Moreton Bay Regional Council
Acid Sulfate Soils
Pine Rivers Area

Volume 2

Appendix 3 MAS Borehole Descriptions

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References for Borehole Descriptions

Project: MAS Site: 1 Observation: 1

Soil Name: A1S3 - AASS at 0.5-1m and PASS at 2-3m

Acid Sulfate Soil Site Code: L64 Factsheet (2009) Using acid sulfate soil maps. Department of Environment and Resource Management

Location: GDA 94 ZONE 56 502852mE 6990485mN Lat: -27.20837 Long: 153.0288

Location: measured by hand held GPS and recorded in GDA 94 Australian Map Grid (metric). Accuracy of site location not determined.

Described By: Jonathan Walton (WALJ) Date: 14/APR/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Geology: Cranfield LC, Donchalk PJT, Green PM, Grimes KG and Hutton LJ (2008). Brisbane Geology 100 000 scale. Department of Natural Resources, Mines and Energy, Brisbane.

Element: drainage depression Landform Pattern: alluvial plain

Permeability: Slowly permeable

Slope: 0 % Drainage: Poorly drained

Surface Condition: Soft

Disturbances: Limited clearing

Element to Disturbances: The National Committee on Soil and Terrain (2009). Australian Soil and Land Survey Field Handbook (3rd edn). CSIRO Publishing, Melbourne.

Classifications:

ASC: ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non gravelly, Clayey, Clayey, Giant

Classifications: Isbell RF (1996). The Australian Soil Classification. CSIRO Publishing, Collingwood, Victoria, Australia

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Very dark grey (10YR31) moist; medium clay; subangular blocky moderate 2-5mm structure; very weak moderately moist; many <1mm roots; moderately permeable; moderately well drained; clear to
B21	.1 to .7	Very dark greyish brown (2.5Y32) moist; few 2-10% fine <5mm distinct orange mottles, few 2- 10% fine <5mm prominent red mottles; medium heavy clay; subangular blocky weak 10-20mm structure; firm moderately moist; slowly permeable; imperfectly drained; gradual to
B22ia	.7 to 1.2	Grey (10YR51) moist; common 10-20% fine <5mm distinct orange mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; heavy clay; subangular blocky weak 10- 20mm structure; firm moderately moist; slowly permeable; poorly drained; gradual to
B3ia	1.2 to 1.6	Grey (10YR51) moist; very few <2% fine <5mm distinct orange mottles; medium clay; massive structure; firm moist; common <1mm roots; slowly permeable; poorly drained; gradual to
C1i	1.6 to 2.67	Dark grey (N40) moist; medium clay; very few <2% subrounded quartz small pebbles 2-6 mm; massive structure; weak moist; slowly permeable; poorly drained; gradual to
2C2	2.67 to 3.4	Greenish grey (5GY61) moist; coarse sand; single grain structure; loose moist; highly permeable; poorly drained; abrupt to
3C3	3.4 to 3.85	Dark grey (N40) moist; light clay; massive structure; weak wet; slowly permeable; poorly drained; abrupt to
4C4u	3.85 to 5.3	Grey (5Y61) moist; loamy sand; single grain structure; very weak moist; highly permeable; poorly drained; clear to
4C5u	5.3 to 5.97	Grey (5Y61) moist; clay loam, sandy; massive structure; weak wet; highly permeable; poorly drained; abrupt to
D1	5.97 to 6.3	Greenish grey (5GY61) moist; light medium clay; massive structure; firm moderately moist; slowly permeable; poorly drained; gradual to
D2	6.3 to 7.5	Yellow (2.5Y76) moist; sandy light medium clay; massive structure; firm moderately moist; slowly permeable; poorly drained

Profile Morphology:
Colour: Munsell (2000). Munsell Soil Colour Charts. Gretag Macbeth, Little Britain road, New Windsor, NY

Colour Moisture; Mottles; Texture; Coarse Fragments; Structure; Segregations; Pans; Soil Water Status; Horizon Boundary Distinctness : The National Committee on Soil and Terrain (2009). Australian Soil and Land Survey Field Handbook (3rd edn). CSIRO Publishing, Melbourne.

