	5.8
0.30	5.8	2.9	3.00	6.2	1.5
0.60	6.2	3.8	3.25	6.2	1.3
0.80	6.5	3.8	3.50	6.3	1.7
1.00	6.1	3.9	3.75	6.2	1.5
1.25	5.6	3.9	4.00	6.3	1.5
1.50	6.1	4.3	4.25	5.9	4.4
1.75	6.2	6.0	4.50	6.3	4.9
2.00	6.0	5.6	4.75	6.5	4.9
2.25	6.2	7.2	5.00	6.1	3.6
2.50	6.2	5.2			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 1.4 mS/cm; pH 6.6

Project: MWQ Site: 197

Location: 721720 mE 7660945 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Drainage depression
 Runoff: No record
 Elevation: 6.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.7 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Dermosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.30	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm faint brown, few 2-10% fine < 5mm faint grey mottles; silty clay loam, heavy; weak 2-5mm subangular blocky structures; gradual to;
B21	0.30 to 1.20	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown mottles; silty medium clay;
B22	1.20 to 3.05	Dark yellowish brown (10YR34) moist colour; few 2-10% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct brown mottles; fine sandy medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; sharp to;
2C1	3.05 to 3.50	Brown (10YR53) moist, very pale brown (10YR73) dry colour; sand; single grain structures; sharp to;
2C2	3.50 to 3.70	Dark yellowish brown (10YR44) moist colour; few 2-10% medium 5-15mm distinct dark mottles; fine sand with a 5cm grey clay with few brown mottles lens at 3.65m; massive structures; very few < 2% medium 2-6 mm manganiferous soft segregations on clay only; sharp to;
3C	3.70 to 3.80	Dark yellowish brown (10YR34) moist colour; coarse sand; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	1.7	
0.60	5.1	1.8	
1.00	5.1	1.9	
1.50	5.3	3.2	
2.00	5.6	4.1	
2.50	5.4	4.9	
3.00	5.4	4.0	
3.50	6.2	3.5	

Notes:

Horizon – 3C EOP - huge rock @ 3.8 m
 Observation Water depth greater than 3.8 m

Project: MWQ Site: 198

Location: 721450 mE 7661035 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Drainage depression
 Runoff: No record
 Elevation: 6.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Melacic, Dermosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Black (10YR21) moist colour; few 2-10% fine < 5mm faint brown mottles; silty light clay; weak 2-5mm subangular blocky structures; moist; diffuse to;
B21	0.20 to 1.10	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct grey mottles; silty medium clay; moderately moist; diffuse to;
B22	1.10 to 1.60	Dark brown (10YR33) moist colour; common 10-20% fine < 5mm distinct dark, few 2-10% fine < 5mm distinct brown mottles; medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist;
B23	1.60 to 2.10	Dark yellowish brown (10YR34) moist colour; few 2-10% fine < 5mm prominent dark, few 2-10% fine < 5mm prominent grey mottles; medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	2.10 to 2.35	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm prominent dark, few 2-10% fine < 5mm prominent brown mottles; fine sandy loam, light; massive structures; moist; sharp to;
3B2	2.35 to 2.45	Dark olive grey (5Y32) moist colour; common 10-20% fine < 5mm distinct grey, common 10-20% fine < 5mm distinct brown mottles; light medium clay; strong 2-5mm lenticular structures; common 10-20% fine < 2 mm manganiferous nodules segregations; moist;
4B2	2.45 to 2.65	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm prominent dark mottles; fine sand; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; moist; abrupt to;
5B2	2.65 to 2.80	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent brown mottles; sand; single grain structures; few 2-10% fine < 2 mm manganiferous soft segregations; moist; sharp to;
6C	2.80 to 3.20	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp

7B21	3.20 to 3.30	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct grey mottles; fine sandy loam, heavy; massive structures; moist; sharp to;
7B22	3.30 to 3.50	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow mottles; fine sand; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; wet; sharp to;
8B2	3.50 to 3.90	Yellowish brown (10YR56) moist colour; many 20-50% fine < 5mm prominent grey, few 2-10% fine < 5mm distinct orange mottles; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; wet;
9C	3.90 to 4.50	Greyish brown (10YR52) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
10C	4.50 to 4.60	Light olive brown (2.5Y54) moist colour; sand; very few < 2% small pebbles 2-6mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.0	1.8	2.50	5.7	3.7
0.60	5.2	2.2	3.00	6.3	3.8
1.00	5.2	1.9	3.50	6.0	4.0
1.50	5.5	3.1	4.00	6.1	3.7
2.00	5.6	3.5	4.50	5.5	3.5

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 10C EOP - sand too wet to hold in VVC
 Observation Water depth greater than 4.6 m

Project: MWQ**Site:199**

Location: 725485 mE 7661745 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 20-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Levee

Runoff: No record

Elevation: 4.7 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.8 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Hard setting

Classifications

ASC: Melacic, Dermosolic, Oxyaquic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; very few < 2% fine < 5mm distinct grey mottles; silty light clay; massive structures; moderately moist;
B2	0.25 to 1.30	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct grey mottles; silty medium clay; moderately moist; gradual to;
2B2?	1.30 to 1.70	Dark yellowish brown (10YR34) moist colour; few 2-10% fine < 5mm prominent brown, very few < 2% fine < 5mm distinct grey mottles; fine sandy loam; massive structures; very few < 2% fine < 2 mm manganiferous nodules and soft segregations; moist; abrupt to;
3B21i	1.70 to 2.30	Yellowish brown (10YR54) moist colour; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm prominent brown mottles; light medium clay; very few < 2% fine < 2 mm manganiferous nodules and soft segregations; moist; clear to;
3B22i	2.30 to 2.60	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm distinct grey mottles; light medium clay; moist; clear to;
3B23ia	2.60 to 3.35	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% medium 5-15mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct brown mottles; light clay; massive structures; moist; abrupt to;
3Cu	3.35 to 4.85	Dark grey (2.5Y40) moist colour; silty light clay with many 1-2mm fine sandy lenses between 4.1 and 4.85m; massive structures; wet; sharp to;
4Cu	4.85 to 5.70	Grey (2.5Y50) moist colour; sand with a thin silty light clay lens at 5m; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.1	2.7	2.75	5.4	3.1
0.30	5.2	3.0	3.00	5.2	2.9
0.60	5.9	3.5	3.25	5.4	2.9
0.80	5.9	3.9	3.50	5.3	1.7
1.00	6.1	4.3	3.75	5.6	1.2
1.25	6.1	5.6	4.00	5.4	1.2
1.50	6.0	4.8	4.25	5.7	0.9
1.75	6.0	5.0	4.50	5.6	1.0
2.00	6.2	5.2	4.75	5.7	1.1
2.25	5.5	4.9	5.00	7.0	1.4
2.50	5.7	4.7	5.10	6.9	1.5

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)**Notes:**

Observation H2O EC - 1.0 mS/cm; pH 5.7

Project: MWQ Site: 200

Location: 726635 mE 7662860 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker); Eucalyptus tessellaris
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
O1	0.00 to 0.00	Fibric; abrupt to;
A1	0.00 to 0.05	Black (7.5YR20) moist colour; medium clay; strong <2mm subangular blocky structures; moderately moist; clear to;
B21	0.05 to 0.40	Black (7.5YR20) moist colour; medium heavy clay; strong 5-10mm subangular blocky structures; dry; gradual to;
B22	0.40 to 0.80	Black (7.5YR20) moist colour; medium heavy clay; strong lenticular structures; moderately moist; gradual to;
B23	0.80 to 1.10	Black (7.5YR20) moist colour; few 2-10% medium 5-15mm prominent grey mottles; medium heavy clay; strong lenticular structures; moist;
2B2i	1.10 to 2.00	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent grey, few 2-10% medium 5-15mm prominent dark mottles; light clay; moist; abrupt to;
2Cu	2.00 to 4.60	Dark grey (7.5YR40) moist colour; silty light clay with 1cm lenses at 4.4 and 4.6m; massive structures; wet; sharp to;
3Cu	4.60 to 5.00	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm subangular quartz and granodiorite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.3	3.4	2.75	6.1	1.3
0.30	6.4	4.8	3.00	6.2	1.0
0.60	5.9	4.8	3.25	6.3	1.4
0.80	5.6	4.7	3.50	6.3	1.3
1.00	5.6	4.6	3.75	6.3	1.2
1.25	5.8	4.7	4.00	6.3	1.2
1.50	5.9	4.7	4.25	6.6	1.6
1.75	6.2	5.2	4.50	6.6	1.7
2.00	6.4	5.2	4.75	7.2	1.7
2.25	6.0	5.1	5.00	7.5	1.5
2.50	6.1	4.6			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 3Cu EOP - material below 4.6 m did not hold in tube
 Observation H2O EC - 20.4 mS/cm; pH 6.4

Project: MWQ Site: 201

Location: 725925 mE 7663545 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Dec-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Backplain
 Runoff: No record
 Elevation: 4.2 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Sodic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; moist; abrupt to;
A2j	0.10 to 0.20	Dark greyish brown (10YR42) moist, light grey (10YR71) dry colour; clay loam; fine sandy; massive structures; moist; sharp to;
B21	0.20 to 0.50	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm faint yellow mottles; light medium clay; moist; clear to;
B22	0.50 to 1.00	Grey (10YR51) moist colour; common 10-20% fine < 5mm distinct yellow, few 2-10% fine < 5mm distinct grey mottles; medium clay; moist; clear to;
B23	1.00 to 1.80	Light grey (2.5Y72) moist colour; common 10-20% medium 5-15mm distinct yellow, common 10-20% medium 5-15mm prominent yellow-brown, common 10-20% medium 5-15mm prominent grey mottles; fine sandy light medium clay; moist; sharp to;
2C1	1.80 to 2.90	Light grey (2.5Y72) moist colour; clayey fine sand, heavy; very few < 2% medium pebbles 6-20mm subrounded acid volcanic coarse fragments; single grain structures; wet;
2C2	2.90 to 3.00	Dark yellowish brown (10YR34) moist colour; clayey fine sand; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.2	
0.60	7.1	5.8	
1.00	7.2	7.7	
1.50	7.5	6.3	
2.00	7.7	6.8	
2.50	7.5	6.7	
3.00	7.6	6.8	

Notes:

Horizon - 2C2 EOP - large rock halted further progress
 Observation H2O EC - 4.9 mS/cm; pH 7.5

Project: MWQ Site: 202

Location: 724890 mE 7667765 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Feb-1998

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Backplain
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Sulfuric, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; light medium clay; strong 2-5mm subangular blocky structures; moist; abrupt to;
B21	0.05 to 0.40	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown mottles; medium clay; strong 2-5mm lenticular structures; moist; clear to;
B22	0.40 to 0.70	Black (7.5YR20) moist colour; medium clay; strong 2-5mm lenticular structures; moist; abrupt to;
2B21i	0.70 to 1.50	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent orange mottles; heavy clay; strong 2-5mm lenticular structures; moist; gradual to;
2B22ia	1.50 to 1.80	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% medium 5-15mm distinct brown mottles; heavy clay; moist; gradual to;
2B23ia	1.80 to 2.10	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent brown mottles; silty light clay; massive structures; moist; clear to;
2Cu	2.10 to 2.40	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; silty light clay; massive structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	3.2	
0.50	6.1	4.6	
1.00	4.6	4.3	
1.50	3.6	2.4	
2.00	4.3	2.6	
2.40	5.2	2.1	

Notes:

Horizon – 2Cu EOP
 Observation H2O pH 4.4

Project: MWQ Site: 203

Location: 725640 mE 7662480 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Apr-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Drainage depression
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Nauclea orientalis (Leichhardt tree, cheesewood); Chionanthus ramiflora;
 Archontophoenix alexandrae (Alexandra palm)
 Mid Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker); Livistona decipiens
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (7.5YR20) moist colour; very few < 2% fine < 5mm prominent orange mottles; silty light medium clay; moderate 5-10mm subangular blocky structures; moderately moist; gradual to;
B21	0.05 to 0.28	Black (7.5YR20) moist colour; very few < 2% fine < 5mm prominent orange mottles; silty light medium clay and sand; very few < 2% small pebbles 2-6mm subrounded andesite, medium pebbles 6-20mm rounded acid volcanic coarse fragments; moderate 2-5mm lenticular structures; moist; diffuse to;
B22	0.28 to 1.60	Black (2.5Y20) moist colour; very few < 2% fine < 5mm prominent brown, very few < 2% medium 5-15mm prominent grey, very few < 2% fine < 5mm prominent yellow-brown mottles; silty light medium clay; lenticular structures; moist; diffuse to;
B23	1.60 to 2.20	Very dark grey (7.5YR30) moist colour; common 10-20% medium 5-15mm prominent grey, few 2-10% medium 5-15mm prominent yellow-brown mottles; silty light medium clay; moist; diffuse to;
2B21i	2.20 to 2.45	Grey (2.5Y60) moist colour; many 20-50% very coarse > 30mm prominent yellow-brown, few 2-10% very coarse > 30mm prominent dark mottles; silty light medium clay; moist; clear to;
2B22yi	2.45 to 2.70	Grey (2.5Y60) moist colour; many 20-50% very coarse > 30mm prominent yellow-brown mottles; silty light medium clay; few 2-10% medium 2-6 mm gypseous crystals segregations; moist; clear to;
2B23ia	2.70 to 2.95	Grey (2.5Y50) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent brown, very few < 2% fine < 5mm prominent yellow-brown, common 10-20% medium 5-15mm prominent pale mottles; silty light medium clay; massive structures; very few < 2% fine < 2 mm gypseous crystals segregations; moist;

2BC	2.95 to 4.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm faint grey, few 2-10% medium 5-15mm distinct brown, very few < 2% fine < 5mm prominent yellow-brown, very few < 2% medium 5-15mm prominent pale mottles; silty light medium clay; moderate 2-5mm lenticular structures; moist; diffuse to;
2Cu	4.20 to 5.70	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.7	4.1	3.50	5.1	2.8
0.60	5.3	4.3	3.75	5.2	1.8
1.00	5.9	4.7	4.00	5.5	1.7
1.50	5.9	5.6	4.25	5.6	1.7
2.00	5.7	5.5	4.50	5.7	1.9
2.50	5.4	5.0	4.75	5.7	1.8
2.75	5.3	4.4	5.00	5.9	2.9
3.00	4.9	3.5	5.25	5.9	2.1
3.25	5.0	3.4	5.50	6.0	1.9

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 7.9 mS/cm; pH 5.4

Project: MWQ Site: 204

Location: 730260 mE 7661410 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: Very few < 2%, medium pebbles 6-20mm, Pumice
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Casuarina equisetifolia (Beach casuarina)
 Mid Stratum: Lantana camara (Lantana)
 Lower Stratum: Cynodon dactylon (Couch); Macroptilium atropurpureum (siratro);
 Stachytarpheta jamaicensis (Jamaica snakeweed); Sida cordifolia (flannelweed)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; sand; single grain structures;
C	0.10 to 0.50	Brown (10YR53) moist, light brownish grey (10YR62) dry colour; sand; single grain structures; gradual to;
2C	0.50 to 1.40	Light yellowish brown (10YR64) moist colour; sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; diffuse to;
3C	1.40 to 1.90	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and igneous rock and subrounded shell coarse fragments; single grain structures; diffuse to;
4C	1.90 to 3.40	Brown (10YR53) moist colour; sand; few 2-10% medium pebbles 6-20mm subrounded shell and igneous rock (unidentified) coarse fragments; single grain structures; abrupt to;
5C1	3.40 to 3.90	Brown (10YR53) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded shell and rounded igneous rock coarse fragments; single grain structures; clear to;
5C2	3.90 to 4.50	Brown (10YR53) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm subrounded shell and rounded igneous rock coarse fragments; single grain structures;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.5	4.8	
0.60	6.5	5.2	
1.00	6.9	5.5	
1.50	7.4	5.8	
2.00	7.3	9.2	
2.50	7.5	9.0	
3.00	7.8	9.1	
3.50	7.8	6.0	
4.00	7.8	5.9	
4.50	7.7	5.9	

Notes:

Horizon – 5C2 EOP - tube went to 5.7 m, but 1.2 m fell out on the way up
 Observation H2O EC - 0.3 mS/cm; pH 7.9

Project: MWQ Site: 205

Location: 729890 mE 7661605 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 5.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Cupaniopsis anacardioides (Tuckeroo)
 Mid Stratum: Lantana camara (Lantana)
 Lower Stratum: Stachytarpheta jamaicensis (Jamaica snakeweed); Sida cordifolia (flannelweed)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark brown (10YR33) moist colour; sand; single grain structures; dry; clear to;
C	0.10 to 2.30	Light yellowish brown (10YR64) moist colour; sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and igneous rock coarse fragments; single grain structures; dry; diffuse to;
2C	2.30 to 4.85	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic and igneous rock (unidentified) coarse fragments; single grain structures; moist; abrupt to;
3C	4.85 to 5.70	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded and rounded shell and igneous rock coarse fragments; single grain structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	4.9	
0.60	7.2	5.5	
1.00	7.3	5.6	
1.50	7.2	5.6	
2.00	7.2	5.7	
2.50	7.6	5.7	
3.00	7.6	5.7	
3.50	7.5	5.9	
4.00	7.4	6.0	
4.50	7.3	6.2	
5.00	8.1	6.2	
5.50	8.1	6.6	

Notes:

Horizon - B21 EOP
 Observation Could not sample water table

Project: MWQ Site: 206

Location: 730210 mE 7660875 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense Rhizophora species

Profile

Horizon	Depth (m)	Description
C1	0.00 to 0.25	Black (10YR21) moist colour; silty light clay; weak 5-10mm subangular blocky structures; moist; gradual to;
C2	0.25 to 0.55	Very dark grey (10YR31) moist colour; fine sandy light clay; massive structures; wet;
2C	0.55 to 1.25	Very dark grey (10YR31) moist colour; sandy light clay with pockets of sand; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	2.1	
0.30	6.2	0.6	
0.60	6.1	0.8	
0.80	6.1	0.6	
1.00	6.0	0.8	
1.25	6.0	0.7	

Notes:

Horizon - 2C EOP - as deep as Gouge would go
 Observation H2O EC - 50.3 mS/cm; pH 5.4

Project: MWQ Site: 207

Location: 730320 mE 7664740 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 7.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Few 2-10%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Soft

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Lower Stratum: Sporobolus species

Profile

Horizon	Depth (m)	Description
F1	0.00 to 0.50	Brown (10YR43) moist colour; sandy loam to 0.3m then clay loam fine sandy; few 2-10% cobbles 60-200mm and abundant 50-90mm large pebbles 20-60mm angular microdiorite coarse fragments; single grain structures; dry; sharp to;
C1	0.50 to 3.55	Light yellowish brown (10YR64) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; dry; sharp to;
C2	3.55 to 5.10	Brown (10YR53) moist, greyish brown (10YR52) moist colour between 4.4 and 4.8m; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; abrupt to;
2C	5.10 to 5.55	Light brownish grey (10YR62) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; sharp to;
3C	5.55 to 5.70	Greyish brown (10YR52) moist colour; sand with pockets of brown (10YR53) moist colour clay, very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	2.1	
0.60	6.9	2.5	
1.00	7.3	1.6	
1.50	7.1	1.5	
2.00	7.6	1.2	
2.50	7.3	1.6	
3.00	7.8	1.7	
3.50	7.3	1.3	
4.00	7.0	1.4	
4.50	7.0	1.4	
5.00	7.0	1.1	
5.25	6.8	1.2	
5.50	6.6	0.9	
5.55	6.5	1.8	
5.70	6.7	1.1	

Notes:
 Observation Could not sample water

Project: MWQ Site: 208

Location: 730415 mE 7663550 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Common 10-20%, cobbles 60-200mm, Microdiorite
 Surface Condition: Soft

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Panicum maximum var. maximum (Guinea grass); Imperata cylindrica (Blady grass); Stachytarpheta jamaicensis (Jamaica snakeweed)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Dark brown (10YR33) moist colour; fine sand; abundant 50-90% large pebbles 20-60mm and cobbles 60-200mm angular microdiorite coarse fragments; single grain structures; dry; sharp to;
C1	0.30 to 1.20	Light yellowish brown (10YR64) moist colour; sand; single grain structures; dry; clear to;
C2	1.20 to 1.95	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded and rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; gradual
C3	1.95 to 3.90	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded and rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; gradual to;
C4	3.90 to 4.30	Light brownish grey (2.5Y62) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet;
2Cu	4.30 to 5.30	Grey (10YR51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.9	5.5	
0.60	7.7	2.5	
1.00	7.7	2.0	
1.50	7.6	2.8	
2.00	6.9	1.8	
2.50	7.6	1.6	
3.00	7.3	1.9	
3.50	7.3	1.8	
4.00	6.4	4.2	
4.25	6.4	4.0	
4.50	6.3	1.7	
4.75	6.7	1.6	
5.00	6.8	1.6	
5.25	6.8	1.5	

Notes:

Horizon – 2Cu EOP
 Observation H2O EC - 10.2 mS/cm; pH 6.5

Project: MWQ Site: 209

Location: 729800 mE 7661046 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense Rhizophora stylosa (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; sandy light clay; very few < 2% medium pebbles 6-20mm rounded igneous rock and small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; gradual to;
Cu	0.15 to 1.35	Very dark grey (10YR31) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; clear to;
2Cu	1.35 to 1.55	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
3Cu	1.55 to 1.65	Very dark grey (2.5Y30) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	2.4	
0.30	6.0	2.5	
0.60	6.0	0.8	
0.80	6.0	0.7	
1.00	6.0	0.6	
1.25	6.0	1.2	
1.50	5.9	0.6	
1.60	6.0	1.5	

Notes:
 Observation H2O EC - 48.5 mS/cm; pH 6.2

Project: MWQ Site: 210

Location: 729960 mE 7664140 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Few 2-10%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch); Bothriochloa bladhii (Forest bluegrass);
 Panicum species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist colour; sand; abundant 50-90% large pebbles 20-60mm and cobbles 60-200mm angular microdiorite coarse fragments; single grain structures; dry; sharp to;
C1	0.20 to 2.05	Yellowish brown (10YR54) moist colour; sand; single grain structures; moist; abrupt to;
C2	2.05 to 2.45	Greyish brown (2.5Y52) moist colour; sand; single grain structures; moist; sharp to;
2C1u	2.45 to 2.55	Black (10YR21) moist colour; silty light clay; massive structures; moist; abrupt to;
2C2	2.55 to 3.00	Dark grey (10YR41) moist colour; coarse sandy clay loam, light; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; massive structures; moist; gradual to;
2C3u	3.00 to 3.75	Very dark grey (2.5Y30) moist colour; alternating bands of silty light clay and dark grey coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; massive to single grain structures; moderately moist to wet;
3Cu	3.75 to 5.20	Grey (10YR51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	4.1	
0.60	7.7	4.8	
1.00	7.4	4.9	
1.50	7.4	5.3	
2.00	6.6	5.2	
2.25	6.9	4.4	
2.50	6.2	1.2	
2.75	6.7	2.9	
3.00	5.9	2.7	
3.25	5.2	1.4	
3.50	5.7	0.9	
3.75	5.7	1.4	
4.00	6.1	1.4	
4.25	6.4	1.4	
4.50	6.4	1.2	
4.75	6.9	1.7	
5.00	6.8	1.4	

Notes:

Horizon – 2C1u Layer or partially decomposed OM at the top
 Horizon – 3Cu EOP
 Observation H2O EC - 0.6 mS/cm; pH 6.2

Project: MWQ Site: 211

Location: 729840 mE 7663685 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: *Ceriops tagal* (Yellow mangrove); *Avicennia marina* (Grey mangrove); *Bruguiera exaristata* (Rib-fruited mangrove); *Excoecaria agallocha* (Blind-your-eye mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm distinct orange mottles; silty light clay; weak 2-5mm subangular blocky structures; moist;
2B2	0.10 to 0.30	Grey (10YR51) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; sandy light clay; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; massive structures; wet; clear to;
2Cu	0.30 to 1.40	Dark grey (5Y41) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; massive structures; wet; abrupt to;
3Cu	1.40 to 1.75	Dark grey (5Y41) moist colour; clayey coarse sand, heavy; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	3.6	
0.30	5.6	3.5	
0.60	5.7	1.0	
0.80	5.8	0.8	
1.00	5.8	0.8	
1.25	5.8	0.9	
1.50	5.9	1.1	
1.75	5.7	1.1	

Notes:

Horizon - A1 Lots of fine roots
 Horizon - 3Cu EOP - gouge would not go in any further
 Observation H2O EC - 50.3 mS/cm; pH 5.7

Project: MWQ Site: 212

Location: 729710 mE 7661838 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, closed or dense
 Species: Rhizophora stylosa (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; massive structures; wet; diffuse
C1u	0.15 to 0.70	Very dark grey (10YR31) moist colour; very few < 2% medium 5-15mm distinct grey mottles; sandy light clay; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; massive structures; wet; diffuse to;
C2u	0.70 to 1.65	Very dark grey (5Y31) moist colour; very few < 2% medium 5-15mm distinct brown mottles; sandy light clay with pockets of dark brown silty light clay; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; massive structures; wet; sharp to;
2Cu	1.65 to 1.70	Clayey sand; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	3.3	
0.30	5.5	3.6	
0.60	5.8	0.6	
0.80	5.8	0.8	
1.00	5.8	0.6	
1.25	5.7	1.2	
1.50	5.6	1.2	

Notes:

Horizon - 2Cu EOP - sand would not hold in auger
 Observation H2O EC - 52.0 mS/cm; pH 5.9

Project: MWQ Site: 213

Location: 730455 mE 7667620 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: Few 2-10%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; moist; abrupt to;
C	0.15 to 0.95	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; moist;
2C	0.95 to 1.25	Black (10YR21) moist colour; sandy clay loam; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; massive structures; moderately moist; clear to;
3B2	1.25 to 2.00	Yellowish brown (10YR56) moist colour; common 10-20% fine < 5mm distinct grey mottles; coarse sand with a thin clay lens at 2.0m; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; moist; abrupt to;
4C	2.00 to 2.85	Grey (10YR51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5Cu	2.85 to 2.95	Dark grey (2.5Y40) moist colour; few 2-10% fine < 5mm faint grey mottles; silty light clay with sand pipes through it; massive structures; wet; sharp to;
6Cu	2.95 to 3.15	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
7C1u	3.15 to 3.45	Dark grey (2.5Y40) moist colour; sand; very few < 2% medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded shell coarse fragments; single grain structures; wet; sharp to;
7C2u	3.45 to 5.25	Dark grey (2.5Y40) moist colour; fine sand with a 1cm silty light clay lens at 4.3m; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm subrounded intermediate volcanic and shell coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.1	3.8	3.00	6.9	1.3
0.60	6.6	4.5	3.25	6.9	1.3
1.00	5.6	2.4	3.50	6.7	2.2
1.25	5.4	2.7	3.75	6.6	4.7
1.50	5.4	3.8	4.00	6.5	5.0
1.75	5.7	3.4	4.25	6.8	2.4
2.00	5.9	3.3	4.50	7.1	4.7
2.25	6.5	3.0	4.75	6.8	1.6
2.50	6.5	2.8	5.00	6.8	1.4
2.75	6.7	2.7	5.25	6.9	1.4

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 6Cu 1 cm layer of OM at 3.05 to 3.10 m
 Observation H2O EC - 0.6 mS/cm; pH 6.0

Project: MWQ Site: 214

Location: 729905 mE 7667590 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.7 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; fine sand; many 20-50% large pebbles 20-60mm and cobbles 60-200mm angular microdiorite coarse fragments; single grain structures; moderately moist;
2C	0.30 to 0.50	Brown (10YR53) moist colour; very few < 2% fine < 5mm distinct orange mottles; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular microdiorite and subrounded igneous rock coarse fragments; single grain structures; moderately moist; abrupt to;
3C	0.50 to 0.75	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; sandy light clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; massive structures; moderately moist; sharp to;
4B2	0.75 to 1.90	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown, few 2-10% fine < 5mm distinct dark mottles; coarse sandy medium clay; very few < 2% small pebbles 2-6mm subangular igneous rock (unidentified) coarse fragments; massive structures; moist;
5C	1.90 to 2.40	Light brownish grey (10YR62) moist colour; coarse sand with a 5mm clay lens at 2.25m; 7cm thick layer of common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments at 2.12m; single grain structures; wet; sharp to;
6C1u	2.40 to 2.82	Dark grey (2.5Y40) moist colour; fine sand with a 5cm silty light clay lens at 2.4m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular microdiorite coarse fragments; single grain structures; wet; sharp to;
6C2u	2.82 to 3.75	Grey (2.5Y50) moist colour; sand with a 2cm coarse sand lens at 2.98m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

6C3u	3.75 to 4.55	Grey (2.5Y50) moist colour; fine sand with a 2cm coarse sand lens at 4.2m and 1cm silty light clay lens at 3.77, 4.48 and 4.55m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
6C4u	4.55 to 5.40	Grey (2.5Y50) moist colour; sand with 1cm coarse sand lenses at 4.85 and 5.0m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.1	4.5	3.25	5.9	1.6
0.60	6.0	3.4	3.50	5.8	1.6
1.00	4.7	3.5	3.75	6.0	1.6
1.50	4.4	3.6	4.00	6.1	1.7
2.00	4.8	3.3	4.25	6.1	1.6
2.25	5.2	2.5	4.50	6.2	1.3
2.50	5.6	0.9	4.75	6.3	1.9
2.75	5.5	1.5	5.00	6.6	1.8
3.00	5.6	1.6	5.25	6.5	1.7

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - Fill Slabs of concrete
 Horizon - 6C4u 1 cm mangrove Om layer @ 5.4 m
 Observation H2O EC - 0.3 mS/cm; pH 5.3

Project: MWQ Site: 215

Location: 730340 mE 7666650 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Cupaniopsis anacardioides (Tuckeroo); Archontophoenix alexandrae (Alexandra palm)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark brown (10YR22) moist colour; loamy sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; dry; gradual to;
C	0.40 to 1.20	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm subangular quartz and subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry; clear to;
2C1	1.20 to 2.40	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; clear to;
2C2	2.40 to 3.05	Light brownish grey (10YR62) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; abrupt to;
3C1u	3.05 to 4.00	Grey (10YR51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
3C2u	4.00 to 5.30	Grey (10YR51) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.6	
0.60	5.6	4.6	
1.00	5.8	4.8	
1.50	6.3	4.9	
2.00	6.5	4.9	
2.25	6.1	5.0	
2.50	6.0	4.9	
2.75	6.1	4.9	
3.00	6.3	4.6	
3.25	6.4	3.6	
3.50	6.3	3.0	
3.75	6.2	2.4	
4.00	6.2	2.4	
4.25	6.2	2.0	
4.50	6.3	2.0	
4.75	6.3	2.5	
5.00	6.4	2.2	
5.25	6.6	1.9	

Notes:

Observation Could not sample H2O

Project: MWQ Site: 216

Location: 729940 mE 7667030 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Dune
 Runoff: No record
 Elevation: 6.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; loamy sand; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm angular microdiorite coarse fragments; single grain structures;
2A11	0.20 to 0.45	Very dark greyish brown (10YR32) moist colour; loamy sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; gradual
2A12	0.45 to 0.75	Dark brown (10YR33) moist colour; loamy sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; clear to;
2C	0.75 to 1.50	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; gradual
3C1	1.50 to 3.50	Light yellowish brown (10YR64) moist, light grey (10YR72) dry colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry; abrupt to;
3C2	3.50 to 5.15	Yellowish brown (10YR56) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
3C3	5.15 to 5.50	Yellowish brown (10YR54) moist colour; few 2-10% medium 5-15mm distinct brown mottles; fine sand with a 8cm coarse sand lens at 5.25m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4Cu	5.50 to 5.65	Grey (2.5Y50) moist colour; fine sand with a 1cm coarse sand lens at 5.65m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.1	3.4	
0.60	5.9	4.4	
1.00	6.2	4.4	
1.50	6.4	4.8	
2.00	6.6	4.8	
2.50	6.4	4.8	
3.00	6.4	4.8	
3.50	6.3	4.8	
4.00	6.5	5.0	
4.50	6.7	4.7	
5.00	6.5	6.3	
5.50	6.6	3.8	
5.60	6.5	1.4	

Notes:

Observation Could not sample water

Project: MWQ Site: 217

Location: 729270 mE 7665885 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.80	Very dark greyish brown (10YR32) moist colour; loamy sand; many 20-50% large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; abrupt to;
2C	0.80 to 1.90	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry;
3C1	1.90 to 3.20	Yellowish brown (10YR56) moist colour; common 10-20% coarse 15-30mm distinct grey mottles; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
3C2	3.20 to 3.70	Yellowish brown (10YR56) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; moist;
4C	3.70 to 4.80	Light brownish grey (10YR62) moist colour; fine sand with a 2mm clay lens at 3.7m and a 10cm coarse sand lens at 4.1m; very few < 2% medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
5C1	4.80 to 5.10	Greyish brown (2.5Y52) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;
5C2	5.10 to 5.35	Grey (10YR61) moist colour; sand; very few < 2% small pebbles 2-6mm and small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
6Cu	5.35 to 5.55	Grey (2.5Y50) moist colour; fine sand with 2 x 1cm dark grey silty light clay lenses at 5.43 and 5.48m and coarse sand from 5.5m; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	7.2	5.6	
0.60	7.3	5.3	
1.00	7.3	5.3	
1.50	7.8	5.5	
2.00	7.7	5.4	
2.50	7.5	5.5	
3.00	7.4	5.7	
3.50	7.3	5.5	
4.00	7.5	5.5	
4.50	7.4	5.4	
4.75	7.0	5.2	
5.00	6.8	4.1	
5.25	7.2	3.2	
5.45	6.4	1.5	

Notes:

Horizon - 6Cu 1 cm mangrove layer from 5.35 m
 Observation H2O EC - 0.3 mS/cm; pH 7.5

Project: MWQ Site: 218

Location: 730935 mE 7667605 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 9.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, Microdiorite
 Surface Condition: Loose, Soft

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; sand; very few < 2% small pebbles 2-6mm subangular igneous rock (unidentified) and common 10-20% large pebbles 20-60mm angular microdiorite coarse fragments; single grain structures; abrupt to;
2C	0.25 to 3.80	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; sand; single grain structures; sharp to;
3A1	3.80 to 4.30	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct brown mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; sharp to;
3C	4.30 to 6.10	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; sand; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.9	
0.60	6.8	5.5	
1.00	6.9	5.7	
1.50	7.1	5.4	
2.00	7.1	5.4	
2.50	7.0	5.3	
3.00	7.2	5.4	
3.50	7.2	5.4	
4.00	6.2	4.3	
4.50	6.5	4.9	
5.00	7.1	5.2	
5.50	7.0	5.2	
6.00	7.1	5.4	

Notes:

Observation Could not sample water

Project: MWQ Site: 219

Location: 730950 mE 7668630 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Apr-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Valley-flat
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Pandanus whitei
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; fine sand; single grain structures; abrupt to;
C1	0.10 to 0.80	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; clear to;
C2	0.80 to 1.15	Brown (10YR53) moist colour; fine sand; single grain structures; clear to;
C3	1.15 to 1.40	Very dark grey (10YR31) moist colour; fine sand; single grain structures; sharp to;
2B2	1.40 to 2.40	Black (7.5YR20) moist colour; silty light clay, sapric; moderate 2-5mm lenticular structures; sharp to;
3B2	2.40 to 3.20	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent gley, common 10-20% fine < 5mm prominent grey, very few < 2% medium 5-15mm prominent brown mottles; fine sandy light clay; massive structures; sharp to;
4B2	3.20 to 4.30	Grey (10YR51) moist colour; few 2-10% fine < 5mm distinct gley, few 2-10% fine < 5mm prominent grey mottles; fine sandy loam; massive structures; sharp to;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	5.0	
0.60	8.3	5.9	
1.00	7.6	5.0	
1.25	6.6	3.1	
1.50	6.2	1.5	
1.75	5.8	2.4	
2.00	5.7	3.2	
2.25	5.7	2.4	
2.50	5.9	3.1	
2.75	5.8	2.4	
3.00	5.6	2.9	
3.25	6.1	1.9	
3.50	6.0	1.5	
3.75	6.0	1.0	
4.00	6.1	1.5	

Notes:
 Horizon – 4B2 EOP - bedrock
 Observation H2O EC - 0.7 mS/cm; pH 6.7

Project: MWQ Site: 220

Location: 730585 mE 7668125 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Few 2-10%, small pebbles 2-6mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.50	Very dark greyish brown (10YR32) moist colour; loamy fine sand; many 20-50% medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm angular microdiorite coarse fragments; single grain structures; dry; sharp to;
2C1	0.50 to 1.55	Brownish yellow (10YR65) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; sharp to;
2C2	1.55 to 2.45	Grey (5Y51) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; sharp to;
3Cu	2.45 to 2.62	Black (10YR21) moist colour; fine sand with a 1cm clay lens at 2.5m; single grain structures; moist; sharp to;
3C2	2.62 to 2.80	Dark grey (10YR41) moist colour; fine sand; single grain structures; wet; abrupt to;
3C3	2.80 to 3.40	Greyish brown (2.5Y52) moist colour; fine sand; single grain structures; wet; sharp to;
4C	3.40 to 3.85	Dark greyish brown (2.5Y42) moist colour; sandy light clay 2cm sand lens at 3.47, 3.65 and 3.75m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
5C	3.85 to 4.45	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subangular granite coarse fragments; single grain structures; wet; sharp to;
6Cu	4.45 to 4.65	Dark grey (2.5Y40) moist colour; sand; single grain structures; wet; sharp to;
7Cu	4.65 to 5.70	Dark grey (2.5Y40) moist colour; silty light clay; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.2	3.7	3.50	5.4	1.5
0.60	6.9	3.7	3.75	4.6	1.1
1.00	7.6	4.7	4.00	6.5	1.6
1.50	7.5	4.6	4.25	6.1	2.0
2.00	6.8	1.9	4.50	5.7	0.7
2.25	6.2	1.6	4.75	4.9	0.7
2.50	5.8	0.9	5.00	5.6	0.7
2.75	5.5	1.1	5.25	5.8	0.9
3.00	5.5	2.0	5.50	5.9	1.1
3.25	5.1	2.5	5.70	6.0	1.2

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:
 Horizon - 3Cu common lumps of wood - melaleuca
 Horizon - 3C2 Occasional root
 Observation H2O pH 5.3; EC - insufficient sample to measure

Project: MWQ Site: 221

Location: 727425 mE 7662725 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Apr-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very abundant > 90%, small pebbles 2-6mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Dark brown (10YR33) moist colour; fine sandy clay loam; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm angular unconsolidated material (unidentified) coarse fragments; massive structures; dry;
2B21	0.30 to 0.60	Very dark greyish brown (10YR32) moist colour; silty light medium clay; moderately moist; clear to;
2B22	0.60 to 1.00	Greyish brown (2.5Y52) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium clay; moderately moist; gradual to;
2B23	1.00 to 1.40	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent brown, few 2-10% medium 5-15mm distinct dark mottles; medium heavy clay; very few < 2% medium 2-6 mm calcareous nodules segregations; moderately moist; abrupt to;
3B21	1.40 to 1.70	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm prominent brown, common 10-20% fine < 5mm prominent grey mottles; sandy medium heavy clay; moderately moist; gradual to;
3B22	1.70 to 2.15	Light grey (2.5Y72) moist colour; common 10-20% fine < 5mm distinct brown, common 10-20% medium 5-15mm prominent gley mottles; coarse sandy medium clay; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; moderately moist; clear to;
3B23	2.15 to 2.30	Greenish grey (5GY61) moist colour; coarse sandy light medium clay; few 2-10% small pebbles 2-6mm subrounded quartz and granite coarse fragments; moist; sharp
4C1	2.30 to 3.35	Light grey (10YR72) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; single grain structures; wet; sharp to;
4C2	3.35 to 4.05	Greenish grey (5GY61) moist colour; coarse sandy; clay; very few < 2% large pebbles 20-60mm subangular and subrounded igneous rock (unidentified) coarse fragments; massive structures; wet; sharp to;

5B2	4.05 to 4.30	Greyish green (5G42) moist colour; many 20-50% fine < 5mm prominent brown, common 10-20% fine < 5mm prominent gley mottles; coarse sandy light clay; massive structures; moist; sharp
6B2	4.30 to 4.35	Olive grey (5Y52) moist colour; common 10-20% fine < 5mm distinct brown mottles; coarse sandy; clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	4.0	
0.60	6.3	5.9	
1.00	7.5	6.3	
1.50	7.0	6.1	
2.00	6.8	5.9	
2.50	6.3	6.0	
3.00	6.7	5.9	
3.50	6.3	6.5	
4.00	6.8	6.7	
4.25	6.9	6.4	

Notes:

Horizon – 2B23 Thin layer of segregations at 1.3 m
 Horizon – 6B2 EOP - pan stopped VVC
 Observation H2O EC - 1.0 mS/cm; pH 6.8

Project: MWQ Site: 222

Location: 727315 mE 7665205 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Dune
 Runoff: No record
 Elevation: 6.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Bleached-mottled, Eutrophic, Brown, CHROMOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Eucalyptus tereticornis (Blue gum)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark greyish brown (10YR42) moist colour; fine sand; single grain structures; dry; clear to;
A2e	0.20 to 0.65	Brown (10YR53) moist, light grey (10YR72) dry colour; fine sand; single grain structures; dry; sharp to;
B21	0.65 to 1.60	Light brownish grey (2.5Y63) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm prominent grey mottles; fine sandy light medium clay; massive structures; common 10-20% medium 2-6 mm manganiferous soft segregations; moderately moist; gradual to;
B22	1.60 to 2.60	White (10YR81) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent red mottles; fine sandy light clay; massive structures; moist; clear to;
2B21	2.60 to 3.80	White (10YR81) moist colour; common 10-20% medium 5-15mm prominent brown mottles; clayey fine sand; single grain structures; wet; sharp to;
2B22	3.80 to 5.10	Yellow (10YR76) moist colour; very few < 2% medium 5-15mm distinct red, few 2-10% coarse 15-30mm distinct grey mottles; fine sand; single grain structures; wet; sharp to;
2B23	5.10 to 5.30	Brownish yellow (10YR68) moist colour; fine sand; single grain structures; wet; sharp to;
2C?	5.30 to 5.40	Very pale brown (10YR74) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.3	
0.60	6.8	5.0	
1.00	6.3	4.9	
1.50	5.6	4.0	
2.00	5.0	4.0	
2.50	5.4	3.9	
3.00	5.9	4.9	
3.50	5.6	4.9	
4.00	5.7	4.4	
4.50	6.0	4.7	
5.00	6.0	5.0	
5.40	6.2	5.5	

Notes:

Observation H2O EC - 0.2 mS/cm; pH 5.7

Project: MWQ Site: 223

Location: 727375 mE 7663860 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Apr-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, mid-dense
 Species: Lumnitzera racemosa (Black mangrove); Aegiceras corniculatum (River mangrove); Avicennia marina (Grey mangrove); Rhizophora stylosa (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; silty light clay; moderate 5-10mm cast structures; moist;
B2i	0.10 to 0.65	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent brown, few 2-10% medium 5-15mm prominent brown mottles; silty light clay; massive structures; wet; sharp to;
C1u	0.65 to 2.25	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
C2u	2.25 to 2.60	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; wet;
2Cu	2.60 to 2.65	Very dark grey (2.5Y30) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.0	4.6	
0.30	5.8	6.2	
0.60	5.8	4.9	
0.80	6.3	3.4	
1.00	6.1	1.6	
1.25	6.2	1.4	
1.50	6.1	1.4	
1.75	6.1	1.4	
2.00	6.1	1.3	
2.25	6.3	1.3	
2.50	6.1	1.3	

Notes:
 Horizon – 2Cu EOP - fine sand would not hold in auger
 Observation H2O EC - 40 mS/cm; pH 6.2

Project: MWQ Site: 224

Location: 729160 mE 7662315 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 30-Apr-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 1.9 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense

Species: Rhizophora stylosa (Red mangrove); Avicennia marina (Grey mangrove);

Bruguiera exaristata (Rib-fruited mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (10YR21) moist colour; silty light clay; strong 5-10mm cast structures; wet; abrupt to;
C1u	0.20 to 1.00	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; clear to;
C2u	1.00 to 1.55	Very dark grey (10YR31) moist colour; silty light clay with a 2cm sand lens at 1.05 m; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.0	
0.30	6.0	4.4	
0.60	6.0	1.2	
0.80	5.9	1.0	
1.00	6.0	0.9	
1.25	5.9	1.0	
1.50	5.9	0.8	

Notes:

Horizon - C2u EOP - gravel layer at 1.55 m
Observation H2O EC - 49.3 mS/cm; pH 6.0

Project: MWQ Site: 225

Location: 729960 mE 7662685 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 30-Apr-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 1.9 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense

Species: Bruguiera exaristata (Rib-fruited mangrove); Aegiceras corniculatum (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; sandy light clay; massive structures; sharp to;
B2	0.20 to 0.45	Dark grey (2.5Y40) moist colour; many 20-50% medium 5-15mm prominent brown mottles; sandy light clay; massive structures;
C1u	0.45 to 1.15	Dark grey (2.5Y40) moist colour; sandy light clay; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	4.5	
0.30	5.6	4.7	
0.60	5.8	3.1	
0.80	5.9	1.4	
1.00	5.7	1.2	

Notes:

Horizon - C1u 2Cu - EOP - sand would not hold in gouge auger

Observation H2O EC - 51.7 mS/cm; pH 6.0

Project: MWQ Site: 226

Location: 727570 mE 7670335 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Apr-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Dune
 Runoff: No record
 Elevation: 5.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1.5 %
 Surface Coarse Fragments: Common 10-20%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (7.5YR20) moist colour; fine sand; few 2-10% large pebbles 20-60mm angular microdiorite coarse fragments; single grain structures; sharp to;
C1	0.10 to 0.30	Brown (10YR53) moist colour; fine sand; many 20-50% large pebbles 20-60mm angular microdiorite coarse fragments; single grain structures; sharp to;
2C1	0.30 to 2.20	Light yellowish brown (10YR64) moist colour; fine sand; single grain structures; sharp to;
3A1	2.20 to 2.50	Brown (10YR53) moist colour; many 20-50% fine < 5mm prominent dark mottles; fine sand; single grain structures; sharp to;
3C1	2.50 to 2.80	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; clear to;
4C1	2.80 to 3.30	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and medium pebbles 6-20mm rounded igneous rock coarse fragments; single grain structures; clear to;
4C2	3.30 to 5.70	Yellowish brown (10YR54) moist colour; fine sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded shell and igneous rock coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	4.6	
0.60	7.3	5.6	
1.00	7.2	6.3	
1.50	7.4	6.7	
2.00	7.4	5.7	
2.50	7.0	5.8	
3.00	7.3	6.8	
3.50	7.2	6.3	
4.00	7.8	6.7	
4.50	7.8	6.4	
5.00	7.9	7.3	
5.50	7.7	7.6	

Notes:

Horizon – 4C2 EOP
 Observation Could not sample water

Project: MWQ Site: 227

Location: 726065 mE 7672195 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: No record
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sand; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm subangular igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
2A1	0.20 to 0.50	Very dark brown (10YR22) moist colour; fine sand; single grain structures; moderately moist; sharp to;
2C	0.50 to 1.10	Pale brown (10YR63) moist colour; fine sand; single grain structures; dry; sharp to;
3C1	1.10 to 2.10	Brown (10YR53) moist colour; sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
4B2?	2.10 to 2.30	Strong brown (7.5YR56) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5D1	2.30 to 2.75	Light grey (7.5YR70) moist colour; clayey fine sand; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm rounded basalt coarse fragments; massive structures; wet; clear to;
5D2	2.75 to 3.10	Light greenish grey (5G71) moist colour; fine sandy loam; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; massive structures; wet; gradual to;
5D3	3.10 to 3.70	Greenish grey (5G61) moist colour; very few < 2% fine < 5mm prominent brown mottles; fine sandy light medium clay; few 2-10% large pebbles 20-60mm angular microdiorite coarse fragments; massive structures; moist; sharp to;
5C	3.70 to 3.80	Dark greenish grey (5G41) moist colour; very few < 2% fine < 5mm prominent brown mottles; fine sandy loam; very abundant > 90% microdiorite coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.1	4.3	
0.60	6.2	4.8	
1.00	5.4	4.6	
1.50	5.7	4.8	
2.00	6.3	5.2	
2.50	6.2	5.3	
3.00	6.2	6.0	
3.50	5.7	5.9	
3.75	6.2	6.0	

Notes:

Horizon – 5C EOP - weathered rock
 Observation Could not sample water

Project: MWQ Site: 228

Location: 726350 mE 7671590 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Acid volcanic
 Surface Condition: Firm

Classifications

ASC: Endohypersodic, Epipedal, Grey, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Acacia leptocarpa (North coast wattle)
 Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent orange mottles; light medium clay; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm subangular acid volcanic coarse fragments; moderate 5-10mm parting to weak 2-5mm subangular blocky structures; moderately moist; clear to;
B21	0.10 to 0.40	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm prominent brown, common 10-20% medium 5-15mm prominent grey mottles; medium clay; very few < 2% small pebbles 2-6mm subangular acid volcanic coarse fragments; strong 5-10mm parting to moderate 2-5mm lenticular structures; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist; gradual to;
B22	0.40 to 1.00	Dark grey (2.5Y40) moist colour; common 10-20% medium 5-15mm prominent yellow mottles; medium clay; moderately moist; diffuse to;
B23	1.00 to 2.60	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm faint yellow mottles; medium clay; moist; gradual to;
B24	2.60 to 2.90	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent grey, many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subangular acid volcanic coarse fragments; moist; abrupt to;
B25	2.90 to 3.30	Grey (2.5Y50) moist colour; common 10-20% medium 5-15mm prominent grey, many 20-50% medium 5-15mm prominent yellow-brown mottles; light clay; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm angular intermediate volcanic and subangular acid volcanic coarse fragments; wet; sharp to;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	4.4	
0.60	5.9	5.3	
1.00	6.0	5.4	
1.50	5.9	5.8	
2.00	5.8	5.3	
2.50	5.8	5.6	
3.00	5.7	5.9	
3.25	5.6	5.4	

Notes:

Horizon – B25 EOP - rock at 3.3 m
 Observation H2O EC - 31.6 mS/cm; pH 6.0

Project: MWQ Site: 229

Location: 726540 mE 7671605 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-May-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Avicennia marina (Grey mangrove); Ceriops tagal (Yellow mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark greyish brown (10YR42) moist colour; few 2-10% medium 5-15mm prominent grey, very few < 2% fine < 5mm distinct brown mottles; silty light clay; weak 2-5mm subangular blocky structures; sharp to;
B21i	0.10 to 0.24	Grey (5Y61) moist colour; many 20-50% medium 5-15mm prominent red, very few < 2% medium 5-15mm prominent brown mottles; silty light clay; moderate 5-10mm parting to moderate 2-5mm subangular blocky structures; sharp to;
B22ia	0.24 to 0.45	Very dark greyish brown (10YR32) moist colour; common 10-20% coarse 15-30mm prominent yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent red, few 2-10% fine < 5mm prominent brown mottles; silty light clay; weak 2-5mm subangular blocky structures; sharp to;
C1u	0.45 to 0.60	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm distinct grey mottles; silty light clay; massive structures; abrupt to;
C2u	0.60 to 1.20	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; diffuse to;
C3u	1.20 to 4.30	Grey (2.5Y50) moist colour; few 2-10% medium 5-15mm distinct brown mottles; silty light clay; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	5.1	
0.30	3.2	1.2	
0.60	4.1	0.7	
0.80	4.9	0.5	
1.00	5.5	0.6	
1.25	5.9	0.9	
1.50	6.0	0.8	
1.75	5.9	0.6	
2.00	5.8	0.8	
2.25	6.0	1.3	
2.50	6.2	1.3	
2.75	6.1	0.8	
3.00	6.2	1.3	
3.25	6.1	0.9	
3.50	5.9	0.9	
3.75	6.0	0.6	
4.00	5.9	0.9	
4.25	5.9	1.2	

Notes:

Horizon – 3Cu EOP - gouged almost to maximum depth
 Observation H2O EC - 87.8 mS/cm; pH 4.2

Project: MWQ Site: 230

Location: 724405 mE 7672100 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Dune
 Runoff: No record
 Elevation: 5.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Brown (10YR43) moist colour; fine sand; very few < 2% medium pebbles 6-20mm angular igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; abrupt to;
A2e	0.10 to 0.40	White (10YR82) dry colour; fine sand; single grain structures; moderately moist; clear to;
B2	0.40 to 0.80	Yellowish brown (10YR58) moist colour; fine sand; single grain structures; moderately moist; sharp to;
BC	0.80 to 1.50	Light yellowish brown (10YR64) moist, very pale brown (10YR83) dry colour with a 10cm yellow sand lens at 1.2m; few 2-10% medium 5-15mm distinct brown mottles; fine sand; single grain structures; moderately moist; sharp to;
2C	1.50 to 4.00	Grey (5Y51) moist colour; fine sand; single grain structures; wet; sharp to;
3Cu	4.00 to 4.20	Dark grey (2.5Y40) moist colour; silty light clay; single grain structures; moist; sharp to;
4C1u	4.20 to 4.40	Dark grey (2.5Y40) moist colour; sand; single grain structures; wet; sharp to;
4C2u	4.40 to 4.90	Grey (2.5Y50) moist colour; sand with a 10 cm fine sand lens at 4.4m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
4C3	4.90 to 5.30	Very dark grey (2.5Y30) moist colour; sand with a 10cm fine sand lens at 4.9m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded andesite and quartz coarse fragments; single grain structures; wet; sharp to;
4C4	5.30 to 5.70	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	5.3	
0.60	6.8	5.2	
1.00	6.2	4.9	
1.50	6.0	5.1	
2.00	6.4	3.2	
2.50	6.6	3.6	
3.00	6.5	3.2	
3.50	6.4	2.9	
3.75	6.7	2.2	
4.00	6.0	1.5	
4.25	6.2	1.6	
4.50	6.4	3.0	
4.75	6.5	2.5	
5.00	6.3	1.6	
5.25	6.6	1.5	
5.50	6.7	1.6	
5.70	7.1	1.5	

Notes:

Horizon – 4C1u 1mm layer of bark
 Observation H2O EC - 0.5 mS/cm; pH 6.5

Project: MWQ Site: 231

Location: 724795 mE 7672435 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Mid Stratum: Cupaniopsis anacardioides (Tuckeroo)
 Lower Stratum: Bothriochloa species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sand; single grain structures; moderately moist; clear to;
C	0.30 to 0.70	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; gradual to;
2C	0.70 to 1.60	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded acid volcanic coarse fragments; single grain structures; moderately moist;
3C	1.60 to 1.90	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; sharp to;
4B2	1.90 to 2.20	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm prominent grey mottles; fine sand; single grain structures; moist; sharp to;
5C	2.20 to 2.75	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; abrupt to;
6B2	2.75 to 3.35	Strong brown (7.5YR46) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
7C1	3.35 to 4.10	Light yellowish brown (10YR64) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and acid volcanic coarse fragments; single grain structures; wet; gradual to;
7C2	4.10 to 5.50	Olive grey (5Y52) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded acid volcanic coarse coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	4.7	
0.60	6.5	5.2	
1.00	6.5	5.4	
1.50	6.5	5.5	
2.00	6.0	4.9	
2.50	6.1	5.4	
3.00	6.5	5.9	
3.50	6.3	5.8	
4.00	6.6	5.7	
4.50	6.7	5.4	
5.00	6.4	4.7	
5.50	6.3	4.2	

Notes:

Observation H2O EC - 0.2 mS/cm; pH 6.5

Project: MWQ Site: 232

Location: 724975 mE 7671990 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Dune
 Runoff: No record
 Elevation: 6.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Granodiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; light medium clay; massive structures; moderately moist; sharp to;
B2	0.10 to 0.20	Brown (10YR43) moist colour; clayey sand; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm rounded gravel coarse fragments; single grain structures; moderately moist; sharp to;
2B2	0.20 to 2.20	Dark yellowish brown (10YR44) moist colour; fine sand; single grain structures; moderately moist; abrupt to;
2B3	2.20 to 2.90	Light yellowish brown (10YR64) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic coarse fragments; single grain structures; moderately moist; abrupt to;
2C	2.90 to 3.65	White (10YR81) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; moist; sharp to;
3C1	3.65 to 5.10	Light yellowish brown (10YR64) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
3C2	5.10 to 5.80	Light yellowish brown (10YR64) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) and subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.6	3.2	
0.60	7.5	5.0	
1.00	7.6	5.1	
1.50	7.6	5.1	
2.00	7.3	5.3	
2.50	7.1	5.3	
3.00	7.4	5.3	
3.50	6.5	5.5	
4.00	6.6	5.3	
4.50	6.7	5.5	
5.00	6.8	5.5	
5.50	6.8	5.4	
5.80	6.6	5.5	

Notes:

Observation H2O EC - 0.2 mS/cm; pH 6.4

Project: MWQ Site: 233

Location: 724565 mE 7672270 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Dune
 Runoff: No record
 Elevation: 6.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Abundant 50-90%, small pebbles 2-6mm, Granite
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; fine sand; single grain structures; moderately moist; gradual to;
B21	0.30 to 0.80	Dark yellowish brown (10YR44) moist colour; fine sand; single grain structures; moderately moist; diffuse to;
B22	0.80 to 2.00	Yellowish brown (10YR54) moist colour; few 2-10% medium 5-15mm prominent brown mottles; fine sand; very few < 2% medium pebbles 6-20mm charcoal coarse fragments; single grain structures; moderately moist; abrupt to;
C	2.00 to 2.60	Light grey (10YR72) moist, white (10YR82) dry colour; fine sand; single grain structures; moist; sharp to;
2B2	2.60 to 3.65	Yellowish brown (10YR58) moist colour; many 20-50% very coarse > 30mm prominent pale mottles; fine sand; single grain structures; wet; abrupt to;
2C1	3.65 to 5.00	Pale brown (10YR63) moist colour; few 2-10% medium 5-15mm distinct brown, very few < 2% medium 5-15mm distinct grey mottles; fine sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and subrounded quartz coarse fragments; single grain structures; wet; clear to;
2C2	5.00 to 5.55	Grey (10YR61) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	5.0	
0.60	7.4	5.2	
1.00	7.5	5.2	
1.50	7.3	5.2	
2.00	7.2	5.2	
2.50	7.5	5.3	
3.00	7.2	5.7	
3.50	7.1	6.0	
4.00	7.0	6.1	
4.50	6.9	6.1	
5.00	6.5	5.5	
5.25	6.6	5.5	
5.50	6.9	5.0	

Notes:

Observation H2O EC - 0.2 mS/cm; pH 7.0

Project: MWQ Site: 234

Location: 724130 mE 7672410 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 16-May-2002

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Made land

Element: Dune

Runoff: No record

Elevation: 7.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: Common 10-20%, medium pebbles 6-20mm, Microdiorite

Surface Condition: Firm

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL

GSG: No record

PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; moderately moist; clear to;
A2e	0.40 to 1.90	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; clear to;
B21	1.90 to 2.30	Yellowish brown (10YR56) moist colour; fine sand; single grain structures; moderately moist; abrupt to;
B22	2.30 to 2.60	Pale brown (10YR63) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sand; single grain structures; moderately moist; abrupt to;
B23	2.60 to 3.00	Strong brown (7.5YR58) moist colour; fine sand; single grain structures; moist; abrupt to;
B24	3.00 to 4.00	Yellowish brown (10YR56) moist colour; few 2-10% medium 5-15mm prominent brown mottles; fine sand; single grain structures; wet; sharp to;
2B21	4.00 to 4.90	Brown (10YR53) moist colour; common 10-20% medium 5-15mm distinct brown, few 2-10% medium 5-15mm distinct dark mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
2B22	4.90 to 5.20	Light yellowish brown (10YR64) moist colour; few 2-10% medium 5-15mm prominent brown mottles; coarse sand with 3 x 2-4cm bands of fine sand; few 2-10% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
2B23	5.20 to 5.60	Light yellowish brown (10YR64) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.5	
0.60	6.4	5.0	
1.00	6.6	5.3	
1.50	6.2	5.2	
2.00	6.4	5.1	
2.50	6.3	5.1	
3.00	6.6	5.0	
3.50	6.2	5.3	
4.00	6.5	5.2	
4.50	6.3	5.0	
5.00	6.6	5.0	
5.50	6.2	4.9	

Notes:

Horizon – B21 10 cm darker brown layer with black sands at 2.2 m
Observation H2O EC - 0.1 mS/cm; pH 6.7

Project: MWQ Site: 235

Location: 727950 mE 7659670 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Haplic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.08	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty medium clay; moderate 5-10mm parting to moderate 2-5mm subangular blocky structures; moderately moist; abrupt to;
B21	0.08 to 0.30	Silty medium clay; strong 2-5mm lenticular structures; moderately moist; gradual to;
B22	0.30 to 0.60	Dark greyish brown (2.5Y42) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium heavy clay; strong lenticular structures; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; gradual to;
B23	0.60 to 1.40	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm prominent orange mottles; light medium clay to sandy light medium clay below 1m; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; abrupt to;
2B21	1.40 to 1.90	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded intermediate volcanic coarse fragments; single grain structures; moderately moist; clear to;
2B22	1.90 to 2.60	Strong brown (7.5YR56) moist colour; many 20-50% very coarse > 30mm prominent grey, very few < 2% medium 5-15mm prominent dark mottles; sand; very few < 2% large pebbles 20-60mm rounded intermediate volcanic and very small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moderately moist;
2C1	2.60 to 3.80	Grey (10YR61) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; diffuse to;
2C2	3.80 to 4.60	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

3C	4.60 to 4.90	Brown (10YR53) moist colour; coarse sand; common 10-20% large pebbles 20-60mm rounded intermediate volcanic and small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4C	4.90 to 5.00	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.0	3.7	3.25	7.0	5.3
0.60	7.0	6.0	3.50	6.9	5.4
1.00	6.9	6.3	3.75	6.7	5.4
1.50	6.4	6.1	4.00	6.6	5.4
2.00	6.8	5.8	4.25	6.8	5.2
2.50	7.1	6.0	4.50	7.1	5.5
2.75	6.6	5.5	4.75	7.0	5.5
3.00	6.5	5.5	5.00	7.1	5.7

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 8.1 mS/cm; pH 6.7

Project: MWQ Site: 236

Location: 728955 mE 7659870 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Casuarina equisetifolia (Beach casuarina)
 Lower Stratum: Rhynchelytrum repens; Heteropogon contortus (Black speargrass)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; diffuse to;
A12	0.40 to 0.80	Dark greyish brown (10YR42) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures;
C	0.80 to 1.00	Yellowish brown (10YR54) moist, pale brown (10YR63) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; gradual to;
2C	1.00 to 5.50	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm rounded acid volcanic and small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	5.0	
0.60	5.8	5.0	
1.00	6.5	5.2	
1.50	6.4	5.3	
2.00	6.5	5.4	
2.50	6.9	5.3	
3.00	7.1	5.4	
3.50	7.1	5.4	
4.00	7.2	5.3	
4.50	7.1	5.2	
5.00	7.0	5.4	
5.50	7.1	5.3	

Notes:

Observation Could not sample water

Project: MWQ Site: 237

Location: 728310 mE 7659710 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 17-May-2002

Landscape

Geology: Qm - Quaternary marine
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Made land
Element: Plain
Runoff: No record
Elevation: 4.2 m
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 0.2 %
Surface Coarse Fragments: No coarse fragments
Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
GSG: No record
PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.60	Dark brown (10YR33) moist and greyish brown (2.5Y52) moist colour; mix of coarse sand, fine sand and clayey sand; few 2-10% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; massive to single grain structures; sharp to;
2C	0.60 to 2.60	Light yellowish brown (10YR64) moist colour; coarse sand; very few <2% cobbles 60-200mm rounded basalt, few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded and rounded igneous rock (unidentified) coarse fragments;
3Cu	2.60 to 3.80	Very dark grey (10YR31) moist colour; silty light clay; massive structures; common mangrove roots at 3.65m.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	3.9	
0.60	5.2	3.9	
1.00	6.4	4.6	
1.50	6.4	4.5	
2.00	6.2	4.7	
2.25	6.2	5.0	
2.50	6.4	1.5	
2.75	6.2	0.9	
3.00	6.4	1.3	
3.25	6.5	1.0	
3.50	6.5	1.0	
3.75	6.7	1.0	

Notes:

Horizon - 3Cu EOP - rock stopped VVC
Observation H2O EC - 0.7 mS/cm; pH 6.6

Project: MWQ Site: 238

Location: 727780 mE 7659370 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist colour; fine sandy light medium clay; moderate 2-5mm subangular blocky structures; moderately moist;
2C	0.20 to 0.40	Dark greyish brown (2.5Y42) moist colour; sand; abundant 50-90% medium pebbles 6-20mm large pebbles 20-60mm subrounded charcoal coarse fragments; single grain structures; dry; sharp to;
3B21	0.40 to 0.80	Dark greyish brown (2.5Y42) moist colour; medium heavy clay; moderate 2-5mm subangular blocky structures; moderately moist; gradual to;
3B22	0.80 to 1.30	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent yellow mottles; fine sandy light medium clay; moderately moist; sharp to;
4B2	1.30 to 2.00	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sandy loam; moderately moist; sharp to;
5B2	2.00 to 2.70	Strong brown (7.5YR58) moist colour; many 20-50% very coarse > 30mm prominent grey mottles; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
6Cu	2.70 to 2.90	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
7Cu	2.90 to 3.15	Very dark grey (2.5Y30) moist colour; silty light clay with 3 x 2cm fine sand layers at 2.95, 3.02 and 3.07m; massive structures; wet; sharp to;
8Cu	3.15 to 3.50	Dark grey (2.5Y40) moist colour; sand with a 2cm silty light clay layer at 3.2m; few 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and subrounded igneous rock coarse fragments; single grain structures; wet; diffuse to;
9C1	3.50 to 5.00	Grey (10YR51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded granodiorite, basalt and igneous rock (unidentified) coarse fragments; single grain structures; wet; diffuse

9C2u 5.00 to 5.20 Grey (10YR51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite and subrounded igneous rock coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.2	4.5	3.50	5.9	3.0
0.60	6.8	6.3	3.75	6.2	4.0
1.00	7.2	5.8	4.00	6.0	4.0
1.50	7.5	6.1	4.25	6.2	4.5
2.00	6.9	5.9	4.50	6.3	4.4
2.50	7.1	5.5	4.75	6.1	4.0
2.75	5.9	1.8	5.00	6.3	2.5
3.00	5.7	1.4	5.20	6.2	1.4
3.25	5.8	1.8			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 6.1 mS/cm; pH 6.4

Project: MWQ Site: 239

Location: 727230 mE 7659320 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL / Endohypersodic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; clayey sand; single grain structures; dry; sharp to;
2A1	0.10 to 0.20	Black (10YR21) moist colour; fine sandy light medium clay; moderate 2-5mm subangular blocky structures; moderately moist; clear to;
2B21	0.20 to 0.75	Very dark grey (10YR31) moist parting to dark grey (10YR41) moist colour; medium heavy clay; lenticular structures; moderately moist; diffuse to;
2B22	0.75 to 1.30	Grey (5Y61) moist colour; fine sandy light clay; lenticular structures; moderately moist; clear to;
2B23	1.30 to 1.60	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown, very few < 2% medium 5-15mm prominent grey mottles; medium clay; lenticular structures; moderately moist; diffuse to;
2B24	1.60 to 2.90	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent gley, few 2-10% medium 5-15mm distinct brown, very few < 2% medium 5-15mm prominent grey mottles; medium heavy clay; lenticular structures; moderately moist;
3C1	2.90 to 3.20	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; wet; sharp to;
3C2	3.20 to 3.70	Grey (5Y61) moist colour; clayey coarse sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; wet; sharp to;
4C	3.70 to 3.90	Grey (5Y61) moist colour; common 10-20% medium 5-15mm prominent gley mottles; sandy medium clay; massive structures; moist; sharp to;
5C	3.90 to 4.80	Light grey (N70) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subangular granite coarse fragments; single grain structures; wet; sharp to;

6C 4.80 to 5.70 Light grey (5Y71) moist colour; few 2-10% fine < 5mm distinct gley mottles; coarse sandy light clay; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular granite and quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.0	
0.60	6.0	5.6	
1.00	6.8	5.4	
1.50	6.3	5.6	
2.00	6.9	5.7	
2.50	6.8	6.1	
3.00	6.4	5.6	
3.50	6.7	6.9	
4.00	7.1	5.4	
4.50	6.7	6.0	
5.00	6.2	7.1	
5.50	6.2	5.9	

Notes:

Observation H2O EC - 4.7 mS/cm; pH 6.7

Project: MWQ Site: 240

Location: 727090 mE 7659575 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Common 10-20%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL / Endohypersodic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (2.5Y32) moist colour; sandy clay loam; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm angular igneous rock (unidentified) coarse fragments; massive structures; moderately moist; sharp to;
2A1	0.10 to 0.25	Black (2.5Y20) moist colour; medium clay; moderate 2-5mm subangular blocky structures; moderately moist; gradual to;
2B21	0.25 to 0.90	Black (10YR21) moist parting to grey (10YR51) moist colour at 0.6m; few 2-10% coarse 15-30mm prominent grey parting to few 2-10% coarse 15-30mm prominent dark and few 2-10% medium 5-15mm distinct yellow mottles at 0.6m; medium heavy clay; lenticular structures; moderately moist; clear to;
2B22	0.90 to 1.80	Grey (5Y51) moist colour; many 20-50% very coarse > 30mm prominent brown, very few < 2% medium 5-15mm prominent red mottles only at 1.7m; medium clay; lenticular structures; very few < 2% fine <2 mm manganiferous soft and gypseous crystals segregations; moderately moist; sharp to;
3B2	1.80 to 2.00	Light brownish grey (10YR62) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; very few < 2% medium 2-6 mm ferruginous nodules segregations; moist; sharp to;
3C1	2.00 to 2.40	Light grey (10YR72) moist colour; sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; moist; gradual to;
3C2	2.40 to 3.20	Light brownish grey (10YR62) moist colour; very few < 2% medium 5-15mm prominent brown, very few < 2% medium 5-15mm prominent grey mottles; clayey sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; massive structures; moist; abrupt to;

4B2	3.20 to 3.80	Light grey (10YR71) moist colour; many 20-50% coarse 15-30mm prominent yellow mottles; sandy clay loam; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; massive structures; moist; sharp to;
5D	3.80 to 5.25	Greenish grey (5GY61) moist colour; many 20-50% coarse 15-30mm prominent yellow mottles; clayey coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular quartz coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	3.4	
0.60	5.6	4.6	
1.00	6.0	5.7	
1.50	4.5	3.4	
2.00	5.5	4.2	
2.50	4.9	3.5	
3.00	4.8	3.1	
3.50	4.9	3.1	
4.00	5.4	3.3	
4.50	5.9	3.5	
5.00	6.2	4.8	

Notes:

Observation H2O could not sample

Project: MWQ Site: 241

Location: 728635 mE 7659505 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 5.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Many 20-50%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist colour; sandy loam; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm angular igneous rock (unidentified) coarse fragments; dry; abrupt to;
C1	0.20 to 0.80	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry;
C2	0.80 to 1.90	Light yellowish brown (10YR64) moist colour; sand; single grain structures; dry; gradual to;
C3	1.90 to 4.60	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; dry; sharp to;
2C1	4.60 to 4.85	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; clear to;
2C2	4.85 to 5.10	Dark grey (2.5Y40) moist colour; fine sand with a 5mm silty light clay lens at 5.07m; single grain structures; moist; abrupt to;
2C3u	5.10 to 5.50	Dark grey (2.5Y40) moist colour; sand; single grain structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	5.6	
0.60	6.8	5.6	
1.00	6.7	5.2	
1.50	7.2	5.2	
2.00	7.4	5.6	
2.50	6.9	5.7	
3.00	7.2	5.3	
3.50	7.2	5.0	
4.00	7.2	5.3	
4.50	7.1	5.5	
4.75	7.2	4.2	
5.00	7.2	5.5	
5.25	6.7	1.4	
5.50	6.7	1.7	

Notes:

Observation H2O Could not sample
 Horizon – 2C3u Common mangrove roots at 5.3 & 5.4 m and lumps of wood @ 5.2 m

Project: MWQ Site: 242

Location: 728320 mE 7659030 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Many 20-50%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; clayey sand; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm angular igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
2C1	0.20 to 1.85	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry;
2C2	1.85 to 2.40	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry;
3B2	2.40 to 3.10	Greyish brown (10YR52) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; clay loam; sandy; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; massive structures; moist; sharp to;
4C1	3.10 to 3.30	Grey (10YR51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded microdiorite coarse fragments; single grain structures; moist; sharp to;
4C2u	3.30 to 3.70	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded microdiorite coarse fragments; single grain structures; moist; sharp to;
5C	3.70 to 4.40	Light olive brown (2.5Y54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; single grain structures; moist; sharp to;
6Cu	4.40 to 4.50	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; moist;
7C	4.50 to 4.90	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.8	5.7	3.25	6.7	5.0
0.60	7.8	5.4	3.50	6.9	1.8
1.00	7.4	5.7	3.75	6.4	4.7
1.50	7.2	5.5	4.00	6.5	5.0
2.00	7.0	5.4	4.25	6.4	5.1
2.50	6.4	5.5	4.50	6.9	1.7
2.75	6.3	5.7	4.75	7.4	1.6
3.00	6.6	6.3	4.90	7.7	1.6

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O could not sample
 Horizon - 7C EOP - soil below 4.9 m would not hold in VVC

Project: MWQ Site: 243

Location: 728305 mE 7659340 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Common 10-20%, large pebbles 20-60mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.80	Dark brown (10YR33) moist colour; sandy loam, heavy; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm angular microdiorite coarse fragments; massive structures; dry; sharp to;
C1	0.80 to 1.40	Brown (10YR43) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular microdiorite and subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry; abrupt to;
C2	1.40 to 5.20	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.6	
0.60	6.6	5.6	
1.00	7.0	5.4	
1.50	7.2	5.4	
2.00	7.1	5.4	
2.50	6.9	5.6	
3.00	7.1	6.1	
3.50	6.8	5.3	
4.00	6.7	5.4	
4.50	6.8	5.4	
5.00	6.9	5.3	

Notes:
 Observation H2O EC - 0.2 mS/cm; pH 6.4

Project: MWQ Site: 244

Location: 727860 mE 7659020 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Abundant 50-90%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Eutrophic, Chromosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.10	Olive grey (5Y42) moist colour; sand, road base and crusher dust; abundant 50-90% medium pebbles 6-20mm angular microdiorite coarse fragments; dry; sharp to;
A1	0.10 to 0.50	Black (10YR21) moist colour; sandy clay loam; very few < 2% medium pebbles 6-20mm subangular and subrounded unconsolidated material (unidentified) coarse fragments; massive structures; moderately moist; abrupt to;
B2	0.50 to 0.80	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm distinct yellow mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded quartz and medium pebbles 6-20mm rounded acid volcanic coarse fragments; strong structures; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2B21	0.80 to 1.50	Brown (10YR43) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz, granite, igneous rock and rounded intermediate volcanic coarse fragments; single grain structures; many 20-50% medium 2-6 mm manganiferous soft segregations; dry; gradual to;
2B22	1.50 to 2.15	Dark yellowish brown (10YR46) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; single grain structures; moderately moist; abrupt to;
2BC	2.15 to 2.70	Light brownish grey (10YR62) moist colour; common 10-20% very coarse > 30mm prominent orange, few 2-10% medium 5-15mm distinct grey mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; sharp to;
3Cu	2.70 to 2.80	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet;

4Cu	2.80 to 4.10	Grey (2.5Y50) moist colour; fine sand with 1cm, 3cm and 3cm very dark grey silty light clay lenses at 3.0, 3.18 and 3.3m; single grain to massive structures; wet; sharp to;
5C1	4.10 to 4.45	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5C2	4.45 to 4.80	Light brownish grey (10YR62) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.3	5.2	3.25	5.8	1.4
0.60	5.8	3.7	3.50	5.9	1.9
1.00	6.4	4.3	3.75	5.9	1.6
1.50	6.1	6.5	4.00	6.2	1.3
2.00	6.7	4.7	4.25	6.1	3.6
2.50	6.6	5.6	4.50	6.4	3.9
2.75	5.7	1.4	4.75	6.4	4.2
3.00	6.4	1.7			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon - 4Cu 6 cm lump of wood @ 3.25 m, thin layer of mangrove debris @ 3.7 & 3.85 m
 Horizon - 3C2 EOP - sand did not hold in tube
 Observation H2O could not sample

Project: MWQ Site: 245

Location: 727880 mE 7658550 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-May-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Spolic, ANTHROPOSOL / Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; clayey sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock coarse fragments; single grain structures; dry; sharp to;
2C	0.10 to 1.80	Yellowish brown (10YR54) moist colour; coarse sand; common 10-20% large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock and small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; dry; sharp to;
3C1u	1.80 to 2.55	Very dark grey (2.5Y30) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
3C2	2.55 to 2.85	Very dark grey (2.5Y30) moist colour; many 20-50% coarse 15-30mm distinct yellow mottles; coarse sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
3C3	2.85 to 3.20	Black (2.5Y20) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
4C1	3.20 to 3.65	Very dark grey (2.5Y30) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4C2	3.65 to 4.00	Very dark grey (2.5Y30) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; wet; sharp to;
4C3	4.00 to 4.30	Very dark grey (2.5Y30) moist colour; sand; single grain structures; wet; sharp to;
4C4	4.30 to 4.95	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; wet; sharp to;

5C 4.95 to 5.15 Grey (N60) moist colour; coarse sand with a 1cm clay lens at 5.0m; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.5	3.5	3.00	6.9	1.6
0.60	7.5	5.6	3.25	7.1	1.5
1.00	7.6	5.7	3.50	7.0	1.5
1.50	8.1	5.6	3.75	7.2	1.6
1.75	7.9	5.5	4.00	6.8	1.6
2.00	6.9	1.8	4.25	7.0	1.7
2.25	7.3	3.3	4.50	7.2	1.6
2.50	6.9	2.6	4.75	7.0	1.6
2.75	7.0	2.0	5.00	7.0	2.0

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:
 Observation H2O EC - 1.3 mS/cm; pH 6.9

Project: MWQ Site: 246

Location: 728280 mE 7658690 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: Common 10-20%, large pebbles 20-60mm, Pumice
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Casuarina equisetifolia (Beach casuarina)
 Mid Stratum: Alphitonia excelsa (Red ash, soapbush)
 Lower Stratum: Rhynchelytrum repens; Aristida species; Tragus australianus (Small burr grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark greyish brown (10YR42) moist colour; sand; very few < 2% medium pebbles 6-20mm rounded pumice and igneous rock (unidentified) and small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry;
C1	0.10 to 0.80	Yellowish brown (10YR54) moist, very pale brown (10YR74) dry colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded granite, quartz and igneous rock (unidentified) coarse fragments; moderately moist; sharp to;
C2	0.80 to 1.10	Brown (10YR43) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist; sharp to;
C3	1.10 to 1.75	Yellowish brown (10YR54) moist, very pale brown (10YR74) dry colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist; sharp to;
2C1u	1.75 to 2.10	Dark grey (2.5Y40) moist colour; sandy loam; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; wet; sharp to;
2C2u	2.10 to 2.60	Dark grey (2.5Y40) moist colour; sand with a 5cm silty light clay at 2.55m; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and subrounded quartz coarse fragments; wet; sharp to;
3C1	2.60 to 3.35	Grey (10YR51) moist colour; very few < 2% coarse 15-30mm distinct brown mottles; coarse sand with a 10cm fine sand lens at 3.0m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock (unidentified) and rounded intermediate volcanic coarse fragments; wet;

3C2	3.35 to 4.70	Yellowish brown (10YR56) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) and small pebbles 2-6mm subrounded quartz and granite coarse fragments; wet; abrupt to;
3C3	4.70 to 5.60	Light brownish grey (10YR62) moist colour; very few < 2% very coarse > 30mm distinct brown mottles; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and subrounded igneous rock (unidentified) coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	7.4	5.0	3.25	6.7	4.9
0.60	7.7	5.6	3.50	6.8	5.1
1.00	7.0	5.4	3.75	6.8	5.1
1.50	7.4	5.5	4.00	6.6	5.2
1.75	6.8	5.4	4.25	6.7	5.2
2.00	6.6	1.8	4.50	6.7	5.1
2.25	6.9	1.9	4.75	6.7	5.0
2.50	6.8	1.7	5.00	6.8	5.3
2.75	6.9	1.8	5.50	6.8	5.1
3.00	7.0	5.1			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:
 Observation H2O EC - 20.4 mS/cm; pH 6.7

Project: MWQ Site: 247

Location: 727165 mE 7658830 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Many 20-50%, small pebbles 2-6mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm angular microdiorite coarse fragments; massive structures; dry;
2B21	0.30 to 0.60	Very dark grey (10YR31) moist colour; medium clay; moderately moist; gradual to;
2B22	0.60 to 0.80	Dark greyish brown (2.5Y42) moist colour; common 10-20% medium 5-15mm distinct yellow mottles; medium clay; moderately moist; abrupt to;
3B21	0.80 to 2.10	Light grey (10YR71) moist colour; common 10-20% coarse 15-30mm prominent brown, very few < 2% medium 5-15mm prominent orange mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist; abrupt to;
4B2	2.10 to 2.40	Light grey (10YR71) moist colour; common 10-20% medium 5-15mm prominent yellow, few 2-10% medium 5-15mm distinct brown mottles; clayey sand with bits of clay loam sandy; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain parting to massive structures; moist; sharp to;
4C	2.40 to 2.90	Grey (10YR61) moist colour; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; clear to;
5B2	2.90 to 3.80	Light greenish grey (5GY71) moist colour; few 2-10% medium 5-15mm distinct yellow mottles; sandy clay loam, heavy; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; clear to;
6C	3.80 to 5.40	Light grey (5Y71) moist colour; very few < 2% fine < 5mm distinct yellow mottles; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	5.0	
0.60	6.2	5.7	
1.00	7.6	7.0	
1.50	8.2	6.9	
2.00	8.2	6.7	
2.50	7.8	6.4	
3.00	7.2	6.1	
3.50	6.9	6.1	
4.00	7.2	7.5	
4.50	7.7	6.6	
5.00	7.6	6.5	
Notes:			
Observation		H2O EC - 5.4 mS/cm; pH 7.0	

Project: MWQ Site: 248

Location: 727800 mE 7658030 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Quartz
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark brown (10YR33) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; clear to;
C	0.10 to 1.50	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; very few < 2% small pebbles 2-6mm rounded and subrounded quartz, volcanic intermediate and igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2C	1.50 to 2.40	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct brown mottles; clayey fine sand; massive structures; wet; sharp to;
3Cu	2.40 to 4.00	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded quartz, granite and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
4Cu	4.00 to 4.25	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; moist; sharp to;
5Cu	4.25 to 4.60	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
6D	4.60 to 5.40	Greenish grey (5GY61) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; sandy medium clay; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	7.6	5.8	
0.60	8.6	6.0	
1.00	8.4	6.1	
1.50	8.2	5.7	
1.75	7.3	5.6	
2.00	6.1	3.3	
2.25	6.0	1.5	
2.50	6.4	1.4	
2.75	7.2	2.2	
3.00	7.6	2.8	
3.25	7.5	2.9	
3.50	7.4	1.8	
3.75	7.2	1.9	
4.00	7.4	2.1	
4.25	7.5	3.1	
4.50	7.5	1.5	
4.75	7.9	5.4	
5.00	7.9	6.2	
Notes:			
Observation		H2O could not sample	

Project: MWQ Site: 249

Location: 728160 mE 7658300 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-May-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Casuarina equisetifolia (Beach casuarina); Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris; Hibiscus tiliaceus (Cotton tree / cowtucker)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist colour; fine sandy loam; massive structures; moist; sharp to;
2C	0.20 to 1.80	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent yellow jarositic (from pyrite) mottles; medium clay and greyish brown sand mix; very few < 2% small pebbles 2-6mm subrounded quartz and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain to massive structures; dry; sharp to;
3C	1.80 to 2.80	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; dry; sharp to;
4C1u	2.80 to 3.50	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent orange, few 2-10% fine < 5mm prominent brown mottles; fine sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; sharp to;
4C2u	3.50 to 4.15	Very dark grey (10YR31) moist colour; fine sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; sharp to;
5C1u	4.15 to 5.00	Very dark grey (2.5Y30) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite and quartz coarse fragments; single grain structures; wet; gradual to;
5C2u	5.00 to 5.50	Dark grey (5Y41) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz, microdiorite and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.1	4.2	3.00	3.6	2.4
0.30	4.7	3.9	3.25	3.9	2.9
0.60	4.7	3.3	3.50	5.4	2.3
0.80	4.0	2.4	3.75	5.3	2.1
1.00	4.3	2.5	4.00	4.9	1.3
1.25	3.5	2.1	4.25	4.2	1.1
1.50	3.3	2.0	4.50	4.4	1.4
1.75	3.6	2.4	4.75	4.9	1.5
2.00	4.0	2.7	5.00	5.4	1.8
2.25	3.9	3.5	5.25	5.5	1.7
2.50	4.1	2.8	5.50	5.5	1.6
2.75	3.8	2.9			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 2.6 mS/cm; pH 5.3