References for Borehole Descriptions

Project: MAS Site: 1 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.7	2.5
.3	1	4.4	2.6
.6		4.5	2.6
.8		4.5	2.6
1		4.6	2.4
1.25	1	4.6	2.6
1.5	3	4.4	3.0
1.75	4	4.6	3.1
2	4	4.6	2.6
2.25	4	4.4	2.1
2.5	4	4.4	2.0
2.75	4	4.6	1.7
3	4	4.4	1.5
3.25	4	4.3	1.4
3.5	4	4.3	1.6
3.75	4	5.4	1.7
4	4	5.8	2.0
4.25	4	6.2	2.3
4.5	4	6.2	2.1
4.75	4	6.1	1.8
5	4	6	1.9
5.25		6.2	5.2
5.5	4	6.4	1.3
5.75	4	6.5	1.0
6	1	6.7	7.4
6.25	1	6.7	5.8
6.5	1	7.3	6.7
6.75	1	6.9	6.5
7	1	6.8	5.9
7.25		7.1	6.9
7.5		7	6.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Field Tests:

Depth — *Depth at which pH test was conducted (m)*

H2O2- — *Reaction of soil with Hydrogen Peroxide*

1 = Low *2 = Medium*

3 = High *4 = Extremely High*

pH-2 — *pH Field (soil:water paste) using electrode probe*

pH-3 — *pH Field (soil:hydrogen peroxide mix) using electrode probe*

Ahern CR, Ahern MR and Powell B (1998). Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland 1998. Department of Natural Resources, Indooroopilly, Queensland, Australia

Observation Notes:

Observation	Gouge auger taken from teatree swamp (502851E, 6990537N). Surface sample (Number 19) taken from 0-0.2m Monosulfidic black ooze. Roots to approx 1.1m. H_2S smell when sampling.
Soil	Thin 1-2mm sand lens at 1.55, 2.0, 2.6, 2.2.
Vegetation	U(w1.0)6M *Melaleuca quinquenervia*, Pine spp M(w1.0)5S Acacia spp G(g1.0)3M Grass spp, lantana spp *(stratum, growth form, height class, cover class)*

Vegetation codes according to: The National Committee on Soil and Terrain (2009). Australian Soil and Land Survey Field Handbook (3rd edn). CSIRO Publishing, Melbourne.

Project: MAS Site: 1 Observation: 1

Soil Name: A1S3 - AASS at 0.5-1m and PASS at 2-3m

Location: GDA 94 ZONE 56 502852mE 6990485mN Lat: -27.20837 Long: 153.0288

Described By: Jonathan Walton (WALJ) Date: 14/APR/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: drainage depression Landform Pattern: alluvial plain

Permeability: Slowly permeable

Slope: 0 % Drainage: Poorly drained

Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non gravelly, Clayey, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Very dark grey (10YR31) moist; medium clay; subangular blocky moderate 2-5mm structure; very weak moderately moist; many <1mm roots; moderately permeable; moderately well drained; clear to
B21	.1 to .7	Very dark greyish brown (2.5Y32) moist; few 2-10% fine <5mm distinct orange mottles, few 2- 10% fine <5mm prominent red mottles; medium heavy clay; subangular blocky weak 10-20mm structure; firm moderately moist; slowly permeable; imperfectly drained; gradual to
B22ia	.7 to 1.2	Grey (10YR51) moist; common 10-20% fine <5mm distinct orange mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; heavy clay; subangular blocky weak 10- 20mm structure; firm moderately moist; slowly permeable; poorly drained; gradual to
B3ia	1.2 to 1.6	Grey (10YR51) moist; very few <2% fine <5mm distinct orange mottles; medium clay; massive structure; firm moist; common <1mm roots; slowly permeable; poorly drained; gradual to
C1i	1.6 to 2.67	Dark grey (N40) moist; medium clay; very few <2% subrounded quartz small pebbles 2-6 mm; massive structure; weak moist; slowly permeable; poorly drained; gradual to
2C2	2.67 to 3.4	Greenish grey (5GY61) moist; coarse sand; single grain structure; loose moist; highly permeable; poorly drained; abrupt to
3C3	3.4 to 3.85	Dark grey (N40) moist; light clay; massive structure; weak wet; slowly permeable; poorly drained; abrupt to
4C4u	3.85 to 5.3	Grey (5Y61) moist; loamy sand; single grain structure; very weak moist; highly permeable; poorly drained; clear to
4C5u	5.3 to 5.97	Grey (5Y61) moist; clay loam, sandy; massive structure; weak wet; highly permeable; poorly drained; abrupt to
D1	5.97 to 6.3	Greenish grey (5GY61) moist; light medium clay; massive structure; firm moderately moist; slowly permeable; poorly drained; gradual to
D2	6.3 to 7.5	Yellow (2.5Y76) moist; sandy light medium clay; massive structure; firm moderately moist; slowly permeable; poorly drained