Project: MWQ Site: 250

Location: 727345 mE 7658280 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Common 10-20%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; many 20-50% medium pebbles 6-20mm angular microdiorite coarse fragments; massive structures; dry; abrupt to;
2A1	0.20 to 0.50	Black (10YR21) moist colour; fine sandy loam; massive structures; dry; sharp to;
3B2	0.50 to 1.80	Brown (10YR53) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sand; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; dry; sharp to;
4C1	1.80 to 2.25	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm faint yellow mottles; clayey sand; single grain structures; moist; clear to;
4C2	2.25 to 2.90	Greyish brown (10YR52) moist colour; very few < 2% medium 5-15mm prominent orange mottles at 2.75 and 2.8m; coarse sand with thin bands of grey clay below 2.6m; very few < 2% small pebbles 2-6mm subangular granite and quartz coarse fragments; single grain structures; wet; clear to;
5C1u	2.90 to 3.20	Dark grey (2.5Y40) moist colour; coarse sand with thin bands of grey clay; very few < 2% small pebbles 2-6mm subangular microdiorite and quartz coarse fragments; single grain structures; wet; clear to;
5C2	3.20 to 3.40	Grey (10YR51) moist colour; sand with thin bands of grey clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; wet;
6B2	3.40 to 4.65	Light grey (5Y71) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; coarse sandy clay loam with 10cm sandy light clay at 4.55m with 15cm coarse sand at 3.85m and thin bands of grey clay above 3.85m; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; massive structures; wet;

6C	4.65 to 5.05	Light greenish grey (5GY71) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
7D	5.05 to 5.25	Light greenish grey (5GY71) moist colour; few 2-10% medium 5-15mm prominent brown mottles; sandy medium heavy clay; very few < 2% small pebbles 2-6mm subrounded granite coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.9	4.7	3.25	6.4	4.4
0.60	6.1	5.3	3.50	6.4	4.6
1.00	6.6	5.5	3.75	6.7	4.7
1.50	7.0	5.4	4.00	6.5	5.2
2.00	6.9	5.3	4.25	6.5	5.4
2.25	6.5	5.2	4.50	6.6	5.3
2.50	6.3	5.1	4.75	6.7	5.4
2.75	6.3	4.5	5.00	6.6	5.6
3.00	6.2	1.1			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O could not sample

Project: MWQ Site: 251

Location: 727500 mE 7657715 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-May-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark brown (10YR33) moist colour; clayey fine sand; massive structures; moderately moist; abrupt to;
2C	0.10 to 1.30	Dark greyish brown (10YR42) moist colour; sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
3C	1.30 to 1.75	Dark grey (2.5Y40) moist colour; fine sandy light clay with a 5cm black silty light medium clay at 1.3m; massive structures; wet; sharp to;
4Cu	1.75 to 2.65	Dark grey (2.5Y40) moist with a 10cm lens of grey (2.5Y20) moist colour at 2.0m; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
5Cu	2.65 to 3.00	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
6D1	3.00 to 4.10	Light grey (5Y71) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; coarse sandy light medium clay; very few < 2% small pebbles 2-6mm angular quartz coarse fragments; massive structures; moist; clear to;
6D2	4.10 to 5.70	Light greenish grey (5GY71) moist colour; few 2-10% medium 5-15mm distinct yellow mottles; clayey coarse sand; very few < 2% small pebbles 2-6mm subangular granite and angular quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.7	4.1	2.75	6.4	1.3
0.60	7.3	5.2	3.00	6.6	1.5
1.00	7.2	4.9	3.25	6.6	4.5
1.25	6.9	2.3	3.50	6.2	4.7
1.50	6.5	3.0	3.75	6.3	4.6
1.75	6.7	2.0	4.00	6.1	4.7
2.00	6.8	1.2	4.50	6.0	4.9
2.25	6.7	0.8	5.00	6.1	4.8
2.50	6.9	1.4	5.50	6.1	5.9

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 4Cu 2 cm layer of organic debris at 1.95m; 3 cm lump of wood @ 2.2 m
 Observation H2O EC - 0.2 mS/cm; pH 6.8

Project: MWQ Site: 252

Location: 727995 mE 7658740 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-May-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Quartz
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch); Cyperus species; Sesuvium portulacastrum (Samphire)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist;
B2i	0.15 to 0.75	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist;
Cu	0.75 to 1.35	Very dark grey (10YR31) moist colour; fine sandy light medium clay; massive structures; wet; sharp to;
2C1u	1.35 to 2.00	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular and rounded quartz and microdiorite coarse fragments; single grain structures; wet; clear to;
2C2u	2.00 to 3.60	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subangular quartz and rounded and subrounded microdiorite coarse fragments; single grain structures; wet; diffuse to;
2C3u	3.60 to 5.20	Grey (10YR61) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded and rounded quartz and microdiorite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.7	4.8	2.75	6.7	1.3
0.30	5.3	4.6	3.00	6.8	1.1
0.60	5.2	4.5	3.25	6.1	1.1
0.80	5.2	4.1	3.50	6.5	1.2
1.00	5.3	0.9	3.75	6.5	1.4
1.25	5.3	0.9	4.00	6.6	1.2
1.50	5.4	1.3	4.25	6.4	1.1
1.75	5.8	1.4	4.50	6.8	2.7
2.00	5.7	1.4	4.75	6.4	4.9
2.25	6.2	1.5	5.00	6.9	4.7
2.50	6.9	1.6			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC 16.0 mS/cm; pH 5.9

Project: MWQ Site: 253

Location: 726505 mE 7657690 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sandy light clay; few 2-10% medium pebbles 6-20mm angular igneous rock (unidentified) coarse fragments; moderately moist;
2C	0.20 to 0.30	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
3B21	0.30 to 0.70	Black (10YR21) moist colour; common 10-20% fine < 5mm prominent brown mottles; medium clay; strong structures; moderately moist; gradual to;
3B22	0.70 to 1.20	Light brownish grey (2.5Y62) moist colour; common 10-20% very coarse > 30mm prominent dark, common 10-20% very coarse > 30mm prominent dark mottles; medium heavy clay; moderately moist; clear to;
3B23	1.20 to 1.90	Grey (10YR51) moist colour; many 20-50% very coarse > 30mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; abrupt to;
3B24?	1.90 to 2.70	Greyish brown (2.5Y52) moist colour; few 2-10% medium 5-15mm distinct brown, common 10-20% medium 5-15mm distinct grey mottles; light medium clay; moist; sharp to;
4C	2.70 to 3.00	Light brownish grey (10YR62) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; wet; sharp to;
5D	3.00 to 3.65	Dark greyish brown (2.5Y42) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium heavy clay; moderate 2-5mm lenticular structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	4.3	
0.60	5.3	4.1	
1.00	5.8	4.5	
1.50	5.2	3.6	
2.00	5.1	4.2	
2.25	4.9	4.4	
2.50	5.5	5.3	
3.00	6.2	5.1	
3.50	6.0	5.0	

Notes:

Horizon – 5D EOP - too tight for VVC and could not recover with hand auger as water table suction and overlying sand lens kept filling in.
 Observation H2O EC - 4.9 mS/cm; pH 6.4

Project: MWQ Site: 254

Location: 727735 mE 7657295 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Igneous rock (unidentified)
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subangular microdiorite and igneous rock (unidentified) coarse fragments; single grain structures; dry; clear to;
C1	0.15 to 0.80	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; single grain structures; dry; diffuse to;
C2	0.80 to 1.90	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm subrounded quartz and granite and rounded acid volcanic coarse fragments; single grain structures; moderately moist; abrupt to;
2B2	1.90 to 2.10	Strong brown (7.5YR46) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3B21i	2.10 to 2.60	Dark grey (2.5Y40) moist colour; many 20-50% medium 5-15mm prominent brown mottles; silty light clay; weak 2-5mm angular blocky structures; moist; clear to;
3B22i	2.60 to 3.10	Dark grey (2.5Y40) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty light clay; massive structures; moist; sharp to;
3B23ia	3.10 to 3.25	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite) mottles; silty light clay; massive structures; moist; sharp to;
3Cu	3.25 to 4.00	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
4C1u	4.00 to 4.20	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;

4C2u	4.20 to 4.35	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
5C	4.35 to 5.00	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; single grain structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.9	4.9	3.25	6.0	2.3
0.60	7.3	5.4	3.50	5.7	1.4
1.00	7.3	5.5	3.75	6.0	1.3
1.50	6.0	5.5	4.00	6.3	1.5
2.00	7.4	5.3	4.25	6.5	1.1
2.25	5.3	2.9	4.50	6.8	2.7
2.50	5.9	2.4	4.75	6.5	1.7
2.75	5.9	2.6	5.00	6.9	1.9
3.00	5.5	1.2			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon - 5C EOP - sand would not hold in auger
 Observation H2O could not sample

Project: MWQ Site: 255

Location: 727790 mE 7657210 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 29-May-2002

Landscape

Geology: Qd - Quaternary dune
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Made land
Element: Dune
Runoff: No record
Elevation: 6.5 m
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 0.5 %
Surface Coarse Fragments: No coarse fragments
Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
GSG: No record
PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Dark brown (10YR33) moist colour; fine sand; single grain structures; dry;
C1	0.30 to 4.30	Light yellowish brown (10YR64) moist colour; fine sand; single grain structures; dry parting to wet at 3.2m;
2Cu	4.30 to 5.70	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.8	5.4	
1.00	6.9	6.1	
2.00	7.3	6.0	
3.00	7.1	6.1	
4.00	5.6	6.3	
4.25	6.1	6.1	
4.50	6.2	1.4	
4.75	6.5	1.2	
5.00	6.6	1.3	
5.25	6.9	1.7	
5.50	6.8	1.4	

Notes:

Observation H2O could not sample

Project: MWQ Site: 256

Location: 726750 mE 7657220 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Melacic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Bothriochloa bladhii (Forest bluegrass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; light medium clay; strong <2mm granular structures; dry; clear to;
B21	0.05 to 0.50	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm faint grey mottles; medium heavy clay; strong 5-10mm parting to strong 2-5mm subangular blocky structures; moderately moist; gradual to;
B22	0.50 to 1.90	Olive grey (5Y52) moist colour; many 20-50% very coarse > 30mm prominent brown, common 10-20% medium 5-15mm distinct gley mottles; medium clay; moist; diffuse to;
B23	1.90 to 2.90	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm distinct orange, common 10-20% fine < 5mm distinct gley mottles; medium clay; few 2-10% fine <2 mm manganiferous soft segregations; moist; abrupt to;
B24k	2.90 to 4.10	Brown (10YR53) moist colour; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct orange mottles; medium clay; few 2-10% fine <2mm manganiferous concretions and coarse 6-20 mm calcareous soft and common 10-20% very coarse 20-60mm calcareous nodules segregations; moist; clear to;
B25	4.10 to 5.20	Light grey (2.5Y72) moist colour; many 20-50% medium 5-15mm prominent orange mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.5	
0.60	6.7	5.6	
1.00	6.3	6.1	
1.50	6.1	5.7	
2.00	6.6	5.7	
2.50	6.6	7.4	
3.00	6.8	8.0	
3.50	6.7	8.0	
4.00	7.3	8.1	
4.50	6.8	6.0	
5.00	7.2	5.8	

Notes:

Observation H2O EC 23.5 mS/cm; pH 7.0

Project: MWQ Site: 257

Location: 726915 mE 7656765 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-May-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Brachiaria mutica (Para grass); Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist colour; silty clay loam; weak 2-5mm cast parting to strong 2-5mm subangular blocky structures; abrupt to;
B21	0.25 to 0.80	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent orange mottles; light medium clay; clear to;
B22	0.80 to 1.80	Light olive grey (5Y62) moist colour; very few < 2% fine < 5mm distinct yellow, many 20-50% medium 5-15mm prominent orange mottles; medium clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments;
B23	1.80 to 3.50	Dark yellowish brown (10YR46) moist colour; many 20-50% fine < 5mm prominent grey mottles; medium clay with a thin 5mm clayey sand lens at 3.3m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz coarse fragments; very few < 2% fine < 2 mm manganiferous soft segregations; diffuse to;
B24	3.50 to 4.30	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm distinct brown, few 2-10% fine < 5mm distinct grey mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments;
B25	4.30 to 5.50	Dark yellowish brown (10YR44) moist colour; many 20-50% fine < 5mm prominent grey mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; few 2-10% fine < 2 mm manganiferous soft segregations;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	4.5	
0.60	6.5	4.8	
1.00	6.2	4.9	
1.50	6.9	5.4	
2.00	6.8	7.4	
2.50	6.9	5.9	
3.00	7.0	6.1	
3.50	7.0	7.4	
4.00	7.1	7.3	
4.50	7.3	6.2	
5.00	7.3	7.8	

Notes:
 Observation H2O EC - 17.8 mS/cm; pH 7.1

Project: MWQ Site: 258

Location: 727215 mE 7656445 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-May-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Dwarf closed forest (1.01-3m) Ceriops tagal (Yellow mangrove);
 Avicennia marina (Grey mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sandy light clay; weak 2-5mm subangular blocky structures; moist; clear to;
B2	0.10 to 0.65	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm distinct brown, few 2-10% fine < 5mm distinct dark mottles; fine sandy light clay with 2cm fine sand lens at 0.5m; weak 2-5mm subangular blocky structures; wet; abrupt to;
C1	0.65 to 1.25	Very dark grey (5Y31) moist colour; fine sandy light clay; massive structures; wet; clear to;
C2u	1.25 to 2.40	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet;
2Cu	2.40 to 2.50	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	5.4	
0.30	6.7	5.3	
0.60	6.5	5.8	
0.80	6.8	5.9	
1.00	6.5	6.0	
1.25	6.5	4.9	
1.50	6.6	1.3	
1.75	6.9	1.6	
2.00	6.8	1.6	
2.25	6.9	1.9	
2.50	6.7	1.6	

Notes:

Horizon – 2Cu EOP - could not push gouge auger in any further
 Observation H2O EC - 50.4 mS/cm; pH 6.8

Project: MWQ Site: 259

Location: 727570 mE 7659710 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Many 20-50%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; few 2-10% medium pebbles 6-20mm angular microdiorite and small pebbles 2-6mm subangular igneous rock (unidentified) coarse fragments; massive structures; dry; abrupt
2B21	0.20 to 0.40	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange, very few < 2% fine < 5mm faint dark mottles; medium clay; strong structures; moderately moist; clear to;
2B22	0.40 to 1.00	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent orange, few 2-10% fine < 5mm prominent grey mottles; medium clay; strong structures; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
3B21i	1.00 to 1.30	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sandy light clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; diffuse to;
3B22i	1.30 to 1.70	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; Very weak clayey finesand; massive structures; moderately moist; diffuse to;
4B2ia	1.70 to 2.10	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent orange, very few < 2% fine < 5mm faint yellow jarositic (from pyrite) mottles; clayey fine sand; massive structures; very few < 2% coarse 6-20 mm ferruginous tubules segregations; moist; sharp to;
5Cu	2.10 to 2.55	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; wet; sharp to;
6C1u	2.55 to 3.40	Grey (10YR51) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;
6C2u	3.40 to 4.05	Dark grey (2.5Y40) moist colour; fine sandy loam; very few < 2% medium pebbles 6-20mm rounded charcoal coarse fragments; massive structures; wet; sharp to;

6C3u	4.05 to 4.80	Grey (2.5Y50) moist colour; sand with a 5cm coarse sand lens at 4.2m and 5cm fine sand lenses at 4.3 and 4.5m; very few < 2% small pebbles 2-6mm rounded microdiorite and subrounded quartz coarse fragments; single grain structures; wet;
7C	4.80 to 5.70	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite and subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.9	4.4	3.25	4.2	1.3
0.60	6.1	5.5	3.50	4.8	1.5
1.00	5.9	5.2	3.75	5.3	1.7
1.25	5.6	5.2	4.00	5.6	1.8
1.50	5.1	4.5	4.25	5.4	1.4
1.75	3.9	3.0	4.50	5.6	1.8
2.00	3.7	2.9	4.75	5.9	1.9
2.25	3.4	1.2	5.00	6.0	2.1
2.50	3.4	1.6	5.25	6.0	3.2
2.75	3.7	1.1	5.50	6.0	3.1
3.00	3.7	1.4			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 7.2 mS/cm; pH 4.1
 Horizon - 6C3u Lumps of wood at 4.3 and 4.5m

Project: MWQ Site: 260

Location: 727875 mE 7660195 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Jun-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Common 10-20%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist colour; clayey fine sand; very few < 2% medium pebbles 6-20mm subrounded quartz coarse fragments; single grain structures; dry; abrupt to;
2C	0.20 to 1.65	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
3B2	1.65 to 2.50	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent dark, very few < 2% fine < 5mm distinct red, few 2-10% medium 5-15mm prominent dark mottles; silty light clay with a 1cm fine sand lens at 2.4m; massive structures; very few < 2% medium 2-6 mm ferruginous tubules segregations; moist; sharp to;
3C1u	2.50 to 2.80	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent orange, few 2-10% medium 5-15mm distinct brown mottles; clayey sand with a 5cm light clay lens at 2.55m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain to massive structures; wet; sharp to;
3C2u	2.80 to 3.20	Dark grey (2.5Y40) moist colour; sand with several silty light clay plugs and a 5cm silty light clay lens at 3.15m; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain to massive structures; wet; sharp to;
3C3u	3.20 to 3.60	Dark grey (2.5Y40) moist colour; sand with a plug of silty light clay at 3.3m; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; diffuse to;
3C4u	3.60 to 4.50	Grey (10YR51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded microdiorite and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

4C 4.50 to 4.60 Light brownish grey (2.5Y62) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.5	5.3	2.75	4.2	2.4
0.60	7.3	5.8	3.00	5.7	1.6
1.00	7.4	5.8	3.25	6.5	1.6
1.50	6.9	5.5	3.50	6.7	1.8
1.75	6.2	4.9	3.75	7.0	1.8
2.00	6.1	4.8	4.00	6.8	1.8
2.25	4.9	4.8	4.25	6.8	2.0
2.50	4.6	1.4	4.50	6.9	4.3

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 4C EOP - gravel would not hold in tube
 Observation H2O EC - 0.8 mS/cm; pH 6.8

Project: MWQ Site: 261

Location: 727310 mE 7660450 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Periodic cracking

Classifications

ASC: Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; light medium clay; weak 5-10mm parting to moderate 2-5mm subangular blocky structures; moderately moist; abrupt to;
B21	0.10 to 0.45	Very dark grey (10YR31) moist colour; light medium clay; lenticular structures; moderately moist; clear to;
B22	0.45 to 0.75	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm distinct orange mottles; medium clay; lenticular structures; moderately moist; abrupt to;
2B21i	0.75 to 1.40	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent orange mottles; medium clay; moderately moist; clear to;
2B22i	1.40 to 1.80	Dark grey (5Y41) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty light medium clay; moderately moist; abrupt to;
2B23ia	1.80 to 2.55	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% medium 5-15mm distinct brown mottles; silty light clay; massive structures; moist; sharp to;
2Cu	2.55 to 3.00	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; moist; sharp to;
3C1u	3.00 to 3.55	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
3C2u	3.55 to 4.00	Dark grey (2.5Y40) moist colour; clayey sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
3C3u	4.00 to 4.40	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; gradual to;

4C 4.40 to 5.10 Light brownish grey (10YR62) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	7.1	5.6	3.00	6.5	3.7
0.60	6.3	5.7	3.25	6.3	1.8
1.00	6.5	5.7	3.50	6.3	1.9
1.50	6.4	5.8	3.75	6.4	3.8
1.75	6.2	5.4	4.00	6.9	3.8
2.00	4.9	4.5	4.25	6.2	3.8
2.25	4.4	3.4	4.50	6.6	4.9
2.50	4.2	3.6	4.75	6.5	5.2
2.75	5.0	1.5	5.00	6.5	5.3

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 4C EOP - gravel would not hold in tube
 Observation H2O could not sample

Project: MWQ Site: 262

Location: 726765 mE 7660620 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Common 10-20%, medium pebbles 6-20mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.45	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm distinct orange mottles; clay loam; fine sandy; few 2-10% fine <2 mm manganiferous nodules segregations; moderately moist; abrupt to;
B21	0.45 to 1.55	Yellowish brown (10YR58) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium clay; few 2-10% fine <2 mm manganiferous nodules and soft segregations; moderately moist; gradual to;
B22	1.55 to 2.25	Brown (10YR53) moist colour; common 10-20% fine < 5mm prominent dark, common 10-20% fine < 5mm distinct grey mottles; medium clay; strong 5-10mm lenticular structures; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; clear to;
B23	2.25 to 2.60	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm distinct grey mottles; fine sandy light medium clay; common 10-20% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	2.60 to 3.10	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm faint pale, very few < 2% fine < 5mm faint orange mottles; clayey fine sand; few 2-10% fine <2 mm manganiferous soft segregations; moist; sharp to;
3B2	3.10 to 3.40	Dark yellowish brown (10YR44) moist colour; common 10-20% fine < 5mm distinct grey mottles; clay loam; fine sandy; very few < 2% fine <2 mm manganiferous soft segregations; moist; sharp to;
4B2	3.40 to 4.10	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm distinct grey mottles; medium clay; common 10-20% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
5C	4.10 to 5.00	Yellowish brown (10YR54) moist colour; few 2-10% coarse 15-30mm prominent pale mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	4.7	
0.60	6.6	6.3	
1.00	7.6	8.3	
1.50	7.5	8.1	
2.00	7.6	7.9	
2.50	7.3	8.0	
3.00	7.1	8.1	
3.50	6.8	8.2	
4.00	7.1	8.2	
4.50	6.7	8.6	
5.00	6.7	8.0	

Notes:
 Observation H2O EC 0.7 mS/cm; pH 7.0

Project: MWQ Site: 263

Location: 725400 mE 7660865 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.45	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; silty light clay; moderately moist; abrupt to;
2C	0.45 to 0.90	Dark brown (10YR33) moist colour; loamy fine sand; single grain structures; moist; sharp to;
3C	0.90 to 1.60	Brown (10YR53) moist colour; fine sand with 5cm silty light clay lenses at 1.2 and 1.4m; few 2-10% cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist;
4C	1.60 to 2.00	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; few 2-10% fine <2 mm manganiferous soft segregations;
4C2	2.00 to 2.50	Brown (10YR43) moist colour; coarse sand; many 20-50% large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; many 20-50% fine <2 mm manganiferous soft segregations;
4C3	2.50 to 4.00	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.9	
0.60	5.1	4.1	
1.00	5.5	4.9	
1.50	6.4	7.0	
2.00	6.3	7.3	
2.50	6.8	7.9	
3.00	6.3	5.9	

Notes:

Horizon - Ap Compacted
 Horizon - 4C3 EOP - VVC stopped by river gravel at 4.0m
 Observation H2O could not sample

Project: MWQ Site: 264

Location: 725265 mE 7660445 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Eutrophic, Chromosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Neptunia gracilis (Sensitive plant); Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; sand; few 2-10% cobbles 60-200mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; sharp to;
2A1	0.20 to 0.35	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint grey mottles; silty clay loam; gradual to;
2B2	0.35 to 0.80	Dark yellowish brown (10YR44) moist colour; many 20-50% fine < 5mm distinct grey mottles; silty light medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; gradual to;
3B2	0.80 to 1.30	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent brown mottles; fine sandy clay loam; very few < 2% fine < 2 mm manganiferous soft segregations; clear to;
4B2	1.30 to 1.90	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; very few < 2% large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; strong 5-10mm parting to strong 2-5mm subangular blocky structures; sharp to;
5Cu	1.90 to 2.80	Very dark grey (2.5Y30) moist colour; silty light clay with 1-2mm fine sand or sand lenses between 2.2 and 2.8m; massive structures; sharp to;
6C	2.80 to 3.00	Dark grey (5Y40) moist colour; coarse sand with a 5mm silty light clay lens at 2.9m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain parting to massive structures; abrupt to;
7C	3.00 to 5.00	Brown (10YR53) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	7.3	4.8	2.75	6.8	1.6
0.60	6.7	4.5	3.00	7.0	1.9
1.00	7.1	6.1	3.25	7.5	3.8
1.25	7.2	5.6	3.50	7.5	4.9
1.50	6.7	5.5	3.75	7.4	5.0
1.75	6.7	5.1	4.00	7.3	5.2
2.00	6.7	3.5	4.50	7.3	5.1
2.25	6.7	1.4	5.00	7.2	5.1
2.50	6.8	1.2			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 2.6 mS/cm; pH 7.1

Project: MWQ Site: 265

Location: 724950 mE 7660325 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Jun-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting, Surface crust

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark brown (10YR33) moist and very dark grey (2.5Y30) moist colour; many 20-50% coarse 15-30mm prominent orange mottles; silty light medium clay; many 20-50% large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; moderate 5-10mm platy structures; dry; abrupt to;
2A1	0.10 to 0.25	Brown (10YR43) moist colour; many 20-50% fine < 5mm prominent orange, common 10-20% fine < 5mm prominent grey mottles; silty light medium clay; moderately moist;
2C1?	0.25 to 0.80	Black (2.5Y20) moist colour; few 2-10% medium 5-15mm distinct gley mottles; silty light medium clay; moist; diffuse to;
2C2u	0.80 to 3.55	Very dark grey (2.5Y30) moist colour; silty light clay with 1-5mm sand lenses between 2.3-2.5m and 3.3-3.55m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
3Cu	3.55 to 4.90	Dark grey (2.5Y40) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; gradual to;
4C	4.90 to 5.30	Grey (10YR61) moist colour; sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.2	3.5	2.75	6.2	1.3
0.30	6.3	3.1	3.00	6.4	1.5
0.60	6.2	2.8	3.25	6.6	1.3
0.80	6.2	2.8	3.50	6.3	1.5
1.00	5.7	1.3	3.75	6.3	1.8
1.25	4.6	1.5	4.00	6.2	1.8
1.50	4.7	1.6	4.25	6.9	1.8
1.75	4.7	1.6	4.50	7.2	1.9
2.00	5.0	1.6	4.75	7.1	1.8
2.25	5.6	1.0	5.00	6.8	4.4
2.50	6.0	1.3			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 2C2u Good lump of wood @ 2.4 m
 Observation H2O EC - 23.0 mS/cm; pH 5.2

Project: MWQ Site: 266

Location: 724950 mE 7660330 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 13-Jun-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense *Avicennia marina* (Grey mangrove);

Rhizophora stylosa (Red mangrove); *Aegiceras corniculatum* (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct brown mottles; coarse sandy clay loam; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
2A1	0.10 to 0.20	Black (2.5Y20) moist colour; fine sandy light clay; massive structures; wet; clear to;
2C1	0.20 to 0.38	Very dark grey (2.5Y30) moist colour; fine sandy light medium clay; massive structures; wet; abrupt to;
2C2	0.38 to 1.00	Very dark grey (7.5YR30) moist colour; sandy light clay with a 5cm silty light clay lens at 0.82 m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.05	4.2	1.1	
0.25	5.8	3.1	
0.50	5.8	1.4	
0.75	5.9	0.7	
1.00	5.8	1.3	

Notes:

Horizon - 2C2 EOP - Sandy material below 1.0 m would not hold in auger

Observation H2O EC - 39.5 mS/cm; pH 6.2

Project: MWQ Site: 267

Location: 728350 mE 7660125 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Jun-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense Rhizophora stylosa (Red mangrove);
 Avicennia marina (Grey mangrove); Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sandy light clay; strong 2-5mm cast structures; moist; clear to;
B2	0.15 to 0.70	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent orange, common 10-20% medium 5-15mm distinct grey mottles; silty light clay; strong 20-50mm concoidal structures; wet; abrupt to;
B3	0.70 to 0.90	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm distinct grey mottles; silty light clay; massive structures; wet;
C1u	0.90 to 1.95	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
2C1u	1.95 to 2.00	Very dark grey (2.5Y30) moist colour; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	5.3	
0.25	5.7	4.1	
0.50	5.5	4.1	
0.75	5.6	1.1	
1.00	5.8	1.9	
1.25	5.8	0.5	
1.50	6.1	1.0	
1.75	5.9	1.0	
2.00	5.8	1.4	

Notes:

Horizon - 2C1u EOP
 Observation H2O EC - 44.5 mS/cm; pH 5.9

Project: MWQ Site: 268

Location: 728940 mE 7660260 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Jun-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Pit
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.7 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, very sparse Avicennia marina (Grey mangrove)
 Lower Stratum: Tussock grass, 0.26-0.5m, closed or dense Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
B2	0.00 to 1.10	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay with sand grains throughout; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; sharp to;
Cu	1.10 to 1.65	Very dark grey (2.5Y30) moist colour; few 2-10% medium 5-15mm distinct brown mottles; light medium clay with sand grains throughout; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
2Cu	1.65 to 1.80	Very dark grey (2.5Y30) moist colour; sandy loam; very few < 2% small pebbles 2-6mm subrounded intermediate volcanic and quartz coarse fragments; massive structures; wet; sharp to;
3Cu	1.80 to 1.90	Very dark grey (10YR31) moist colour; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
4C1u	1.90 to 2.50	Dark grey (2.5Y40) moist colour; sand; few 2-10% small pebbles 2-6mm subrounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
4C2u	2.50 to 2.60	Dark grey (2.5Y40) moist colour; sand; abundant 50-90% medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.7	4.8	
0.25	5.9	4.7	
0.50	5.9	5.0	
0.75	6.1	4.9	
1.00	6.0	4.9	
1.25	6.0	1.4	
1.50	6.2	1.2	
1.75	6.6	1.3	
2.00	6.4	1.6	
2.25	6.3	1.2	
2.50	6.5	1.0	

Notes:

Horizon - Cu 2 different clays colours blended together 10YR32
 Horizon - 4C2u EOP - rocks to large to go into VVC tube
 Observation H2O EC - 41.5 mS/cm; pH 6.5

Project: MWQ Site: 269

Location: 728790 mE 7663618 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Jun-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense *Bruguiera exaristata* (Rib-fruited mangrove); *Excoecaria agallocha* (Blind-your-eye mangrove); *Lumnitzera racemosa* (Black mangrove); *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; light clay with a few sand grains; weak 5-10mm subangular blocky structures; wet; clear to;
O2	0.04 to 0.00	Black (10YR21) moist colour; wet; sharp to;
B2	0.10 to 0.90	Grey (5Y51) moist colour; many 20-50% coarse 15-30mm prominent orange mottles; fine sandy light clay with a few sand grains; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; gradual to;
Cu	0.90 to 1.40	Very dark grey (10YR31) moist colour; sandy light clay with 5cm light clay lenses at 1.1 and 1.35m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
2Cu	1.40 to 1.55	Dark grey (5Y41) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.9	
0.25	5.6	4.6	
0.50	5.7	4.7	
0.75	5.4	4.6	
1.00	5.2	3.4	
1.25	5.6	1.4	
1.50	5.5	1.5	

Notes:

Horizon - 2Cu EOP - sand would not hold in auger
 Observation H2O EC - 5.0 mS/cm; pH 5.8

Project: MWQ Site: 270

Location: 726790 mE 7663235 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 19-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Flood plain
Element: Channel bench
Runoff: No record
Elevation: 4 m
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 0 %
Surface Coarse Fragments: No coarse fragments
Surface Condition: Firm

Classifications

ASC: Haplic, Epipedal, Black, VERTOSOL
GSG: No record
PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch); Stenotaphrum secundatum (buffalo grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; fine sandy light medium clay; moderate 2-5mm subangular blocky structures; clear to;
B21	0.05 to 0.50	Black (10YR21) moist colour; medium heavy clay; strong lenticular structures; gradual to;
B22	0.50 to 0.70	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent yellow mottles; fine sandy light medium clay; abrupt to;
2B2	0.70 to 1.00	Grey (5Y61) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sandy light clay; abrupt to;
2C	1.00 to 1.15	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sandy light clay; many 20-50% medium pebbles 6-20mm angular acid volcanic coarse fragments;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	4.0	
0.60	6.1	5.0	
1.00	6.8	6.0	
1.15	7.0	6.6	

Notes:

Horizon - 2C EOP -hit bedrock
Observation Could not sample water

Project: MWQ

Site:271

Location: 724205 mE 7660185 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 21-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Channel bench

Runoff: No record

Elevation: 5.4 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: Few 2-10%, medium pebbles 6-20mm, Microdiorite

Surface Condition: Firm, Surface crust

Classifications

ASC: KANDOSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; fine sandy loam; massive structures; moderately moist; gradual to;
A12	0.15 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; moderately moist; gradual to;
B21	0.30 to 0.55	Very dark greyish brown (10YR32) moist colour; silty clay loam; massive structures; moderately moist; clear to;
B22	0.55 to 0.90	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct orange mottles; sandy clay loam; massive structures; moderately moist; clear to;
2B2	0.90 to 1.10	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct orange mottles; sandy loam; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moderately moist; sharp to;
3B21	1.10 to 1.30	Dark greyish brown (10YR42) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sand with a 5cm sand lens; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
3B22	1.30 to 1.80	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct brown mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and large pebbles 20-60mm rounded acid volcanic coarse fragments; single grain structures; moderately moist; sharp to;
3B23	1.80 to 2.05	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent orange mottles; clayey fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; sharp to;
4C	2.05 to 2.35	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; wet; abrupt to;

5B2	2.35 to 2.80	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist;
5C	2.80 to 3.00	Very dark grey (2.5Y30) moist colour; light medium clay with a sand lens at 2.95m; weak 5-10mm subangular blocky structures; moist; sharp to;
D	3.00 to 3.50	Dark bluish grey (5B41) moist colour; few 2-10% fine < 5mm faint grey mottles; medium clay; weak 2-5mm subangular blocky structures; moist

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.8	4.7	
0.60	5.4	4.3	
1.00	5.6	4.6	
1.50	6.3	5.2	
2.00	6.6	5.7	
2.25	6.4	5.4	
2.50	6.3	5.4	
2.75	6.0	5.4	
3.00	6.2	4.4	
3.25	6.6	3.0	
3.50	6.1	3.6	

Notes:

Horizon - D EOP - too hard to core
Observation H2O EC - 0.5 mS/cm; pH 6.1

Project: MWQ Site: 272

Location: 724285 mE 7660575 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 6.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Eutrophic, Brown, DERMOSOL / HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; fine sandy clay loam; few 2-10% medium pebbles 6-20mm angular microdiorite coarse fragments; massive structures; moderately moist; sharp to;
2A1	0.30 to 0.70	Black (2.5Y20) moist colour; silty clay loam, heavy; moderately moist; gradual to;
2B2	0.70 to 1.30	Dark brown (10YR33) moist colour; very few < 2% fine < 5mm faint dark mottles; silty light medium clay; moderately moist; diffuse to;
2B3	1.30 to 1.90	Brown (10YR43) moist colour; clay loam; fine sandy; massive structures; moderately moist; sharp to;
3C	1.90 to 2.40	Dark brown (10YR33) moist colour; fine sand; single grain structures; dry; sharp to;
4B1	2.40 to 2.70	Brown (10YR43) moist colour; many 20-50% fine < 5mm prominent grey mottles; clay loam; fine sandy; massive structures; moderately moist; clear to;
4B21	2.70 to 3.10	Brown (10YR43) moist colour; many 20-50% fine < 5mm prominent grey, few 2-10% fine < 5mm prominent orange mottles; silty light medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; diffuse to;
4B22	3.10 to 3.90	Greyish brown (2.5Y52) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist; abrupt to;
5B21?	3.90 to 4.20	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct grey mottles; light medium clay; massive structures; moist; sharp to;

6B2	4.20 to 4.55	Grey (10YR51) moist colour; common 10-20% fine < 5mm distinct yellow mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
6C	4.55 to 5.50	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded microdiorite and igneous rock coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.6	3.1	4.00	5.4	4.6
0.60	5.7	4.1	4.15	5.2	3.1
1.00	6.0	4.5	4.25	6.0	4.3
1.50	6.1	4.8	4.50	5.9	2.7
2.00	6.3	4.8	4.75	5.8	1.9
2.50	6.0	5.9	5.00	6.4	1.9
3.00	6.1	5.6	5.25	6.3	1.7
3.50	5.7	5.5	5.50	6.4	2.7

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 6Cu EOP - stone layer stopped VVC
 Observation H2O EC - 0.5 mS/cm; pH 5.4

Project: MWQ Site: 273

Location: 725010 mE 7660690 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Igneous rock (unidentified)
 Surface Condition: Hard setting

Classifications

ASC: Basic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.50	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; weak 2-5mm subangular blocky structures; moderately moist;
2C	0.50 to 0.60	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
2B2	0.60 to 1.30	Very dark greyish brown (10YR32) moist colour; silty clay loam; moderate 2-5mm subangular blocky structures; moist; sharp to;
3C1	1.30 to 2.00	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; clear to;
3C2	2.00 to 2.40	Light yellowish brown (10YR64) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; clear to;
3C3	2.40 to 4.60	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;
3C4	4.60 to 5.80	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	5.0	
0.60	6.3	4.4	
1.00	6.3	3.8	
1.50	6.9	5.1	
2.00	7.0	5.4	
2.50	7.2	6.1	
3.00	6.4	5.5	
3.50	6.2	5.6	
4.00	6.3	5.8	
4.50	6.1	5.7	
5.00	6.4	5.9	
5.50	6.4	5.7	

Notes:

Observation Could not sample water

Project: MWQ Site: 274

Location: 725270 mE 7660985 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Many 20-50%, medium pebbles 6-20mm, Igneous rock (unidentified)
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Leucaena leucocephala (leucaena)
 Lower Stratum: Brachiaria mutica (Para grass); Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
C1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; silty clay loam; many 20-50% medium pebbles 6-20mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; massive structures; moderately moist; sharp to;
2C	0.10 to 0.90	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sandy loam; massive structures; dry; sharp to;
3C	0.90 to 3.60	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; dry changing to wet at 1.8m;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	4.1	
0.60	6.4	3.8	
1.00	7.0	6.2	
1.50	7.1	6.0	
2.00	7.3	6.0	
2.50	5.6	5.8	
3.00	6.1	6.0	
3.50	6.1	5.8	

Notes:

Horizon – 3C EOP - Tube went to 4.1 m but 0.5 m fell out
 Observation Could not sample water

Project: MWQ Site: 275

Location: 725510 mE 7661115 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 25-Jun-2002

Landscape

Geology: Qm - Quaternary marine
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Tidal flat
Element: Intertidal flat
Runoff: No record
Elevation: 1.9 m
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 0.3 %
Surface Coarse Fragments: No coarse fragments
Surface Condition: Soft

Classifications

ASC: Arenaceous, Intertidal, HYDROSOL
GSG: No record
PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense *Aegiceras corniculatum* (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark greyish brown (10YR42) moist colour; fine sandy clay loam; massive structures;
B2	0.15 to 0.33	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% medium 5-15mm prominent grey mottles; fine sandy loam; massive structures;
2B2	0.33 to 0.45	Greyish brown (10YR52) moist colour; many 20-50% fine < 5mm prominent orange mottles; fine sand; single grain structures; many 20-50% fine < 2 mm manganiferous soft segregations;
3C	0.45 to 0.62	Dark grey (2.5Y40) moist colour; silty light clay; massive structures;
4C	0.62 to 0.70	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; common 10-20% medium 2-6 mm manganiferous soft segregations;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	4.6	
0.25	6.3	4.4	
0.50	6.3	4.4	
0.70	6.6	5.5	

Notes:

Horizon - 4C EOP - sand would not hold in auger
Observation H2O EC - 38.1 mS/cm; pH 6.0

Project: MWQ Site: 276

Location: 725510 mE 7661125 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 25-Jun-2002

Landscape

Geology: Qm - Quaternary marine
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Tidal flat
Element: Intertidal flat
Runoff: No record
Elevation: 2 m
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 0.3 %
Surface Coarse Fragments: No coarse fragments
Surface Condition: Soft

Classifications

ASC: Argillaceous, Intertidal, HYDROSOL
GSG: No record
PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense *Aegiceras corniculatum* (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; silty light clay; massive structures;
B2	0.10 to 0.40	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent orange mottles; silty light clay; massive structures;
2B2	0.40 to 0.70	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm prominent orange mottles; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; few 2-10% fine < 2 mm manganiferous soft segregations and medium 2-6 mm ferruginous tubules;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	4.8	
0.25	6.4	4.2	
0.50	6.7	5.2	
0.70	6.8	7.1	

Notes:

Horizon - 2B2 EOP - sand would not hold in auger
Observation H2O EC - 38.1 mS/cm; pH 6.0

Project: MWQ Site: 277

Location: 724640 mE 7661105 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Many 20-50%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Loose

Classifications

ASC: Sulfidic, Salic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch); Sesuvium portulacastrum (Samphire); Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark greyish brown (10YR42) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
C1	0.10 to 0.60	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;
C2	0.60 to 0.87	Dark greyish brown (10YR42) moist colour; few 2-10% fine < 5mm prominent dark mottles; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
2B2	0.87 to 1.35	Dark grey (5Y41) moist colour; common 10-20% medium 5-15mm prominent brown mottles between 1.05 and 1.25m; fine sand; single grain structures; moist; abrupt to;
3C	1.35 to 1.57	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; moist; sharp to;
4C	1.57 to 2.50	Very dark grey (10YR31) moist colour; fine sandy loam; massive structures; moist; sharp to;
5C1	2.50 to 2.70	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5C2u	2.70 to 3.00	Dark grey (2.5Y40) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.4	5.8	
0.30	7.3	5.9	
0.60	7.2	6.1	
0.80	7.0	5.4	
1.00	7.2	5.0	
1.25	6.9	5.4	
1.50	6.3	1.6	
1.75	6.2	1.4	
2.00	6.2	1.6	
2.25	6.2	1.4	
2.50	6.3	1.9	
2.75	6.5	1.5	
3.00	6.9	2.5	

Notes:

Horizon – 5C2u EOP - tube went to 3.6 m before stopped by a rock but 0.6 m of sand fell out
 Observation H2O EC - 39.5 mS/cm; pH 6.7

Project: MWQ Site: 278

Location: 725480 mE 7660140 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 26-Jun-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 4.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Common 10-20%, large pebbles 20-60mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL / Urbic, ANTHROPOSOL / Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Panicum maximum var. maximum (Guinea grass); Cynodon dactylon (Couch); Chloris gayana (rhodes grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.50	Very dark greyish brown (10YR32) moist colour; light medium clay; common 10-20% small pebbles 2-6mm, medium pebbles and cobbles 60-200mm angular microdiorite coarse fragments; moderately moist; sharp to;
C	0.50 to 1.20	Black (7.5YR20) moist colour; ash; many 20-50% glass, plastic and tile, few 2-10% large pebbles 20-60mm angular microdiorite coarse fragments; single grain structures; moderately moist; sharp to;
2C1u	1.20 to 2.80	Dark grey (5Y41) moist colour; silty light clay; massive structures; wet; diffuse to;
2C2u	2.80 to 3.70	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
3Cu	3.70 to 4.30	Very dark grey (2.5Y30) moist colour; sand; very few < 2% small pebbles 2-6mm rounded microdiorite and quartz coarse fragments; single grain structures; wet; abrupt to;
4Cu	4.30 to 4.70	Very dark grey (5Y31) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm rounded microdiorite and quartz coarse fragments; massive structures; wet; sharp to;
5Cu	4.70 to 5.70	Very dark grey (7.5YR30) moist colour; silty light clay; massive structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.8	3.5	3.25	6.5	1.2
0.60	6.9	5.7	3.50	6.5	1.2
1.00	6.6	6.3	3.75	7.6	1.5
1.25	6.3	1.3	4.00	7.0	1.7
1.50	6.5	1.7	4.25	6.7	1.7
1.75	6.6	1.8	4.50	6.6	1.2
2.00	6.5	1.9	4.75	6.7	1.3
2.25	6.8	1.2	5.00	6.8	1.2
2.50	6.7	1.6	5.25	6.8	1.4
2.75	6.7	1.2	5.50	6.8	1.6
3.00	6.6	1.2	5.70	6.7	1.6

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 2C1u Common mangrove roots
 Horizon - 2C2u 5 cm lumps of wood at 2.85, 3.0 and 3.3 m and a few mangrove roots
 Horizon - 3Cu few 2-5 mm bits of wood
 Observation H2O EC - 2.6 mS/cm; pH 6.6

Project: MWQ Site: 279

Location: 725510 mE 7660670 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 26-Jun-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense Aegiceras corniculatum (River mangrove); Avicennia marina (Grey mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; silty light clay; weak 2-5mm subangular blocky structures; wet; abrupt to;
B2	0.10 to 0.58	Very dark grey (10YR31) moist colour; many 20-50% distinct brown mottles; silty light clay; weak 2-5mm subangular blocky structures; wet; clear to;
Cu	0.58 to 1.17	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	1.17 to 1.30	Very dark grey (7.5YR30) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.5	
0.25	6.0	4.5	
0.50	5.9	4.7	
0.75	6.1	1.1	
1.00	6.1	1.0	
1.25	6.2	1.3	

Notes:

Horizon - 2Cu EOP - fine sand would not hold in gouge auger
 Observation H2O EC - 40.1 mS/cm; pH 6.2

Project: MWQ**Site:280**

Location: 723735 mE 7659130 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 27-Jun-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 5.5 m

Microrelief: Normal gilgai

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Periodic cracking, Firm

Classifications

ASC: Endohypersodic, Epipedal, Black, VERTOSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct brown mottles; silty medium clay; strong 5-10mm parting to strong 2-5mm subangular blocky structures; moderately moist; clear to;
B21	0.10 to 0.65	Black (10YR21) moist colour; few 2-10% fine < 5mm faint orange mottles; silty medium heavy clay; lenticular structures; moderately moist; gradual to;
B22	0.65 to 1.80	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm prominent dark, few 2-10% medium 5-15mm prominent grey mottles; medium clay; lenticular structures; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; diffuse to;
B23	1.80 to 2.20	Grey (5Y51) moist colour; common 10-20% medium 5-15mm distinct brown, few 2-10% coarse 15-30mm distinct gley mottles; medium clay; moist;
2C1	2.20 to 3.00	Dark grey (10YR41) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; gradual to;
2C2	3.00 to 5.00	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	2.5	
0.60	6.0	5.1	
1.00	6.3	6.6	
1.50	6.1	5.2	
2.00	5.7	4.9	
2.50	6.5	4.8	
3.00	6.7	5.1	
3.50	6.6	5.2	
4.00	6.7	5.2	
4.50	6.7	5.2	
5.00	6.9	5.4	

Notes:

Horizon - 2C2 EOP - stones stopped VVC @ 5.0 m

Observation H2O EC - 0.4 mS/cm; ph 6.3

Project: MWQ Site: 281

Location: 727365 mE 7652885 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense *Ceriops tagal* (Yellow mangrove);
Bruguiera exaristata (Rib-fruited mangrove); *Rhizophora stylosa* (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; clear to;
C1u	0.30 to 1.10	Very dark greyish brown (10YR32) moist colour; sandy light medium clay with pockets of sand at intervals and a 5cm silty light clay lens at 0.9m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
C2u	1.10 to 1.28	Very dark brown (10YR22) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	1.28 to 2.15	Dark grey (2.5Y40) moist colour; clayey fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.1	
0.25	5.9	3.5	
0.50	6.3	2.8	
0.75	6.2	1.1	
1.00	6.2	0.9	
1.25	6.1	2.8	
1.50	6.1	1.8	
1.75	6.2	1.1	
2.00	6.3	1.1	

Notes:

Horizon – 2Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 48.1 mS/cm; pH 6.2

Project: MWQ Site: 282

Location: 727000 mE 7650000 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Surface crust

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense *Ceriops tagal* (Yellow mangrove);
Bruguiera exaristata (Rib-fruited mangrove)
 Lower Stratum: *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.06	Black (10YR21) moist colour; light clay; strong 2-5mm subangular blocky structures; moist; abrupt to;
A12	0.06 to 0.20	Very dark brown (10YR22) moist colour; light clay, fibric; weak 2-5mm subangular blocky structures; moist; clear to;
B1	0.20 to 0.47	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct orange mottles; fine sandy light clay; massive structures; moist; clear to;
B2	0.47 to 0.75	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm prominent orange mottles; silty light clay; weak 2-5mm subangular blocky structures in orange mottle; moist; abrupt to;
C1u	0.75 to 1.17	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm distinct grey mottles; fine sandy light clay; massive structures; wet; abrupt to;
C2u	1.17 to 1.33	Very dark grey (5Y31) moist colour; fine sandy light clay; massive structures; wet; sharp to;
2Cu	1.33 to 1.65	Very dark grey (2.5Y30) moist colour; clayey fine sand; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	4.5	
0.25	4.3	3.4	
0.50	4.2	3.4	
0.75	4.5	3.7	
1.00	4.6	4.2	
1.25	4.8	0.9	
1.50	5.0	1.1	
1.65	5.3	1.2	

Notes:

Horizon – 2Cu EOP - Gouge auger would not go deeper
 Observation H2O Ec - 52.3 mS/cm; pH 5.4

Project: MWQ Site: 283

Location: 726590 mE 7654375 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 03-Jul-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 1.8 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Shell

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, very sparse Avicennia marina (Grey mangrove);

Rhizophora stylosa (Red mangrove)

Mid Stratum: Tree, 1.01-3m, closed or dense Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
B2	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct pale mottles; fine sandy light clay; massive structures; moist; clear to;
C1u	0.30 to 0.85	Very dark greyish brown (10YR32) moist colour; fine sandy light clay; massive structures; moist;
C2u	0.85 to 1.60	Very dark greyish brown (10YR32) moist colour; common 10-20% medium 5-15mm distinct grey mottles, mottle is lenses of dark grey fine sandy light clay or very dark grey light clay (2.5Y30); silty light clay; massive structures; wet; sharp to;
2Cu	1.60 to 1.70	Very dark grey (2.5Y30) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	3.7	
0.25	5.8	0.9	
0.50	5.9	1.1	
0.75	5.9	1.1	
1.00	5.9	0.9	
1.25	5.9	1.2	
1.50	6.0	1.5	
1.70	6.0	1.6	

Notes:

Horizon - 2Cu EOP - sand would not hold in gouge auger

Observation H2O EC - 56.7 mS/cm; pH 5.7

Project: MWQ Site: 284

Location: 727330 mE 7655470 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 03-Jul-2002

Landscape

Geology: Qm - Quaternary marine
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Tidal flat
Element: Intertidal flat
Runoff: No record
Elevation: 2.5 m
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 0.2 %
Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Shell
Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
GSG: No record
PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense *Ceriops tagal* (Yellow mangrove);
Avicennia marina (Grey mangrove); *Rhizophora stylosa* (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm faint orange mottles; sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; weak 5-10mm subangular blocky structures; moist; clear to;
B2	0.15 to 0.50	Very dark grey (2.5Y30) moist colour; common 10-20% fine < 5mm distinct orange mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; weak 5-10mm subangular blocky structures; moist; abrupt to;
2Cu	0.50 to 0.80	Very dark grey (2.5Y30) moist colour; clayey sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	5.0	
0.25	5.8	5.1	
0.50	5.9	5.4	
0.75	6.0	4.2	

Notes:

Horizon - 2Cu EOP - sand would not hold in gouge auger
Observation H2O EC - 43.8 mS/cm; pH 6.1

Project: MWQ Site: 285

Location: 725000 mE 7650000 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 03-Jul-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 3.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense *Ceriops tagal* (Yellow mangrove);

Excoecaria agallocha (Blind-your-eye mangrove); *Avicennia marina* (Grey mangrove);

Bruguiera exaristata (Rib-fruited mangrove)

Mid Stratum: *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm faint brown mottles; silty light clay; weak 5-10mm cast structures; moist; gradual to;
B2	0.25 to 0.95	Grey (10YR51) moist colour; common 10-20% fine < 5mm distinct brown, common 10-20% medium 5-15mm prominent brown mottles; silty light clay; weak 2-5mm subangular blocky structures; moist; abrupt to;
Cu	0.95 to 1.50	Very dark grey (7.5YR30) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	1.50 to 1.55	Dark grey (7.5YR40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.0	
0.25	5.9	4.7	
0.50	5.7	4.9	
0.75	5.7	4.7	
1.00	5.6	4.2	
1.25	5.6	1.2	
1.50	5.6	1.5	

Notes:

Horizon - 2Cu EOP - sand would not hold in gouge auger

Observation H2O EC - 46.0 mS/cm; pH 6.1

Project: MWQ Site: 286

Location: 722200 mE 7660040 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Levee
 Runoff: No record
 Elevation: 5.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm
 Surface Condition: Recently cultivated

Classifications

ASC: Basic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; moderately moist; sharp to;
2B2	0.15 to 0.35	Very dark greyish brown (10YR32) moist colour; sandy light clay; many 20-50% large pebbles 20-60mm angular microdiorite coarse fragments; massive structures; moderately moist; sharp to;
3A1	0.35 to 0.60	Dark brown (10YR33) moist colour; fine sandy clay loam, light; massive structures; moderately moist; abrupt to;
4C1	0.60 to 0.80	Dark brown (10YR33) moist colour; fine sandy loam; massive structures; moist; abrupt to;
4C2	0.80 to 0.90	Dark brown (10YR33) moist colour; fine sand; single grain structures; moist; sharp to;
5B2	0.90 to 1.00	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sandy clay loam; massive structures; moderately moist; sharp to;
6C	1.00 to 1.30	Brown (10YR43) moist colour; fine sand; single grain structures; moist; sharp to;
7B2	1.30 to 1.50	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist;
7B2	1.50 to 1.75	Dark brown (10YR33) moist colour; fine sandy light medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
8C	1.75 to 2.20	Dark brown (10YR33) moist colour; fine sand; single grain structures; moist; sharp to;

9B21	2.20 to 2.50	Very dark brown (10YR22) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% medium 5-15mm prominent brown mottles; fine sandy light clay and clay loam fine sandy lenses with a 2cm fine sand lens at 2.48m; weak 2-5mm lenticular structures; very few < 2% medium 2-6 mm manganiferous concretions segregations; moderately moist; sharp to;
9B22	2.50 to 3.20	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sandy light medium clay; weak 2-5mm lenticular structures; common 10-20% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
9C	3.20 to 5.60	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	2.7	
0.60	6.1	4.0	
1.00	6.0	3.9	
1.50	6.1	4.2	
2.00	5.6	3.7	
2.50	5.6	3.9	
3.00	5.7	3.8	
3.50	6.4	4.5	
4.00	7.1	5.5	
4.50	6.7	7.3	
5.00	6.8	6.0	

Notes:

Observation H2O EC - 1.7 mS/cm; pH 6.3

Project: MWQ Site: 287

Location: 722625 mE 7659915 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Melacic, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; silty light medium clay; weak 5-10mm subangular blocky parting to weak 2-5mm cast structures; moderately moist; clear to;
B2	0.20 to 1.20	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent red-brown mottles; silty light medium clay; moderately moist; abrupt to;
Cu	1.20 to 3.40	Very dark grey (2.5Y30) moist colour; silty light medium clay; massive structures; moist; sharp to;
2C1	3.40 to 3.80	Dark grey (5Y41) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
2C2	3.80 to 4.10	Yellowish brown (10YR54) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.7	
0.25	4.9	3.9	
0.60	4.7	3.9	
0.80	4.7	3.9	
1.00	4.6	4.0	
1.25	5.8	2.8	
1.50	6.0	1.8	
1.75	6.4	2.5	
2.00	6.6	1.3	
2.25	6.8	2.1	
2.50	6.8	2.0	
2.75	6.9	1.4	
3.00	7.0	1.4	
3.25	7.0	2.5	
3.50	6.8	3.3	
3.75	6.8	3.1	
4.00	6.7	5.0	
4.10	6.8	5.6	

Notes:

Horizon – 2C2 EOP - large rock at 4.1 m stopped VVC tube
 Observation H2O EC - 9.6 mS/cm; pH 6.0

Project: MWQ**Site:288**

Location: 723130 mE 7659850 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 09-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Levee

Runoff: No record

Elevation: 8.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No record

Surface Condition: Recently cultivated

Classifications

ASC: Melacic, Mesotrophic, Black, KANDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; fine sandy loam; massive structures; moderately moist; abrupt to;
B2	0.30 to 0.50	Black (10YR21) moist colour; clay loam; fine sandy; massive structures; moderately moist; sharp to;
C1	0.50 to 0.90	Dark brown (10YR33) moist colour; fine sand; single grain structures; moderately moist; clear to;
C2	0.90 to 1.90	Brown (10YR43) moist colour; sand; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; clear to;
C3	1.90 to 2.40	Yellowish brown (10YR54) moist colour; fine sand; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; abrupt to;
C4	2.40 to 2.90	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; abrupt to;
C5	2.90 to 4.05	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.4	4.1	
0.60	5.9	4.7	
1.00	6.0	4.9	
1.50	6.6	5.1	
2.00	6.5	5.2	
2.50	6.6	5.3	
3.00	6.6	5.5	
3.50	6.7	5.5	
4.00	6.9	5.5	

Notes:

Horizon – C5 EOP - large stone stopped VVC
 Observation Could not sample water was > 4.0 m

Project: MWQ Site: 289

Location: 723360 mE 7659600 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: No record
 Landform Pattern: Flood plain
 Element: prior stream
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking, Surface crust

Classifications

ASC: Endohypersodic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark brown (10YR22) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; strong 10-20mm parting to moderate 2-5mm subangular blocky structures; moderately moist; abrupt to;
B21	0.05 to 0.90	Black (7.5YR20) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium heavy clay; lenticular structures; moderately moist; gradual to;
B22	0.90 to 1.25	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; medium clay; moderately moist; clear to;
B23	1.25 to 1.75	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moderately moist; clear to;
B24	1.75 to 2.00	Light olive grey (5Y62) moist colour; common 10-20% fine < 5mm distinct brown, very few < 2% fine < 5mm distinct pale mottles; light clay with fine sand lenses; moist; sharp to;
2C	2.00 to 2.50	Grey (10YR51) moist colour; light clay with 2-5mm fine sand lenses at 2.2, 2.25 and 2.4m; single grain structures; moist; sharp to;
3C	2.50 to 3.10	Grey (10YR61) moist colour; very few < 2% medium 5-15mm prominent orange mottles; fine sand with a 2mm Light clay lens at 2.8m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4Cu	3.10 to 3.20	Dark grey (2.5Y40) moist colour; fine sandy loam; massive structures; wet; sharp to;
5Cu	3.20 to 3.30	Very dark grey (2.5Y30) moist colour; sand; single grain structures; wet; sharp to;

6Cu	3.30 to 4.70	Dark grey (2.5Y40) moist colour; silty light clay; several 2-5cm layers of mangrove debris; massive structures; wet; sharp to;
7D	4.70 to 5.20	Dark greenish grey (5GY41) moist colour; fine sandy medium clay with a 2cm fine sand and gravel lens at 4.7m; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.9	3.5	3.25	6.2	1.4
0.60	5.9	4.8	3.50	6.0	1.5
1.00	5.7	5.5	3.75	5.9	1.5
1.50	5.9	5.1	4.00	5.8	1.4
2.00	6.2	4.9	4.25	6.0	1.7
2.25	6.0	5.1	4.50	6.1	1.8
2.50	5.9	4.8	4.75	6.5	3.0
2.75	6.4	4.7	5.00	6.3	3.2
3.00	6.6	4.6			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.4 mS/cm; pH 6.2

Project: MWQ Site: 290

Location: 722970 mE 7659730 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 5.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Haplic, Eutrophic, Black, CHROMOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (2.5Y31) moist colour; fine sandy clay loam; abundant 50-90% medium pebbles 6-20mm angular microdiorite coarse fragments; massive structures; moderately moist; sharp to;
2A1	0.15 to 0.45	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty clay loam, light; massive structures; moderately moist;
2B21	0.45 to 1.45	Black (7.5YR20) moist colour; medium clay; moderately moist; diffuse to;
2B22	1.45 to 2.30	Strong brown (7.5YR46) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
3B2	2.30 to 2.80	Dark greyish brown (10YR42) moist colour; few 2-10% fine < 5mm distinct brown mottles; sandy loam; massive structures; moderately moist; sharp to;
4B2	2.80 to 5.70	Dark greyish brown (10YR42) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist to wet at 4.5m;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	5.4	
0.60	6.0	2.7	
1.00	6.3	4.0	
1.50	6.6	5.7	
2.00	6.7	5.9	
2.50	7.0	5.9	
3.00	7.0	5.6	
3.50	7.2	5.5	
4.00	7.2	5.3	
4.50	6.9	5.6	
5.00	7.2	5.3	

Notes:
 Observation H2O EC - 0.3 mS/cm; pH 6.3

Project: MWQ Site: 291

Location: 721740 mE 7659830 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Dermosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; light medium clay; very few < 2% small pebbles 2-6mm subangular microdiorite coarse fragments; massive structures; dry; clear to;
A12	0.30 to 0.40	Very dark greyish brown (10YR32) moist colour; many 20-50% fine < 5mm prominent brown mottles; sandy light medium clay; few 2-10% small pebbles 2-6mm subangular microdiorite coarse fragments; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
2B21	0.40 to 0.90	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; strong 5-10mm subangular blocky structures; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; gradual to;
2B22	0.90 to 1.35	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent brown mottles; fine sandy light clay; moderate 2-5mm subangular blocky structures; moist; gradual to;
2B23	1.35 to 2.10	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; weak 2-5mm subangular blocky structures; moist; gradual to;
3B2i	2.10 to 2.60	Very dark grey (7.5YR30) moist colour; common 10-20% medium 5-15mm prominent brown mottles; medium clay; weak 2-5mm subangular blocky structures; moist; abrupt to;
3Cu	2.60 to 3.10	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
4Cu	3.10 to 3.25	Dark grey (2.5Y40) moist colour; clayey fine sand; massive structures; wet; sharp to;
5Cu	3.25 to 3.55	Very dark grey (2.5Y30) moist colour; silty light clay with 5mm coarse sand lenses at 3.35, 3.4 and 3.5m; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; massive structures; wet; sharp to;

6C1u	3.55 to 3.65	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
6C2u	3.65 to 3.80	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
7C	3.80 to 4.60	Light yellowish brown (10YR64) moist colour; very few < 2% very coarse > 30mm prominent orange mottles; coarse sand; few 2-10% large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.8	2.9	2.50	6.5	2.9
0.60	6.0	4.0	2.75	6.4	2.3
0.80	6.4	3.2	3.00	6.5	1.5
1.00	6.5	4.3	3.25	6.2	1.3
1.25	6.2	3.8	3.50	6.6	1.3
1.50	6.2	3.9	3.75	6.5	1.1
1.75	5.7	4.4	4.00	6.4	4.5
2.00	5.4	4.1	4.25	6.8	4.8
2.25	6.4	3.0	4.50	6.9	5.0

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 7C EOP - VVC went to 5.3 m but coarse sand did not hold in tube; Band of orange colour at 4.1 m
 Horizon – 6C2u 10cm mangrove debris layer from 3.65 - 3.75m
 Observation H2O EC - 0.7 mS/cm; pH 6.0

Project: MWQ Site: 292

Location: 721350 mE 7660000 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 7.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Haplic, Eutrophic, Brown, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; silty loam; massive structures; moderately moist; gradual to;
B2	0.15 to 1.00	Dark brown (10YR33) moist colour; clay loam; fine sandy; massive structures; moist; abrupt to;
2B2	1.00 to 1.30	Dark brown (10YR33) moist colour; clayey fine sand; massive structures; moist; sharp to;
2C	1.30 to 1.70	Brown (10YR53) moist colour; fine sand; single grain structures; moist; sharp to;
3B2	1.70 to 2.00	Dark brown (10YR33) moist colour; fine sandy loam, light; massive structures; moist; sharp to;
4C1	2.00 to 2.60	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; clear to;
4C2	2.60 to 3.10	Light yellowish brown (10YR64) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm, large pebbles 20-60mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.5	
0.60	5.8	4.9	
1.00	6.2	5.3	
1.50	6.5	5.0	
2.00	6.4	5.3	
2.50	6.8	5.5	
3.00	6.8	5.3	

Notes:

Horizon - 4C2 EOP - too many big stones; could not auger any deeper; assume this material goes to 5.0
 Observation H2O below 3.1 m could not sample

Project: MWQ Site: 293

Location: 723995 mE 7658395 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 5.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Endohypersodic, Epipedal, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Dark brown (10YR33) moist colour; loamy sand; common 10-20% large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2B21	0.25 to 0.85	Black (7.5YR20) moist colour; medium heavy clay; lenticular structures; moderately moist; diffuse to;
2B22	0.85 to 1.50	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; lenticular structures; moderately moist; diffuse to;
2B23	1.50 to 1.80	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct yellow, few 2-10% medium 5-15mm prominent grey mottles; medium clay; moderately moist; sharp to;
3C1	1.80 to 3.00	Greyish brown (10YR52) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; gradual to;
3C2	3.00 to 4.65	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
4C	4.65 to 4.85	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.6	3.7	
0.60	6.2	5.2	
1.00	6.5	5.5	
1.50	6.4	5.6	
2.00	6.8	5.3	
2.50	6.7	5.3	
3.00	6.9	5.6	
3.50	6.9	5.3	
4.00	6.9	5.5	
4.50	6.6	4.9	
4.85	6.3	4.2	

Notes:

Horizon – 4C EOP - sand would not hold in tube but VVC went to 5.7 m
 Observation H2O could not sample

Project: MWQ Site: 294

Location: 726760 mE 7655595 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Jul-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist colour; fine sand; single grain structures; dry; clear to;
C1	0.20 to 0.50	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; gradual to;
C2	0.50 to 0.90	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; single grain structures; moderately moist; abrupt to;
2C	0.90 to 1.00	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite coarse fragments; moderately moist; sharp to;
3B21	1.00 to 1.20	Grey (5Y61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; gradual to;
3B22	1.20 to 2.00	Grey (5Y51) moist colour; common 10-20% coarse 15-30mm prominent brown mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; clear to;
3B23	2.00 to 2.30	Grey (5Y51) moist colour; common 10-20% coarse 15-30mm prominent brown mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; sharp to;
4B2	2.30 to 2.95	Yellowish brown (10YR55) moist colour; common 10-20% coarse 15-30mm prominent grey mottles; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
4C	2.95 to 3.70	Grey (5Y61) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subrounded quartz, granite and igneous rock coarse fragments; single grain structures; wet; sharp to;

5D 3.70 to 4.00 Dark grey (5Y41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; few 2-10% fine <2 mm manganiferous nodules segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	4.9	
0.60	6.6	5.0	
1.00	5.2	4.7	
1.50	5.9	5.3	
2.00	6.5	4.8	
2.50	6.6	5.3	
3.00	6.6	4.5	
3.50	6.2	4.6	
4.00	6.4	6.6	

Notes:

Horizon – 5D EOP - clay too stiff for VVC to penetrate
 Observation H2O EC - 0.7 mS/cm; pH 6.2

Project: MWQ Site: 295

Location: 727000 mE 7655515 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Kandosolic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct yellow-brown mottles; coarse sandy clay loam, light; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; massive structures; moist; clear to;
B2	0.10 to 0.70	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; coarse sandy clay loam; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) and medium pebbles 6-20mm rounded acid volcanic coarse fragments; massive structures; moist; sharp to;
C1	0.70 to 1.30	Grey (10YR61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
C2	1.30 to 3.20	Grey (10YR51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic and igneous rock and subrounded quartz coarse fragments; single grain structures; wet; sharp to;
C3u	3.20 to 3.40	Very dark grey (2.5Y30) moist colour; coarse sand; few 2-10% small pebbles 2-6mm rounded intermediate volcanic and subrounded quartz coarse fragments; single grain structures; wet; sharp to;
C4u	3.40 to 3.60	Grey (10YR51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm subrounded quartz and medium pebbles 6-20mm rounded igneous rock coarse fragments; single grain structures; wet; sharp to;
2D	3.60 to 4.00	Dark greyish brown (2.5Y42) moist colour; many 20-50% fine < 5mm prominent grey, few 2-10% fine < 5mm distinct orange mottles; medium heavy clay; massive structures; very few < 2% fine < 2 mm manganiferous nodules segregations; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.4	4.5	2.25	7.1	4.4
0.25	6.8	5.4	2.50	7.2	4.2
0.50	7.1	5.9	2.75	7.1	2.4
0.75	6.6	5.3	3.00	7.1	4.5
1.00	6.8	5.1	3.25	7.2	3.6
1.25	6.7	4.3	3.50	7.3	3.2
1.50	6.8	5.7	3.75	6.6	6.0
1.75	6.8	3.2	4.00	6.6	5.5
2.00	7.4	4.0			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – C3u 5 cm layer of mangrove debris at 3.3 m
 Observation H2O EC - 18.2 mS/cm; pH 6.3

Project: MWQ Site: 296

Location: 727260 mE 7654890 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Jul-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Brown (10YR43) moist colour; fine sand; single grain structures; dry; gradual to;
C	0.20 to 2.30	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry changing to moderately moist; abrupt to;
2C1	2.30 to 2.40	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
2C2 or 3B	2.40 to 3.00	Yellowish brown (10YR56) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
3C	3.00 to 3.30	Light grey (10YR72) moist, white (10YR81) dry colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
4B2	3.30 to 4.10	Yellowish brown (10YR56) moist colour; very few < 2% fine < 5mm distinct pale, very few < 2% fine < 5mm distinct orange mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
5B	4.10 to 4.55	Yellowish brown (10YR58) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
5C	4.55 to 4.70	White (10YR81) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;

6Cu	4.70 to 5.00	Dark grey (2.5Y40) moist colour; coarse sand with a 5cm fine sand lens at 4.95m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
7D	5.00 to 5.30	Olive brown (2.5Y44) moist colour; common 10-20% fine < 5mm prominent grey mottles; medium clay; massive structures; few 2-10% coarse 6-20 mm calcareous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.8	5.3	
0.60	7.1	5.4	
1.00	7.5	5.1	
1.50	7.6	5.1	
2.00	7.4	5.1	
2.50	6.9	5.2	
3.00	6.8	5.0	
3.50	7.0	5.2	
4.00	7.1	5.3	
4.50	7.7	5.1	
4.75	7.8	1.5	
5.00	7.6	1.6	
5.25	7.1	6.5	

Notes:

Observation Could not sample water

Project: MWQ Site: 297

Location: 727440 mE 7653910 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Jul-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Pit
 Runoff: No record
 Elevation: 4.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris; Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Brown (10YR53) moist colour; fine sand; single grain structures; dry; gradual to;
C1	0.15 to 0.60	Light yellowish brown (10YR64) moist colour; fine sand; single grain structures; moderately moist;
C2	0.60 to 2.00	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
2C	2.00 to 3.15	Light yellowish brown (10YR64) moist colour; coarse sand; many 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded shell, quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
3Cu	3.15 to 3.90	Dark grey (2.5Y40) moist colour; fine sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded microdiorite, quartz and shell coarse fragments; single grain structures; wet; clear to;
4C1	3.90 to 4.20	Grey (5Y51) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
4C2	4.20 to 4.70	Grey (5Y61) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and acid volcanic coarse fragments; single grain structures; wet;
4C3	4.70 to 5.00	Grey (5Y51) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz and acid volcanic coarse fragments; single grain structures; wet; sharp to;
5C1u	5.00 to 5.40	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and microdiorite coarse fragments; single grain structures; wet; sharp to;

5C2u	5.40 to 5.75	Dark grey (2.5Y40) moist colour; coarse sand with a 5cm fine sand lens at 5.65m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and microdiorite coarse fragments; single grain structures; wet; sharp to;
6C1	5.75 to 6.35	Grey (5Y51) moist colour; fine sand; single grain structures; wet; sharp to;
6C2	6.35 to 6.55	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
6C3	6.55 to 6.70	Grey (5Y51) moist colour; fine sand; single grain structures; wet; sharp to;
7D	6.70 to 6.90	Dark greenish grey (5GY41) moist colour; many 20-50% fine < 5mm prominent brown mottles; medium clay; moderate 2-5mm lenticular structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.7	4.2	4.75	7.5	4.9
1.00	5.8	4.4	5.00	7.6	2.2
2.00	7.1	5.5	5.25	7.5	1.6
2.50	7.2	5.8	5.50	7.6	1.5
3.00	7.3	5.7	5.75	7.9	1.5
3.25	7.4	2.1	6.00	7.1	1.5
3.50	7.4	3.7	6.25	7.2	1.7
3.75	7.5	3.3	6.50	7.3	2.0
4.00	7.6	4.2	6.75	7.3	5.6
4.25	7.5	4.9	6.90	6.8	6.0
4.50	7.7	4.9			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 7D EOP - too stiff to core
 Observation H2O EC - 10.6 mS/cm; pH 7.2

Project: MWQ Site: 298

Location: 727625 mE 7652920 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 12-Jul-2002

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Swale

Runoff: No record

Elevation: 4 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Quartz

Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, isolated clumps Cupaniopsis anacardioides (Tuckeroo)

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark greyish brown (10YR42) moist colour; fine sand; single grain structures; dry; clear to;
C1	0.15 to 0.40	Yellowish brown (10YR54) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; abrupt to;
C2	0.40 to 1.25	Light yellowish brown (10YR64) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded acid volcanic coarse fragments; single grain structures; dry; gradual to;
2C1	1.25 to 2.35	Yellowish brown (10YR54) moist colour; coarse sand with a 3cm fine sand lens at 2.3m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded acid volcanic and igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
2C2	2.35 to 3.00	Yellowish brown (10YR54) moist colour; coarse sand with a 8cm fine sand lens at 2.48m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded shell and acid volcanic and subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
2C3	3.00 to 3.60	Light brownish grey (10YR62) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded shell and acid volcanic coarse fragments; single grain structures; wet; sharp to;
3C1u	3.60 to 4.15	Dark grey (2.5Y40) moist colour; fine sand with a 5mm mud lens at 4.14m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded shell and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
3C2u	4.15 to 4.45	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded shell and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

3C3u	4.45 to 4.95	Dark grey (2.5Y40) moist colour; fine sand with a 5mm mud lens at 4.47m and a 3cm coarse sand lens at 4.55m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic and subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3C4u	4.95 to 5.10	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and intermediate volcanic and subrounded basalt coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.9	5.0	3.50	7.4	5.7
0.60	6.3	5.0	3.75	7.5	2.1
1.00	6.5	5.0	4.00	7.5	1.9
1.50	6.6	5.3	4.25	8.0	1.8
2.00	7.2	5.7	4.50	7.8	1.8
2.50	6.6	6.5	4.75	7.5	1.9
3.00	7.2	6.0	5.00	7.7	1.7
3.25	7.1	6.3			

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 20.8 mS/cm; pH 7.1

Project: MWQ

Site:299

Location: 727615 mE 7653510 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 16-Jul-2002

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Swale

Runoff: No record

Elevation: 6 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 5 %

Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Quartz

Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, isolated clumps *Planchonia careya* (Cockatoo apple); *Cupaniopsis anacardioides* (Tuckeroo)

Mid Stratum: *Alphitonia excelsa* (Red ash, soapbush)

Lower Stratum: *Heteropogon contortus* (Black speargrass); *Rhynchelytrum repens*

Profile

Horizon	Depth (m)	Description
C1	0.00 to 0.30	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm rounded pumice and subrounded quartz and acid volcanic coarse fragments; single grain structures; dry;
C2	0.30 to 1.10	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; abrupt to;
C3	1.10 to 1.40	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; moderately moist; abrupt to;
C4	1.40 to 2.30	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and acid volcanic coarse fragments; single grain structures; moderately moist; abrupt to;
C5	2.30 to 2.60	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; moderately moist; abrupt to;
C6	2.60 to 2.90	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; abrupt to;
2C1	2.90 to 3.80	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; few 2-10% fine <2 mm calcareous soft segregations; moderately moist; sharp to;
2C2	3.80 to 4.10	Yellowish brown (10YR54) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;

2C3	4.10 to 4.75	Brown (10YR53) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded shell and igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
2C4	4.75 to 5.55	Greyish brown (2.5Y52) moist colour; fine sand with 5cm coarse sand lenses at 4.9 and 5.2m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded shell and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
3C1	5.55 to 5.70	Grey (2.5Y50) moist colour; fine sand; very few < 2% medium pebbles 6-20mm rounded shell coarse fragments; single grain structures; wet; sharp to;
3C2	5.70 to 5.85	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded shell and quartz coarse fragments; single grain structures; wet; sharp to;
3C3	5.85 to 6.00	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% medium pebbles 6-20mm rounded shell coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.6	4.8	3.50	7.7	5.4
0.60	7.2	4.7	4.00	7.6	6.1
1.00	7.5	4.9	4.50	7.5	6.0
1.50	7.5	4.9	5.00	8.1	6.3
2.00	7.5	5.2	5.50	8.0	6.3
2.50	7.5	5.2	5.75	7.8	2.1
3.00	7.6	6.9	6.00	7.3	1.8

pH_F (pH using electrode probe),
pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – C4 black mineral not manganese

Horizon – 2C1 Few black mineral

Observation Could not sample water

Project: MWQ Site: 300

Location: 726835 mE 7654920 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Recently cultivated

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (2.5Y20) moist colour; common 10-20% fine < 5mm prominent orange mottles; sandy light medium clay and sand mix; fragment structures; moderately moist; sharp to;
2B21i	0.30 to 0.70	Light brownish grey (10YR62) moist colour; very few < 2% fine < 5mm distinct red, many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm distinct dark mottles; fine sandy light medium clay; moderately moist; clear to;
2B22i	0.70 to 1.00	Very dark greyish brown (10YR32) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% coarse 15-30mm prominent dark mottles; light medium clay; moist; abrupt to;
2B23ia	1.00 to 1.30	Very dark greyish brown (10YR32) moist colour; many 20-50% medium 5-15mm prominent yellow jarositic (from pyrite), few 2-10% coarse 15-30mm prominent dark mottles; light clay; massive structures; moist; abrupt to;
3B21ia	1.30 to 1.55	Grey (5Y61) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent brown, few 2-10% medium 5-15mm distinct dark mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) and medium pebbles 6-20mm rounded siltstone coarse fragments; massive structures; moist; sharp to;
4B2ia	1.55 to 1.78	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct orange mottles; clay loam; sandy; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded siltstone and quartz coarse fragments; massive structures; wet; sharp to;
5B2ia	1.78 to 1.84	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent brown mottles; medium clay; massive structures; moist; abrupt to;
6D	1.84 to 2.10	Grey (5Y51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium heavy clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	3.6	
0.25	5.3	3.7	
0.50	5.2	3.9	
0.75	4.2	3.4	
1.00	3.8	3.1	
1.25	3.9	2.8	
1.50	5.0	3.2	
1.75	4.5	3.6	
2.00	4.6	3.0	

Notes:

Horizon – 3B2ia Coarse fragments only in bottom 5 cm of the horizon
 Horizon – 6D EOP - too stiff for VVC to penetrate
 Observation H2O EC - 5.8 mS/cm; pH 4.0

Project: MWQ Site: 301

Location: 726420 mE 7654750 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 16-Jul-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 2.6 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Excoecaria agallocha (Blind-your-eye mangrove)

Lower Stratum: Paspalum vaginatum (Saltwater couch); Chloris truncata (windmill grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; fine sandy light medium clay; moderate 10-20mm subangular blocky structures; dry; abrupt to;
B2	0.15 to 0.25	Light olive brown (2.5Y56) moist colour; common 10-20% coarse 15-30mm prominent dark, few 2-10% fine < 5mm distinct grey mottles; fine sandy light medium clay; moderately moist; sharp to;
2B21	0.25 to 0.55	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent yellow-brown, few 2-10% fine < 5mm distinct grey mottles; fine sandy loam; moist; clear to;
2B22	0.55 to 1.20	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown mottles; fine sand; single grain structures; moist;
2C1u	1.20 to 2.55	Dark grey (2.5Y40) moist colour; fine sand with 1cm brown silty light clay lenses at 1.2, 1.25 and 1.3m; single grain structures; wet; sharp to;
2C2u	2.55 to 3.55	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded microdiorite coarse fragments; single grain structures; wet; sharp to;
2C3u	3.55 to 4.00	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
2C4u	4.00 to 5.60	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded microdiorite coarse fragments; single grain structures; wet; sharp to;
3D	5.60 to 5.70	Dark greenish grey (5GY41) moist colour; fine sandy light medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.9	5.6	3.00	6.9	1.2
0.25	6.9	5.8	3.25	7.0	1.0
0.50	6.8	5.8	3.50	7.0	1.2
0.75	6.7	5.4	3.75	6.7	1.3
1.00	6.4	4.7	4.00	6.5	1.2
1.25	6.0	1.0	4.25	6.9	1.2
1.50	6.2	1.2	4.50	6.7	1.1
1.75	6.6	1.0	4.75	6.7	1.4
2.00	6.2	0.9	5.00	6.8	1.3
2.25	6.5	1.1	5.25	6.3	1.5
2.50	6.6	1.0	5.50	6.2	1.4
2.75	6.9	1.1	5.70	6.3	1.3

pH_F (pH using electrode probe),

pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 2C4u 1 cm layers of mangrove debris at 4.65, 4.7 and 4.75 m and lump of wood at 5.5 m

Observation Could not sample water

Project: MWQ Site: 302

Location: 725750 mE 7655500 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Mid Stratum: Pandanus whitei; Ficus species
 Lower Stratum: Cynodon dactylon (Couch); Neptunia gracilis (Sensitive plant)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (2.5Y20) moist colour; silty light medium clay; moderate 20-50mm parting to weak 2-5mm subangular blocky structures; dry; abrupt to;
2B2	0.20 to 0.30	Light olive brown (2.5Y56) moist colour; common 10-20% fine < 5mm distinct dark, few 2-10% fine < 5mm distinct grey mottles; clay loam; fine sandy; moderately moist; abrupt to;
3B2	0.30 to 1.40	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sand; single grain structures; very few < 2% fine < 2 mm and medium 2-6mm manganiferous soft segregations; moist;
3C1u	1.40 to 3.20	Dark grey (2.5Y40) moist colour; fine sand with a 3cm sand lens at 3.0m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3C2u	3.20 to 3.60	Dark grey (2.5Y40) moist colour; sand with a couple 1cm light clay lenses between 3.5 and 3.6m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4Cu	3.60 to 3.77	Very dark grey (2.5Y30) moist colour; silty light clay with a 2cm fine sand lens at 3.68m; massive structures; wet; sharp to;
5D	3.77 to 4.00	Dark greenish grey (5G41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium heavy clay; moderate 2-5mm lenticular structures; very few < 2% fine < 2 mm ferruginous nodules and common 10-20% coarse 6-20mm calcareous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.8	3.3	
0.30	5.6	4.4	
0.60	5.8	4.5	
0.80	5.4	4.6	
1.00	5.2	6.5	
1.25	5.1	4.1	
1.50	4.6	0.9	
1.75	5.2	1.2	
2.00	6.0	1.4	
2.25	6.0	1.3	
2.50	6.0	1.5	
2.75	5.7	1.2	
3.00	5.7	0.7	
3.25	6.1	1.6	
3.50	6.6	1.3	
3.75	6.6	1.3	
4.00	6.6	5.9	

Notes:

Horizon – 5D EOP - too stiff for VVC to penetrate
 Observation Could not sample water

Project: MWQ Site: 303

Location: 726130 mE 7655145 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Melaleuca viridiflora (Broad-leaved tea-tree)
 Mid Stratum: Pandanus whitei
 Lower Stratum: Sporobolus virginicus (Marine couch); Cyperus species; Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (2.5Y20) moist colour; silty light medium clay; weak 2-5mm subangular blocky structures in top 2 cm only; dry; abrupt to;
B2	0.15 to 0.20	Yellowish brown (10YR56) moist colour; common 10-20% fine < 5mm prominent dark mottles; medium clay; moderately moist; abrupt to;
2B2	0.20 to 0.30	Yellowish brown (10YR56) moist colour; many 20-50% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct dark mottles; clay loam; fine sandy, heavy; moderately moist; sharp to;
3B2	0.30 to 1.15	Brownish yellow (10YR66) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sandy loam; weak 2-5mm subangular blocky structures; moist; sharp to;
3C1u	1.15 to 1.50	Dark grey (2.5Y40) moist colour; fine sand with 2-4cm silty light clay lenses at 1.15, 1.2, 1.35, 1.4, 1.45 and 1.5m; single grain structures; wet; sharp to;
3C2u	1.50 to 2.43	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
3C3u	2.43 to 3.25	Dark grey (2.5Y40) moist colour; sand with a 2cm coarse sand lens at 2.6m and 3-5cm very dark grey silty light clay lenses with massive structure at 2.8, 2.9 and 3.15m; very few < 2% small pebbles 2-6mm rounded microdiorite coarse fragments; single grain structures; wet; sharp to;
3C4u	3.25 to 3.50	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;

4D 3.50 to 3.80 Olive (5Y43) moist colour; few 2-10% coarse 15-30mm prominent gley mottles in top 5cm only; medium heavy clay; weak 2-5mm lenticular structures; very few < 2% fine < 2 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	3.6	
0.30	5.2	3.9	
0.60	5.6	4.3	
0.80	5.9	4.3	
1.00	4.8	3.8	
1.25	4.8	0.8	
1.50	5.6	1.2	
1.75	5.8	1.1	
2.00	5.9	1.7	
2.25	6.1	1.6	
2.50	6.2	1.1	
2.75	6.3	0.9	
3.00	6.3	1.4	
3.25	5.9	1.7	
3.50	6.1	1.8	
3.75	6.3	6.0	

Notes:

Horizon – 3C3u 1-2cm layers of mangrove debris at 2.46, 2.5 and 2.65m
 Horizon – 4D EOP - too stiff for VVC to penetrate
 Observation H2O EC - 36.2 mS/cm; pH 5.9

Project: MWQ Site: 304

Location: 725580 mE 7654870 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 17-Jul-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: No record

Landform Pattern: Alluvial plain

Element: Plain

Runoff: No record

Elevation: 3.4 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (Blue gum)

Mid Stratum: Ficus species

Lower Stratum: Cynodon dactylon (Couch); Neptunia gracilis (Sensitive plant); Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; weak 2-5mm cast structures; dry; abrupt to;
B2	0.20 to 0.30	Yellowish brown (10YR56) moist colour; common 10-20% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct dark mottles; clay loam; fine sandy, light; massive structures; moderately moist; abrupt to;
2B2	0.30 to 1.35	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm prominent red mottles; clayey fine sand, heavy; massive structures; moist; sharp to;
2C	1.35 to 1.90	Grey (10YR61) moist colour; fine sand with 0.5-3cm very dark greyish brown silty light clay lenses at 1.35, 1.7 and 1.85m; single grain structures; wet; sharp to;
3Cu	1.90 to 3.00	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
4Cu	3.00 to 3.80	Very dark grey (2.5Y30) moist colour; silty light clay; single grain structures; wet; sharp to;
5D	3.80 to 4.10	Dark greenish grey (5G41) moist colour; fine sandy light medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	3.8	
0.30	5.1	4.2	
0.60	4.7	3.8	
0.80	4.4	3.5	
1.00	4.3	3.1	
1.25	4.1	2.9	
1.50	3.7	2.9	
1.75	3.6	2.6	
2.00	3.7	0.7	
2.25	3.8	0.6	
2.50	4.1	1.3	
2.75	4.7	1.2	
3.00	5.9	1.1	
3.25	6.2	1.5	
3.50	6.3	1.5	
3.75	6.4	1.3	
4.00	6.6	1.7	