Project: MAS Site: 1 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.7	2.5
.3	1	4.4	2.6
.6		4.5	2.6
.8		4.5	2.6
1		4.6	2.4
1.25	1	4.6	2.6
1.5	3	4.4	3.0
1.75	4	4.6	3.1
2	4	4.6	2.6
2.25	4	4.4	2.1
2.5	4	4.4	2.0
2.75	4	4.6	1.7
3	4	4.4	1.5
3.25	4	4.3	1.4
3.5	4	4.3	1.6
3.75	4	5.4	1.7
4	4	5.8	2.0
4.25	4	6.2	2.3
4.5	4	6.2	2.1
4.75	4	6.1	1.8
5	4	6	1.9
5.25		6.2	5.2
5.5	4	6.4	1.3
5.75	4	6.5	1.0
6	1	6.7	7.4
6.25	1	6.69	5.8
6.5	1	7.3	6.7
6.75	1	6.9	6.5
7	1	6.8	5.9
7.25		7.1	6.9
7.5		7	6.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation	Gouge auger taken from teatree swamp (502851E, 6990537N). Surface sample (Number 19) taken from 0.0-0.2m Monosulfidic black ooze. Roots to approx 1.1m. H_2S smell when sampling.
Soil	Thin 1-2mm sand lenses at 1.55, 2.0, 2.2, 2.6m
Vegetation	U(w1.0)6M *Melaleuca quinquenervia*, Pine spp M(w1.0)5S Acacia spp G(g1.0)3M Grass spp, lantana spp

Project: MAS Site: 2 Observation: 1

Soil Name: A2S3 - AASS at 1-2m and PASS at 2-3m

Location: GDA 94 ZONE 56 501801mE 6991010mN Lat: -27.20363 Long: 153.01819

Described By: Jonathan Walton (WALJ) Date: 14/APR/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: valley-flat Landform Pattern: alluvial plain

Permeability: Slowly permeable

Slope: 1 % Drainage: Poorly drained

Surface Condition: Soft Disturbances: Limited clearing

Classifications:

ASC: ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .15	Dark grey (2.5Y41) moist; very few <2% fine <5mm faint brown mottles; light clay; subangular blocky strong 2-5mm structure; weak moderately moist; moderately permeable; poorly drained; clear to
B21	.15 to .55	Grey (10YR51) moist; few 2-10% fine <5mm distinct brown mottles; sandy light medium clay; subangular blocky weak 2-5mm structure; weak moist; slowly permeable; poorly drained; clear to
B22	.55 to .85	Dark grey (10YR41) moist; very few <2% fine <5mm faint brown mottles; fine sandy light clay; subangular blocky weak 2-5mm structure; firm moist; slowly permeable; poorly drained; diffuse to
B23i	.85 to 1.75	Grey (2.5Y51) moist; very few <2% fine <5mm distinct brown mottles; heavy clay; subangular blocky weak 2-5mm structure; firm moist; slowly permeable; poorly drained; abrupt to
2C1	1.75 to 2.4	Light grey (2.5Y72) moist; sand; single grain structure; very weak moist; highly permeable; well drained; clear to
2C2	2.4 to 4.25	Grey (2.5Y51) moist; sand; single grain structure; very weak moist; highly permeable; well drained; abrupt to
D	4.25 to 4.3	Light greenish grey (5GY81) moist; very firm moderately moist; slowly permeable; poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.3	2.4
.3	1	5.1	2.6
.6		4.7	2.3
.8		4.4	3.1
1		4.2	2.9
1.25		4.0	2.9
1.5		3.9	2.3
1.75		4.6	2.4
2		5.1	2.7
2.25		4.9	2.8
2.5	3	4.6	2.1
2.75	4	4.7	1.7
3	4	5.2	1.9
3.25	4	5.4	1.7
3.5	4	5.7	1.7
3.75	4	5.8	1.7
4	4	6	1.6
4.25	4	6.5	1.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)7M *Melaleuca quinquenervia*, Eucalyptus spp (moreton bay ash?) \ M(w1.0)6M Acacia spp, *Camphor laurel* \ G(w3.0)4MLantana and grass spp

Project: MAS Site: 3 Observation: 1

Soil Name: a0LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0-0.5m

Location: GDA 94 ZONE 56 504012mE 6989727mN Lat: -27.21521 Long: 153.04051

Described By: Fiona McCartney (MCCF) Date: 15/APR/10

Landscape:

Geology: Qpa - Qpa-SEQ: High level alluvium; silt, clay, sand, gravel

Element: plain Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 1 % Drainage: Poorly drained

Surface Condition: Firm Disturbances: Extensive clearing

Classifications:

ASC: MOTTLED-SODIC, NATRIC, GREY, Kurosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .15	Dark brown (10YR33) moist; heavy clay loam; angular blocky moderate <2mm structure; strong dry; few 1-2mm roots; moderately permeable; moderately well drained; abrupt to
B21	.15 to .4	Olive grey (5Y42) moist; many 20-50% fine <5mm distinct orange sharp mottles; medium heavy clay; massive structure; very firm moderately moist; few <1mm roots; very slowly permeable; poorly drained; clear to
B22	.4 to .6	Grey (5Y51) moist; fine sandy light clay; massive structure; very firm moist; few <1mm roots; slowly permeable; imperfectly drained; abrupt to
B23	.6 to .95	Grey (5Y51) moist; heavy clay; massive structure; very firm moist; few 2-5mm roots; very slowly permeable; poorly drained; clear to
B24	.95 to 1.55	Greenish grey (10Y51) moist; common 10-20% coarse 15-30mm distinct orange sharp mottles; medium heavy clay; massive structure; firm moist; few 1-2mm roots; very slowly permeable; poorly drained; diffuse to
B25	1.55 to 2.05	Greenish grey (10Y51) moist; common 10-20% very coarse >30mm distinct red sharp mottles, few 2-10% coarse 15-30mm distinct orange sharp mottles; sandy light clay; massive structure; firm moist; slowly permeable; imperfectly drained; clear to
B26	2.05 to 2.3	Grey (10YR51) moist; very few <2% fine <5mm faint orange mottles; light medium clay; massive structure; very firm moist; very slowly permeable; poorly drained; abrupt to
B27	2.3 to 2.6	Grey (5Y51) moist; few 2-10% coarse 15-30mm distinct orange mottles; sandy light clay; massive structure; very firm moist; slowly permeable; imperfectly drained; clear to
B28	2.6 to 3.8	Dark grey (5Y41) moist; common 10-20% very coarse >30mm distinct red mottles, common 10- 20% very coarse >30mm distinct orange mottles; sandy light clay; massive structure; very strong moderately moist; slowly permeable; imperfectly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.5	2.2
.3	2	4.3	2.5
.6		4.4	2.9
.8		4.6	3.1
1.25		4.7	3.2
1.5		4.9	3.4
1.75		4.8	3.4
2		4.9	3.5
2.25		5.9	4.7
2.5		5.7	4.6
2.75	4	6.4	6.2
3	4	6.6	6.7
3.25	4	6.4	6.5
3.5	4	6.5	6.3
3.75	4	5.8	5.2

Project: MAS Site: 3 Observation: 1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation	U(w1.0)7V	Eucalyptus spp, G(g1.0) 2D Couch grass

Horizon Notes:

Texture	B23	sodic, stiff
Texture	B24	sodic, stiff
Texture	B26	sodic, soft

Project: MAS Site: 4 Observation: 1

Soil Name: A1 - AASS at 0.5-1m

Location: GDA 94 ZONE 56 503945mE 6989626mN Lat: -27.21612 Long: 153.03984

Described By: Fiona McCartney (MCCF) Date: 15/APR/10

Landscape:

Geology: Qpa - Qpa-SEQ: High level alluvium; silt, clay, sand and gravel

Element: supratidal flat Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 1 % Drainage: Poorly drained

Disturbances: No effective disturbance except grazing by hoofed animals

Classifications:

ASC: NO AVAILABLE CLASS, SULFURIC, EXTRATIDAL, Hydrosol, Thick, Non-gravelly, Clay Loamy, Clayey, Very Deep:

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .35	Very dark brown (10YR22) moist; sapric clay loam; massive structure; very weak dry; many 1-2mm roots; moderately permeable; moderately well drained; sharp to
B21	.35 to .55	Grey (2.5Y51) moist; many 20-50% coarse 15-30mm prominent orange mottles; light clay;massive structure; weak wet; few <1mm roots; very slowly permeable; poorly drained; clear to
B22ia	.55 to 1.2	Dark grey (2.5Y41) moist; very few <2% fine <5mm distinct orange mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; light clay; massive structure; weak wet; common 1-2mm roots; very slowly permeable; poorly drained; sharp to
2B21i	1.2 to 1.6	Dark grey (2.5Y41) moist; many 20-50% very coarse >30mm prominent red mottles; light clay; massive structure; very strong dry; very slowly permeable; poorly drained; clear to
2B22	1.6 to 1.9	Grey (5Y61) moist; many 20-50% coarse 15-30mm prominent orange mottles; sandy light medium clay; massive structure; very firm dry; very slowly permeable; poorly drained; clear to
2B23	1.9 to 4	Grey (N50) moist; light medium clay; massive structure; very strong dry; very slowly permeable; poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		4.5	3.3
.3		4.3	3.4
.6		4.1	2.3
.8		4.1	2.8
1		4.1	2.9
1.25		4	2.8
1.5		4.3	2.7
1.75	4	4.7	3.7
2	4	4.9	4.4
2.25	4	5.3	4.8
2.5	4	5.5	4.8
2.75	4	4.8	3.8
3	4	4.9	4.6
3.25	4	5.1	4.6
3.5		5.4	4.9
3.75	4	4.8	4.7
4		4.8	5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)6M Casuarina spp, G(g1.0)1D *Sporobolus virginicus* (Salt couch)

Project: MAS Site: 5 Observation: 1

Soil Name: a0S1 - PASS At 0.5-1.0m with pH of 4-5 at 0-0.5m

Location: GDA 94 ZONE 56 504051mE 6989431mN Lat: -27.21788 Long: 153.04091

Described By: Fiona McCartney (MCCF) Date: 15/APR/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: tidal flat Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 1 % Drainage: Poorly drained

Depth to Water: 0.3

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, INTERTIDAL, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clay Loamy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Brown (7.5YR42) moist; fibric clay loam; massive structure; very weak wet; abundant 2-5mm roots; moderately permeable; moderately well drained; abrupt to
B21	.2 to .35	Dark grey (10YR41) moist; few 2-10% medium 5-15mm distinct orange mottles; sapric light clay; massive structure; very weak wet; many 1-2mm roots; very slowly permeable; poorly drained; clear to
B22	.35 to .6	Grey (10YR51) moist; many 20-50% medium 5-15mm prominent orange mottles; light clay; massive structure; very weak wet; many 1-2mm roots; very slowly permeable; poorly drained; gradual to
B23u	.6 to .95	Grey (10YR51) moist; light clay; massive structure; very few <2% fine <2mm ferruginous root linings; very weak wet; common <1mm roots; very slowly permeable; poorly drained; gradual to
B24u	.95 to 1.5	Dark grey (N40) moist; light clay; massive structure; very weak wet; common 1-2mm roots;very slowly permeable; poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.01	1	4.5	3.4
.1	1	5.4	4.2
.3		5.7	3.8
.5		4.9	4.1
.6		5.1	3.8
.8	2	5.5	1.8
1	4	5.8	1.6
1.25	4	6	1.6
1.5	4	6	1.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Soil gouge auger in large mangroves

Vegetation U(w1.0)6D, *Avicennia marina, Casuarina glauca*
G(g1.0)2D *Sporobolus virginicus* (Salt couch)

Project: MAS Site: 6 Observation: 1

Soil Name: A1S2 - AASS at 0.5-1.0m and PASS at 1-2m

Location: GDA 94 ZONE 56 504036mE 6989290mN Lat: -27.21916 Long: 153.04076

Described By: Fiona McCartney (MCCF) Date: 15/APR/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: supratidal flat Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 1 %

Drainage: Poorly drained

Depth to Water: 0.4

Classifications:

ASC: NO AVAILABLE CLASS, SULFURIC, EXTRATIDAL, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Brown (7.5YR42) moist; fibric clay loam; massive structure; very weak wet; abundant >5mm roots; moderately permeable; moderately well drained; abrupt to
B21	.1 to .2	Grey (10YR51) moist; many 20-50% coarse 15-30mm prominent orange mottles; sapric light medium clay; massive structure; very weak wet; many 2-5mm roots; very slowly permeable; poorly drained; clear to
B22i	.2 to .6	Grey (10YR51) moist; common 10-20% coarse 15-30mm prominent orange mottles; medium clay; massive structure; very weak wet; common 2-5mm roots; very slowly permeable; poorly drained; clear to
B23u	.6 to 1	Dark grey (10YR41) moist; few 2-10% fine <5mm faint orange mottles; light medium clay; massive structure; very weak wet; common 2-5mm roots; very slowly permeable; poorly drained; gradual to
C1u	1 to 1.75	Dark grey (N40) moist; fine sandy light clay; massive structure; very weak wet; few 1-2mm roots; very slowly permeable; poorly drained; abrupt to
C2u	1.75 to 2.3	Very dark grey (N30) moist; sandy clay loam; massive structure; very weak wet; very slowly permeable; poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.01	1	4.8	2.7
.11	1	5.1	3.9
.3	1	4.3	3.4
.6		4.1	2.7
.8	1	4.6	2.9
1	4	4.2	1.5
1.25	4	4.2	1.5
1.5	4	4.2	1.5
1.75	4	4.6	1.7
2	4	4.5	1.5
2.25	4	4.5	1.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Soil Sand auger to 0.8m, gouge auger 0.8 - 2.3m