Notes:

Horizon – 3Cu Wood fragments at 2.2 and 5 mm layers of mangrove debris at 2.45, 2.75 and 2.8 m

Horizon – 4Cu Wood fragments at 3.2 and 3.8 m and common mangrove roots throughout

Horizon – 5D EOP - too stiff for VVC to penetrate

Observation Could not sample water

Project: MWQ Site: 305

Location: 726330 mE 7655595 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Acidic-sodic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; fine sandy light clay; massive structures; moderately moist; sharp to;
2A1	0.10 to 0.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm faint orange mottles; light medium clay; moderately moist; clear to;
2B21	0.20 to 0.70	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct dark mottles; light medium clay; moderately moist; gradual to;
2B22	0.70 to 0.95	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow-brown mottles; light clay; moist; abrupt to;
2B23	0.95 to 1.50	Greenish grey (5GY61) moist colour; many 20-50% very coarse > 30mm prominent yellow-brown, few 2-10% fine < 5mm distinct gley mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moist; gradual to;
2B24k	1.50 to 3.20	Brown (10YR53) moist colour; few 2-10% medium 5-15mm distinct gley mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft and nodule and coarse 6-20mm and very coarse 20-60mm calcareous nodules segregations; moist; diffuse to;
2B25k	3.20 to 4.20	Brown (10YR53) moist colour; few 2-10% fine < 5mm distinct gley mottles; medium heavy clay; common 10-20% fine < 2mm manganiferous concretions and few 2-10% medium 2-6 mm calcareous nodules segregations; moist; diffuse to;
2B26	4.20 to 5.30	Yellowish brown (10YR55) moist colour; common 10-20% fine < 5mm prominent gley mottles; medium heavy clay; common 10-20% fine < 2mm manganiferous soft and very few < 2% coarse 6-20 mm calcareous nodules segregations; moist;
2B27	5.30 to 5.50	Dark reddish brown (5YR34) moist colour; many 20-50% medium 5-15mm prominent gley mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; very few < 2% fine < 2 mm manganiferous soft segregations; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.5	
0.60	4.5	3.7	
1.00	5.2	4.0	
1.50	6.5	7.6	
2.00	6.8	7.5	
2.50	7.0	7.7	
3.00	7.1	7.6	
3.50	6.9	7.8	
4.00	7.0	7.8	
4.50	7.0	7.8	
5.00	7.3	7.8	
5.50	7.2	7.7	

Notes:

Horizon – A1 Mill mud
 Observation H2O EC - 18.8 mS/cm; pH 7.4

Project: MWQ Site: 306

Location: 725500 mE 7655105 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Surface crust

Classifications

ASC: Sulfuric, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent pale, few 2-10% medium 5-15mm prominent brown mottles; silty light medium clay; moderate 5-10mm platy structures; moderately moist; sharp to;
B21	0.10 to 0.50	Very dark grey (10YR31) moist colour; few 2-10% medium 5-15mm prominent pale, few 2-10% fine < 5mm prominent orange mottles; silty light clay; moist; abrupt to;
B22i	0.50 to 0.60	Grey (10YR51) moist colour; many 20-50% coarse 15-30mm prominent brown, common 10-20% medium 5-15mm prominent red mottles; silty light clay; massive structures; moist; sharp to;
B22ia	0.60 to 1.00	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent yellow jarositic (from pyrite) mottles; silty light clay; massive structures; wet; sharp to;
B23ia	1.00 to 1.30	Very dark grey (2.5Y30) moist colour; few 2-10% medium 5-15mm prominent yellow jarositic (from pyrite) mottles; silty light clay; massive structures; wet; sharp to;
2D	1.30 to 1.70	Dark greenish grey (5BG41) moist colour; very few < 2% fine < 5mm distinct gley mottles; medium heavy clay; massive structures; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.4	4.1	
0.25	3.9	3.9	
0.50	3.7	3.0	
0.75	3.4	3.2	
1.00	3.7	3.4	
1.25	3.9	1.7	
1.50	4.5	1.8	

Notes:

Horizon - 2D EOP - too stiff for VVC to penetrate
 Observation H2O EC - 30.5 mS/cm; pH 4.2

Project: MWQ Site: 307

Location: 725580 mE 7655805 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Trampled

Classifications

ASC: Melacic, Dermosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; common 10-20% large pebbles 20-60mm angular microdiorite coarse fragments; dry; sharp to;
2B21	0.15 to 0.60	Black (10YR21) moist colour; medium clay; moderately moist; clear to;
2B22	0.60 to 1.30	Very dark grey (10YR31) moist colour; few 2-10% medium 5-15mm prominent grey, few 2-10% medium 5-15mm prominent yellow-brown mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist; abrupt to;
2B23	1.30 to 1.75	Greenish grey (5GY61) moist colour; many 20-50% very coarse > 30mm prominent yellow-brown, few 2-10% medium 5-15mm distinct grey mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist;
3B21	1.75 to 2.10	Light yellowish brown (2.5Y64) moist colour; many 20-50% medium 5-15mm prominent gley, few 2-10% fine < 5mm prominent yellow-brown mottles; fine sandy clay loam; moderately moist;
3B22	2.10 to 2.70	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm prominent gley, very few < 2% fine < 5mm prominent yellow-brown mottles; clay loam; sandy; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; clear to;
4B21	2.70 to 3.50	Light olive grey (5Y62) moist colour; many 20-50% coarse 15-30mm prominent gley mottles; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist
4B22	3.50 to 3.90	Light greenish grey (5G71) moist colour; common 10-20% medium 5-15mm prominent yellow mottles; fine sandy light clay; moist; sharp to;
4B23	3.90 to 4.20	Olive (5Y53) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent gley mottles; light clay; very few < 2% fine < 2 mm manganiferous soft segregations; moist; abrupt to;

4B24	4.20 to 5.00	Greenish grey (5G61) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% very coarse > 30mm prominent brown mottles; fine sandy light clay with thin sand and coarse sand lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist; sharp to;
5B2	5.00 to 5.40	Greenish grey (5GY61) moist colour; few 2-10% medium 5-15mm prominent brown mottles; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.4	4.9	2.50	6.9	5.5
0.30	5.2		3.00	7.1	6.4
0.60	5.8	4.6	3.50	7.3	6.2
1.00	5.8	4.2	4.00	7.5	7.4
1.50	7.1	5.7	4.50	6.9	7.8
2.00	6.9	5.2	5.00	6.9	6.6

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 10.3 mS/cm; pH 6.7; Slabs of concrete

Project: MWQ Site: 308

Location: 725030 mE 7655170 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; light medium clay; few 2-10% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; dry; abrupt to;
B21	0.20 to 0.50	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent red, common 10-20% fine < 5mm prominent yellow-brown mottles; light medium clay; dry; abrupt to;
B22	0.50 to 1.00	Grey (10YR61) moist colour; common 10-20% fine < 5mm distinct yellow-brown, common 10-20% medium 5-15mm distinct gley mottles; coarse sandy medium heavy clay; very few < 2% small pebbles 2-6mm subrounded and rounded chert coarse fragments; moderately moist;
B23	1.00 to 1.60	Grey (5Y51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; medium heavy clay; very few < 2% medium pebbles 6-20mm subrounded chert coarse fragments; moderately moist; clear to;
B24	1.60 to 3.00	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm prominent gley, few 2-10% fine < 5mm distinct yellow-brown mottles; medium heavy clay; lenticular structures; few 2-10% coarse 6-20 mm calcareous soft and nodule and manganiferous soft and nodule segregations; moderately moist; gradual to;
B25	3.00 to 4.60	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm distinct grey mottles; medium clay; common 10-20% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
2C	4.60 to 5.00	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3B2	5.00 to 5.30	Yellowish brown (10YR54) moist colour; common 10-20% coarse 15-30mm prominent gley, common 10-20% medium 5-15mm prominent brown mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; common 10-20% medium 2-6 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.5	4.2	
0.60	5.9	5.1	
1.00	7.5	6.3	
1.50	7.4	6.5	
2.00	6.9	6.1	
2.50	7.7	5.9	
3.00	7.6	8.1	
3.50	8.3	6.2	
4.00	7.8	8.1	
4.50	8.0	7.6	
5.00	8.2	6.5	

Notes:
 Observation H2O EC - 1.6 mS/cm; pH 7.4

Project: MWQ Site: 309

Location: 725125 mE 7654535 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 19-Jul-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 2.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Excoecaria agallocha (Blind-your-eye mangrove)

Mid Stratum: Shrub Myoporum acuminatum (Boobiialla)

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; clay loam; fine sandy; massive structures; dry; sharp to;
2A1	0.10 to 0.20	Black (2.5Y20) moist colour; light medium clay; moderately moist; clear to;
2B2i	0.20 to 0.40	Greyish brown (2.5Y52) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, many 20-50% coarse 15-30mm prominent dark mottles; light medium clay; moderately moist; sharp to;
3B21i	0.40 to 0.90	Light grey (10YR71) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy loam, heavy; massive structures; moist; abrupt to;
3B22i	0.90 to 1.30	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent orange mottles; fine sandy loam with 3 x 5mm silty light clay lenses at 1.15-1.25m; massive structures; few 2-10% medium 2-6 mm ferruginous tubules segregations; moist; sharp to;
3B23ia	1.30 to 1.55	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm distinct yellow jarositic (from pyrite), few 2-10% fine < 5mm distinct yellow-brown mottles; fine sand with a 5mm clay lens and a 2cm grey fine sand lens; single grain structures; moist; sharp to;
3Cu	1.55 to 4.50	Grey (2.5Y50) moist colour; fine sand; single grain structures; wet; sharp to;
4D	4.50 to 4.65	Dark greenish grey (5GY41) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy light medium clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.4	4.7	2.25	4.1	1.2
0.25	7.0	5.5	2.50	4.2	1.8
0.50	6.9	5.3	2.75	4.3	1.3
0.75	6.9	5.1	3.00	4.3	1.3
1.00	7.0	5.2	3.25	4.4	1.4
1.25	4.8	3.5	3.50	5.0	1.6
1.35	3.9		3.75	5.7	1.7
1.50	4.0	2.7	4.00	5.2	1.4
1.75	5.0	1.2	4.25	5.3	1.6
2.00	4.1	1.3	4.50	5.6	2.0

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 4D EOP - too stiff for VVC to penetrate further
Observation H2O EC - 7.6 mS/cm; pH 4.6

Project: MWQ Site: 310

Location: 727630 mE 7656410 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Arenaceous, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, sparse Avicennia marina (Grey mangrove); Ceriops tagal (Yellow mangrove); Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sesuvium portulacastrum (Samphire); Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; fine sand with lumps of clay; single grain structures; moist; abrupt to;
2C	0.10 to 1.10	Yellowish brown (10YR54) moist colour; few 2-10% medium 5-15mm prominent orange mottles; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moist; abrupt to;
3C	1.10 to 1.50	Brown (10YR53) moist colour; few 2-10% medium 5-15mm distinct orange, common 10-20% coarse 15-30mm prominent grey mottles; coarse sand; very few < 2% medium pebbles 6-20mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
4C1	1.50 to 1.70	Grey (5Y51) moist colour; fine sand with thin bands of coarse sand; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4C2	1.70 to 1.90	Grey (5Y61) moist colour; fine sand with thin bands of coarse sand; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5C1	1.90 to 4.80	Grey (5Y51) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm rounded intermediate volcanic, acid volcanic and quartz coarse fragments; single grain structures; wet; abrupt to;
5C2	4.80 to 5.20	Greyish brown (2.5Y52) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; clear to;
5C3	5.20 to 5.70	Light olive brown (2.5Y54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock and quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.4	5.7	3.00	6.5	5.1
0.30	5.8	5.9	3.25	6.7	5.2
0.60	6.1	5.5	3.50	6.7	5.3
0.80	6.0	5.4	3.75	6.8	5.5
1.00	6.3	5.3	4.00	6.6	5.3
1.25	6.4	5.3	4.25	6.8	5.5
1.50	6.3	5.6	4.50	6.7	5.5
1.75	6.5	5.4	4.75	6.4	5.5
2.00	6.8	5.5	5.00	6.3	5.5
2.25	6.4	5.6	5.25	6.6	5.3
2.50	6.7	6.0	5.50	6.6	5.4
2.75	6.3	5.6	5.70	6.9	5.4

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 45.1 mS/cm; pH 6.3

Project: MWQ Site: 311

Location: 725120 mE 7654160 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Shell
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: *Ceriops tagal* (Yellow mangrove); *Bruguiera exaristata* (Rib-fruited mangrove); *Avicennia marina* (Grey mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light clay; weak 2-5mm subangular blocky structures; wet; abrupt to;
B2i	0.20 to 0.65	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; silty light clay; massive structures; wet; clear to;
C1u	0.65 to 1.20	Dark grey (2.5Y40) moist colour; few 2-10% medium 5-15mm prominent grey mottles; silty light clay; massive structures; wet;
C2u	1.20 to 1.60	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
C3u	1.60 to 2.25	Grey (2.5Y50) moist colour; fine sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	4.8	
0.25	6.2	4.8	
0.50	6.1	4.7	
0.75	5.9	3.1	
1.00	5.7	1.1	
1.25	5.7	0.9	
1.50	5.7	0.7	
1.75	5.6	1.2	
2.00	5.8	1.5	
2.25	5.7	0.9	

Notes:
 Horizon - C3u EOP - as deep as gouge would sample
 Observation H2O EC - 48.8 mS/cm; pH 5.7

Project: MWQ Site: 312

Location: 727513 mE 7656360 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Jul-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 6.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.50	Very dark greyish brown (10YR32) moist colour; fine sand; single grain structures; dry; clear to;
C1	0.50 to 1.40	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; sharp to;
2A1	1.40 to 1.60	Dark greyish brown (10YR42) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; clear to;
2C	1.60 to 2.75	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
3C	2.75 to 3.50	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded acid volcanic and quartz coarse fragments; single grain structures; moderately moist; sharp to;
4C	3.50 to 3.70	Light yellowish brown (10YR64) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; single grain structures; moderately moist; sharp to;
5C	3.70 to 4.50	Light yellowish brown (10YR64) moist colour; coarse sand with 5cm fine sand lenses at 3.9 and 4.1m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
6C	4.50 to 4.80	Brown (10YR53) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

7Cu	4.80 to 5.25	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and igneous rock coarse fragments; single grain structures; wet; sharp to;
8B2	5.25 to 5.73	Light yellowish brown (10YR64) moist colour; few 2-10% medium 5-15mm prominent orange mottles; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and rounded acid volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
9Cu	5.73 to 6.00	Very dark grey (2.5Y30) moist colour; fine sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.6	4.5	4.00	7.4	5.2
0.60	7.2	5.0	4.50	7.1	5.0
1.00	7.3	4.9	4.75	7.5	5.3
1.50	7.6	4.9	5.00	7.3	1.7
2.00	7.3	4.9	5.25	7.4	1.9
2.50	7.2	4.9	5.50	7.5	4.8
3.00	7.5	5.0	5.75	7.4	1.9
3.50	7.6	5.2	6.00	7.6	1.5

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 1.8 mS/cm; pH 6.5

Project:- MWQ Site: 313

Location: 724750 mE 7654675 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Vertic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; dry; clear to;
A2j	0.20 to 0.25	Dark greyish brown (10YR42) moist, light grey (10YR71) dry colour; clay loam; fine sandy; massive structures; dry; sharp to;
B21	0.25 to 0.50	Dark brown (10YR33) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; moderately moist; gradual to;
B22	0.50 to 1.90	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; light medium clay; lenticular structures; moderately moist; sharp to;
B23k	1.90 to 2.40	Light yellowish brown (2.5Y64) moist colour; many 20-50% fine < 5mm prominent grey mottles; medium clay; common 10-20% medium 2-6mm calcareous soft, few 2-10% coarse 6-20mm calcareous nodules and soft and very few < 2% fine < 2 mm manganiferous soft segregations; moist; sharp to;
B24	2.40 to 3.40	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; medium clay; common 10-20% fine < 2 mm manganiferous soft and few 2-10% fine < 2 mm manganiferous nodules segregations; moist;
B25	3.40 to 5.00	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent yellow-brown mottles; fine sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; common 10-20% fine < 2 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.3	
0.60	6.5	7.4	
1.00	6.6	6.1	
1.50	6.8	6.4	
2.00	7.2	8.1	
2.50	6.9	7.7	
3.00	7.1	7.9	
3.50	6.9	6.1	
4.00	7.0	8.2	
4.50	7.0	7.3	
5.00	7.4	7.4	

Notes:

Observation H2O EC - 13.9 mS/cm; pH 7.6; was only a slow seep

Project: MWQ Site: 314

Location: 724575 mE 7653910 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Recently cultivated

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Chloris virgata (Feathertop rhodes grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; clod structures; moderately moist;
B21	0.10 to 0.50	Light olive brown (2.5Y54) moist colour; common 10-20% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent yellow-brown mottles; light medium clay; moderately moist;
B22	0.50 to 1.60	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow-brown, few 2-10% fine < 5mm distinct orange mottles; medium clay; moist; sharp to;
B23k	1.60 to 2.10	Dark greyish brown (10YR42) moist colour; common 10-20% medium 5-15mm prominent gley, common 10-20% fine < 5mm prominent yellow-brown mottles; medium clay; common 10-20% coarse 6-20 mm calcareous soft and medium 2-6mm calcareous nodule segregations; moist; gradual to;
B24k	2.10 to 2.80	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent gley mottles; medium heavy clay; common 10-20% coarse 6-20 mm calcareous nodule, few 2-10% coarse 6-20mm calcareous soft and very few < 2% fine < 2 mm manganiferous soft segregations; moist; gradual to;
B25	2.80 to 3.50	Yellowish brown (10YR54) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium heavy clay; few 2-10% fine < 2mm manganiferous soft and very few < 2% coarse 6-20 mm calcareous soft segregations; moist; diffuse to;
B26	3.50 to 5.00	Grey (5Y61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sandy light medium clay; common 10-20% medium 2-6 mm manganiferous soft segregations; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	4.2	
0.60	6.7	7.1	
1.00	6.7	5.7	
1.50	6.8	6.0	
2.00	7.1	8.1	
2.50	7.0	6.1	
3.00	6.9	7.3	
3.50	7.2	7.6	
4.00	7.0	6.2	
4.50	7.1	7.6	
5.00	7.0	7.7	

Notes:
 Observation H2O EC - 27.0 mS/cm; pH 7.0

Project: MWQ Site: 315

Location: 723970 mE 7653930 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Intermediate volcanic
 Surface Condition: Recently cultivated

Classifications

ASC: Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; fine sandy light clay; fragment structures; dry; sharp to;
B21	0.10 to 0.30	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct dark, very few < 2% fine < 5mm faint dark mottles; fine sandy light medium clay; moderately moist; clear to;
B22	0.30 to 0.60	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent brown, common 10-20% medium 5-15mm prominent grey mottles; medium clay; moist; clear to;
2A1	0.60 to 1.10	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm distinct orange mottles; light clay; moist; gradual to;
2B2	1.10 to 1.60	Grey (5Y51) moist colour; few 2-10% fine < 5mm distinct yellow mottles; light clay; moist; diffuse to;
2Cu	1.60 to 2.85	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
3Cu	2.85 to 2.95	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;
4Cu	2.95 to 3.20	Dark grey (2.5Y40) moist colour; silty light clay with 2cm sand lenses at 3.05 and 3.1m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; sharp to;
5D	3.20 to 3.40	Greenish grey (5G51) moist colour; fine sandy medium clay; massive structures; wet; sharp to;
6D1	3.40 to 3.65	Greenish grey (5GY51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
6D2	3.65 to 4.00	Strong brown (7.5YR36) moist colour; few 2-10% medium 5-15mm prominent grey mottles; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) and large pebbles 20-60mm rounded intermediate volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.7	4.0	2.25	5.4	1.0
0.30	5.8	4.0	2.50	5.6	1.3
0.60	5.3	3.6	2.75	5.9	1.1
0.80	6.2	3.0	3.00	5.8	1.2
1.00	5.6	3.8	3.25	6.2	1.7
1.25	6.1	4.9	3.50	6.7	1.7
1.50	5.7	4.2	3.75	6.5	5.9
1.75	5.8	3.8	4.00	6.4	6.0
2.00	5.4	1.3			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 6D2 EOP - stopped on a rock
 Observation H2O EC - 3.6 mS/cm; pH 6.6

Project: MWQ Site: 316

Location: 723365 mE 7654000 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Levee
 Runoff: No record
 Elevation: 4.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Vertic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Stachytarpheta jamaicensis (Jamaica snakeweed)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; clay loam; moderate 2-5mm cast structures; dry; abrupt to;
A2j	0.15 to 0.25	Dark grey (10YR41) moist, white (10YR81) dry colour; clay loam; weak 2-5mm cast structures; dry; abrupt to;
B21	0.25 to 0.50	Yellowish brown (10YR54) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium clay; strong structures; dry; clear to;
B22	0.50 to 1.40	Dark greyish brown (2.5Y42) moist colour; very few < 2% fine < 5mm distinct orange mottles; medium heavy clay; lenticular structures; very few < 2% medium 2-6mm manganiferous soft and fine <2 mm manganiferous nodules and coarse 6-20 mm calcareous nodules segregations; moderately moist; sharp to;
2B2	1.40 to 1.80	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm prominent pale, few 2-10% fine < 5mm prominent yellow-brown mottles; fine sandy light medium clay; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
3B21	1.80 to 2.30	Yellowish brown (10YR54) moist colour; many 20-50% medium 5-15mm prominent pale mottles; fine sand; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; moist; sharp to;
3B22	2.30 to 2.90	Brown (10YR53) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent pale mottles; sandy loam, light; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; massive structures; moist; sharp to;
3B23	2.90 to 3.80	Pale brown (10YR63) moist colour; few 2-10% coarse 15-30mm faint brown mottles; sand; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; wet; abrupt to;

3B24 3.80 to 5.70 Light yellowish brown (10YR64) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	2.6	
0.60	6.9	6.1	
1.00	6.7	7.5	
1.50	6.9	6.4	
2.00	6.4	5.9	
2.50	6.9	5.4	
3.00	7.3	7.1	
3.50	7.2	5.6	
4.00	6.9	5.5	
4.50	7.2	5.6	
5.00	7.1	5.6	
5.50	7.0	5.2	

Notes:

Observation H2O EC - 1.0 mS/cm; pH 7.1

Project: MWQ Site: 317

Location: 724280 mE 7652800 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Jul-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Basic, Arenic, Bleached-Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, closed or dense Melaleuca leucadendra (Long-leaved paperbark); Acacia leptocarpa; Eucalyptus tessellaris

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; fine sand; single grain structures; dry; abrupt to;
A2e	0.15 to 0.40	Fine sand; single grain structures; moderately moist; abrupt to;
B2	0.40 to 0.95	Yellowish brown (10YR56) moist colour; many 20-50% coarse 15-30mm prominent pale, few 2-10% medium 5-15mm prominent yellow-brown mottles; fine sand; single grain structures; moderately moist; sharp to;
2B2	0.95 to 1.15	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm prominent dark, common 10-20% fine < 5mm prominent yellow-brown mottles; sand; single grain structures; moderately moist; sharp to;
3B2	1.15 to 1.75	Yellowish brown (10YR54) moist colour; common 10-20% very coarse > 30mm prominent pale, few 2-10% coarse 15-30mm prominent grey mottles; fine sand; single grain structures; moist; clear to;
3C	1.75 to 2.00	Light brownish grey (2.5Y62) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4C	2.00 to 2.10	Dark grey (10YR41) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
5C1	2.10 to 2.60	Greyish brown (2.5Y52) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
5C2	2.60 to 2.85	Olive brown (2.5Y44) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock and medium pebbles 6-20mm rounded intermediate volcanic coarse fragments; single grain structures; wet; abrupt to;
6C	2.85 to 3.68	Grey (5Y61) moist colour; fine sand with a 3cm sand lens at 3.1m; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

7C	3.68 to 4.30	Olive grey (5Y52) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
8D	4.30 to 4.80	Greyish brown (2.5Y52) moist colour; common 10-20% medium 5-15mm prominent gley mottles; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;
9D	4.80 to 5.00	Greenish grey (5G61) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent gley mottles; fine sandy medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.8	4.0	3.00	6.5	4.1
0.60	6.1	4.2	3.25	6.3	4.1
1.00	6.2	4.1	3.50	6.5	3.8
1.50	6.0	3.9	3.75	6.4	2.0
1.75	5.3	3.8	4.00	6.5	2.0
2.00	6.0	3.9	4.25	6.6	5.2
2.25	6.3	3.7	4.50	6.5	6.3
2.50	6.6	4.0	4.75	6.5	6.2
2.75	6.5	3.5	5.00	7.1	6.7

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 12.1 mS/cm; pH 6.6

Project: MWQ**Site:318**

Location: 724515 mE 7652750 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense *Ceriops tagal* (Yellow mangrove);
Bruguiera exaristata (Rib-fruited mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light clay; weak 2-5mm cast structures; wet; clear to;
B2	0.10 to 0.70	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent orange mottles; silty light clay; massive structures; wet; gradual to;
Cu	0.70 to 1.45	Dark grey (5Y41) moist colour; fine sandy light clay with pockets of fine sand; massive structures; wet; sharp to;
2Cu	1.45 to 1.55	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	4.6	
0.25	6.3	5.0	
0.50	6.1	4.9	
0.75	6.0	1.2	
1.00	6.1	1.4	
1.25	6.0	1.4	
1.50	6.1	1.2	

Notes:

Horizon - 2Cu EOP - fine sand would not hold in auger
 Observation H2O EC - 48.7 mS/cm; pH 6.5

Project: MWQ Site: 319

Location: 724740 mE 7653025 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 26-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Plain

Runoff: No record

Elevation: 3.5 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 0.3 %

Surface Coarse Fragments: Common 10-20%, cobbles 60-200mm, Gravel

Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris

Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Acacia leptocarpa (North coast wattle)

Lower Stratum: Sporobolus species

Profile

Horizon	Depth (m)	Description
A1/A2j	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; few 2-10% large pebbles 20-60mm angular acid volcanic and gravel coarse fragments; massive structures; dry; sharp to;
B21	0.15 to 0.25	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm prominent orange mottles; medium clay; moderately moist; clear to;
B22	0.25 to 0.80	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; medium clay; moderately moist; gradual to;
B23	0.80 to 1.40	Grey (5Y51) moist colour; common 10-20% fine < 5mm prominent yellow-brown mottles; medium clay; moderately moist; gradual to;
B24	1.40 to 2.00	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist; clear to;
2B2	2.00 to 2.50	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm distinct grey mottles; fine sandy light medium clay; moist; sharp to;
3B2	2.50 to 3.30	Yellowish brown (10YR54) moist colour; common 10-20% medium 5-15mm prominent grey, common 10-20% medium 5-15mm prominent yellow-brown mottles; clayey fine sand; single grain structures; wet; sharp to;
4B2	3.30 to 3.75	Yellowish brown (10YR54) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct grey mottles; fine sandy light medium clay; massive structures; wet; abrupt to;
5D	3.75 to 4.50	Olive (5Y43) moist colour; many 20-50% fine < 5mm prominent gley mottles; medium heavy clay; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	4.5	
0.60	5.4	5.4	
1.00	5.9	5.4	
1.50	5.7	7.6	
2.00	6.4	5.8	
2.50	6.1	5.6	
3.00	6.5	5.5	
3.50	6.5	5.6	
4.00	6.9	6.4	
4.50	6.6	6.5	

Notes:

Horizon – 5D EOP - water suction prevented hand augering deeper
Observation H2O EC - 23.8 mS/cm; pH 6.3

Project: MWQ**Site:320**

Location: 724475 mE 7653240 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 26-Jul-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 2.7 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Shell

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

VegetationTallest Stratum: Tree, 1.01-3m, closed or dense *Ceriops tagal* (Yellow mangrove)Mid Stratum: *Ceriops tagal* (Yellow mangrove)Lower Stratum: *Ceriops tagal* (Yellow mangrove)**Profile**

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint orange mottles; silty light clay; weak 2-5mm cast structures; moist; abrupt to;
B21	0.10 to 0.70	Grey (5Y51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm distinct grey mottles; fine sandy light clay; weak 2-5mm subangular blocky structures; wet; clear to;
C1u	0.70 to 1.40	Very dark grey (10YR31) moist colour; fine sandy light clay; massive structures; wet; gradual to;
C2u	1.40 to 2.22	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
2D	2.22 to 2.30	Dark greenish grey (5G41) moist colour; light medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.8	
0.25	5.6	4.8	
0.50	5.7	1.1	
0.75	5.8	1.1	
1.00	6.1	1.2	
1.25	5.9	1.1	
1.50	5.9	1.1	
1.75	5.9	1.2	
2.00	5.9	1.4	
2.25	6.0	1.3	

Notes:

Horizon – 2D EOP - too hard for gouge auger to penetrate
 Observation H2O EC - 62.7 mS/cm; pH 6.0

Project: MWQ Site: 321

Location: 723335 mE 7652465 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense Eucalyptus tessellaris; Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Ficus species; Urena lobata (Urena burr)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; fine sand; weak 2-5mm cast parting to single grain structures; dry; clear to;
A2e	0.30 to 1.30	Brown (10YR53) moist, very pale brown (10YR83) dry colour; fine sand; single grain structures; dry; abrupt to;
B2	1.30 to 2.20	Dark greyish brown (10YR42) moist colour; common 10-20% medium 5-15mm prominent brown mottles; clayey fine sand; single grain structures; moderately moist; sharp to;
2B2	2.20 to 2.45	Dark grey (5Y41) moist colour; few 2-10% fine < 5mm prominent brown mottles; clayey fine sand; single grain structures; moist; sharp to;
3C	2.45 to 3.05	Greyish brown (2.5Y52) moist colour; sand almost a coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4B2	3.05 to 3.55	Grey (10YR51) moist colour; few 2-10% medium 5-15mm prominent brown mottles; fine sand; single grain structures; wet; sharp to;
5B2	3.55 to 3.80	Brown (10YR53) moist colour; many 20-50% coarse 15-30mm distinct grey mottles; fine sandy clay loam; massive structures; wet;
6C1	3.80 to 4.60	Greenish grey (5GY51) moist colour; clayey fine sand; single grain structures; wet; gradual to;
6C2	4.60 to 4.90	Olive grey (5Y42) moist colour; fine sandy loam; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
7B	4.90 to 5.10	Grey (5Y51) moist colour; common 10-20% medium 5-15mm distinct red mottles; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.1	3.9	3.25	6.3	4.2
0.60	5.9	4.9	3.50	6.1	4.5
1.00	5.9	5.2	3.75	6.0	5.2
1.50	6.8	5.5	4.00	6.1	3.9
2.00	6.9	5.3	4.25	6.0	4.2
2.25	6.5	1.8	4.50	6.2	4.3
2.50	7.2	3.9	4.75	6.2	3.9
2.75	6.7	4.1	5.00	6.3	4.7
3.00	6.8	4.4	5.10	6.4	4.8

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water

Project: MWQ Site: 322

Location: 723590 mE 7652655 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 30-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Plain

Runoff: No record

Elevation: 3.8 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Eucalyptus alba (Poplar gum); Eucalyptus tessellaris

Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)

Lower Stratum: Cynodon dactylon (Couch); Urena lobata (Urena burr)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; dry; abrupt to;
A2j	0.05 to 0.25	Dark greyish brown (10YR42) moist, white (10YR81) dry colour; very few < 2% fine < 5mm distinct orange mottles; clay loam; fine sandy; massive structures; dry; abrupt to;
B21	0.25 to 0.70	Brown (10YR53) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; gradual to;
B22	0.70 to 1.50	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sandy light medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2B21	1.50 to 2.40	Yellowish brown (10YR56) moist colour; many 20-50% very coarse > 30mm prominent pale mottles; clayey sand; single grain structures; moist; clear to;
2B22	2.40 to 4.25	Yellowish brown (10YR54) moist colour; common 10-20% very coarse > 30mm prominent pale mottles; sand; single grain structures; wet;
3B2	4.25 to 4.40	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; sandy light clay; massive structures; wet; sharp to;
4B2	4.40 to 4.60	Yellowish brown (10YR56) moist colour; few 2-10% medium 5-15mm prominent pale mottles; coarse sand; single grain structures; wet; abrupt to;
5B2	4.60 to 5.00	Yellowish brown (10YR54) moist colour; many 20-50% coarse 15-30mm prominent grey mottles; sandy clay loam; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.4	
0.30	6.5	5.2	
0.60	6.2	5.8	
1.00	6.8	6.6	
1.50	7.5	5.6	
2.00	7.2	5.7	
2.50	6.1	5.6	
3.00	6.4	5.5	
3.50	6.4	5.7	
4.00	6.4	5.5	
4.50	6.3	5.5	
5.00	6.1	5.4	

Notes:

Observation H2O EC - 4.7 mS/cm; pH 6.6

Project: MWQ Site: 323

Location: 723205 mE 7652220 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Jul-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Argillaceous, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense *Ceriops tagal* (Yellow mangrove);
Excoecaria agallocha (Blind-your-eye mangrove); *Lumnitzera racemosa* (Black mangrove); *Rhizophora stylosa* (Red mangrove)
 Lower Stratum: *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; fine sandy light clay; weak 2-5mm cast structures; moist; abrupt to;
B2	0.15 to 1.45	Greyish brown (2.5Y52) moist colour; common 10-20% medium 5-15mm prominent orange mottles; fine sandy light clay; weak 2-5mm subangular blocky structures; moist; abrupt to;
Cu	1.45 to 1.70	Grey (10YR51) moist colour; few 2-10% medium 5-15mm distinct grey mottles; fine sandy light clay; massive structures; moist; sharp to;
3C	1.70 to 2.50	Grey (2.5Y50) moist colour; fine sandy clay loam; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.8	
0.25	6.0	5.1	
0.50	6.0	5.0	
0.75	6.2	4.4	
1.00	5.9	4.5	
1.25	5.9	4.6	
1.50	6.2	1.0	
1.75	6.2	0.8	
2.00	6.0	1.5	
2.25	5.9	3.2	
2.50	6.1	1.4	

Notes:
 Horizon – 3C EOP - too wet to sample deeper by gouge or hand auger
 Observation H2O EC - 45.4 mS/cm; pH 6.1

Project: MWQ Site: 324

Location: 722595 mE 7652680 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Pit
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Scalpic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Pandanus whitei

Profile

Horizon	Depth (m)	Description
E	0.00 to 1.00	
C1	1.00 to 1.30	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; abrupt to;
2A2e	1.30 to 1.70	Light grey (10YR72) moist, white (10YR81) dry colour; very few < 2% fine < 5mm prominent orange mottles; fine sand; single grain structures; clear to;
2B2	1.70 to 2.40	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; fine sand; single grain structures; sharp to;
3C1	2.40 to 2.70	Light brownish grey (2.5Y62) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; sharp to;
3C2	2.70 to 2.85	Light brownish grey (2.5Y62) moist colour; fine sand; single grain structures; sharp to;
3C3	2.85 to 3.50	Light brownish grey (2.5Y62) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; abrupt to;
3C4	3.50 to 3.80	Grey (5Y61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; sharp to;
4D	3.80 to 4.10	Greenish grey (5G61) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; light medium clay; weak 2-5mm subangular blocky structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
1.00	4.5	4.4	
1.50	5.8	5.1	
2.00	5.6	4.9	
2.25	4.7	4.3	
2.50	5.1	4.4	
2.75	5.1	4.6	
3.00	3.9	3.8	
3.25	4.6	4.3	
3.50	5.1	4.4	
3.75	5.0	4.4	
4.00	6.0	6.2	

Notes:
 Horizon – 4D EOP - too tight for VVC to penetrate
 Observation H2O EC - 10.7 mS/cm; pH 4.1

Project: MWQ Site: 325

Location: 722360 mE 7652845 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark brown (10YR33) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
B1	0.10 to 0.30	Brown (10YR43) moist colour; fine sand; single grain structures; dry; clear to;
B2	0.30 to 0.70	Yellowish brown (10YR54) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sand; single grain structures; moderately moist;
B3?	0.70 to 1.00	Yellowish brown (10YR54) moist colour; many 20-50% fine < 5mm prominent pale, few 2-10% fine < 5mm prominent orange mottles; fine sand; single grain structures; moderately moist; sharp to;
2B2	1.00 to 2.00	Yellowish brown (10YR56) moist colour; common 10-20% medium 5-15mm prominent pale, few 2-10% medium 5-15mm distinct grey, very few < 2% medium 5-15mm prominent brown mottles; sand with a 5cm lens of white fine sand at 1.35m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moderately moist;
3C	2.00 to 2.75	Light brownish grey (10YR62) moist colour; very few < 2% fine < 5mm distinct brown mottles; coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
4Cu	2.75 to 3.05	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
5C	3.05 to 3.35	Light grey (10YR72) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
6Cu	3.35 to 3.65	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;

7C	3.65 to 4.00	Grey (10YR61) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
8D1	4.00 to 4.30	Greenish grey (5GY61) moist colour; few 2-10% fine < 5mm distinct brown mottles; fine sand; single grain structures; wet; abrupt to;
8D2	4.30 to 4.60	Greenish grey (5GY61) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm distinct gley mottles; light medium clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.8	3.5	3.00	6.1	1.9
0.60	6.3	4.7	3.25	6.2	4.3
1.00	5.7	4.4	3.50	6.5	1.8
1.50	6.0	4.6	3.75	6.2	2.8
2.00	5.9	4.5	4.00	6.3	3.9
2.25	5.7	4.8	4.25	6.4	6.1
2.50	5.1	3.5	4.50	6.6	6.6
2.75	5.3	3.5			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 8D2 EOP - too hard for VVC to penetrate
 Observation H2O EC - 0.3 mS/cm; pH 4.9

Project: MWQ Site: 326

Location: 722220 mE 7652495 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Jul-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Basic, Arenic, Bleached-Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Mid Stratum: Acacia leptocarpa (North coast wattle)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
A2e	0.20 to 0.80	Brown (10YR53) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; abrupt to;
BC?	0.80 to 1.10	Light grey (10YR72) moist colour; common 10-20% fine < 5mm distinct yellow-brown mottles; clayey fine sand; single grain structures; moderately moist; sharp to;
2B2	1.10 to 1.25	Light grey (10YR72) moist colour; few 2-10% medium 5-15mm prominent pale, many 20-50% fine < 5 mm distinct yellow-brown mottles; clay loam; fine sandy; massive structures; moderately moist; clear to;
3B2	1.25 to 1.50	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy light medium clay; moderately moist; abrupt to;
4B2	1.50 to 1.80	Light grey (2.5Y72) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy clay loam; moderately moist; abrupt to;
5B2	1.80 to 2.75	Light grey (10YR72) moist colour; few 2-10% fine < 5mm prominent yellow-brown mottles; alternating bands of fine sand and grey silty light clay only 1-5mm thick; single grain structures; moist;
5Cu	2.75 to 3.10	Dark grey (2.5Y40) moist colour; fine sandy light clay with many 2-10mm fine sandy lenses; massive structures; wet; sharp to;
6Cu	3.10 to 3.60	Grey (2.5Y50) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;

7C	3.60 to 4.60	Grey (5Y51) moist colour; coarse sand with a 3cm lump of mud at 4.2m; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
8Cu	4.60 to 4.70	Light olive brown (2.5Y56) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
9C	4.70 to 5.50	Grey (5Y61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.0	4.6	3.25	5.9	1.5
0.60	6.0	4.7	3.50	6.0	1.8
0.60	6.0	4.7	3.75	6.4	2.0
1.00	7.1	4.8	4.00	6.4	3.2
1.50	5.1	4.2	4.25	6.7	4.3
2.00	5.0	3.9	4.50	6.6	4.2
2.25	4.2	3.5	4.75	6.7	4.8
2.50	3.1	2.6	5.00	6.6	4.9
2.75	4.4	1.4	5.25	6.9	5.1
3.00	5.8	1.9	5.50	6.8	5.5

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes: Observation Could not sample water

Project: MWQ**Site:327**

Location: 721808 mE 7652692 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Mid Stratum: Acacia leptocarpa (North coast wattle); Terminalia sericocarpa (Damson, sovereignwood)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; clear to;
C	0.30 to 0.95	Brown (10YR53) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; sharp to;
2C	0.95 to 2.15	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm rounded acid volcanic and igneous rock and subrounded quartz coarse fragments; single grain structures; dry; sharp to;
3C	2.15 to 2.60	Light brownish grey (10YR62) moist, white (10YR81) dry colour; very few < 2% fine < 5mm prominent yellow-brown mottles; fine sand; single grain structures; moist; sharp to;
4C1u	2.60 to 3.50	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
4C2u	3.50 to 3.60	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	3.9	
0.60	5.1	4.5	
1.00	5.7	5.7	
1.50	6.3	5.2	
2.00	6.1	5.0	
2.25	4.1	4.0	
2.50	4.4	4.0	
2.75	6.2	0.8	
3.00	6.1	1.0	
3.25	5.8	0.8	
3.50	5.5	1.3	

Notes:

Horizon – 4C2u EOP - sand would not hold in auger - too wet
 Observation Could not sample water

Project: MWQ Site: 328

Location: 721740 mE 7652570 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Argillaceous, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense Excoecaria agallocha (Blind-your-eye mangrove); Ceriops tagal (Yellow mangrove); Bruguiera exaristata (Rib-fruited mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark grey (10YR31) moist colour; light clay; moderately moist; abrupt to;
B21	0.05 to 0.30	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% fine < 5mm distinct grey mottles; light clay; moist; clear to;
B22	0.30 to 0.65	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent brown mottles; light clay; moist;
2B2	0.65 to 0.85	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sand; single grain structures; moist;
3B2	0.85 to 1.50	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent brown mottles; silty light clay with thin sand lenses at 1.1 and 1.3m; massive structures; moist;
4B2	1.50 to 2.20	Strong brown (7.5YR46) moist colour; few 2-10% fine < 5mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	4.4	
0.25	6.3	5.0	
0.50	6.2	5.5	
0.75	6.0	5.1	
1.00	5.7	4.8	
1.25	5.6	4.8	
1.50	5.7	4.7	
1.75	5.8	4.9	
2.00	6.0	4.9	

Notes:

Horizon – 4B2 EOP - too wet to hold in gouge auger
 Observation Could not sample water

Project: MWQ Site: 329

Location: 722229 mE 7652300 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: No record
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense Excoecaria agallocha (Blind-your-eye mangrove); Lumnitzera racemosa (Black mangrove)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove); Hibiscus tiliaceus (Cotton tree / cowtucker); Ceriops tagal (Yellow mangrove)
 Lower Stratum: Sesuvium portulacastrum (Samphire); Acanthus ilicifolius (Holly mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Dark grey (10YR41) moist colour; fine sand; single grain structures; moist; abrupt to;
C	0.05 to 0.30	Light brownish grey (2.5Y62) moist colour; fine sand; single grain structures; moist; sharp to;
2B2	0.30 to 0.75	Brown (10YR53) moist colour; many 20-50% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct orange mottles; light clay; single grain structures; moderately moist; sharp to;
3B2	0.75 to 1.20	Brown (10YR53) moist colour; few 2-10% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct brown mottles; fine sand with light clay lenses; single grain to massive structures; moist; abrupt to;
C	1.20 to 2.45	Light brownish grey (2.5Y62) moist colour; very few < 2% fine < 5mm distinct orange mottles; fine sand; single grain structures; moist;
2C	2.45 to 2.80	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	5.1	
0.25	6.1	4.9	
0.50	6.3	4.0	
0.75	6.2	4.6	
1.00	5.9	5.3	
1.25	6.1	6.1	
1.50	6.1	5.0	
1.75	6.5	5.5	
2.00	6.4	5.4	
2.50	5.9	5.2	

Notes:
 Horizon – 2C EOP - too wet to stay in auger
 Observation Could not sample water

Project: MWQ Site: 330

Location: 722135 mE 7652265 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 01-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 3.3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Soft

Classifications

ASC: Acidic, Arenic, Bleached-Orthic, TENOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris

Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark grey (10YR41) moist colour; fine sand; single grain structures; dry; clear to;
A2e	0.10 to 0.60	Pale brown (10YR63) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; clear to;
B2	0.60 to 2.30	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sand; single grain structures; moderately moist; sharp to;
C1	2.30 to 2.45	Grey (5Y61) moist colour; fine sand; single grain structures; moist; sharp to;
C2	2.45 to 2.70	Grey (2.5Y50) moist colour; fine sand; single grain structures; moist; sharp to;
2C1	2.70 to 3.00	Grey (5Y61) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
2C2	3.00 to 4.00	Grey (5Y61) moist colour; coarse sand with 2-3cm lumps of light clay at 3.3 and 3.65m; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.4	
0.60	4.9	4.8	
1.00	4.9	4.7	
1.50	5.6	5.0	
2.00	5.4	4.7	
2.25	5.4	4.5	
2.50	6.2	3.2	
2.75	6.6	4.5	
3.00	7.2	5.0	
3.25	7.1	5.1	
3.50	6.3	4.8	
3.75	6.9	1.9	
4.00	6.9	1.3	

Notes:

Observation Could not sample water

Project: MWQ Site: 331

Location: 720935 mE 7652465 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 02-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 5.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Mottled, Eutrophic, Black, CHROMOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; fine sandy loam; massive structures; dry; clear to;
A12	0.15 to 0.40	Very dark brown (10YR22) moist colour; fine sandy loam, light; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist; abrupt to;
B1	0.40 to 0.50	Black (10YR21) moist colour; clay loam; fine sandy; moderately moist; sharp to;
B21	0.50 to 0.70	Very dark greyish brown (10YR32) moist colour; many 20-50% fine < 5mm prominent yellow mottles; fine sandy light medium clay; moderately moist; gradual to;
B22	0.70 to 1.25	Grey (10YR61) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy light medium clay; moderately moist; sharp to;
2C	1.25 to 2.25	Light brownish grey (10YR62) moist, white (10YR82) dry colour; few 2-10% medium 5-15mm distinct grey mottles; fine sand; single grain structures; moderately moist; sharp to;
3C1	2.25 to 2.85	Light brownish grey (2.5Y62) moist, white (10YR82) dry colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; single grain structures; dry; clear to;
3C2	2.85 to 3.20	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded gravel coarse fragments; single grain structures; wet; abrupt to;
3C3	3.20 to 3.50	Grey (10YR61) moist colour; coarse sand with several lenses of dark grey silty light clay; few 2-10% small pebbles and medium pebbles 6-20mm rounded gravel coarse fragments; massive structures; wet; sharp to;

3C4	3.50 to 5.00	Light yellowish brown (10YR64) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel and acid volcanic coarse fragments; single grain structures; wet; sharp to;
4Cu	5.00 to 5.50	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.6	3.4	3.75	6.2	4.5
0.60	5.3	4.2	4.00	6.1	4.6
1.00	6.3	4.7	4.25	5.8	4.6
1.50	6.4	4.4	4.50	6.4	4.4
2.00	6.5	4.9	4.75	6.2	4.7
2.50	6.8	4.7	5.00	5.9	4.5
3.00	6.2	4.3	5.25	5.5	1.6
3.25	6.2	3.9	5.50	5.5	1.5
3.50	5.9	4.6			

pH_F (pH using electrode probe),
pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.6 mS/cm; pH 5.5

Project: MWQ Site: 332

Location: 720620 mE 7652670 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Kandosolic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct orange mottles; light medium clay; moderately moist; clear to;
B21	0.10 to 0.80	Light brownish grey (10YR62) moist colour; many 20-50% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct orange mottles; light medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; abrupt to;
B22	0.80 to 1.15	Grey (10YR61) moist colour; few 2-10% fine < 5mm prominent orange, common 10-20% fine < 5mm distinct brown mottles; fine sandy light clay; moist; sharp to;
2B2	1.15 to 1.55	Brown (10YR53) moist colour; few 2-10% coarse 15-30mm prominent brown, common 10-20% coarse 15-30mm prominent pale mottles; sand; single grain structures; very few < 2% medium 2-6 mm manganiferous soft segregations; moist; sharp to;
3C1u	1.55 to 1.85	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; moist; sharp to;
3C2u	1.85 to 2.20	Dark grey (2.5Y40) moist colour; fine sand with many silty light clay lenses; massive structures; wet; sharp to;
4C1	2.20 to 2.70	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz, acid and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;

4C2	2.70 to 3.35	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz, acid and intermediate volcanic coarse fragments; single grain structures; wet; abrupt to;
4C3	3.35 to 4.00	Grey (10YR61) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5Cu	4.00 to 5.70	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.0	3.9	3.00	6.5	0.8
0.25	5.8	3.5	3.25	6.8	0.9
0.50	5.5	3.9	3.50	6.3	1.3
0.75	5.6	4.9	3.75	7.3	1.3
1.00	5.8	4.4	4.00	6.8	1.3
1.25	6.1	4.2	4.25	5.8	1.8
1.50	5.9	4.1	4.50	5.9	1.2
1.75	5.2	0.8	4.75	5.9	1.0
2.00	6.5	0.9	5.00	5.9	0.6
2.25	5.4	0.4	5.25	5.8	0.9
2.50	6.5	1.3	5.50	5.8	0.9
2.75	6.6	1.3			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 28.6 mS/cm; pH 5.3

Project: MWQ Site: 333

Location: 721160 mE 7652220 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 02-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, mid-dense Excoecaria agallocha (Blind-your-eye mangrove); Rhizophora stylosa (Red mangrove)
 Mid Stratum: Aegiceras corniculatum (River mangrove)
 Lower Stratum: Acanthus ilicifolius (Holly mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; very few < 2% fine < 5mm faint orange, very few < 2% fine < 5mm faint grey mottles; silty light clay; weak 5-10mm cast structures; moist; clear to;
B2	0.20 to 0.65	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm prominent brown mottles; silty light clay; moist; clear to;
Cu	0.65 to 1.40	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	1.40 to 1.45	Dark grey (7.5YR40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.8	
0.25	5.9	4.2	
0.50	5.8	4.8	
0.75	5.9	3.6	
1.00	6.2	1.3	
1.25	6.3	1.0	
1.45	6.3	1.9	

Notes:

Horizon – 2Cu EOP - sand would not hold in gouge auger
 Observation Could not sample water

Project: MWQ Site: 334

Location: 721880 mE 7652760 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, mid-dense Excoecaria agallocha (Blind-your-eye mangrove); Lumnitzera racemosa (Black mangrove)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove); Aegiceras corniculatum (River mangrove)
 Lower Stratum: Acanthus ilicifolius (Holly mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; many 20-50% fine < 5mm distinct brown mottles; fine sandy light clay; weak 2-5mm subangular blocky structures; moist; clear to;
B2	0.10 to 1.10	Grey (5Y51) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sandy light clay; massive structures; few 2-10% medium 2-6 mm manganiferous soft segregations; moist; clear to;
Cu	1.10 to 1.30	Dark grey (5Y41) moist colour; fine sandy light clay; massive structures; moist; sharp to;
2C1u	1.30 to 2.45	Dark grey (5Y41) moist colour; fine sand; single grain structures; wet;
2C2u	2.45 to 2.50	Dark grey (5Y41) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.8	
0.25	6.0	4.6	
0.50	5.8	6.8	
0.75	6.0	6.4	
1.00	5.6	5.0	
1.25	6.0	1.7	
1.50	6.0	5.2	
1.75	5.9	3.2	
2.00	5.9	1.5	
2.25	5.8	1.7	
2.50	5.5	1.8	

Notes:
 Observation H2O EC - 36.9 mS/cm; pH 5.8

Project: MWQ Site: 335

Location: 720240 mE 7653400 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct brown mottles; light medium clay; moderate 50-100mm parting to weak 5-10mm subangular blocky structures; moderately moist; clear to;
B21	0.20 to 0.60	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; moderately moist; gradual to;
B22	0.60 to 1.60	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moist; clear to;
C1	1.60 to 1.90	Greyish brown (2.5Y52) moist colour; few 2-10% fine < 5mm faint brown, few 2-10% medium 5-15mm faint pale mottles; light clay; massive structures; moist; sharp to;
C2u	1.90 to 2.90	Dark grey (2.5Y40) moist colour; silty light clay with 4cm sand lens at 2.6m; massive structures; moist; sharp to;
2Cu	2.90 to 3.60	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
3D	3.60 to 3.75	Greenish grey (5G61) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	2.8	
0.30	5.2	4.0	
0.60	5.5	4.6	
0.80	5.2	4.5	
1.00	5.3	4.9	
1.25	5.3	4.6	
1.50	5.1	4.7	
1.75	4.0	3.7	
2.00	4.1	1.4	
2.25	4.9	0.9	
2.50	5.2	0.7	
2.75	5.3	0.3	
3.00	5.9	0.7	
3.25	6.1	1.4	
3.50	5.7	4.5	
3.75	5.8	6.2	

Notes:

Horizon – C2u Organic debris in mud between 2.7 and 2.8 m
 Horizon – 3D EOP - clay too hard for VVC to penetrate
 Observation H2O EC - 17.3 mS/cm; pH 5.5

Project: MWQ Site: 336

Location: 726745 mE 7651825 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 6.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Eutrophic, Mottled-subnatric, Brown, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus polycarpa
 Mid Stratum: Lantana camara (Lantana)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; weak 2-5mm cast structures; dry; sharp to;
B2	0.10 to 1.50	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sandy medium clay; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
2B21	1.50 to 2.00	Yellowish brown (10YR54) moist colour; common 10-20% medium 5-15mm distinct grey mottles; sandy loam; massive structures; moderately moist; abrupt to;
2B22	2.00 to 3.50	Yellowish brown (10YR54) moist colour; many 20-50% coarse 15-30mm distinct grey mottles; clayey coarse sand with a 5cm pale sand lens at 2.5m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
2B23	3.50 to 4.60	Greyish brown (10YR52) moist colour; few 2-10% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct yellow mottles; clayey coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moist; abrupt to;
2B24	4.60 to 5.50	Grey (5Y61) moist colour; many 20-50% medium 5-15mm distinct brown mottles; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.2	4.7	
0.60	6.1	6.1	
1.00	6.2	7.0	
1.50	6.3	5.5	
2.00	6.0	5.6	
2.50	5.7	5.2	
3.00	5.4	5.0	
3.50	5.7	4.8	
4.00	5.9	4.9	
4.50	6.0	5.0	
5.00	6.0	5.7	

Notes:
 Observation Could not sample water

Project: MWQ Site: 337

Location: 719750 mE 7653465 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 07-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 5.9 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.3 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Eutrophic, Mottled-subnatic, Grey, SODOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Hibiscus tiliaceus (Cotton tree / cowtucker)

Mid Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Datura stramonium (Common thornapple)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.70	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty clay loam; weak 2-5mm cast structures; dry; abrupt to;
B22	0.70 to 1.40	Greyish brown (10YR52) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; light medium clay; moderately moist; sharp to;
B23	1.40 to 1.80	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; medium clay; common 10-20% medium 2-6 mm manganiferous soft segregations; moderately moist; clear to;
B24	1.80 to 2.20	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy light medium clay; moderately moist; clear to;
2B2	2.20 to 2.50	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm distinct yellow, few 2-10% fine < 5mm prominent brown mottles; sandy clay loam; massive structures; moderately moist; sharp to;
3C	2.50 to 3.00	Very pale brown (10YR73) moist colour; very few < 2% fine < 5mm faint yellow mottles; sand with a 5cm light clay lens at 2.75m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
4B21	3.00 to 4.00	Light brownish grey (10YR62) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; sand with a 5cm grey light clay lens at 3.1m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moist; abrupt to;

4B22	4.00 to 4.65	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent pale mottles; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz coarse fragments; single grain structures; moist; sharp to;
5C1u	4.65 to 5.20	Grey (2.5Y50) moist colour; coarse sand with 8cm sand lenses at 4.7 and 5.1m; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5C2u	5.20 to 5.50	Dark grey (2.5Y40) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded volcanic glass coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.2	2.8	3.50	6.0	4.5
0.60	5.2	3.4	4.00	5.3	4.5
1.00	5.4	4.6	4.50	5.3	4.3
1.50	5.8	4.4	4.75	6.4	4.2
2.00	5.9	5.2	5.00	6.1	1.6
2.50	5.7	4.9	5.25	5.8	1.4
3.00	5.7	4.9			

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 3C1 lumps of wood at 4.9 and 5.15 m
Observation Could not sample water

Project: MWQ Site: 338

Location: 719760 mE 7653100 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melanic, Eutrophic, Brown, DERMOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Urena lobata (Urena burr); Sida cordifolia (Flannelweed)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.55	Very dark greyish brown (10YR32) moist colour; light medium clay; weak 2-5mm cast structures; clear to;
B21	0.55 to 1.00	Yellowish brown (10YR56) moist colour; many 20-50% fine < 5mm distinct grey mottles; medium clay; abrupt to;
B22	1.00 to 1.50	Brown (10YR53) moist colour; few 2-10% medium 5-15mm distinct grey, few 2-10% fine < 5mm distinct dark mottles; fine sandy light medium clay; sharp to;
2B21	1.50 to 1.80	Brown (10YR53) moist colour; common 10-20% medium 5-15mm prominent brown mottles; fine sand; single grain structures; clear to;
2B22	1.80 to 4.45	Yellowish brown (10YR54) moist colour; common 10-20% very coarse > 30mm prominent brown, many 20-50% coarse 15-30mm distinct pale mottles; sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; very few < 2% very coarse 20-60 mm manganiferous soft segregations; sharp to;
3Cu	4.45 to 4.50	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; sharp to;
4C	4.50 to 4.90	Light grey (10YR72) moist colour; very few < 2% coarse 15-30mm faint brown mottles; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; sharp to;
5D	4.90 to 5.00	Strong brown (7.5YR46) moist colour; common 10-20% medium 5-15mm prominent gley mottles; fine sandy light clay; massive structures;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.7	2.9	
0.60	5.5	4.6	
1.00	5.9	4.9	
1.50	5.9	4.7	
2.00	6.6	5.2	
2.50	6.8	5.1	
3.00	6.2	5.0	
3.50	6.5	7.1	
4.00	6.3	7.1	
4.50	5.8	1.8	
4.75	6.1	5.1	
5.00	6.0	7.0	

Notes:

Observation Could not sample water

Project: MWQ Site: 339

Location: 720450 mE 7652880 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, mid-dense Excoecaria agallocha (Blind-your-eye mangrove)
 Mid Stratum: Hibiscus tiliaceus (Cotton tree / cowntucker)
 Lower Stratum: Acanthus ilicifolius (Holly mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm prominent pale mottles; silty light clay; weak 5-10mm subangular blocky structures; dry; clear to;
B21	0.10 to 0.60	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent pale, few 2-10% fine < 5mm prominent orange mottles; silty light medium clay; moderately moist; gradual to;
B22	0.60 to 1.00	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm prominent pale, common 10-20% fine < 5mm prominent orange, few 2-10% medium 5-15mm distinct grey mottles; fine sandy light medium clay; moderately moist; sharp to;
2B2	1.00 to 1.80	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
3Cu	1.80 to 2.00	Dark grey (2.5Y40) moist colour; clay loam; fine sandy; massive structures; wet; sharp to;
4B	2.00 to 2.25	Yellowish brown (10YR54) moist colour; few 2-10% fine < 5mm distinct orange mottles; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5C1	2.25 to 2.40	Light brownish grey (10YR62) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and igneous rock coarse fragments; single grain structures; wet; sharp to;
5C2u	2.40 to 2.60	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	4.9	
0.30	5.8	4.9	
0.60	6.0	6.0	
0.80	5.9	6.1	
1.00	6.1	5.3	
1.25	5.9	6.0	
1.50	5.9	5.9	
1.75	6.0	5.9	
2.00	5.8	5.6	
2.25	5.6	5.1	
2.50	6.0	0.5	

Notes:

Horizon – 5C2u EOP - too wet to hold in auger; lump of wood at 2.5 m
 Observation Could not sample water

Project: MWQ Site: 340

Location: 719880 mE 7653335 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Plain
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting, Surface crust

Classifications

ASC: HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense Excoecaria agallocha (Blind-your-eye mangrove); Hibiscus tiliaceus (Cotton tree / cowlucker)
 Lower Stratum: Acanthus ilicifolius (Holly mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; few 2-10% medium 5-15mm distinct grey, few 2-10% fine < 5mm distinct dark mottles; silty light medium clay; weak 20-50mm subangular blocky structures; moderately moist; clear
B2	0.10 to 1.40	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm distinct pale, common 10-20% fine < 5mm distinct orange mottles; light medium clay; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	1.40 to 1.90	Brown (10YR53) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% medium 5-15mm distinct grey mottles; sand with a mud lens at 1.6m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; abrupt to;
2C1u	1.90 to 2.50	Grey (5Y61) moist colour with a lens of darker grey sand at 2.25m; sand with mud lenses at 1.9 and 2.5m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
2C2u	2.50 to 2.80	Grey (5Y51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;
2C3u	2.80 to 3.20	Dark grey (2.5Y40) moist colour; coarse sand with a mud lens at 2.9m; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	5.4	
0.30	6.0	5.5	
0.60	6.1	6.3	
0.80	6.0	6.2	
1.00	5.9	5.7	
1.25	5.7	6.0	
1.50	5.8	4.9	
1.75	5.8	5.5	
2.00	6.2	7.0	
2.25	5.8	1.3	
2.50	6.6	1.2	
2.75	6.3	2.4	
3.00	6.1	1.6	

Notes:

Horizon - 2C3u EOP - too wet to hold in auger
 Observation H2O EC - 17.2 mS/cm; pH 5.8

Project: MWQ Site: 341

Location: 719380 mE 7653515 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 08-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 6.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Subnatric, Grey, SODOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Dark brown (10YR33) moist colour; fine sandy clay loam; massive structures; dry; abrupt to;
A3	0.25 to 0.40	Light olive brown (2.5Y54) moist, light yellowish brown (2.5Y64) dry colour; fine sandy clay loam; massive structures; dry; abrupt to;
B21	0.40 to 2.20	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy light medium clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	2.20 to 3.00	Light grey (10YR72) moist, white (10YR81) dry colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sand; dry; sharp to;
3B21	3.00 to 3.65	Grey (10YR61) moist colour; many 20-50% medium 5-15mm distinct brown, common 10-20% fine < 5mm prominent orange mottles; light medium clay; moderately moist; clear to;
3B22	3.65 to 4.20	Dark yellowish brown (10YR46) moist colour; many 20-50% medium 5-15mm prominent grey mottles; light clay; moderately moist; abrupt to;
4B2i	4.20 to 4.50	Grey (10YR51) moist colour; few 2-10% fine < 5mm prominent yellow, very few < 2% fine < 5mm prominent red mottles; light clay; moist; sharp to;
4Cu	4.50 to 4.70	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
5B2	4.70 to 4.90	Brown (10YR53) moist colour; few 2-10% fine < 5mm distinct yellow mottles; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and igneous rock coarse fragments; single grain structures; wet; sharp to;
6Cu	4.90 to 5.20	Dark grey (2.5Y40) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.4	
0.60	5.6	4.5	
1.00	7.2	6.8	
1.50	6.3	6.4	
2.00	7.5	6.3	
2.50	6.2	5.9	
3.00	6.6	5.3	
3.50	5.4	4.7	
4.00	3.7	3.0	
4.25	3.5	2.7	
4.50	3.4	1.9	
4.75	3.6	0.8	
5.00	3.9	1.0	
5.15	4.0	1.2	

Notes:

Observation H2O EC - 1.9 mS/cm; pH 4.0

Project: MWQ Site: 342

Location: 719950 mE 7653640 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Dermosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; silty light medium clay; weak 2-5mm cast parting to strong 2-5mm subangular blocky structures; dry; gradual to;
B2	0.30 to 0.80	Dark brown (10YR33) moist colour; light medium clay; moderately moist; sharp to;
2C	0.80 to 1.40	Dark brown (10YR33) moist colour; loamy fine sand with thin fine sand lens at 1.3m; single grain structures; moderately moist; sharp to;
3B2	1.40 to 1.90	Grey (10YR61) moist colour; many 20-50% fine < 5mm prominent yellow-brown, few 2-10% fine < 5mm prominent dark mottles; fine sandy loam; moderately moist; abrupt to;
4B2	1.90 to 2.10	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent yellow-brown, common 10-20% fine < 5mm distinct grey mottles; light medium clay with thin fine sand lenses; moderately moist; sharp to;
5C	2.10 to 2.25	Light brownish grey (10YR62) moist colour; few 2-10% fine < 5mm prominent orange mottles; sand; single grain structures; moist; sharp to;
6B2i	2.25 to 2.70	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent orange, few 2-10% fine < 5mm distinct brown mottles; light clay with several sand lenses 2-5cm thick; massive structures; moist; sharp to;
6Cu	2.70 to 3.00	Dark grey (2.5Y40) moist colour; silty light clay with a 5cm sand lens at 2.9m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments in sand lens; massive structures; wet; sharp to;
7C	3.00 to 3.30	Dark greyish brown (2.5Y42) moist colour; coarse sand; abundant 50-90% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	3.8	
0.60	5.0	4.2	
1.00	5.1	4.1	
1.50	5.0	4.0	
1.75	4.8	3.8	
2.00	4.7	3.8	
2.25	4.9	3.8	
2.50	4.6	3.8	
2.75	5.0	3.1	
3.00	5.5	3.6	
3.25	6.0	3.0	

Notes:

Horizon – 7C EOP – KS would not hold in VVC tube
 Observation H2O EC - 0.5 mS/cm; pH 5.2

Project: MWQ Site: 343

Location: 722550 mE 7652030 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus alba (Poplar gum); Eucalyptus tessellaris
 Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; clay loam; moderate 2-5mm cast structures; dry; clear to;
A2j	0.25 to 0.55	Greyish brown (10YR52) moist, white (10YR81) dry colour; clay loam; weak 2-5mm cast structures; dry; sharp to;
B2	0.55 to 1.30	Grey (10YR61) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; light medium clay; very few < 2% medium 2-6 mm manganiferous nodules and soft segregations; moderately moist; gradual to;
2B21i	1.30 to 1.90	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent yellow-brown mottles; silty light clay with thin fine sand lens; moist; clear to;
2B22ia	1.90 to 2.50	Greyish brown (10YR52) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm prominent red, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; silty light clay with many thin fine sand lenses most of the mottle jarosite is in the fine sand; massive structures; moist; sharp to;
3B2i	2.50 to 3.10	Dark grey (2.5Y40) moist colour; very few < 2% fine < 5mm prominent yellow-brown mottles; fine sand with common thin silty light clay lenses; single grain structures; moist;
3C1u	3.10 to 3.55	Grey (5Y51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
3C2u	3.55 to 3.80	Grey (5Y51) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;

3C3u 3.80 to 4.80 Grey (5Y51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded siltstone coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.9	3.0	2.75	3.2	1.1
0.60	5.1	4.1	3.00	3.8	1.4
1.00	6.3	4.7	3.25	6.2	1.2
1.25	6.0	6.5	3.50	6.7	2.0
1.50	5.0	4.0	3.75	6.0	2.3
1.75	4.3	3.9	4.00	6.1	1.4
2.00	3.9	3.5	4.25	6.7	4.4
2.25	3.4	2.3	4.50	7.3	4.6
2.50	2.8	0.8	4.75	6.4	4.5

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 3C3u EOP - sand would not hold in tube; thin layer of wood at 4.1 m
 Observation H2O EC - 3.4 mS/cm; pH 3.5

Project: MWQ Site: 344

Location: 719035 mE 7653935 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 6.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Kandosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark brown (10YR22) moist colour; fine sandy light clay; massive structures; dry; gradual to;
B21	0.40 to 0.80	Black (10YR21) moist colour; fine sandy light clay; massive structures; moderately moist; abrupt to;
2B21	0.80 to 1.60	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist; gradual to;
2B22	1.60 to 3.00	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct yellow mottles; fine sandy light clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; gradual to;
2B23	3.00 to 4.10	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent brown, very few < 2% fine < 5mm prominent orange mottles; light medium clay; moderately moist; gradual to;
3B2i	4.10 to 4.65	Grey (10YR51) moist colour; few 2-10% fine < 5mm prominent brown mottles; light clay with thin sand lenses from 4.1-4.3m; massive structures; moist; sharp to;
3Cu	4.65 to 5.10	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
4Cu	5.10 to 5.30	Dark grey (2.5Y40) moist colour; coarse sand; few 2-10% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
5D	5.30 to 5.60	Dark greenish grey (5G41) moist colour; fine sandy light clay; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded intermediate volcanic and quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	2.6	
0.60	5.7	4.5	
1.00	5.1	4.5	
1.50	7.0	6.8	
2.00	6.7	6.4	
2.50	7.4	6.2	
3.00	7.2	7.8	
3.50	7.5	7.6	
3.75	6.4	6.7	
4.00	6.2	5.2	
4.25	4.9	4.3	
4.50	4.0	2.8	
4.75	5.0	1.1	
5.00	5.3	0.9	
5.25	5.5	1.5	
5.50	6.4	1.4	

Notes:

Observation H2O EC - 1.6 mS/cm; pH 5.2

Project: MWQ Site: 345

Location: 720610 mE 7652410 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 6.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Regolithic, Bleached-orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus intermedia; Eucalyptus tessellaris
 Mid Stratum: Melaleuca leucadendra (Long-leaved paperbark); Alphitonia excelsa (Red ash, soapbush)
 Lower Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; clear to;
A2e	0.40 to 1.15	Very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; clear to;
B2	1.15 to 1.80	Yellowish brown (10YR54) moist colour; fine sandy loam; dry; clear to;
B3	1.80 to 2.10	Brown (10YR53) moist colour; many 20-50% fine < 5mm prominent pale, few 2-10% fine < 5mm distinct orange mottles; clayey fine sand, heavy; very few < 2% fine < 2 mm manganiferous soft segregations; dry; sharp to;
2BC1	2.10 to 2.95	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent yellow-brown, common 10-20% fine < 5mm distinct grey mottles; clayey fine sand with many 2-5mm light clay lenses; single grain to massive structures; dry; sharp to;
2BC2	2.95 to 3.45	Light brownish grey (2.5Y62) moist colour; very few < 2% fine < 5mm distinct yellow mottles; fine sand with occasional 2-5mm light clay lenses between 3.1 and 3.3m; single grain structures; dry; sharp to;
2BC3	3.45 to 3.80	Light grey (10YR71) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow mottles; fine sand; single grain structures; moderately moist; sharp to;
3B2	3.80 to 4.40	Grey (5Y61) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent orange, few 2-10% fine < 5mm prominent orange mottles; fine sand with common 2-5mm light clay lenses; single grain to massive structures; moist; sharp to;

4Cu	4.40 to 4.52	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
5C	4.52 to 4.75	Light olive grey (5Y62) moist colour; very few < 2% fine < 5mm prominent orange mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
6Cu	4.75 to 5.05	Dark grey (2.5Y40) moist colour; fine sand with 1-3cm sand lenses of 6C at 4.79 and 4.84m; single grain to massive structures; wet; sharp to;
7Cu	5.05 to 5.15	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;
8B2	5.15 to 5.40	Light brownish grey (2.5Y62) moist colour; few 2-10% coarse 15-30mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
9Cu	5.40 to 5.50	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
10C	5.50 to 6.00	Light brownish grey (2.5Y62) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	4.3	4.0	4.00	3.1	2.3
0.60	5.4	5.0	4.25	3.8	2.0
1.00	5.5	4.8	4.50	3.7	1.3
1.50	5.4	4.9	4.75	4.6	2.5
2.00	5.3	6.7	5.00	5.4	1.5
2.50	5.7	4.8	5.25	5.3	3.4
3.00	5.5	4.9	5.50	6.0	1.5
3.50	5.5	4.3	5.75	5.6	4.3
3.75	4.0	3.0			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)
 Notes:

Observation H2O EC - 1.2 mS/cm/ pH 4.1

Project: MWQ Site: 346

Location: 721575 mE 7652870 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Acidic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane); Hibiscus tiliaceus (Cotton tree / cowtucker)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.15	Dark greyish brown (10YR42) moist colour; fine sand; single grain structures; dry; clear to;
A12	0.15 to 0.50	Brown (10YR43) moist colour; fine sand with thin lenses of sand or coarse sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry; abrupt to;
2B2	0.50 to 0.90	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sand; single grain structures; moderately moist; sharp to;
3C1	0.90 to 3.20	Brown (10YR43) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; common 10-20% fine < 2 mm manganiferous soft segregations; dry changing to wet at 2.6m; sharp to;
3C2	3.20 to 3.40	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4Cu	3.40 to 3.80	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5B2	3.80 to 4.20	Light brownish grey (10YR62) moist colour; common 10-20% medium 5-15mm distinct brown mottles; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

6D 4.20 to 4.50 Greenish grey (5GY61) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; light medium clay; weak 2-5mm subangular blocky structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	3.6	
0.60	4.2	3.5	
1.00	4.8	6.1	
1.50	4.7	6.3	
2.00	6.0	6.6	
2.50	5.9	6.9	
3.00	5.5	6.8	
3.25	5.7	4.3	
3.50	6.3	1.2	
3.75	6.4	1.1	
4.00	6.3	4.8	
4.25	6.5	5.8	
4.50	6.6	5.9	

Notes:

Horizon – 6D EOP - clay too hard to core
 Observation H2O EC - 27.1 mS/cm; pH 6.2

Project: MWQ Site: 347

Location: 721475 mE 7652360 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 6.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Regolithic, Chernic-leptic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Dark brown (10YR33) moist colour; loamy fine sand; single grain structures; moderately moist; abrupt to;
A2?	0.40 to 0.70	Brown (10YR53) moist, pale brown (10YR63) dry colour; fine sand; single grain structures; moderately moist; clear to;
2B2	0.70 to 1.10	Yellowish brown (10YR54) moist colour; sandy light clay; moderately moist;
3C	1.10 to 1.35	Brown (10YR53) moist colour; clayey sand; single grain structures; moderately moist; clear to;
4B2	1.35 to 1.90	Yellowish brown (10YR58) moist colour; many 20-50% medium 5-15mm prominent grey mottles; clay loam; fine sandy; moderately moist; clear to;
5B21	1.90 to 2.40	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent orange mottles; fine sandy light medium clay with a few thin coarse sand bands; moderately moist;
5B22	2.40 to 2.70	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent orange mottles; fine sandy light clay; moderately moist; abrupt to;
6B2	2.70 to 3.80	Light brownish grey (10YR62) moist colour; few 2-10% fine < 5mm prominent orange mottles; fine sand with many thin lenses of light clay; massive structures; moist; abrupt to;
7Cu	3.80 to 5.30	Dark grey (2.5Y40) moist colour; fine sandy light clay or fine sand with many very thin bands of silty light clay; massive structures; wet; sharp to;
8-11Cu	5.30 to 5.85	Dark grey (2.5Y40) moist colour; alternating 10-20cm thick layers of coarse sand and fine sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	3.7	
0.60	5.6	4.2	
1.00	5.8	4.5	
1.50	6.3	4.7	
2.00	6.4	4.6	
2.50	6.0	4.5	
3.00	5.9	4.5	
3.50	5.8	4.5	
3.75	5.7	3.6	
4.00	6.0	0.1	
4.25	5.4	1.1	
4.50	5.6	0.6	
4.75	5.5	0.9	
5.00	5.6	1.1	
5.25	6.0	1.0	
5.50	5.9	1.5	
5.75	6.2	1.1	

Notes:

Observation H2O EC - 0.4 mS/cm; pH 5.3

Project: MWQ**Site:348**

Location: 721335 mE 7652160 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Plain
 Element: Plain
 Runoff: No record
 Elevation: 6.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, Microdiorite
 Surface Condition: Hard setting

Classifications

ASC: Calcic, Mottled-subnatric, Grey, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; dry; sharp to;
B21	0.15 to 0.40	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent dark, few 2-10% fine < 5mm distinct grey mottles; medium heavy clay; moderately moist; gradual to;
B22	0.40 to 0.95	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% medium 5-15mm distinct dark mottles; medium clay; moderately moist; sharp to;
B23k	0.95 to 1.45	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; common 10-20% and few 2-10% coarse 6-20mm calcareous nodule and soft and very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; gradual to;
B24k	1.45 to 2.30	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium clay; few 2-10% medium 2-6 mm calcareous nodules and manganiferous soft segregations; moderately moist; diffuse to;
B25	2.30 to 3.00	Light olive grey (5Y62) moist colour; common 10-20% coarse 15-30mm distinct yellow mottles; medium clay; very few < 2% medium 2-6 mm calcareous nodules segregations; moderately moist; clear to;
B26	3.00 to 5.50	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm prominent grey mottles; light medium clay; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.3	3.2	
0.60	5.0	4.3	
1.00	6.6	7.1	
1.50	6.4	5.8	
2.00	6.7	5.9	
2.50	6.5	5.8	
3.00	7.4	6.5	
3.50	7.2	4.6	
4.00	7.6	7.7	
4.50	7.5	7.5	
5.00	7.3	6.1	

Notes:

Observation Could not sample water, as it was greater than 5.5 m deep

Project: MWQ Site: 349

Location: 721690 mE 7652330 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Dystrophic, Rudosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; gradual to;
C1	0.15 to 0.70	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2C	0.70 to 1.20	Pale brown (10YR63) moist colour; fine sand; single grain structures; moderately moist; abrupt to;
3B2	1.20 to 1.60	Light yellowish brown (10YR64) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sand; single grain structures; moderately moist; sharp to;
4C	1.60 to 2.15	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
5B21	2.15 to 2.40	Light yellowish brown (10YR64) moist colour; fine sand; single grain structures; moist; clear to;
5B22	2.40 to 2.55	Light grey (2.5Y72) moist colour; common 10-20% fine < 5mm distinct grey, very few < 2% fine < 5mm prominent orange mottles; fine sand; single grain structures; moist; sharp to;
5C1u	2.55 to 2.65	Grey (2.5Y50) moist colour; fine sand with 2 thin coarse sand lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moist;
6C1	2.65 to 2.90	Light yellowish brown (10YR64) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
6C2u?	2.90 to 3.00	Grey (5Y51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;

6C3	3.00 to 3.20	Light brownish grey (2.5Y62) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; abrupt to;
6C4u	3.20 to 4.20	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
7Cu	4.20 to 4.40	Grey (5Y51) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;
8Cu	4.40 to 4.60	Grey (5Y61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
9Cu	4.60 to 5.10	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.5	5.1	3.00	6.7	4.6
0.60	6.1	5.5	3.25	6.8	1.7
1.00	6.2	4.6	3.50	6.9	1.4
1.50	5.5	4.1	3.75	6.8	3.6
2.00	7.3	4.7	4.00	6.9	4.6
2.25	6.2	4.9	4.25	6.4	4.1
2.50	6.6	4.8	4.50	6.8	3.9
2.60	6.8	1.6	4.75	6.2	1.0
2.75	6.5	4.7	5.00	6.2	0.9

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water

Project: MWQ Site: 350

Location: 721540 mE 7652000 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Basic, Regolithic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; moderately moist; clear to;
B2	0.30 to 0.90	Brown (10YR43) moist colour; fine sand; single grain structures; moderately moist; clear to;
C	0.90 to 1.20	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; sharp to;
2B2	1.20 to 1.50	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% fine < 5mm faint pale mottles; fine sandy loam; massive structures; moderately moist; abrupt to;
3B2	1.50 to 2.20	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
4B2	2.20 to 2.40	Light grey (10YR72) moist colour; many 20-50% coarse 15-30mm prominent orange mottles; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
5B21	2.40 to 3.35	Light grey (10YR72) moist colour; common 10-20% coarse 15-30mm prominent orange mottles; fine sand; single grain structures; moist;
5B22	3.35 to 3.50	Light grey (10YR72) moist colour; many 20-50% fine < 5mm prominent grey mottles; fine sand; single grain structures; moist; sharp to;
6B21	3.50 to 4.40	Light grey (10YR72) moist colour; few 2-10% medium 5-15mm distinct orange mottles; coarse sand with a 5cm pyritic sand lens at 4.35m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; very few < 2% medium 2-6 mm manganiferous soft segregations; wet;

6B22	4.40 to 4.80	Light yellowish brown (2.5Y64) moist colour; common 10-20% coarse 15-30mm prominent orange mottles; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;
7Cu	4.80 to 4.87	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
8B2	4.87 to 5.30	Very pale brown (10YR74) moist colour; common 10-20% very coarse > 30mm prominent yellow, common 10-20% very coarse > 30mm prominent pale mottles; sand; very few < 2% small pebbles 2-6mm medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.9	4.7	3.50	6.2	5.0
0.60	5.5	4.7	3.75	5.2	4.4
1.00	5.9	4.8	4.00	4.8	4.3
1.50	6.4	5.0	4.35	6.0	1.1
2.00	6.1	5.5	4.50	4.7	4.0
2.50	6.7	5.0	4.85	6.0	1.1
3.00	6.6	5.2	5.00	5.9	4.6
3.25	6.6	5.2			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water

Project: MWQ Site: 351

Location: 721965 mE 7651880 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Dystrophic, Tenosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense
 Species: Lophostemon confertus (Brush box, pink box); Eucalyptus tereticornis (Blue gum)
 Mid Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
B2	0.15 to 0.45	Yellowish brown (10YR54) moist, light yellowish brown (10YR64) dry colour; few 2-10% fine < 5mm distinct orange mottles; fine sand; single grain structures; dry; abrupt to;
C	0.45 to 0.70	Very pale brown (10YR73) moist, white (10YR82) dry colour; fine sand; single grain structures; dry; sharp to;
2B2	0.70 to 1.40	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent dark mottles; clayey fine sand, heavy; single grain structures; moderately moist; sharp to;
3BC	1.40 to 2.00	Light brownish grey (2.5Y62) moist, white (10YR82) dry colour; very few < 2% fine < 5mm prominent orange, few 2-10% coarse 15-30mm distinct brown mottles; fine sand; single grain structures; moderately moist; sharp to;
4BC1	2.00 to 2.30	Light brownish grey (2.5Y62) moist, white (10YR81) dry colour; few 2-10% fine < 5mm prominent orange mottles; sand; very few < 2% small pebbles 2-6mm subrounded granite and quartz coarse fragments; single grain structures; moist; clear to;
4BC2	2.30 to 2.83	Light brownish grey (10YR62) moist colour; few 2-10% medium 5-15mm distinct orange mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and granite and medium pebbles 6-20mm rounded intermediate volcanic coarse fragments; single grain structures; moist;
5C1u	2.83 to 2.90	Dark grey (2.5Y40) moist colour; sand; single grain structures; wet; sharp to;
5C2	2.90 to 3.40	Grey (5Y61) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;

5C3	3.40 to 3.60	Grey (5Y51) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
5C4	3.60 to 3.80	Grey (5Y51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
6D	3.80 to 4.00	Greenish grey (5GY51) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; light medium clay; weak 2-5mm subangular blocky structures; very few < 2% fine < 2 mm manganese soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.4	3.9	2.85	4.8	0.1
0.60	6.0	4.4	3.00	5.1	3.2
1.00	5.9	4.1	3.25	5.4	2.7
1.50	6.0	4.3	3.50	6.2	1.8
2.00	6.9	4.2	3.75	6.8	4.1
2.50	6.5	4.5	4.00	7.1	6.8

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 5C1u Lots of bits of wood affected pH
 Horizon – 6D EOP - too hard for VVC to penetrate
 Observation H2O EC - 0.7 mS/cm; pH 6.0

Project: MWQ Site: 352

Location: 721805 mE 7652210 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Excoecaria agallocha (Blind-your-eye mangrove); Lumnitzera racemosa (Black mangrove); Ceriops tagal (Yellow mangrove)
 Mid Stratum: Ceriops tagal (Yellow mangrove); Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Acanthus ilicifolius (Holly mangrove); Sesuvium portulacastrum (Samphire)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.08	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct grey mottles; fine sandy light clay; moderate 2-5mm subangular blocky structures; moist; abrupt to;
2B21	0.08 to 0.50	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent grey mottles; clay loam; fine sandy, heavy; moist; clear to;
2B22	0.50 to 1.15	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent brown mottles; clay loam; fine sandy, light; moist; abrupt to;
3Cu	1.15 to 1.70	Grey (2.5Y50) moist colour; clayey fine sand; moist; sharp to;
4C	1.70 to 1.80	Light grey (10YR71) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	4.6	
0.25	5.9	4.7	
0.50	6.6	5.2	
0.75	6.0	5.3	
1.00	5.9	4.9	
1.25	6.6	1.7	
1.50	6.2	1.1	
1.75	5.9	3.7	

Notes:

Horizon – 4C EOP - too wet to sample
 Observation H2O EC - 38.3 mS/cm; pH 6.0

Project: MWQ

Site:353

Location: 722660 mE 7651805 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 15-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Plain

Runoff: No record

Elevation: 5.8 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.3 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Eutrophic, Mottled-mesonatric, Grey, SODOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sandy loam; common 10-20% large pebbles 20-60mm angular microdiorite coarse fragments; massive structures; dry; abrupt to;
A2j	0.20 to 0.40	Brown (10YR53) moist, white (10YR81) dry colour; few 2-10% fine < 5mm distinct orange mottles; fine sandy loam; massive structures; dry; sharp to;
B21	0.40 to 1.40	Light brownish grey (10YR62) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; dry; clear to;
B22	1.40 to 2.60	Yellowish brown (10YR55) moist colour; very few < 2% fine < 5mm distinct grey mottles; light medium clay; common 10-20% fine < 2 mm manganiferous soft segregations; moderately moist; abrupt to;
B23k	2.60 to 2.95	Yellowish brown (10YR55) moist colour; common 10-20% fine < 5mm prominent grey mottles; fine sandy light medium clay; few 2-10% fine < 2 mm manganiferous soft and few 2-10% coarse 6-20 mm calcareous nodules segregations; moderately moist; abrupt to;
B24	2.95 to 4.20	Yellowish brown (10YR54) moist colour; common 10-20% medium 5-15mm prominent grey, few 2-10% fine < 5mm prominent orange mottles; fine sandy light medium clay; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	4.20 to 4.60	Yellowish brown (10YR56) moist colour; common 10-20% coarse 15-30mm prominent pale mottles; fine sand; single grain structures; moderately moist; sharp to;
3B2	4.60 to 4.80	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; light medium clay; massive structures; very few < 2% fine < 2 mm manganiferous soft segregations; moist; sharp to;

4B2	4.80 to 5.50	Dark yellowish brown (10YR46) moist colour; fine sand with 3 x 5cm clay lenses at 5.1, 5.3 and 5.42m; very few < 2% small pebbles 2-6mm rounded siltstone coarse fragments; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; moist; sharp to;
5D	5.50 to 5.60	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm distinct yellow, common 10-20% fine < 5mm prominent orange, few 2-10% medium 5-15mm distinct brown mottles; light medium clay; weak 5-10mm lenticular structures; few 2-10% fine < 2 mm manganiferous soft segregations; moist

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	3.6	
0.60	5.0	4.2	
1.00	6.6	5.7	
1.50	7.7	7.9	
2.00	7.9	8.0	
2.50	7.2	6.5	
3.00	7.7	8.1	
3.50	7.6	6.2	
4.00	7.9	7.5	
4.50	7.8	5.9	
5.00	7.3	6.1	
5.50	6.9	7.6	

Notes:

Observation Could not sample water

Project: MWQ Site: 354

Location: 723590 mE 7651910 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 5.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Recently cultivated

Classifications

ASC: Hypocalcic, Mottled-subnatric, Brown, SODOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; clay loam; massive structures; moderately moist; sharp to;
B21	0.10 to 0.25	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange, common 10-20% medium 5-15mm prominent brown mottles; light medium clay; few 2-10% fine <2mm manganiferous soft and very few < 2% medium 2-6 mm manganiferous nodules segregations; moderately moist; clear to;
B22	0.25 to 0.90	Light yellowish brown (2.5Y64) moist colour; common 10-20% fine < 5mm distinct grey, common 10-20% fine < 5mm distinct orange mottles; medium heavy clay; very few < 2% medium 2-6 mm manganiferous soft and few 2-10% medium 2-6 mm ferruginous nodules segregations; moderately moist; sharp to;
B23k	0.90 to 1.80	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent orange mottles; medium clay; common 10-20% coarse 6-20mm and very few < 2% very coarse 20-60mm calcareous nodules very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; clear to;
B24	1.80 to 2.75	Brown (10YR53) moist colour; common 10-20% medium 5-15mm distinct grey mottles; medium clay; common 10-20% fine <2mm manganiferous soft and very few < 2% medium 2-6 mm calcareous nodules segregations; moderately moist; diffuse to;
B25	2.75 to 3.75	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm distinct grey, very few < 2% fine < 5mm distinct yellow mottles; light medium clay; few 2-10% fine <2 mm manganiferous soft segregations; moderately moist; diffuse to;
B26	3.75 to 5.20	Brown (10YR53) moist colour; common 10-20% fine < 5mm prominent grey, common 10-20% fine < 5mm distinct orange mottles; fine sandy light medium clay; few 2-10% fine <2mm and very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	3.3	
0.60	5.6	4.6	
1.00	6.8	7.3	
1.50	6.5	7.2	
2.00	6.5	7.4	
2.50	6.6	7.3	
3.00	6.6	7.5	
3.50	6.3	7.3	
4.00	6.4	5.6	
4.50	6.2	6.8	
5.00	6.3	7.0	

Notes:
 Observation H2O EC - 4.5 mS/cm; pH 6.5

Project: MWQ Site: 355

Location: 723630 mE 7652095 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.7 %
 Surface Coarse Fragments: No record
 Surface Condition: Recently cultivated

Classifications

ASC: Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; abrupt to;
B2?	0.40 to 0.70	Brown (10YR53) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sand; single grain structures; sharp to;
2B2	0.70 to 1.60	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct grey mottles; fine sandy light clay; sharp to;
3B21	1.60 to 2.05	Light grey (10YR71) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm distinct brown mottles; fine sand; single grain structures; sharp to;
3B22	2.05 to 2.35	Light brownish grey (10YR62) moist colour; few 2-10% coarse 15-30mm prominent yellow-brown mottles; fine sand with light clay lenses; single grain structures; sharp to;
4B2	2.35 to 2.40	Dark grey (2.5Y40) moist colour; few 2-10% fine < 5mm prominent orange mottles; silty light clay with a 5mm fine sand lens; massive structures; sharp to;
5B2	2.40 to 2.70	Light brownish grey (2.5Y62) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown mottles; fine sand; very few < 2% small pebbles 2-6mm rounded and subrounded siltstone coarse fragments; single grain structures;
6D1	2.70 to 3.10	Greenish grey (5GY51) moist colour; clayey fine sand with clay lenses; massive structures; clear to;
6D2	3.10 to 3.90	Greenish grey (5GY51) moist colour; many 20-50% very coarse > 30mm prominent brown, few 2-10% medium 5-15mm distinct grey mottles; clayey fine sand with clay lenses; massive structures; sharp to;
7D	3.90 to 4.20	Greenish grey (5G51) moist colour; few 2-10% medium 5-15mm distinct brown mottles; sand; single grain structures; sharp to;

8D	4.20 to 4.70	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; clayey fine sand; single grain structures; clear to;
9D	4.70 to 5.00	Olive (5Y43) moist colour; few 2-10% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct grey mottles; clay loam; fine sandy; massive structures; sharp to;
10D	5.00 to 6.00	Olive (5Y53) moist colour; few 2-10% medium 5-15mm prominent grey mottles; sand; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.8	3.9	
0.60	4.8	4.6	
1.00	6.1	4.7	
1.50	5.8	5.0	
2.00	7.0	5.7	
2.25	6.0	5.1	
2.40	5.5	3.9	
2.50	6.2	4.6	
3.00	5.8	3.0	
3.50	6.1	3.8	
4.00	6.7	4.0	
4.50	6.8	7.0	
5.00	6.7	7.2	

Notes:

Observation H2O EC - 0.7 mS/cm; pH 6.3

Project: MWQ Site: 356

Location: 724000 mE 7652190 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: *Ceriops tagal* (Yellow mangrove); *Excoecaria agallocha* (Blind-your-eye mangrove); *Lumnitzera racemosa* (Black mangrove)
 Lower Stratum: *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.17	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; wet; clear to;
B2	0.17 to 0.80	Greyish brown (10YR52) moist colour; common 10-20% fine < 5mm prominent yellow-brown mottles; clay loam; fine sandy; massive structures; wet; abrupt to;
Cu	0.80 to 1.30	Dark grey (5Y41) moist colour; fine sandy clay loam; massive structures; wet;
2Cu	1.30 to 1.50	Dark grey (2.5Y40) moist colour; fine sand; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	4.3	
0.25	5.7	4.6	
0.50	5.5	4.5	
0.75	5.6	4.4	
1.00	5.7	3.7	
1.25	5.6	1.4	

Notes:

Horizon - 2Cu EOP - soil would not hold in gouge auger
 Observation H2O EC - 49.2 mS/cm; pH 5.8

Project: MWQ

Site:357

Location: 725140 mE 7652300 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 21-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 3.3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Melacic, Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; dry; sharp to;
B2	0.25 to 0.35	Yellowish brown (10YR54) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; fine sandy light medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist;
B3	0.35 to 0.50	Yellowish brown (10YR54) moist colour; few 2-10% fine < 5mm distinct brown mottles; clay loam; fine sandy; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2B21	0.50 to 1.25	Yellowish brown (10YR54) moist colour; common 10-20% medium 5-15mm distinct grey mottles; fine sand; single grain structures; moderately moist; clear to;
2B22	1.25 to 1.90	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sand; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; moist; sharp to;
3C1	1.90 to 2.20	Light brownish grey (2.5Y62) moist colour; few 2-10% medium 5-15mm distinct grey mottles; fine sand; single grain structures; wet; sharp to;
3C2	2.20 to 3.05	Light brownish grey (2.5Y63) moist colour; fine sand with 10cm sand lenses at 2.3 and 2.8m; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) and medium pebbles 6-20mm rounded intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
4C1	3.05 to 3.40	Grey (5Y61) moist colour; fine sand; single grain structures; wet; sharp to;
4C2u	3.40 to 3.65	Grey (5Y51) moist colour; fine sand; single grain structures; wet; abrupt to;
4C3	3.65 to 3.80	Olive grey (5Y52) moist colour; fine sand; single grain structures; wet; sharp to;

5D1	3.80 to 4.10	Greenish grey (5GY51) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy medium clay; massive structures; moist; sharp to;
6D	4.10 to 4.80	Light olive brown (2.5Y54) moist colour; common 10-20% coarse 15-30mm prominent grey mottles; fine sand; single grain structures; wet;
7D	4.80 to 5.20	Greenish grey (5GY51) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy light medium clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.3	3.8	
0.60	6.3	4.8	
1.00	5.9	4.7	
1.50	5.9	4.9	
2.00	6.0	4.7	
2.50	6.0	5.0	
3.00	7.1	4.0	
3.25	6.4	4.5	
3.50	6.0	1.9	
3.75	6.2	3.9	
4.00	6.5	5.9	
4.50	6.6	6.2	
5.00	6.5	5.8	

Notes:

Observation H2O EC - 1.2 mS/cm; pH 5.7

Horizon - 3C2 5 cm layer of organic debris (mangrove) at 2.95

Project: MWQ Site: 358

Location: 725140 mE 7651990 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; dry; sharp to;
B21	0.30 to 0.80	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sandy medium clay; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; diffuse to;
B22	0.80 to 1.40	Light grey (5Y71) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; sandy medium clay; moderately moist; diffuse to;
B23	1.40 to 2.30	Yellowish brown (10YR58) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% fine < 5mm distinct grey mottles; fine sandy medium clay; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; gradual to;
B24	2.30 to 3.00	Yellowish brown (10YR54) moist colour; very few < 2% fine < 5mm distinct grey mottles; fine sandy light medium clay; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; clear to;
B25	3.00 to 3.50	Yellowish brown (10YR54) moist colour; common 10-20% medium 5-15mm prominent gley mottles; fine sandy light medium clay; moist; sharp to;
2C	3.50 to 3.80	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3B2	3.80 to 4.70	Yellowish brown (10YR54) moist colour; many 20-50% medium 5-15mm prominent grey mottles; sandy light clay; very few < 2% fine <2 mm manganiferous soft segregations; wet; sharp to;
4C	4.70 to 5.80	Light brownish grey (10YR62) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	4.1	
0.60	6.8	5.5	
1.00	6.0	5.8	
1.50	6.9	5.8	
2.00	7.6	6.0	
2.50	8.1	5.9	
3.00	8.0	6.6	
3.50	8.1	6.1	
4.00	7.2	7.8	
4.50	6.6	5.9	
5.00	6.5	8.1	

Notes:

Horizon – Fill A2j at 30 cm
 Observation H2O pH 6.9; could not measure conductivity

Project: MWQ Site: 359

Location: 724745 mE 7652265 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
B21	0.00 to 0.65	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; clay loam; fine sandy; many 20-50% medium 2-6 mm manganiferous soft segregations; dry; diffuse to;
B22	0.65 to 0.90	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; fine sandy light clay with fine sand lenses; moderately moist; sharp to;
2B2i	0.90 to 1.40	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm distinct yellow mottles; fine sand; single grain structures; moist; sharp to;
2C1u	1.40 to 1.50	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
2C2u	1.50 to 2.60	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;
3D	2.60 to 2.90	Olive brown (2.5Y44) moist colour; common 10-20% fine < 5mm prominent gley mottles; medium heavy clay; moderate 2-5mm lenticular structures; few 2-10% medium 2-6 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.5	7.1	
0.25	7.0	6.0	
0.50	6.7	5.6	
0.75	6.9	5.6	
1.00	6.3	5.4	
1.25	6.4	5.2	
1.50	6.4	1.9	
1.75	6.5	1.7	
2.00	6.7	1.9	
2.25	6.7	1.6	
2.50	6.3	4.4	
2.75	6.5	5.9	
2.90	6.4	5.7	

Notes:

Horizon – 3D EOP - too hard for VVC to penetrate
 Observation Could not sample water

Project: MWQ Site: 360

Location: 725580 mE 7651960 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Drainage depression
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.15	Black (7.5YR20) moist colour; silty light medium clay; moderate 2-5mm subangular blocky structures; moderately moist; clear to;
A12	0.15 to 0.40	Black (7.5YR20) moist colour; common 10-20% medium 5-15mm prominent grey mottles; silty light clay; moderately moist; abrupt to;
B21	0.40 to 0.60	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; silty light clay; moderately moist; clear to;
B22	0.60 to 1.30	Grey (10YR61) moist colour; common 10-20% fine < 5mm distinct yellow-brown mottles; fine sandy light clay with silty light clay lenses at 1.1, 1.2 and 1.3m; massive structures; moist;
2C1u	1.30 to 2.05	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
2C2u	2.05 to 2.75	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt and quartz coarse fragments; single grain structures; wet; sharp to;
3D	2.75 to 3.10	Olive brown (2.5Y44) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium heavy clay; few 2-10% medium pebbles 6-20mm rounded granite coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.9	3.3	
0.30	5.0	4.2	
0.60	5.4	4.4	
0.80	5.6	4.3	
1.00	5.4	3.7	
1.25	5.1	4.0	
1.50	5.2	1.1	
1.75	5.4	1.6	
2.00	5.7	1.6	
2.25	5.7	1.0	
2.50	5.6	1.5	
2.75	6.9	0.9	
3.00	6.0	5.1	

Notes:

Horizon – 3D EOP - too hard for VVC to core
 Observation Could not sample water

Project: MWQ Site: 361

Location: 725815 mE 7652435 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Natric, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tereticornis (Blue gum); Eucalyptus tessellaris
 Mid Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Paspalum vaginatum (Saltwater couch); Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; dry; abrupt to;
A2j	0.10 to 0.25	Dark greyish brown (10YR42) moist, light brownish grey (10YR62) dry, white (10YR81) dry colour; fine sandy loam; massive structures; dry; abrupt to;
B21i	0.25 to 0.80	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy light medium clay; strong 50-100mm parting to strong 20-50mm subangular blocky structures; dry; clear to;
B22i	0.80 to 1.25	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, very few < 2% medium 5-15mm prominent red mottles; fine sandy light clay; massive structures; moist; abrupt to;
Cu	1.25 to 1.40	Very dark grey (10YR31) moist colour; fine sandy light clay with several 5mm greyish brown fine sand lenses; massive structures; wet; sharp to;
2Cu	1.40 to 2.20	Dark grey (2.5Y40) moist colour; fine sand with light clay lenses at 1.8, 1.9 and 2.0m and a 10cm sand lens at 2.1m; very few < 2% small pebbles 2-6mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
3Cu	2.20 to 2.40	Dark grey (2.5Y40) moist colour; silty light clay with many 5-10mm fine sand lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
4C1u	2.40 to 2.65	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
4C2u	2.65 to 3.20	Grey (5Y51) moist colour; fine sand; single grain structures; wet; sharp to;

4C3u	3.20 to 4.40	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz, intermediate and acid volcanic coarse fragments; single grain structures; wet; gradual to;
4C4	4.40 to 4.90	Greyish brown (2.5Y52) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic, granite and quartz coarse fragments; single grain structures; wet; sharp to;
5D	4.90 to 5.05	Olive brown (2.5Y44) moist colour; common 10-20% medium 5-15mm prominent gley mottles; fine sandy medium clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.5	3.5	2.75	5.7	0.9
0.30	5.9	4.2	3.00	6.1	1.0
0.60	5.6	4.8	3.25	5.9	1.2
0.80	5.6	3.6	3.50	6.2	1.2
1.00	4.9	3.8	3.75	6.3	1.0
1.25	4.6	3.3	4.00	6.7	1.4
1.50	5.1	1.3	4.25	5.7	1.1
1.75	5.7	1.3	4.50	6.1	1.0
2.00	5.3	1.2	4.75	6.4	1.7
2.25	5.5	1.7	5.00	6.3	5.2
2.50	5.7	1.0			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water

Project: MWQ Site: 362

Location: 725930 mE 7652160 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Regolithic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Dark brown (10YR33) moist colour; loamy fine sand; single grain structures; moderately moist; abrupt to;
B2	0.30 to 1.00	Yellowish brown (10YR54) moist colour; few 2-10% medium 5-15mm distinct yellow mottles; fine sand; single grain structures; moist;
BC	1.00 to 2.65	Light grey (2.5Y72) moist colour; common 10-20% coarse 15-30mm prominent yellow-brown mottles; fine sand; single grain structures; moist;
2C1	2.65 to 2.85	Grey (5Y51) moist colour; fine sand; single grain structures; wet; sharp to;
2C2u	2.85 to 3.00	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
2C3u	3.00 to 4.45	Grey (5Y51) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and acid volcanic coarse fragments; single grain structures; wet; sharp to;
3D	4.45 to 4.60	Olive brown (2.5Y44) moist colour; common 10-20% medium 5-15mm prominent gley mottles; fine sandy light medium clay with a 5cm gley coarse sandy light medium clay lens at 4.45m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; very few < 2% medium 2-6 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	4.9	
0.60	6.3	5.0	
1.00	6.6	4.9	
1.50	6.9	5.2	
2.00	6.6	5.2	
2.50	6.8	5.2	
2.75	6.8	4.1	
3.00	6.6	1.3	
3.25	6.6	1.4	
3.50	6.4	1.9	
3.75	6.8	2.4	
4.00	6.6	2.4	
4.25	6.9	2.5	
4.50	6.4	4.4	

Notes:

Horizon – 2C2u 3 x 5mm layers of organic debris
 Horizon – 3D EOP - too hard for VVC to core
 Observation H2O EC - 0.2 mS/cm; pH 5.8

Project: MWQ Site: 363

Location: 725710 mE 7651760 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; sandy clay loam; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; dry; sharp to;
B2	0.15 to 1.20	Olive grey (5Y52) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; medium clay; moderately moist; sharp to;
2C	1.20 to 1.35	Light brownish grey (10YR62) moist, white (10YR81) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; sharp to;
3B2	1.35 to 2.20	Brownish yellow (10YR66) moist colour; few 2-10% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct brown mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; clear to;
4B2	2.20 to 3.00	Olive (5Y53) moist colour; common 10-20% medium 5-15mm prominent grey mottles; sandy clay loam; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moist
5B2	3.00 to 3.90	Greyish brown (2.5Y52) moist colour; many 20-50% coarse 15-30mm prominent grey mottles; coarse sandy light clay; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded gravel coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	4.3	
0.60	6.8	5.7	
1.00	7.1	5.4	
1.50	6.9	6.1	
2.00	7.4	6.1	
2.50	6.7	6.3	
3.00	6.7	6.4	
3.50	7.0	6.1	

Notes:

Horizon – 5B2 EOP - stones stopped VVC
 Observation H2O EC - 11.3 mS/cm; pH 6.9

Project: MWQ Site: 364

Location: 722565 mE 7652350 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Aug-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Intermediate volcanic
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.45	Dark brown (10YR33) moist colour; light clay; few 2-10% large pebbles 20-60mm subrounded intermediate volcanic coarse fragments; massive structures; dry; sharp to;
2B2	0.45 to 0.70	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; common 10-20% large pebbles 20-60mm angular intermediate volcanic coarse fragments; moderately moist; sharp to;
3A2e	0.70 to 1.90	Brown (10YR53) moist, very pale brown (10YR73) dry colour; fine sand with a 1cm light clay lens at 1.5m; single grain structures; moderately moist; sharp to;
3B21	1.90 to 2.15	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sand; single grain structures; moderately moist; clear to;
3B22	2.15 to 2.45	Light brownish grey (2.5Y62) moist colour; very few < 2% coarse 15-30mm prominent brown, many 20-50% medium 5-15mm prominent brown mottles; fine sand; single grain structures; moist; sharp to;
4C	2.45 to 3.00	Brown (10YR43) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; very few < 2% medium 2-6 mm and many 20-50% fine <2mm manganiferous soft segregations; wet; abrupt to;
5C	3.00 to 6.00	Light brownish grey (10YR62) moist colour; very few < 2% medium 5-15mm prominent brown mottles; coarse sand with 2-3cm lumps of light clay at 4.45 and 4.85m; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	5.1	
0.60	7.4	6.2	
1.00	6.9	5.5	
1.50	6.6	5.3	
2.00	6.5	5.2	
2.50	6.5	5.5	
3.00	6.6	6.4	
3.50	6.7	5.5	
4.00	6.6	5.6	
4.45	6.2	5.6	
4.50	6.9	5.6	
4.85	6.6	5.5	
5.00	6.7	5.6	

Notes:

Horizon – 5C Mottle around light clay at 4.45 m
 Observation H2O EC - 11.9 mS/cm; pH 6.1

Project: MWQ Site: 365

Location: 726525 mE 7651885 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Acidic-sodic, Kurosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Eucalyptus tessellaris
 Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.10	Black (10YR21) moist colour; silty clay loam; moderate 2-5mm cast structures; dry; abrupt to;
A2j?	0.10 to 0.20	Very dark brown (10YR22) moist, white (10YR81) dry colour; silty clay loam; massive structures; dry; sharp to;
B21i	0.20 to 0.40	Light brownish grey (10YR62) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; light medium clay; moderately moist; abrupt to;
B22i	0.40 to 0.65	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent red, common 10-20% fine < 5mm prominent yellow-brown mottles; light medium clay; moderately moist;
2B2?	0.65 to 1.00	Greyish brown (10YR52) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; sharp to;
3C	1.00 to 1.40	Greyish brown (10YR52) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; abrupt to;
4D	1.40 to 2.05	Light grey (10YR71) moist colour; common 10-20% fine < 5mm prominent yellow-brown mottles; sand to a sandy loam at 2.0m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; gradual to;
5D1	2.05 to 2.60	Light grey (7.5YR70) moist colour; very few < 2% fine < 5mm prominent yellow mottles; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; diffuse to;

5D2 2.60 to 3.00 Light greenish grey (5G71) moist colour; sandy medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	4.6	
0.30	5.0	3.9	
0.60	4.6	3.6	
0.80	4.7	3.5	
1.00	4.6	3.7	
1.50	4.2	3.8	
2.00	4.3	3.5	
2.50	4.4	3.8	
3.00	5.3	4.1	

Notes:

Horizon - 5D2 EOP - clay too hard to core
 Observation H2O EC - 28.1 mS/cm; pH 4.0

Project: MWQ Site: 366

Location: 726300 mE 7652660 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Aug-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Shell
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, sparse
 Species: Eucalyptus tessellaris

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; loamy sand; single grain structures; dry; abrupt to;
C	0.20 to 1.20	Brown (10YR53) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and large pebbles 20-60mm rounded igneous rock coarse fragments; single grain structures; dry; sharp to;
2A1	1.20 to 1.30	Very dark grey (10YR31) moist colour; loamy sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; abrupt to;
2C	1.30 to 1.45	Grey (10YR61) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry;
3A1	1.45 to 1.55	Black (2.5Y20) moist colour; light clay; dry; abrupt to;
3B21i	1.55 to 1.75	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm prominent dark mottles; light medium clay; dry; abrupt to;
3B22ia	1.75 to 2.00	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), many 20-50% medium 5-15mm prominent brown mottles; light medium clay; dry; sharp to;
4D1	2.00 to 2.70	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, common 10-20% fine < 5mm distinct grey mottles; medium clay; moderately moist;
4D2	2.70 to 3.15	Light grey (2.5Y72) moist colour; very few < 2% fine < 5mm distinct yellow, very few < 2% fine < 5mm distinct brown mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; sharp to;

4D3	3.15 to 3.80	White (2.5Y82) moist colour; few 2-10% medium 5-15mm prominent gley mottles; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; abrupt to;
4D4	3.80 to 5.00	Greenish grey (5G61) moist colour; common 10-20% medium 5-15mm prominent olive brown mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.5	4.3	2.75	4.2	3.3
0.60	5.8	4.7	3.00	4.4	3.2
1.00	5.4	4.7	3.25	4.0	3.4
1.25	5.9	4.6	3.50	4.2	3.0
1.50	5.1	3.9	3.75	4.4	3.2
1.75	4.3	3.5	4.00	5.7	5.2
2.00	3.7	2.9	4.50	5.6	6.5
2.25	4.2	3.2	5.00	6.3	7.1
2.50	3.6	3.4			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water as it was below 5 m

Project: MWQ Site: 367

Location: 726515 mE 7653000 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Shell
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Rhizophora stylosa (Red mangrove)
 Lower Stratum: Rhizophora stylosa (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.08	Black (10YR21) moist colour; silty light clay; weak 5-10mm cast structures; wet; abrupt to;
C1u	0.08 to 0.75	Very dark brown (10YR22) moist colour; silty light clay; massive structures; wet; gradual to;
C2u	0.75 to 1.50	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
2D	1.50 to 1.65	Dark greenish grey (5G41) moist colour; fine sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	0.9	
0.25	6.4	1.0	
0.50	6.4	0.6	
0.75	6.4	0.7	
1.00	6.4	1.2	
1.25	6.3	1.1	
1.50	6.3	0.7	
1.65	6.4	1.1	

Notes:

Horizon - 2D EOP - too hard to penetrate with gouge
 Observation H2O EC - 54.4 mS/cm; pH 6.5

Project: MWQ Site: 368

Location: 726170 mE 7652910 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tessellaris
 Mid Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker)
 Lower Stratum: Imperata cylindrica (Blady grass); Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; light clay; weak 5-10mm parting to weak 2-5mm subangular blocky structures; dry;
B21i	0.15 to 0.30	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; moderate 2-5mm subangular blocky structures; dry; clear to;
B22i	0.30 to 0.80	Grey (10YR61) moist colour; common 10-20% fine < 5mm prominent brown, common 10-20% fine < 5mm prominent red mottles; light medium clay; moderately moist; sharp to;
B23ia	0.80 to 1.00	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent brown mottles; light medium clay; abrupt to;
B3ia	1.00 to 1.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% fine < 5mm prominent brown mottles; light clay; moderately moist; sharp to;
2D1	1.20 to 1.55	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; medium heavy clay; moderately moist; gradual to;
2D2	1.55 to 2.30	Grey (10YR61) moist colour; many 20-50% very coarse > 30mm prominent yellow-brown mottles; medium clay; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock (unidentified) coarse fragments; moist; gradual to;
2D3	2.30 to 2.65	Olive yellow (2.5Y66) moist colour; common 10-20% medium 5-15mm prominent grey, few 2-10% medium 5-15mm distinct brown mottles; medium clay; few 2-10% small pebbles 2-6mm and large pebbles 20-60mm subrounded igneous rock (unidentified) coarse fragments; moist; abrupt to;

3D 2.65 to 3.50 Light grey (2.5Y70) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent gley mottles; coarse sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	4.6	
0.30	5.2	3.9	
0.60	4.7	3.9	
0.80	4.0	3.9	
1.00	3.8	3.3	
1.25	3.8	3.7	
1.50	3.9	3.6	
1.75	4.3	3.7	
2.00	4.4	4.0	
2.25	4.2	3.6	
2.50	4.5	3.8	
3.00	4.7	3.8	
3.50	4.8	3.7	

Notes:

Horizon – 3D EOP - wet soil would not hold in tube stopped at 4.3 m by a rock
 Observation H2O EC - 14.6 mS/cm; pH 4.8

Project: MWQ Site: 369

Location: 725710 mE 7653075 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, very sparse
 Species: Myoporum acuminatum (Boobiialla); Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; fine sandy clay loam; massive structures; dry; sharp to;
B21i	0.10 to 0.50	Light yellowish brown (2.5Y64) moist colour; common 10-20% fine < 5mm distinct orange, common 10-20% fine < 5mm prominent dark mottles; fine sandy medium clay; coarse prismatic or columnar structure; moderately moist;
B22i	0.50 to 1.20	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy light medium clay; moist; abrupt to;
Cu	1.20 to 1.65	Very dark grey (10YR31) moist colour; light clay with few fine sand lenses; massive structures; wet; sharp to;
2C1u	1.65 to 2.30	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
2C2u	2.30 to 3.50	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
2C3u	3.50 to 4.65	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
3D	4.65 to 5.00	Dark greenish grey (5G41) moist colour; fine sandy light medium clay; massive structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.6	4.6	2.75	5.7	0.9
0.30	5.8	5.1	3.00	6.6	1.4
0.60	5.5	5.0	3.25	5.9	2.5
0.80	5.6	4.8	3.50	6.0	1.6
1.00	6.2	5.1	3.75	6.4	1.9
1.25	5.5	1.2	4.00	6.4	1.3
1.50	5.8	1.4	4.25	5.8	1.5
1.75	6.6	1.3	4.50	5.9	1.9
2.00	6.5	1.3	4.75	6.3	1.7
2.25	5.8	1.3	5.00	6.3	1.6
2.50	6.6	0.9			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 24.3 mS/cm; pH 5.2

Project: MWQ Site: 370

Location: 726240 mE 7653170 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch); Sesuvium portulacastrum (Samphire)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (7.5YR20) moist colour; silty light clay; massive structures; moist; sharp to;
2B2i	0.10 to 0.70	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy light clay; massive structures; moist; clear to;
2B3	0.70 to 1.00	Grey (10YR61) moist colour; fine sandy light clay with bits of 2C between 0.9 and 1.0m; massive structures; moist; abrupt to;
3Cu	1.00 to 2.60	Dark grey (2.5Y40) moist colour with a dark black top 5cm of 2C; fine sand; single grain structures; wet; diffuse to;
4C	2.60 to 3.20	Light brownish grey (2.5Y63) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5D	3.20 to 3.50	Dark greyish brown (2.5Y43) moist colour; common 10-20% medium 5-15mm prominent gley mottles; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and igneous rock coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.7	
0.30	6.3	4.9	
0.60	5.8	4.8	
0.80	5.6	5.0	
1.00	5.5	1.0	
1.25	5.6	1.4	
1.50	5.8	1.6	
1.75	5.8	1.6	
2.00	6.1	1.5	
2.25	6.8	1.8	
2.50	6.5	4.2	
2.75	6.0	5.0	
3.00	6.5	4.7	
3.25	6.3	5.4	
3.50	6.4	5.4	

Notes:
 Horizon – 5D EOP - too hard for VVC to penetrate
 Observation H2O EC - 53.3 mS/cm; pH 5.9

Project: MWQ Site: 371

Location: 725880 mE 7653545 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Shell
 Surface Condition: Soft, Saline

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense
 Species: *Ceriops tagal* (Yellow mangrove); *Rhizophora stylosa* (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct dark, common 10-20% fine < 5mm distinct orange mottles; fine sandy light clay; moderate 5-10mm cast structures; wet; abrupt to;
C	0.15 to 0.35	Dark grey (10YR41) moist colour; very few < 2% fine < 5mm prominent orange mottles; fine sandy light clay; massive structures; wet; sharp to;
2C	0.35 to 0.50	Grey (10YR51) moist colour; fine sand with pockets of light clay; single grain structures; wet; sharp to;
3C1u	0.50 to 1.25	Very dark greyish brown (10YR32) moist colour; few 2-10% medium 5-15mm prominent grey mottles; light clay with pockets of mottled sand; massive structures; wet; gradual to;
3C2u	1.25 to 2.30	Very dark grey (2.5Y30) moist colour; light clay; massive structures; wet; sharp to;
4Cu	2.30 to 2.35	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	3.2	
0.25	5.5	2.5	
0.50	6.4	5.1	
0.75	6.1	0.7	
1.00	6.2	1.1	
1.25	6.3	1.0	
1.50	6.3	1.0	
1.75	6.4	1.2	
2.00	6.3	1.1	
2.25	6.2	0.8	

Notes:

Horizon – 4Cu EOP - gouge auger would not penetrate sand

Project: MWQ Site: 372

Location: 726525 mE 7653310 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Aug-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense
 Species: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (Blue gum); Eucalyptus tessellaris

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and igneous rock coarse fragments; single grain structures; dry; abrupt to;
C	0.15 to 1.10	Brown (10YR53) moist, very pale brown (10YR73) dry colour; fine sand; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2C	1.10 to 1.50	Very pale brown (10YR74) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz, acid volcanic and igneous rock coarse fragments; single grain structures; dry; sharp to;
3C	1.50 to 1.95	Grey (10YR61) moist, white (10YR81) dry colour; fine sand; single grain structures; moderately moist; sharp to;
3Cu	1.95 to 2.25	Grey (10YR51) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments and a thin layer of organic matter; single grain structures; moist; abrupt to;
4Cu	2.25 to 2.85	Very dark grey (10YR31) moist colour; silty light clay with common 5mm paler grey fine sand lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive to single grain structures; wet; sharp to;
5C1u	2.85 to 3.50	Grey (2.5Y50) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;
5C2u	3.50 to 4.60	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
6D	4.60 to 4.70	Greenish grey (5G61) moist colour; coarse sand; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

7D 4.70 to 4.90 Greenish grey (5G61) moist colour; common 10-20% medium 5-15mm prominent brown mottles; sandy medium clay; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.6	5.4	3.00	6.0	1.0
0.60	5.9	5.5	3.25	6.7	1.1
1.00	5.9	5.6	3.50	6.4	1.1
1.50	7.0	5.9	3.75	6.1	1.5
1.75	6.8	5.9	4.00	6.1	0.9
2.00	6.1	0.7	4.25	6.5	1.3
2.25	5.9	0.9	4.50	6.0	1.2
2.50	5.9	0.9	4.75	6.9	5.3
2.75	5.7	0.8			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 7D EOP - too hard to auger further
 Observation H2O EC - 23.6 mS/cm; pH 6.2

Project: MWQ Site: 373

Location: 725740 mE 7652890 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 29-Aug-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 2.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense

Species: *Ceriops tagal* (Yellow mangrove)

Lower Stratum: *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.08	Black (10YR21) moist colour; silty light clay; weak 2-5mm cast structures; moist; sharp to;
B2	0.08 to 0.45	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent orange mottles; light clay; moist; clear to;
C1	0.45 to 0.65	Dark grey (10YR41) moist colour with blotches of pale sand; light clay; wet; abrupt to;
C2u	0.65 to 1.40	Very dark grey (10YR31) moist colour; light clay; massive structures; wet; sharp to;
2Cu	1.40 to 1.60	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
3Cu	1.60 to 1.70	Very dark grey (10YR31) moist colour; light clay; massive structures; wet; sharp to;
4Cu	1.70 to 1.80	Dark grey (5Y41) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.3	
0.25	5.9	4.5	
0.50	5.8	4.7	
0.75	5.9	4.7	
1.00	5.9	0.6	
1.25	5.9	0.6	
1.50	6.0	1.0	
1.75	6.2	0.6	

Notes:

Horizon - 4Cu EOP - could not push gouge auger in any further

Observation H2O EC - 61.6 mS/cm; pH 6.2

Project: MWQ Site: 374

Location: 726150 mE 7652290 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Sodosolic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Myoporum acuminatum (Boobialla); Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; clay loam; fine sandy; massive structures; dry; sharp to;
B1	0.15 to 0.30	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy light clay; moderately moist; abrupt to;
B21	0.30 to 0.50	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy light clay; moderately moist; clear to;
B22i	0.50 to 1.05	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm prominent red mottles; fine sandy light clay; moist; clear to;
B23ia	1.05 to 1.50	Grey (10YR51) moist colour; few 2-10% fine < 5mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; massive structures; wet; sharp to;
2B2ia	1.50 to 1.70	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; fine sand with a 1cm silty light clay lens at 1.69m; single grain structures; wet; sharp to;
2C1	1.70 to 1.90	Grey (10YR51) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
2C2u	1.90 to 2.80	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and acid volcanic coarse fragments; single grain structures; wet; sharp to;

2C3u	2.80 to 3.50	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz, acid volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
3D	3.50 to 4.00	Greenish grey (5G51) moist colour; few 2-10% coarse 15-30mm prominent brown mottles; coarse sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.5	4.8	2.25	6.1	1.3
0.30	6.8	5.2	2.50	6.6	1.5
0.60	6.3	5.0	2.75	6.6	1.1
0.80	6.2	4.8	3.00	6.5	1.2
1.00	6.0	4.9	3.25	6.5	0.9
1.25	6.0	4.8	3.50	6.6	1.7
1.50	5.9	4.3	3.75	6.6	5.4
1.75	6.1	4.9	4.00	6.3	5.5
2.00	6.2	1.4			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 3D EOP - too hard for VVC to penetrate
 Observation could not sample water

Project: MWQ Site: 375

Location: 726965 mE 7651835 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Aug-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense
 Species: Eucalyptus tessellaris
 Mid Stratum: Cupaniopsis anacardioides (Tuckeroo); Planchonia careya (Cockatoo apple)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.18	Very dark brown (10YR22) moist colour; sand; very few < 2% cobbles 60-200mm rounded intermediate volcanic coarse fragments; single grain structures; dry; clear to;
A2e	0.18 to 0.50	Light yellowish brown (10YR64) moist, very pale brown (10YR74) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded acid volcanic and quartz large pebbles 20-60mm rounded pumice coarse fragments; single grain structures; dry; diffuse to;
2A2e	0.50 to 1.30	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz and acid volcanic coarse fragments; single grain structures; dry; abrupt to;
2B1	1.30 to 1.60	Strong brown (7.5YR56) moist colour; many 20-50% coarse 15-30mm prominent pale mottles; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz, acid volcanic and igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
2B2	1.60 to 1.80	Strong brown (7.5YR58) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and acid volcanic coarse fragments; single grain structures; moist; abrupt to;
2B3	1.80 to 2.00	Strong brown (7.5YR56) moist colour; many 20-50% very coarse > 30mm prominent pale, few 2-10% fine < 5mm prominent brown mottles; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and acid volcanic coarse fragments; single grain structures; wet; sharp to;
2C	2.00 to 2.10	Light brownish grey (10YR62) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and acid volcanic coarse fragments; single grain structures; wet; sharp to;

3C1	2.10 to 2.20	Grey (2.5Y50) moist colour; coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz and acid volcanic coarse fragments; single grain structures; wet; sharp to;
3C2	2.20 to 2.30	Grey (2.5Y50) moist colour; clayey fine sand; single grain structures; wet; sharp to;
4D	2.30 to 2.80	Light grey (2.5Y70) moist colour; very few < 2% fine < 5mm distinct yellow, very few < 2% fine < 5mm distinct gley mottles; fine sandy light medium clay; massive structures; very few < 2% fine < 2 mm manganese soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	5.4	
0.60	6.2	5.7	
1.00	6.4	5.8	
1.50	5.7	5.0	
2.00	4.9	4.9	
2.15	5.3	1.6	
2.25	5.7	1.6	
2.50	6.4	7.2	
2.75	6.4	7.3	

Notes:

Horizon – 4D EOP - too hard for VVC to penetrate
 Observation Could not sample water

Project: MWQ Site: 376

Location: 727410 mE 7651400 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense
 Species: Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.12	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sandy light clay; weak 2-5mm cast structures; moist; clear to;
B2	0.12 to 0.80	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% medium 5-15mm distinct grey mottles; fine sandy light clay; massive structures; moist; abrupt to;
Cu	0.80 to 1.55	Very dark grey (10YR31) moist colour; fine sandy light clay with 5-9cm sand lenses at 1.3 and 1.4m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
2Cu	1.55 to 1.75	Very dark grey (2.5Y30) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	5.0	
0.25	6.2	4.6	
0.50	5.9	4.5	
0.75	6.0	1.9	
1.00	6.1	0.7	
1.25	6.0	0.6	
1.50	6.1	0.8	
1.75	6.3	1.2	

Notes:

Horizon - 2Cu EOP
 Observation H2O EC - 53.1 mS/cm; pH 6.3

Project: MWQ**Site:377**

Location: 727000 mE 7650930 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Aug-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Self-mulching, Surface flake

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.01	Black (2.5Y20) moist colour; few 2-10% fine < 5mm prominent orange mottles; silty medium clay; moderate 5-10mm parting to moderate 2-5mm subangular blocky structures; sharp to;
A12	0.01 to 0.15	Black (2.5Y20) moist colour; very few < 2% fine < 5mm prominent orange mottles; silty medium clay; weak 2-5mm subangular blocky structures; sharp to;
B2	0.15 to 0.50	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% coarse 15-30mm distinct grey mottles; light clay; weak 2-5mm subangular blocky structures; sharp to;
2D1	0.50 to 0.75	Greenish grey (5GY51) moist colour; common 10-20% medium 5-15mm prominent brown mottles; light clay with a 5cm fine sand lens at 0.65m; massive structures; abrupt to;
2D2	0.75 to 1.25	Dark greenish grey (5G41) moist colour; fine sandy light clay; massive structures; clear
2D3	1.25 to 1.60	Dark greenish grey (5GY41) moist colour; many 20-50% medium 5-15mm distinct brown mottles; medium heavy clay; massive structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	4.3	
0.25	5.3	4.0	
0.50	6.2	4.1	
0.75	6.1	5.6	
1.00	6.1	1.3	
1.25	6.5	6.1	
1.50	6.2	7.4	

Notes:

Horizon - B2 Sometimes with pockets of C at 45 cm
 Horizon - 2D3 EOP - too hard for VVC to penetrate
 Observation H2O EC - 63.4 mS/cm; pH 6.0

Project: MWQ Site: 378

Location: 726825 mE 7650230 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 03-Sep-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Sporobolus virginicus (Marine couch); Sporobolus species

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.02	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct brown mottles; light clay, sapric; massive structures; dry; sharp to;
A12	0.02 to 0.17	Black (2.5Y20) moist colour; very few < 2% fine < 5mm distinct brown mottles; light medium clay; strong 100-200mm prismatic structures; moderately moist; abrupt to;
B21t	0.17 to 0.45	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm prominent brown mottles; light medium clay; moderately moist;
B22i	0.45 to 0.80	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent brown, very few < 2% fine < 5mm prominent red mottles; light clay; moist; sharp to;
B23ia	0.80 to 1.60	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent brown mottles; silty light clay; massive structures; wet; sharp to;
Cu/2D	1.60 to 1.90	Very dark grey (2.5Y30) moist colour; common 10-20% medium 5-15mm prominent gley mottles; silty light clay; massive structures; wet;
2D	1.90 to 2.20	Dark greenish grey (5GY41) moist colour; fine sandy medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	4.0	
0.25	4.3	3.7	
0.50	4.0	3.2	
0.75	3.6	3.3	
1.00	3.5	2.6	
1.25	3.5	3.0	
1.50	4.1	3.0	
1.75	5.5	1.1	
2.00	6.1	1.8	
2.20	6.3	1.8	

Notes:

Horizon - Cu/2D mottles in D horizon

Horizon - 2D EOP - too hard for VVC

Observation H2O EC - 32.9 mS/cm; pH 5.8

Project: MWQ Site: 379

Location: 727425 mE 7650115 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 03-Sep-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Plain

Runoff: No record

Elevation: No record

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.3 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (Blue gum)

Lower Stratum: Imperata cylindrica (Blady grass); Sporobolus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; very few < 2% fine < 5mm distinct brown mottles; silty clay loam; moderate 2-5mm cast structures; dry; sharp to;
A2j	0.15 to 0.16	White (10YR81) dry colour; sharp to;
B21	0.16 to 0.25	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; light medium clay; strong 50-100mm prismatic parting to moderate 5-10mm subangular blocky structures; dry; clear to;
B22i	0.25 to 0.55	Dark greyish brown (2.5Y42) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; light medium clay; moderate 5-10mm subangular blocky structures; dry; clear to;
B23i	0.55 to 0.80	Grey (10YR51) moist colour; few 2-10% medium 5-15mm distinct yellow-brown mottles; light medium clay; moderately moist;
B24ia	0.80 to 1.20	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; moderately moist;
B24	1.20 to 2.40	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown, few 2-10% fine < 5mm prominent gley mottles; light medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; clear to;
B25	2.40 to 3.25	Dark greyish brown (2.5Y42) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent gley mottles; medium clay; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	3.25 to 5.50	Olive grey (5Y52) moist colour; common 10-20% very coarse > 30mm distinct brown mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.1	
0.60	5.9	4.8	
1.00	5.7	4.2	
1.50	6.2	6.8	
2.00	6.5	5.4	
2.50	6.6	6.1	
3.00	6.3	6.9	
3.50	6.1	5.8	
4.00	6.1	6.2	
4.50	6.6	6.1	
5.00	6.5	5.8	
5.50	6.6	5.5	

Notes:

Observation H2O EC - 24.2 mS/cm; pH 6.0

Project: MWQ Site: 380

Location: 727570 mE 7650555 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 03-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: No record
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense Ceriops tagal (Yellow mangrove)
 Lower Stratum: Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm distinct orange mottles; fine sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; moist; abrupt to;
B2i	0.05 to 0.60	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% medium 5-15mm distinct pale mottles; fine sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; moist; clear to;
C1u	0.60 to 1.25	Very dark greyish brown (10YR32) moist colour; few 2-10% medium 5-15mm distinct grey mottles; light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; abrupt to;
C2u	1.25 to 2.00	Very dark grey (2.5Y30) moist colour; silty light clay with coarse sand lenses from 1.7 to 2.0 m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; sharp to;
2Cu	2.00 to 2.40	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.2	
0.25	5.9	4.2	
0.50	6.0	4.4	
0.75	6.0	2.2	
1.00	6.0	0.9	
1.25	6.1	0.5	
1.50	6.1	0.7	
1.75	6.1	0.7	
2.00	6.2	0.7	
2.25	6.4	1.3	

Notes:

Horizon – 2Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 56.6 mS/cm; pH 6.2

Project: MWQ Site: 381

Location: 727465 mE 7650325 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 03-Sep-2002

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Dunecrest

Runoff: No record

Elevation: No record

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No record

Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris

Mid Stratum: Alphitonia excelsa (Red ash, soapbush)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark greyish brown (10YR42) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; clear to;
B2	0.20 to 0.90	Dark yellowish brown (10YR44) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry; clear to;
B3?	0.90 to 1.30	Brown (10YR53) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; clear to;
C	1.30 to 1.90	Light grey (10YR72) moist, white (10YR81) dry colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz and subangular igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2B2	1.90 to 2.30	Light grey (10YR72) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; sand; single grain structures; dry
2C	2.30 to 2.60	White (10YR81) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; sharp to;
3Cu	2.60 to 2.85	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; wet; sharp to;
4Cu	2.85 to 3.20	Very dark grey (2.5Y30) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
5D1	3.20 to 3.65	Greenish grey (5GY51) moist colour; fine sandy light medium clay; massive structures; moist; abrupt to;
5D2	3.65 to 3.75	Greenish grey (5GY51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sandy light medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.6	4.5	
0.60	5.9	4.7	
1.00	6.1	5.2	
1.50	4.6	4.3	
2.00	4.4	4.7	
2.50	3.9	3.9	
2.75	4.1	0.8	
3.00	4.4	0.8	
3.25	4.2	1.2	
3.50	4.7	1.1	
3.75	5.1	3.9	

Notes:

Horizon – 5D2 EOP - too hard for VVC to penetrate
Observation Could not sample water

Project: MWQ Site: 382

Location: 728835 mE 7648540 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Sep-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 5.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; loamy fine sand; very few < 2% medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry; clear to;
C	0.20 to 1.15	Light yellowish brown (10YR64) moist colour; fine sand; very few < 2% medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry; abrupt to;
2C?	1.15 to 1.40	Very pale brown (10YR73) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
3B2	1.40 to 2.10	Brownish yellow (10YR68) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
4C	2.10 to 2.68	White (10YR81) moist colour; very few < 2% fine < 5mm prominent orange mottles; sand with a lens of grey light clay at 2.15-2.28 and 2.6-2.7m with orange mottle; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
5C1	2.68 to 2.95	Light grey (10YR71) moist colour; fine sand with 1cm light clay lenses at 2.65-2.8 and 2.9-2.95m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
5C2u	2.95 to 3.35	Grey (10YR51) moist colour; fine sand with thin lenses of grey light clay throughout; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;
5C3u	3.35 to 3.70	Very dark grey (2.5Y30) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
6Cu	3.70 to 4.05	Very dark grey (2.5Y30) moist colour; light clay with 1cm sand lenses at 3.75-3.9m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; clear to;

7D 4.05 to 4.50 Dark grey (5Y41) moist colour; medium clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; weak 2-5mm subangular blocky structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.0	5.0	3.00	6.5	4.2
0.60	6.2	5.1	3.25	6.6	1.9
1.00	6.3	5.2	3.50	6.4	1.6
1.50	6.4	5.4	3.75	6.1	0.8
2.00	6.6	5.3	4.00	6.1	0.8
2.25	6.0	4.8	4.25	6.0	1.9
2.50	6.3	4.9	4.50	6.3	1.9
2.75	6.5	3.9			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 7D EOP - too hard for VVC to penetrate
 Observation H2O EC - 0.5 mS/cm; pH 5.6

Project: MWQ Site: 383

Location: 728320 mE 7647845 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Rhizophora stylosa (Red mangrove); Avicennia marina (Grey mangrove)
 Mid Stratum: Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm prominent brown mottles; silty light clay; weak 2-5mm subangular blocky structures; moist; sharp to;
C1u	0.20 to 0.90	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; diffuse to;
C2u	0.90 to 2.40	Very dark grey (2.5Y30) moist colour; silty light clay; wet; sharp to;
C3u	2.40 to 2.90	Dark grey (5Y41) moist colour; fine sandy light clay; wet; sharp to;
2Cu	2.90 to 3.20	Dark grey (5Y41) moist colour; sand with mud lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	3.8	
0.25	6.4	1.3	
0.50	6.6	1.0	
0.75	6.6	1.2	
1.00	6.7	1.1	
1.25	6.7	1.3	
1.50	6.7	0.9	
1.75	6.7	0.9	
2.00	6.7	1.3	
2.25	6.7	1.8	
2.50	6.7	1.3	
2.75	6.7	1.4	
3.00	6.7	1.0	
3.20	6.7	1.0	

Notes:

Horizon - 2Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 53.8 mS/cm; pH 6.9

Project: MWQ Site: 384

Location: 728715 mE 7648050 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 04-Sep-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist colour; fine sand; single grain structures; dry; clear to;
B21	0.25 to 0.80	Brown (10YR43) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; gradual to;
B22	0.80 to 1.40	Yellowish brown (10YR55) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; clear to;
C	1.40 to 2.00	Very pale brown (10YR73) moist, white (10YR81) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; sharp to;
2BC	2.00 to 2.40	Yellowish brown (10YR58) moist colour; many 20-50% very coarse > 30mm prominent pale mottles; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
3C	2.40 to 2.75	Light brownish grey (10YR62) moist colour; fine sand with a 10 cm grey light clay lens at 2.5m; massive structures; moist; sharp to;
4Cu	2.75 to 3.35	Very dark grey (2.5Y30) moist colour; fine sandy light clay with a few 1-2cm fine sand lenses; massive structures; wet; sharp to;
5Cu	3.35 to 3.75	Very dark grey (2.5Y30) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded quartz, shell and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
6Cu	3.75 to 4.12	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; wet; sharp to;
7D1u	4.12 to 4.50	Very dark grey (2.5Y30) moist colour; medium clay; weak 2-5mm lenticular structures; moist; gradual to;
7D2	4.50 to 5.00	Dark greenish grey (5G41) moist colour; medium heavy clay; massive structures; very few < 2% fine <2 mm calcareous soft segregations; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.1	4.3	
0.60	6.4	4.8	
1.00	6.5	5.1	
1.50	6.8	5.2	
2.00	6.4	5.3	
2.50	5.8	4.6	
2.75	4.9	1.4	
3.00	5.2	1.0	
3.25	5.5	0.8	
3.50	5.9	1.3	
3.75	6.2	1.3	
4.00	6.3	1.2	
4.25	6.3	1.6	
4.50	6.6	1.7	
4.75	6.7	7.0	
5.00	6.9	7.1	

Notes:

Observation H2O EC - 4.0 mS/cm; pH 6.1

Project: MWQ Site: 385

Location: 728200 mE 7649260 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 05-Sep-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: No record

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, isolated plants Excoecaria agallocha (Blind-your-eye mangrove)

Lower Stratum: Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (10YR21) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist; abrupt to;
B2i	0.10 to 0.65	Grey (10YR51) moist colour; common 10-20% medium 5-15mm distinct yellow-brown mottles; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist; abrupt to;
C	0.65 to 1.15	Grey (10YR51) moist colour; coarse sandy light clay with a 5cm coarse sand lens at 0.95m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; sharp to;
2Cu	1.15 to 2.05	Very dark grey (2.5Y30) moist colour; coarse sandy loam with 2cm light clay lenses at 1.1 and 1.25m; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3Cu	2.05 to 2.35	Very dark grey (2.5Y30) moist colour; sandy light clay with a 1cm coarse sand lens at 2.15m; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and subrounded quartz coarse fragments; massive structures; wet;
4C1u	2.35 to 3.60	Dark grey (2.5Y40) moist colour; coarse sand with a 2cm of sandy light clay lens at 2.5m; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and subrounded quartz coarse fragments; single grain structures; wet; diffuse to;
4C2	3.60 to 4.30	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic and igneous rock coarse fragments; single grain structures; wet; sharp to;
5D	4.30 to 4.60	Greenish grey (5GY51) moist colour; heavy clay; weak 2-5mm lenticular structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.3	2.3	2.50	6.9	0.9
0.25	6.4	5.0	2.75	7.0	1.6
0.50	6.3	5.3	3.00	7.0	1.6
0.75	6.1	5.2	3.25	7.2	1.5
1.00	6.3	5.2	3.50	6.9	1.5
1.25	6.2	0.9	3.75	6.8	1.6
1.50	6.9	1.0	4.00	6.9	1.8
1.75	6.8	1.1	4.25	7.3	2.9
2.00	6.7	1.1	4.50	6.6	6.1
2.25	6.8	1.2			

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 5D EOP - too hard to penetrate by VVC
Observation H2O Ec - 36.5 mS/cm; pH 6.3

Project: MWQ Site: 386

Location: 728170 mE 7649620 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: No record
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense *Ceriops tagal* (Yellow mangrove);
Excoecaria agallocha (Blind-your-eye mangrove)
 Mid Stratum: *Ceriops tagal* (Yellow mangrove)
 Lower Stratum: *Ceriops tagal* (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.07	Very dark greyish brown (10YR32) moist colour; light clay; weak 2-5mm cast structures; moist; abrupt to;
B21i	0.07 to 0.40	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct brown mottles; light clay; moist; gradual to;
B22i	0.40 to 0.85	Dark grey (2.5Y40) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% coarse 15-30mm distinct grey mottles; light clay; moist; clear to;
Cu	0.85 to 1.80	Very dark grey (2.5Y30) moist colour; very few < 2% medium 5-15mm distinct brown mottles; silty light clay; massive structures; wet;
2Cu	1.80 to 2.10	Very dark grey (2.5Y30) moist colour; fine sand; single grain structures; wet; sharp to;
3Cu	2.10 to 2.25	Very dark grey (5Y31) moist colour; silty light clay; massive structures; wet; sharp to;
4Cu	2.25 to 2.40	Very dark grey (2.5Y30) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	4.4	
0.25	5.9	4.5	
0.50	5.9	4.6	
0.75	5.8	4.8	
1.00	5.8	2.4	
1.25	5.8	1.2	
1.50	5.8	1.0	
1.75	5.8	1.2	
2.00	5.9	1.2	
2.25	6.0	1.1	
2.40	5.9	1.2	

Notes:

Horizon – 4Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 59.2 mS/cm; pH 5.9

Project: MWQ Site: 387

Location: 728015 mE 7649100 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 05-Sep-2002

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Dunecrest

Runoff: No record

Elevation: No record

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No record

Surface Condition: Loose

Classifications

ASC: Basic, Arenic, RUDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris

Mid Stratum: Planchonia careya (Cockatoo apple); Lantana camara (Lantana)

Lower Stratum: Sporobolus species; Heteropogon contortus (Black speargrass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; fine sand; abundant 50-90% large pebbles 20-60mm angular microdiorite coarse fragments; single grain structures; dry; abrupt to;
2A1	0.15 to 0.30	Very dark greyish brown (10YR32) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; gradual to;
2C	0.30 to 2.20	Yellowish brown (10YR55) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
3B2ia	2.20 to 2.90	Very dark grey (2.5Y30) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light medium clay; massive structures; moist; abrupt to;
4D	2.90 to 3.50	Grey (N60) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium heavy clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; very few < 2% fine < 2 mm manganiferous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	5.8	
0.60	6.9	6.0	
1.00	6.9	5.9	
1.50	7.1	5.8	
2.00	7.0	6.0	
2.25	3.8	3.1	
2.50	4.1	2.7	
2.75	3.9	3.3	
3.00	4.3	3.8	
3.25	5.7	4.4	
3.50	6.8	7.8	

Notes:

Horizon - 4D EOP - too hard to core
 Observation Could not sample water as it was below 3.5 m

Project: MWQ Site: 388

Location: 728785 mE 7649025 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Shell
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, very sparse Avicennia marina (Grey mangrove)
 Mid Stratum: Ceriops tagal (Yellow mangrove); Bruguiera exaristata (Rib-fruited mangrove)
 Lower Stratum: Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct brown mottles; light clay; weak 2-5mm cast structures; wet; abrupt to;
B2	0.05 to 0.40	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent brown mottles; light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; abrupt to;
C1u	0.40 to 0.70	Very dark greyish brown (10YR32) moist colour; common 10-20% medium 5-15mm prominent grey mottles; light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; clear to;
C2u	0.70 to 1.40	Very dark grey (5Y30) moist colour; light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; gradual to;
C3u	1.40 to 1.80	Dark grey (2.5Y40) moist colour; fine sandy light clay with a 5cm sand lens at 1.6m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; sharp to;
2Cu	1.80 to 2.50	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
3Cu	2.50 to 2.65	Dark grey (2.5Y40) moist colour; light clay; massive structures; wet;
4Cu	2.65 to 2.70	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.3	
0.25	5.9	4.8	
0.50	5.9	0.8	
0.75	6.1	0.7	
1.00	6.1	0.8	
1.25	6.1	0.7	
1.50	6.1	0.9	
1.75	6.1	1.0	
2.00	5.9	0.9	
2.25	6.0	0.9	
2.50	5.9	0.9	

Notes:
 Horizon - 4Cu EOP - too sandy to sample further
 Observation H2O EC - 49.7 mS/cm; pH 6.6

Project: MWQ Site: 389

Location: 728670 mE 7648415 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swamp
 Runoff: No record
 Elevation: 3.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: No record
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Black (10YR21) moist colour; common 10-20% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; light medium clay; dry; abrupt to;
B21i	0.40 to 0.75	Light brownish grey (10YR62) moist colour; few 2-10% fine < 5mm distinct yellow-brown, common 10-20% medium 5-15mm distinct brown mottles; fine sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; very few < 2% very coarse 20-60 mm ferruginous nodules segregations; moderately moist; sharp to;
2B2ia	0.75 to 1.20	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), many 20-50% medium 5-15mm prominent yellow-brown mottles; light clay with a 8cm sand lens at 0.68m; massive structures; moist; sharp to;
3C	1.20 to 2.00	Grey (2.5Y51) moist colour; sandy loam with a few 1-2cm light clay lenses; very few < 2% medium pebbles 6-20mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
4Cu	2.00 to 2.30	Very dark grey (2.5Y30) moist colour; common 10-20% coarse 15-30mm prominent pale mottles; light clay with a few thin sand lenses; massive structures; wet; abrupt to;
5D	2.30 to 2.55	Grey (N60) moist colour; many 20-50% coarse 15-30mm prominent dark mottles; light medium clay; massive structures; wet; abrupt to;
6D	2.55 to 3.10	Greenish grey (5GY51) moist colour; common 10-20% medium 5-15mm prominent grey, very few < 2% medium 5-15mm prominent dark mottles; medium clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	4.6	3.0	
0.25	4.5	3.3	
0.50	4.2	3.6	
0.75	3.9	2.9	
1.00	3.8	3.0	
1.25	4.6	3.5	
1.50	4.7	3.4	
1.75	4.6	3.6	
2.00	4.7	2.8	
2.25	4.1	1.8	
2.50	4.2	1.8	
2.75	5.0	2.0	
3.00	5.6	2.0	

Notes:

Horizon - 5D EOP - too hard to core
 Observation H2O EC - 6.5 mS/cm; pH 4.2

Project: MWQ Site: 390

Location: 728425 mE 7648310 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Sep-2002

Landscape

Geology: Qd - Quaternary dune
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Dunefield
Element: Dunecrest
Runoff: No record
Elevation: No record
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 1 %
Surface Coarse Fragments: No record
Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
GSG: No record
PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tereticornis (Blue gum)
Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; loamy fine sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; dry; clear to;
B2	0.30 to 0.90	Yellowish brown (10YR55) moist colour; fine sand; very few < 2% medium pebbles 6-20mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; dry; diffuse to;
C2	0.90 to 1.60	Light yellowish brown (10YR64) moist, white (10YR82) dry colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2C	1.60 to 2.20	Very pale brown (10YR73) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm rounded intermediate volcanic and igneous rock coarse fragments; single grain structures; dry; sharp to;
3C	2.20 to 2.70	White (10YR81) moist colour; very few < 2% fine < 5mm prominent orange mottles; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; sharp to;
5?	2.70 to 3.35	White (10YR81) moist colour; coarse sand; very few < 2% medium pebbles 6-20mm rounded quartz and siltstone coarse fragments; single grain structures; moderately moist; abrupt to;
5B2	3.35 to 3.87	Yellowish brown (10YR58) moist colour; few 2-10% coarse 15-30mm prominent pale mottles; coarse sand; few 2-10% small pebbles 2-6mm rounded quartz and siltstone coarse fragments; single grain structures; wet; sharp to;
7C	3.87 to 3.92	Grey (10YR61) moist colour; coarse sand with a 2cm light clay lens at 3.9m; very few < 2% medium pebbles 6-20mm rounded quartz and siltstone coarse fragments; single grain structures; wet; sharp to;

8D1	3.92 to 4.25	Grey (10YR51) moist colour; common 10-20% medium 5-15mm distinct grey mottles; fine sandy light medium clay; massive structures; moist; clear to;
8D2	4.25 to 4.60	Greenish grey (5GY51) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sandy medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.9	5.8	
0.60	6.8	5.6	
1.00	6.8	5.8	
1.50	7.4	5.8	
2.00	7.0	5.4	
2.50	6.8	5.4	
3.00	6.7	5.3	
3.50	6.2	5.0	
4.00	4.9	2.7	
4.25	5.2	2.5	
4.50	6.0	3.9	

Notes:

Horizon – 5? 4 cm layer of yellow brown at 3.1 m
 Horizon – 8D2 EOP - too hard to core
 Observation Could not sample water

Project: MWQ Site: 391

Location: 729115 mE 7649765 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Rhizophora stylosa (Red mangrove)
 Mid Stratum: Ceriops tagal (Yellow mangrove); Bruguiera parviflora (Small-leafed orange mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; abrupt to;
Cu	0.20 to 1.30	Very dark grey (2.5Y30) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; sharp to;
2Cu	1.30 to 1.50	Very dark grey (2.5Y30) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
3Cu	1.50 to 1.73	Very dark grey (2.5Y30) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; sharp to;
4Cu	1.73 to 1.86	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.4	
0.25	6.0	0.6	
0.50	6.1	1.0	
0.75	6.4	0.9	
1.00	6.2	1.0	
1.25	6.3	1.0	
1.50	6.5	1.3	
1.75	6.4	1.2	

Notes:

Horizon – 4Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 49.7 mS/cm; pH 6.4

Project: MWQ Site: 392

Location: 728215 mE 7648700 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Sep-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: No record
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tereticornis (Blue gum)
 Mid Stratum: Melaleuca species
 Lower Stratum: Imperata cylindrica (Blady grass); Urena lobata (Urena burr)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct pale mottles; silty light clay; weak 2-5mm subangular blocky structures; dry; abrupt to;
B2	0.20 to 0.75	Greyish brown (10YR52) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; moderate 5-10mm subangular blocky structures; dry; sharp to;
2B21i	0.75 to 1.00	Light brownish grey (10YR62) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sand; single grain structures; moderately moist; abrupt to;
2B22i	1.00 to 1.25	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy loam; single grain structures; moderately moist; sharp to;
3B2ia	1.25 to 1.95	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), many 20-50% fine < 5mm prominent yellow-brown, few 2-10% fine < 5mm distinct pale mottles; light clay; massive structures; moist; sharp to;
4D1ia	1.95 to 2.10	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% fine < 5mm distinct brown, few 2-10% fine < 5mm distinct grey mottles; light medium clay; massive structures; moist; clear to;
4D2	2.10 to 2.50	Dark grey (N40) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; massive structures; moist; abrupt to;

4D3	2.50 to 3.70	Dark greenish grey (5GY41) moist colour; few 2-10% fine < 5mm distinct grey mottles; medium clay; very few < 2% small pebbles 2-6mm rounded igneous rock and subrounded quartz coarse fragments; weak 2-5mm lenticular structures; very few < 2% fine < 2 mm manganese nodules segregations; moist; diffuse to;
4D4	3.70 to 4.00	Grey (10YR51) moist colour; common 10-20% fine < 5mm distinct gley, common 10-20% fine < 5mm distinct grey mottles; sandy medium clay; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; very few < 2% fine < 2 mm manganese nodules segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.3	3.8	2.25	4.2	3.4
0.30	4.4	3.6	2.50	5.6	2.1
0.60	4.1	3.5	2.75	6.5	1.7
0.80	4.3	3.8	3.00	6.2	2.0
1.00	3.8	3.7	3.25	6.6	7.3
1.25	3.7	3.4	3.50	6.9	7.6
1.50	3.5	3.1	3.75	7.0	6.8
1.75	3.4	3.2	4.00	7.3	4.8
2.00	3.4	3.3			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water as it was below 4 m

Project: MWQ Site: 393

Location: 727535 mE 7649290 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Sep-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: No record
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Mid Stratum: Melaleuca species; Melaleuca dealbata (swamp tea-tree)
 Lower Stratum: Cynodon dactylon (Couch); Neptunia gracilis (Sensitive plant)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; clay loam, heavy; weak 2-5mm subangular blocky structures; abrupt to;
A2j	0.05 to 0.08	White (10YR81) moist colour; abrupt to;
B21	0.08 to 0.25	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium clay; strong 200-500mm parting to strong 10-20mm subangular blocky structures; abrupt to;
B22	0.25 to 0.90	Light olive grey (5Y62) moist colour; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct yellow mottles; light medium clay; diffuse to;
B23	0.90 to 1.95	Light olive grey (5Y62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm distinct grey mottles; light clay; sharp to;
2Cu	1.95 to 2.10	Very dark grey (10YR31) moist colour; many 20-50% very coarse > 30mm prominent gley mottles; silty light clay; massive structures; clear to;
3D1	2.10 to 2.25	Dark greenish grey (5G41) moist colour; few 2-10% coarse 15-30mm distinct dark mottles; fine sandy light medium clay with silty light clay which is the mottle; massive structures; abrupt to;
3D2	2.25 to 2.50	Dark greenish grey (5G41) moist colour; fine sandy light medium clay; massive structures; abrupt to;
4D1	2.50 to 3.00	Dark greenish grey (5GY41) moist colour; fine sandy loam; massive structures; abrupt to;
4D2	3.00 to 3.50	Dark greenish grey (5GY41) moist colour; common 10-20% medium 5-15mm distinct red mottles; clayey fine sand, heavy; massive structures; wet; sharp to;

5D 3.50 to 5.25 Olive grey (5Y52) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.1	4.1	
0.60	5.6	4.6	
1.00	5.0	4.9	
1.50	5.4	4.9	
2.00	5.1	1.0	
2.25	5.8	1.3	
2.50	6.1	1.7	
2.75	6.2	5.0	
3.00	6.4	5.7	
3.50	6.0	6.1	
4.00	6.2	6.9	
4.50	6.3	5.7	
5.00	6.3	5.9	

Notes:

Observation H2O EC - 23.2 mS/cm; pH 6.0

Project: MWQ Site: 394

Location: 727060 mE 7649525 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Surface crust

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light medium clay; moderate 20-50mm subangular blocky structures; moist; abrupt to;
B2	0.30 to 0.50	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent orange mottles; silty light clay; massive structures; moist; clear to;
Cu	0.50 to 2.30	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
2D	2.30 to 3.00	Dark greenish grey (5GY41) moist colour; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moderately cemented pan, continuous, massive structure; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	2.2	
0.25	4.4	3.9	
0.50	4.5	3.5	
0.75	5.1	4.5	
1.00	5.5	0.9	
1.25	5.6	1.2	
1.50	5.7	0.8	
1.75	5.8	1.0	
2.00	5.9	1.2	
2.25	6.1	1.2	
2.50	6.9	5.4	
2.75	6.5	5.2	
3.00	6.8	5.1	

Notes:

Horizon - 2D EOP - too hard to penetrate with VVC
 Observation H2O EC - 50.5 mS/cm; pH 5.7

Project: MWQ Site: 395

Location: 726500 mE 7649105 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 11-Sep-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Plain

Runoff: No record

Elevation: 3 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, sparse

Species: Eucalyptus alba (Poplar gum); Eucalyptus tessellaris

Mid Stratum: Melaleuca leucadendra (Long-leaved paperbark); Melaleuca species;

Melaleuca dealbata (swamp tea-tree)

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; moderate 10-20mm parting to strong 2-5mm subangular blocky structures; dry; abrupt to;
B21i	0.25 to 0.45	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent yellow mottles; light medium clay; moderately moist; gradual to;
B22i	0.45 to 1.15	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent red, common 10-20% fine < 5mm prominent yellow-brown mottles; light medium clay; moderately moist;
B23ia	1.15 to 2.00	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent yellow-brown, very few < 2% fine < 5mm distinct red mottles; silty light clay; moist; sharp to;
Cu	2.00 to 3.40	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	3.40 to 4.20	Dark grey (2.5Y40) moist colour; coarse sand; common 10-20% small pebbles 2-6mm medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
3D	4.20 to 4.50	Greenish grey (5G51) moist colour; few 2-10% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct gley mottles; medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderate 2-5mm lenticular structures; very few < 2% fine < 2 mm calcareous soft segregations; moist.

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.6	3.2	2.50	3.9	0.9
0.30	4.2	3.2	2.75	4.3	0.9
0.60	3.6	3.4	3.00	5.2	1.0
0.80	3.9	3.4	3.25	5.3	1.1
1.00	3.7	3.1	3.50	5.4	1.3
1.25	3.3	3.0	3.75	5.6	1.2
1.50	3.2	2.5	4.00	5.5	1.3
1.75	3.4	2.6	4.25	5.9	1.8
2.00	3.4	2.0	4.50	6.5	6.1
2.25	3.5	1.9			

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 3D EOP - too hard to core

Observation H2O EC - 12.4 mS/cm; pH 4.1

Project: MWQ Site: 396

Location: 725685 mE 7649010 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Drainage depression
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking

Classifications

ASC: Sulfuric, Self-mulching, Black, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca species; Eucalyptus tessellaris
 Mid Stratum: Pandanus whitei
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; light medium clay; strong <2mm granular structures; dry; abrupt to;
B21i	0.05 to 1.10	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; lenticular structures; moderately moist; clear to;
B22i	1.10 to 1.60	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent red, few 2-10% fine < 5mm distinct yellow-brown mottles; light medium clay; moderately moist; gradual to;
B23i	1.60 to 2.00	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent yellow jarositic (from pyrite) mottles; light medium clay; moderately moist; abrupt to;
B24ia	2.00 to 2.35	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; moist;
Cu	2.35 to 2.80	Dark grey (2.5Y40) moist colour; light clay; massive structures; wet; sharp to;
2C1	2.80 to 3.00	Grey (5Y61) moist colour; very few < 2% medium 5-15mm distinct yellow mottles; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz coarse fragments; single grain structures; wet;
2C2	3.00 to 3.70	Dark greenish grey (5GY41) moist colour; sandy loam; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;
2C3	3.70 to 5.00	Greenish grey (5GY61) moist colour; clayey coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded quartz and igneous rock (unidentified) coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.4	2.9	2.25	4.0	3.0
0.30	4.5	3.7	2.50	4.5	4.0
0.60	4.2	3.3	2.75	5.2	1.9
0.80	3.9	3.4	3.00	4.7	4.5
1.00	3.7	3.0	3.50	5.6	6.5
1.25	3.7	3.3	4.00	5.3	5.3
1.50	3.8	3.0	4.50	5.7	5.6
1.75	3.8	3.2	5.00	5.9	5.7
2.00	3.8	3.0			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 3.4 mS/cm; pH 5.7

Project: MWQ Site: 397

Location: 727085 mE 7648990 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Melaleuca species
 Lower Stratum: Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm prominent orange, common 10-20% fine < 5mm distinct pale mottles; light medium clay; moderate 20-50mm subangular blocky structures; moderately moist;
B21i	0.25 to 0.75	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent red, common 10-20% fine < 5mm prominent yellow-brown mottles; light medium clay; moderately moist; abrupt to;
B22ia	0.75 to 2.00	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% medium 5-15mm prominent yellow-brown mottles; light clay; moist; abrupt to;
Cu	2.00 to 4.15	Very dark grey (2.5Y30) moist colour; light clay; massive structures; wet; sharp to;
2Cu	4.15 to 4.50	Dark grey (2.5Y40) moist colour; coarse sand; very few < 2% large pebbles 20-60mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
3D	4.50 to 4.70	Greenish grey (5GY51) moist colour; common 10-20% fine < 5mm prominent brown mottles; medium heavy clay; weak 2-5mm lenticular structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.4	3.6	
0.30	4.1	3.2	
0.60	3.5	2.8	
0.80	3.4	3.0	
1.00	3.4	3.3	
1.25	3.4	2.9	
1.50	3.4	2.8	
1.75	3.4	3.1	
2.00	3.8	2.4	
2.25	3.7	1.8	
2.50	4.0	1.4	
2.75	4.6	1.3	
3.00	5.7	1.3	
3.25	5.7	1.2	
3.50	5.8	1.3	
3.75	5.9	1.4	
4.00	5.9	1.2	
4.25	6.3	1.0	
4.50	6.8	1.4	
4.69	6.7	7.8	

Notes:

Horizon - 3D EOP - too hard to core
 Observation H2O EC - 20.8 mS/cm; pH 3.7

Project: MWQ Site: 398

Location: 726440 mE 7647990 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 12-Sep-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Plain

Runoff: No record

Elevation: 4.1 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 0.3 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Eucalyptus tereticornis (Blue gum)

Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)

Lower Stratum: Aristida species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Dark brown (10YR33) moist colour; fine sandy clay loam; dry; abrupt to;
A2j	0.05 to 0.15	Greyish brown (10YR52) moist, white (10YR81) dry colour; common 10-20% fine < 5mm distinct brown mottles; fine sandy clay loam, light; sharp to;
B21	0.15 to 0.60	Dark greyish brown (10YR42) moist colour; common 10-20% fine < 5mm prominent brown mottles; fine sandy medium clay; strong 100-200mm columnar structures;
B22	0.60 to 1.40	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy medium clay; sharp to;
2B2	1.40 to 1.75	Olive yellow (2.5Y66) moist colour; few 2-10% fine < 5mm distinct grey mottles; clayey sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; sharp to;
3B2	1.75 to 2.90	Light grey (2.5Y72) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; fine sandy medium clay;
4B2	2.90 to 3.60	Light brownish grey (10YR62) moist colour; many 20-50% coarse 15-30mm distinct brown mottles; clayey sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; clear to;
5B2	3.60 to 4.00	Yellowish brown (10YR56) moist colour; common 10-20% coarse 15-30mm prominent grey mottles; fine sandy light clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.4	
0.60	6.3	5.1	
1.00	7.1	6.6	
1.50	6.8	6.7	
2.00	6.9	6.7	
2.50	6.7	6.6	
3.00	6.9	6.6	
3.50	7.0	6.3	
4.00	6.8	6.5	

Notes:

Horizon – 5B2 EOP - too hard to core

Observation H2O EC - 32.5 mS/cm; pH 6.4

Project: MWQ Site: 399

Location: 726250 mE 7648650 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Drainage depression
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking

Classifications

ASC: Sulfuric, Massive, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca species; Eucalyptus tereticornis (Blue gum); Eucalyptus tessellaris
 Mid Stratum: Melaleuca species

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.01	Light medium clay; moderate 2-5mm cast structures; dry;
A12	0.01 to 0.05	Black (10YR21) moist colour; very few < 2% fine < 5mm distinct orange mottles; light medium clay; massive structures; dry; abrupt to;
B21	0.05 to 0.15	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; weak 2-5mm subangular blocky structures; dry; clear to;
B22	0.15 to 0.60	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium clay; lenticular structures; moderately moist; abrupt to;
B23i	0.60 to 1.45	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent yellow-brown, common 10-20% fine < 5mm prominent red mottles; light medium clay; very few < 2% medium pebbles 6-20mm rounded acid volcanic coarse fragments; moist; abrupt to;
B24ia	1.45 to 2.30	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent yellow-brown, very few < 2% fine < 5mm prominent red mottles; light clay; moist; abrupt to;
C1u	2.30 to 2.60	Very dark grey (10YR31) moist colour; light clay; massive structures; wet; sharp to;
C2u	2.60 to 3.10	Dark grey (2.5Y40) moist colour; light clay with many thin sand and coarse sand lenses; very few < 2% medium pebbles 6-20mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet;
2Cu	3.10 to 3.50	Grey (2.5Y50) moist colour; coarse sand with a 5cm light clay lens at 3.45m; very few < 2% medium pebbles 6-20mm subrounded quartz and igneous rock coarse fragments; single grain structures; wet; sharp to;

3D1	3.50 to 4.70	Greenish grey (5G61) moist colour; sand; very few < 2% large pebbles 20-60mm rounded intermediate volcanic, quartz and igneous rock coarse fragments; single grain structures; wet; clear to;
3D2	4.70 to 6.00	Greenish grey (5GY61) moist colour; very few < 2% coarse 15-30mm prominent brown mottles; clayey coarse sand with 5-10cm coarse sandy light clay lenses at 5.4 and 5.7m; few 2-10% small pebbles 2-6mm rounded acid volcanic, quartz and intermediate volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.2	3.9	2.75	4.4	0.8
0.30	5.0	3.9	3.00	5.2	0.9
0.60	3.9	3.2	3.25	5.1	1.4
0.80	3.5	3.1	3.50	5.1	1.3
1.00	3.3	3.0	3.75	5.3	1.1
1.25	3.2	3.0	4.00	5.5	1.3
1.50	3.2	2.9	4.50	5.3	2.6
1.75	3.2	2.7	5.00	5.8	5.9
2.00	3.2	3.0	5.50	5.7	6.0
2.25	3.4	2.7	6.00	5.6	5.8
2.50	3.5	2.7			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 23.6 mS/cm; pH 4.3

Project: MWQ Site: 400

Location: 725965 mE 7646970 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Sep-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Drainage depression
 Runoff: No record
 Elevation: 3 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking

Classifications

ASC: Epihypersodic-epiacidic, Massive, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca species
 Mid Stratum: Pandanus whitei

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.005	Very dark grey (10YR31) moist colour; light medium clay; strong 2-5mm cast structures; dry; sharp to;
A12	0.005 to 0.01	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; weak 2-5mm cast parting to massive structures; dry; abrupt to;
B21	0.01 to 0.30	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm faint brown mottles; medium heavy clay; moderate 20-50mm subangular blocky structures; moderately moist; gradual to;
A12	0.01 to 0.01	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; medium clay; weak 2-5mm cast structures; dry;
B22	0.30 to 0.90	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown mottles; medium heavy clay; lenticular structures; moderately moist; gradual to;
B23	0.90 to 1.60	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles with a bit of jarosite; light medium clay; moist; sharp to;
2B2	1.60 to 1.85	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm prominent brown mottles; fine sand; single grain structures; moist;
3B2	1.85 to 2.25	Light grey (2.5Y72) moist colour; many 20-50% fine < 5mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moist; clear to;
4B2	2.25 to 2.70	Light brownish grey (2.5Y62) moist colour; few 2-10% fine < 5mm prominent brown mottles; coarse sandy clay loam; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist;
5B2	2.70 to 3.20	Light grey (2.5Y72) moist colour; few 2-10% fine < 5mm prominent brown, few 2-10% medium 5-15mm prominent gley mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moist; sharp to;

6D 3.20 to 3.50 Greenish grey (5GY61) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% coarse 15-30mm prominent gley mottles; medium heavy clay; common 10-20% coarse 6-20 mm calcareous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.9	2.5	2.00	4.4	4.1
0.30	5.1	3.0	2.25	5.3	3.5
0.60	4.5	3.4	2.50	6.3	5.5
0.80	4.2	3.0	2.75	6.1	5.0
1.00	4.1	3.3	3.00	6.0	6.0
1.25	4.1	3.4	3.25	6.7	6.8
1.50	4.0	2.9	3.50	7.1	6.9

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 6D EOP - no need to go further - the answer is there for all to see
 Observation Could not sample water as it was below 3.5 m

Project: MWQ Site: 401

Location: 727045 mE 7646340 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Bruguiera parviflora (Small-leafed orange mangrove); Rhizophora stylosa (Red mangrove); Avicennia marina (Grey mangrove)
 Lower Stratum: Bruguiera parviflora (Small-leafed orange mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.18	Black (10YR21) moist colour; few 2-10% fine < 5mm faint orange mottles; silty light clay; massive structures; moist; abrupt to;
C1u	0.18 to 1.15	Dark grey (2.5Y40) moist colour; common 10-20% coarse 15-30mm distinct brown mottles; silty light clay; massive structures; wet;
C2u	1.15 to 2.25	Dark grey (2.5Y40) moist colour; very few < 2% very coarse > 30mm distinct brown mottles; silty light clay with pockets of brown silt; massive structures; wet;
2Cu	2.25 to 2.50	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.2	4.6	
0.25	6.3	1.7	
0.50	6.3	3.4	
0.75	6.5	0.9	
1.00	6.4	0.9	
1.25	6.4	1.3	
1.50	6.4	0.9	
1.75	6.5	1.9	
2.00	6.4	1.4	
2.25	6.5	1.3	
2.50	6.5	0.7	

Notes:

Horizon - 2Cu EOP - gouge would not penetrate further
 Observation H2O EC - 45.2 mS/cm; pH 6.6

Project: MWQ Site: 402

Location: 727750 mE 7649505 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Sep-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: No record
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Melacic, Regolithic, Chernic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense
 Species: Eucalyptus tereticornis (Blue gum); Eucalyptus intermedia
 Mid Stratum: Planchonia careya (Cockatoo apple)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (10YR21) moist colour; loamy fine sand; single grain structures; dry; clear to;
B21	0.20 to 0.95	Brown (10YR53) moist, pale brown (10YR63) dry colour; fine sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and cobbles 60-200mm rounded acid volcanic, pumice and quartz coarse fragments; single grain structures; dry; abrupt to;
B22	0.95 to 1.30	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; dry; abrupt to;
C	1.30 to 1.90	Very pale brown (10YR73) moist, white (10YR81) dry colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; sharp to;
2B2	1.90 to 2.25	Yellowish brown (10YR58) moist colour; many 20-50% medium 5-15mm prominent pale mottles; sand; very few < 2% small pebbles 2-6mm rounded quartz and subrounded igneous rock (unidentified) coarse fragments; single grain structures; dry;
3C	2.25 to 2.40	Light brownish grey (10YR62) moist, white (10YR81) dry colour; clayey fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and rhyolite coarse fragments; massive structures; dry; sharp to;
4B2	2.40 to 2.90	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light medium clay; massive structures; moderately moist; clear to;
5D1	2.90 to 3.60	Grey (5Y61) moist colour; few 2-10% fine < 5mm prominent yellow-brown mottles; sandy medium clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist; abrupt to;

5D2	3.60 to 4.00	Greenish grey (5BG51) moist colour; common 10-20% medium 5-15mm distinct grey mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist; abrupt to;
5D3	4.00 to 4.40	Light grey (N70) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; sandy medium clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist; abrupt to;
6D	4.40 to 5.00	Light grey (5Y71) moist with a 10cm light yellowish brown (2.5Y64) moist colour layer at 4.5m; many 20-50% medium 5-15mm prominent yellow-brown mottles; sandy loam; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded rhyolite and quartz coarse fragments; moderately moist.

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.2	4.5	3.00	3.6	2.5
0.60	6.0	5.4	3.25	3.9	2.8
1.00	6.6	5.2	3.50	3.6	2.4
1.50	5.6	5.2	3.75	3.9	1.5
2.00	6.4	5.1	4.00	5.0	5.6
2.25	4.4	2.9	4.50	5.6	6.1
2.50	3.5	2.2	5.00	5.7	5.9
2.75	3.5	1.7			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation Could not sample water it was below 5 m

Project: MWQ Site: 403

Location: 727470 mE 7648320 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: No record
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Surface crust

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct dark mottles; silty light medium clay; weak 20-50mm parting to weak 2-5mm subangular blocky structures; moist; abrupt to;
B2i	0.20 to 0.50	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent yellow-brown, common 10-20% fine < 5mm prominent yellow, few 2-10% fine < 5mm distinct red mottles; silty light medium clay; moderate 10-20mm prismatic parting to strong 2-5mm subangular blocky structures; moist; abrupt to;
C1u	0.50 to 1.40	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; diffuse to;
C2u	1.40 to 3.55	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.9	3.7	
0.25	4.6	3.6	
0.50	4.9	4.4	
0.75	5.2	4.5	
1.00	5.4	1.9	
1.25	5.6	1.3	
1.50	5.8	0.7	
1.75	5.8	0.7	
2.00	6.0	0.9	
2.25	6.0	1.1	
2.50	6.0	1.0	
2.75	6.4	1.2	
3.00	6.3	1.2	
3.25	6.3	1.3	
3.50	6.3	1.2	

Notes:

Horizon – C2u EOP - as much as could be recovered with gouge augers
 Observation H2O EC - 65.8 mS/cm; pH 5.8

Project: MWQ Site: 404

Location: 704100 mE 7687660 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Sep-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 5.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca dealbata (Swamp tea-tree); Eucalyptus tessellaris
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; clear to;
B21	0.15 to 0.90	Yellowish brown (10YR55) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded pumice coarse fragments; single grain structures; dry; abrupt to;
B22	0.90 to 1.90	Yellowish brown (10YR54) moist colour; few 2-10% fine < 5mm distinct yellow-brown mottles; fine sand; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; dry; clear to;
BC	1.90 to 2.90	Light brownish grey (10YR62) moist, white (10YR81) dry colour; common 10-20% coarse 15-30mm prominent yellow-brown mottles; fine sand; very few < 2% small pebbles 2-6mm rounded gravel and quartz and subrounded shell coarse fragments; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; moist; sharp to;
2C1	2.90 to 3.70	Brown (10YR53) moist colour; fine sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded shell coarse fragments; single grain structures; wet;
2C2	3.70 to 4.70	Olive grey (5Y42) moist colour; very few < 2% medium 5-15mm distinct yellow mottles; fine sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded shell and subrounded intermediate volcanic and siltstone coarse fragments; single grain structures; wet; sharp to;
3Cu	4.70 to 5.10	Grey (10YR51) moist colour; fine sand with many 2-10mm lenses of very dark grey clay; single grain parting to massive structures; wet; sharp to;
4D	5.10 to 5.50	Greenish grey (5G61) moist colour; many 20-50% medium 5-15mm prominent grey, common 10-20% medium 5-15mm prominent brown mottles; light medium clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	4.6	4.5	3.75	7.8	6.4
0.60	6.2	5.1	4.00	7.0	6.3
1.00	6.0	5.4	4.25	7.5	6.1
1.50	5.8	5.3	4.50	7.1	6.1
2.00	7.2	5.2	4.75	6.8	1.0
2.50	6.3	5.6	5.00	6.7	1.3
3.00	6.8	6.8	5.25	6.9	1.3
3.50	7.6	6.3	5.50	7.0	6.2

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon - 2C1 10cm bands of shell at 3.2 and 3.6m
 Horizon - 2C2 Shell bands at 4.1 and 4.4m

Project: MWQ Site: 405

Location: 703860 mE 7687595 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Sep-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swamp
 Runoff: No record
 Elevation: 3.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Humose-bleached, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.13	Black (10YR21) moist colour; fine sandy loam; weak 2-5mm cast structures; dry; abrupt to;
A2e	0.13 to 0.28	Dark greyish brown (10YR42) moist, white (10YR81) dry colour; fine sand; dry; abrupt to;
B2	0.28 to 0.60	Dark brown (7.5YR32) moist colour; common 10-20% fine < 5mm prominent yellow-brown, few 2-10% fine < 5mm faint grey mottles; fine sandy light clay; dry; sharp to;
2A2e?	0.60 to 0.70	Light grey (10YR72) moist, white (10YR81) dry colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; fine sandy clay loam; very few < 2% fine < 2mm manganiferous soft and medium 2-6 mm ferruginous tubules segregations; dry;
2B21ia	0.70 to 1.20	Light grey (10YR72) moist, colour; few 2-10% fine < 5mm distinct yellow jarositic (from pyrite), many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct red mottles; fine sandy light medium clay; moderately moist; clear to;
2B22ia	1.20 to 1.75	Light grey (2.5Y72) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), very few < 2% fine < 5mm distinct red, very few < 2% medium 5-15mm distinct pale mottles; fine sandy light clay; moderately moist; sharp to;
3D	1.75 to 2.15	Greyish green (5G42) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; very few < 2% large pebbles 20-60mm and boulders 600mm-2m angular rhyolite coarse fragments; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	1.8	
0.30	5.0	3.1	
0.60	4.3	2.9	
0.80	3.9	3.3	
1.00	3.7	2.9	
1.25	3.8	3.1	
1.50	4.0	3.2	
1.75	4.2	3.8	
2.00	4.7	5.9	

Notes:

Horizon – 3D EOP - R horizon underneath
 Observation Could not sample water as it was below 2.15 m

Project: MWQ Site: 406

Location: 703400 mE 7688805 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Sep-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 6.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: Common 10-20%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Brown (10YR43) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
B2	0.10 to 0.50	Dark yellowish brown (10YR45) moist colour; fine sand; single grain structures; dry; diffuse to;
C1	0.50 to 1.90	Yellowish brown (10YR55) moist, light yellowish brown (10YR64) dry colour; fine sand; very few < 2% small pebbles 2-6mm subrounded shell coarse fragments; single grain structures; moderately moist; gradual to;
C2	1.90 to 2.80	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; very few < 2% medium pebbles 6-20mm subrounded shell coarse fragments; single grain structures; moderately moist; sharp to;
2C1	2.80 to 4.40	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; very few < 2% small pebbles 2-6mm subangular quartz coarse fragments; single grain structures; moist; abrupt to;
2C2	4.40 to 4.70	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded rhyolite, quartz, acid volcanic and shell and boulders 600mm-2m rhyolite coarse fragments; single grain structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	4.6	
0.60	7.4	5.0	
1.00	7.2	5.1	
1.50	7.2	5.1	
2.00	7.3	5.6	
2.50	6.9	7.3	
3.00	7.7	6.4	
3.50	7.3	8.5	
4.00	8.2	7.4	
4.50	8.1	7.7	

Notes:

Horizon – 2C2 EOP - R horizon
 Observation Could not sample water

Project: MWQ Site: 407

Location: 705315 mE 7687155 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Sep-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.7 %
 Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Quartz
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, sparse
 Species: Eucalyptus tessellaris
 Mid Stratum: Planchonia careya (Cockatoo apple); Acacia leptocarpa (North coast wattle)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (2.5Y20) moist colour; loamy sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; dry; abrupt to;
C	0.15 to 1.40	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; dry; sharp to;
2C	1.40 to 3.40	Yellowish brown (10YR54) moist, very pale brown (10YR74) dry colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; sharp to;
3C1	3.40 to 4.40	Yellowish brown (10YR54) moist colour; sand with 10cm fine sand lenses at 3.9 and 4.2m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic, quartz and shell coarse fragments; single grain structures; moderately moist; sharp to;
3C2	4.40 to 6.20	Yellowish brown (10YR54) moist colour; sand with 10-15cm fine sand lenses at 4.5, 4.8, 5.1 and 5.4m; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic, quartz and shell coarse fragments; single grain structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	5.4	
0.60	6.7	6.1	
1.00	6.8	5.6	
1.50	6.9	5.4	
2.00	6.8	5.7	
2.50	6.6	5.5	
3.00	7.3	5.8	
3.50	6.8	6.2	
4.00	7.1	6.4	
4.50	7.5	8.1	
5.00	7.1	8.0	
5.50	6.9	6.5	
6.00	6.9	6.5	

Notes:

Observation Could not sample water

Project: MWQ Site: 408

Location: 704550 mE 7687210 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 19-Sep-2002

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Dunefield

Element: Swale

Runoff: No record

Elevation: 5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No record

Surface Condition: Loose, Soft

Classifications

ASC: No record

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca dealbata (swamp tea-tree); Eucalyptus intermedia

Mid Stratum: Acacia leptocarpa (North coast wattle); Livistona decipiens

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
A2e	0.15 to 0.50	Brown (10YR43) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; dry; clear to;
B2	0.50 to 1.30	Yellowish brown (10YR56) moist colour; very few < 2% fine < 5mm distinct yellow mottles; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry;
C	1.30 to 2.25	Light yellowish brown (10YR64) moist colour; very few < 2% fine < 5mm distinct yellow mottles; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; dry; sharp to;
2C1	2.25 to 2.90	Light grey (10YR72) moist, white (10YR82) dry colour; fine sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded siltstone, acid volcanic and quartz coarse fragments; single grain structures; dry; sharp to;
2C2	2.90 to 3.70	Greyish brown (2.5Y52) moist colour; very few < 2% fine < 5mm distinct yellow mottles; fine sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; single grain structures; moist; sharp to;
3Cu	3.70 to 4.05	Dark grey (5Y41) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
4C	4.05 to 4.55	Olive grey (5Y42) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded acid volcanic coarse fragments; single grain structures; wet; sharp to;

5C1	4.55 to 4.92	Olive grey (5Y42) moist colour; sand with a 5cm grey fine sand lens at 4.8m; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
5C2	4.92 to 5.40	Light brownish grey (2.5Y62) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
5C3	5.40 to 6.00	Olive grey (5Y42) moist colour; coarse sand with a 25cm fine sand lens at 5.7m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid and intermediate volcanic and quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	6.7	4.1	4.00	6.7	1.9
0.60	6.6	4.7	4.25	6.8	2.3
1.00	7.1	4.9	4.50	6.7	2.2
1.50	7.2	5.2	4.75	6.8	1.5
2.00	7.3	5.3	5.00	6.4	2.2
2.50	7.1	4.8	5.25	6.6	2.2
3.00	6.8	4.2	5.50	6.9	2.0
3.50	6.8	3.9	5.75	6.8	2.0
3.75	6.6	2.1	6.00	6.9	2.1

pH_F (pH using electrode probe),
pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 3Cu 5 mm organic debris at 4.0 m

Observation H₂O pH 6.6; insufficient sample to measure EC

Project: MWQ Site: 409

Location: 704120 mE 7687195 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Sep-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Bleached-Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense
 Species: Melaleuca dealbata (swamp tea-tree); Eucalyptus intermedia; Eucalyptus tessellaris; Eucalyptus alba (Poplar gum)
 Mid Stratum: Planchonia careya (Cockatoo apple); Grevillea parallela; Acacia leptocarpa (North coast wattle)
 Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (5YR31) moist colour; loamy fine sand; weak 2-5mm cast structures; very few < 2% fine <2 mm manganiferous nodules segregations; dry; abrupt to;
A2?	0.15 to 0.40	Few 2-10% fine < 5mm distinct pale mottles; clayey fine sand; massive structures; very few < 2% fine <2 mm manganiferous nodules segregations; dry; abrupt to;
B21	0.40 to 0.70	Yellowish red (5YR46) moist colour; clayey fine sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and subrounded quartz coarse fragments; few 2-10% medium 2-6 mm manganiferous nodules and soft segregations; dry; gradual to;
B22	0.70 to 1.50	Yellowish brown (10YR56) moist, brownish yellow (10YR66) dry colour; clayey fine sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; very few < 2% medium 2-6 mm manganiferous soft segregations; dry; abrupt to;
B/C	1.50 to 3.10	Light grey (10YR72) moist, white (10YR81) dry colour; many 20-50% coarse 15-30mm prominent yellow mottles; fine sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; dry;
2B2?	3.10 to 3.60	Yellowish brown (10YR58) moist colour; few 2-10% fine < 5mm distinct red, very few < 2% fine < 5mm distinct pale mottles; fine sandy loam, light; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; dry; abrupt to;

2B3 3.60 to 4.00 Olive yellow (2.5Y66) moist colour; common 10-20% medium 5-15mm prominent pale, few 2-10% medium 5-15mm prominent brown mottles; fine sand; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; dry;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.9	
0.60	5.4	6.7	
1.00	5.8	4.8	
1.50	5.6	4.7	
2.00	5.3	4.4	
2.50	5.4	4.6	
3.00	5.4	4.5	
3.50	5.7	4.6	
4.00	5.9	4.5	

Notes:

Horizon – 2B3 EOP - R - rock at 4.0 m
 Observation Could not sample water as it was below 4.0 m

Project: MWQ Site: 410

Location: 703320 mE 7688385 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Common 10-20%, small pebbles 2-6mm, Acid volcanic
 Surface Condition: Firm

Classifications

ASC: Mottled, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.08	Dark yellowish brown (10YR44) moist colour; very few < 2% medium 5-15mm prominent yellow-brown mottles; clay loam; fine sandy; few 2-10% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; massive structures; moist; abrupt to;
B2i	0.08 to 0.40	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm prominent red mottles; fine sandy light clay; massive structures; moist; abrupt to;
D1	0.40 to 0.70	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent gley mottles; fine sandy light clay; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and acid volcanic coarse fragments; massive structures; moist;
D2	0.70 to 1.00	Greyish green (5G42) moist colour; common 10-20% medium 5-15mm prominent gley, common 10-20% medium 5-15mm prominent brown mottles; medium clay; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	6.8	
0.30	6.0	6.0	
0.60	6.4	6.0	
0.80	6.2	7.6	
1.00	6.6	6.8	

Notes:

Horizon – D2 EOP – no need to go further
 Observation Coule not sample water as it was below 1.0 m

Project: MWQ Site: 411

Location: 703380 mE 7688325 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 20-Sep-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: No record

Elevation: 2.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense

Species: Rhizophora stylosa (Red mangrove); Avicennia marina (Grey mangrove)

Mid Stratum: Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1u	0.00 to 0.30	Black (10YR21) moist colour; silty light clay; massive structures; wet; clear to;
Cu	0.30 to 1.03	Black (10YR21) moist colour; few 2-10% coarse 15-30mm prominent pale mottles; silty light clay with very few pockets of white and brown sand; massive structures; wet; sharp to;
2D	1.03 to 1.10	Greyish green (5G42) moist colour; common 10-20% fine < 5mm prominent gley, common 10-20% medium 5-15mm prominent grey mottles; fine sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	0.9	
0.25	6.3	6.0	
0.50	6.4	0.5	
0.75	6.4	0.4	
1.00	6.3	1.3	
1.10	6.8	7.2	

Notes:

Horizon - 2D EOP - gouge auger would not go any further

Observation H2O EC - 58.0 mS/cm; pH 6.1

Project: MWQ Site: 412

Location: 703380 mE 7688420 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: *Ceriops tagal* (Yellow mangrove); *Bruguiera exaristata* (Rib-fruited mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; light clay; massive structures; moist; abrupt to;
B2	0.25 to 0.60	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent orange, common 10-20% medium 5-15mm distinct grey mottles; light clay with very few thin lenses of grey fine sand; massive structures; moist; clear to;
Cu	0.60 to 1.55	Black (2.5Y20) moist colour; silty light clay with very few thin veins and pockets of fine sand; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.3	
0.25	5.3	4.5	
0.50	5.2	5.0	
0.75	5.3	0.6	
1.00	5.4	0.7	
1.25	5.4	0.7	
1.50	5.5	0.8	

Notes:

Horizon - Cu EOP - stopped on 2D horizon
 Observation H2O EC - 65.5 mS/cm; pH 5.3

Project: MWQ Site: 413

Location: 703580 mE 7687905 mN ZONE 55 (AGD 84)
Described: Muller, PG
Date: 20-Sep-2002

Landscape

Geology: Qa - Quaternary alluvium
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Dunefield
Element: Swamp
Runoff: No record
Elevation: 3.8 m
Microrelief: Zero or none
Microrelief Component: No record
Drainage: No record
Slope: 0.1 %
Surface Coarse Fragments: No record
Surface Condition: Soft

Classifications

ASC: Acidic, Arenic, Bleached-Orthic, TENOSOL
GSG: No record
PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense
Species: Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.21	Black (10YR21) moist colour; loamy fine sand; weak 2-5mm cast structures; dry; abrupt to;
A2e	0.21 to 0.50	Light grey (10YR72) moist, white (10YR81) dry colour; fine sand; single grain structures; dry; sharp to;
B21	0.50 to 0.90	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct yellow, few 2-10% fine < 5mm distinct grey mottles; clayey fine sand, heavy; massive structures; sharp to;
2D	0.90 to 1.20	Light grey (10YR71) moist colour; few 2-10% fine < 5mm distinct yellow-brown mottles; fine sandy light medium clay;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	3.7	
0.30	4.4	4.7	
0.60	5.1	4.7	
0.80	4.9	4.6	
1.00	5.2	5.0	
1.20	5.1	4.9	

Notes:

Horizon - A2e Lower boundary varies from 50 to 90 cm
Horizon - 2D EOP - too hard to auger
Observation Could not sample water as it was below 1.2 m

Project: MWQ Site: 414

Location: 704690 mE 7686900 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Rhizophora stylosa (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty light clay; weak 2-5mm cast structures; wet;
C1u	0.30 to 0.65	Very dark grey (10YR31) moist colour; few 2-10% medium 5-15mm distinct grey mottles; silty light clay; massive structures; wet;
C2u	0.65 to 2.10	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
C3u	2.10 to 2.50	Black (10YR21) moist colour; silty light clay; few 2-10% medium pebbles 6-20mm and large pebbles subrounded intermediate volcanic coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.6	
0.25	5.5	3.2	
0.50	5.8	0.8	
0.75	5.9	0.5	
1.00	6.0	0.9	
1.25	6.1	0.4	
1.50	6.1	0.6	
1.75	6.1	0.8	
2.00	6.1	0.9	
2.25	6.3	0.5	
2.50	6.2	0.5	

Notes:
 Observation H2O EC - 45.2 mS/cm; pH 5.8

Project: MWQ Site: 415

Location: 706415 mE 7687670 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Rhizophora stylosa (Red mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; light clay with a 1cm coarse sand lens at 0.09m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
2C	0.15 to 0.40	Very dark greyish brown (10YR32) moist colour; coarse sand; few 2-10% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
3C1u	0.40 to 1.00	Very dark grey (10YR31) moist colour; light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; abrupt to;
3C2u	1.00 to 2.63	Dark grey (10YR41) moist colour; light clay with a few thin sand and coarse sand lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; sharp to;
3C3u	2.63 to 2.75	Very dark grey (10YR31) moist colour; coarse sandy light clay; few 2-10% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	1.1	
0.25	6.0	0.7	
0.50	6.0	0.8	
0.75	6.1	0.8	
1.00	6.1	0.8	
1.25	6.0	1.0	
1.50	6.0	0.8	
1.75	6.1	1.0	
2.00	6.2	0.9	
2.25	6.2	1.0	
2.50	6.2	0.8	
2.75	6.2	0.8	

Notes:

Horizon – 3C3u EOP
 Observation H2O EC - 48.5 mS/cm; pH 5.6

Project: MWQ Site: 416

Location: 708200 mE 7686100 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Sep-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Species: Rhizophora stylosa (Red mangrove)

Profile

Horizon	Depth (m)	Description
C1	0.00 to 0.95	Very dark grey (10YR31) moist colour; light clay with a few fine sand lenses; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; abrupt to;
C2	0.95 to 1.20	Dark grey (2.5Y40) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz and large pebbles 20-60mm rounded diorite coarse fragments; massive structures; wet; sharp to;
C3	1.20 to 1.50	Very dark greyish brown (10YR32) moist colour; silty light clay; very few < 2% large pebbles 20-60mm rounded pumice coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	4.3	
0.25	6.3	3.2	
0.50	6.3	0.8	
0.75	6.4	0.7	
1.00	6.4	0.8	
1.25	6.4	0.6	
1.50	6.3	0.7	

Notes:

Horizon - C3 EOP - sand at 1.5 m
 Observation H2O EC - 48.8 mS/cm; pH 6.5

Project: MWQ Site: 417

Location: 703755 mE 7688115 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Oct-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Dunecrest
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sand; common 10-210% small pebbles 2-6mm and medium pebbles 6-20mm subrounded gravel coarse fragments; single grain structures; dry; sharp to;
2B2	0.20 to 0.70	Dark yellowish brown (10YR34) moist, yellowish brown (10YR54) dry colour; fine sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; diffuse to;
2C1	0.70 to 1.50	Dark yellowish brown (10YR44) moist, light yellowish brown (10YR64) dry colour; fine sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; diffuse to;
2C2	1.50 to 3.00	Dark yellowish brown (10YR44) moist, light yellowish brown (10YR64) dry colour; fine sand; very few < 2% small pebbles 2-6mm subrounded shell and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
3C1	3.00 to 3.50	Yellowish brown (10YR54) moist colour; fine sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subrounded shell coarse fragments; single grain structures; moderately moist; sharp to;
3C2	3.50 to 4.80	Yellowish brown (10YR54) moist colour; fine sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded shell and rounded and subangular igneous rock (unidentified) coarse fragments; single grain structures; moderately moist changing to wet; sharp to;
4C1	4.80 to 5.60	Yellowish brown (10YR54) moist colour; fine sand; very few < 2% small pebbles 2-6mm subrounded shell and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.2	3.5	
0.30	5.3	4.7	
0.60	5.6	5.2	
1.00	5.7	5.1	
1.50	5.9	5.5	
2.00	5.8	5.5	
2.50	5.9	6.8	
3.00	6.9	7.8	
3.50	7.8	8.1	
4.00	7.4	8.4	
4.50	7.4	7.3	
5.00	7.3	6.9	
5.50	7.6	7.5	

Notes:

Horizon – 2C2 very thin layer of shell at 2.6 m
 Observation H2O EC - 0.9 mS/cm; pH 7.0

Project: MWQ Site: 418

Location: 702990 mE 7689690 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Oct-2002

Landscape

Geology: Cza - Unconsolidated Cainozoic
 Substrate Lithology: Unconsolidated material (unidentified) alluvial/colluvial sediments
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 3.7 m
 Microrelief: Normal gilgai
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.8 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking, Surface crust

Classifications

ASC: Epiacidic-mottled, Massive, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense
 Species: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus alba (Poplar gum);
 Eucalyptus tessellaris
 Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark brown (10YR22) moist colour; very few < 2% fine < 5mm distinct dark mottles; medium clay; weak 2-5mm cast structures; dry;
B21	0.05 to 0.30	Black (10YR21) moist colour; common 10-20% fine < 5mm prominent orange mottles; medium clay; moderate 20-50mm subangular blocky structures; dry; gradual to;
B22	0.30 to 0.90	Black (10YR21) moist colour; common 10-20% fine < 5mm prominent orange mottles; medium clay; lenticular structures; moderately moist; clear to;
B23	0.90 to 1.60	Greyish brown (10YR52) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; moderately moist; abrupt to;
B24	1.60 to 2.20	Greyish brown (10YR52) moist colour; many 20-50% coarse 15-30mm prominent brown, few 2-10% fine < 5mm prominent red mottles; medium clay; moderately moist; abrupt to;
B25	2.20 to 3.25	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm prominent red, few 2-10% coarse 15-30mm prominent brown, few 2-10% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm prominent yellow mottles; light medium clay; very few < 2% large pebbles 20-60mm angular intermediate volcanic coarse fragments; moderately moist; abrupt to;
B31	3.25 to 4.65	Dark reddish brown (2.5YR33) moist colour; common 10-20% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct yellow mottles; light medium clay; moderately moist;
B23	4.65 to 5.00	Dark reddish grey (2.5YR41) moist colour; common 10-20% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent yellow mottles; light medium clay; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	2.8	
0.60	4.0	2.5	
1.00	4.2	2.9	
1.50	4.6	4.1	
2.00	5.4	4.9	
2.50	5.8	5.0	
3.00	5.8	5.2	
3.50	6.1	5.4	
4.00	5.8	5.6	
4.50	6.3	5.8	
5.00	6.3	6.2	

Notes:
 Observation H2O EC - 29.6 mS; pH 6.3

Project: MWQ Site: 419

Location: 707535 mE 7686820 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Oct-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Dunecrest
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
B21	0.20 to 0.70	Dark yellowish brown (10YR34) moist colour; fine sand; single grain structures; dry; diffuse to;
B22	0.70 to 1.20	Dark yellowish brown (10YR44) moist colour; fine sand; single grain structures; dry; clear to;
C	1.20 to 2.70	Yellowish brown (10YR54) moist, very pale brown (10YR74) dry colour; fine sand; single grain structures; moderately moist; sharp to;
2B2	2.70 to 2.95	Strong brown (7.5YR58) moist colour; common 10-20% medium 5-15mm prominent red, few 2-10% fine < 5mm distinct pale mottles; fine sand; single grain structures; moderately moist; sharp to;
3B2	2.95 to 3.80	Light grey (10YR72) moist colour; many 20-50% medium 5-15mm prominent brown mottles; sandy clay loam; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; moist; sharp to;
4C	3.80 to 4.80	White (10YR82) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and tuff coarse fragments; single grain structures; wet; sharp to;
5D	4.80 to 5.30	Greyish green (5G42) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sandy light medium clay; massive structures; moist

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	3.5	
0.60	5.6	4.6	
1.00	5.4	4.9	
1.50	5.8	5.3	
2.00	6.0	5.7	
2.50	5.9	5.3	
3.00	5.8	5.0	
3.50	5.7	4.4	
4.00	5.0	4.4	
4.50	5.5	4.7	
5.00	6.1	1.8	
5.25	6.2	4.3	

Notes:

Observation Could not sample water

Project: MWQ Site: 420

Location: 707910 mE 7686375 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Oct-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 5.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense
 Species: Eucalyptus tessellaris
 Mid Stratum: Planchonia careya (Cockatoo apple)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
B2	0.15 to 0.40	Dark yellowish brown (10YR34) moist colour; fine sand; very few < 2% medium pebbles 6-20mm rounded pumice coarse fragments; single grain structures; dry; gradual to;
B3	0.40 to 2.20	Dark yellowish brown (10YR45) moist, light yellowish brown (10YR64) dry colour; fine sand; very few < 2% medium pebbles 6-20mm rounded pumice coarse fragments; single grain structures; dry; diffuse to;
C	2.20 to 2.90	Yellowish brown (10YR54) moist, very pale brown (10YR74) dry colour; fine sand; single grain structures; moderately moist; sharp to;
2C1	2.90 to 3.80	Light yellowish brown (10YR64) moist, light grey (10YR72) dry colour; coarse sand; few 2-10% small pebbles 2-6mm rounded quartz and acid volcanic coarse fragments; single grain structures; dry; sharp to;
2C2	3.80 to 4.40	Light brownish grey (10YR62) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; diffuse to;
3B2	4.40 to 5.30	Strong brown (7.5YR56) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and large pebbles 20-60mm rounded acid and intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
4Cu	5.30 to 5.65	Grey (10YR51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; very few < 2% coarse 6-20 mm calcareous nodules segregations; wet; sharp to;

5D 5.65 to 6.00 Greyish green (5G52) moist colour; many 20-50% coarse 15-30mm distinct brown mottles; fine sandy medium clay; massive structures; few 2-10% coarse 6-20 mm calcareous nodules and soft segregations; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.4	5.1	4.00	4.6	4.6
0.60	5.8	5.3	4.50	6.3	5.1
1.00	6.3	5.5	5.00	5.7	5.0
1.50	6.1	5.5	5.25	5.5	4.2
2.00	5.8	5.6	5.50	5.9	1.8
2.50	5.9	5.4	5.75	6.5	5.8
3.00	5.8	5.6	6.00	6.9	7.9
3.50	6.2	5.4			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O pH - 6.4; could not measure EC

Project: MWQ Site: 421

Location: 707535 mE 7686600 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swamp
 Runoff: No record
 Elevation: 2.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Humose-acidic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, closed or dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; many 20-50% fine < 5mm prominent orange mottles; light clay ,sapric ;weak 5-10mm cast structures; dry; clear to;
B21	0.30 to 0.60	Very dark grey (10YR31) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; moderately moist; clear to;
B22	0.60 to 0.90	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay with sand grains; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist; abrupt to;
C	0.90 to 1.40	Dark grey (10YR41) moist colour; light clay with thin sand lenses throughout; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; moist; sharp to;
2C	1.40 to 1.55	Light brownish grey (10YR62) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moist; sharp to;
3C	1.55 to 2.00	Very dark grey (2.5Y30) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.5	1.7	
0.30	4.3	1.8	
0.60	3.6	3.2	
0.80	3.5	3.0	
1.00	3.6	2.8	
1.25	3.6	2.7	
1.50	4.0	1.6	
1.75	4.5	1.4	
2.00	4.6	1.4	

Notes:

Horizon – 3C EOP - too wet to hand auger - could not get VVC into area
 Observation Could not sample water

Project: MWQ Site: 422

Location: 707520 mE 7686410 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Oct-2002

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: No record
 Elevation: 6.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Bleached-Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, very sparse
 Species: Eucalyptus intermedia; Eucalyptus tessellaris
 Mid Stratum: Acacia leptocarpa (North coast wattle); Alphitonia excelsa (Red ash, soapbush)
 Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; loamy sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; abrupt to;
A2e	0.15 to 0.35	Brown (10YR43) moist, very pale brown (10YR73) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; dry; abrupt to;
B21	0.35 to 0.80	Strong brown (7.5YR46) moist colour; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; dry; gradual to;
B22	0.80 to 1.75	Brownish yellow (10YR68) moist colour; clayey sand, heavy; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; dry; clear to;
B3	1.75 to 2.30	Brownish yellow (10YR68) moist colour; many 20-50% fine < 5mm prominent pale mottles; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; dry; abrupt to;
C	2.30 to 2.90	White (10YR82) moist, white (5YR81) dry colour; coarse sand; common 10-20% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; sharp to;
2B2	2.90 to 3.50	Yellowish brown (10YR56) moist colour; many 20-50% coarse 15-30mm prominent grey mottles; clay loam; coarse sandy; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; massive structures; moderately moist; abrupt to;

2C	3.50 to 4.40	Light grey (10YR72) moist colour; clay loam; coarse sandy; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and subrounded quartz coarse fragments; massive structures; moderately moist; sharp to;
3A2e	4.40 to 4.60	Very few < 2% fine < 5mm prominent brown mottles; clay loam; sandy; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded tuff coarse fragments; massive structures; moderately moist; abrupt to;
3B2	4.60 to 5.00	Yellowish brown (10YR58) moist colour; few 2-10% coarse 15-30mm prominent pale mottles; clayey fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded quartz, tuff and unconsolidated material (unidentified) coarse fragments; massive structures; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.3	
0.60	4.9	5.2	
1.00	5.7	4.8	
1.50	6.0	4.7	
2.00	5.4	4.5	
2.50	5.3	4.5	
3.00	5.2	4.5	
3.50	4.8	4.5	
4.00	5.0	4.4	
4.50	5.1	4.7	
5.00	5.3	4.6	

Notes:

Observation Water was below 5 m

Project: MWQ Site: 423

Location: 708655 mE 7685145 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense
 Species: Rhizophora stylosa (Red mangrove); Ceriops tagal (Yellow mangrove)
 Mid Stratum: Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (2.5Y20) moist colour; light clay; massive structures; wet; abrupt to;
C1	0.05 to 0.55	Very dark grey (10YR31) moist colour; light clay; massive structures; wet; sharp to;
C2	0.55 to 0.70	Very dark brown (10YR22) moist colour; light clay; massive structures; wet; sharp to;
D1	0.70 to 1.10	Dark greenish grey (5GY41) moist colour; light clay with pockets of light clay from C2; massive structures; wet; sharp to;
D2	1.10 to 1.55	Dark greenish grey (5G41) moist colour; medium clay with pockets of light clay from C2 in the root channels; moderate 10-20mm prismatic parting to moderate 2-5mm subangular blocky structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	0.9	
0.25	6.3	0.7	
0.50	6.5	0.6	
0.75	6.4	0.6	
1.00	6.3	0.8	
1.25	6.4	1.3	
1.50	6.4	1.3	

Notes:

Horizon - D2 EOP - too hard to penetrate with gouge auger
 Observation H2O EC - 52.4 mS/cm; pH 6.2

Project: MWQ Site: 424

Location: 709065 mE 7684940 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Surface crust

Classifications

ASC: Mottled, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.08	Dark yellowish brown (10YR44) moist colour; light clay; moist; abrupt to;
B2	0.08 to 0.40	Light olive brown (2.5Y54) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, common 10-20% medium 5-15mm prominent red, common 10-20% fine < 5mm prominent grey mottles; light clay; moist; abrupt to;
2D1	0.40 to 0.80	Grey (7.5YR50) moist colour; few 2-10% fine < 5mm faint gley mottles; light medium clay; wet;
2D2	0.80 to 1.40	Grey (7.5YR50) moist colour; many 20-50% medium 5-15mm distinct gley mottles; medium clay; few 2-10% medium 2-6 mm manganiferous and ferruginous nodules segregations; wet; gradual to;
2D3	1.40 to 2.10	Greenish grey (5GY51) moist colour; many 20-50% fine < 5mm distinct grey mottles; medium heavy clay; few 2-10% medium pebbles 6-20mm subangular detrital sedimentary rock (unidentified) coarse fragments; few 2-10% medium 2-6 mm manganiferous nodules segregations; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.6	6.6	
0.25	4.5	3.4	
0.50	4.4	3.0	
0.75	6.1	6.4	
1.00	6.1	3.6	
1.25	5.9	6.9	
1.50	5.8	7.0	
1.75	6.1	6.7	
2.00	6.2	5.5	

Notes:

Horizon - 2D3 EOP - too wet - hard to hand auger
 Observation H2O EC - 120.4 mS/cm; pH 3.8

Project: MWQ Site: 425

Location: 705685 mE 7686450 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Oct-2002

Landscape

Geology: Kg - Cretaceous Granite
 Substrate Lithology: Granite
 Landform Pattern: Low hills
 Element: footslope
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.7 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Bleached, Tenosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark grey (10YR41) moist colour; fine sandy loam; very few < 2% small pebbles 2-6mm angular granite and quartz coarse fragments; massive structures; dry; clear to;
A21j	0.20 to 0.50	Greyish brown (10YR52) moist, white (10YR81) dry colour; fine sandy loam; very few < 2% small pebbles 2-6mm angular granite and quartz coarse fragments; massive structures; dry; abrupt to;
A22e	0.50 to 0.85	Light brownish grey (10YR62) moist, white (5YR81) dry colour; clayey sand, heavy; few 2-10% small pebbles 2-6mm angular granite and quartz coarse fragments; massive structures; dry; abrupt to;
C1	0.85 to 1.45	Light grey (10YR72) moist, white (5YR81) dry colour; sand; common 10-20% small pebbles 2-6mm angular granite and quartz coarse fragments; massive structures; dry; clear to;
C2	1.45 to 1.95	Light yellowish brown (10YR64) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct yellow mottles; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm angular granite and subangular quartz coarse fragments; massive structures; moderately moist; abrupt to;
C3?	1.95 to 2.30	Strong brown (7.5YR58) moist colour; few 2-10% fine < 5mm distinct grey mottles; coarse sandy clay loam; common 10-20% small pebbles 2-6mm angular granite and quartz coarse fragments; massive structures; moderately moist;
C4?	2.30 to 2.60	Light grey (10YR71) moist colour; few 2-10% fine < 5mm prominent brown mottles; clayey coarse sand; common 10-20% small pebbles 2-6mm angular granite and quartz coarse fragments; massive structures; moist; abrupt to;
C5?	2.60 to 3.00	Yellowish brown (10YR58) moist colour; common 10-20% medium 5-15mm prominent grey mottles; coarse sandy clay loam; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm subangular and angular quartz and granite coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	4.1	
0.60	5.7	4.2	
1.00	5.6	4.6	
1.50	5.3	4.9	
2.00	5.6	4.8	
2.50	6.2	4.4	
3.00	5.5	4.4	

Notes:

Horizon - C5? EOP - rock - would not hand auger
 Observation H2O EC - 0.2 mS/cm; pH 5.3

Project: MWQ Site: 426

Location: 706435 mE 7687560 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Few 2-10%, small pebbles 2-6mm, Quartz
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, sparse
 Species: Ceriops tagal (Yellow mangrove); Avicennia marina (Grey mangrove)
 Lower Stratum: Sesuvium portulacastrum (Samphire)

Profile

Horizon	Depth (m)	Description
2A1	0.00 to 0.05	Greyish brown (2.5Y52) moist colour; clay loam; coarse sandy; few 2-10% small pebbles 2-6mm subangular granite coarse fragments; massive structures; moist; sharp to;
2B2	0.05 to 0.20	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, common 10-20% fine < 5mm prominent red mottles; coarse sandy clay loam, light; few 2-10% small pebbles 2-6mm subangular granite coarse fragments; massive structures; moist; sharp to;
2Cu	0.20 to 1.05	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
3Cu	1.05 to 1.30	Greyish brown (2.5Y52) moist colour; coarse sandy light clay with light clay pockets; few 2-10% small pebbles 2-6mm subangular quartz and subrounded granite coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	5.2	
0.25	6.2	1.4	
0.50	6.1	0.8	
0.75	6.1	0.8	
1.00	5.8	0.8	
1.25	6.2	1.3	

Notes:

Horizon – 3Cu EOP - sand would not hold in gouge auger
 Observation H2O EC - 83.4 mS/cm; pH 5.8

Project: MWQ Site: 427

Location: 705340 mE 7686490 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: Few 2-10%, small pebbles 2-6mm, Quartz
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sesuvium portulacastrum (Samphire)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Greyish brown (2.5Y52) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist; clear to;
B2	0.20 to 0.40	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% coarse 15-30mm prominent grey, few 2-10% medium 5-15mm prominent brown mottles; sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; moist
Cu	0.40 to 0.63	Grey (10YR51) moist colour; fine sandy light clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; massive structures; wet; abrupt to;
2Cu	0.63 to 0.90	Very dark brown (10YR22) moist colour; silty light clay with brown sloppy mud in pockets; massive structures; wet; sharp to;
3Cu	0.90 to 1.20	Black (10YR21) moist colour; coarse sand; few 2-10% small pebbles 2-6mm subrounded quartz and granite coarse fragments; massive structures; wet; sharp to;
4D	1.20 to 1.40	Greenish grey (5G51) moist colour; few 2-10% fine < 5mm distinct grey mottles; coarse sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderate 10-20mm prismatic structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.0	6.2	
0.25	6.6	5.7	
0.50	6.2	0.6	
0.75	6.2	0.8	
1.00	6.1	1.0	
1.25	6.0	1.5	

Notes:

Horizon - 4D EOP - too hard to gouge further
 Observation H2O EC - 96.6 mS/cm; pH 6.1

Project: MWQ Site: 428

Location: 709230 mE 7685425 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm, Surface crust

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.13	Dark greyish brown (2.5Y42) moist colour; silty light clay; moderate 5-10mm prismatic parting to moderate 2-5mm subangular blocky structures; moist; abrupt to;
B2	0.13 to 0.35	Grey (5Y51) moist colour; many 20-50% fine < 5mm prominent brown mottles; silty light clay; weak prismatic structures; moist; abrupt to;
Cu	0.35 to 1.05	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
2D	1.05 to 1.75	Grey (7.5YR50) moist colour; light medium clay; moderate 2-5mm lenticular structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	6.5	
0.25	5.4	4.7	
0.50	5.1	0.8	
0.75	5.4	0.7	
1.00	5.5	0.8	
1.25	5.8	1.4	
1.50	5.7	1.4	
1.75	5.6	1.5	

Notes:

Horizon – 2D EOP - clay too hard to gouge
 Observation H2O EC - 118.6 mS/cm; pH 5.5

Project: MWQ**Site:429**

Location: 727500 mE 7666150 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Pit
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Surface crust, Hard setting

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; many 20-50% fine < 5mm prominent orange mottles; silty light clay; dry; abrupt to;
B21	0.15 to 0.70	Grey (7.5YR50) moist colour; common 10-20% medium 5-15mm prominent brown mottles; light clay with thin sand lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist;
B22	0.70 to 0.95	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm prominent grey mottles; light clay with thin sand lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moist; sharp to;
Cu	0.95 to 2.00	Very dark grey (10YR31) moist colour; silty light clay with thin sand lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.6	3.9	
0.25	6.1	4.8	
0.50	5.7	5.3	
0.75	6.0	5.4	
1.00	6.1	0.9	
1.25	6.2	0.9	
1.50	6.2	0.8	
1.75	6.3	0.7	
2.00	6.4	0.8	

Notes:

Horizon – Cu EOP - as deep as Norm required
 Observation Could not sample water

Project: MWQ Site: 430

Location: 705180 mE 7684410 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Dermosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist colour; clay loam; dry; diffuse to;
B21	0.25 to 1.30	Very dark brown (10YR22) moist colour; light clay; dry; gradual to;
B22	1.30 to 1.90	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct brown mottles; light medium clay; moderately moist; abrupt to;
2B21	1.90 to 2.40	Dark yellowish brown (10YR34) moist colour; few 2-10% fine < 5mm prominent brown mottles; fine sandy light medium clay; very few < 2% medium pebbles 6-20mm subangular igneous rock (unidentified) coarse fragments; moderately moist; clear to;
2B22	2.40 to 3.00	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent brown mottles; fine sandy light medium clay; very few < 2% medium pebbles 6-20mm subangular igneous rock (unidentified) coarse fragments; moderately moist;
2C1	3.00 to 3.60	Very dark grey (10YR31) moist colour; light clay; massive structures; wet; sharp to;
2C2	3.60 to 4.20	Olive grey (5Y42) moist colour; common 10-20% medium 5-15mm distinct dark mottles; sandy loam with 1cm bands of light clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;
2C3	4.20 to 4.25	Black (2.5Y20) moist colour; fine sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.5	2.4	
0.60	5.0	3.5	
1.00	5.2	3.9	
1.50	5.2	4.3	
2.00	5.5	4.7	
2.50	5.7	4.5	
3.00	5.8	4.8	
3.10	5.9	2.4	
3.25	6.2	2.1	
3.50	6.3	2.7	
3.75	6.4	2.9	
4.00	6.5	2.1	
4.20	6.5	1.2	

Notes:

Horizon – 2C3 EOP - rock at 3.0 m; gouged sample from creek bank
 Observation Could not sample water as it was below 3.0 m

Project: MWQ Site: 431

Location: 705170 mE 7685695 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sesuvium portulacastrum (Samphire)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.14	Brown (10YR43) moist colour; very few < 2% fine < 5mm distinct orange mottles; fine sandy light clay; massive structures; moist; abrupt to;
B2	0.14 to 0.35	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent orange, common 10-20% medium 5-15mm prominent red mottles; light clay; massive structures; moist; sharp to;
Cu	0.35 to 1.22	Very dark grey (10YR31) moist colour; light clay; massive structures; wet; sharp to;
2D	1.22 to 1.50	Greenish grey (5BG51) moist colour; light medium clay with a 5cm pocket of PASS at 1.38m; weak 2-5mm lenticular structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	6.4	
0.25	4.4	3.6	
0.50	5.0	0.8	
0.75	5.8	0.9	
1.00	5.9	0.9	
1.25	6.0	1.3	
1.50	5.9	1.5	

Notes:
 Horizon - 2D EOP - clay too hard to gouge
 Observation H2O EC - 86.2 mS/cm; pH 5.8

Project: MWQ Site: 432

Location: 725825 mE 7645545 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; clay loam; fine sandy; massive structures; dry; sharp to;
B21	0.10 to 0.25	Black (2.5Y20) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium clay; moderate 20-50mm subangular blocky structures; dry; sharp to;
B22i	0.25 to 1.30	Grey (5Y51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; moderately moist; clear to;
B23i	1.30 to 1.70	Grey (5Y51) moist colour; few 2-10% fine < 5mm distinct yellow-brown mottles; light clay with many 1 mm white sand lenses; massive structures; moist; clear to;
BC	1.70 to 1.95	Dark grey (10YR41) moist colour; very few < 2% medium 5-15mm prominent yellow-brown mottles; light clay with many 1-2mm grey sand lenses; massive structures; moist;
C1u	1.95 to 2.30	Grey (2.5Y50) moist colour; fine sand with a 5cm light clay lens at 2.0m; single grain structures; wet; sharp to;
C2u	2.30 to 3.63	Dark grey (2.5Y40) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt, quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
C3u	3.63 to 4.40	Grey (2.5Y50) moist colour; coarse sand with a 4cm light clay lens at 3.8m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded basalt, quartz and intermediate volcanic coarse fragments; single grain structures; wet;
2D?	4.40 to 5.10	Grey (5Y51) moist colour; coarse sand with a 4cm light clay lens at 4.58m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.5	4.1	2.75	5.6	1.6
0.30	6.0	5.0	3.00	5.4	1.5
0.60	6.2	5.2	3.25	5.6	1.7
0.80	6.2	5.3	3.50	5.5	1.4
1.00	5.6	5.1	3.75	6.8	1.8
1.25	5.8	5.1	4.00	5.9	1.5
1.50	5.7	4.7	4.25	6.4	5.5
1.75	5.5	4.5	4.50	6.1	5.6
2.00	4.6	1.7	4.75	6.0	5.7
2.25	5.6	1.5	5.00	6.3	5.8
2.50	5.8	1.7			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC – 38.2 mS/cm; pH 4.9

Project: MWQ Site: 433

Location: 725630 mE 7645310 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Oct-2000

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Levee
 Runoff: No record
 Elevation: 3.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (Blue gum)
 Mid Stratum: Cupaniopsis anacardioides (Tuckeroo)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.10	Very dark brown (10YR22) moist colour; loamy fine sand, heavy; moderate 2-5mm cast structures; dry; sharp to;
A12	0.10 to 0.50	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint orange mottles; loamy fine sand; single grain structures; dry;
A2e	0.50 to 0.55	Light brownish grey (10YR62) moist, white (10YR82) dry colour; fine sand; single grain structures; sharp to;
B21	0.55 to 0.90	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy light medium clay; strong columnar structures; clear to;
B22	0.90 to 1.90	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sandy light clay; abrupt to;
B3	1.90 to 2.40	Greyish brown (2.5Y52) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct pale mottles; clay loam; fine sandy; sharp to;
2B2	2.40 to 2.90	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent yellow-brown, common 10-20% fine < 5mm prominent grey mottles; fine sand with common thin light clay lenses and grey pyritic sand lenses; sharp to;
3Cu	2.90 to 4.00	Dark grey (2.5Y40) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic and quartz coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	3.4	
0.60	4.5	3.5	
1.00	5.4	4.9	
1.50	4.9	5.0	
1.75	5.0	3.7	
2.00	4.2	3.4	
2.25	3.9	2.9	
2.50	3.7	3.4	
2.75	3.4	2.7	
3.00	3.9	1.6	
3.25	4.2	1.6	
3.50	4.3	1.5	
3.75	4.3	1.9	
4.00	4.4	1.8	

Notes:

Horizon – 3Cu EOP - too wet to hand auger further
 Observation H2O EC - 25.6 mS/cm; pH 4.3

Project: MWQ Site: 434

Location: 725700 mE 7644800 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, Pumice
 Surface Condition: Firm

Classifications

ASC: Dystrophic, Tenosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, mid-dense
 Excoecaria agallocha (Blind-your-eye mangrove); Lumnitzera racemosa (Black mangrove)
 Mid Stratum: Aegiceras corniculatum (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Brown (10YR53) moist colour; common 10-20% fine < 5mm distinct pale, common 10-20% fine < 5mm distinct dark mottles; fine sandy loam; single grain structures; moderately moist; clear to;
B2	0.20 to 0.40	Dark yellowish brown (10YR44) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% fine < 5mm distinct grey mottles; fine sandy loam, light; single grain structures; moderately moist; abrupt to;
C1	0.40 to 0.90	Dark yellowish brown (10YR44) moist colour; fine sandy loam, light; single grain structures; moderately moist;
2C1	0.90 to 1.25	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; moderately moist; sharp to;
2C2	1.25 to 2.40	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; gradual to;
2C3	2.40 to 4.85	Dark yellowish brown (10YR44) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; few 2-10% fine <2 mm manganiferous nodules segregations; wet;
3D	4.85 to 5.10	Strong brown (7.5YR46) moist colour; many 20-50% medium 5-15mm prominent gley mottles; fine sandy medium clay; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.5	4.8	
0.60	5.9	5.0	
1.00	6.0	5.1	
1.50	5.9	6.1	
2.00	6.2	5.9	
2.50	6.0	6.5	
3.00	6.5	7.1	
3.50	6.9	6.3	
4.00	6.4	6.7	
4.50	6.5	7.4	
5.00	6.3	5.8	

Notes:
 Observation Could not sample water

Project: MWQ Site: 435

Location: 722770 mE 7646960 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Plain
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.8 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Acidic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; fine sandy loam; massive structures; dry; clear to;
B2	0.15 to 1.70	Brown (10YR43) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct orange mottles; fine sandy loam; massive structures; moderately moist; diffuse to;
B3	1.70 to 2.15	Brown (10YR43) moist colour; many 20-50% fine < 5mm prominent pale mottles; clayey fine sand; massive structures; moderately moist;
2B21	2.15 to 2.90	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent grey mottles; light clay with many thin 1-5mm lenses of fine sand; massive structures; few 2-10% coarse 6-20 mm manganiferous soft segregations; moist; sharp to;
2B22	2.90 to 3.20	Grey (10YR51) moist colour; few 2-10% fine < 5mm prominent brown mottles; light clay with many 1-2mm fine sand lenses; massive parting to single grain structures; moist; gradual to;
2C1u	3.20 to 3.40	Dark grey (2.5Y40) moist colour; light clay with many thin 1-5mm grey fine sand lenses; massive parting to single grain structures; wet; clear to;
2C2u	3.40 to 4.20	Dark grey (2.5Y40) moist colour; fine sand with few thin 2-5mm light clay lenses; single grain parting to massive structures; wet; sharp to;
2C3u	4.20 to 5.40	Very dark grey (2.5Y30) moist colour; light clay with few thin 2-10mm fine sand lenses; massive structures; wet; sharp to;
3Cu	5.40 to 6.00	Dark grey (2.5Y40) moist colour; fine sand with 2 x 2-5cm light clay lenses; very few < 2% small pebbles 2-6mm rounded quartz, basalt and igneous rock coarse fragments; single grain structures; wet.

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.6	3.1	3.75	7.1	1.5
0.60	4.7	3.7	4.00	7.2	1.9
1.00	5.6	4.2	4.25	7.1	1.8
1.50	5.5	4.7	4.50	7.4	1.8
2.00	5.9	5.0	4.75	7.2	1.6
2.25	6.1	4.5	5.00	7.2	1.6
2.50	5.7	5.9	5.25	7.6	1.7
2.75	5.7	5.7	5.50	7.2	1.8
3.00	5.6	5.1	5.75	7.1	1.9
3.25	6.5	6.0	6.00	7.1	1.7
3.50	6.6	2.0			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.9 mS/cm; pH 6.7

Project: MWQ Site: 436

Location: 722880 mE 7646600 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 17-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Levee

Runoff: No record

Elevation: 5.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.7 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Acidic, Stratic, RUDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.90	Dark brown (10YR33) moist colour; clayey fine sand; single grain structures; dry; abrupt to;
2C1	0.90 to 1.65	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2C2	1.65 to 2.85	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
3C	2.85 to 3.10	Brown (10YR53) moist colour; very few < 2% fine < 5mm distinct orange mottles; fine sand; single grain structures; dry; sharp to;
4C1	3.10 to 4.90	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; common 10-20% fine <2 mm manganiferous soft segregations; dry; abrupt to;
4C2	4.90 to 5.10	Strong brown (7.5YR46) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.4	3.0	
0.60	4.9	3.6	
1.00	5.4	3.7	
1.50	6.1	4.2	
2.00	6.3	4.8	
2.50	6.4	6.0	
3.00	6.2	4.2	
3.50	6.3	6.3	
4.00	6.0	6.5	
4.50	6.4	7.0	
5.00	5.8	5.0	

Notes:

Horizon – 4C2 EOP – 5.1-6.0 would not hold in the tube
Observation Could not sample water

Project: MWQ Site: 437

Location: 723320 mE 7647200 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch); Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; many 20-50% fine < 5mm prominent orange mottles; light medium clay; dry; sharp to;
B21	0.20 to 0.60	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent orange mottles; light medium clay with a thin layer of white fine sand at 0.2m; dry; abrupt to;
B22	0.60 to 1.75	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm distinct brown mottles; light clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moist; abrupt to;
Cu	1.75 to 2.80	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	2.80 to 3.50	Dark grey (2.5Y40) moist colour; clayey fine sand; single grain structures; wet; sharp to;
3C1	3.50 to 4.70	Light grey (10YR72) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
3C2	4.70 to 5.85	Grey (5Y61) moist colour; sand with coarse sand at 5.6m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4D	5.85 to 6.00	Light greenish grey (5G71) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; weak 2-5mm subangular blocky structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.1	4.2	3.25	6.5	1.5
0.30	5.6	4.7	3.50	6.5	1.8
0.60	6.0	5.6	3.75	6.7	5.0
0.80	5.9	5.6	4.00	6.8	5.1
1.00	6.5	5.8	4.25	6.8	5.5
1.25	5.6	6.8	4.50	7.0	5.6
1.50	5.7	5.4	4.75	7.2	5.5
1.75	5.9	5.4	5.00	7.4	5.1
2.00	5.8	1.4	5.25	6.9	5.6
2.25	6.0	1.5	5.50	6.7	4.9
2.50	6.0	1.4	5.75	7.2	5.1
2.75	5.8	1.5	6.00	7.0	6.7
3.00	5.9	1.5			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 3C2 Lumps of wood at 5.4 and 5.6 m
 Observation H2O EC - 19.1 mS/cm; pH 5.8

Project: MWQ Site: 438

Location: 725630 mE 7646155 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark brown (10YR22) moist colour; loamy fine sand; single grain structures; moderately moist; clear to;
B2	0.25 to 0.80	Greyish brown (10YR52) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; clayey fine sand; single grain structures; moderately moist; sharp to;
2B2	0.80 to 1.45	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm prominent yellow-brown, common 10-20% medium 5-15mm distinct pale mottles; fine sandy light medium clay with thin bands 4mm thick of fine sand; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
3B2	1.45 to 2.10	Brown (10YR53) moist colour; few 2-10% fine < 5mm prominent yellow-brown, common 10-20% fine < 5mm distinct grey mottles; fine sand; single grain structures; moist; sharp to;
4Cu	2.10 to 3.00	Dark grey (2.5Y40) moist colour; fine sand with many 2-10mm very dark grey light clay lenses and a 6cm band of brown sand at 2.67m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain parting to massive structures; wet; sharp to;
5C1	3.00 to 3.30	Dark yellowish brown (10YR36) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
5C2	3.30 to 5.10	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.2	3.8	2.25	6.5	2.2
0.30	5.2	4.5	2.50	6.4	1.8
0.60	6.0	5.2	2.75	6.1	3.1
0.80	6.6	5.7	3.00	5.9	1.9
1.00	6.5	5.2	3.50	6.6	4.8
1.25	6.1	5.5	4.00	6.7	5.2
1.50	6.3	5.3	4.50	6.4	5.2
1.75	6.7	5.3	5.00	6.6	5.2
2.00	6.6	5.2			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 5C2 EOP - sand would not hold in tube
 Observation H2O EC - 2.1 mS/cm; pH 6.0

Project: MWQ Site: 439

Location: 724685 mE 7646440 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Acidic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (Blue gum)
 Mid Stratum: Acacia leptocarpa (North coast wattle)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
A21e?	0.10 to 0.70	Light brownish grey (10YR62) moist, white (10YR81) dry colour; many 20-50% fine < 5mm prominent yellow-brown mottles; fine sand; single grain structures; moderately moist;
A22e?	0.70 to 1.25	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; abrupt to;
B2	1.25 to 2.20	Yellowish brown (10YR54) moist colour; many 20-50% fine < 5mm prominent grey, very few < 2% medium 5-15mm prominent orange mottles; fine sand; single grain structures; moist; sharp to;
BC?	2.20 to 2.65	Greyish brown (2.5Y52) moist colour; very few < 2% fine < 5mm prominent orange mottles; fine sand; single grain structures; wet; sharp to;
2C1u	2.65 to 3.10	Dark grey (2.5Y40) moist colour; fine sand with a few 5-10mm light clay lenses; single grain parting to massive structures; wet; sharp to;
2C2u	3.10 to 3.70	Grey (2.5Y50) moist colour; fine sand with a 5mm light clay lens at 3.68m; single grain structures; wet; sharp to;
3C1	3.70 to 4.30	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; gradual to;
3C2	4.30 to 5.00	Light olive grey (5Y62) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.9	3.7	
0.60	5.2	4.9	
1.00	6.3	4.9	
1.50	5.1	5.1	
2.00	6.1	5.3	
2.25	6.0	5.9	
2.50	6.1	5.3	
2.75	5.8	1.8	
3.00	6.2	1.7	
3.25	6.2	1.9	
3.50	6.2	2.5	
3.75	6.5	4.5	
4.00	6.4	6.0	
4.25	6.6	5.9	
4.50	6.6	5.8	
4.75	6.7	5.9	
5.00	6.6	5.4	

Notes:

Observation H2O C - 12.4 mS/cm; pH 6.0

Project: MWQ Site: 440

Location: 724600 mE 7646860 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Quartz
 Surface Condition: Firm

Classifications

ASC: Acidic, Tenosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Fill	0.00 to 0.10	Fine sand; abrupt to;
A1	0.10 to 0.25	Dark brown (10YR33) moist colour; loamy fine sand; single grain structures; dry; clear to;
B2	0.25 to 0.60	Brown (10YR43) moist colour; clayey fine sand; single grain structures; moderately moist;
C	0.60 to 1.00	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; sharp to;
2C	1.00 to 1.50	Yellowish brown (10YR54) moist, very pale brown (10YR74) dry colour; sand; single grain structures; moderately moist; sharp to;
3B2	1.50 to 1.90	Light yellowish brown (10YR64) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct pale mottles; fine sand with 2 x 1cm grey with brown mottle light clay lenses; single grain structures; moderately moist; sharp to;
4B2	1.90 to 2.10	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; clay loam; fine sandy; massive structures; moist;
5C1	2.10 to 4.50	Very pale brown (10YR73) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
5C2	4.50 to 4.90	Light grey (10YR71) moist colour; coarse sand with 3 x 1cm light clay lenses; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
6Cu	4.90 to 6.00	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.9	3.9	
0.60	4.0	4.2	
1.00	5.0	4.3	
1.50	5.6	4.8	
2.00	5.3	4.6	
2.50	5.8	5.1	
3.00	6.3	5.3	
3.50	6.4	5.4	
4.00	7.2	5.4	
4.50	7.2	5.6	
4.75	7.3	5.6	
5.00	6.9	5.9	
5.25	7.3	5.4	
5.50	7.3	5.8	
5.75	7.4	6.1	
6.00	7.6	5.5	

Notes:

Observation H2O EC - 2.1 mS/cm; pH 7.3

Project: MWQ Site: 441

Location: 725580 mE 7646320 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Surface crust, Periodic cracking

Classifications

ASC: Sulfidic, Epipedal, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sesuvium portulacastrum (Samphire)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.07	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct orange mottles; moderate 5-10mm parting to weak 2-5mm subangular blocky structures; dry; sharp
B21i	0.07 to 0.40	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moderate 50-100mm prismatic parting to moderate 10-20mm lenticular structures; moderately moist; clear to;
B22i	0.40 to 0.80	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent brown mottles; light clay; moderate 2-5mm lenticular structures; moist; abrupt to;
Cu	0.80 to 2.20	Very dark grey (2.5Y30) moist colour; silty light clay with a 5cm fine sand lens at 2.1m; massive structures; wet; sharp to;
2C	2.20 to 2.50	Grey (5Y51) moist colour; fine sand with a 1cm light clay lens at 2.43m; single grain structures; wet; sharp to;
3Cu	2.50 to 3.30	Dark grey (2.5Y40) moist colour; light clay with 2-5cm fine sand lenses at 2.7, 2.8 and 3.0m; massive structures; wet; sharp to;
4C1	3.30 to 3.95	Light brownish grey (2.5Y62) moist colour; sand with a 2cm grey fine sand lens at 3.4m; very few < 2% small pebbles 2-6mm rounded quartz and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4C2	3.95 to 4.70	Greyish brown (2.5Y52) moist colour; coarse sand with a 3cm fine sand lens at 4.15m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and intermediate volcanic and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5D	4.70 to 4.80	Greyish green (5G52) moist colour; many 20-50% very coarse > 30mm prominent brown, few 2-10% coarse 15-30mm distinct grey mottles; fine sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.4	7.2	2.50	6.4	1.5
0.25	6.4	5.8	2.75	6.3	1.4
0.50	6.2	5.7	3.00	6.7	1.5
0.75	6.3	5.1	3.25	6.3	1.4
1.00	6.2	1.1	3.50	7.5	5.6
1.25	6.2	1.2	3.75	7.6	5.8
1.50	6.4	1.3	4.00	7.3	5.3
1.75	6.6	1.2	4.25	7.7	5.6
2.00	6.7	1.3	4.50	7.6	5.6
2.25	6.5	1.5	4.75	7.3	6.9

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 5D EOP - too hard to core
 Observation H2O EC - 23.6 mS/cm; pH 6.2

Project: MWQ Site: 442

Location: 724825 mE 7646000 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Argillaceous, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense
 Excoecaria agallocha (Blind-your-eye mangrove); Ceriops tagal (Yellow mangrove)
 Mid Stratum: Aegiceras corniculatum (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint orange mottles; light medium clay; moderate 2-5mm subangular blocky structures; moderately moist; abrupt to;
B2	0.20 to 0.75	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; fine sandy light clay; few 2-10% fine <2 mm manganiferous soft segregations; moist; sharp to;
2B2	0.75 to 1.40	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% fine < 5mm distinct grey mottles; light clay with many brown Ffine sand lenses; very few < 2% fine <2 mm manganiferous soft segregations; moist; sharp to;
3C1	1.40 to 2.00	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; few 2-10% fine <2 mm manganiferous soft segregations; moist; sharp to;
3C2	2.00 to 2.50	Brown (10YR53) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz and igneous rock (unidentified) coarse fragments; single grain structures; few 2-10% fine <2 mm manganiferous soft segregations; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	6.6	
0.25	6.1	7.1	
0.50	5.6	5.0	
0.75	5.9	6.3	
1.00	5.8	5.7	
1.25	6.0	5.1	
1.50	6.3	6.5	
1.75	5.9	6.9	
2.00	6.2	7.1	
2.25	6.0	5.6	
2.50	6.0	5.7	

Notes:

Horizon – 3C2 EOP - too wet to hand auger
 Observation Could not sample water

Project: MWQ Site: 443

Location: 724650 mE 7645610 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 12.01-20m, mid-dense
 Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Mid Stratum: Cupaniopsis anacardioides (Tuckeroo)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; loamy fine sand; weak 2-5mm cast structures; dry; abrupt to;
A2?	0.10 to 2.65	Brown (10YR53) moist, pale brown (10YR63) dry colour; fine sand; single grain structures; dry; sharp to;
B2?	2.65 to 3.00	Yellowish brown (10YR55) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sand; single grain structures; moderately moist; sharp to;
2B2	3.00 to 3.40	Greyish brown (2.5Y52) moist colour; very few < 2% fine < 5mm prominent grey, many 20-50% medium 5-15mm prominent brown mottles; coarse sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
3C	3.40 to 4.50	Olive grey (5Y52) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.3	
0.60	4.2	3.4	
1.00	3.7	3.3	
1.50	5.8	5.0	
2.00	5.8	4.5	
2.50	4.2	4.0	
3.00	4.3	3.5	
3.50	6.2	5.5	
4.00	6.0	5.4	
4.50	5.7	5.2	

Notes:

Horizon – 3C EOP - too wet to hand auger
 Observation H2O EC - 13.9 mS/cm; pH 5.6

Project: MWQ Site: 444

Location: 726990 mE 7648145 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.4 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Aristida species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty clay loam; weak 2-5mm cast structures; dry; sharp to;
B21	0.25 to 0.60	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent red, common 10-20% fine < 5mm prominent brown mottles; medium heavy clay; dry; clear to;
B22	0.60 to 1.10	Grey (10YR61) moist colour; very few < 2% medium 5-15mm prominent brown, very few < 2% fine < 5mm prominent red mottles; fine sandy medium clay; lenticular structures; moderately moist;
B23	1.10 to 1.80	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent red mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; sharp to;
2B2	1.80 to 2.40	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; clayey coarse sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
3D	2.40 to 2.60	Greenish grey (5GY61) moist colour; few 2-10% medium 5-15mm prominent brown, many 20-50% coarse 15-30mm prominent gley mottles; medium heavy clay; moderate 2-5mm lenticular structures; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	3.5	
0.60	4.3	3.9	
1.00	4.6	3.5	
1.50	4.3	4.1	
2.00	4.8	4.6	
2.50	5.5	6.1	

Notes:

Horizon – 3D EOP - too hard to core
 Observation Could not sample water

Project: MWQ Site: 445

Location: 726775 mE 7648250 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Surface crust

Classifications

ASC: Sulfuric, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.15	Black (2.5Y20) moist colour; medium clay; moderately moist; clear to;
A12	0.15 to 0.65	Black (2.5Y20) moist colour; few 2-10% fine < 5mm distinct brown mottles; medium clay; moderately moist; abrupt to;
B21i	0.65 to 0.90	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; moderately moist; abrupt to;
B22ia	0.90 to 1.40	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; moist; sharp to;
Cu	1.40 to 2.35	Very dark grey (10YR31) moist colour; light clay thin sand and coarse sand lenses; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; sharp to;
2D	2.35 to 2.50	Dark greenish grey (5G41) moist colour; medium clay; weak 2-5mm lenticular structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.3	5.6	
0.25	4.3	3.8	
0.50	5.2	1.1	
0.75	5.4	3.9	
1.00	4.9	3.1	
1.25	4.0	3.0	
1.50	3.8	3.3	
1.75	3.9	3.1	
2.00	3.8	2.3	
2.25	3.7	1.2	
2.50	4.7	1.5	

Notes:

Horizon - 2D EOP - too hard to core
 Observation H2O EC - 94.2 mS/cm; pH 4.0

Project: MWQ Site: 446

Location: 727205 mE 7647690 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 23-Oct-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Plain

Runoff: No record

Elevation: 3.3 m (estimation)

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Sulfuric, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris

Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist colour; silty light clay; weak 2-5mm cast structures; dry; sharp to;
B21i	0.25 to 0.90	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, common 10-20% fine < 5mm prominent red, few 2-10% fine < 5mm distinct pale mottles; light medium clay; moderately moist; abrupt to;
B22ia	0.90 to 1.20	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; moist;
C1u	1.20 to 2.10	Very dark grey (10YR31) moist colour; silty light clay; massive structures; sharp to;
C2u	2.10 to 2.60	Dark grey (2.5Y40) moist colour; sandy light clay; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; massive structures; wet; sharp to;
2Cu	2.60 to 4.20	Dark grey (2.5Y40) moist colour; coarse sand with a few thin sand lenses; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
3Cu	4.20 to 5.40	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
4D	5.40 to 5.85	Greenish grey (5G61) moist colour; coarse sandy light clay; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and subrounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	4.4	2.9	3.00	6.3	1.4
0.25	3.9	2.8	3.25	6.7	1.4
0.50	3.5	2.7	3.50	6.7	1.3
0.75	3.4	2.7	3.75	6.9	1.5
1.00	3.2	3.1	4.00	6.7	1.4
1.25	3.5	3.1	4.25	6.2	1.1
1.50	3.6	3.0	4.50	6.3	1.3
1.75	3.6	1.2	4.75	6.2	1.0
2.00	3.8	1.0	5.00	6.3	1.1
2.25	3.8	1.1	5.25	6.4	1.1
2.50	4.5	1.1	5.50	7.2	5.5
2.75	5.6	1.4	5.75	7.2	6.9

pH_F (pH using electrode probe),

pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC 25.8 mS/cm; pH 5.7

Project: MWQ Site: 447

Location: 727480 mE 7647655 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Quartz
 Surface Condition: Hard setting, Surface crust

Classifications

ASC: Sulfuric, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Black (2.5Y20) moist colour; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm prominent yellow-brown mottles; light medium clay; massive structures; moderately moist; abrupt to;
B21i	0.10 to 0.35	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm distinct dark mottles; light clay; massive structures; moist; clear to;
B22ia	0.35 to 0.65	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; massive structures; moist; clear to;
Ci	0.65 to 3.30	Very dark grey (10YR31) moist colour; light clay; massive structures; wet; sharp to;
2Cu	3.30 to 4.25	Very dark grey (2.5Y30) moist colour; sand with many thin 5-10mm lenses of coarse sand and light clay; very few < 2% small pebbles 2-6mm rounded intermediate volcanic coarse fragments; single grain structures; wet; abrupt to;
3Cu	4.25 to 4.35	Dark grey (2.5Y40) moist colour; light clay; massive structures; wet; abrupt to;
4D	4.35 to 4.50	Dark greenish grey (5G41) moist colour; medium clay; moderate 5-10mm lenticular structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.4	4.1	
0.25	3.6	3.4	
0.50	3.6	3.3	
0.75	3.6	3.2	
1.00	3.6	3.6	
1.25	3.7	1.1	
1.50	3.8	1.0	
1.75	4.2	1.0	
2.00	4.7	1.0	
2.25	4.3	1.0	
2.50	4.6	1.1	
2.75	4.8	0.9	
3.00	4.9	1.0	
3.25	5.1	1.0	
3.50	5.6	1.0	
3.75	5.8	1.2	
4.00	5.7	0.6	
4.25	5.7	1.3	
4.50	6.2	1.9	

Notes:

Horizon – 4D EOP - too hard to core
 Observation Could not sample water

Project: MWQ Site: 448

Location: 727830 mE 7646855 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: Very few < 2%, cobbles 60-200mm, Intermediate volcanic
 Surface Condition: Surface crust, Hard setting

Classifications

ASC: Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
B21	0.00 to 0.45	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent red, few 2-10% medium 5-15mm prominent yellow-brown mottles; light clay; massive structures; moist
Cu	0.45 to 1.60	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
2D	1.60 to 2.00	Dark greenish grey (5G41) moist colour; few 2-10% fine < 5mm distinct grey mottles; fine sandy medium clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.5	3.7	
0.25	4.1	3.7	
0.50	4.2	4.1	
0.75	4.5	1.0	
1.00	4.6	0.9	
1.25	4.9	0.8	
1.50	5.1	0.9	
1.75	6.3	1.2	
2.00	6.5	5.3	

Notes:

Horizon – 2D EOP - too hard to core further
 Observation H2O EC - 112.5 mS/cm; pH 5.3

Project: MWQ Site: 449

Location: 727180 mE 7646760 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Oct-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca viridiflora (Broad-leaved tea-tree); Eucalyptus tereticornis (Blue gum)
 Lower Stratum: Aristida species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark greyish brown (10YR42) moist colour; silty clay loam; weak 2-5mm cast structures; dry; sharp to;
B21	0.15 to 0.55	Dark greyish brown (2.5Y43) moist colour; few 2-10% fine < 5mm faint dark mottles; medium heavy clay; dry; abrupt to;
B22	0.55 to 1.40	Grey (5Y51) moist colour; few 2-10% fine < 5mm prominent yellow-brown, very few < 2% fine < 5mm prominent red mottles; medium heavy clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderately moist; abrupt to;
2B2	1.40 to 2.00	Light olive brown (2.5Y54) moist colour; many 20-50% medium 5-15mm distinct grey mottles; coarse sandy medium clay; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; moderately moist; clear to;
3B2	2.00 to 3.05	Yellowish brown (10YR54) moist colour; many 20-50% fine < 5mm prominent grey, common 10-20% fine < 5mm prominent yellow-brown, few 2-10% medium 5-15mm prominent gley mottles; medium heavy clay; moderately moist; sharp to;
4B2	3.05 to 4.85	Greenish grey (5GY51) moist colour; common 10-20% medium 5-15mm prominent brown mottles; clayey sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
5D	4.85 to 5.10	Greenish grey (5GY61) moist colour; few 2-10% medium 5-15mm prominent gley mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	4.4	
0.60	5.9	6.1	
1.00	6.6	6.3	
1.50	7.3	6.4	
2.00	7.2	6.4	
2.50	6.6	6.2	
3.00	6.8	6.4	
3.50	5.9	5.5	
4.00	5.9	6.3	
4.50	6.3	6.5	
5.00	6.9	7.7	

Notes:
 Observation H2O EC - 24.6 mS/cm; pH 5.7

Project: MWQ Site: 450

Location: 727525 mE 7646415 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca dealbata (Swamp tea-tree)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; few 2-10% fine < 5mm distinct orange mottles; light clay; dry;
B2ia	0.15 to 0.65	Light brownish grey (2.5Y62) moist colour; common 10-20% fine < 5mm prominent yellow-brown, common 10-20% fine < 5mm prominent red, few 2-10% fine < 5mm prominent dark, few 2-10% fine < 5mm distinct grey mottles; medium clay; moderate 10-20mm subangular blocky structures; dry; sharp to;
2B21	0.65 to 1.25	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, common 10-20% medium 5-15mm distinct grey, very few < 2% medium 5-15mm prominent pale mottles; fine sandy light medium clay; very few < 2% small pebbles 2-6mm rounded acid volcanic coarse fragments; moderately moist; clear to;
2B22	1.25 to 2.30	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium clay; very few < 2% small pebbles 2-6mm rounded acid volcanic coarse fragments; moderately moist; sharp to;
3C	2.30 to 2.65	Light brownish grey (10YR62) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
4B21	2.65 to 2.90	Greyish brown (2.5Y52) moist colour; common 10-20% fine < 5mm prominent brown mottles; coarse sandy light medium clay; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; massive structures; wet; abrupt to;
4B22	2.90 to 3.25	Greyish brown (2.5Y52) moist colour; common 10-20% medium 5-15mm distinct brown mottles; coarse sandy clay loam; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; massive structures; wet;

5D 3.25 to 3.50 Dark yellowish brown (10YR44) moist colour; many 20-50% medium 5-15mm prominent grey mottles; medium clay; weak 2-5mm lenticular structures; very few < 2% medium 2-6 mm manganiferous soft segregations; moist

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.4	3.8	
0.25	4.5	4.1	
0.50	4.1	3.9	
0.75	3.9	3.8	
1.00	4.0	3.9	
1.50	4.4	3.5	
2.00	5.5	4.2	
2.50	5.3	4.8	
3.00	5.8	6.1	
3.50	5.8	5.6	

Notes:

Horizon – 5D EOP - too hard to core deeper and water sucked soil out of augers
 Observation H2O EC - 18.5 mS/cm; pH 5.2

Project: MWQ Site: 451

Location: 727085 mE 7647030 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 31-Oct-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Supratidal flat

Runoff: No record

Elevation: 2.7 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Sulfuric, Supratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (2.5Y20) moist colour; few 2-10% fine < 5mm distinct orange mottles; medium clay; weak 20-50mm angular blocky structures; dry;
B21i	0.15 to 0.40	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm prominent dark, common 10-20% fine < 5mm prominent grey, common 10-20% medium 5-15mm prominent yellow-brown mottles; medium clay; moderately moist; clear to;
B22i	0.40 to 0.80	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent red mottles; light clay; moist; abrupt to;
B23ia	0.80 to 1.00	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; silty light clay; moist;
B24ia	1.00 to 1.50	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent yellow jarositic (from pyrite), very few < 2% fine < 5mm distinct yellow-brown mottles; silty light clay; massive structures; moist; clear to;
C1u	1.50 to 3.30	Very dark grey (2.5Y30) moist colour; silty light clay; weak lenticular structures; wet; gradual to;
C2u	3.30 to 4.23	Very dark grey (2.5Y30) moist colour; silty light clay with a 5cm coarse sand lens at 4.95m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; moderate 5-10mm lenticular structures; wet; sharp to;
D	4.23 to 4.50	Dark greenish grey (5G41) moist colour; common 10-20% medium 5-15mm prominent gley mottles; sandy light medium clay; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and basalt coarse fragments; massive structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.7	3.7	2.50	5.6	1.0
0.25	4.0	3.5	2.75	5.7	1.1
0.50	3.7	3.2	3.00	5.9	1.0
0.75	3.4	3.0	3.25	6.1	1.1
1.00	3.3	2.3	3.50	6.3	1.1
1.25	3.7	2.1	3.75	6.6	1.2
1.50	3.9	1.9	4.00	6.6	1.2
1.75	4.3	1.1	4.25	7.3	2.4
2.00	4.6	1.1	4.50	6.7	6.6
2.25	5.3	0.9			

pHF (pH using electrode probe),
pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - D EOP - too hard to core deeper
Observation H2O EC - 30.5 mS/cm; pH 3.8

Project: MWQ Site: 452

Location: 727215 mE 7648600 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 31-Oct-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Acidic-sodic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense
 Species: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Mid Stratum: Melaleuca dealbata (swamp tea-tree); Melaleuca viridiflora (Broad-leaved tea-tree)
 Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.24	Very dark brown (10YR23) moist colour; few 2-10% fine < 5mm distinct orange mottles; dry; abrupt to;
B21i	0.24 to 0.76	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent red, few 2-10% fine < 5mm distinct yellow-brown mottles; moderately moist; clear to;
B22ia	0.76 to 1.15	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), few 2-10% medium 5-15mm prominent yellow jarositic (from pyrite) mottles; light clay; massive structures; moist; clear to;
Cu	1.15 to 1.40	Dark grey (10YR41) moist colour; light clay; massive structures; wet; sharp to;
2C1	1.40 to 2.30	Grey (5Y61) moist colour; sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; gradual to;
2C2	2.30 to 3.70	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; diffuse to;
3B2	3.70 to 5.10	Dark greenish grey (5GY41) moist colour; few 2-10% coarse 15-30mm prominent brown mottles; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt, intermediate and acid volcanic and quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.7	3.6	2.75	6.0	1.4
0.25	4.2	3.5	3.00	6.0	1.5
0.50	3.8	3.2	3.25	6.2	1.5
0.75	3.6	3.4	3.50	6.0	1.6
1.00	3.4	3.1	3.75	6.2	1.5
1.25	3.5	3.5	4.00	6.3	1.9
1.50	4.2	2.5	4.25	6.1	6.3
1.75	4.8	2.4	4.50	6.1	6.9
2.00	4.6	1.8	4.75	6.0	6.6
2.25	5.9	1.4	5.00	5.7	7.1
2.50	6.0	1.5			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon – 3B2 EOP - sand would not hold in tube
 Observation H2O EC - 29.9 mS/cm; pH 4.4

Project: MWQ Site: 453

Location: 722390 mE 7646700 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Basic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; fine sandy loam; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; dry; clear to;
C	0.10 to 0.30	Dark yellowish brown (10YR44) moist, light yellowish brown (10YR64) dry colour; clayey fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; sharp to;
2C	0.30 to 1.00	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt, acid volcanic and quartz coarse fragments; single grain structures; dry; abrupt to;
3B21	1.00 to 1.40	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent brown mottles; sandy loam; very few < 2% small pebbles 2-6mm rounded acid volcanic coarse fragments; massive structures; moderately moist;
3B22	1.40 to 1.95	Brown (10YR53) moist colour; many 20-50% fine < 5mm prominent orange mottles; sand; single grain structures; moderately moist; sharp
4B2	1.95 to 3.35	Dark grey (2.5Y40) moist colour; few 2-10% fine < 5mm distinct brown mottles; light medium clay with many 2-4mm fine sand lenses below 2.9m; massive structures; moderately moist;
4Cu	3.35 to 4.00	Dark grey (2.5Y40) moist colour; fine sandy light clay with few 5-10mm fine sand lenses; massive structures; wet; sharp to;
5Cu	4.00 to 4.40	Grey (2.5Y50) moist colour; fine sand; single grain structures; wet; clear to;
6C1u	4.40 to 5.00	Grey (2.5Y50) moist colour; coarse sand with a 10cm light clay lens at 4.85m; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded acid volcanic, basalt and quartz coarse fragments; single grain structures; wet; sharp to;

6C2	5.00 to 5.50	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded, subrounded and subangular acid volcanic, quartz and basalt coarse fragments; single grain structures; wet; sharp to;
6C3u	5.50 to 6.00	Dark grey (2.5Y40) moist colour; coarse sand with a 10cm fine sand lens at 5.5m; many 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	4.5	2.7	3.50	6.8	2.6
0.60	5.6	4.7	3.75	6.9	3.5
1.00	6.3	5.2	4.00	6.9	4.6
1.50	5.1	3.9	4.25	7.0	1.8
1.75	5.1	5.2	4.50	7.1	2.0
2.00	5.9	5.1	4.75	7.5	3.4
2.25	6.4	5.6	5.00	7.6	5.5
2.50	6.7	6.6	5.25	7.4	6.0
2.75	6.2	6.5	5.50	7.6	6.6
3.00	6.8	7.0	5.75	7.3	1.1
3.25	6.4	6.8	6.00	7.5	2.5

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 1.6 mS/cm; pH 6.9

Project: MWQ Site: 454

Location: 722315 mE 7646785 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 01-Nov-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Flood plain

Element: Drainage depression

Runoff: No record

Elevation: 3.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No record

Surface Condition: Poached, Periodic cracking

Classifications

ASC: Natric, Dermosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; moist; clear to;
B21	0.15 to 0.60	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; moist; sharp to;
B22	0.60 to 1.60	Dark grey (5Y41) moist colour; few 2-10% fine < 5mm prominent orange, common 10-20% medium 5-15mm distinct brown mottles; clay loam; fine sandy with common thin 5mm light clay lenses; massive structures; moist; sharp to;
2Cu	1.60 to 2.70	Very dark grey (2.5Y30) moist colour; light clay with common thin 5mm fine sand lenses; massive structures; wet; sharp to;
3C	2.70 to 4.80	Greyish brown (2.5Y52) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded basalt, quartz, acid and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
4Cu	4.80 to 6.00	Dark grey (2.5Y40) moist colour; fine sandy loam with common thin 1-2mm light clay lenses; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.7	1.6	3.25	6.4	4.9
0.30	5.8	2.9	3.50	7.2	5.2
0.60	6.1	4.3	3.75	7.0	1.9
0.80	6.0	3.8	4.00	7.2	5.4
1.00	6.4	5.9	4.25	7.4	4.7
1.25	6.3	5.8	4.50	6.7	2.8
1.50	6.2	6.1	4.75	7.2	1.8
1.75	6.1	1.7	5.00	7.5	1.7
2.00	6.1	1.6	5.25	7.5	1.9
2.25	6.3	1.5	5.50	7.6	2.0
2.50	6.0	1.7	5.75	7.5	1.9
2.75	6.5	2.9	6.00	7.0	2.0
3.00	6.4	4.6			

pH_F (pH using electrode probe),
pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.5 mS/cm; pH 5.6

Project: MWQ Site: 455

Location: 721975 mE 7646505 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Dystrophic, Rudosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Cynodon dactylon (Couch); Neptunia gracilis (Sensitive plant)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; fine sandy clay loam; massive structures; clear to;
C1	0.15 to 1.25	Brown (10YR53) moist colour; fine sandy loam; massive structures; moderately moist; sharp to;
C2	1.25 to 1.75	Greyish brown (10YR52) moist colour; fine sandy loam with thin grey light clay lenses; orange mottles in these lenses; very few < 2% medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; massive structures; sharp to;
C3	1.75 to 2.00	Light grey (10YR72) moist colour; fine sand; single grain structures; sharp to;
2B2	2.00 to 2.60	Strong brown (7.5YR46) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures; very many > 50% coarse 6-20 mm manganiferous soft segregations; sharp to;
3Cu	2.60 to 3.20	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
4C	3.20 to 5.00	Light yellowish brown (10YR64) moist colour; coarse sand with 5cm grey light clay lenses at 3.7 and 4.95m and a 2cm grey light clay lens at 3.6m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded igneous rock (unidentified) coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.2	
0.60	5.2	4.4	
1.00	6.2	5.2	
1.50	6.0	5.3	
2.00	5.0	4.6	
2.50	5.8	5.7	
2.75	6.0	1.5	
3.00	6.0	1.5	
3.25	6.1	4.6	
3.50	6.2	5.3	
3.75	5.9	5.5	
4.00	5.9	5.6	
4.50	6.2	5.6	
5.00	6.0	5.2	

Notes:

Observation Could not sample water

Project: MWQ Site: 456

Location: 721530 mE 7646620 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Self-mulching, Periodic cracking

Classifications

ASC: Epiacidic-mottled, Self-mulching, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.03	Black (10YR21) moist colour; common 10-20% fine < 5mm prominent orange mottles; light clay; dry; abrupt to;
B21	0.03 to 1.10	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent orange mottles; medium clay; moderate 10-20mm parting to strong 2-5mm subangular blocky structures; dry; diffuse to;
B22	1.10 to 2.25	Grey (7.5YR50) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% fine < 5mm distinct grey mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	2.25 to 3.00	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% fine < 5mm prominent yellow mottles; light clay with many 5mm-5cm fine sand lenses, light brownish grey (2.5Y62) moist; massive structures; moist; sharp to;
3Cu	3.00 to 3.82	Very dark grey (2.5Y31) moist colour; light clay; massive structures; wet; sharp to;
4C	3.82 to 4.10	Grey (5Y51) moist colour; fine sand; single grain structures; wet; sharp to;
5C	4.10 to 5.50	Grey (5Y51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
6Cu	5.50 to 5.60	Dark grey (5Y41) moist colour; fine sandy clay loam; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.5	1.6	
0.60	4.8	3.6	
1.00	5.3	4.3	
1.50	5.3	4.7	
2.00	6.1	6.3	
2.25	5.5	5.0	
2.50	5.5	4.7	
2.75	5.2	3.4	
3.00	5.6	2.6	
3.25	5.5	1.5	
3.50	5.3	1.7	
3.75	5.4	2.1	
4.00	6.0	2.7	
4.25	6.3	4.5	
4.50	6.0	5.2	
4.75	6.0	4.6	
5.00	5.9	5.0	
5.25	6.3	3.8	
5.50	6.1	4.0	
5.60	6.0	2.5	

Notes:

Observation H2O EC - 1.2 mS/cm; pH 5.6

Project: MWQ Site: 457

Location: 720905 mE 7646380 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Flood plain
 Element: Pit
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Basic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct orange mottles; clay loam; moderate 2-5mm cast structures; dry; sharp to;
C1	0.25 to 0.95	Brown (10YR53) moist colour; sand; single grain structures; dry; sharp to;
2B2	0.95 to 1.10	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; sandy loam; massive structures; moderately moist; sharp to;
3C	1.10 to 2.20	Yellowish brown (10YR54) moist colour; sand; single grain structures; moderately moist; sharp to;
4B21	2.20 to 2.45	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent orange, few 2-10% medium 5-15mm distinct grey, few 2-10% fine < 5mm distinct pale mottles; alternating 1-2 cm bands of light clay and sand; single grain structures; moist; sharp to;
4B22i	2.45 to 3.60	Dark grey (2.5Y40) moist colour; few 2-10% fine < 5mm distinct orange, common 10-20% fine < 5mm distinct brown, few 2-10% medium 5-15mm prominent orange mottles; silty light clay with few 2-5mm white fine sand lenses; massive structures; moist;
4Cu	3.60 to 5.65	Very dark grey (2.5Y30) moist colour; silty light clay with 1-2mm fine sand lenses; massive structures; wet; sharp to;
5Cu	5.65 to 6.00	Grey (2.5Y50) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm subangular intermediate volcanic, basalt and quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.2	4.0	3.75	5.8	1.6
0.60	6.3	5.3	4.00	6.0	1.7
1.00	6.6	5.8	4.25	6.0	1.7
1.50	6.8	5.6	4.50	6.3	3.6
2.00	6.7	5.4	4.75	6.3	2.2
2.25	6.3	5.4	5.00	6.6	3.1
2.50	5.7	4.9	5.25	6.3	2.4
2.75	6.0	4.9	5.50	6.6	2.2
3.00	6.2	5.0	5.75	7.0	2.0
3.25	5.1	3.2	6.00	6.7	1.7
3.50	5.5	3.3			

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.2 mS/cm; pH 6.3

Project: MWQ Site: 458

Location: 720015 mE 7646365 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Acidic, Eutrophic, Brown, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Terminalia sericocarpa (Damson, sovereignwood)
 Mid Stratum: Hibiscus tiliaceus (Cotton tree / cowntucker)
 Lower Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist colour; light medium clay; weak 2-5mm cast parting to weak 2-5mm subangular blocky structures; dry; clear to;
B21	0.20 to 1.30	Brown (10YR43) moist colour; light medium clay; dry; diffuse to;
B22	1.30 to 2.10	Dark yellowish brown (10YR44) moist colour; common 10-20% fine < 5mm prominent pale mottles; clay loam; fine sandy; moderately moist; diffuse to;
B23	2.10 to 2.80	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm distinct brown, few 2-10% fine < 5mm prominent orange mottles; clay loam; fine sandy; moderately moist; sharp to;
2B2i	2.80 to 4.30	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent orange, common 10-20% fine < 5mm prominent pale mottles; light medium clay; massive structures; few 2-10% medium 2-6 mm manganiferous soft segregations: moist; sharp to;
2Cu	4.30 to 4.60	Very dark grey (2.5Y30) moist colour; light clay with few 1-2mm fine sand lenses; massive structures; wet; sharp to;
3C	4.60 to 6.00	Grey (5Y51) moist colour; sand with a 8cm light clay lens at 5.72m and a 10cm coarse sand lens at 5.35m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic, acid volcanic, basalt and quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.2	
0.60	5.1	4.1	
1.00	4.8	3.9	
1.50	4.8	3.8	
2.00	5.2	3.9	
2.50	5.0	4.1	
3.00	5.0	4.2	
3.25	5.5	6.2	
3.50	5.7	6.1	
3.75	6.2	5.9	
4.00	5.9	5.9	
4.25	5.7	5.5	
4.50	5.8	1.7	
4.75	6.2	5.0	
5.00	6.3	5.5	
5.25	6.1	4.7	
5.50	6.3	5.5	
5.75	5.9	1.6	
6.00	6.1	3.5	

Notes:

Observation H2O EC - 5.0 mS/cm; pH 5.8

Project: MWQ Site: 459

Location: 719365 mE 7646210 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Eutrophic, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Terminalia sericocarpa (Damson, sovereignwood); Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Eucalyptus tessellaris
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
C1	0.00 to 0.15	Yellowish brown (10YR54) moist, very pale brown (10YR73) dry colour; fine sand; dry; sharp to;
B21	0.15 to 0.50	Brown (10YR43) moist colour; very few < 2% fine < 5mm distinct orange, very few < 2% fine < 5mm distinct pale mottles; clay loam; fine sandy; dry; diffuse to;
B22	0.50 to 1.10	Brown (10YR53) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% fine < 5mm prominent brown mottles; clay loam; fine sandy; moderately moist; sharp to;
2B2	1.10 to 1.80	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% fine < 5mm prominent orange mottles; alternating thin lenses 2-10mm of light clay and fine sand; single grain parting to massive structures; moist; sharp to;
3B2i	1.80 to 2.60	Grey (7.5YR50) moist colour; many 20-50% medium 5-15mm prominent orange mottles; light clay with a few thin fine sand lenses; massive structures; common 10-20% fine < 2 mm manganiferous soft segregations; moist; clear to;
3Cu	2.60 to 3.00	Very dark grey (2.5Y30) moist colour; light clay; massive structures; wet; sharp to;
4C	3.00 to 4.35	Greyish brown (2.5Y52) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	4.4	
0.60	5.6	4.5	
1.00	5.8	4.6	
1.25	5.8	4.5	
1.50	5.6	5.2	
1.75	6.5	4.6	
2.00	6.2	5.0	
2.25	6.0	5.9	
2.50	5.8	5.9	
2.75	6.0	3.9	
3.00	6.0	1.8	
3.25	6.2	5.1	
3.50	6.2	4.5	
3.75	6.3	5.2	
4.00	6.5	5.3	
4.25	6.4	5.1	

Notes:

Horizon – 4C EOP - rocks stopped VVC
 Observation H2O EC - 0.4 mS/cm; pH 6.1

Project: MWQ Site: 460

Location: 720395 mE 7646780 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.7 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Acidic, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light medium clay; dry; clear to;
B2	0.20 to 1.25	Brown (10YR53) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; dry; sharp to;
2B2	1.25 to 1.65	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent brown mottles; sandy clay loam; common 10-20% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
3B21i	1.65 to 2.30	Grey (10YR51) moist colour; many 20-50% fine < 5mm distinct yellow mottles; light clay with many thin 1-2mm sand lenses between 2.0-2.3m; massive structures; moist; sharp to;
3B22ia	2.30 to 2.50	Very dark grey (10YR31) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), few 2-10% fine < 5mm prominent orange mottles; silty light clay; massive structures; moist; sharp to;
4C	2.50 to 2.70	Light brownish grey (10YR62) moist colour; sand; single grain structures; moderately moist; sharp to;
5Cu	2.70 to 3.50	Grey (2.5Y50) moist colour; fine sand with 3cm light clay lenses at 2.77 and 2.9m; single grain structures; wet; clear to;
6C1	3.50 to 4.40	Dark grey (5Y41) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
6C2	4.40 to 4.80	Grey (2.5Y50) moist colour; sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz, basalt and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
6C3	4.80 to 5.00	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.5	3.2	3.00	6.1	1.6
0.60	5.2	4.0	3.25	6.0	1.5
1.00	5.0	4.2	3.50	6.2	1.9
1.50	6.6	7.8	3.75	6.0	1.9
1.75	6.3	5.7	4.00	6.1	1.9
2.00	6.1	5.6	4.25	6.0	1.9
2.25	4.0	3.0	4.50	6.1	1.8
2.50	3.7	3.1	4.75	6.1	2.2
2.75	4.8	1.0	5.00	6.3	4.4

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 3B22ia Full of mangrove leaf
 Observation H2O EC - 1.3 mS/cm; pH 5.8

Project: MWQ Site: 461

Location: 720025 mE 7646645 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Sodic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm prominent orange mottles; light clay; dry; sharp to;
B2	0.10 to 0.90	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent orange, common 10-20% fine < 5mm prominent pale mottles; medium clay; dry; sharp to;
2B2i	0.90 to 1.90	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent brown mottles; light clay with many fine sand lenses; massive structures; few 2-10% fine <2 mm manganiferous soft segregations: moderately moist; sharp to;
2Cu	1.90 to 2.55	Very dark grey (2.5Y30) moist colour; light clay with 2cm fine sand lenses at 2.35m; massive structures; moist; sharp to;
3C1	2.55 to 2.80	Grey (2.5Y50) moist colour; fine sand; single grain structures; wet; clear to;
3C2	2.80 to 3.20	Grey (5Y51) moist colour; fine sand; single grain structures; wet; abrupt to;
3C3	3.20 to 3.75	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz and intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
3C4	3.75 to 4.95	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4D	4.95 to 5.10	Light greenish grey (5GY71) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; massive structures; common 10-20% medium 2-6 mm manganiferous soft segregations: moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	3.8	
0.60	6.4	5.4	
1.00	6.7	5.9	
1.25	6.2	6.1	
1.50	6.5	6.1	
1.75	6.6	6.0	
2.00	6.0	3.9	
2.25	5.7	1.4	
2.50	6.0	1.4	
2.75	6.4	1.9	
3.00	6.7	3.5	
3.25	7.0	1.7	
3.50	6.9	1.6	
3.75	6.8	1.4	
4.00	7.0	1.6	
4.25	6.9	1.6	
4.50	6.9	1.8	
4.75	6.4	2.1	
5.00	6.3	5.9	

Notes:

Observation H2O EC - 0.6 mS/cm; pH 6.4

Project: MWQ Site: 462

Location: 719630 mE 7646535 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Recently cultivated

Classifications

ASC: Acidic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
B2	0.00 to 0.45	Yellowish brown (10YR54) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent grey mottles; sand; massive structures; dry; sharp to;
C	0.45 to 0.80	Yellowish brown (10YR56) moist colour; sand with a 5cm clay lens at 0.6m; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2B21i	0.80 to 1.15	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay with 2-5cm lenses of brown sand at 0.85, 0.95 and 1.10m; massive structures; moderately moist; sharp to;
2B22i	1.15 to 1.80	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; massive structures; very few < 2% fine <2 mm manganiferous soft segregations: moist; clear to;
2B23i	1.80 to 3.50	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light clay with a 5cm sand lens at 2.9m; very few < 2% large pebbles 20-60mm angular charcoal and small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; moderate 5-10mm subangular blocky structures; very few < 2% fine <2 mm manganiferous soft segregations: moist; abrupt to;
2Cu	3.50 to 4.00	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
3C	4.00 to 4.60	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
4Cu	4.60 to 5.20	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.5	4.1	2.75	5.9	6.3
0.60	4.6	3.4	3.00	5.4	4.5
0.80	4.7	3.3	3.25	5.5	4.2
1.00	4.8	3.8	3.50	5.9	3.4
1.25	5.1	4.2	3.75	6.1	1.7
1.50	5.5	4.6	4.00	6.5	1.6
1.75	6.5	3.7	4.25	6.4	4.9
2.00	6.6	5.6	4.50	6.6	1.6
2.25	6.0	4.9	4.75	6.2	1.8
2.50	5.8	4.5	5.00	6.3	1.8

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 0.9 mS/cm; pH 6.3

Project: MWQ Site: 463

Location: 719760 mE 7646340 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 07-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 3.9 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Eutrophic, Kandosolic, Oxyaquic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct orange mottles; clay loam; fine sandy; weak 5-10mm cast structures; dry; clear to;
B2	0.20 to 0.70	Brown (10YR43) moist colour; few 2-10% fine < 5mm distinct orange mottles; clay loam; fine sandy; massive structures; dry; sharp to;
2B2	0.70 to 1.55	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent orange, common 10-20% fine < 5mm distinct pale mottles; light clay with a few 2-5cm fine sand lenses; massive structures; few 2-10% fine < 2 mm manganiferous soft segregations: moderately moist; sharp to;
3C	1.55 to 1.75	Light brownish grey (10YR62) moist colour; fine sand; single grain structures; dry; sharp to;
4B2	1.75 to 1.90	Greyish brown (10YR52) moist colour; many 20-50% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; light medium clay; massive structures; few 2-10% fine < 2 mm manganiferous soft segregations: moderately moist; sharp to;
5C	1.90 to 2.10	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; moderately moist; sharp to;
6B2i	2.10 to 2.35	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent orange mottles; light clay; massive structures; moderately moist;
6Cu	2.35 to 2.70	Very dark grey (2.5Y30) moist colour; light clay; massive structures; moist; sharp to;
7C	2.70 to 2.83	Light grey (10YR72) moist colour; fine sand; single grain structures; moist; sharp to;
8C	2.83 to 3.00	Grey (5Y51) moist colour; coarse sand with a 3cm silty light clay lens at 2.83m; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	4.2	
0.60	6.4	4.6	
1.00	6.2	5.0	
1.25	6.4	4.8	
1.50	6.6	5.8	
1.75	6.4	5.1	
2.00	6.8	5.7	
2.25	5.0	4.3	
2.50	5.8	1.9	
2.75	6.5	4.9	
3.00	6.7	4.0	

Notes:

Horizon - 3C2 EOP - large rocks at 3.0 m prevented VV going deeper
Observation H2O EC - 0.4 mS/cm; pH 6.5

Project: MWQ Site: 464

Location: 719080 mE 7646005 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 08-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 5.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Rudosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; fine sandy clay loam, heavy; massive structures; dry; sharp to;
C1	0.15 to 0.55	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt and igneous rock coarse fragments; single grain structures; dry; sharp to;
C2	0.55 to 0.95	Yellowish brown (10YR54) moist colour; sand with a 10cm mottled grey fine sandy clay loam lens at 0.7m; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; strong structures; dry; sharp to;
2B2	0.95 to 1.80	Greyish brown (2.5Y52) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sandy clay loam with a 15cm sand lens at 1.65m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; moderately moist; clear to;
3B2i	1.80 to 4.40	Grey (2.5Y50) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light clay; weak 5-10mm lenticular structures; few 2-10% medium 2-6 mm manganiferous soft segregations; moist;
3Cu	4.40 to 6.00	Black (2.5Y20) moist colour; silty light clay with a few 1-2mm fine sand lenses; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.3	
0.60	6.1	4.9	
1.00	5.9	4.0	
1.50	5.5	4.0	
2.00	5.9	4.8	
2.50	6.3	4.4	
3.00	6.2	4.9	
3.50	6.6	6.6	
4.00	6.2	6.7	
4.25	6.8	5.1	
4.50	6.3	1.8	
4.75	6.6	1.7	
5.00	6.9	1.7	
5.25	6.7	1.6	
5.50	6.6	1.7	
5.75	6.7	1.6	
6.00	6.7	1.6	

Notes:

Observation H2O EC - 3.8 mS/cm; pH 6.6

Project: MWQ Site: 465

Location: 718555 mE 7645830 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 08-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 4 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Dystrophic, Tenosolic, Oxyaquic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; clayey fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; dry; sharp to;
B2	0.15 to 0.60	Dark yellowish brown (10YR44) moist colour; fine sand; dry; sharp to;
2B2	0.60 to 2.40	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent brown mottles; silty light medium clay; common 10-20% medium 2-6 mm manganiferous soft segregations: moderately moist; sharp to;
3B2	2.40 to 3.10	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm prominent brown mottles; fine sand with 2-5cm light clay lenses at 2.65, 2.8 and 2.95m; massive structures; few 2-10% fine < 2 mm manganiferous soft segregations: moderately moist;
4Cu	3.10 to 3.50	Very dark grey (2.5Y30) moist colour; silty light clay with a 5cm sand lens at 3.35m; massive structures; wet; sharp to;
5Cu	3.50 to 4.00	Grey (5Y51) moist colour; fine sand; single grain structures; wet; clear to;
6B2	4.00 to 4.60	Light yellowish brown (2.5Y64) moist colour; many 20-50% very coarse > 30mm prominent brown, few 2-10% very coarse > 30mm prominent grey mottles; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt and igneous rock coarse fragments; single grain structures; wet; abrupt to;
7C	4.60 to 5.00	Olive grey (5Y52) moist colour; coarse sand with a 2cm silty light clay lens at 4.7m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic, acid volcanic, basalt and quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	3.4	
0.60	5.8	3.0	
1.00	5.6	3.9	
1.50	5.9	4.2	
2.00	5.9	5.5	
2.50	6.2	5.3	
2.75	6.0	6.2	
3.00	5.6	4.5	
3.25	6.0	3.6	
3.50	5.8	1.6	
3.75	6.2	2.0	
4.00	6.3	2.3	
4.25	6.2	4.5	
4.50	6.5	4.6	
4.75	6.7	1.6	
5.00	6.7	6.3	

Notes:

Observation H2O EC - 0.3 mS/cm; pH 6.0

Project: MWQ Site: 466

Location: 718130 mE 7645565 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melanic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; silty light medium clay; moderate 2-5mm subangular blocky structures; dry; clear to;
B21	0.20 to 1.25	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; dry; clear to;
B22	1.25 to 2.00	Dark brown (10YR33) moist colour; common 10-20% fine < 5mm distinct grey mottles; clay loam; fine sandy; moderately moist; sharp to;
2B2	2.00 to 3.00	Brown (10YR43) moist colour; few 2-10% fine < 5mm distinct grey mottles; fine sand; single grain structures; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; clear to;
3C	3.00 to 3.50	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt and igneous rock coarse fragments; single grain structures; moderately moist; sharp to;
4B2	3.50 to 4.50	Grey (N50) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; moderate 2-5mm subangular blocky structures; very few < 2% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
5B2	4.50 to 5.00	Grey (10YR61) moist colour; common 10-20% coarse 15-30mm prominent brown mottles; fine sand; single grain structures; moist;
5Cu	5.00 to 5.50	Dark grey (2.5Y40) moist colour; fine sand with 2-5cm light clay lenses at 5.0, 5.05, 5.08, 5.15 and 5.35m; single grain structures; wet; clear to;
6Cu	5.50 to 6.00	Dark grey (2.5Y40) moist colour; coarse sand with a 10cm light clay lens at 5.9m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded basalt, intermediate volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	3.3	
0.60	6.0	4.0	
1.00	6.0	3.6	
1.50	6.2	4.3	
2.00	6.3	4.1	
2.50	6.3	4.6	
3.00	6.6	4.5	
3.50	7.6	4.8	
4.00	6.6	5.5	
4.50	6.6	5.3	
4.75	6.7	1.8	
5.00	6.7	3.4	
5.25	6.6	1.7	
5.50	6.5	1.9	
5.75	6.7	1.9	
6.00	6.6	1.6	

Notes:

Observation H2O EC - 0.5 mS/cm; pH 6.3

Project: MWQ Site: 467

Location: 717920 mE 7645990 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 6.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Eutrophic, Brown, DERMOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; silty light clay; dry; sharp to;
2A1	0.15 to 0.60	Very dark brown (10YR22) moist colour; light medium clay; dry; clear to;
B2	0.60 to 1.35	Dark brown (10YR33) moist colour; medium clay; dry; sharp to;
2C1	1.35 to 2.30	Dark yellowish brown (10YR34) moist colour; clayey sand; single grain structures; dry; diffuse to;
2C2	2.30 to 4.50	Dark yellowish brown (10YR44) moist colour; sand; single grain structures; moderately moist; clear to;
2C3	4.50 to 5.10	Brown (10YR43) moist colour; fine sand; single grain structures; wet; abrupt to;
3B2	5.10 to 5.65	Brown (10YR43) moist colour; many 20-50% very coarse > 30mm prominent pale mottles; fine sand; single grain structures; common 10-20% coarse 6-20 mm manganiferous soft segregations; wet;
4D	5.65 to 6.00	Dark greenish grey (5GY41) moist colour; many 20-50% coarse 15-30mm prominent grey, few 2-10% fine < 5mm prominent brown mottles; medium clay; single grain structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.6	
0.60	5.8	4.4	
1.00	5.9	4.8	
1.50	6.1	5.0	
2.00	6.3	5.0	
2.50	6.5	5.1	
3.00	6.3	5.8	
3.50	6.3	5.4	
4.00	6.5	5.2	
4.50	6.1	6.1	
5.00	5.9	5.9	
5.50	5.9	5.5	
6.00	5.6	6.3	

Notes:

Observation Could not sample water

Project: MWQ Site: 468

Location: 718050 mE 7645965 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Ox-bow
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking, Surface crust

Classifications

ASC: Episodic-epiacidic, Epipedal, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; many 20-50% fine < 5mm prominent orange mottles; light clay; moderate 5-10mm parting to moderate 2-5mm subangular blocky structures; dry; abrupt to;
B21i	0.05 to 0.30	Black (10YR21) moist colour; many 20-50% fine < 5mm prominent orange mottles; light clay; strong 2-5mm subangular blocky structures; moderately moist; diffuse to;
B22i	0.30 to 0.90	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent orange mottles; light clay; lenticular structures; moderately moist; clear to;
B23i	0.90 to 2.20	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light clay; lenticular structures; moist; clear to;
Cu	2.20 to 3.25	Very dark grey (2.5Y30) moist colour; silty light clay; very few < 2% medium pebbles 6-20mm angular charcoal coarse fragments; massive structures; wet; sharp to;
2Cu	3.25 to 4.05	Dark grey (2.5Y40) moist colour; coarse sand; Common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded basalt, quartz and intermediate volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.3	2.6	
0.60	5.2	3.9	
1.00	5.6	4.8	
1.50	5.9	5.6	
2.00	5.9	4.7	
2.25	5.8	3.1	
2.50	6.0	1.3	
2.75	6.0	1.7	
3.00	5.9	2.1	
3.25	5.8	1.8	
3.50	6.0	1.7	
3.75	6.1	2.3	
4.00	6.5	2.9	

Notes:

Horizon – 2Cu EOP - rocks stopped VVC
 Observation H2O EC - 0.6 mS/cm; pH 6.0

Project: MWQ Site: 469

Location: 717620 mE 7645930 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 8.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Rudosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; abrupt to;
C/B2	0.10 to 0.60	Yellowish brown (10YR54) moist colour; fine sand with lumps of dark grey - brown silty clay loam; single grain parting to massive structures; sharp to;
2B21	0.60 to 1.40	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light medium clay; clear to;
2B22	1.40 to 2.20	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct brown mottles; medium clay; few 2-10% fine <2 mm manganiferous soft segregations: diffuse to;
2B23	2.20 to 3.50	Dark yellowish brown (10YR34) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sandy light medium clay; very few < 2% fine <2 mm manganiferous soft segregations: sharp to;
3B2	3.50 to 3.80	Dark yellowish brown (10YR44) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sand; single grain structures; sharp to;
4B2	3.80 to 4.90	Grey (5Y61) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy loam; massive structures; abrupt to;
5B2	4.90 to 6.00	Grey (N50) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; weak 2-5mm lenticular structures; few 2-10% coarse 6-20 mm manganiferous soft segregations;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.8	3.8	
0.60	5.9	3.8	
1.00	6.0	3.7	
1.50	6.0	4.4	
2.00	6.1	4.9	
2.50	6.3	5.8	
3.00	6.4	5.7	
3.50	6.3	5.6	
4.00	6.2	5.7	
4.50	6.4	5.5	
5.00	6.3	6.2	
5.50	6.8	5.9	
6.00	6.4	6.4	

Notes:

Observation H2O EC - 0.4 mS/cm; pH 6.1

Project: MWQ Site: 470

Location: 718320 mE 7645265 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint dark mottles; silty light medium clay; weak 2-5mm cast structures; dry; clear to;
B2	0.30 to 1.95	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; silty light medium clay; strong structures; few 2-10% fine <2 mm manganiferous soft segregations: moderately moist; sharp to;
2B2	1.95 to 3.05	Light brownish grey (10YR62) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; sand with 2-5cm light clay lenses; massive structures; common 10-20% medium 2-6 mm manganiferous soft segregations: moist; sharp to;
3Cu	3.05 to 3.25	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
4Cu	3.25 to 4.70	Grey (10YR51) moist colour; sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic, quartz and basalt coarse fragments; single grain structures; wet; diffuse to;
5C	4.70 to 5.10	Grey (5Y51) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.2	
0.60	5.5	4.0	
1.00	5.5	3.9	
1.50	5.6	4.6	
2.00	5.5	5.1	
2.50	5.8	6.5	
3.00	5.1	3.2	
3.25	5.4	1.6	
3.50	6.1	3.1	
3.75	6.0	2.7	
4.00	6.0	2.5	
4.25	6.0	3.3	
4.50	6.2	3.2	
4.75	6.2	4.2	
5.00	6.5	4.1	

Notes:
 Horizon – 5C EOP - large gravels at 5.1 m stopped tube
 Observation H2O EC - 0.4 mS/cm; pH 6.1

Project: MWQ Site: 471

Location: 718530 mE 7645450 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Kandosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm faint orange mottles; silty clay loam, heavy; moderate 2-5mm cast structures; clear to;
B2	0.25 to 1.10	Brown (10YR43) moist colour; very few < 2% fine < 5mm faint dark mottles; clay loam; fine sandy, heavy; abrupt to;
2B21	1.10 to 2.30	Brown (10YR53) moist colour; common 10-20% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct orange mottles; light medium clay; few 2-10% fine <2 mm manganiferous soft segregations;
2B22	2.30 to 3.60	Dark brown (10YR33) moist colour; many 20-50% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct orange mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations: moist; diffuse to;
2B23	3.60 to 4.20	Dark brown (10YR33) moist colour; many 20-50% fine < 5mm distinct grey mottles; clay loam; fine sandy; massive structures; few 2-10% fine <2 mm manganiferous soft segregations: wet; clear to;
2B24	4.20 to 4.95	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; weak 2-5mm lenticular structures; common 10-20% medium 2-6 mm manganiferous soft segregations: moist; sharp to;
3B2	4.95 to 5.40	Brown (10YR43) moist colour; few 2-10% medium 5-15mm prominent orange mottles; sand with a 5cm grey fine sand lens at 5.15m; single grain structures; few 2-10% coarse 6-20 mm manganiferous soft segregations: wet; sharp to;
4C	5.40 to 5.60	Grey (7.5YR60) moist colour; sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.0	
0.60	5.8	4.2	
1.00	5.7	4.5	
1.50	6.0	4.4	
2.00	5.8	6.3	
2.50	6.1	7.0	
3.00	5.9	5.2	
3.50	6.0	5.0	
4.00	6.2	5.1	
4.50	6.1	5.6	
5.00	6.7	6.9	
5.50	6.5	1.9	

Notes:

Observation Could not sample water as it was below 5.6 m

Project: MWQ Site: 472

Location: 717270 mE 7646055 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 13-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 8.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.8 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Haplic, Mesotrophic, Brown, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

Mid Stratum: Lantana camara (Lantana)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; massive structures; dry; clear to;
B1	0.30 to 1.20	Dark brown (10YR33) moist colour; fine sandy clay loam; massive structures; dry; diffuse to;
B2	1.20 to 2.30	Brown (10YR43) moist colour; clay loam; fine sandy; massive structures; moderately moist; abrupt to;
C	2.30 to 3.10	Brown (10YR43) moist colour; clayey sand; single grain structures; moderately moist; sharp to;
2C	3.10 to 5.90	Light yellowish brown (10YR64) moist colour; coarse sand with 5cm fine sand lenses at 3.6, 4.2 and 5.1m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded basalt, quartz, acid volcanic and intermediate volcanic and angular charcoal coarse fragments; single grain structures; dry;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	4.6	
0.60	5.9	5.0	
1.00	5.8	5.0	
1.50	6.0	4.8	
2.00	6.1	5.0	
2.50	6.0	5.1	
3.00	6.2	5.4	
3.50	6.4	5.7	
4.00	6.4	5.6	
4.50	6.8	5.7	
5.00	6.3	5.7	
5.50	6.4	5.4	
5.90	6.5	6.8	

Notes:

Observation Could not sample water as it was below 6.0 m

Project: MWQ Site: 473

Location: 717860 mE 7645540 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 7.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: No record
 Surface Condition: Recently cultivated

Classifications

ASC: Acidic, Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.30	Very dark brown (10YR22) moist colour; fine sandy clay loam; massive structures; dry; clear to;
2A1	0.30 to 0.70	Black (10YR21) moist colour; clay loam; fine sandy; dry; sharp to;
3C	0.70 to 1.50	Dark yellowish brown (10YR44) moist colour; fine sand; single grain structures; dry; sharp to;
4A2j	1.50 to 1.90	Greyish brown (10YR52) moist, white (10YR81) dry colour; common 10-20% fine < 5mm prominent orange mottles; clay loam; fine sandy; moderately moist; abrupt to;
4B21	1.90 to 3.00	Dark greyish brown (10YR42) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% medium 5-15mm distinct brown, few 2-10% fine < 5mm distinct pale mottles; light medium clay; few 2-10% fine < 2 mm manganiferous soft segregations: moderately moist; diffuse to;
4B22	3.00 to 5.20	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent yellow-brown mottles; light medium clay; common 10-20% fine < 2 mm manganiferous soft segregations: moderately moist; sharp to;
5C	5.20 to 5.60	Brown (10YR43) moist colour; fine sand with 5cm lenses of mottled grey clay; single grain structures; moderately moist; sharp to;
6B21i	5.60 to 6.00	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent yellow-brown, common 10-20% medium 5-15mm prominent pale mottles; light medium clay with a 5cm fine sand lens at 5.85m; moderately moist;
6B22i	6.00 to 6.50	Grey (10YR51) moist colour; few 2-10% fine < 5mm prominent orange, common 10-20% medium 5-15mm distinct brown, few 2-10% fine < 5mm prominent pale mottles; light clay; moist;
6Cu	6.50 to 7.00	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.2	
0.60	5.3	3.7	
1.00	5.6	4.7	
1.50	5.6	4.7	
2.00	6.2	4.7	
2.50	5.9	4.8	
3.00	6.0	5.1	
3.50	6.0	5.3	
4.00	5.8	5.7	
4.50	6.0	5.1	
5.00	6.2	6.6	
5.50	6.3	5.4	
6.00	5.7	5.2	
6.25	5.4	5.1	
6.50	5.5	5.3	
6.75	5.7	1.7	
7.00	5.8	1.6	

Notes:

Observation H2O EC - 0.7 mS/cm; pH 5.7

Project: MWQ Site: 474

Location: 717190 mE 7645640 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Plain
 Element: Channel bench
 Runoff: No record
 Elevation: 7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; silty light medium clay; weak 10-20mm parting to strong 5-10mm cast structures; clear to;
B21	0.20 to 1.65	Greyish brown (10YR52) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; dry; diffuse to;
B22	1.65 to 2.90	Very dark greyish brown (10YR32) moist colour; many 20-50% medium 5-15mm distinct brown mottles; medium clay; common 10-20% fine <2 mm manganiferous soft segregations: moderately moist; abrupt to;
2B21	2.90 to 4.80	Greyish brown (2.5Y52) moist colour; many 20-50% fine < 5mm prominent brown mottles; fine sandy light clay with 2-5cm fine sand lenses at 4.25 and 4.6m; common 10-20% medium 2-6 mm manganiferous soft segregations: moist; sharp to;
3B21	4.80 to 5.75	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moderate 2-5mm lenticular structures; few 2-10% medium 2-6 mm manganiferous soft segregations: moist; clear to;
3B22	5.75 to 5.90	Dark grey (2.5Y40) moist colour; light clay; moderate 2-5mm lenticular structures; moist; sharp to;
3B23	5.90 to 6.15	Dark grey (2.5Y40) moist colour; common 10-20% fine < 5mm distinct gley, few 2-10% fine < 5mm prominent orange mottles; light medium clay; moderate 5-10mm lenticular structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.4	
0.60	5.7	4.6	
1.00	6.0	5.0	
1.50	6.0	4.4	
2.00	5.6	4.1	
2.50	5.4	4.9	
3.00	6.2	6.1	
3.50	6.8	7.6	
4.00	6.8	6.5	
4.50	6.6	6.7	
5.00	6.7	6.3	
5.50	6.2	6.2	
5.75	6.1	6.9	
5.85	5.9	5.6	
6.00	5.9	5.9	
6.15	6.0	6.7	

Notes:

Observation H2O EC - 2.4 mS/cm; pH 6.5

Project: MWQ Site: 475

Location: 723800 mE 7646185 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Regolithic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; clear to;
A2?	0.30 to 1.40	Brown (10YR53) moist, pale brown (10YR63) dry colour; fine sand; single grain structures; dry; clear to;
B2	1.40 to 2.30	Yellowish brown (10YR54) moist colour; many 20-50% fine < 5mm prominent pale mottles; clayey fine sand; single grain structures; moderately moist; sharp to;
2B2	2.30 to 3.65	Yellowish brown (10YR54) moist colour; many 20-50% coarse 15-30mm prominent pale, few 2-10% medium 5-15mm prominent grey, few 2-10% medium 5-15mm prominent orange mottles; coarse sand with 5cm fine sand lenses at 3.1 and 3.2m; moisture changes to wet at 2.8m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt, quartz and acid volcanic coarse fragments; single grain structures; common 10-20% medium 2-6 mm manganiferous soft segregations; wet;
3C1	3.65 to 4.05	Grey (7.5YR50) moist colour; fine sand; single grain structures; wet; sharp to;
3C2u	4.05 to 4.35	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
4C	4.35 to 5.20	Dark grey (5Y41) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	4.9	
0.60	5.7	4.8	
1.00	5.9	5.0	
1.50	5.9	4.9	
2.00	5.3	5.2	
2.50	5.9	5.9	
3.00	6.4	5.4	
3.50	6.0	5.1	
3.75	6.2	4.5	
4.00	6.3	3.8	
4.25	6.3	3.1	
4.50	6.3	3.2	
4.75	6.2	4.6	
5.00	6.1	4.3	
5.20	6.3	2.0	

Notes:
 Horizon – 4C EOP - sand would not hold in tube
 Observation Could not sample water

Project: MWQ Site: 476

Location: 724050 mE 7646480 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Acidic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; fine sandy loam; massive structures; dry; clear to;
B2	0.15 to 1.10	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct pale mottles; fine sandy loam, heavy; massive structures; very few < 2% fine < 2 mm manganiferous soft segregations: dry; sharp to;
2B2	1.10 to 1.90	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent orange mottles; light clay with many thin white fine sand lenses; massive structures; common 10-20% medium 2-6 mm manganiferous soft segregations: dry; sharp to;
3C	1.90 to 2.05	Light brownish grey (2.5Y62) moist colour; fine sand; single grain structures; moist; sharp to;
4Cu	2.05 to 2.85	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
5Cu	2.85 to 3.60	Dark grey (N40) moist colour; fine sandy loam with a 5cm light clay lens at 3.4m, light; single grain structures; wet; sharp to;
6C	3.60 to 4.60	Grey (5Y51) moist colour; coarse sand; many 20-50% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt, acid volcanic and igneous rock coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	3.1	
0.60	5.0	3.6	
1.00	6.3	4.8	
1.50	5.5	5.9	
1.75	5.8	5.6	
2.00	6.1	5.6	
2.25	6.2	1.8	
2.50	6.0	1.7	
2.75	5.9	1.8	
3.00	6.0	1.7	
3.25	6.1	1.9	
3.50	6.5	1.6	
3.75	6.4	4.2	
4.00	6.5	4.5	
4.25	6.8	5.4	
4.50	6.7	5.2	

Notes:

Horizon – 6C EOP - large rocks at 4.6 m stopped auger from going deeper
 Observation H2O EC - 11.7 mS/cm; pH 6.0

Project: MWQ Site: 477

Location: 723855 mE 7646820 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Rudosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded acid volcanic coarse fragments; weak 2-5mm cast structures; dry; abrupt to;
C	0.10 to 0.30	Brown (10YR43) moist, pale brown (10YR63) dry colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry; sharp to;
2B2	0.30 to 0.80	Dark brown (10YR33) moist colour; clayey sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; dry;
3B2	0.80 to 1.30	Dark brown (10YR33) moist colour; fine sandy loam, heavy; dry; sharp to;
4C	1.30 to 1.50	Yellowish brown (10YR54) moist colour; sand; single grain structures; dry; sharp to;
5B2	1.50 to 1.90	Light brownish grey (10YR62) moist colour; many 20-50% fine < 5mm prominent orange, few 2-10% fine < 5mm distinct grey mottles; fine sand; single grain structures; moderately moist; sharp to;
6B2i	1.90 to 2.90	Grey (7.5YR50) moist colour; many 20-50% fine < 5mm prominent brown, common 10-20% fine < 5mm distinct grey mottles; light clay with many thin fine sand lenses and a 10cm fine sand lens at 2.6m; massive structures; moist; sharp to;
7B2	2.90 to 3.45	Brown (10YR53) moist colour; common 10-20% medium 5-15mm prominent orange mottles; sand with 2 x 2cm light clay lenses at 3.0 and 3.2m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic, quartz and basalt coarse fragments; single grain structures; wet; clear to;
8C	3.45 to 5.20	Light brownish grey (10YR62) moist colour; coarse sand; many 20-50% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded basalt, acid volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	3.6	
0.60	5.8	4.5	
1.00	5.7	4.6	
1.50	6.2	5.0	
2.00	5.7	4.7	
2.25	5.9	5.1	
2.50	6.2	5.0	
2.75	5.7	4.9	
3.00	6.5	4.9	
3.50	6.1	4.8	
4.00	6.0	5.3	
4.50	6.1	5.3	
5.00	6.1	5.4	

Notes:

Horizon – 8C EOP - sand would not hold in tube
 Observation H2O EC - 0.3 mS/cm; pH 5.9

Project: MWQ Site: 478

Location: 723645 mE 7646065 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Acidic, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm prominent orange mottles; silty clay loam, light; moderately moist; clear to;
B21	0.10 to 0.75	Dark greyish brown (10YR42) moist colour; many 20-50% fine < 5mm prominent orange mottles; fine sandy clay loam; very few < 2% fine <2 mm manganiferous soft segregations: moderately moist; sharp to;
B22	0.75 to 1.15	Very dark greyish brown (10YR32) moist colour; many 20-50% fine < 5mm prominent orange mottles; clay loam; fine sandy with a 5cm layer of light clay; massive structures; very few < 2% fine <2 mm manganiferous soft segregations: moderately moist; sharp to;
2B2	1.15 to 1.40	Dark greyish brown (10YR42) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sand; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations: dry; sharp to;
3B2	1.40 to 2.10	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent orange, common 10-20% medium 5-15mm distinct grey mottles; clay loam; fine sandy; massive structures; moderately moist; clear to;
4B2i	2.10 to 2.70	Grey (5Y51) moist colour; common 10-20% fine < 5mm prominent orange mottles; light clay; massive structures; moist; gradual to;
4Cu	2.70 to 3.60	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
5Cu	3.60 to 4.05	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;
6C	4.05 to 4.20	Grey (5Y51) moist colour; coarse sand; few 2-10% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;

7Cu	4.20 to 4.30	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
8Cu	4.30 to 4.40	Very dark grey (2.5Y30) moist colour; coarse sand with a plug of light clay; few 2-10% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
9C	4.40 to 4.70	Grey (5Y51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	4.5	3.5	3.00	5.9	1.3
0.60	4.8	4.7	3.25	6.1	1.4
1.00	5.0	4.3	3.50	6.2	1.3
1.50	5.5	5.0	3.75	6.7	3.8
2.00	5.6	4.8	4.00	6.9	1.3
2.25	5.2	4.9	4.25	6.4	1.3
2.50	5.5	5.1	4.50	6.8	5.7
2.75	5.7	4.9			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Horizon – 9C EOP - rock at 4.7 m stopped tube
 Observation H2O EC - 3.9 mS/cm; pH 6.6

Project: MWQ Site: 479

Location: 723595 mE 7645750 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Recently cultivated

Classifications

ASC: Melacic, Tenosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Solanum species

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; sharp to;
B2	0.20 to 0.65	Dark yellowish brown (10YR44) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sand; single grain structures; moist;
B3	0.65 to 1.20	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent yellow-brown mottles; fine sand; single grain structures; moist; gradual to;
2B2	1.20 to 1.70	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent orange mottles; fine sandy loam, light; massive structures; wet;
2C	1.70 to 2.25	Grey (7.5YR51) moist colour; fine sandy loam; massive structures; wet; sharp to;
3C	2.25 to 2.30	Dark grey (10YR41) moist colour; light clay; massive structures; wet; sharp to;
4C	2.30 to 5.60	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
5C	5.60 to 5.70	Grey (5Y51) moist colour; sand with 5mm grey fine sand lens at 5.63m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.6	3.6	
0.60	5.9	4.9	
1.00	5.4	5.7	
1.50	6.4	5.5	
1.75	6.4	3.2	
2.00	6.5	2.6	
2.30	6.0	4.4	
2.50	6.2	6.0	
3.00	6.3	6.0	
3.50	6.3	5.9	
4.00	6.2	6.0	
4.50	6.5	6.1	
5.00	6.1	6.1	
5.60	6.3	6.1	

Notes:

Observation H2O EC - 3.6 mS/cm; pH 5.9

Project: MWQ Site: 480

Location: 723830 mE 7645825 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Excoecaria agallocha (Blind-your-eye mangrove); Ceriops tagal (Yellow mangrove)
 Mid Stratum: Aegiceras corniculatum (River mangrove); Bruguiera exaristata (Rib-fruited mangrove)
 Lower Stratum: Acanthus ilicifolius (Holly mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; moderate 2-5mm subangular blocky structures; moist; clear to;
B2i	0.15 to 0.95	Grey (5Y51) moist colour; many 20-50% fine < 5mm prominent orange mottles; light clay; weak 2-5mm subangular blocky structures; few 2-10% medium 2-6 mm manganiferous soft segregations: moist;
Cu	0.95 to 1.30	Very dark grey (10YR31) moist colour; light clay with common 1-4cm fine sand lenses; massive structures; wet; sharp to;
2Cu	1.30 to 1.55	Dark grey (5Y41) moist colour; fine sand with a 5mm lens of light clay at 1.5m; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	5.4	
0.25	6.1	5.4	
0.50	5.9	5.5	
0.75	5.8	5.1	
1.00	5.8	3.7	
1.25	6.0	1.1	
1.50	5.8	0.8	

Notes:

Horizon - 2Cu EOP - gouge auger could not penetrate further
 Observation H2O Ec - 47.0 mS/cm; pH 5.7

Project: MWQ Site: 481

Location: 724270 mE 7646590 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Excoecaria agallocha (Blind-your-eye mangrove); Hibiscus tiliaceus (Cotton tree / cowlflower)
 Lower Stratum: Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark brown (10YR33) moist colour; fine sand; single grain structures; dry; clear to;
A2e?	0.10 to 0.60	Light brownish grey (10YR62) moist, light grey (10YR72) dry colour; many 20-50% fine < 5mm distinct orange mottles; fine sand; single grain structures; dry; abrupt to;
B2?	0.60 to 1.40	Brown (10YR53) moist colour; common 10-20% fine < 5mm distinct brown mottles; fine sand with clay lenses between 0.7 and 1.0m; single grain parting to massive structures; moderately moist;
2B2i	1.40 to 2.10	Grey (10YR51) moist colour; common 10-20% fine < 5mm prominent pale, many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moderately moist; abrupt to;
2Cu	2.10 to 2.70	Dark grey (2.5Y40) moist colour; light clay; massive structures; wet; sharp to;
3Cu	2.70 to 3.00	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.6	
0.60	5.0	4.3	
1.00	5.8	5.8	
1.50	6.2	5.0	
2.00	6.0	4.9	
2.25	5.4	6.7	
2.50	5.9	1.8	
2.75	5.9	6.0	
3.00	5.8	5.0	

Notes:

Horizon – 3Cu EOP - too wet to hand auger
 Observation Could not sample water

Project: MWQ Site: 482

Location: 726170 mE 7645810 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Rhizophora stylosa (Red mangrove); Bruguiera species; Ceriops tagal (Yellow mangrove)
 Lower Stratum: Bruguiera species

Profile

Horizon	Depth (m)	Description
A1u	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; silty light clay; massive structures; wet; clear to;
Cu	0.20 to 0.40	Grey (2.5Y50) moist colour; silty light clay; massive structures; wet; abrupt to;
2A1	0.40 to 0.60	Very dark greyish brown (10YR32) moist colour; silty light clay; massive structures; wet; abrupt to;
2Cu	0.60 to 1.65	Dark grey (2.5Y40) moist colour; light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	1.0	
0.25	6.0	1.2	
0.50	6.2	1.0	
0.75	6.3	1.0	
1.00	6.3	1.1	
1.25	6.4	1.1	
1.50	6.3	1.0	

Notes:
 Horizon - 2Cu EOP - only used one gouge auger
 Observation H2O EC - 54.4 mS/cm; pH 6.0

Project: MWQ Site: 483

Location: 725755 mE 7645920 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 1.01-3m, closed or dense
 Aegiceras corniculatum (River mangrove); Lumnitzera racemosa (Black mangrove);
 Excoecaria agallocha (Blind-your-eye mangrove); Bruguiera species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; light clay; weak 5-10mm cast structures; wet; abrupt to;
B21i	0.15 to 0.50	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent orange mottles; light clay; massive structures; wet; clear to;
B22i	0.50 to 1.05	Dark grey (7.5YR40) moist colour; common 10-20% medium 5-15mm prominent orange mottles; light clay; massive structures; wet; clear to;
Cu	1.05 to 1.35	Dark grey (N40) moist colour; light clay parting to fine sand; massive parting to single grain structures; wet; sharp to;
2Cu	1.35 to 1.55	Dark grey (N40) moist colour; fine sand; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	5.9	
0.25	6.0	6.2	
0.50	5.9	5.8	
0.75	6.4	6.5	
1.00	6.0	5.2	
1.25	6.2	1.2	
1.50	6.5	1.4	

Notes:

Horizon - 2Cu EOP - gouge would not go in further
 Observation H2O EC - 49.2 mS/cm; pH 7.3

Project: MWQ Site: 484

Location: 723525 mE 7646510 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 21-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 5.8 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No record

Surface Condition: Loose, Soft

Classifications

ASC: Acidic, Regolithic, Orthic, TENOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; dry; clear to;
B2	0.30 to 0.80	Dark brown (10YR33) moist, brown (10YR53) dry colour; clayey fine sand; single grain structures; dry; abrupt to;
C1	0.80 to 1.15	Yellowish brown (10YR54) moist, pale brown (10YR63) dry colour; fine sand; single grain structures; dry; abrupt to;
C2	1.15 to 2.25	Brown (10YR53) moist, pale brown (10YR63) dry colour; fine sand; single grain structures; moderately moist; sharp to;
2B2	2.25 to 2.70	Dark yellowish brown (10YR44) moist colour; sand with a 10cm fine sand lens at 2.5m; single grain structures; moderately moist; sharp to;
3B2	2.70 to 3.15	Dark yellowish brown (10YR34) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; few 2-10% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
4B2	3.15 to 3.40	Pale brown (10YR63) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sand; single grain structures; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
5B2	3.40 to 3.80	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent orange, common 10-20% fine < 5mm prominent pale mottles; light clay with a 10cm fine sand lens at 3.5m; massive structures; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist;
6B21	3.80 to 5.00	Very dark brown (10YR22) moist colour; coarse sand with a pale fine sand and sand lens at 3.8m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; very many > 50% fine <2 mm manganiferous soft segregations; wet; sharp to;

6B22	5.00 to 5.40	Dark yellowish brown (10YR44) moist colour; few 2-10% medium 5-15mm prominent grey mottles; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
7B2	5.40 to 5.70	Light brownish grey (10YR62) moist colour; common 10-20% fine < 5mm prominent grey, few 2-10% medium 5-15mm prominent dark mottles; fine sand; single grain structures; wet; sharp to;
8C	5.70 to 6.00	Light yellowish brown (10YR64) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.1	4.8	
0.60	4.8	4.5	
1.00	4.8	5.0	
1.50	5.0	5.3	
2.00	5.9	5.7	
2.50	6.4	5.8	
3.00	5.7	6.9	
3.50	6.0	5.3	
4.00	6.4	7.0	
4.50	6.0	7.7	
5.00	6.0	5.8	
5.50	6.2	6.0	
6.00	5.8	6.3	

Notes:

Observation H2O EC - 0.4 mS/cm; pH 6.4

Project: MWQ Site: 485

Location: 723690 mE 7646360 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Paspalum vaginatum (Saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark grey (10YR41) moist colour; many 20-50% fine < 5mm prominent orange mottles; fine sandy light clay; moderate 20-50mm subangular blocky structures; dry; abrupt to;
B21i	0.10 to 0.75	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent brown, few 2-10% medium 5-15mm prominent orange mottles; fine sandy light clay with common thin 1-5mm white lenses; dry; abrupt to;
B22i	0.75 to 1.00	Grey (10YR51) moist colour; many 20-50% fine < 5mm distinct brown mottles; silty light clay; massive structures; moist; abrupt to;
Cu	1.00 to 1.55	Dark grey (2.5Y40) moist colour; silty light clay; massive structures; wet; sharp to;
2C1	1.55 to 2.50	Grey (5Y51) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic, basalt and igneous rock coarse fragments; single grain structures; wet;
2C2	2.50 to 4.10	Grey (10YR51) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic, basalt and igneous rock coarse fragments; single grain structures; wet; sharp to;
3D	4.10 to 4.40	Greenish grey (5GY61) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent grey mottles; fine sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.7	
0.25	5.6	4.6	
0.50	5.5	5.1	
0.75	6.2	5.6	
1.00	6.4	5.7	
1.25	6.3	4.4	
1.50	6.3	1.8	
1.75	6.8	2.9	
2.00	6.7	5.3	
2.25	6.4	5.6	
2.50	6.2	5.2	
2.75	6.4	6.1	
3.00	6.9	6.2	
3.25	6.2	6.0	
3.50	6.1	5.8	
3.75	6.1	5.9	
4.00	6.1	6.0	
4.25	6.6	7.3	

Notes:

Horizon – 3D EOP - too hard for VVC to penetrate deeper
 Observation H2O EC - 5.0 mS/cm; pH 6.2

Project: MWQ Site: 486

Location: 723780 mE 7646655 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Dystrophic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark brown (10YR33) moist colour; loamy fine sand; single grain structures; dry; clear to;
C	0.10 to 0.40	Brown (10YR43) moist colour; fine sand; single grain structures; dry; sharp to;
2A1	0.40 to 0.65	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm faint brown mottles; loamy fine sand; single grain structures; dry; clear to;
2B2	0.65 to 1.40	Yellowish brown (10YR54) moist colour; common 10-20% fine < 5mm prominent orange mottles; clayey fine sand; single grain structures; moderately moist; diffuse to;
2B3	1.40 to 1.90	Pale brown (10YR63) moist colour; many 20-50% medium 5-15mm prominent orange, few 2-10% fine < 5mm prominent grey mottles; clayey fine sand; single grain structures; moderately moist; abrupt to;
3B2	1.90 to 3.10	Grey (7.5YR50) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light clay; massive structures; moist; sharp to;
4Cu	3.10 to 4.05	Grey (2.5Y50) moist colour; fine sand with few thin 5mm light clay lenses; single grain structures; wet; abrupt to;
5Cu	4.05 to 4.40	Grey (2.5Y50) moist colour; silty light clay; massive structures; wet; sharp to;
6C1	4.40 to 5.60	Grey (5Y61) moist colour; sand with 2 x 5mm grey lenses at 5.5m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and igneous rock coarse fragments; single grain structures; wet; sharp to;
6C2	5.60 to 5.85	Grey (5Y61) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles subangular basalt and rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;

7D 5.85 to 6.00 Greenish grey (5G51) moist colour; common 10-20% fine < 5mm distinct brown mottles; medium clay; few 2-10% large pebbles 20-60mm subangular basalt coarse fragments; moderate 2-5mm lenticular structures; common 10-20% coarse 6-20 mm calcareous soft segregations; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.3	
0.60	5.7	4.3	
1.00	6.0	5.1	
1.50	6.9	5.9	
2.00	5.5	4.6	
2.25	5.0	4.1	
2.50	6.1	5.5	
2.75	5.6	6.4	
3.00	6.2	6.9	
3.25	6.8	2.4	
3.50	6.9	3.6	
3.75	6.7	4.1	
4.00	6.7	1.4	
4.25	6.6	1.4	
4.50	6.5	5.3	
4.75	6.5	5.8	
5.00	6.0	5.6	
5.25	6.1	5.2	
5.50	6.5	5.5	
5.75	6.6	6.3	
6.00	7.5	8.5	

Notes:

Observation H2O EC - 0.6 mS/cm; pH 6.2

Project: MWQ Site: 487

Location: 725970 mE 7644165 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (2.5Y20) moist colour; silty medium clay; moderately moist; clear to;
B21i	0.20 to 0.80	Dark greyish brown (2.5Y42) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; light medium clay; moist; clear to;
B22ia	0.80 to 1.20	Grey (10YR51) moist colour; very few < 2% fine < 5mm distinct yellow jarositic (from pyrite), common 10-20% fine < 5mm prominent brown mottles; silty light clay; massive structures; moist; clear to;
Cu	1.20 to 3.30	Very dark grey (2.5Y30) moist colour; silty light clay with 5mm sand lenses at 2.75, 2.85 and 2.9m; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm rounded intermediate volcanic coarse fragments; weak 5-10mm lenticular structures below 2.5m; wet; sharp to;
2Cu	3.30 to 3.65	Dark grey (2.5Y40) moist colour; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
3D	3.65 to 4.30	Olive grey (5Y52) moist colour; few 2-10% medium 5-15mm prominent brown mottles; sand with 2 x 10cm gley clay lenses at 3.7 and 4.2m; very few < 2% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; single grain parting to massive structures; wet; sharp to;
4D	4.30 to 4.50	Olive brown (2.5Y44) moist colour; common 10-20% medium 5-15mm prominent gley mottles; fine sandy medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.3	5.0	
0.25	5.7	5.1	
0.50	5.2	4.9	
0.75	4.0	4.0	
1.00	3.7	2.5	
1.25	4.2	1.3	
1.50	4.5	1.2	
1.75	5.2	1.3	
2.00	5.4	1.4	
2.25	5.5	1.4	
2.50	5.6	1.3	
2.75	5.6	1.3	
3.00	5.6	1.3	
3.25	5.3	1.4	
3.50	6.0	1.5	
3.75	6.3	7.0	
4.00	5.9	6.8	
4.25	5.7	7.5	
4.50	6.1	7.2	

Notes:

Horizon – Cu lump of wood at 3.1 m
 Horizon – 4D EOP - too hard to core
 Observation H2O EC - 46.2 mS/cm; pH 6.0

Project: MWQ Site: 488

Location: 726130 mE 7644275 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Levee
 Runoff: No record
 Elevation: 5 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Acidic-sodic, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, sparse
 Melaleuca viridiflora (Broad-leaved tea-tree)
 Mid Stratum: Acacia leptocarpa (North coast wattle); Xanthorrhoea johnsonii (Blackboy, grasstree)
 Lower Stratum: Heteropogon contortus (Black speargrass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; loamy fine sand; weak 2-5mm cast structures; dry; abrupt to;
A2e	0.15 to 0.30	Brown (10YR53) moist, light grey (10YR72) dry colour; fine sand; single grain structures; dry; sharp to;
B21	0.30 to 1.10	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent brown mottles; medium clay; strong columnar structures; dry; diffuse to;
B22	1.10 to 2.60	Light yellowish brown (10YR64) moist colour; few 2-10% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct red, very few < 2% medium 5-15mm prominent pale mottles; medium clay; moderately moist; diffuse to;
B23k	2.60 to 3.00	Light brownish grey (2.5Y63) moist colour; many 20-50% medium 5-15mm prominent red mottles; medium clay; very few < 2% medium 2-6 mm calcareous soft segregations; moderately moist; diffuse to;
B24	3.00 to 4.20	Pale yellow (5Y73) moist colour; many 20-50% coarse 15-30mm prominent red mottles; light medium clay; moderately moist; diffuse to;
B25	4.20 to 5.10	Light grey (2.5Y72) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moderately moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	4.1	
0.60	4.5	4.3	
1.00	6.5	5.8	
1.50	7.1	6.4	
2.00	7.2	6.7	
2.50	7.3	6.8	
3.00	7.2	6.7	
3.50	7.1	6.2	
4.00	7.1	6.6	
4.50	7.1	6.6	
5.00	6.9	6.3	

Notes:
 Horizon – B25 EOP
 Observation Could not sample water

Project: MWQ Site: 489

Location: 726795 mE 7644245 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Supratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark greyish brown (2.5Y42) moist colour; light medium clay; moderately moist; abrupt to;
B21i	0.10 to 0.45	Grey (10YR51) moist colour; many 20-50% very coarse > 30mm prominent brown, few 2-10% medium 5-15mm prominent dark mottles; light clay; moist; clear to;
B22ia	0.45 to 0.65	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm distinct brown, very few < 2% fine < 5mm distinct yellow jarositic (from pyrite) mottles; silty light clay; massive structures; moist; clear to;
Cu	0.65 to 2.20	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	2.20 to 4.50	Grey (2.5Y50) moist colour; coarse sand with 5cm silty light clay lenses at 3.1 and 4.35m; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
3Cu	4.50 to 4.78	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; sharp to;
4Cu	4.78 to 5.40	Grey (2.5Y50) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
5D	5.40 to 5.50	Greenish grey (5G51) moist colour; common 10-20% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct grey mottles; medium clay; strong 2-5mm lenticular structures; moist;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	7.0	6.3	
0.25	4.3	4.0	
0.60	3.9	3.6	
0.80	4.5	1.5	
1.00	4.9	1.4	
1.25	5.0	1.4	
1.50	5.1	1.5	
1.75	5.2	1.4	
2.00	5.4	1.5	
2.25	5.7	1.7	
2.50	5.9	1.6	
2.75	5.8	3.9	
3.00	6.1	4.3	
3.25	5.9	3.4	
3.50	5.8	2.0	
3.75	5.6	1.7	
4.00	5.7	1.8	
4.25	5.8	1.8	
4.50	5.6	1.6	
4.75	5.5	1.5	
5.00	5.9	1.8	
5.25	6.0	1.9	
5.50	6.2	7.4	

Notes:

Observation H2O EC - 72.5 mS/cm; pH 5.5

Project: MWQ Site: 490

Location: 726820 mE 7644460 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 26-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, sparse
 Melaleuca viridiflora (Broad-leaved tea-tree); Eucalyptus tessellaris
 Mid Stratum: Acacia leptocarpa (North coast wattle)
 Lower Stratum: Themeda species; Heteropogon contortus (Black speargrass); Imperata cylindrica (Blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; clay loam; fine sandy; weak 2-5mm cast structures; dry; sharp to;
B21	0.15 to 0.60	Dark greyish brown (2.5Y42) moist colour; common 10-20% medium 5-15mm distinct grey, very few < 2% fine < 5mm prominent brown mottles; medium clay; strong columnar structures; dry; diffuse to;
B22k	0.60 to 1.60	Pale brown (10YR63) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sandy light clay; few 2-10% medium 2-6 mm calcareous soft segregations; moderately moist; abrupt to;
B23	1.60 to 3.40	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm distinct grey mottles; medium clay; moderately moist; abrupt to;
2B21	3.40 to 4.15	Yellowish brown (10YR56) moist colour; common 10-20% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent grey mottles; clay loam; sandy with a grey light clay lenses; moist; clear to;
2B22	4.15 to 5.55	Light brownish grey (2.5Y62) moist colour; many 20-50% very coarse > 30mm prominent yellow-brown mottles; clay loam; sandy with few 5cm sand lenses; massive structures; wet; sharp to;
3B2	5.55 to 6.00	Light grey (10YR72) moist colour; many 20-50% very coarse > 30mm prominent brown mottles; coarse sandy light clay; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; massive structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	4.3	
0.60	7.1	6.8	
1.00	7.5	6.8	
1.50	7.8	6.7	
2.00	7.5	6.6	
2.50	7.0	6.9	
3.00	7.3	6.8	
3.50	7.3	6.7	
4.00	7.4	6.7	
4.50	6.8	6.5	
5.00	6.8	6.4	
5.50	6.9	6.3	
6.00	7.1	6.3	

Notes:

Observation H2O EC - 30.2 mS/cm; pH 6.9

Project: MWQ Site: 491

Location: 727250 mE 7644410 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 26-Nov-2002

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 3.3 m

Microrelief: Debil-debil

Microrelief Component: No record

Drainage: No record

Slope: 0.1 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Kandosolic, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Tussock grass, 0.26-0.5m, closed or dense

Species: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (2.5Y20) moist colour; silty light medium clay; weak 2-5mm cast parting to moderate 10-20mm subangular blocky structures; dry; abrupt to;
B21i	0.25 to 1.25	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent grey, few 2-10% fine < 5mm prominent pale mottles; light medium clay; moderately moist; clear to;
B22i	1.25 to 1.75	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent orange mottles; silty light clay; massive structures; moist;
Cu	1.75 to 4.50	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
2Cu	4.50 to 5.30	Dark grey (2.5Y40) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic, acid volcanic, quartz and basalt coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.8	5.0	
0.30	6.0	5.4	
0.60	6.0	5.2	
0.80	5.9	5.3	
1.00	5.7	5.5	
1.25	5.6	4.9	
1.50	5.5	4.7	
1.75	5.1	1.4	
2.00	4.6	1.0	
2.25	4.2	1.1	
2.50	4.3	1.1	
2.75	4.7	1.1	
3.00	5.0	1.2	
3.25	5.1	1.3	
3.50	4.9	1.1	
3.75	5.2	1.2	
4.00	5.3	1.3	
4.25	5.4	1.4	
4.50	5.4	1.3	
4.75	5.9	1.6	
5.00	6.0	1.6	
5.25	6.7	2.0	

Notes:

Horizon – 2Cu EOP - KS would not hold in tube
 Observation H2O EC - 45.3 mS/cm; pH 5.6

Project: MWQ Site: 492

Location: 727000 mE 7644980 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 26-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 1.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Ceriops tagal (Yellow mangrove); Excoecaria agallocha (Blind-your-eye mangrove);
 Bruguiera exaristata (Rib-fruited mangrove); Lumnitzera racemosa (Black mangrove)
 Mid Stratum: Aegiceras corniculatum (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; massive structures; moderately moist; abrupt to;
B2i	0.10 to 1.30	Grey (10YR51) moist colour; many 20-50% fine < 5mm distinct orange mottles; light medium clay; massive structures; moderately moist; clear to;
Cu	1.30 to 2.10	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; moist; sharp to;
2Cu	2.10 to 2.50	Dark grey (2.5Y40) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	5.4	
0.30	5.9	5.3	
0.60	5.7	5.5	
0.80	5.6	5.4	
1.00	5.5	4.7	
1.25	5.5	5.2	
1.50	5.6	1.5	
1.75	6.0	1.3	
2.00	5.7	1.3	
2.25	5.9	1.5	
2.50	5.9	1.5	

Notes:

Horizon – 2Cu EOP - sand would not hold in #4 or gouge auger
 Observation Could not sample water

Project: MWQ Site: 493

Location: 725235 mE 7645450 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: No record
 Elevation: 2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 3.01-6m, closed or dense
 Ceriops tagal (Yellow mangrove); Bruguiera exaristata (Rib-fruited mangrove); Excoecaria agallocha (Blind-your-eye mangrove)
 Mid Stratum: Ceriops tagal (Yellow mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark grey (10YR41) moist colour; few 2-10% fine < 5mm distinct orange, few 2-10% fine < 5mm faint grey mottles; fine sandy light clay; moderately moist; clear to;
B2i	0.10 to 1.30	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct dark mottles; fine sandy light clay; very few < 2% medium 2-6 mm manganiferous soft segregations; moist; clear to;
Cu	1.30 to 1.80	Dark grey (2.5Y40) moist colour; fine sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	5.0	
0.30	6.1	6.9	
0.60	5.8	5.8	
0.80	5.7	5.6	
1.00	5.8	5.9	
1.25	6.2	5.3	
1.50	6.1	4.9	
1.75	6.2	2.0	

Notes:

Horizon – Cu EOP - sand below 1.8 m would not hold in gouge auger
 Observation H2O EC - 50.6 mS/cm; pH 6.0

Project: MWQ Site: 494

Location: 725305 mE 7645675 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Channel bench
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: Very few < 2%, small pebbles 2-6mm, Quartz
 Surface Condition: Loose, Soft

Classifications

ASC: Acidic, Rudosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker); Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Dark greyish brown (10YR42) moist colour; coarse sand; few 2-10% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; abrupt to;
C	0.10 to 0.60	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
2B2	0.60 to 1.05	Pale brown (10YR63) moist, very pale brown (10YR73) dry colour; many 20-50% fine < 5mm prominent orange mottles; fine sand with a few light clay 5mm light grey lenses; massive structures; moderately moist;
3C1	1.05 to 2.00	Yellowish brown (10YR54) moist colour; coarse sand; common 10-20% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
3C2	2.00 to 3.50	Yellowish brown (10YR54) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and large pebbles 20-60mm rounded igneous rock and quartz coarse fragments; single grain structures; moist changing to wet at 3.0m; sharp to;
4C	3.50 to 4.30	Light grey (10YR72) moist colour; fine sand with 2 x 10cm lenses of brown coarse sand at 3.4 and 3.7m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
5C	4.30 to 5.20	Pale brown (10YR63) moist colour; coarse sand; few 2-10% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
6D	5.20 to 5.60	Greenish grey (5G51) moist colour; many 20-50% medium 5-15mm prominent grey mottles; fine sandy light medium clay; massive structures; moist.

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.6	4.8	
0.60	4.5	4.6	
1.00	5.1	4.8	
1.50	5.8	6.8	
2.00	6.6	7.2	
2.50	6.0	7.3	
3.00	6.3	7.1	
3.50	6.3	6.1	
4.00	6.2	6.4	
4.50	6.3	6.5	
5.00	6.8	6.7	
5.50	6.5	8.0	

Notes:

Horizon – 5C Lump of wood at 5.1 m
 Observation Could not sample water

Project: MWQ Site: 495

Location: 724370 mE 7645010 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Tussock grass, 0.26-0.5m, closed or dense
 Sporobolus virginicus (Marine couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty light medium clay; moderate 5-10mm parting to strong 2-5mm subangular blocky structures; dry; abrupt to;
B21	0.05 to 0.50	Light brownish grey (2.5Y62) moist colour; many 20-50% fine < 5mm prominent yellow-brown, few 2-10% fine < 5mm distinct grey mottles; light medium clay; moderately moist;
B22	0.50 to 0.80	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; moderately moist; abrupt to;
B23i	0.80 to 1.30	Dark grey (10YR41) moist colour; few 2-10% medium 5-15mm prominent pale, common 10-20% medium 5-15mm prominent red, common 10-20% medium 5-15mm prominent yellow-brown, few 2-10% fine < 5mm prominent orange mottles; light clay; moist; clear to;
B24ia	1.30 to 2.05	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm prominent yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent yellow-brown, very few < 2% fine < 5mm prominent pale mottles; silty light clay; massive structures; moist; sharp to;
Cu	2.05 to 2.50	Very dark grey (10YR31) moist colour; silty light clay with 2-3mm coarse sand lenses at 2.35 and 2.45m; massive structures; wet; sharp to;
2Cu	2.50 to 3.20	Dark grey (2.5Y40) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded intermediate volcanic, acid volcanic and quartz coarse fragments; single grain structures; wet; diffuse to;
3C	3.20 to 4.30	Grey (10YR61) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and basalt coarse fragments; single grain structures; wet; abrupt
4C	4.30 to 5.60	Light brownish grey (10YR62) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded intermediate volcanic, acid volcanic, quartz and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	5.2	4.1	3.00	3.6	2.1
0.60	5.4	4.8	3.25	3.7	3.2
0.80	4.6	4.5	3.50	3.7	4.3
1.00	3.7	4.0	3.75	3.8	3.7
1.25	3.4	3.7	4.00	3.5	3.5
1.50	3.5	3.5	4.25	3.9	4.1
1.75	3.3	3.2	4.50	4.6	4.4
2.00	3.3	1.9	4.75	4.2	4.7
2.25	3.2	1.4	5.00	4.3	4.3
2.50	3.3	1.5	5.25	5.3	5.0
2.75	3.5	1.7	5.50	5.2	5.5

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 13.7 mS/cm; pH 3.8

Project: MWQ Site: 496

Location: 718350 mE 7645485 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct orange mottles; silty light medium clay; moderate 2-5mm cast structures; dry; gradual to;
B2	0.25 to 2.20	Dark greyish brown (10YR42) moist colour; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; few 2-10% medium 2-6 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	2.20 to 2.75	Brown (10YR53) moist colour; many 20-50% medium 5-15mm prominent orange mottles; sand; single grain structures; moderately moist;
3B2	2.75 to 3.45	Dark grey (2.5Y40) moist colour; common 10-20% medium 5-15mm prominent brown mottles; light clay; massive structures; moist; sharp to;
3BC	3.45 to 3.65	Very dark grey (2.5Y30) moist colour; many 20-50% medium 5-15mm prominent grey mottles; light clay; massive structures; moist; sharp to;
3Cu	3.65 to 3.85	Very dark grey (10YR31) moist colour; silty light clay; massive structures; moist; sharp to;
4Cu	3.85 to 4.15	Very dark grey (2.5Y30) moist colour; fine sand with a 5cm light clay lens at 3.95m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; abrupt to;
5C1u	4.15 to 4.60	Very dark grey (2.5Y30) moist colour; few 2-10% fine < 5mm faint grey mottles; light clay with a 5mm sand lens at 4.5m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet; clear to;
5C2	4.60 to 5.30	Grey (5Y51) moist colour; few 2-10% medium 5-15mm distinct grey mottles; light clay with a 2mm sand lens at 5.2m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.4	
0.60	5.4	5.2	
1.00	5.2	5.1	
1.50	5.4	5.7	
2.00	5.4	5.4	
2.50	5.9	4.8	
2.75	5.1	3.4	
3.00	5.6	2.9	
3.25	5.9	2.7	
3.50	5.9	2.4	
3.75	5.8	1.9	
4.00	5.7	2.0	
4.25	5.9	2.9	
4.50	6.2	3.2	
4.75	6.0	6.0	
5.00	6.3	5.5	
5.25	6.0	5.8	

Notes:

Horizon – 5C2 EOP - gravel layer at 5.3 m stopped VVC
 Horizon – 4Cu Lumps of wood at 4.0m
 Observation H2O EC - 1.6 mS/cm; pH 6.7

Project: MWQ Site: 497

Location: 721265 mE 7661430 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Chromosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Archontophoenix alexandrae (Alexandra palm); Livistona australis (Cabbage tree palm)
 Mid Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm faint orange mottles; clay loam; fine sandy; weak 2-5mm cast structures; dry; sharp to;
B21	0.25 to 0.90	Brown (10YR43) moist colour; common 10-20% fine < 5mm distinct orange, few 2-10% fine < 5mm faint grey mottles; fine sandy medium clay; dry; gradual to;
B22	0.90 to 1.80	Dark yellowish brown (10YR44) moist colour; common 10-20% medium 5-15mm prominent yellow-brown, few 2-10% medium 5-15mm prominent grey mottles; fine sandy light medium clay; moderately moist; sharp to;
2B2	1.80 to 2.20	Yellowish brown (10YR54) moist colour; many 20-50% fine < 5mm prominent brown, common 10-20% fine < 5mm prominent grey mottles; fine sand; single grain structures; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
3B2i	2.20 to 2.65	Light brownish grey (10YR62) moist colour; many 20-50% medium 5-15mm prominent brown, common 10-20% medium 5-15mm prominent grey mottles; light clay; moist; clear to;
3B22i	2.65 to 2.90	Grey (7.5YR50) moist colour; very few < 2% medium 5-15mm prominent brown, common 10-20% medium 5-15mm faint grey mottles; light clay with a thin brown fine sand lens at 2.88m; moist;
3Cu	2.90 to 3.40	Black (10YR21) moist colour; silty light clay; massive structures; moist; sharp to;
4C1	3.40 to 3.75	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;

4C2u	3.75 to 4.05	Very dark grey (2.5Y30) moist colour; sand with a 2cm light clay lens at 3.75m; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
5Cu	4.05 to 4.20	Black (2.5Y20) moist colour; silty light clay; massive structures; wet; sharp to;
6C1u	4.20 to 4.50	Dark grey (2.5Y40) moist colour; sand with 2x5mm lumps of light clay; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt and igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;
6C2	4.50 to 5.10	Grey (10YR61) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded basalt and igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
7C	5.10 to 6.00	Pale brown (10YR63) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	Depth (m)	pH _F	pH _{FOX}
0.10	5.5	3.4	3.75	6.8	2.7
0.60	5.0	4.5	4.00	6.3	1.6
1.00	6.4	5.5	4.15	6.0	0.8
1.50	7.6	7.3	4.25	6.5	1.3
2.00	7.5	8.3	4.50	6.4	1.5
2.50	6.7	6.1	4.75	6.6	6.0
2.75	6.2	6.1	5.00	6.5	5.5
3.00	6.0	2.7	5.50	6.6	5.5
3.25	6.1	1.3	6.00	6.5	5.8
3.50	7.2	6.2			

pH_F (pH using electrode probe),
 pH_{FOX} (pH of hydrogen peroxide extract)

Notes:

Observation H2O EC - 1.7mS; pH 6.3

Project: MWQ Site: 498

Location: 720905 mE 7661460 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Mesotrophic, Kandosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.50	Very dark greyish brown (10YR32) moist colour; coarse sand with a 5cm medium clay lens at 0.3m; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; dry; sharp to;
2B2	0.50 to 1.20	Brown (10YR43) moist colour; few 2-10% fine < 5mm faint grey mottles; fine sandy loam; massive structures; very few < 2% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
3C	1.20 to 1.45	Brown (10YR43) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and acid volcanic coarse fragments; single grain structures; moderately moist; sharp to;
4C	1.45 to 2.30	Dark yellowish brown (10YR44) moist colour; clayey fine sand with a 10cm fine sandy loam lens at 1.8m; single grain structures; moderately moist; sharp to;
5C	2.30 to 3.55	Dark yellowish brown (10YR44) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz and acid volcanic coarse fragments; single grain structures; moderately moist; abrupt to;
6B2	3.55 to 3.80	Dark yellowish brown (10YR44) moist colour; few 2-10% coarse 15-30mm prominent orange, very few < 2% coarse 15-30mm distinct dark mottles; coarse sand; common 10-20% large pebbles 20-60mm rounded acid volcanic coarse fragments; single grain structures; moist; sharp to;
7C1	3.80 to 4.00	Dark grey (N40) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
8C1u	4.00 to 4.25	Very dark grey (2.5Y30) moist colour; fine sandy clay loam; massive structures; wet; sharp to;
8C2u	4.25 to 4.55	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; sharp to;

8C3	4.55 to 4.80	Grey (10YR51) moist colour; fine sand; very few < 2% medium pebbles 6-20mm rounded intermediate volcanic coarse fragments; single grain structures; wet; sharp to;
9Cu	4.80 to 5.00	Very dark grey (2.5Y30) moist colour; silty light clay; wet; sharp to;
10C1	5.00 to 5.35	Grey (5Y51) moist colour; sand with a 3cm silty light clay lens at 5.22m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
10C2	5.35 to 6.00	Olive grey (5Y42) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	3.6	
0.50	5.8	5.6	
1.00	6.0	5.8	
1.50	6.0	6.1	
2.00	6.1	5.2	
2.50	5.8	6.1	
3.00	6.5	6.6	
3.50	6.8	6.8	
4.00	6.6	3.8	
4.25	6.1	1.6	
4.50	6.0	1.4	
4.75	6.3	5.8	
5.00	6.4	1.5	
5.25	6.3	2.1	
5.50	6.4	4.4	
6.00	6.7	4.6	

Notes:

Horizon – 8C2u Organic debris
 Observation H2O EC - 0.6mS/cm; pH 6.4

Project: MWQ Site: 499

Location: 721110 mE 7661350 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; silty light medium clay; dry; diffuse to;
B2	0.30 to 0.80	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm faint orange, few 2-10% fine < 5mm faint pale mottles; silty medium clay; very few < 2% fine <2 mm manganiferous soft segregations; dry;
B22	0.80 to 1.65	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent orange mottles; light medium clay; few 2-10% fine <2 mm manganiferous soft segregations; moderately moist; gradual to;
B23	1.65 to 2.40	Dark yellowish brown (10YR44) moist colour; many 20-50% fine < 5mm prominent grey, few 2-10% fine < 5mm distinct orange mottles; light medium clay; few 2-10% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
2B2	2.40 to 2.65	Dark brown (10YR33) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; many 20-50% fine <2 mm manganiferous soft segregations; moderately moist;
2C1	2.65 to 3.50	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; clear to;
2C2	3.50 to 4.40	Brown (10YR53) moist colour; coarse sand with a 5cm lens of grey mottled light clay at 4.35m; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; single grain structures; moist; sharp to;
2C3	4.40 to 5.30	Yellowish brown (10YR55) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; clear to;
2C4	5.30 to 5.90	Light brownish grey (10YR62) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;

3C 5.90 to 6.00 Very abundant > 90% large pebbles 20-60mm rounded acid volcanic coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	4.7	
0.60	5.5	5.1	
1.00	6.0	6.2	
1.50	6.1	6.1	
2.00	6.1	6.7	
2.50	5.9	6.0	
3.00	6.1	6.0	
3.50	6.1	6.0	
4.00	6.3	6.2	
4.35	5.2	1.9	
4.50	6.3	6.1	
5.00	6.3	6.6	
5.50	6.4	7.2	

Notes:

Observation H2O EC - 0.3mS/cm; pH 6.5

Project: MWQ Site: 500

Location: 720500 mE 7661055 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Dec-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 6.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.45	Black (10YR21) moist colour; clay loam; fine sandy; dry; sharp to;
2B2	0.45 to 0.80	Grey (10YR51) moist colour; few 2-10% fine < 5mm distinct brown, very few < 2% fine < 5mm distinct dark mottles; fine sandy clay loam; massive structures; few 2-10% medium 2-6 mm manganiferous soft segregations; dry; sharp to;
3B2	0.80 to 1.40	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; medium clay; few 2-10% fine < 2 mm manganiferous soft segregations; moderately moist; sharp to;
4B2	1.40 to 2.20	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
5B21	2.20 to 2.50	Yellowish brown (10YR56) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; sharp to;
5B22	2.50 to 2.80	Brown (10YR53) moist colour; common 10-20% coarse 15-30mm prominent brown, few 2-10% coarse 15-30mm distinct grey mottles; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded acid volcanic and quartz coarse fragments; single grain structures; wet; abrupt to;
6Cu	2.80 to 3.10	Grey (10YR51) moist colour sand to 2.95m then very dark grey (2.5Y30) light clay/ sand; massive and single grain structures; wet; sharp to;
7Cu	3.10 to 3.30	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; abrupt to;
8C1	3.30 to 3.70	Light brownish grey (2.5Y62) moist colour; coarse sand; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; clear to;

8C2	3.70 to 4.20	Light brownish grey (2.5Y62) moist colour; coarse sand; abundant 50-90% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
9D	4.20 to 4.30	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent yellow-brown, few 2-10% fine < 5mm distinct orange mottles; sandy light clay; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	2.8	
0.30	5.3	4.2	
0.60	5.5	6.5	
1.00	5.5	3.9	
1.50	6.0	4.6	
2.00	6.1	4.7	
2.50	6.5	6.8	
2.75	7.0	6.5	
2.85	6.8	6.4	
3.00	6.4	1.5	
3.25	6.3	1.8	
3.50	6.8	5.4	
4.00	7.5	4.7	
4.25	7.3	6.4	

Notes:

Horizon – 9D EOP - rocks stopped VVC
 Observation H2O EC - 0.4mS/cm; pH 6.6

Project: MWQ Site: 501

Location: 720290 mE 7660705 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Dec-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 7.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melanic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; fine sandy light clay; moderate 5-10mm cast structures; dry; gradual to;
B2	0.30 to 0.65	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sandy light medium clay; dry; abrupt to;
2B2	0.65 to 1.00	Very dark brown (10YR22) moist colour; common 10-20% fine < 5mm distinct orange mottles; clay loam; sandy; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; few 2-10% fine <2 mm manganiferous soft segregations; dry; sharp to;
3B2	1.00 to 1.60	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct orange mottles; fine sandy light medium clay; very few < 2% fine <2 mm manganiferous soft segregations; moderately moist; clear to;
4B1	1.60 to 1.90	Dark yellowish brown (10YR46) moist colour; many 20-50% fine < 5mm prominent grey mottles; clay loam; fine sandy; moderately moist; sharp to;
4B2	1.90 to 2.90	Grey (10YR51) moist colour; many 20-50% coarse 15-30mm prominent yellow-brown mottles; medium clay; few 2-10% fine <2 mm manganiferous soft segregations; moderately moist; sharp to;
5C	2.90 to 3.40	Pale brown (10YR63) moist colour; sand; very few < 2% small pebbles 2-6mm rounded acid volcanic and quartz coarse fragments; single grain structures; moderately moist; abrupt to;
6C1	3.40 to 3.60	Light brownish grey (2.5Y62) moist colour; sand; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and quartz coarse fragments; single grain structures; moist; clear to;
6C2u	3.60 to 5.00	Grey (5Y51) moist colour; sand with 2cm black (2.5Y20) light clay lenses at 4.5 and 5.0m; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm rounded intermediate volcanic coarse fragments; single grain structures; wet.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	3.1	
0.30	5.6	5.8	
0.60	5.3	6.1	
1.00	6.0	5.4	
1.50	5.8	6.1	
2.00	6.2	5.8	
2.50	6.1	6.3	
3.00	6.6	5.8	
3.25	6.5	5.9	
3.50	6.4	5.6	
3.75	7.4	5.4	
4.00	8.0	5.3	
4.25	6.9	5.5	
4.50	6.1	1.2	
4.75	6.7	5.9	
5.00	6.3	1.2	

Notes:

Horizon – 6C2u EOP - rocks at 5.1m would not hold in the tube
 Observation H2O EC - 0.6dS/m; pH 6.5

Project: MWQ Site: 502

Location: 719785 mE 7660340 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Dec-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 7.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking

Classifications

ASC: Haplic, Epipedal, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.10	Black (10YR21) moist colour; light medium clay; dry; abrupt to;
A12	0.10 to 0.65	Black (2.5Y20) moist colour; coarse sandy light medium clay; very few < 2% small pebbles 2-6mm subrounded igneous rock (unidentified) coarse fragments; dry; sharp to;
2B21	0.65 to 2.10	Black (2.5Y20) moist colour; very few < 2% medium 5-15mm faint brown, few 2-10% fine < 5mm distinct dark mottles; medium clay; moderately moist; abrupt to;
2B22	2.10 to 3.50	Dark yellowish brown (10YR46) moist colour; common 10-20% medium 5-15mm prominent gley, few 2-10% medium 5-15mm distinct grey mottles; light medium clay; moderately moist; abrupt to;
2B3	3.50 to 3.80	Grey (7.5YR50) moist colour; common 10-20% medium 5-15mm distinct gley mottles; light medium clay; moist; sharp to;
3C	3.80 to 4.40	Very dark grey (10YR31) moist colour; sand with a 5cm fine sand lens and a 1cm light clay lens at 3.94m; very few < 2% small pebbles 2-6mm rounded intermediate volcanic and subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4Cu	4.40 to 4.50	Dark grey (2.5Y40) moist colour; fine sand with 3x1cm light clay lenses; wet;
5C1	4.50 to 5.20	Dark grey (5Y41) moist colour; sand; single grain structures; wet;
5C2	5.20 to 6.00	Grey (5Y51) moist colour; sand; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.6	4.5	
0.30	5.9	5.6	
0.60	6.2	5.7	
1.00	6.5	5.4	
1.50	6.9	6.7	
2.00	6.6	5.7	
2.50	6.9	6.4	
3.00	6.8	5.6	
3.25	6.5	6.5	
3.50	6.4	7.7	
3.75	7.5	7.4	
4.00	6.3	5.0	
4.25	7.4	6.3	
4.50	6.5	1.6	
4.75	7.0		
5.00	7.7	1.6	
5.50	7.3	1.4	
6.00	7.1	1.3	

Notes:

Observation H2O EC - 0.5dS/m; pH 6.6

Project: MWQ Site: 503

Location: 721005 mE 7660390 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 06-Dec-2002

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 6 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 1 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Oxyaquic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Digitaria species; Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; silty clay loam; moderate 2-5mm cast structures; diffuse to;
B2	0.30 to 1.55	Dark brown (10YR33) moist colour; silty clay loam; sharp to;
2C	1.55 to 2.05	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; dry; sharp to;
3C	2.05 to 2.25	Dark brown (7.5YR33) moist colour; fine sandy loam; massive structures; dry; sharp to;
4C	2.25 to 2.70	Dark yellowish brown (10YR44) moist colour; fine sand; very few < 2% large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; sharp to;
5C	2.70 to 2.90	Brown (10YR43) moist colour; clay loam; fine sandy; massive structures; sharp to;
6C	2.90 to 3.45	Light yellowish brown (10YR64) moist colour; sand; single grain structures; sharp to;
7B2	3.45 to 3.60	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent orange mottles; light medium clay; sharp to;
8B2	3.60 to 4.00	Brown (10YR53) moist colour; common 10-20% medium 5-15mm prominent orange mottles; sand with a 5cm grey light clay lens at 3.8m;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	5.4	
0.30	5.8	5.7	
0.60	5.4	5.4	
1.00	5.7	6.1	
1.50	6.0	6.2	
2.00	6.6	6.4	
2.50	6.6	6.9	
3.00	6.7	6.4	
3.50	6.5	5.8	
4.00	6.5	5.8	

Notes:

Horizon – 8B2 EOP - large gravels at 4.0m stopped vvc and hand augers
Observation Could not sample water

Project: MWQ Site: 504

Location: 719860 mE 7660615 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Dec-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Haplic, Self-mulching, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark grey (10YR31) moist colour; few 2-10% fine < 5mm distinct orange mottles; silty medium clay; strong 2-5mm subangular blocky structures; dry; abrupt to;
B21	0.05 to 0.40	Black (10YR21) moist colour; few 2-10% fine < 5mm distinct brown mottles; silty medium clay; strong 10-20mm subangular blocky structures; dry; diffuse to;
B22	0.40 to 1.10	Black (2.5Y20) moist colour; silty medium clay; lenticular structures; moderately moist; clear to;
B23	1.10 to 1.55	Very dark grey (10YR31) moist colour; common 10-20% fine < 5mm distinct brown mottles; medium clay; lenticular structures; moderately moist; clear to;
B24	1.55 to 2.65	Grey (10YR51) moist colour; many 20-50% fine < 5mm prominent brown mottles; light medium clay; few 2-10% fine < 2 mm manganiferous soft segregations; moist; abrupt to;
2B2u	2.65 to 3.05	Grey (7.5YR50) moist colour; common 10-20% fine < 5mm distinct brown mottles; light clay; moist; abrupt to;
2Cu	3.05 to 3.60	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; moist; sharp to;
3C1	3.60 to 4.20	Grey (5Y51) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; diffuse to;
3C2	4.20 to 4.80	Grey (5Y61) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; abrupt to;
4C	4.80 to 5.20	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.3	2.7	
0.30	4.4	3.6	
0.60	4.8	3.5	
1.00	5.6	4.6	
1.50	5.2	5.0	
1.75	4.9		
2.00	5.0	4.9	
2.25	5.3	5.7	
2.50	5.1	5.7	
2.75	5.1	6.1	
3.00	5.2	6.5	
3.25	5.2	4.4	
3.50	5.3	1.6	
3.75	7.7	4.0	
4.00	6.4	1.4	
4.25	6.3	6.0	
4.50	6.6	2.0	
4.75	7.6	7.0	
5.00	8.6	5.7	
5.20	6.8	7.5	

Notes:

Observation H2O EC - 0.5mS/cm; pH 6.4

Project: MWQ Site: 505

Location: 720810 mE 7661050 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 10-Dec-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Melacic, Eutrophic, Black, CHROMOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; silty clay loam; dry; abrupt to;
B21	0.30 to 0.75	Black (10YR21) moist colour; silty medium clay; dry; clear to;
B22	0.75 to 1.20	Dark greyish brown (10YR42) moist colour; common 10-20% fine < 5mm distinct brown mottles; light medium clay; moderately moist; abrupt to;
B23	1.20 to 2.30	Brownish yellow (10YR68) moist colour; many 20-50% fine < 5mm prominent grey mottles; light medium clay; moderately moist; sharp to;
2C	2.30 to 2.60	Brown (10YR53) moist colour; fine sand; single grain structures; moderately moist; sharp to;
3B21	2.60 to 3.10	Greyish brown (10YR52) moist colour; common 10-20% fine < 5mm distinct brown mottles; fine sandy loam; massive structures; moist;
3B22	3.10 to 3.85	Greyish brown (10YR52) moist colour; many 20-50% medium 5-15mm prominent brown mottles; clayey fine sand; single grain structures; moist; sharp to;
4Cu	3.85 to 4.70	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; moist; sharp to;
5Cu	4.70 to 4.90	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; moist;
6C1	4.90 to 5.60	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;
6C2	5.60 to 6.00	Coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.4	
0.30	5.1	4.8	
0.60	5.1	4.7	
1.00	5.3	4.3	
1.50	5.2	4.8	
2.00	5.1	5.8	
2.50	6.0	5.6	
3.00	5.5	5.1	
3.50	5.5	5.7	
3.75	5.5	5.3	
4.00	6.0	1.2	
4.25	6.4		
4.50	6.0	0.6	
4.75	5.2	1.6	
5.00	6.9	5.5	
5.50	6.9	7.1	
6.00	6.9	8.4	

Notes:

Horizon – 4Cu Lump of wood at 4.2 m
 Observation H2O EC - 0.3 mS/cm; pH 6.0

Project: MWQ Site: 506

Location: 719225 mE 7671485 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Dec-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking, Surface crust

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.50	Black (10YR21) moist colour; common 10-20% fine < 5mm prominent orange mottles; light medium clay; massive structures; dry; abrupt to;
2B21i	0.50 to 0.95	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; moderately moist; abrupt to;
2B22ia	0.95 to 1.55	Very dark grey (10YR31) moist colour; many 20-50% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct yellow jarositic (from pyrite) mottles; light clay; massive structures; moist; sharp to;
2Cu	1.55 to 3.85	Very dark grey (2.5Y30) moist colour; silty light clay; very few < 2% large pebbles 20-60mm rounded intermediate volcanic coarse fragments at 3.8m; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.4	3.6	
0.30	4.1	3.0	
0.60	3.6	2.7	
0.80	3.1	2.6	
1.00	2.9	2.1	
1.25	4.1	1.8	
1.50	4.8	2.2	
1.75	3.9	1.2	
2.00	3.9	0.7	
2.25	3.9	1.0	
2.50	4.6	1.1	
2.75	5.1	1.2	
3.00	5.4	1.1	
3.25	5.6	1.2	
3.50	5.7	1.4	
3.75	5.8	0.9	
3.85	5.9	1.2	

Notes:

Horizon – 2Cu EOP - gravel layer stopped tube; coarse frags at 3.8m
 Observation H2O EC - 9.6 mS/cm; pH 4.1

Project: MWQ Site: 507

Location: 725455 mE 7662302 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 06-Feb-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Valley-flat
 Runoff: No record
 Elevation: No record
 Microrelief: Debil-debil
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.02 %
 Surface Coarse Fragments: No record
 Surface Condition: Periodic cracking, Firm

Classifications

ASC: Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Nauclea orientalis (Leichhardt tree, cheesewood); Archontophoenix alexandrae (Alexandra palm)
 Lower Stratum: Cynodon dactylon (Couch); Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
B21	0.00 to 0.45	Very dark grey (10YR31) moist colour; few 2-10% medium 5-15mm prominent dark mottles; medium clay; very few < 2% large pebbles 20-60mm subrounded andesite coarse fragments; strong 10-20mm subangular blocky structures; dry; clear to;
B22	0.45 to 0.80	Black (10YR21) moist colour; common 10-20% medium 5-15mm prominent dark mottles; medium clay; few 2-10% large pebbles 20-60mm subrounded andesite coarse fragments; lenticular structures; manganiferous nodules segregations; moderately moist;
B23	0.80 to 2.50	Black (10YR21) moist colour; medium clay; lenticular structures; manganiferous nodules segregations; moderately moist; abrupt to;
B24	2.50 to 2.90	Yellowish brown (10YR56) moist colour; many 20-50% medium 5-15mm prominent grey, common 10-20% medium 5-15mm prominent dark mottles; light medium clay; moist; clear to;
BC	2.90 to 3.20	Dark grey (10YR41) moist colour; common 10-20% medium 5-15mm distinct gley mottles; light medium clay; few 2-10% small pebbles 2-6mm subrounded andesite coarse fragments; wet; sharp to;
2Cu	3.20 to 4.10	Very dark grey (2.5Y30) moist colour; light clay; massive structures; wet; sharp to;
3D	4.10 to 4.20	Dark greenish grey (5BG41) moist colour; fine sandy light clay; few 2-10% cobbles 60-200mm angular andesite coarse fragments; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	3.5	
0.30	6.1	4.2	
0.60	6.0	3.5	
1.00	6.1	4.6	
1.50	6.4	4.9	
2.00	6.3	5.6	
2.50	5.9	6.8	
3.00	5.8	5.6	
3.25	5.9	2.9	
3.50	5.9	1.5	
3.75	5.9	1.1	
4.00	5.0	1.1	
4.15	6.5	3.0	

Notes:

Observation H2O EC - 1.7 mS/cm

Project: MWQ Site: 508

Location: 726755 mE 7672225 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Mar-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Fill-top
 Runoff: No record
 Elevation: 4.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark brown (10YR22) moist colour; loamy fine sand; few 2-10% small pebbles 2-6mm subangular igneous rock (unidentified) coarse fragments; moderately moist; sharp to;
C	0.10 to 0.50	Dark greyish brown (2.5Y42) moist colour; coarse sand with lumps of clay; many 20-50% medium pebbles 6-20mm and large pebbles 20-60mm subangular igneous rock (unidentified) coarse fragments; moderately moist; sharp to;
2B21	0.50 to 1.10	Dark greyish brown (2.5Y42) moist colour; common 10-20% fine < 5mm prominent grey, few 2-10% fine < 5mm prominent brown mottles; medium clay; common 10-20% medium pebbles 6-20mm subangular igneous rock (unidentified) coarse fragments; moderately moist; clear to;
2B22	1.10 to 1.60	Brown (10YR43) moist colour; common 10-20% medium 5-15mm prominent grey, few 2-10% fine < 5mm prominent red mottles; light medium clay; common 10-20% medium pebbles 6-20mm subangular igneous rock (unidentified) coarse fragments; moist; diffuse to;
2B23	1.60 to 1.90	Grey (N50) moist colour; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm prominent red, few 2-10% fine < 5mm distinct yellow mottles; light medium clay; many 20-50% medium pebbles 6-20mm subangular igneous rock (unidentified) coarse fragments; moist; abrupt to;
2B24?	1.90 to 2.60	Grey (2.5Y60) moist colour; common 10-20% fine < 5mm distinct grey, few 2-10% fine < 5mm distinct brown, very few < 2% fine < 5mm distinct yellow mottles; light clay; few 2-10% medium pebbles 6-20mm subangular igneous rock (unidentified) coarse fragments; wet; sharp to;
3B2i	2.60 to 2.80	Dark grey (2.5Y40) moist colour; very few < 2% fine < 5mm distinct brown mottles; silty light clay; very few < 2% medium pebbles 6-20mm subrounded igneous rock (unidentified) coarse fragments; wet; clear to;
3C1u	2.80 to 3.80	Very dark grey (2.5Y30) moist colour; silty light clay; wet; diffuse to;
3C2u	3.80 to 5.50	Dark grey (2.5Y40) moist colour; light clay; wet;

Field Tests

Depth (m)	pHF	pHFOX	Depth (m)	pHF	pHFOX
0.10	6.3	5.2	3.00	4.5	0.9
0.30	7.1		3.25	5.1	0.9
0.60	6.1	7.3	3.50	5.5	0.9
1.00	6.7	4.2	3.75	5.7	0.9
1.25	6.7		4.00	5.9	1.0
1.50	6.7	5.8	4.25	5.9	1.0
1.75	6.7		4.50	6.0	1.1
2.00	6.2	5.9	4.75	6.1	1.2
2.25	5.0	3.7	5.00	6.1	1.2
2.50	4.7	2.7	5.25	6.1	1.3
2.75	3.9	0.8	5.50	6.2	1.2

pHF (pH using electrode probe),
 pHFOX (pH of hydrogen peroxide extract)

Notes:

Horizon - 3C1u Plenty of mangrove roots
 Observation H2O EC - 39.6 mS/cm; pH 5.5

Project: MWQ Site: 509

Location: 726245 mE 7672290 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Mar-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Beach ridge plain
 Element: Foredune
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, Microdiorite
 Surface Condition: Loose, Soft

Classifications

ASC: Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; sand; many 20-50% large pebbles 20-60mm angular igneous rock (unidentified) coarse fragments; single grain structures; dry; abrupt to;
2C	0.15 to 3.30	Yellowish brown (10YR54) moist, light yellowish brown (10YR64) dry colour; sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; abrupt to;
3C?	3.30 to 4.30	Yellowish brown (10YR54) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.5	4.2	
0.60	5.7	4.5	
1.00	5.9	4.9	
1.50	5.7	4.9	
2.00	5.9	5.3	
2.50	5.8	4.6	
3.00	5.7	4.2	
3.50	5.7	4.4	
4.00	5.9	3.8	
4.25	6.0	4.4	

Notes:

Horizon – 3C? EOP - sand would not hold in
 Observation Could not sample water

Project: MWQ Site: 510

Location: 723210 mE 7675770 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Mar-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Beach ridge plain
 Element: Foredune
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Melacic, Tenosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Acacia leptocarpa (North coast wattle)
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.50	Very dark brown (10YR22) moist colour with a 5cm pale sand lens at 0.25m; loamy fine sand; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm angular charcoal and microdiorite coarse fragments at 0.4m; single grain structures; moderately moist; sharp to;
2A1	0.50 to 0.70	Black (10YR21) moist colour; loamy fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moist; clear to;
2B21	0.70 to 1.20	Yellowish brown (10YR54) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; abrupt to;
2B22	1.20 to 1.55	Yellowish brown (10YR56) moist colour; common 10-20% medium 5-15mm prominent brown mottles; clayey fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; abrupt to;
2C	1.55 to 1.95	Light brownish grey (10YR62) moist colour; fine sand with a 5cm sand lens at 1.7m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
3C	1.95 to 2.60	Dark grey (5Y41) moist colour; fine sand; few 2-10% small pebbles 2-6mm subrounded shell, medium pebbles 6-20mm rounded microdiorite and large pebble 20-60mm angular acid volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.1	3.4	
0.60	5.4	4.0	
0.80	5.4	4.0	
1.00	5.3	4.6	
1.25	6.7	5.1	
1.50	6.6	5.7	
1.75	6.5	4.1	
2.00	7.1	2.7	
2.25	7.1	1.9	
2.50	7.0	5.6	

Notes:

Horizon – 3C EOP - material to 3.05m would not hold in the tube; Rocks at 3.05m
 stopped tube
 Observation H2O pH 6.7

Project: MWQ Site: 511

Location: 723550 mE 7675800 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 25-Mar-2003

Landscape

Geology: D-Cc - Campwyn Beds
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Foothlope
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: No record
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Mid Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker); Planchonia careya (Cockatoo apple)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; loamy fine sand; single grain structures; moderately moist; abrupt to;
A2	0.15 to 0.35	Fine sand; few 2-10% large pebbles 20-60mm subangular acid volcanic coarse fragments; single grain structures; moderately moist;
B2	0.35 to 0.45	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct brown mottles; silty light medium clay; moist; sharp to;
2C	0.45 to 0.78	Very dark grey (10YR31) moist colour; fine sand; single grain structures; moist; sharp to;
3C	0.78 to 1.20	Greyish brown (2.5Y53) moist colour; fine sand; very few < 2% medium pebbles 6-20mm subangular acid volcanic coarse fragments; single grain structures; wet; sharp to;
R	1.20 to 1.25	Very abundant > 90% large pebbles 20-60mm subangular acid volcanic coarse

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	4.1	
0.30	7.4	6.1	
0.40	7.8	6.0	
0.60	7.2	5.6	
0.80	6.8	6.7	
1.00	7.4	6.8	

Notes:

Horizon - R EOP - possibly bedrock
 Observation H2O EC - 157 dS/m; pH 6.6

Project: MWQ Site: 512

Location: 724150 mE 7672165 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 26-Mar-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Dune
 Runoff: No record
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 5 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Melacic, Regolithic, Chernic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; loamy fine sand; single grain structures; dry; clear to;
B2	0.30 to 0.90	Dark yellowish brown (10YR34) moist colour; fine sand; single grain structures; moderately moist; gradual to;
C	0.90 to 1.20	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moist; abrupt to;
2B2	1.20 to 2.20	Light yellowish brown (2.5Y64) moist colour; common 10-20% coarse 15-30mm prominent orange, few 2-10% very coarse > 30mm prominent grey, few 2-10% fine < 5mm prominent brown mottles; sand with a 5cm light clay lens at 2.1m; single grain structures; wet; sharp to;
3C	2.20 to 2.60	Dark grey (5Y41) moist colour; light medium clay; moist; sharp to;
4B2	2.60 to 2.85	Grey (5Y61) moist colour; few 2-10% fine < 5mm distinct brown mottles; sand; single grain structures; wet; sharp to;
5C	2.85 to 4.80	Dark grey (2.5Y40) moist colour; fine sand; single grain structures; wet; diffuse to;
6C	4.80 to 5.10	Dark grey (2.5Y40) moist colour; clay loam; fine sandy; very few < 2% small pebbles 2-6mm and large pebbles 20-60mm rounded and subrounded shell coarse fragments; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	4.7	
0.60	5.8	5.3	
1.00	6.0	5.4	
1.50	5.4	5.4	
2.00	5.1	4.9	
2.25	5.2	2.9	
2.50	5.0	2.7	
2.75	5.9	2.5	
3.00	5.7	1.3	
3.25	6.2	1.2	
3.50	6.3	1.3	
3.75	6.2	1.2	
4.00	6.9	1.1	
4.25	6.6	1.5	
4.50	6.9	1.4	
4.75	7.3	1.5	
5.00	7.3	1.8	

Notes:

Horizon – 6C EOP - material did not hold in tube - went to 6.0m
 Observation H2O EC - 0.36 dS/m; pH 5.2

Project: MWQ Site: 513

Location: 727830 mE 7667845 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Mar-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Rises
 Element: Channel bench
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.8 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Acidic-sodic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Eucalyptus alba (Poplar gum); Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Melaleuca viridiflora (Broad-leaved tea-tree)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; common 10-20% fine < 5mm prominent orange mottles; light medium clay; moderately moist; abrupt to;
B21i	0.15 to 0.35	Light brownish grey (2.5Y62) moist colour; many 20-50% medium 5-15mm prominent orange mottles; light medium clay; moderately moist; clear to;
B22i	0.35 to 0.60	Grey (10YR61) moist colour; common 10-20% medium 5-15mm prominent red, common 10-20% medium 5-15mm prominent orange mottles; light medium clay; moist; sharp to;
2C	0.60 to 1.00	Greyish brown (10YR52) moist colour; fine sandy loam; wet; sharp to;
3D	1.00 to 1.50	Grey (5Y61) moist colour; few 2-10% fine < 5mm distinct yellow mottles; medium heavy clay; very few < 2% medium pebbles 6-20mm angular acid volcanic coarse fragments; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	3.8	
0.30	4.2	3.6	
0.40	3.5		
0.60	3.4	3.1	
0.80	3.0	2.8	
1.00	3.2	3.1	
1.25	3.2	3.1	
1.50	3.2	3.2	

Notes:

Horizon - 3D EOP - too hard for VVC - too wet for hand auger
 Observation H2O EC - 13.2 mS/cm; pH 3.5

Project: MWQ Site: 514

Location: 730620 mE 7667785 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Mar-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 6.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A/C	0.00 to 1.05	Fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; abrupt to;
A1	1.05 to 1.30	Very dark greyish brown (10YR32) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; clear to;
C	1.30 to 1.70	Yellowish brown (10YR54) moist colour; fine sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moderately moist; sharp to;
2A1	1.70 to 1.90	Very dark brown (10YR22) moist colour; coarse sand; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; moist; clear to;
2C1	1.90 to 3.10	Yellowish brown (10YR54) moist colour; coarse sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and acid volcanic coarse fragments; single grain structures; wet; gradual to;
2C2	3.10 to 3.65	Light grey (10YR71) moist colour; sand with a 2cm light clay lens at 3.51m; very few < 2% small pebbles 2-6mm rounded quartz coarse fragments; single grain structures; wet; sharp to;
3Cu	3.65 to 4.10	Very dark grey (2.5Y30) moist colour; silty light clay with many thin 2-4mm fine sand lenses; massive structures; moist; sharp to;
4C1u	4.10 to 4.70	Dark grey (2.5Y40) moist colour; fine sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm subrounded intermediate volcanic and shell coarse fragments; single grain structures; wet; abrupt to;
4C2u	4.70 to 5.50	Grey (2.5Y50) moist colour; fine sand with a 5cm sand lens at 5.1m; common 10-20% small pebbles 2-6mm and medium pebbles 6-20mm rounded and subrounded shell and igneous rock coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.0	6.4	
0.60	7.2	5.5	
1.00	6.9	5.2	
1.50	6.9	5.5	
2.00	7.3	5.4	
2.50	6.6	5.1	
3.00	6.4	5.2	
3.50	6.4	3.2	
3.75	6.1	0.8	
4.00	6.2	0.9	
4.25	6.5	1.2	
4.50	6.9	3.6	
4.75	7.2	2.6	
5.00	7.1	5.5	
5.25	8.0	5.7	
5.50	7.9	5.8	

Notes:

Observation Could not sample water

Project: MWQ Site: 515

Location: 730760 mE 7667710 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Mar-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 8.3
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.75 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist colour; loamy sand; massive structures; dry; sharp to;
2C	0.20 to 5.15	Light yellowish brown (10YR64) moist, very pale brown (10YR73) dry colour; fine sand; single grain structures; moderately moist; sharp to;
3C1	5.15 to 5.40	Light grey (5Y71) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; abrupt to;
3C2u	5.40 to 5.70	Dark grey (5Y41) moist colour; sand; very few < 2% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet; sharp to;
4Cu	5.70 to 5.75	Black (2.5Y20) moist colour; fine sandy light clay with 1mm fine sand lenses; massive structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	4.5	
0.60	6.1	4.9	
1.00	6.5	5.1	
1.50	6.7	4.8	
2.00	7.2	4.9	
2.50	7.0	5.6	
3.00	7.0	4.9	
3.50	7.1	5.2	
4.00	6.7	5.0	
4.50	6.2	5.5	
5.00	6.4	5.5	
5.25	6.1	3.5	
5.50	6.1	1.7	
5.75	5.7	1.7	

Notes:

Observation Could not sample water

Project: MWQ Site: 516

Location: 730260 mE 7667875 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Mar-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Made land
 Element: Plain
 Runoff: No record
 Elevation: 6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A/C	0.00 to 0.50	Black (10YR21) and light grey (10YR72) moist colour; fine sand; single grain structures; moderately moist; sharp to;
A1	0.50 to 0.65	Black (2.5Y20) moist colour; loamy fine sand; single grain structures; moderately moist; clear to;
C	0.65 to 0.85	Dark greyish brown (2.5Y42) moist colour; fine sand; single grain structures; moderately moist; sharp to;
2A1	0.85 to 1.10	Dark brown (7.5YR32) moist colour; loamy fine sand; single grain structures; moderately moist; clear to;
2B21	1.10 to 1.60	Brown (10YR43) moist colour; clayey fine sand; single grain structures; moist; gradual to;
2B22	1.60 to 2.50	Yellowish brown (10YR54) moist, light yellowish brown (10YR64) dry colour; fine sand; single grain structures; moist; sharp to;
3B2	2.50 to 5.50	Light yellowish brown (10YR64) moist colour; common 10-20% very coarse > 30mm prominent grey, common 10-20% very coarse > 30mm prominent brown mottles; coarse sand; few 2-10% small pebbles 2-6mm subrounded quartz coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.7	
0.60	6.2	5.1	
1.00	5.1	4.7	
1.50	5.5	4.7	
2.00	5.8	5.2	
2.50	5.9	4.9	
3.00	6.2	5.1	
3.50	6.5	5.8	
4.00	6.8	4.9	
4.50	6.9	5.4	
4.75	7.2	4.1	
5.00	7.1	6.5	
5.50	7.1	6.0	

Notes:

Horizon – 3B2 EOP
 Observation Could not sample water

Project: MWQ Site: 517

Location: 727280 mE 7664400 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 31-Mar-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Swamp

Runoff: No record

Elevation: 3.6 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Mesotrophic, Kandosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)

Mid Stratum: Livistona australis (Cabbage tree palm)

Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist colour; fine sandy clay loam; massive structures; moist; abrupt to;
A2	0.25 to 0.45	Fine sandy loam; massive structures; moist; clear to;
B2	0.45 to 0.65	Grey (10YR61) moist colour; many 20-50% medium 5-15mm prominent brown mottles; clay loam; fine sandy; massive structures; moist;
BC?	0.65 to 0.90	Grey (10YR61) moist colour; common 10-20% coarse 15-30mm prominent brown mottles; fine sandy loam; massive structures; moist;
2B21	0.90 to 1.20	Light grey (10YR71) moist colour; few 2-10% medium 5-15mm prominent brown mottles; fine sand; single grain structures; wet; abrupt to;
2B22	1.20 to 1.90	Light brownish grey (2.5Y62) moist colour; many 20-50% coarse 15-30mm prominent brown mottles; fine sand; single grain structures; wet;
2C	1.90 to 2.30	Light brownish grey (2.5Y62) moist colour; fine sand; single grain structures; wet; clear to;
3Cu	2.30 to 3.85	Light olive brown (2.5Y56) moist colour; fine sand with a 1cm light clay lens at 3.6m; single grain structures; wet; sharp to;
4B2	3.85 to 5.50	Olive (5Y53) moist colour; few 2-10% medium 5-15mm distinct brown mottles; clayey fine sand, heavy; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.3	
0.30	6.8	5.3	
0.60	7.2	6.7	
0.80	6.6	5.8	
1.00	5.8	5.0	
1.25	4.2	3.9	
1.50	4.5	4.0	
1.75	4.5	3.8	
2.00	4.5	3.6	
2.25	5.6	3.3	
2.50	5.8	1.7	
2.75	6.0	1.7	
3.00	5.9	1.7	
3.25	6.0	1.7	
3.50	5.8	1.5	
3.75	5.9	1.6	
4.00	6.1	4.1	
4.25	6.1	4.0	
4.50	5.9	4.2	
4.75	5.9	4.2	
5.00	6.1	4.0	
5.25	5.9	4.2	
5.50	5.9	4.2	

Notes:

Observation H2O EC 1.53 dS/m; pH 4.6

Project: MWQ Site: 518

Location: 726970 mE 7661400 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Apr-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Ficus species
 Lower Stratum: Panicum maximum var. maximum (Guinea grass)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.15	Very dark brown (10YR22) moist colour; silty clay loam; moderate 2-5mm cast structures; moderately moist; clear to;
A12	0.15 to 0.40	Very dark brown (10YR22) moist colour; silty clay loam; massive structures; moderately moist; sharp to;
2C1	0.40 to 0.80	Dark brown (10YR33) moist colour; fine sand with 10cm fine sandy loam lenses at 0.5 and 0.7m; single grain structures; dry; sharp to;
2C2	0.80 to 1.30	Dark brown (10YR33) moist colour; clayey sand; single grain structures; moderately moist; sharp to;
2C3	1.30 to 1.90	Yellowish brown (10YR54) moist colour; fine sand; single grain structures; moderately moist; sharp to;
2C4	1.90 to 5.00	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
2C5	5.00 to 5.30	Brown (10YR53) moist colour; sand; many 20-50% large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.2	
0.30	6.2	4.8	
0.60	6.9	5.0	
1.00	6.7	5.6	
1.50	7.2	5.9	
2.00	6.9	5.0	
2.50	6.4	4.8	
3.00	6.6	5.5	
3.50	6.6	5.4	
4.00	6.3	5.4	
4.50	6.2	5.3	
5.00	6.3	5.0	

Notes:
 Observation H2O EC - 21.5 dS/m; pH 5.9

Project: MWQ Site: 519

Location: 725990 mE 7661760 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 01-Apr-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 3.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No record
 Surface Condition: Hard setting

Classifications

ASC: Mesotrophic, Brown, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; silty light clay; massive structures; moist; gradual to;
B21	0.20 to 0.60	Dark brown (10YR33) moist colour; common 10-20% fine < 5mm distinct orange mottles; silty light clay; massive structures; moist;
B22	0.60 to 1.30	Dark brown (10YR33) moist colour; very few < 2% fine < 5mm faint orange mottles; fine sandy light clay; massive structures; moist; clear
2B2	1.30 to 1.55	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent brown mottles; clay loam; sandy; massive structures; common 10-20% medium 2-6 mm manganiferous soft segregations; moist;
3B2	1.55 to 2.60	Yellowish brown (10YR58) moist colour; few 2-10% very coarse > 30mm prominent grey mottles; sand; very few < 2% small pebbles 2-6mm rounded acid volcanic coarse fragments; single grain structures; wet; clear to;
3C	2.60 to 5.00	Light brownish grey (10YR62) moist colour; coarse sand; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm rounded acid volcanic coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.7	5.3	
0.30	6.7	7.1	
0.60	6.6	5.6	
1.00	6.6	6.2	
1.50	6.4	5.6	
2.00	7.0	5.0	
2.50	6.7	5.5	
3.00	6.7	4.6	
3.50	6.8	4.8	
4.00	6.8	4.4	
4.50	6.6	5.1	
5.00	7.6	6.0	

Notes:

Horizon – 3C EOP - sand would not hold in
 Observation H2O EC - 9.2 dS/m; pH 6.8

Project: MWQ Site: 520

Location: 727960 mE 7668030 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Apr-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: No record
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Acacia leptocarpa (North coast wattle)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; loamy fine sand; single grain structures; moderately moist; gradual to;
C	0.30 to 0.70	Brown (10YR53) moist colour; fine sand; single grain structures; moderately moist; sharp to;
2C	0.70 to 1.30	Light yellowish brown (10YR64) moist colour; sand; common 10-20% medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
3D	1.30 to 2.00	Greenish grey (5GY61) moist colour; common 10-20% coarse 15-30mm prominent brown mottles; light medium clay; many 20-50% medium pebbles 6-20mm and large pebbles 20-60mm subangular acid volcanic coarse fragments; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	4.1	
0.30	6.5	4.8	
0.60	6.6	4.8	
0.80	6.4	4.9	
1.00	6.4	4.9	
1.25	7.1	5.0	
1.50	6.6	5.3	
1.75	6.4	5.4	
2.00	6.2	5.2	

Notes:

Horizon – 3D EOP - stones prevented further augering
 Observation H2O EC - 1.32 dS/m; pH 6.5

Project: MWQ Site: 521

Location: 729280 mE 7664320 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 30-Apr-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No record
 Surface Condition: Soft

Classifications

ASC: Melacic, Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 20.01-35m, closed or dense
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Alphitonia excelsa (Red ash, soapbush)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Black (10YR21) moist colour; sandy clay loam; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; moderate 2-5mm cast structures; moderately moist; abrupt to;
B2	0.30 to 1.10	Grey (10YR61) moist colour; many 20-50% coarse 15-30mm prominent brown, common 10-20% medium 5-15mm distinct grey mottles; clay loam; sandy; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; moist; sharp to;
2Cu	1.10 to 1.80	Dark grey (10YR41) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; sharp to;
3Cu	1.80 to 2.05	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
4C1u	2.05 to 2.60	Dark grey (2.5Y40) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; gradual to;
4C2u	2.60 to 4.50	Grey (10YR51) moist colour; coarse sand; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet; diffuse to;
5C	4.50 to 6.00	Pale brown (10YR63) moist colour; coarse sand; common 10-20% medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	3.9	
0.30	4.4	3.4	
0.45	3.8		
0.60	4.0	4.3	
0.80	3.6	3.6	
1.00	3.3	3.1	
1.25	3.5	3.2	
1.50	3.8	2.3	
1.75	4.3	1.7	
2.00	4.8	1.6	
2.25	5.4	1.8	
2.50	6.1	1.9	
2.75	6.2	1.8	
3.00	6.2	2.1	
3.25	6.5	2.2	
3.50	6.5	2.2	
3.75	6.4	2.4	
4.00	6.9	2.3	
4.25	6.9	2.3	
4.50	6.5	2.8	
4.75	6.3	3.1	
5.00	6.6	4.1	
5.25	6.6	4.1	
5.50	6.7	4.3	
5.75	6.7	4.5	
6.00	7.0	4.4	

Notes:
 Observation H2O EC - 3.4 dS/m; pH 5.6

Project: MWQ Site: 522

Location: 725030 mE 7660850 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-May-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.5 %
 Surface Coarse Fragments: Abundant 50-90%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Firm

Classifications

ASC: Mesotrophic, Kandosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker)
 Lower Stratum: Brachiaria mutica (Para grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam; weak 2-5mm cast structures; moist; sharp to;
2C	0.30 to 0.90	Dark brown (10YR33) moist colour; sand; common 10-20% medium pebbles 6-20mm and cobbles 60-200mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
3B21	0.90 to 1.60	Dark brown (10YR33) moist colour; few 2-10% fine < 5mm faint orange mottles; fine sandy clay loam, light; massive structures; few 2-10% fine <2 mm manganiferous soft segregations; moist; diffuse to;
3B22	1.60 to 2.40	Dark brown (10YR33) moist colour; common 10-20% fine < 5mm distinct orange, common 10-20% medium 5-15mm prominent grey mottles; fine sandy loam; massive structures; moist; abrupt to;
3Cu	2.40 to 2.90	Dark grey (2.5Y40) moist colour; clay loam; fine sandy; massive structures; wet; sharp to;
4C	2.90 to 4.50	Brown (10YR53) moist colour; sand; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and igneous rock coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.8	5.0	
0.60	6.5	4.4	
1.00	6.1	4.0	
1.50	6.9	4.2	
2.00	6.9	5.8	
2.50	5.7	3.8	
2.75	6.2	0.6	
3.00	6.4	4.7	
3.50	6.3	5.6	
4.00	6.5	5.2	

Notes:

Horizon – 4C EOP - rocks at 4.5m stopped VVC but 4.0-4.5m fell out of tube
 Observation H2O EC - 0.6mS/m; pH 6.3

Project: MWQ Site: 523

Location: 725070 mE 7660605 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-May-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 5.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.3 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Eutrophic, Kandosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Bothriochloa species

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam, light; moderately moist; clear to;
A12	0.20 to 0.40	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam, heavy; moderately moist; gradual to;
B2	0.40 to 0.65	Dark brown (10YR33) moist colour; fine sandy light medium clay; dry; sharp to;
2C1	0.65 to 1.30	Brown (10YR43) moist colour; loamy fine sand; single grain structures; dry; abrupt to;
2C2	1.30 to 1.70	Yellowish brown (10YR54) moist colour; sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; dry; sharp to;
3B2	1.70 to 1.80	Grey (10YR51) moist colour; common 10-20% medium 5-15mm distinct brown, common 10-20% fine < 5mm prominent orange mottles; clayey fine sand; single grain structures; moist; sharp to;
4B2	1.80 to 2.55	Brown (10YR43) moist colour; many 20-50% coarse 15-30mm prominent grey, common 10-20% medium 5-15mm prominent brown mottles; sand with a silty light clay lens at 2.45m and 10cm grey mottled sand; very few < 2% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moist; sharp to;
5Cu	2.55 to 2.90	Very dark grey (2.5Y30) moist colour; fine sandy light clay; massive structures; wet; sharp to;
6C1	2.90 to 3.80	Brown (10YR53) moist colour; coarse sand; common 10-20% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;
6C2	3.80 to 4.00	Abundant 50-90% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	3.7	
0.60	5.8	4.5	
1.00	6.4	5.2	
1.50	6.6	5.5	
2.00	6.7	5.4	
2.50	6.7	4.2	
2.75	6.1	1.4	
3.00	6.3	5.8	
3.50	7.0	6.0	
4.00	7.1	5.8	

Notes:

Horizon – 6C2 100% river gravels
 Observation H2O EC - 12.5 mS/cm; pH 6.1

Project: MWQ Site: 524

Location: 724425 mE 7660310 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 16-May-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: No record
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)
 Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark brown (10YR22) moist colour; clay loam; fine sandy; moderate 2-5mm subangular blocky structures; moderately moist;
B2?	0.25 to 0.65	Very dark greyish brown (10YR32) moist colour; common 10-20% fine < 5mm distinct brown mottles; clay loam; fine sandy; moderately moist; abrupt to;
2B2	0.65 to 1.30	Black (10YR21) moist colour; common 10-20% fine < 5mm distinct orange mottles; light medium clay; moderately moist; clear to;
3B21i	1.30 to 2.15	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent brown, very few < 2% fine < 5mm prominent yellow mottles; light medium clay; moderately moist; gradual to;
3B22ia	2.15 to 2.45	Dark grey (10YR41) moist colour; very few < 2% fine < 5mm faint yellow jarositic (from pyrite), few 2-10% fine < 5mm prominent yellow, common 10-20% fine < 5mm prominent brown mottles; moist; abrupt to;
3B3?	2.45 to 2.90	Very dark grey (10YR31) moist colour; common 10-20% medium 5-15mm prominent brown mottles; silty light clay; massive structures; wet;
3Cu	2.90 to 4.85	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
4Cu	4.85 to 6.00	Grey (2.5Y50) moist colour; sand; few 2-10% small pebbles 2-6mm and medium pebbles 6-20mm rounded quartz and microdiorite coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	2.6	
0.60	5.0	4.0	
1.00	5.0	4.4	
1.50	4.8	4.1	
1.75	3.8	3.4	
2.00	3.7	2.9	
2.25	3.9	2.4	
2.50	3.9	1.8	
2.75	3.7	1.8	
3.00	5.1	0.9	
3.25	5.6	0.7	
3.50	5.7	0.3	
3.75	6.0	0.2	
4.00	6.0	0.7	
4.25	6.2	0.9	
4.50	6.3	0.8	
4.75	6.2	0.8	
5.00	5.9	1.1	
5.50	5.6	1.3	
6.00	5.6	1.2	

Notes:

Horizon – 3Cu Lot of mangrove debris between 3.4-4.0m and pieces of wood at 3.95m
 Observation H2O EC -0.3 mS/cm; pH 4.0

Project: MWQ Site: 525

Location: 725365 mE 7654755 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 19-May-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 2.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Sporobolus virginicus (Marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; few 2-10% fine < 5mm distinct orange mottles; fine sandy light clay; massive structures; moderately moist; abrupt to;
B21	0.15 to 0.85	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct brown mottles; fine sandy light clay; massive structures; moist; clear to;
B22ia	0.85 to 1.05	Dark grey (10YR41) moist colour; many 20-50% medium 5-15mm prominent yellow jarositic (from pyrite) mottles; fine sandy light clay; massive structures; moist; clear to;
C/Bia	1.05 to 1.25	Dark grey (2.5Y40) moist colour; few 2-10% fine < 5mm prominent yellow jarositic (from pyrite) mottles; fine sandy light clay; massive structures; moist; abrupt to;
Cu	1.25 to 2.45	Very dark grey (2.5Y30) moist colour; fine sandy light clay; massive structures; wet; abrupt to;
2D	2.45 to 2.52	Dark greenish grey (5BG41) moist colour; fine sandy light medium clay; massive structures; moist;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	5.0	
0.30	5.9	5.0	
0.60	3.6	3.6	
1.00	3.0	2.7	
1.50	3.6	1.2	
2.00	3.8	1.2	
2.35	4.9	1.4	
2.50	6.2	1.4	

Notes:

Horizon – 2D EOP - too hard to gouge deeper
 Observation H2O EC - 28 mS/cm; pH 3.5

Project: MWQ Site: 526

Location: 722670 mE 7652330 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 19-May-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 3.4 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.2 %

Surface Coarse Fragments: No record

Surface Condition: Firm

Classifications

ASC: Tenosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Hibiscus tiliaceus (Cotton tree / cowtucker); Olea paniculata (native olive)

Lower Stratum: Cynodon dactylon (Couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; loamy fine sand; single grain structures; moderately moist; abrupt to;
B2	0.15 to 0.50	Brown (10YR53) moist colour; many 20-50% fine < 5mm distinct orange mottles; fine sand; single grain structures; moderately moist; sharp
2C	0.50 to 0.85	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist; sharp to;
3B2	0.85 to 1.10	Grey (5Y51) moist colour; many 20-50% fine < 5mm prominent orange mottles; fine sand; single grain structures; moderately moist;
4B21	1.10 to 1.70	Brown (10YR53) moist colour; many 20-50% medium 5-15mm prominent brown mottles; fine sand; single grain structures; moderately moist; abrupt to;
4B22	1.70 to 2.20	Yellowish brown (10YR54) moist colour; many 20-50% medium 5-15mm distinct grey mottles; fine sand; single grain structures; sharp to;
5C	2.20 to 4.75	Light yellowish brown (10YR64) moist colour; coarse sand; few 2-10% small pebbles 2-6mm, medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures; sharp to;
6Cu	4.75 to 5.15	Very dark grey (2.5Y30) moist colour; fine sand; single grain structures; sharp to;
7C	5.15 to 6.00	Olive grey (5Y52) moist colour; fine sand with a 7cm lens of light clay at 5.87m; few 2-10% medium pebbles 6-20mm and large pebbles 20-60mm rounded igneous rock (unidentified) coarse fragments; single grain structures;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.4	
0.60	5.9	4.6	
1.00	5.5	4.2	
1.50	5.4	4.2	
2.00	5.2	4.9	
2.50	6.3	6.5	
3.00	5.8	5.1	
3.50	6.2	5.9	
4.00	6.0	4.9	
4.50	6.4	4.3	
4.75	6.3	1.3	
5.00	6.9	1.5	
5.25	7.1	5.4	
5.50	6.7	6.1	
5.75	7.2	5.7	
6.00	6.8	4.7	

Notes:

Horizon – 5C 10cm gravel lens at 4.65m

Horizon – 6C Heaps of organic debris

Horizon – 7C 2mm bands of organic matter at 5.35 and 5.45m

Observation H2O EC - 28.1 mS/cm; pH 6.1

Project: MWQ Site: 527

Location: 725435 mE 7655320 mN ZONE 55 (AGD 84)
 Described: Muller, PG
 Date: 26-May-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: No record
 Elevation: 3.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0.1 %
 Surface Coarse Fragments: No record
 Surface Condition: Firm

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Cynodon dactylon (Couch); Xanthium pungens (Noogoora burr)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist colour; light clay; moderate 2-5mm cast structures; moderately moist; abrupt to;
B2	0.15 to 0.35	Black (10YR21) moist colour; few 2-10% coarse 15-30mm prominent grey mottles; medium clay; moderately moist; abrupt to;
2B2	0.35 to 0.75	Light brownish grey (2.5Y62) moist colour; common 10-20% medium 5-15mm prominent yellow-brown mottles; fine sandy loam; massive structures; moderately moist; abrupt to;
3B21i	0.75 to 1.20	Grey (10YR51) moist colour; common 10-20% medium 5-15mm prominent red, common 10-20% medium 5-15mm prominent brown mottles; light clay; moist; clear to;
3B22ia	1.20 to 1.60	Dark grey (10YR41) moist colour; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent yellow-brown mottles; silty light clay; moist; clear to;
3Cu	1.60 to 3.10	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet; abrupt to;
4D	3.10 to 3.50	Very dark grey (7.5YR30) moist colour; few 2-10% fine < 5mm prominent gley mottles; heavy clay; moderate 2-5mm lenticular structures; moist.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	3.9	
0.30	4.9	4.2	
0.60	4.2	3.7	
0.80	3.8	3.4	
1.00	3.5	3.1	
1.25	3.2	3.1	
1.50	3.1	2.5	
1.75	2.6	1.5	
2.00	3.5	1.2	
2.25	5.1	1.3	
2.50	5.7	1.2	
2.75	6.0	1.2	
3.00	6.4	1.3	
3.25	6.3	5.0	
3.50	6.2	7.5	

Notes:
 Horizon – 4D EOP - too tight for VVC to go deeper
 Observation Could not sample water

Project: MWQ Site: 528

Location: 724015 mE 7660385 mN ZONE 55 (AGD 84)

Described: Muller, PG

Date: 26-May-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 6.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No record

Surface Condition: Hard setting

Classifications

ASC: Dystrophic, Rudosolic, Oxyaquic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Saccharum officinarum (Sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Dark brown (10YR33) moist colour; fine sandy loam; massive structures; moderately moist; clear to;
2C	0.30 to 1.10	Brown (10YR43) moist colour; fine sand; massive structures; moderately moist; abrupt to;
3C	1.10 to 1.40	Brown (10YR43) moist colour; fine sandy loam; massive structures; moist; sharp to;
4B2	1.40 to 2.40	Black (10YR21) moist colour; very few < 2% fine < 5mm distinct brown mottles; medium clay; moist; clear to;
5B1	2.40 to 3.15	Brown (10YR53) moist colour; many 20-50% medium 5-15mm prominent brown mottles; clay loam; fine sandy; very few < 2% fine < 2 mm manganiferous soft segregations; moist; abrupt to;
5B2	3.15 to 4.40	Grey (10YR51) moist colour; many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; few 2-10% fine < 2 mm manganiferous soft segregations; moist;
6B2?	4.40 to 4.50	Very dark grey (2.5Y30) moist colour; common 10-20% medium 5-15mm prominent brown mottles; silty light clay; massive structures; moist; abrupt to;
6Cu	4.50 to 5.05	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet; sharp to;
7Cu	5.05 to 5.75	Very dark grey (2.5Y30) moist colour; sand with 3x2cm light clay lenses 5.48, 5.55 and 5.68m; very few < 2% small pebbles 2-6mm and medium pebbles 6-20mm rounded igneous rock (unidentified) coarse fragments; single grain structures; wet;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	4.8	
0.60	6.0	5.2	
1.00	5.8	5.4	
1.50	5.4	4.8	
2.00	5.3	5.0	
2.50	5.5	5.2	
3.00	5.5	5.6	
3.50	5.5	5.8	
4.00	5.3	5.2	
4.25	5.2	5.5	
4.50	5.5	1.2	
4.75	5.2	1.5	
5.00	5.4	1.5	
5.25	5.5	1.3	
5.50	5.7	1.7	
5.75	5.7	1.7	

Notes:

Horizon - 2Cu Mangrove roots present

Observation H2O EC - 0.3 mS/cm; pH 5.7

Project: MWQ Site: 529

Location: 719 425 mE; 7 671 560 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Dec-2002

Landscape

Geology: D-Cc - Campwyn Beds
 Substrate Lithology: No record
 Landform Pattern: Rises
 Element: footslope
 Runoff: No record
 Elevation: 4.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 1 %
 Surface Coarse Fragments: Very few < 2%, large pebbles 20-60mm, Igneous rock (unidentified)
 Surface Condition: Hard setting

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Tussock grass, 0.26-0.5m, closed or dense
 Species: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist; no mottles; fine sandy clay loam; few 2-10% subangular intermediate volcanic small pebbles 2-6mm; massive structure; no segregations; moderately moist when sampled; abrupt to;
A2j	0.15 to 0.25	Brown (10YR53) moist; light grey (10YR72) dry; no mottles; fine sandy clay loam; common 10-20% subangular intermediate volcanic small pebbles 2-6mm; massive structure; no segregations; moderately moist when sampled; sharp to;
B21	0.25 to 0.65	Many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm distinct orange mottles; medium clay; few 2-10% subangular intermediate volcanic medium pebbles 6-20mm; no segregations; moderately moist when sampled; gradual to;
B22	0.65 to 1.30	Greyish brown (2.5Y52) moist; many 20-50% medium 5-15mm prominent grey, common 10-20% medium 5-15mm prominent brown mottles; medium clay; very few < 2% subangular intermediate volcanic large pebbles 20-60mm; no segregations; moderately moist when sampled; diffuse to;
B23	1.30 to 3.00	Many 20-50% medium 5-15mm prominent brown mottles; light medium clay; no coarse fragments; no segregations; moist when sampled;
EOP -		Stopped augering as on a colluvial footslope

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	5.3	
0.60	6.1	5.5	
1.00	6.4	5.1	
1.50	6.3	5.8	
2.00	6.8	5.4	
2.50	7.1	5.9	
3.00	7.3	6.2	

Notes:

Check Site Not sampled
 Location J. Baretta, Reliance Creek

Project: MWQ Site: 530

Location: 728 765 mE; 7 663 291 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Jul-2003

Landscape

Geology: D-Cc - Campwyn Beds
 Substrate Lithology: No record
 Landform Pattern: Low hills
 Element: footslope
 Runoff: No record
 Elevation: 5.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Hypocalcic, Grey, DERMOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist; light clay; very few < 2% subrounded intermediate volcanic medium pebbles 6-20mm; moderate 2-5mm polyhedral structure; moderately moist when sampled; clear to;
B1	0.20 to 0.40	Dark brown (10YR33) moist; light medium clay; very few < 2% subrounded intermediate volcanic small pebbles 2-6mm; moderate 2-5mm subangular blocky structure; many 20-50% medium 2-6 mm manganiferous concretion; moderately moist when sampled; clear to;
B21	0.40 to 0.90	Greyish brown (2.5Y52) moist; many 20-50% fine < 5mm prominent orange, common 10-20% medium 5-15mm prominent red mottles; medium clay; very few < 2% subrounded intermediate volcanic small pebbles 2-6mm; few 2-10% medium 2-6 mm manganiferous soft; moderately moist when sampled; diffuse to;
B22	0.90 to 1.80	Light yellowish brown (10YR64) moist; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; common 10-20% subrounded intermediate volcanic large pebbles 20-60mm; very few < 2% medium 2-6 mm manganiferous soft; moderately moist when sampled;
B23k	1.80 to 2.90	Many 20-50% fine < 5mm prominent grey mottles; fine sandy light clay; few 2-10% subrounded intermediate volcanic large pebbles 20-60mm; very few < 2% fine <2 mm manganiferous soft; moderately moist when sampled; abrupt to;
BC	2.90 to 3.10	Olive (5Y53) moist; common 10-20% fine < 5mm distinct pale, few 2-10% fine < 5mm distinct brown mottles; clay loam; fine sandy; very few < 2% fine <2 mm manganiferous soft; moist when sampled; sharp to;
R	3.10 to 3.15	Very abundant > 90% microdiorite.

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.7	4.0	H
0.60	5.8	4.8	
1.00	6.7	6.1	L
1.50	7.8	8.3	H
2.00	8.2	6.8	
2.50	8.1	6.5	
3.00	7.7	8.5	H

Notes:

Location Mt. Bassett, Pioneer catchment

Project: MWQ Site: 531

Location: 727 810 mE; 7 666 700 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 14-Jul-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: No record
 Landform Pattern: Alluvial plain
 Element: Swamp
 Runoff: No record
 Elevation: 2.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: No record
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Humose, Sulfidic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Very tall closed forest (20.01-35m)
 Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Black (10YR21) moist; silty light clay; massive structure; wet when sampled; abrupt to;
B2	0.25 to 0.90	Dark grey (10YR41) moist; few 2-10% fine < 5mm distinct dark, very few < 2% fine < 5mm distinct brown mottles; light clay; weak 10-20mm subangular blocky structure; wet when sampled; clear to;
2Cu	0.90 to 1.30	Dark grey (2.5Y40) moist; silty light clay; massive structure; wet when sampled; sharp to;
3Cu	1.30 to 1.60	Dark grey (5Y41) moist; fine sand; single grain structure; wet when sampled.
EOP		As deep as could be gouged augered

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.2	
0.25	5.3	3.3	
0.50	5.8	4.3	
0.75	4.6	2.0	L
1.00	4.7	1.8	X
1.25	5.8	1.9	X
1.50	6.4	1.8	H

Notes:

Location Andergrove - Pine St., McCrearys Creek catchment

Project: MWQ Site: 532

Location: 727 500 mE; 7 665 295 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 14-Jul-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: No record

Landform Pattern: Alluvial plain

Element: Swamp

Runoff: No record

Elevation: 3.0 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications:

ASC: Humose-acidic, Sulfidic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tall closed forest (12.01-20m)

Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark grey (10YR41) moist; few 2-10% fine < 5mm distinct orange mottles; light clay; massive structure; no segregations; wet when sampled; clear to;
B21	0.20 to 0.55	Many 20-50% medium 5-15mm prominent yellow-brown mottles; light medium clay; no coarse fragments; massive structure; no segregations; wet when sampled; abrupt to;
B22	0.55 to 0.95	Grey (5Y51) moist; few 2-10% fine < 5mm distinct brown mottles; light medium clay; no coarse fragments; massive structure; no segregations; wet when sampled;
2C	0.95 to 1.25	Very dark grey (2.5Y30) moist; no mottles; silty light clay; no coarse fragments; massive structure; no segregations; wet when sampled;
EOP		As deep as could be gouged augered

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.0	1.3	L
0.25	3.7	1.6	L
0.50	3.8	2.2	
0.75	5.9	2.9	H
1.00	5.0	1.5	L
1.25	4.4	1.3	L

Notes:

Location Just south of Keeleys Road, Pioneer River catchment

Project: MWQ Site: 533

Location: 704 350 mE; 7 687 190 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Jul-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: No record
 Landform Pattern: Dunefield
 Element: Swamp
 Runoff: Very slow
 Elevation: 4.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Very poorly drained
 Slope: 0 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications:

ASC: Melacic, Rudosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Very tall closed forest (20.01-35m)
 Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Low open woodland (3.01-6m)
 Pandanus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Black (10YR21) moist; many 20-50% fine < 5mm prominent orange mottles; fine sandy light medium clay; moderate 2-5mm cast structure; moderately moist when sampled; abrupt to;
2A2e	0.20 to 0.70	Light brownish grey (10YR62) moist; white (10YR81) dry; very few < 2% medium 5-15mm prominent orange mottles; fine sand; single grain structure; moderately moist when sampled; sharp to;
3B2	0.70 to 1.90	Yellowish brown (10YR56) moist; many 20-50% medium 5-15mm prominent grey, very few < 2% fine < 5mm distinct pale mottles; fine sandy light clay; moderately moist when sampled; gradual to;
3B3	1.90 to 2.40	Light brownish grey (10YR62) moist; common 10-20% fine < 5mm prominent orange, very few < 2% fine < 5mm distinct pale mottles; clay loam; fine sandy; moderately moist when sampled; sharp to;
4R	2.40 to 2.45	Very abundant > 90% igneous rock (unidentified); EOP

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	3.5	
0.30	5.1	3.5	
0.60	6.1	3.8	
0.80	4.3	3.6	
1.00	4.1	3.5	
1.25	3.9	3.3	
1.50	3.7	3.1	
1.75	3.6	2.8	
2.00	3.7	3.0	
2.25	3.9	2.9	
2.40	3.9	2.9	

Notes:
 Location: Seaforth

Project: MWQ Site: 534

Location: 704 295 mE; 7 687 365 m N: Zone 55(AGD 84)
 Described: Muller, PG
 Date: 21-Jul-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: No record
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: Very slow
 Elevation: 5.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Rapidly drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, Soft

Classifications

ASC: Basic, Arenic, Bleached-orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Pale brown (10YR63) moist; fine sand; single grain structure; moderately moist when sampled; abrupt to;
A2e	0.15 to 0.90	Very pale brown (10YR73) dry; fine sand; very few < 2% subangular acid volcanic medium pebbles 6-20mm; moderately moist when sampled; clear to;
B2	0.90 to 1.35	Yellowish brown (10YR55) moist; fine sand; single grain structure; moderately moist when sampled; gradual to;
B3	1.35 to 1.90	Pale brown (10YR63) moist; very pale brown (10YR73) dry; many 20-50% coarse 15-30mm distinct brown, few 2-10% fine < 5mm distinct orange mottles; fine sand; single grain structure; moderately moist when sampled; gradual to;
BC	1.90 to 2.55	Light grey (10YR72) moist; white (10YR82) dry; few 2-10% medium 5-15mm prominent brown mottles; fine sand; very few < 2% rounded charcoal small pebbles 2-6mm; moderately moist when sampled; sharp to;
2B2	2.55 to 3.15	Strong brown (7.5YR58) moist; clayey fine sand; massive structure; moist when sampled; abrupt to;
2B3	3.15 to 3.30	Light yellowish brown (10YR64) moist; many 20-50% medium 5-15mm prominent grey, few 2-10% fine < 5mm prominent orange mottles; fine sand; single grain structure; wet when sampled; clear to;
3C1u	3.30 to 4.30	Grey (10YR61) moist; fine sand; very few < 2% subangular acid volcanic medium pebbles 6-20mm; single grain structure; wet when sampled; abrupt to;
3C2u	4.30 to 4.80	Grey (5Y51) moist; fine sand; single grain structure; sharp to;
3C3u	4.80 to 6.00	Very dark grey (2.5Y30) moist; fine sand; single grain structure; wet when sampled;

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.8	3.9	
0.60	5.7	5.0	
1.00	5.9	4.7	
1.50	5.8	5.1	
2.00	6.2	5.2	
2.50	5.5	4.4	
3.00	5.3	4.6	
3.25	5.2	3.6	
3.50	5.5	2.4	L
3.75	5.3	1.4	M
4.00	5.3	1.4	L
4.25	5.5	1.5	L
4.50	5.3	1.0	M
4.75	5.8	0.9	H
5.00	5.6	0.8	H
5.25	5.5	0.6	H
5.50	5.3	0.6	H
5.75	5.5	0.8	H
6.00	5.3	0.8	H

Notes:

Location Seaforth

Project: MWQ Site: 535

Location: 704 375 mE; 7 687 510 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 21-Jul-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: No record
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: Very slow
 Elevation: 5.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Rapidly drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Dark brown (7.5YR32) moist; loamy fine sand; single grain structure; moderately moist when sampled; clear to;
B21	0.25 to 0.60	Dark yellowish brown (10YR34) moist; fine sand; single grain structure; moderately moist when sampled; gradual to;
B22	0.60 to 1.70	Brown (10YR53) moist; common 10-20% fine < 5mm prominent orange mottles; fine sand; single grain structure; moderately moist when sampled; sharp to;
2C1	1.70 to 3.70	Brown (10YR54) moist; fine sand; abundant 50-90% subrounded shell small pebbles 2-6mm; single grain structure; few 2-10% fine <2 mm manganiferous soft; moderately moist when sampled; gradual to;
2C2	3.70 to 4.30	Brown (10YR53); fine sand; few 2-10% subrounded shell small pebbles 2-6mm; single grain structure; wet when sampled; abrupt to;
2C3	4.30 to 4.60	Yellowish brown (10YR56) moist; fine sand; very few < 2% rounded intermediate volcanic large pebbles 20-60mm; single grain structure; wet when sampled; sharp to;
3Cu	4.60 to 5.20	Grey (5Y51) moist; sand; common 10-20% rounded shell medium pebbles 6-20mm; massive structure; wet when sampled; sharp to;
4D	5.20 to 6.00	Dark reddish brown (5YR33) moist; many 20-50% medium 5-15mm prominent gley mottles; fine sandy light clay; massive structure; moist when sampled

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	3.7	
0.60	6.4	6.4	
1.00	6.7	6.2	
1.50	6.8	6.2	
2.00	7.5	7.5	L
2.50	7.7	8.8	M
3.00	8.0	9.5	H
3.50	8.3	9.0	H
4.00	8.1	7.5	
4.50	8.2	7.6	
4.75	8.6	5.7	L
5.00	8.4	6.2	L
5.25	7.3	3.8	L
5.50	7.2	4.9	
6.00	7.3	5.1	

Notes:
 Location Seaforth camping grounds

Project: MWQ Site: 536

Location: 704 765 mE; 7 687 325 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 22-Jul-2003

Landscape

Geology: Qd - Quaternary dune

substrate Lithology: No record

Landform Pattern: Dunefield

Element: Dunecrest

Runoff: Very slow

Elevation: 5.5 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Rapidly drained

Slope: 2 %

Surface Coarse Fragments: Few 2-10%, large pebbles 20-60mm, acid volcanic rocks

Surface Condition: Hard setting

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL

GSG: No record

PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark yellowish brown (10YR34) moist; fine sandy loam; abundant 50-90% angular acid volcanic large pebbles 20-60mm; massive structure; dry when sampled; sharp to;
2B2	0.20 to 0.90	Dark yellowish brown (10YR44) moist; fine sand; single grain structure; moderately moist when sampled; diffuse to;
2C	0.90 to 1.45	Yellowish brown (10YR54) moist; very pale brown (10YR74) dry; fine sand; single grain structure; moderately moist when sampled; sharp to;
3C1	1.45 to 2.60	Brown (10YR53) moist; very pale brown (10YR73) dry; very few < 2% subrounded shell medium pebbles 6-20mm; single grain structure; very few < 2% fine <2 mm manganiferous soft; moist when sampled; diffuse to;
3C2	2.60 to 5.20	Yellowish brown (10YR54) moist; fine sand; few 2-10% subrounded shell medium pebbles 6-20mm; single grain structure; few 2-10% fine <2 mm manganiferous soft; wet when sampled; sharp to;
3C3	5.20 to 6.00	Brown (10YR53) moist; fine sand; very few < 2% subrounded shell small pebbles 2-6mm; single grain structure; wet when sampled;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	5.3	
0.60	7.7	5.9	
1.00	8.3	6.5	
1.50	8.6	8.8	
2.00	8.7	9.8	
2.50	8.8	9.8	
3.00	8.8	10.4	
3.50	8.2	9.9	
4.00	7.8	9.7	
4.50	8.2	9.5	
5.00	7.8	8.5	
5.50	7.8	9.4	
6.00	7.5	9.0	

Notes:

Location Seaforth sand barrier, Schofield Street

Project: MWQ Site: 537

Location: 705 825 mE; 7 687 170 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Jul-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: No record
 Landform Pattern: Dunefield
 Element: Duneslope
 Runoff: Very slow
 Elevation: 4.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Rapidly drained
 Slope: 3 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, soft

Classifications

ASC: Basic, Arenic RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Mid-high open forest (6.01-12m)
 Eucalyptus tessellaris; Eucalyptus tereticornis (blue gum, forest red gum)
 Mid Stratum: Low open woodland (3.01-6m)
 Acacia leptocarpa (north coast wattle); Alphitonia excelsa (red ash, soap bush, soap tree)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist; loamy fine sand; very few < 2% subrounded quartz small pebbles 2-6mm; single grain structure; dry when sampled; clear
C	0.15 to 1.60	Yellowish brown (10YR54) moist; fine sand; very few < 2% subangular shell small pebbles 2-6mm; single grain structure; dry when sampled; sharp
2C	1.60 to 2.40	Yellowish brown (10YR54) moist; coarse sand; few 2-10% subrounded shell medium pebbles 6-20mm; single grain structure; few 2-10% fine <2 mm manganiferous soft; moderately moist when sampled; sharp to;
3B2	2.40 to 3.15	Yellowish brown (10YR54) moist; few 2-10% fine < 5mm distinct orange, common 10-20% medium 5-15mm distinct brown mottles; fine sand; single grain structure; common 10-20% coarse 6-20 mm manganiferous soft; moist when sampled; sharp to;
4Cu	3.15 to 3.30	Dark grey (2.5Y40) moist; fine sand; many 20-50% subangular shell small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
5Cu	3.30 to 3.80	Very dark grey (10YR31) moist; silty light clay; very few < 2% rounded igneous rock (unidentified) medium pebbles 6-20mm; massive structure; wet when sampled; sharp to;
6C1u	3.80 to 5.00	Dark grey (2.5Y40) moist; coarse sand; few 2-10% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled; abrupt to;
6C2	5.00 to 6.00	Dark grey (5Y41) moist; coarse sand; few 2-10% rounded igneous rock (unidentified) medium pebbles 6-20mm; single grain structure; wet when sampled;

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.2	3.8	
0.60	6.2	5.3	
1.00	6.1	5.6	
1.50	7.0	7.4	
2.00	7.5	9.3	
2.50	7.3	5.5	
3.00	6.3	7.2	
3.25	7.5	5.9	
3.50	7.3	0.7	
3.75	7.2	1.3	
4.00	7.8	1.3	
4.25	7.8	1.7	
4.50	7.6	5.8	
4.75	7.8	5.9	
5.00	8.2	4.5	
5.25	7.9	6.0	
5.50	7.9	6.2	

Notes:

Location: Seaforth sand spit, near boat ramp

Project: MWQ Site: 538

Location: 703 985 mE; 7 687 920 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Jul-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: No record
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: Very slow
 Elevation: 5.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Well drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, soft

Classifications

ASC: Basic, Arenic RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.15	Very dark brown (10YR22) moist; loamy fine sand; single grain structure; dry when sampled; clear to;
A12	0.15 to 0.35	Dark brown (10YR33) moist; fine sand; single grain structure; moderately moist when sampled; clear to;
C1	0.35 to 1.10	Yellowish brown (10YR54) moist; light yellowish brown (10YR64) dry; fine sand; single grain structure; moderately moist when sampled; abrupt to;
C2	1.10 to 1.95	Light yellowish brown (10YR64) moist; very pale brown (10YR73) dry; fine sand; few 2-10% subangular shell small pebbles 2-6mm; single grain structure; moderately moist when sampled; sharp to;
2C1	1.95 to 2.55	Yellowish brown (10YR54) moist; fine sand; very few < 2% subangular shell medium pebbles 6-20mm; single grain structure; very few < 2% fine <2 mm manganiferous soft; moderately moist when sampled; sharp to;
2C2	2.55 to 5.00	Brown (10YR53) moist; fine sand; very few < 2% rounded shell large pebbles 20-60mm; single grain structure; very few < 2% fine <2 mm manganiferous soft; wet when sampled; sharp to;
2C3	5.00 to 5.55	Brown (10YR53) moist; fine sand; very few < 2% subrounded shell small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
3Cu	5.55 to 5.60	Very dark grey (10YR31) moist; silty light clay; no coarse fragments; massive structure; wet when sampled; sharp to;
4D	5.60 to 5.85	Greenish grey (5BG51) moist; common 10-20% medium 5-15mm distinct grey mottles; fine sandy heavy clay; massive structure; moist when sampled. EOP

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	6.0	5.4	
0.60	7.2	6.1	
1.00	7.1	6.4	
1.50	8.5	8.6	
2.00	8.1	9.5	
2.50	8.2	8.7	
3.00	7.9	8.7	
3.50	7.7	9.3	
4.00	8.0	9.5	
4.50	8.1	8.4	
5.00	8.2	8.9	
5.50	8.4	6.8	
5.57	8.2	1.4	
5.75	7.9	1.5	

Notes:

Location: Seaforth frontal dune
 Horizon: PASS penetrates into 4D along mangrove root channels

Project: MWQ Site: 539

Location: 703 825 mE; 7 687 875 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Jul-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: No record
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: Very slow
 Elevation: 4.2 m
 Drainage: Rapidly drained
 Slope: 2 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose, soft

Classifications

ASC: Calcareous, Arenic, Bleached-Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tall closed forest (12.01-20m)
 Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Low woodland (3.01-6m)
 Acacia leptocarpa (north coast wattle); Livistona australis (cabbage palm, cabbage tree palm)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist; loamy fine sand; single grain structure; moderately moist when sampled; clear to;
A2e	0.15 to 0.50	Brown (10YR53) moist; white (10YR82) dry; fine sand; single grain structure; moderately moist when sampled; gradual to;
B1	0.50 to 0.70	Light yellowish brown (10YR64) moist; fine sand; single grain structure; very few < 2% fine <2 mm manganiferous soft; moderately moist when sampled; clear to;
B2	0.70 to 0.85	Yellowish brown (10YR56) moist; few 2-10% medium 5-15mm faint mottles; fine sandy loam; single grain structure; very few < 2% fine <2 mm manganiferous soft; moist when sampled; clear to;
B3	0.85 to 1.65	Brown (10YR53) moist; common 10-20% medium 5-15mm prominent brown mottles; fine sand; very few < 2% subrounded shell medium pebbles 6-20mm; single grain structure; common 10-20% medium 2-6 mm manganiferous soft; moist when sampled; sharp to -
2B2	1.65 to 2.20	Yellowish brown (10YR54) moist; many 20-50% very coarse > 30mm prominent brown mottles; fine sand; very few < 2% subrounded shell medium pebbles 6-20mm; single grain structure; very few < 2% fine <2 mm manganiferous soft; wet when sampled; abrupt to -
2C	2.20 to 2.60	Light brownish grey (10YR62) moist; fine sand; very few < 2% rounded acid volcanic medium pebbles 6-20mm; single grain structure; wet when sampled; sharp to;
3Cu	2.60 to 3.05	Dark grey (5Y41) moist; fine sand; very few < 2% rounded acid volcanic medium pebbles 6-20mm; single grain structure; wet when sampled;
4D	3.05 to 3.60	Light olive brown (2.5Y54) moist; many 20-50% coarse 15-30mm prominent gley, very few < 2% medium 5-15mm prominent red mottles; fine sandy medium heavy clay; massive structure; moist when sampled.
EOP		Too hard for VVC to penetrate further

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	5.6	
0.60	7.7	7.1	
1.00	8.2	8.2	
1.50	7.9	9.1	
2.00	7.6	8.7	
2.50	8.2	6.7	
2.75	7.8	6.4	
3.00	7.7	6.3	
3.25	7.0	7.1	
3.50	7.0	6.5	

Notes:

Location: Seaforth, next to Bowls Club

Project: MWQ Site: 540

Location: 703 535 mE; 7 688 345 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Jul-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: No record
 Landform Pattern: Dunefield
 Element: Duneslope
 Runoff: Very slow
 Elevation: 4.3 m
 Drainage: Rapidly drained
 Slope: 2 %
 Surface Coarse Fragments: Few (2-10%), medium pebbles (6-20mm), pumice
 Surface Condition: Loose, soft

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Mid-high open forest (6.01-12m)
 Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tessellaris
 Mid Stratum: Low woodland (3.01-6m)
 Acacia leptocarpa (north coast wattle)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist; loamy fine sand; very few < 2% rounded pumice medium pebbles 6-20mm; single grain structure; no segregations; dry when sampled; clear to;
B21	0.15 to 0.50	Brown (10YR43) moist; fine sand; few 2-10% rounded pumice medium pebbles 6-20mm; single grain structure; dry when sampled; abrupt to;
B22	0.50 to 1.10	Dark yellowish brown (10YR44) moist; common 10-20% fine < 5mm prominent yellow, few 2-10% fine < 5mm prominent brown mottles; fine sand; single grain structure; many 20-50% fine < 2 mm manganiferous soft; dry when sampled; abrupt to -
B3	1.10 to 1.60	Light yellowish brown (10YR64) moist; many 20-50% coarse 15-30mm prominent yellow mottles; fine sand; single grain structure; sharp to -
BC	1.60 to 1.95	Reddish brown (5YR44) moist; many 20-50% medium 5-15mm prominent brown mottles; fine sand; massive structure; very many > 50% medium 2-6 mm manganiferous soft; strongly cemented continuous massive manganiferous pan; moderately moist when sampled; sharp to;
2B2	1.95 to 2.35	Strong brown (7.5YR56) moist; many 20-50% very coarse > 30mm prominent grey, very few < 2% medium 5-15mm prominent red, very few < 2% fine < 5mm distinct yellow mottles; fine sand; very few < 2% rounded acid volcanic medium pebbles 6-20mm; single grain structure; wet when sampled; sharp to;
3Cu	2.35 to 2.90	Very dark grey (2.5Y30) moist; silty light clay; no coarse fragments; massive structure; wet when sampled; sharp to;
4Cu	2.90 to 3.30	Grey (10YR61) moist; few 2-10% fine < 5mm prominent dark, common 10-20% medium 5-15mm prominent grey, few 2-10% fine < 5mm prominent gley mottles; fine sand; massive structure; wet when sampled; abrupt to;

5D 3.30 to 3.65 Olive brown (2.5Y44) moist; many 20-50% coarse 15-30mm prominent gley, few 2-10% medium 5-15mm prominent brown mottles; fine sandy medium heavy clay; massive structure; moist when sampled. EOP - too hard for VVC to penetrate further.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	5.7	
0.60	6.5	7.5	
1.00	6.4	7.2	
1.50	4.9	4.7	
1.75	5.0		
2.00	3.8	3.7	
2.25	5.0	4.5	
2.50	3.9	0.8	
2.75	3.8	0.9	
3.00	4.2	0.7	
3.25	5.1	1.2	
3.50	5.7	2.9	

Notes:

Location: Seaforth, next to small mangrove inlet.

Project: MWQ Site: 541

Location: 707 425 mE; 7 687 115 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 24-Jul-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Sand
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: Very slow
 Elevation: 4.9 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Rapidly drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Basic, Arenic, Bleached-Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist; fine sand; common 10-20% angular intermediate volcanic medium pebbles 6-20mm; single grain structure; dry when sampled; sharp to;
2A1	0.15 to 0.35	Very dark brown (10YR22) moist; fine sand; many 20-50% angular intermediate volcanic medium pebbles 6-20mm; single grain structure; dry when sampled; abrupt to;
2A2e	0.35 to 0.65	Yellowish brown (10YR54) moist; very pale brown (10YR73) dry; fine sand; single grain structure; moderately moist when sampled; clear to;
2B2	0.65 to 0.90	Yellowish brown (10YR56) moist; few 2-10% fine < 5mm prominent orange mottles; fine sand; single grain structure; moderately moist when sampled; gradual to;
2B3	0.90 to 2.40	Yellowish brown (10YR54) moist; many 20-50% coarse 15-30mm prominent brown, common 10-20% fine < 5mm prominent orange mottles; fine sand; single grain structure; few 2-10% coarse 6-20 mm manganiferous soft; wet when sampled; sharp to;
3B2	2.40 to 2.70	Strong brown (7.5YR56) moist; common 10-20% coarse 15-30mm prominent grey mottles; sand; common 10-20% subangular acid volcanic small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
4D	2.70 to 3.10	Light grey (2.5Y72) moist; many 20-50% coarse 15-30mm prominent gley mottles; medium clay; very few < 2% subangular acid volcanic small pebbles 2-6mm; massive structure; moist when sampled.
EOP		Too hard for VVC to penetrate further

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	5.6	
0.60	6.0	5.4	
1.00	6.0	5.4	
1.50	6.6	5.7	
2.00	6.4	5.8	
2.50	5.6	5.3	
3.00	5.1	5.1	

Notes:

Location: Ball Bay camping ground.

Project: MWQ Site: 542

Location: 707 760 mE: 7 686 570 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 23-Jul-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Sand
 Landform Pattern: Dunefield
 Element: Dunecrest
 Runoff: Very slow
 Elevation: 5.6 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Rapidly drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Loose

Classifications

ASC: Basic, Arenic, Orthic, TENOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tall closed forest (12.01-20m)
 Eucalyptus tessellaris; Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark brown (10YR22) moist; loamy fine sand; single grain structure; dry when sampled; abrupt to;
B2	0.10 to 0.70	Dark yellowish brown (10YR34) moist; fine sand; single grain structure; moderately moist when sampled; gradual to;
C	0.70 to 1.30	Dark yellowish brown (10YR44) moist; fine sand; very few < 2% subrounded shell small pebbles 2-6mm; single grain structure; moderately moist when sampled; sharp to;
2C	1.30 to 1.60	Dark yellowish brown (10YR44) moist; fine sand; few 2-10% subrounded shell small pebbles 2-6mm; single grain structure; moderately moist when sampled; sharp to;
3C1	1.60 to 2.40	Dark yellowish brown (10YR44) moist; fine sand; single grain structure; moderately moist when sampled; sharp to;
3C2	2.40 to 4.20	Yellowish brown (10YR54) moist; very pale brown (10YR73) dry; fine sand; very few < 2% subrounded shell large pebbles 20-60mm; single grain structure; moist when sampled; sharp to;
4C	4.20 to 4.80	Strong brown (7.5YR56) moist; coarse sand; few 2-10% subrounded limestone medium pebbles 6-20mm; single grain structure; wet when sampled; sharp to;
5Du	4.80 to 5.05	Greenish grey (5GY51) moist; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; massive structure; moist when sampled; sharp to;
6Cu	5.05 to 5.20	Yellowish brown (10YR56) moist; coarse sand; many 20-50% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; segregations; wet when sampled; sharp to;
7Du	5.20 to 5.60	Greenish grey (5G51) moist; many 20-50% medium 5-15mm prominent brown, few 2-10% medium 5-15mm distinct dark mottles; fine sandy medium heavy clay; massive structure; moist when sampled. EOP

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	3.9	
0.60	6.7	5.3	
1.00	7.1	6.1	
1.50	7.1	6.1	
2.00	8.3	8.0	
2.50	8.4	7.2	
3.00	7.9	7.3	
3.50	8.1	7.1	
4.00	8.2	7.6	
4.50	6.8	6.2	
5.00	4.1	1.2	
5.15	6.9	1.6	
5.25	5.6	1.5	
5.50	6.2	3.0	

Notes:

Location: Ball Bay frontal dune midway along sand spit.
 Horizon: Limited PASS impregnated into D horizons and bottom of 6C.

Project: MWQ Site: 543

Location: 706 720 mE; 7 688 120 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Aug-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Sand
 Landform Pattern: Dunefield
 Element: Swale
 Runoff: Very slow
 Elevation: 5.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Rapidly drained
 Slope: 2 %
 Surface Coarse Fragments: Common (10-20%), small pebbles (2-6mm), shell
 Surface Condition: Firm

Classifications

ASC: Shelly, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark brown (10YR22) moist; loamy fine sand; common 10-20% subrounded shell small pebbles 2-6mm; single grain structure; moderately moist when sampled; abrupt to;
C1	0.25 to 1.10	Brown (10YR43) moist; fine sand; many 20-50% subrounded shell small pebbles 2-6mm; single grain structure; moderately moist when sampled; sharp to -
C2	1.10 to 1.45	Brown (10YR43) moist; fine sand; common 10-20% subrounded shell small pebbles 2-6mm; single grain structure; moderately moist when sampled; sharp to;
C3	1.45 to 2.60	Yellowish brown (10YR54) moist; fine sand; many 20-50% subrounded shell small pebbles 2-6mm; single grain structure; moderately moist when sampled; gradual to;
C4	2.60 to 3.85	Yellowish brown (10YR54) moist; fine sand; many 20-50% subrounded shell medium pebbles 6-20mm; single grain structure; moderately moist when sampled; sharp smooth to;
C5	3.85 to 3.95	Very abundant > 90% subrounded shell medium pebbles 6-20mm; massive structure; moderately cemented, continuous massive, other pan; moderately moist when sampled.
EOP		VVC could not penetrate further into cemented shell layer.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.6	6.6	
0.60	8.1	8.2	
1.00	8.3	7.2	
1.50	8.2	8.2	
2.00	8.3	8.8	
2.50	8.9	8.8	
3.00	9.1	9.2	
3.50	8.9	7.4	
3.90	8.4	7.3	

Notes:

Location: Halliday Bay, frontal dune next to Precious' Golf Course at the Halliday Bay resort.

Project: MWQ Site: 544

Location: 727 395 mE; 7 657 505 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Aug-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Clay
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: Very slow
 Elevation: 4.0 m
 Drainage: Poorly drained
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Sodic, Dermosolic, Redoxic, HYDROSOL

Vegetation

Tallest Stratum: Tall closed forest (12.01-20m)
 Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark brown (10YR22) moist; common 10-20% fine < 5mm prominent orange mottles; medium clay; moderately moist when sampled; clear to;
B21	0.25 to 0.70	Brownish yellow (10YR66) moist; many 20-50% medium 5-15mm prominent grey mottles; sandy medium clay; very few < 2% subrounded igneous rock (unidentified) small pebbles 2-6mm; moderately moist when sampled; clear to;
B22	0.70 to 1.40	Grey (5Y51) moist; many 20-50% medium 5-15mm prominent grey, common 10-20% coarse 15-30mm prominent brown mottles; coarse sandy medium clay; very few < 2% subrounded igneous rock (unidentified) small pebbles 2-6mm; moderately moist when sampled; sharp to;
2B2	1.40 to 1.90	Grey (5Y61) moist; many 20-50% coarse 15-30mm prominent brown mottles; coarse sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; moist when sampled; sharp to;
3B2	1.90 to 2.40	Light grey (5Y71) moist; common 10-20% medium 5-15mm prominent brown mottles; coarse sandy; clay; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; moderately moist when sampled; sharp to;
4C	2.40 to 3.20	Light grey (5Y71) moist; coarse sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
5C	3.20 to 3.90	Light grey (5Y71) moist; coarse sandy; clay; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; massive structure; wet when sampled; sharp to;
6C1	3.90 to 4.90	Light grey (5Y71) moist; clayey coarse sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
6C2	4.90 to 5.20	Light grey (5Y71) moist; fine sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;

6C3 5.20 to 6.00 Light grey (5Y71) moist; coarse sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.7	
0.60	6.1	4.9	
1.00	5.9	5.1	
1.50	5.3	5.0	
2.00	5.2	4.1	
2.50	5.1	4.2	
3.00	5.3	4.5	
3.50	5.5	4.8	
4.00	6.0	5.1	
4.50	5.8	4.9	
5.00	5.3	4.9	
5.50	5.5	5.0	
6.00	5.5	5.0	

Notes:

Location: Petrie Street, South Mackay

Project: MWQ Site: 545

Location: 726 805 mE; 7 657 670 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 26-Aug-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Clay
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Surface Condition: Firm

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Black (10YR21) moist; light medium clay; no coarse fragments; moderate 2-5mm cast structure; dry when sampled; sharp to;
2A1	0.15 to 0.40	Black (7.5YR20) moist; few 2-10% fine < 5mm distinct orange mottles; medium clay; dry when sampled; clear to;
2B21i	0.40 to 1.60	Grey (5Y61) moist; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; moist when sampled; clear to;
2B22ia	1.60 to 2.00	Dark grey (10YR41) moist; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), many 20-50% medium 5-15mm prominent brown mottles; light clay; very few < 2% coarse 6-20 mm ferruginous tubule; wet when sampled; abrupt to -
2C1	2.00 to 2.27	Grey (10YR51) moist; light clay; massive structure; wet when sampled; sharp to;
2C2u	2.27 to 3.80	Very dark grey (2.5Y30) moist; silty light clay with three 1 cm sand lenses between 3.0 and 3.2 m; massive structure; wet when sampled; sharp to;
3D	3.80 to 4.00	Dark greenish grey (5G41) moist; common 10-20% coarse 15-30mm prominent brown mottles; medium heavy clay; very few < 2% rounded quartz small pebbles 2-6mm; massive structure; common 10-20% medium 2-6 mm calcareous nodule; moist when sampled.
EOP		Too hard for VVC to penetrate further.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	4.4	
0.30	5.2	4.8	
0.60	5.8	5.3	
0.80	5.8	5.1	
1.00	4.5	4.3	
1.25	4.1	4.0	
1.50	3.5	3.3	
1.75	3.4	3.3	
2.00	3.6	3.3	
2.25	4.6	3.2	
2.50	5.2	1.3	
2.75	5.4	1.4	
3.00	5.5	1.4	
3.25	5.7	1.3	
3.50	5.9	1.3	
3.75	6.5	1.2	
4.00	6.8	8.1	

Notes:

Water table: Depth - 1.8 m; pH 5.4; conductivity - 3.2 dS/m
 Location: Football ground next to Mackay airport.

Project: MWQ Site: 546

Location: 726 965 mE; 7 657 230 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 26-Aug-2003

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Clay

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: Very slow

Elevation: 3.0 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Poorly drained

Slope: 0.1 %

Surface Coarse Fragments: No coarse fragments

Surface Condition: Firm

Classifications

ASC: Sulfuric, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Mid-high closed tussock grassland (0.26-0.5m)

Sporobolus virginicus (sand couch, marine couch)

Profile

Horizon	Depth (m)	Description
A11	0.00 to 0.20	Black (7.5YR20) moist; few 2-10%, fine < 5mm, prominent orange mottles; light medium clay; weak 2-5mm cast structure; dry when sampled; clear to;
A12	0.20 to 0.50	Very dark grey (10YR31) moist; few 2-10% fine < 5mm prominent orange mottles; light medium clay; massive structure; moderately moist when sampled; abrupt to;
B21i	0.50 to 0.70	Grey (10YR61) moist; common 10-20%, medium 5-15mm, prominent brown, few 2-10% medium 5-15mm prominent red, common 10-20%, medium 5-15mm, prominent dark mottles; light clay; moderately moist when; clear to;
B22i	0.70 to 1.10	Grey (10YR51) moist; many 20-50%, medium 5-15mm, prominent, brown mottles; light clay; moist when sampled; abrupt to;
B23ia	1.10 to 1.70	Grey (10YR51) moist; common 10-20% fine < 5mm prominent yellow jarositic (from pyrite), common 10-20% medium 5-15mm prominent brown mottles; light clay; wet when sampled; gradual to;
B24ia	1.70 to 2.05	Dark grey (10YR41) moist; common 10-20% medium 5-15mm prominent yellow jarositic (from pyrite) mottles; light clay; massive structure; wet when sampled; sharp to;
Cu	2.05 to 2.25	Very dark grey (10YR31) moist; silty light clay; massive structure; wet when sampled
EOP		As deep as could be sampled by gouge auger

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.2	3.7	
0.30	3.9	3.6	
0.60	3.5	3.6	
0.80	3.3	3.2	
1.00	3.2	3.3	
1.25	3.1	2.8	
1.50	3.3	2.8	
1.75	3.6	2.8	
2.00	4.3	2.1	
2.25	4.2	1.2	

Notes:

Water table: Depth 1.1 m; pH 2.8; conductivity – 9.5 dS/m

Location: Illawong Creek, next to Mackay airport

Project: MWQ Site: 547

Location: 727 745 mE; 7 657 780 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Aug-2003

Landscape

Geology: Qd - Quaternary dune
 Substrate Lithology: Sand
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 4.3 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Well drained
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Water table: -2.6 m
 Surface Condition: Firm

Classifications

ASC: Scalpic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark brown (10YR22) moist; fine sand; single grain structure; dry when sampled; abrupt to;
C1	0.25 to 0.80	Brown (10YR53) moist; fine sand; single grain structure; dry when sampled; clear to;
C2	0.80 to 1.20	Pale brown (10YR63) moist; sand; single grain structure; dry when sampled; clear to;
C3	1.20 to 1.60	Very pale brown (10YR73) moist; fine sand; single grain structure; moderately moist when sampled; abrupt to;
2B2	1.60 to 2.70	Yellowish brown (10YR56) moist; many 20-50% very coarse > 30mm prominent pale, few 2-10% coarse 15-30mm prominent brown mottles; coarse sand; very few < 2% rounded quartz small pebbles 2-6mm; single grain structure; moist when sampled; sharp to;
3Cu	2.70 to 2.95	Very dark grey (2.5Y30) moist; sand; very few < 2% rounded quartz small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
4C	2.95 to 3.40	Greyish brown (2.5Y52) moist; fine sand; single grain structure; wet when sampled; sharp to;
5C1?	3.40 to 3.70	Greyish brown (2.5Y52) moist; coarse sand; few 2-10% rounded quartz small pebbles 2-6mm; single grain structure; wet when sampled; gradual to;
5C2u	3.70 to 4.30	Dark grey (2.5Y40) moist; coarse sand; few 2-10% rounded quartz small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
6D	4.30 to 5.20	Greenish grey (5GY61) moist; clayey sand; very few < 2% subrounded quartz small pebbles 2-6mm; single grain structure; wet when sampled.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	4.9	
0.60	6.3	4.8	
1.00	6.8	5.1	
1.50	6.7	5.1	
2.00	6.8	5.0	
2.50	6.5	4.5	
2.75	5.7	0.6	
3.00	6.2	4.9	
3.25	6.3	5.0	
3.50	6.8	3.8	
3.75	6.6	1.9	
4.00	5.8	0.6	
4.25	6.9	1.1	
4.50	7.5	5.3	
4.75	7.2	4.7	
5.00	7.1	6.3	

Notes:

Location: South of Ocean International Hotel, Beverley Street.
 Water table: Insufficient sample

Project: MWQ Site: 548

Location: 728 055 mE; 7 659 235 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Aug-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Clay
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 5.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 0.5 %
 Surface Condition: Hard setting
 Water table: -2.9 m
 Surface Coarse Fragments: Abundant (50-90%), medium pebbles (6-20mm), microdiorite

Classifications

ASC: Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark brown (10YR22) moist; clay loam; common 10-20% angular microdiorite large pebbles 20-60mm; dry when sampled; sharp to;
2A1	0.25 to 0.60	Black (10YR21) moist; clay loam; dry when sampled; abrupt to;
2B2	0.60 to 1.20	Yellowish brown (10YR54) moist; common 10-20% fine < 5mm prominent brown, few 2-10% fine < 5mm distinct dark mottles; medium clay; moderately moist when sampled; clear to;
3C	1.20 to 3.40	Dark greyish brown (10YR42) moist; sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; moderately moist when sampled; clear to;
4C	3.40 to 6.00	Yellowish brown (10YR54) moist; coarse sand; few 2-10% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled. EOP

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	4.2	
0.60	5.9	4.8	
1.00	6.1	5.6	
1.50	6.4	5.5	
2.00	6.7	5.7	
2.50	6.9	5.5	
3.00	6.6	5.7	
3.50	6.4	5.6	
4.00	6.5	5.3	
4.50	7.1	5.6	
5.00	7.0	5.8	
5.50	7.2	5.8	
6.00	7.2	5.6	

Notes:
 Water table: Insufficient sample
 Location: Corner of Marsh and Pearce Streets, East Mackay.

Project: MWQ Site: 549

Location: 728 160 mE; 7 659 880 mN, Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Aug-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Sand
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 4.4 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 0.2 %
 Surface Condition: Loose, soft
 Water table: > 2.0 m
 Surface Coarse Fragments: Very few (< 2%), small pebbles (2-6mm), quartz

Classifications

ASC: Dredgic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist; coarse sand; few 2-10% rounded quartz small pebbles 2-6mm; single grain structure; dry when sampled; gradual to;
C	0.15 to 1.55	Pale brown (10YR63) moist; coarse sand; very few < 2% rounded igneous rock (unidentified) large pebbles 20-60mm; single grain structure; dry when sampled; sharp to;
2BC	1.55 to 2.15	Dark grey (5Y41) moist; very few < 2% medium 5-15mm distinct brown mottles; silty light clay; massive structure; moist when sampled; gradual to;
2Cu	2.15 to 3.00	Black (10YR21) moist; silty light clay; massive structure; moist when sampled.
EOP		Tree branch at 3.0 m stopped VVC.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	5.2	
0.60	7.1	5.6	
1.00	7.5	6.0	
1.50	7.7	5.3	
1.75	6.5	3.6	
2.00	6.9	3.5	
2.25	7.1	2.6	
2.50	7.1	0.8	
2.75	6.9	0.8	
3.00	7.1	0.7	

Notes:

Location: Old cricket oval Queens Park, East Mackay
 Water table: Insufficient sample

Project: MWQ Site: 550

Location: 726 975 mE; 7 658 145 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Aug-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Clay
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 4.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 0.2 %
 Surface Condition: Hard setting
 Water table: -2.6 m
 Surface Coarse Fragments: Many (20-50%), medium pebbles (6-20mm), microdiorite

Classifications

ASC: Natric, Dermosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark brown (10YR22) moist; clay loam; abundant 50-90% angular microdiorite medium pebbles 6-20mm; weak 2-5mm cast structure; dry when sampled; sharp to;
2A1	0.20 to 0.50	Black (10YR21) moist; medium clay; dry when sampled; clear to;
2B2	0.50 to 1.40	Yellowish brown (10YR54) moist; many 20-50% coarse 15-30mm prominent brown mottles; medium clay; moderately moist when sampled; sharp to;
3C1	1.40 to 1.90	Grey (5Y51) moist; sand; very few < 2% rounded quartz small pebbles 2-6mm; single grain structure; moderately moist when sampled; sharp to;
3C2	1.90 to 2.80	Dark grey (5Y41) moist; sand; very few < 2% rounded igneous rock (unidentified) medium pebbles 6-20mm; single grain structure; wet when sampled; sharp to;
4D	2.80 to 3.10	Dark greenish grey (5GY41) moist; many 20-50% medium 5-15mm prominent brown mottles; medium heavy clay; weak 2-5mm lenticular structure; moist when sampled.
EOP		Too hard for VVC to penetrate and too wet to hand auger.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8		
0.60	6.1		
1.00	6.3		
1.50	5.7	4.2	
2.00	5.5	4.5	
2.50	5.6	4.6	
3.00	6.5		

Notes:

Water table: Insufficient sample
 Location: Indoor Bowls Club, Bridge Road, South Mackay

Project: MWQ Site: 551

Location: 727 790 mE; 7 659 940 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 28-Aug-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Clay

Landform Pattern: Made land

Element: Plain

Runoff: Very slow

Elevation: 4.4 m

Drainage: Imperfectly drained

Slope: 0.5 %

Surface Coarse Fragments: No coarse fragments

Water table: -2.4 m

Surface Condition: Hard setting

Classifications

ASC: Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.25	Very dark brown (10YR22) moist; clay loam; weak 2-5mm cast structure; dry when sampled; sharp to;
B21	0.25 to 0.75	Brown (10YR43) moist; common 10-20% medium 5-15mm distinct dark, very few < 2% medium 5-15mm prominent brown mottles; medium heavy clay; very few < 2% medium 2-6 mm manganiferous soft; dry when sampled; gradual to;
B22	0.75 to 1.35	Light olive brown (2.5Y54) moist; common 10-20% medium 5-15mm prominent brown, few 2-10% fine < 5mm distinct grey mottles; medium clay; few 2-10% medium 2-6 mm manganiferous soft; moderately moist when sampled; sharp to;
2A2e?	1.35 to 2.40	Light brownish grey (2.5Y62) moist; fine sand; single grain structure; moderately moist when sampled; abrupt to;
2B2	2.40 to 3.20	Light brownish grey (2.5Y62) moist; many 20-50% very coarse > 30mm prominent brown mottles; sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled; abrupt to;
3C?	3.20 to 4.20	Grey (5Y51) moist; sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled; gradual to;
4C1	4.20 to 4.90	Grey (5Y61) moist; coarse sand; few 2-10% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled; diffuse to;
4C2	4.90 to 5.50	Grey (5Y61) moist; coarse sand; few 2-10% rounded igneous rock (unidentified) medium pebbles 6-20mm; single grain structure; wet when sampled; diffuse to;
4C3	5.50 to 6.00	Grey (5Y61) moist; coarse sand; common 10-20% rounded igneous rock (unidentified) large pebbles 20-60mm; single grain structure; wet when sampled. EOP

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	4.9	
0.30	5.6	5.2	
0.60	6.2	5.6	
1.00	7.4	7.1	
1.25	8.7	7.2	
1.50	9.0	7.8	
2.00	9.2	7.2	
2.50	8.5	6.6	
3.00	6.1	4.9	
3.25	6.4	4.7	
3.50	6.3	4.7	
3.75	6.0	1.3	
4.00	6.1	4.0	
4.25	6.2	4.4	
4.50	6.5	4.8	
4.75	6.5	5.0	
5.00	6.3	4.8	
5.50	6.6	4.8	
6.00	6.8	4.5	

Notes:

Water table: pH 6.6; conductivity – 1.2 dS/m
Location: Queens Park cenotaph, East Mackay

Project: MWQ Site: 552

Location: 728 070 mE; 7 659 505 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 28-Aug-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Sand
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 4.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Moderately well drained
 Slope: 0.5 %
 Surface Coarse Fragments: No coarse fragments
 Water table: -3.0 m
 Surface Condition: Firm

Classifications

ASC: Dredgic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist; coarse sand; few 2-10% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; dry when sampled; clear to;
C	0.15 to 1.70	Light yellowish brown (10YR64) moist; coarse sand; few 2-10% rounded igneous rock (unidentified) medium pebbles 6-20mm; single grain structure; moist when sampled; sharp to;
2Cu	1.70 to 3.50	Very dark grey (10YR31) moist; silty light clay; massive structure; moist when sampled; sharp to;
3Cu	3.50 to 3.55	Very dark grey (2.5Y30) moist; sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled.
EOP		No need to go any further.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	5.3	
0.60	7.0	5.5	
1.00	7.4	5.9	
1.50	7.6	5.8	
1.75	6.5	1.9	
2.00	6.8	3.6	
2.25	6.8	1.3	
2.50	7.1	1.2	
2.75	7.1	1.1	
3.00	6.9	1.2	
3.25	6.9	1.2	
3.50	7.1	1.3	
3.53	7.7	1.5	

Notes:

Water table: pH 6.8; conductivity – 2.7 dS/m
 Location: Macrossan Street, East Mackay, opposite Victoria Park State School

Project: MWQ Site: 553

Location: 727 590 mE; 7 659 475 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Aug-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Clay
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 3.9 m
 Drainage: Imperfectly drained
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Water table: -2.5 m
 Surface Condition: Firm

Classifications

ASC: Dermosolic, Redoxic, HYDROSOL

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Very dark greyish brown (10YR32) moist; fine sand; very few < 2% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; dry when sampled; sharp to;
2A11	0.40 to 0.65	Black (10YR21) moist; few 2-10% fine < 5mm faint grey, common 10-20% fine < 5mm faint brown mottles; light clay; moderately moist when sampled; gradual to;
2A12	0.65 to 0.85	Black (10YR21) moist; common 10-20% medium 5-15mm prominent brown mottles; light medium clay; moderately moist when sampled; clear to;
2B2	0.85 to 1.10	Greyish brown (2.5Y52) moist; common 10-20% fine < 5mm prominent brown, common 10-20% fine < 5mm distinct dark mottles; medium clay; moderately moist when sampled; abrupt to;
3B1	1.10 to 1.45	Grey (5Y61) moist; common 10-20% medium 5-15mm prominent brown mottles; fine sandy clay loam; moist when sampled; clear to;
3B2	1.45 to 1.90	Grey (5Y61) moist; many 20-50% medium 5-15mm prominent brown mottles; fine sandy light clay; moist when sampled; clear to;
4B2	1.90 to 2.10	Grey (10YR51) moist; many 20-50% medium 5-15mm prominent brown mottles; fine sandy loam; moist when sampled; sharp to;
5B2u	2.10 to 2.55	Light brownish grey (2.5Y62) moist; few 2-10% medium 5-15mm prominent brown mottles; fine sand; single grain structure; moist when sampled; clear to;
5C	2.55 to 3.70	Grey (5Y51) moist; fine sand; single grain structure; wet when sampled; diffuse to;
6C	3.70 to 5.70	Light brownish grey (2.5Y62) moist; sand; common 10-20% rounded igneous rock (unidentified) medium pebbles 6-20mm; single grain structure; wet when sampled; sharp to;
7D	5.70 to 5.85	Greenish grey (5G61) moist; sandy clay loam; massive structure; moist when sampled. EOP

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	4.3	
0.40	6.2		
0.60	6.3	5.1	
0.80	6.5		
1.00	6.2	4.9	
1.25	6.5		
1.50	6.7	5.4	
1.75	6.4		
2.00	5.7	4.5	
2.25	4.2	1.9	
2.50	4.4	2.0	
2.75	4.7	2.0	
3.00	5.6	2.7	
3.25	6.1	4.1	
3.50	6.0	4.2	
3.75	6.0	4.3	
4.00	6.3	4.7	
4.50	6.8	5.2	
5.00	7.3	5.3	
5.50	7.2	5.3	
5.75	6.9	6.8	

Notes:

Water table: pH 6.7; conductivity – insufficient sample
 Location: Gold Street, South Mackay

Project: MWQ Site: 554

Location: 727 515 mE; 7 659 085 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 29-Aug-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Clay
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: No data
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Water table: -2.8 m
 Surface Condition: Hard setting

Classifications

ASC: Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.35	Black (10YR21) moist; few 2-10% fine < 5mm faint orange mottles; clay loam; weak 2-5mm cast structure; moderately moist when sampled; abrupt to;
B21	0.35 to 0.75	Light olive brown (2.5Y54) moist; common 10-20% fine < 5mm distinct dark, few 2-10% fine < 5mm prominent orange mottles; medium clay; moderately moist when sampled; clear to;
B22	0.75 to 0.90	Light brownish grey (2.5Y62) moist; many 20-50% fine < 5mm prominent brown mottles; medium clay; moderately moist when sampled; sharp to;
2B2	0.90 to 1.40	Dark greyish brown (10YR42) moist; common 10-20% medium 5-15mm prominent brown mottles; coarse sand; common 10-20% rounded igneous rock (unidentified) medium and large pebbles 6-20mm and 20-60 mm; single grain structure; moderately moist
2C	1.40 to 5.20	Very pale brown (10YR73) moist; coarse sand; common 10-20% rounded igneous rock (unidentified) small pebbles 2-6mm, and common 10-20% rounded igneous rock (unidentified) medium pebbles 6-20 mm and common 10-20% rounded igneous rock (unidentified) large pebbles 20-60 mm; single grain structure; wet when sampled.
EOP		Gravelly sand would not hold in tube. VVC went to 6.0 m.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	4.7	
0.30	5.7		
0.60	6.0	5.4	
0.80	6.4		
1.00	6.1	5.6	
1.50	6.4	5.6	
2.00	6.8	5.8	
2.25	7.1	6.0	
2.50	7.1	6.0	
3.00	7.4	5.8	
3.50	7.5	6.0	
4.00	8.0	6.2	
4.50	8.0	6.1	
5.00	8.0	6.2	

Notes:

Water table: pH 6.9; conductivity – 0.64 dS/m
 Location: Clarke Street, South Mackay

Project: MWQ Site: 555

Location: 727 745 mE; 7 659 205 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 11-Sep-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Clay
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 5.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Moderately well drained
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Water table: >3.0 m
 Surface Condition: Hard setting

Classifications:

ASC: Haplic, Eutrophic, Brown, KANDOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Black (10YR21) moist; silty clay loam; weak 2-5mm cast structure; dry when sampled; sharp to;
2A1	0.40 to 0.65	Black (10YR21) moist; silty light clay; weak 2-5mm cast structure; moderately moist when sampled; gradual to;
2B21	0.65 to 1.15	Dark yellowish brown (10YR44) moist; few 2-10% fine < 5mm distinct dark mottles; fine sandy light clay; massive structure; very few < 2% fine <2 mm manganiferous soft; dry when sampled; diffuse to;
2B22	1.15 to 1.55	Yellowish brown (10YR54) moist; many 20-50% fine < 5mm prominent grey mottles; fine sandy light medium clay; very few < 2% fine <2 mm manganiferous soft; moderately moist when sampled; sharp to;
3B2	1.55 to 1.90	Light brownish grey (10YR62) moist; many 20-50% medium 5-15mm prominent brown mottles; clayey fine sand; single grain structure; moist when sampled; sharp to;
4B2	1.90 to 3.70	Yellowish brown (10YR56) moist; many 20-50% very coarse > 30mm prominent grey mottles; coarse sand; common 10-20% rounded igneous rock (unidentified) small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
4C	3.70 to 4.60	Grey (5Y51) moist; coarse sand; very few < 2% rounded igneous rock (unidentified) medium pebbles 6-20mm and few 2-10%, rounded, igneous rock (unidentified), small pebbles 2-6 mm; single grain structure; wet when sampled.
EOP		Sand would not hold in tube. VVC went to 6.0 m.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	7.6	6.1	
0.60	5.7	5.1	
1.00	6.1	5.6	
1.50	6.0	5.7	
1.75	6.2	5.6	
2.00	6.3	5.1	
2.50	6.4	5.4	
3.00	6.1	4.9	
3.50	6.3	4.9	
3.75	6.6	4.8	
4.00	7.2	4.9	
4.25	7.1	4.9	
4.50	7.4	5.0	

Notes:

Water table: pH 6.3; conductivity – insufficient sample
 Location: Corner of Evan and McIntyre Streets, South Mackay. Opposite Andrew's house.

Project: MWQ Site: 556

Location: 728 495 mE; 7 659 610 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 11-Sep-2003

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Sand

Landform Pattern: Made land

Element: Plain

Runoff: Very slow

Elevation: 5.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Moderately well drained

Slope: 0.1 %

Surface Coarse Fragments: No coarse fragments

Water table: No record (>3.0 m)

Surface Condition: Hard setting

Classifications

ASC: Dredgic, ANTHROPOSOL

GSG: No record

PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist; common 10-20% medium 5-15mm prominent orange mottles; fine sandy clay loam; abundant 50-90% angular microdiorite medium pebbles 6-20mm; massive structure; dry when sampled; abrupt to;
2C	0.15 to 2.20	Light yellowish brown (10YR64) moist; coarse sand; very few < 2% rounded igneous rock (unidentified) medium pebbles 6-20mm; single grain structure; dry when sampled; sharp to;
3Cu	2.20 to 2.45	Dark grey (2.5Y40) moist; sandy light clay; massive structure; moist when sampled; clear to;
4C	2.45 to 2.75	Dark grey (5Y41) moist; sandy light clay; massive structure; moist when sampled; sharp to;
5C1	2.75 to 3.60	Pale brown (10YR63) moist; very few < 2% coarse 15-30mm prominent orange mottles; coarse sand; very few < 2% rounded igneous rock (unidentified) medium pebbles 6-20mm and few 2-10%, rounded igneous rocks, small pebbles 2-6 mm; single grain structure; very few < 2% medium 2-6 mm manganiferous soft; wet when sampled; clear to;
5C2	3.60 to 4.60	Yellowish brown (10YR56) moist; coarse sand; very few < 2% rounded igneous rock (unidentified) medium pebbles 6-20mm and few 2-10%, rounded igneous rocks, small pebbles 2-6 mm; single grain structure; wet when sampled; clear to;
5C3	4.60 to 5.20	Pale brown (10YR63) moist; coarse sand; very few < 2% rounded igneous rock (unidentified) medium pebbles 6-20mm and few 2-10%, rounded igneous rocks, small pebbles 2-6 mm; single grain structure; wet when sampled.
EOP		Sand would not hold in tube. VVC went to 6.0 m.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	5.3	
0.60	7.4	6.6	
1.00	7.6	6.3	
1.50	7.5	6.2	
2.00	7.6	5.5	
2.25	6.0	1.8	
2.50	6.4	3.1	
2.75	6.3	3.9	
3.00	6.6	5.8	
3.50	6.9	5.8	
4.00	6.4	5.7	
5.00	6.7	5.3	

Notes:

Watertable: Insufficient sample

Location: Corner of Dalrymple and Hoey Streets, East Mackay

Project: MWQ Site: 557

Location: 728 505 mE; 7 659 250 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 12-Sep-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Sand
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 5.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Rapidly drained
 Slope: 0.1 %
 Surface Condition: Hard setting
 Watertable: No record (>3.5 m)
 Surface Coarse Fragments: Abundant (50-90%), large pebbles (20-60mm), microdiorite

Classifications

ASC: Dredgic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark brown (10YR33) moist; loamy fine sand; abundant 50-90%, angular microdiorite, large pebbles 20-60mm; single grain structure; dry when sampled; abrupt to;
2A1	0.20 to 0.65	Very dark greyish brown (10YR32) moist; fine sand; single grain structure; dry when sampled; gradual to;
2C	0.65 to 1.60	Light yellowish brown (10YR64) moist; fine sand; very few < 2%, subrounded quartz, small pebbles 2-6mm; single grain structure; dry when sampled; gradual to;
2C2	1.60 to 2.80	Light yellowish brown (10YR64) moist; sand; few 2-10%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; dry when sampled; diffuse to;
3C	2.80 to 4.30	Light yellowish brown (10YR64) moist; coarse sand; few 2-10%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; moderately moist when sampled; sharp to;
4Cu	4.30 to 4.60	Dark grey (5Y41) moist; sand; very few < 2%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; moist when sampled; sharp to;
5C	4.60 to 5.30	Light yellowish brown (10YR64) moist; coarse sand; common 10-20%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; wet when sampled.
EOP	Sand would not hold in tube. VVC went to 6.0 m.	

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	7.6	5.6	
0.60	6.5	5.3	
1.00	6.3	5.2	
1.50	6.4	5.3	
2.00	7.3	5.6	
2.50	7.2	5.2	
3.00	7.0	5.3	
3.50	7.3	5.4	
4.00	6.9	5.3	
4.50	6.9	4.3	
5.00	7.0	5.2	

Notes:

Watertable: Insufficient sample
 Location: Mulherin Street, East Mackay

Project: MWQ Site: 558

Location: 728 985 mE; 7 660 050 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 12-Sep-2003

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Sand

Landform Pattern: Dunefield

Element: Dunecrest

Runoff: No runoff

Elevation: 6.8 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Rapidly drained

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Watertable: No record (>3.0 m)

Surface Condition: Loose, Soft

Classifications

ASC: Arenic, RUDOSOL

GSG: No record

PPF: No record

Vegetation

Lower Stratum: Tall open tussock grassland (0.51-1m)

Rhynchelytrum repens; Panicum maximum var. maximum (guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist; loamy fine sand; fragments; single grain structure; dry when sampled; clear to;
C	0.15 to 2.40	Light yellowish brown (10YR64) moist; white (10YR82) dry; fine sand; coarse fragments; single grain structure; dry when sampled; abrupt to;
2C	2.40 to 5.70	Light yellowish brown (10YR64) moist; coarse sand; few 2-10%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; moist when sampled; abrupt to;
3C	5.70 to 6.00	Pale brown (10YR63) moist; fine sand; single grain structure; wet when sampled.
EOP		

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	4.9	
0.60	6.1	4.8	
1.00	5.9	4.8	
1.50	6.2	4.9	
2.00	6.4	5.0	
2.50	6.8	5.3	
3.00	6.3	5.0	
3.50	6.8	5.1	
4.00	6.9	5.2	
4.50	7.0	5.1	
5.00	7.0	5.3	
5.50	7.1	5.1	
6.00	7.3	5.3	

Notes:

Watertable: insufficient sample

Location: Sandfly Creek, East Mackay

Project: MWQ Site: 559

Location: 727 470 mE; 7 658 780 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Sep-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Clay
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 4.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: -2.4 m
 Surface Condition: Hard setting

Classifications

ASC: Spolic, ANTHROPOSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.35	Very dark greyish brown (10YR32) moist; sandy loam; common 10-20%, subrounded igneous rock (unidentified), medium pebbles 6-20mm; dry when sampled; clear to;
2A1	0.35 to 0.60	Very dark greyish brown (10YR32) moist; clay loam; few 2-10%, subrounded igneous rock (unidentified), small pebbles 2-6mm; dry when sampled; sharp to;
3A1	0.60 to 0.75	Very dark greyish brown (10YR32) moist; common 10-20%, fine < 5mm, distinct brown mottles; light medium clay; dry when sampled; clear to;
4B2	0.75 to 0.95	Yellowish brown (10YR56) moist; many 20-50%, medium 5-15mm, prominent grey mottles; clay loam; fine sandy; moderately moist when sampled; sharp to;
5B2	0.95 to 1.80	Grey (10YR61) moist; many 20-50%, medium 5-15mm, prominent brown, few 2-10%, fine < 5mm, prominent red mottles; fine sandy loam; moist when sampled; sharp to;
6B2i	1.80 to 2.05	Dark grey (2.5Y40) moist; common 10-20%, fine < 5mm, prominent brown mottles; light clay; massive structure; moist when sampled;
6Cu	2.05 to 2.90	Very dark grey (2.5Y30) moist; silty light clay; massive structure; wet when sampled; sharp to;
7C1u	2.90 to 3.10	Dark grey (5Y41) moist; sand; very few < 2%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; wet when sampled; sharp
7C2	3.10 to 5.10	Grey (5Y51) moist; sand; very few < 2%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; wet when sampled; sharp
8Cu	5.10 to 5.20	Very dark grey (2.5Y30) moist; silty light clay; massive structure; wet when sampled; sharp to;

9C 5.20 to 5.40 Light brownish grey (10YR62) moist; coarse sand; few 2-10%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; wet when sampled. EOP

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.7	5.0	
0.30	5.9	4.8	
0.60	5.8	4.7	
0.80	5.4	4.6	
1.00	7.0	5.4	
1.25	7.0	5.9	
1.50	6.6	5.6	
1.75	6.2	5.6	
2.00	5.2	3.5	
2.25	5.1	1.5	
2.50	5.2	1.4	
2.75	5.3	1.4	
3.00	6.0	1.6	
3.25	6.9	3.6	
3.50	7.1	4.6	
3.75	7.0	4.8	
4.00	6.5	5.1	
4.25	6.8	4.9	
4.50	6.7	4.5	
4.75	6.2	4.0	
5.00	6.0	4.2	
5.15	5.6	1.4	
5.25	6.1	4.4	

Notes:

Watertable: pH: 5.7; conductivity: insufficient sample
 Location: corner Scott and Edward Streets, South Mackay

Project: MWQ Site: 560

Location: 727 200 mE; 7 658 530 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 15-Sep-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Clay
 Landform Pattern: Made land
 Element: Plain
 Runoff: Very slow
 Elevation: 4.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 0.1 %
 Surface Condition: Hard setting
 Watertable: -3.4 m
 Surface Coarse Fragments: Abundant (50-90%), medium pebbles (6-20mm), microdiorite

Classifications

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

No Record

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist; sandy loam; many 20-50%, angular microdiorite, medium pebbles 6-20mm; ; dry when sampled; abrupt to;
2A1	0.20 to 0.40	Very dark greyish brown (10YR32) moist; fine sandy loam; fragments; dry when sampled; abrupt to;
2B2	0.40 to 0.65	Yellowish brown (10YR56) moist; common 10-20%, medium 5-15mm, distinct grey, few 2-10%, medium 5-15mm, prominent brown mottles; sandy light medium clay; moderately moist when sampled; sharp to;
3B2	0.65 to 0.95	Light brownish grey (2.5Y62) moist; few 2-10%, medium 5-15mm, prominent brown mottles; sand; very few < 2%, subrounded quartz, small pebbles 2-6mm; single grain structure; moderately moist when sampled; sharp to;
4B2	0.95 to 2.40	Light grey (10YR71) moist; many 20-50%, very coarse > 30mm, prominent brown mottles; coarse sandy medium clay; very few < 2%, subrounded quartz, small pebbles 2-6mm; moist when sampled; sharp to;
5C	2.40 to 3.60	Grey (N60) moist; sandy loam; very few < 2%, rounded igneous rock (unidentified), small pebbles 2-6mm; massive structure; wet when sampled; clear to;
6B2	3.60 to 5.70	Greyish brown (2.5Y52) moist; many 20-50%, very coarse > 30mm, prominent brown mottles; sand; very few < 2%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; wet when sampled.
EOP		Sand would not hold in tube. VVC went to 6.0 m.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	5.1	
0.50	6.8		
0.60	7.1	5.6	
1.00	6.3	5.2	
1.50	6.3	5.4	
2.00	5.8	4.9	
2.50	5.3	3.9	
3.00	5.8	2.9	
3.50	5.4	3.2	
4.00	5.8	5.1	
4.50	6.0	5.3	
5.00	5.8	4.4	
5.50	6.1	5.2	

Notes:

Watertable: pH-5.9; conductivity-insufficient sample
 Location: Mengel Street North, South Mackay. Next to Harrup Park.

Project: MWQ Site: 561

Location: 726 840 mE; 7 649 550 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 16-Sep-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Clay
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: Very slow
 Elevation: 3.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Very poorly drained
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: -1.4 m
 Surface Condition: Firm

Classifications

ASC: Melacic, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tall closed forest (12.01-20m)
 Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (blue gum, forest red gum)
 Mid Stratum: Low open woodland (3.01-6m)
 Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Mid-high closed tussock grassland (0.26-0.5m)
 Sporobolus virginicus (sand couch, marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist; few 2-10%, fine < 5mm, distinct orange mottles; silty clay loam; moderate, 2-5mm, cast structure; dry when sampled; abrupt to;
B2	0.20 to 0.55	Greyish brown (2.5Y52) moist; common 10-20%, medium 5-15mm, distinct brown mottles; silty light medium clay; moderately moist when sampled; clear to;
2B21i	0.55 to 0.75	Dark greyish brown (10YR42) moist; common 10-20%, medium 5-15mm, prominent brown, common 10-20%, coarse 15-30mm, prominent red mottles; silty light clay; moderately moist when sampled; abrupt to;
2B22ia	0.75 to 1.30	Dark grey (10YR41) moist; common 10-20%, fine < 5mm, prominent yellow jarositic (from pyrite), many 20-50%, medium 5-15mm, prominent brown mottles; silty light clay; moist when sampled; abrupt to;
2C	1.30 to 1.55	Very dark grey (10YR31) moist; silty light clay; massive structure; wet when sampled; sharp to;
3C	1.55 to 2.00	Greyish brown (10YR52) moist; coarse sand; very few < 2%, subrounded quartz, small pebbles 2-6mm; single grain structure; wet when sampled.
EOP	As deep as could be sampled by gouge auger.	

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	3.9	2.5	
0.25	3.3	3.0	
0.50	3.3	3.0	
0.75	3.2	2.7	
1.00	3.0	2.7	
1.25	3.1	2.8	
1.50	3.2	3.1	
1.75	3.4	3.1	
2.00	3.4	3.0	

Notes:

Watertable: pH-3.3; conductivity-10.1 dS/m
 Location: N. Jensen, McEwans Beach Road.

Project: MWQ Site: 562

Location: 726 865 mE; 7 649 655 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 16-Sep-2003

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Clay

Landform Pattern: Alluvial plain

Element: Plain

Runoff: Very slow

Elevation: 3.3 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Poorly drained

Slope: 0.1 %

Surface Coarse Fragments: No coarse fragments

Watertable: -1.6 m

Surface Condition: Firm

Classifications

ASC: Melacic, Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tall closed forest (12.01-20m)

Melaleuca leucadendra (Long-leaved paperbark); Eucalyptus tereticornis (blue gum, forest red gum)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist; very few < 2%, fine < 5mm, faint orange mottles; light clay loam; fine sandy; weak, 2-5mm, cast structure; dry when sampled; abrupt to;
B21	0.15 to 0.35	Black (10YR21) moist; few 2-10%, fine < 5mm, faint yellow mottles; light medium clay; dry when sampled; abrupt to;
B22	0.35 to 0.70	Greyish brown (2.5Y52) moist; common 10-20%, medium 5-15mm, distinct brown, few 2-10%, fine < 5mm, distinct dark mottles; light medium clay; moderately moist when sampled; clear to;
2B2?	0.70 to 1.10	Dark greyish brown (10YR42) moist; many 20-50%, coarse 15-30mm, prominent brown, few 2-10%, fine < 5mm, distinct red mottles; light clay; moist when sampled; sharp to;
3B2?	1.10 to 1.40	Dark grey (10YR41) moist; many 20-50%, medium 5-15mm, prominent brown mottles; coarse sand; very few < 2%, subrounded quartz, small pebbles 2-6mm; single grain structure; wet when sampled; abrupt to;
3C?	1.40 to 2.00	Grey (10YR61) moist; coarse sand; very few < 2%, subrounded quartz, small pebbles 2-6mm; single grain structure; wet when sampled.
EOP		As deep as could be sampled by gouge auger.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.7	3.3	
0.30	3.8	3.3	
0.60	3.5	3.4	
0.80	3.2	3.0	
1.00	3.2	3.3	
1.25	3.3	3.0	
1.50	3.2	3.3	
1.75	3.3	3.1	
2.00	3.3	3.0	

Notes:

Watertable: Insufficient sample

Location: N. Jensen, McEwans Beach Road

Project: MWQ Site: 563

Location: 728 730 mE; 7 647 960 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 16-Sep-2003

Landscape

Geology: Qd - Quaternary dune

Substrate Lithology: Sand

Landform Pattern: Dunefield

Element: Swale

Runoff: Very slow

Elevation: 3.0 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Poorly drained

Slope: 2 %

Surface Coarse Fragments: No coarse fragments

Watertable: -1.2 m

Surface Condition: Loose, soft

Classifications

ASC: Rudosolic, Oxyaquic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tall closed forest (12.01-20m)

Species: Casuarina equisetifolia (Coastal She-oak); Melaleuca leucadendra (Long-leaved paperbark)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist; loamy fine sand; fragments; single grain structure; dry when sampled; clear to;
C	0.15 to 0.50	Yellowish brown (10YR54) moist; fine sand; single grain structure; dry when sampled; abrupt to;
2C	0.50 to 1.10	Light yellowish brown (10YR64) moist; coarse sand; very few < 2%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; dry when sampled; sharp to;
3C	1.10 to 1.30	Grey (10YR51) moist; fine sandy loam; massive structure; moist when sampled; clear to;
4Cu	1.30 to 1.55	Very dark grey (2.5Y30) moist; silty light clay; massive structure; wet when sampled; abrupt to;
5C1u	1.55 to 1.80	Very dark grey (2.5Y30) moist; fine sand; single grain structure; wet when sampled; abrupt to;
5C2u	1.80 to 2.05	Very dark grey (2.5Y30) moist; fine sandy loam; very few < 2%, rounded basalt, medium pebbles 6-20mm; massive structure; wet when sampled;
6D1u	2.05 to 2.30	Dark grey (2.5Y40) moist; medium clay; massive structure; moist when sampled; diffuse to;
6D2u	2.30 to 2.60	Greenish grey (5G51) moist; medium heavy clay; massive structure; moist when sampled.
EOP		Too hard for VVC to penetrate further.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.5	3.7	
0.30	6.2	5.2	
0.60	7.4	5.7	
0.80	7.3	5.1	
1.00	6.5	4.7	
1.25	7.0	1.8	
1.50	6.8	1.4	
1.75	7.3	1.8	
2.00	7.4	2.0	
2.25	7.1	2.7	
2.50	7.0	2.4	

Notes:

Watertable: pH-6.6; conductivity-5.5 dS/m

Location: McEwans Beach, southern end

Project: MWQ Site: 564

Location: 725 725 mE; 7 644 560 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Sep-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Clay
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: Very slow
 Elevation: 2.5 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Poorly drained
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: -2.2 m
 Surface Condition: Firm

Classifications

ASC: Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Low closed forest (3.01-6m)
 Species: Excoecaria agallocha (Blind-your-eye mangrove); Lumnitzera racemosa (Black mangrove)
 Mid Stratum: Dwarf woodland (1.01-3m)
 Species: Aegiceras corniculatum (River mangrove)
 Lower Stratum: Mid-high closed tussock grassland (0.26-0.5m)
 Species: Sporobolus virginicus (sand couch, marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark greyish brown (2.5Y32) moist; common 10-20%, fine < 5mm, distinct orange mottles; clay loam; fine sandy; dry when sampled; abrupt to;
B2	0.05 to 0.70	Greyish brown (2.5Y52) moist; many 20-50%, medium 5-15mm, prominent brown, few 2-10%, medium 5-15mm, prominent grey mottles; fine sandy light clay; very few < 2%, fine < 2 mm, manganiferous soft segregations; moderately moist when sampled; sharp to;
2B2	0.70 to 0.95	Yellowish brown (10YR54) moist; sand; single grain structure; moderately moist when sampled; sharp to;
3B2	0.95 to 1.40	Grey (10YR51) moist; many 20-50%, medium 5-15mm, prominent brown mottles; light clay; very few < 2%, medium 2-6 mm, manganiferous soft segregations; moist when sampled; sharp to;
4B2	1.40 to 2.10	Brown (10YR53) moist; many 20-50%, medium 5-15mm, prominent brown mottles; fine sand; single grain structure; moist when sampled; sharp to;
5Cu	2.10 to 2.55	Very dark grey (2.5Y30) moist; light clay; massive structure; wet when sampled; sharp to;

6B2	2.55 to 4.90	Dark yellowish brown (10YR44) moist; coarse sand; common 10-20%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; common 10-20%, fine < 2 mm, manganiferous soft segregations; wet when sampled; sharp to;
7D	4.90 to 5.10	Yellowish brown (10YR54) moist; few 2-10%, medium 5-15mm, prominent gley mottles; heavy clay; moderate 2-5mm lenticular structure; common 10-20%, coarse 6-20 mm, calcareous soft segregations; moist when sampled.
EOP		Too hard for VVC to penetrate deeper.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.3	5.9	
0.60	6.3	5.8	
1.00	6.1	5.9	
1.25	5.9	4.7	
1.50	5.9	5.0	
2.00	6.2	3.6	
2.25	6.0	1.3	
2.50	5.7	1.6	
2.75	6.3	7.1	
3.00	6.3	7.2	
3.50	6.1	7.0	
4.00	6.8	7.4	
4.50	7.0	7.5	
5.00	6.3	6.5	

Notes:

Watertable: pH-6.5; conductivity-17.1 dS/m
 Location: Dunrock peninsular

Project: MWQ Site: 565

Location: 725 360 mE; 7 646 230 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 17-Sep-2003

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Clay

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: Very slow

Elevation: 3.2 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Very poorly drained

Slope: 0.1 %

Surface Coarse Fragments: No coarse fragments

Watertable: -1.25 m

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Low closed forest (3.01-6m)

Species: Bruguiera species; Excoecaria agallocha (Blind-your-eye mangrove)

Mid Stratum: Dwarf woodland (1.01-3m)

Species: Aegiceras corniculatum (River mangrove); Ceriops tagal (Yellow mangrove, spurred mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist; common 10-20%, fine < 5mm, prominent brown mottles; silty light clay; massive structure; moist when sampled; diffuse to;
B2	0.15 to 0.75	Dark grey (10YR41) moist; many 20-50%, medium 5-15mm, prominent brown mottles; silty light clay; massive structure; moist when sampled; gradual to;
C1u	0.75 to 1.40	Very dark grey (2.5Y30) moist; silty light clay; massive structure; wet when sampled; abrupt to;
C2u	1.40 to 1.70	Dark grey (2.5Y40) moist; fine sandy light clay; massive structure; wet when sampled.
EOP		As deep as could be sampled by gouge auger

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.5	
0.30	5.7	4.1	
0.60	5.8	4.7	
0.80	5.9	1.4	
1.00	5.9	1.2	
1.25	5.9	1.3	
1.50	5.8	1.7	
1.70	5.8	1.6	

Notes:

Watertable: pH-6.1; conductivity-17.5 dS/m

Location: N.Jensen, Sandy Creek

Project: MWQ Site: 566

Location: 724 770 mE; 7 646 350 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 17-Sep-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Clay
 Landform Pattern: Tidal flat
 Element: Intertidal flat
 Runoff: Very slow
 Elevation: 3.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Very poorly drained
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: -1.1 m
 Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Low open woodland (3.01-6m)
 Species: Avicennia marina (Grey mangrove)
 Mid Stratum: Dwarf woodland (1.01-3m)
 Species: Aegiceras corniculatum (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist; very few < 2%, fine < 5mm, faint brown mottles; silty light clay; weak 2-5mm cast structure; moist when sampled; clear to;
B2	0.15 to 0.45	Dark grey (10YR41) moist; common 10-20%, medium 5-15mm, distinct brown mottles; silty light clay; massive structure; moist when sampled; clear to;
C1u	0.45 to 1.10	Dark grey (5Y41) moist; silty light clay; massive structure; wet when sampled; diffuse to;
C2u	1.10 to 1.80	Very dark grey (2.5Y30) moist; silty light clay; massive structure; wet when sampled.
EOP		As deep as could be sampled by gouge auger.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.5	4.7	
0.30	6.1	4.6	
0.50	6.1	3.0	
0.60	6.2	1.7	
0.80	6.2	3.6	
1.00	6.2	3.4	
1.25	6.3	1.9	
1.50	6.4	1.6	
1.75	6.5	1.8	

Notes:

Watertable: pH-6.4; conductivity-13.9 dS/m
 Location: M. Deguara, Sandy Creek

Project: MWQ Site: 567

Location: 727 895 mE; 7 649 005 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 18-Sep-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Clay

Landform Pattern: Alluvial plain

Element: Plain

Runoff: Very slow

Elevation: No data available

Microrelief: Debil-debil

Microrelief Component: Depression

Drainage: Imperfectly drained

Slope: 0.1 %

Surface Coarse Fragments: No coarse fragments

Watertable: No record (>2.0 m)

Surface Condition: Hard setting

Classifications

ASC: Sodosolic, Redoxic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Tall open woodland (12.01-20m)

Species: Eucalyptus tessellaris; Eucalyptus alba (poplar gum)

Mid Stratum: Low open woodland (3.01-6m)

Species: Melaleuca viridiflora (paperbark ti-tree, broad-leaved ti-tree, broad-leaved tea-tree)

Lower Stratum: Tall closed tussock grassland (0.51-1m)

Species: Triodia species; Heteropogon contortus (black speargrass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Very dark greyish brown (10YR32) moist; many 20-50%, fine < 5mm, distinct orange mottles; clay loam; moderate, 2-5mm, cast structure; dry when sampled; abrupt to;
A2j	0.05 to 0.12	Dark greyish brown (10YR42) moist; white (10YR81) dry; many 20-50%, fine < 5mm, distinct orange mottles; clay loam; weak, 2-5mm, cast structure; dry when sampled; sharp to;
B2	0.12 to 0.70	Greyish brown (2.5Y52) moist; many 20-50%, medium 5-15mm, prominent brown mottles; medium clay; dry when sampled; clear to;
2B2	0.70 to 1.10	Dark grey (10YR41) moist; few 2-10%, medium 5-15mm, prominent brown mottles; clay loam; sandy; moderately moist when sampled; abrupt to;
3B2	1.10 to 1.70	Light brownish grey (2.5Y62) moist; common 10-20%, medium 5-15mm, prominent brown mottles; medium clay; moderately moist when sampled; sharp to;
4B2	1.70 to 1.90	Light brownish grey (10YR62) moist; many 20-50%, medium 5-15mm, distinct pale mottles, and few 2-10%, fine < 5mm, distinct brown mottles; sandy loam; massive structure; strongly cemented, continuous, massive pan; moderately moist when sampled.
EOP		Pan too hard to auger deeper.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.3	
0.30	4.6	4.2	
0.60	4.5	4.0	
0.80	4.1	4.0	
1.00	4.1	3.8	
1.25	4.2	4.0	
1.50	4.2	4.1	
1.75	4.5	4.1	

Notes:

Location: L.Warrener, Sandy Creek

Project: MWQ Site: 568

Location: 724 545 mE; 7 646 580 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 18-Sep-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Clay
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: Very slow
 Elevation: 3.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: -1.7 m
 Surface Condition: Firm

Classifications

ASC: Natric, Sulfuric, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tall open woodland (12.01-20m)
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Low closed forest (3.01-6m)
 Species: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Low closed tussock grassland (<0.25)
 Species: Cynodon dactylon (couch, green couch, Bermuda grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist; common 10-20%, fine < 5mm, distinct orange mottles; fine sandy light medium clay; moderately moist when sampled; clear to;
B2	0.15 to 0.55	Very dark grey (10YR31) moist; many 20-50%, medium 5-15mm, prominent brown mottles; silty medium clay; few 2-10%, medium 2-6 mm, manganiferous soft segregations; moderately moist when sampled; clear to;
2B21i	0.55 to 0.90	Dark grey (10YR41) moist; many 20-50%, medium 5-15mm, prominent brown mottles; silty light clay; moist when sampled; clear to;
2B22ia	0.90 to 1.20	Dark grey (10YR41) moist; few 2-10%, fine < 5mm, distinct yellow jarositic (from pyrite), common 10-20%, fine < 5mm, prominent orange mottles; silty light clay; moist when sampled; sharp to;
2Cu	1.20 to 2.15	Dark grey (2.5Y40) moist; silty light clay; massive structure; wet when sampled; sharp to;
3Cu	2.15 to 2.45	Dark grey (5Y41) moist; fine sand; single grain structure; wet when sampled; sharp to;
4Cu	2.45 to 2.55	Very dark grey (2.5Y30) moist; silty light clay; massive structure; wet when sampled; sharp to;
5Cu	2.55 to 3.85	Dark grey (5Y41) moist; fine sand; single grain structure; wet when sampled; abrupt to;

6C	3.85 to 4.60	Greyish brown (2.5Y52) moist; coarse sand; common 10-20%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
7D	4.60 to 4.80	Greenish grey (5GY51) moist; many 20-50%, medium 5-15mm, prominent brown mottles; medium heavy clay; weak 2-5mm lenticular structure; moist when sampled. EOP

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.6	3.4	
0.30	6.4	6.4	
0.60	6.0	5.2	
0.80	6.1	4.4	
1.00	3.6	2.7	
1.15	3.7		
1.25	5.9	2.0	
1.50	6.4	2.3	
1.75	6.7	2.9	
2.00	7.1	2.5	
2.25	7.8	2.5	
2.50	6.7	2.2	
2.75	7.4	6.3	
3.00	7.8	5.4	
3.25	7.9	2.4	
3.50	7.4	2.9	
3.75	7.2	3.4	
4.00	8.4	5.8	
4.25	7.5	6.3	
4.50	7.1	6.0	
4.75	7.5	8.1	

Notes:

Watertable: pH-6.9; conductivity-7.4 dS/m.
 Location: M. Deguara, Sandy Creek.

Project: MWQ Site: 569

Location: 724 570 mE; 7 646 740 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 18-Sep-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Clay

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: Very slow

Elevation: 4.0 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Moderately well drained

Slope: 0.3 %

Surface Coarse Fragments: No coarse fragments

Watertable: -2.1 m

Surface Condition: Firm

Classifications

ASC: Melacic, Eutrophic, Brown, KANDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Very tall closed tussock grassland (1.01-3m)

Species: Saccharum officinarum (sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Very dark greyish brown (10YR32) moist; clay loam; fine sandy; moist when sampled; gradual to;
B2	0.20 to 0.90	Dark brown (10YR33) moist; clay loam; fine sandy; massive structure; very few < 2%, fine <2 mm, manganiferous soft segregations; moist when sampled; abrupt to;
2B2	0.90 to 1.60	Greyish brown (10YR52) moist; many 20-50%, medium 5-15mm, prominent brown mottles; fine sandy loam; massive structure; very few < 2%, fine <2 mm, manganiferous soft segregations; moist when sampled; sharp to;
3C	1.60 to 5.20	Pale brown (10YR63) moist; coarse sand; few 2-10%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; wet when sampled; sharp to;
4Cu	5.20 to 5.40	Grey (10YR51) moist; coarse sand; many 20-50%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; wet when sampled; sharp to;
5Cu	5.40 to 5.60	Black (2.5Y20) moist; silty light clay; few 2-10%, rounded igneous rock (unidentified), small pebbles 2-6mm; massive structure; wet when sampled; sharp to;
6D	5.60 to 5.70	Greenish grey (5GY51) moist; many 20-50%, medium 5-15mm, distinct brown mottles; medium heavy clay; weak, 2-5mm, lenticular structure; segregations; moist when sampled.
EOP		Too hard for VVC to penetrate deeper.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.3	3.7	
0.60	4.4	3.7	
1.00	4.5	4.7	
1.50	5.5	4.8	
2.00	6.8	4.9	
2.50	7.4	5.3	
3.00	6.7	5.5	
3.50	6.5	5.1	
4.00	7.1	5.4	
4.50	6.6	5.5	
5.00	7.2	5.5	
5.25	7.2	0.2	
5.50	6.4	0.9	
5.70	6.4	7.9	

Notes:

Watertable: insufficient sample

Location: M. Deguara, Sandy Creek

Project: MWQ Site: 570

Location: 722 960 mE; 7 646 865 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Oct-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Clay
 Landform Pattern: Alluvial plain
 Element: Drainage depression
 Runoff: Very slow
 Elevation: 3.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Poorly drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: No record (>2.2 m)
 Surface Condition: Hard setting

Classifications

ASC: Kandosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Low closed tussock grassland (<0.25)
 Species: Sporobolus virginicus (sand couch, marine couch); Cynodon dactylon (couch, green couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist; many 20-50%, fine < 5mm, distinct orange mottles; clay loam; dry when sampled; abrupt to;
B2	0.20 to 0.55	Very dark grey (10YR31) moist; many 20-50%, fine < 5mm, distinct orange mottles; light clay; few 2-10%, fine <2 mm, manganiferous soft segregations; moderately moist when sampled; sharp to;
2B2	0.55 to 0.70	Greyish brown (2.5Y52) moist; many 20-50%, medium 5-15mm, prominent brown mottles; fine sand; single grain structure; moderately moist when sampled; sharp to;
3B2	0.70 to 2.05	Dark grey (10YR41) moist; common 10-20%, fine < 5mm, distinct brown mottles; light clay; massive structure; moist when sampled; gradual to;
3Cu	2.05 to 3.00	Dark grey (2.5Y40) moist; silty light clay; massive structure; wet when sampled.
EOP		No need to go any further. Classic PASS at 2.05 m.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	3.8	
0.30	5.6	4.6	
0.60	5.9	4.8	
0.80	5.5	6.5	
1.00	5.5	6.1	
1.25	5.5	5.1	
1.50	5.5	5.1	
1.75	5.5	5.1	
2.00	5.6	4.7	
2.25	5.7	1.6	
2.50	5.8	1.2	
2.75	5.8	1.7	
3.00	6.0	1.6	

Notes:

Watertable: insufficient sample
 Location: B. Drysdale, Sandy Creek

Project: MWQ Site: 571

Location: 722 715 mE, 7 646 730 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Oct-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Sand
 Landform Pattern: Alluvial plain
 Element: Drainage depression
 Runoff: slow
 Elevation: 3.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: imperfectly drained
 Slope: 1 %
 Surface Coarse Fragments: no coarse fragments
 Surface Condition: Hard setting

Classifications

ASC: Acidic, Tenosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Mid-high closed tussock grassland (0.26-0.5m)
 Species: Digitaria decumbens (Pangola)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.40	Dark brown (10YR33) moist; clayey fine sand; massive structure; dry when sampled; diffuse to;
A2	0.40 to 0.75	Dark yellowish brown (10YR44) moist; light yellowish brown (10YR64) dry; fine sand; single grain structure; dry when sampled; gradual to;
B2	0.75 to 1.55	Brown (10YR43) moist; many 20-50%, medium 5-15mm, prominent pale mottles; clayey fine sand; single grain structure; very few < 2%, fine <2 mm, manganiferous soft segregations; moderately moist when sampled; sharp to;
2B2i	1.55 to 2.55	Dark grey (10YR41) moist; many 20-50%, medium 5-15mm, prominent brown mottles; light clay; massive structure; common 10-20%, fine <2 mm, manganiferous soft segregations; moist when sampled; abrupt to;
2Cu	2.55 to 2.80	Very dark grey (2.5Y30) moist; silty light clay; massive structure; moist when sampled; sharp to;
3B2	2.80 to 3.10	Greyish brown (2.5Y52) moist; common 10-20%, coarse 15-30mm, prominent brown mottles; sand; single grain structure; wet when sampled; abrupt to;
4Cu	3.10 to 4.10	Dark grey (5Y41) moist; fine sand; single grain structure; wet when sampled; clear to;
5C	4.10 to 4.80	Grey (5Y61) moist; coarse sand; few 2-10%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; wet when sampled; abrupt to;
6Cu	4.80 to 5.10	Very dark grey (2.5Y30) moist; fine sand; single grain structure; wet when sampled; sharp to;
7C	5.10 to 5.90	Grey (5Y61) moist; coarse sand; few 2-10%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; wet when sampled; sharp to;

8Cu 5.90 to 6.00 Dark grey (2.5Y40) moist; fine sand; single grain structure; wet when sampled. EOP

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.1	3.5	
0.60	5.3	4.7	
1.00	5.4	4.4	
1.50	6.3	5.3	
1.75	6.4	7.5	
2.00	6.6	7.8	
2.25	6.6	6.0	
2.50	6.2	4.0	
2.75	5.8	1.6	
3.00	6.6	3.3	
3.25	6.4	2.0	
3.50	6.3	2.1	
3.75	6.6	1.9	
4.00	7.0	1.8	
4.25	7.2	2.2	
4.50	7.2	3.4	
4.75	7.1	1.9	
5.00	6.9	1.5	
5.25	7.1	3.4	
5.50	7.1	5.6	
5.75	7.4	5.5	
6.00	7.1	1.7	

Notes:

Watertable: Insufficient sample
 Location: B. Drysdale, Sandy Creek

Project: MWQ Site: 572

Location: 723 030 mE; 7 646 920 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 07-Oct-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Sand
 Landform Pattern: Alluvial plain
 Element: Levee
 Runoff: Very slow
 Elevation: 5.2 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Moderately well drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: -4.8 m
 Surface Condition: Hard setting

Classifications

ASC: Stratic, RUDOSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tall isolated trees (12.01-20m)
 Species: Melaleuca leucadendra (Long-leaved paperbark); Hibiscus tiliaceus (Cotton tree, cowtucker)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Dark grey (10YR41) moist; fine sandy loam; massive structure; dry when sampled; gradual to;
C	0.20 to 3.60	Pale brown (10YR63) moist; fine sand; very few < 2%, rounded igneous rock (unidentified), large pebbles 20-60mm; single grain structure; moderately moist when sampled; sharp to;
2B2	3.60 to 4.10	Dark grey (10YR41) moist; common 10-20%, fine < 5mm, distinct brown mottles and, few 2-10%, fine < 5mm, prominent orange mottles; light clay; massive structure; moist when sampled; sharp to;
3B2	4.10 to 5.00	Strong brown (7.5YR46) moist; coarse sand; common 10-20%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; common 10-20%, fine <2 mm, manganiferous soft segregations; wet when sampled.
EOP		VVC went to 6.0 m, but sand did not hold in tube.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.1	4.2	
0.60	5.5	4.9	
1.00	5.3	4.9	
1.50	5.9	5.4	
2.00	5.9	5.3	
2.50	5.8	5.3	
3.00	5.2	5.3	
3.50	5.5	5.7	
3.75	4.8	4.4	
4.00	4.8	4.5	
4.25	6.2	7.9	
4.50	6.3	7.6	
5.00	6.0	5.3	

Notes:

Watertable: Insufficient sample
 Location: B. Drysdale, Sandy Creek

Project: MWQ Site: 573

Location: 722 175 mE; 7 660 230 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 08-Oct-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Sand
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: Very slow
 Elevation: 4.8 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Poorly drained
 Slope: 1 %
 Surface Condition: Firm
 Watertable: No record (>4.6 m)
 Surface Coarse Fragments: Many (20-50%), large pebbles (20-60mm), Igneous rock (unidentified)

Classifications

ASC: Dystrophic, Rudosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Low woodland (3.01-6m)
 Species: Leucaena leucocephala (leucaena)
 Lower Stratum: Very tall closed tussock grassland (1.01-3m)
 Species: Panicum maximum var. maximum (guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist; coarse sand; many 20-50%, rounded igneous rock (unidentified), large pebbles 20-60mm; single grain structure; moist when sampled; clear to;
C	0.15 to 1.20	Light yellowish brown (10YR64) moist; coarse sand; abundant 50-90%, rounded igneous rock (unidentified), large pebbles 20-60mm; single grain structure; moist when sampled; sharp to;
2Cu	1.20 to 1.90	Very dark grey (2.5Y30) moist; sand; very few < 2%, rounded igneous rock (unidentified), large pebbles 20-60mm; single grain structure; moist when sampled; sharp to;
3B2	1.90 to 2.30	Dark brown (10YR33) moist; coarse sand; few 2-10%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; common 10-20%, fine <2 mm, manganiferous soft segregations; moist when sampled; sharp to;
4C	2.30 to 4.60	Light yellowish brown (10YR64) moist; coarse sand; common 10-20%, rounded igneous rock (unidentified), medium pebbles 6-20mm; single grain structure; moderately moist when sampled.
EOP		Large river gravel at 4.6 m stopped VVC tube from going deeper.

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.4	4.2	
0.60	6.1	5.6	
1.00	6.4	5.3	
1.25	6.8	1.9	
1.50	7.1	1.8	
1.75	6.7	1.9	
2.00	8.1	8.3	
2.50	8.3	5.9	
3.00	7.5	5.4	
3.50	7.3	5.4	
4.00	7.1	5.6	
4.50	7.3	5.7	

Notes:
 Watertable: Insufficient sample
 Location: L. Powell, Pioneer River

Project: MWQ Site: 574

Location: 722 630 mE; 7 660 130 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 08-Oct-2003

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Clay

Landform Pattern: Tidal flat

Element: Intertidal flat

Runoff: Very slow

Elevation: 3.0 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Very poorly drained

Slope: 0.1 %

Surface Coarse Fragments: No coarse fragments

Watertable: 0 m

Surface Condition: Soft

Classifications

ASC: Sulfidic, Intertidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Low woodland (3.01-6m)

Species: Avicennia marina (Grey mangrove)

Mid Stratum: Dwarf open forest (1.01-3m)

Species: Aegiceras corniculatum (River mangrove)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.07	Very dark brown (10YR22) moist; silty light clay; massive structure; wet when sampled; clear to;
B2	0.07 to 0.20	Black (10YR21) moist; many 20-50%, medium 5-15mm, prominent brown mottles; silty light clay; massive structure; wet when sampled; abrupt to;
Cu	0.20 to 0.65	Black (2.5Y20) moist; silty light clay; massive structure; wet when sampled; sharp to;
2C	0.65 to 0.70	Dark yellowish brown (10YR34) moist; coarse sand; common 10-20%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; common 10-20%, fine <2 mm, manganiferous soft segregations; wet when sampled.
EOP		As deep as could be sampled by gouge auger.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.1	3.8	
0.30	6.2	1.8	
0.60	6.3	1.9	
0.70	6.1	6.8	

Notes:

Watertable: pH-6.4; conductivity-18.3 dS/m

Location: L. Powell, Pioneer River

Project: MWQ Site: 575

Location: 722 585 mE; 7 660 120 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 09-Oct-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Sand

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: Very slow

Elevation: 5.1 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Moderately well drained

Slope: 1 %

Surface Coarse Fragments: No coarse fragments

Watertable: No record (>3.6 m)

Surface Condition: Recently cultivated

Classifications

ASC: Haplic, Eutrophic, Brown, KANDOSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Very tall closed tussock grassland (1.01-3m)

Species: Saccharum officinarum (sugar cane)

Profile

Horizon	Depth (m)	Description
Ap	0.00 to 0.20	Very dark greyish brown (10YR32) moist; clay loam; moderate, 10-20mm, fragment structure; moderately moist when sampled; abrupt to;
B2	0.20 to 0.70	Dark brown (10YR33) moist; clay loam; massive structure; moderately moist when sampled; sharp to;
2C	0.70 to 2.40	Brown (10YR53) moist; fine sand; single grain structure; dry when sampled; abrupt to;
3C	2.40 to 3.60	Brown (10YR43) moist; coarse sand; many 20-50%, rounded igneous rock (unidentified), large pebbles 20-60mm; single grain structure; moderately moist when sampled.
EOP		Large stone at 3.6 m prevented further sampling.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.0	4.8	
0.60	6.1	4.9	
1.00	6.2	5.3	
1.50	6.5	5.4	
2.00	6.5	5.5	
2.50	6.7	5.6	
3.00	6.5	5.3	
3.50	7.2	5.8	

Notes:

Horizon - 3C Large river gravel at 3.6 m stopped all augers. Could not go further.

Watertable: Insufficient sample

Location: L. Powell, Pioneer River

Project: MWQ Site: 576

Location: 721 775 mE; 7 660 080 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 09-Oct-2003

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Sand
 Landform Pattern: Alluvial plain
 Element: Channel bench
 Runoff: Very slow
 Elevation: 6.7 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Imperfectly drained
 Slope: 1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: No record (>4.1 m)
 Surface Condition: Firm

Classifications

ASC: Mesotrophic, Rudosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Very tall closed tussock grassland (1.01-3m)
 Species: Saccharum officinarum (sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist; fine sandy clay loam; fragments; moderately moist when sampled; abrupt to;
C	0.20 to 0.70	Dark brown (10YR33) moist; few 2-10%, fine < 5mm, faint orange mottles; fine sandy loam; moderately moist when sampled; sharp to;
2B2	0.70 to 1.10	Brown (10YR43) moist; few 2-10%, fine < 5mm, distinct orange mottles; sandy loam; moderately moist when sampled; clear to;
3B2	1.10 to 2.20	Brown (10YR43) moist; fine sandy clay loam; massive structure; moderately moist when sampled; sharp to;
4C1	2.20 to 3.70	Light yellowish brown (10YR64) moist; sand; very few < 2%, rounded quartz, small pebbles 2-6mm; single grain structure; dry when sampled; abrupt to;
4C2	3.70 to 4.10	Light yellowish brown (10YR64) moist; coarse sand; common 10-20%, rounded igneous rock (unidentified), cobbles 60-200mm; single grain structure; moderately moist when sampled.
EOP		Very thick gravel layer at 4.1 m prevented further sampling by VVC.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	6.4	5.0	
0.60	6.7	5.8	
1.00	6.4	5.4	
1.50	6.0	4.9	
2.00	6.1	4.8	
2.50	6.9	5.6	
3.00	7.2	5.6	
3.50	7.1	5.7	
4.00	7.4	5.6	

Notes:

Horizon: 4C2 - Large gravels at 4.1 m stopped VVC
 Watertable: Insufficient sample
 Location: T. Watson, Pioneer River

Project: MWQ Site: 577

Location: 721 775 mE; 7 660 190 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 09-Oct-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Sand

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: Very slow

Elevation: 5.4 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: Imperfectly drained

Slope: 1 %

Surface Condition: Firm

Watertable: No record (>1.2 m)

Surface Coarse Fragments: Common (10-20%), cobbles (60-200mm), igneous rock (unidentified)

Classifications

ASC: Dystrophic, Rudosolic, Oxyaquic, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Low woodland (3.01-6m)

Species: *Leucaena leucocephala* (leucaena)

Lower Stratum: Very tall closed tussock grassland (1.01-3m)

Species: *Panicum maximum* var. *maximum* (guinea grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist; fine sandy loam; few 2-10%, rounded igneous rock (unidentified), small pebbles 2-6mm; single grain structure; moderately moist when sampled; abrupt to;
C	0.20 to 0.70	Dark brown (10YR33) moist; fine sandy clay loam; very few < 2%, rounded igneous rock (unidentified), small pebbles 2-6mm; massive structure; moderately moist when sampled; sharp to;
2C	0.70 to 1.20	Light yellowish brown (10YR64) moist; coarse sand; common 10-20%, rounded igneous rock (unidentified), stones 200-600mm; single grain structure; segregations; moderately moist when sampled.
EOP		Large river gravels prevented further sampling.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.8	3.3	
0.60	6.2	4.9	
1.00	6.5	5.2	

Notes:

Horizon: 2C - gravels at 1.2 m stopped augers

Watertable: Insufficient sample

Location: T. Watson, Pioneer River

Project: MWQ Site: 578

Location: 728 530 mE; 7 648 080 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 05-Dec-2003

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Clay
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: Very slow
 Elevation: 3.0 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Very poorly drained
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: -1.7 m
 Surface Condition: Periodic cracking, Self-mulching

Classifications

ASC: Sulfidic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Mid-high closed forest (6.01-12m)
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Mid Stratum: Dwarf woodland (1.01-3m)
 Species: Excoecaria agallocha (Blind-your-eye mangrove)
 Lower Stratum: Low closed tussock grassland (<0.25)
 Species: Sporobolus virginicus (sand couch); Paspalum vaginatum (saltwater couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.05	Black (10YR21) moist colour; many 20-50%, fine < 5mm, prominent orange mottles; light medium clay; moderate, 2-5mm, granular structures; dry when sampled; abrupt to;
B21	0.05 to 0.40	Black (10YR21) moist colour; many 20-50%, fine < 5mm, prominent orange mottles; light medium clay; ; weak, 20-50mm, subangular blocky structures; dry when sampled; gradual to;
B22	0.40 to 0.55	Grey (5Y51) moist colour; many 20-50%, medium 5-15mm, prominent orange mottles; light medium clay ; moderately moist when sampled; sharp to;
2C	0.55 to 0.75	Grey (5Y51) moist colour; sand ; very few < 2%, small pebbles 2-6mm, subrounded quartz coarse fragments; single grain structures; moderately moist when sampled; sharp to;
3B2	0.75 to 0.90	Grey (10YR51) moist colour; common 10-20,% medium 5-15mm, prominent yellow mottles and, few 2-10%, medium 5-15mm, prominent brown mottles; light clay ; moist when sampled; clear to;
3C1	0.90 to 1.15	Grey (10YR51) moist colour; light clay ; massive structures; moist when sampled; clear to;
3C2u	1.15 to 2.00	Black (2.5Y20) moist colour; silty light clay ; very few < 2%, small pebbles 2-6mm, rounded quartz coarse fragments; massive structures; segregations; wet when sampled.
EOP		As deep as could be sampled by gouge auger.

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	5.3	1.9	
0.30	5.1	2.0	
0.50	5.8	3.4	
0.60	5.9	3.4	
0.80	5.6	4.2	
1.00	5.7	4.1	
1.25	4.9	1.6	
1.50	4.8	1.2	
1.75	5.1	0.9	
2.00	5.2	1.7	

Notes:

Horizon: 3C1 -many thin sand lenses throughout this horizon
 Horizon: 3C2u - 5 cm sand lenses at 1.2 and 1.6 m
 Watertable: pH-5.3
 Location: McEwans Beach

Project: MWQ Site: 579

Location: 725 740 mE; 7 645 115 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 20-Nov-2002

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Clay
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: Very slow
 Elevation: No data available
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Poorly drained
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: -2.2 m
 Surface Condition: Firm

Classifications

ASC: Dermosolic, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Low closed tussock grassland (<0.25)
 Species: Sporobolus virginicus (sand couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Dark brown (10YR33) moist colour; few 2-10%, fine < 5mm, distinct orange mottles; light clay; moderately moist when sampled;clear to;
B2i	0.15 to 2.00	Grey (10YR61) moist colour; many 20-50%, medium 5-15mm, prominent orange mottles; light clay; moist when sampled;abrupt to;
Cu	2.00 to 3.85	Very dark grey (2.5Y30) moist colour; silty light clay; massive structures; wet when sampled;sharp to;
2C	3.85 to 4.60	Grey (2.5Y60) moist colour; coarse sand ;few 2-10%, medium pebbles 6-20mm, rounded igneous rock (unidentified) coarse fragments; single grain structures; wet when sampled.
EOP		Sampling discontinued at 4.6 m

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.6	5.8	
0.50	6.6	5.9	
1.00	6.7	6.5	
1.50	6.8	6.2	
2.00	6.4	5.7	
2.25	6.3	1.5	
2.50	6.4	1.7	
2.75	6.4	1.3	
3.00	5.9	1.2	
3.25	6.8	1.8	
3.50	7.0	1.3	
3.75	6.3	1.5	
4.00	6.8	2.5	
4.25	6.9	5.3	
4.50	6.5	5.9	

Notes:
 Watertable: pH-6.1
 Location: State Land, Dunrock penisular

Project: MWQ Site: 580

Location: 724 635 mE; 7 660 750 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 16-May-2003

Landscape

Geology: Qa - Quaternary alluvium

Substrate Lithology: Sand

Landform Pattern: Alluvial plain

Element: Channel bench

Runoff: No record

Elevation: 4.7 m

Microrelief: Zero or none

Microrelief Component: No record

Drainage: No record

Slope: 0.5 %

Surface Coarse Fragments: No coarse fragments

Watertable: No record

Surface Condition: No record

Classifications

ASC: Dermosolic, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Very tall closed tussock grassland (1.01-3m)

Species: Saccharum officinarum (sugar cane)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.30	Very dark greyish brown (10YR32) moist colour; fine sandy clay loam;
2C	0.30 to 0.80	Light yellowish brown (10YR64) moist colour; fine sand;
3B2	0.80 to 2.10	Very dark grey (2.5Y30) moist colour; few 2-10%, fine < 5mm, distinct brown mottles; fine sandy clay loam;
4B2	2.10 to 2.70	Very dark grey (2.5Y30) moist colour; few 2-10%, fine < 5mm, faint brown mottles; light clay;
4Cu	2.70 to 3.05	Very dark grey (2.5Y30) moist colour; light clay;
5C1u	3.05 to 3.20	Very dark grey (2.5Y30) moist colour; sand;
5C2u	3.20 to 3.60	Very dark grey (2.5Y30) moist colour; sand;
6C	3.60 to 5.00	Light yellowish brown (10YR64) moist colour; coarse sand.
EOP		End of sampling at 5.0 m.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.80	5.6	2.0	
1.00	5.7	2.8	
1.50	6.3	3.3	
2.00	6.4	3.1	
2.50		3.3	
2.75		1.9	
3.00		1.0	
3.10		0.2	
3.25		2.2	
3.40		0.2	

Notes:

Watertable: No record

Location: C. Camilleri, Pioneer River

Project: MWQ Site: 581

Location: 724 830 mE; 7 660 950 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 22-Nov-2002

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Sand
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: Very slow
 Elevation: 3.1 m
 Microrelief: Zero or none
 Microrelief Component: No record
 Drainage: Very poorly drained
 Slope: 0.3 %
 Surface Condition: Soft
 Watertable: -1.8 m
 Surface Coarse Fragments: Many (20-50%), cobbles (60-200mm), igneous rock (unidentified)

Classifications

ASC: Dystrophic, Rudosolic, Oxyaquic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Low closed tussock grassland (<0.25)
 Species: Sporobolus virginicus (sand couch, marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.20	Very dark greyish brown (10YR32) moist colour; loamy fine sand ;very few < 2%, cobbles 60-200mm, rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist when sampled; clear to;
C	0.20 to 0.90	Very pale brown (10YR74) moist colour; fine sand ;few 2-10%, large pebbles 20-60mm, rounded igneous rock (unidentified) coarse fragments; single grain structures; moderately moist when sampled;sharp to;
2C	0.90 to 2.10	Brown (10YR53) moist colour; sand ;common 10-20%, medium pebbles 6-20mm, rounded igneous rock (unidentified) coarse fragments; single grain structures; moist when sampled;sharp to;
3C	2.10 to 5.10	Light yellowish brown (10YR64) moist colour; coarse sand ;many 20-50%, medium pebbles 6-20mm, rounded igneous rock (unidentified) coarse fragments; single grain structures; wet when sampled.
EOP		Large river gravel prevented further sampling.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.9	4.2	
0.60	6.1	5.5	
1.00	6.3	5.2	
1.50	6.3	5.0	
2.00	6.5	5.4	
2.50	6.8	5.6	
3.00	6.8	5.3	
3.50	6.6	5.7	
4.00	6.9	5.6	
4.50	7.1	6.0	
5.00	7.3	5.9	

Notes:
 Watertable: No record
 Location: Pioneer River, next to Ron Camm bridge

Project: MWQ Site: 582

Location: 724 925 mE; 7 643 015 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Oct-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Supratidal flat
 Runoff: Very slow
 Elevation: 4.2 m
 Microrelief: No microrelief
 Microrelief Component: No record
 Drainage: Poorly drained
 Slope: 0.1 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: > 2.0 m
 Surface Condition: Periodic cracking, surface crust

Classification

ASC: Epiacidic-mottled, Epipedal, Aquic, VERTOSOL
 GSG: No record
 PPF: No record

Vegetation

Lower Stratum: Low isolated clump of tussock grasses (<0.25)
 Species: Sporobolus virginicus (sand couch, marine couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.10	Very dark grey (10YR31) moist colour; many 20-50%, fine < 5mm, prominent brown mottles; medium clay ; moderate 5-10mm subangular blocky structures; dry when sampled; abrupt to;
B21	0.10 to 0.45	Very dark grey (10YR31) moist colour; few 2-10%, medium 5-15mm, prominent orange, and many 20-50%, fine < 5mm, distinct brown mottles; medium clay ; strong, 100-200m, prismatic structures; very few < 2%, medium 2-6 mm, manganiferous soft segregations; moderately moist when sampled; gradual to;
B22	0.45 to 1.30	Very dark grey (10YR31) moist colour; few 2-10%, fine < 5mm, faint brown mottles; light medium clay; lenticular structures; moderately moist when sampled; clear to;
B23	1.30 to 1.55	Very dark grey (2.5Y30) moist colour; few 2-10%, fine < 5mm, distinct brown, and few 2-10%, medium 5-15mm, prominent orange mottles; medium clay; moderately moist when sampled; sharp to;
2B2	1.55 to 1.61	Grey (10YR51) moist colour; common 10-20%, fine < 5mm, distinct brown, and few 2-10%, fine < 5mm, distinct yellow mottles; sand; single grain structures; moist when sampled; sharp to;
3B2a	1.60 to 1.76	Very dark grey (10YR31) moist colour; very few < 2%, fine < 5mm prominent, yellow jarositic (from pyrite), and few 2-10%, fine < 5mm, distinct brown, and very few < 2%, fine < 5mm, prominent orange mottles; light medium clay; moist when sampled; clear to;
3Cu	1.76 to 2.05	Very dark grey (10YR31) moist colour; light medium clay ; moist when sampled.
EOP		As deep as required to go for development proposal.

Field Tests

Depth (m)	pHF	pHFOX	pHF (pH using electrode probe), pHFOX (pH of hydrogen peroxide extract)
0.10	0.5	0.2	
0.30	4.8	3.4	
0.60	4.7	3.3	
0.80	4.6	3.2	
1.00	4.5	3.0	
1.25	4.3	2.9	
1.50	4.0	2.3	
1.60	4.7	2.6	
1.75	4.0	1.7	
2.00	4.5	1.5	

Notes:

Location: Wentzels Rd., Alligator Creek, opposite the BP.
 Only analysed to 1.5 m

Project: MWQ Site: 583

Location: 724 790 mE; 7 643 070 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 27-Oct-2001

Landscape

Geology: Qa - Quaternary alluvium
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Alluvial plain
 Element: Plain
 Runoff: Very slow
 Elevation: 6.2 m
 Microrelief: Debil-debil
 Microrelief Component: Depression
 Drainage: Imperfectly drained
 Slope: 0.3 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: > 2.0 m
 Surface Condition: Hard setting

Classification

ASC: Natric, Sodosolic, Redoxic, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Tree, 6.01-12m, mid-dense
 Species: Eucalyptus tessellaris (Moreton Bay ash); Eucalyptus tereticornis (blue gum, forest red gum)
 Lower Stratum: Tall closed tussock grassland (0.51-1m)
 Species: Imperata cylindrica (blady grass)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark greyish brown (10YR32) moist colour; clay loam; fine sandy; massive structures; dry when sampled; abrupt to;
A2j	0.15 to 0.20	White (10YR81) dry colour; dark greybrown (10YR42) moist colour clay loam; fine sandy ; massive structures; dry when sampled; sharp to;
B21	0.20 to 0.70	Greyish brown (2.5Y53) moist colour; common 10-20%, fine < 5mm, distinct orange mottles; medium clay ;very few < 2%, small pebbles 2-6mm, rounded rhyolite coarse fragments; strong, 200-500mm, columnar structures; very few < 2%, fine < 2 mm, manganiferous soft segregations; moderately moist when sampled; diffuse to;
B22	0.70 to 1.05	Light olive brown (2.5Y54) moist colour; many 20-50%, fine < 5mm, distinct grey mottles; medium clay; very few < 2%, small pebbles 2-6mm, rounded rhyolite coarse fragments; very few < 2%, fine < 2 mm, manganiferous soft segregations; moderately moist when sampled; sharp to;
2B2	1.05 to 1.20	Brown (10YR53) moist colour; few 2-10%, fine < 5mm, distinct orange mottles; sandy clay loam; coarse fragments; massive structures; very few < 2%, fine < 2 mm, manganiferous soft segregations; moderately moist when sampled; sharp to;
3B2	1.20 to 2.05	Dark greyish brown (2.5Y42) moist colour; common 10-20%, medium 5-15mm, prominent grey, and few 2-10%, fine < 5mm, prominent orange mottles; medium clay; very few < 2%, coarse 6-20 mm, calcareous nodules and very few < 2%, coarse 6-20 mm, calcareous soft segregations and few 2-10%, medium 2-6 mm, soft manganiferous segregations; moderately moist when sampled.
EOP		As deep as required to go for development proposal.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.2	4.2	
0.30	5.5	4.6	
0.60	5.7	5.3	
0.80	6.4	7.5	
1.00	6.7	7.9	
1.25	7.1	8.1	
1.50	7.0	6.2	
1.75	7.0	6.9	
2.00	6.8	6.8	

Notes:

Location: Wentzels Rd., Alligator Creek, opposite the BP.

Project: MWQ Site: 584

Location: 726 890 mE; 7 650 840 mN; Zone 55 (AGD 84)
 Described: Muller, PG
 Date: 11-June 2004

Landscape

Geology: Qm - Quaternary marine
 Substrate Lithology: Unconsolidated material (unidentified)
 Landform Pattern: Tidal flat
 Element: Extratidal flat
 Runoff: No record
 Elevation: 3.1 m
 Drainage: No record
 Slope: 0.2 %
 Surface Coarse Fragments: No coarse fragments
 Watertable: 1.35 m
 Surface Condition: Firm

Classification

ASC: Sulfuric, Extratidal, HYDROSOL
 GSG: No record
 PPF: No record

Vegetation

Tallest Stratum: Mid-high closed forest (6.01-12m)
 Species: Melaleuca leucadendra (Long-leaved paperbark)
 Lower Stratum: Low closed tussock grassland (<0.25m)
 Species: Sporobolus virginicus (sand couch)

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.28	Very dark brown (10YR22) moist colour; few 2-10%, fine, faint, orange mottles; silty clay loam; moderate, 2-5 mm, cast structures; dry when sampled; clear to;
2B21	0.28 to 0.70	Grey (10YR61) moist colour; many 20-50%, coarse 15-30 mm, prominent, brown mottles; light clay ; moderately moist when sampled; clear to;
2B22i	0.70 to 0.95	Grey (10YR51) moist colour; many 20-50%, coarse 15-30 mm, prominent, brown mottles and common 10-20%, medium 5-15 mm, prominent, red mottles; light clay; moderately moist when sampled; abrupt to;
2B23ia	0.95 to 1.55	Dark grey (10YR41) moist colour; many 20-50%, coarse 15-30 mm, prominent, yellow jarositic (from pyrite) mottles, and few 2-10%, medium 5-15 mm, prominent, brown mottles; silty light clay; moist when sampled; abrupt to;
2Cu	1.55 to 1.72	Very dark grey (10YR31) moist colour; silty light clay; massive structures; wet when sampled; sharp to;
3C	1.72 to 2.15	Grey (10YR51) moist colour; clayey sand, plus 1 cm very dark grey mud lens at 2.15 m; very few <2%, small 2-6 mm, rounded, quartz gravels; single grain structures; wet when sampled.
EOP	As deep as could be sampled with a gouge auger.	

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	3.0	
0.30	3.9	3.0	
0.60	3.6	2.7	
0.80	3.3	2.6	
1.00	3.3	2.5	
1.25	3.3	2.3	
1.50	3.3	2.2	
1.65	3.6	1.9	
1.75	3.6	2.0	
2.00	3.6	2.1	
2.15	3.6	0.9	

Notes:
 Horizon: pH at 2.15 is on the 1 cm mud lens.
 Location: Bakers Creek. J. Morgan.

Project: MWQ Site: 585

Location: 726 570 mE; 7 650 695 mN; Zone 55 (AGD 84)

Described: Muller, PG

Date: 11-June 2004

Landscape

Geology: Qm - Quaternary marine

Substrate Lithology: Unconsolidated material (unidentified)

Landform Pattern: Tidal flat

Element: Extratidal flat

Runoff: No record

Elevation: 3.1 m

Drainage: No record

Slope: 0.1%

Surface Coarse Fragments: No coarse fragments

Watertable: 1.25 m

Surface Condition: Firm

Classification

ASC: Sulfuric, Extratidal, HYDROSOL

GSG: No record

PPF: No record

Vegetation

Tallest Stratum: Mid-high closed forest (6.01-12m)

Species: Melaleuca leucadendra (Long-leaved paperbark)

Lower Stratum: Low closed tussock grassland (<0.25m)

Species: Sporobolus virginicus (sand couch); Cyperus species

Profile

Horizon	Depth (m)	Description
A1	0.00 to 0.15	Very dark brown (10YR22) moist colour; few 2-10%, fine, faint, orange mottles; silty light clay; moderate, 2-5 mm, cast structures; moderately moist when sampled; abrupt to;
B2	0.15 to 0.28	Black (10YR21) moist colour; many 20-50%, fine <5 mm, prominent, orange mottles; medium heavy clay ; moderately moist when sampled; abrupt to;
2B21	0.28 to 0.55	Grey (10YR51) moist colour; many 20-50%, coarse 15-30 mm, prominent, brown mottles; light medium clay; moderately moist when sampled; clear to;
2B22i	0.55 to 0.90	Grey (10YR51) moist colour; many 20-50%, medium 5-15 mm, prominent, brown mottles, and common 10-20%, medium 5-15 mm, prominent, red mottles; light clay; moderately moist when sampled; abrupt to;
2B23ia	0.90 to 1.60	Dark grey (10YR41) moist colour; common 10-20%, medium 5-15 mm, prominent yellow jarositic (from pyrite) mottles and common 10-20%, medium 5-15 mm, prominent brown mottles; silty light clay; massive structures;moist when sampled; abrupt to;
2Cu	1.60 to 2.15	Very dark grey (10YR31) moist colour; silty light clay; 3 cm piece of wood and organic debris at 2.04 m; massive structures; wet when sampled; sharp to;
3Cu	2.15 to 2.55	Very dark grey (2.5Y30) moist colour; sandy light clay; very few <2%, small 2-6 mm, rounded, quartz gravels; massive structures; wet when sampled.
EOP	As deep as could be sampled with a gouge auger.	

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	4.2	2.4	
0.30	3.9	2.8	
0.60	3.8	2.9	
0.80	3.7	2.7	
1.00	3.4	2.4	
1.25	3.2	2.9	
1.50	3.4	2.5	
1.75	3.4	2.6	
2.00	3.3	1.1	
2.25	3.5	1.2	
2.50	3.6	1.1	

Notes:

Watertable pH: 3.6

Location: Bakers Creek. J. Morgan.

Project: MWQ Site: 586

Location: 726 715 mE; 7 650 835 mN; Zone 55 (AGD 84)
Described: Muller, PG Date: 11-June 2004

Landscape

Geology: Qm - Quaternary alluvium
Substrate Lithology: Unconsolidated material (unidentified)
Landform Pattern: Alluvial plain
Element: Plain
Runoff: No record
Elevation: 3.1 m
Drainage: No record
Slope: 0.3 %
Surface Coarse Fragments: No coarse fragments
Watertable: 2.8 m
Surface Condition: Hard-setting

Classification

ASC: Melacic, Sodosolic, Redoxic, HYDROSOL
GSG: No record
PPF: No record

Vegetation

Tallest Stratum: Mid-high closed forest (6.01-12m)
Species: Melaleuca leucadendra (Long-leaved paperbark) and Eucalyptus tessellaris (Moreton bay ash)
Mid Stratum: Tall open shrubland (1.01-3 m)
Species: Lantana camara (lantana)
Lower Stratum: Mid-high closed tussock grassland (0.26-0.5 mm)
Species: Aristida species; Sporobolus species

Profile

Horizon Depth (m)	Description
A1 0.00 to 0.25	Very dark grey-brown (10YR32) moist colour; fine sandy loam; massive structures; dry when sampled; sharp to;
B21 0.25 to 0.85	Dark grey-brown (2.5Y42) moist colour; few 2-10%, fine <5 mm, faint, yellow mottles; medium clay; very few <2%, fine <2 mm, calcareous nodules; moderately moist when sampled; clear to;
B22 0.85 to 1.60	Brownish-yellow (10YR66) moist colour; many 20-50%, very coarse >30 mm, prominent, grey mottles; medium clay; moderately moist when sampled; gradual to;
B23 1.60 to 2.20	Grey (10YR51) moist colour; common 10-20%, medium 5-15 mm, prominent, brown mottles; sandy medium clay; moist when sampled; abrupt to;
2D1 2.20 to 2.65	Greenish-grey (5BG51) moist colour; common 10-20%, coarse 15-30 mm, distinct, yellow mottles; sandy light medium clay; moist when sampled; sharp to;
2D2 2.65 to 3.00	Greenish-grey (5G51) moist colour; many 20-50%, very coarse >30 mm, distinct, yellow mottles; clay loam, sandy; wet when sampled.
EOP	Water prevented deeper sampling with a hand auger.

Field Tests

Depth (m)	pH _F	pH _{FOX}	pH _F (pH using electrode probe), pH _{FOX} (pH of hydrogen peroxide extract)
0.10	5.4	4.5	
0.30	6.9	5.9	
0.60	7.3	6.2	
0.80	7.6	6.4	
1.00	7.6	6.3	
1.50	7.4	6.3	
2.00	6.9	5.8	
2.50	6.8	6.7	
3.00	7.2	6.8	

Notes:

Watertable pH: 6.8.

Location: Bakers Creek. J. Morgan.

References

- Ahern, CR, Ahern, MR & Powell, B 1998, *Guidelines for sampling and analysis of lowland acid sulfate soils (ASS) in Queensland*, Queensland Acid Sulfate Soil Investigation Team (QASSIT), Department of Natural Resources, DNRQ980124.
- Isbell, RF 1996, *The Australian soil classification*, CSIRO Publishing, Collingwood, Australia.
- McDonald, RC, Isbell, RF, Speight, JG, Walker, J & Hopkins, MS 1990, *Australian soil and land survey field handbook*, 2nd edn, Inkata Press, Melbourne, Australia.
- McDonald, RC & Isbell, RF 1990, 'Soil profile', in RC McDonald, RF Isbell, JG Speight, J Walker & MS Hopkins, *Australian soil and land survey field handbook*, Inkata Press, Melbourne, Australia.
- Muller, PG & Coutts, AJ 2005, *Acid sulfate soils and estuarine water quality of the Mackay district*, vol. 1, Department of Natural Resources and Mines, Central Region, Queensland, Australia.
- Muller, PG & Coutts, AJ 2005, *Acid sulfate soils and estuarine water quality of the Mackay district*, vol. 3, Tabulated laboratory data, Department of Natural Resources and Mines, Central Region, Queensland, Australia.
- Walker, J & Hopkins, MS 1990, 'Vegetation', in RC McDonald, RF Isbell, JG Speight, J Walker & MS Hopkins, *Australian soil and land survey field handbook*, MS Inkata Press, Melbourne, Australia.