Vegetation U(w1.0)6V *Casuarina glauca*
G(g1.0)2D *Sporobolus virginicus* (Salt couch), reeds

Project: MAS Site: 7 Observation: 1

Soil Name: a2LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 1-2m

Location: GDA 94 ZONE 56 503568mE 6988868mN Lat: -27.22297 Long: 153.03603

Described By: Fiona McCartney (MCCF) Date: 28/APR/10

Landscape:

Geology: RJl - Landsborough Sandstone: Lithofeldspathic labile and quartzose sandstone, siltstone, shale, minor coal, ferruginous oolite marker

Element: footslope Landform Pattern: rises

Permeability: Slowly permeable

Microrelief: Zero or none

Slope: 3 % Drainage: Poorly drained

Surface Condition: Soft

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: MELANIC, MESOTROPHIC, GREY, Kurosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .04	Very dark brown (10YR22) moist; heavy sandy clay loam; massive structure; weak wet; common 1-2mm roots; highly permeable; well drained; sharp to
A2	.04 to .33	Very dark greyish brown (10YR32) moist; sandy loam; massive structure; firm wet; common 1- 2mm roots; highly permeable; well drained; gradual to
A3	.33 to .76	Light grey (10YR72) moist; few 2-10% medium 5-15mm distinct brown mottles; sandy clay loam; massive structure; weak wet; few <1mm roots; moderately permeable; moderately well drained; clear to
B21	.76 to 1.31	Light grey (10YR71) moist; few 2-10% coarse 15-30mm prominent red mottles, few 2-10% coarse 15-30mm prominent orange mottles; sandy light medium clay; massive structure; few 2- 10% medium 2-6mm ferruginous nodules; firm wet; few <1mm roots; slowly permeable; poorly drained; clear to
B22	1.31 to 2.65	Light reddish grey (2.5YR71) moist; many 20-50% very coarse >30mm prominent red mottles, many 20-50% very coarse >30mm prominent orange mottles; sandy medium heavy clay; massive structure; common 10-20% very coarse 20-60mm ferruginous nodules; very strong moist; slowly permeable; poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		5.7	3.2
.3		5.8	4.6
.6		5.4	4.5
.8		5.3	4.1
1	1	5.3	4.3
1.25		5.3	4.1
1.5	1	5.3	3.7
1.75		4.9	3.7
2		4.8	3.6
2.25		4.7	3.6
2.5		4.7	3.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation Previously cultivated for sweet potato.

Vegetation U(w1.0)5V Eucalyptus spp. Casuarina spp. \ G(g1.0)2D Grass

Project: MAS Site: 8 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 504171mE 6988047mN Lat: -27.23038 Long: 153.04213

Described By: Fiona McCartney (MCCF) Date: 29/APR/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: plain Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 1 % Drainage: Poorly drained

Depth to Water: 1.2

Surface Condition: Firm

Disturbances: Limited clearing

Classifications:

ASC: FERRIC-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .15	Dark brown (10YR33) moist; medium clay; subangular blocky moderate 2-5mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; abrupt to
B21i	.15 to .4	Dark yellowish brown (10YR34) moist; few 2-10% fine <5mm faint red mottles; heavy clay; massive structure; firm moist; wet when sampled; slowly permeable; imperfectly drained; clear to
B22i	.4 to 1.15	Greyish brown (2.5Y52) moist; few 2-10% medium 5-15mm prominent red mottles, few 2-10% medium 5-15mm prominent orange mottles; heavy clay; subangular blocky weak 2-5mm structure; firm moist; wet when sampled; slowly permeable; imperfectly drained; clear to
B23ia	1.15 to 1.5	Olive grey (5Y42) moist; many 20-50% very coarse >30mm prominent red mottles, many 20- 50% very coarse >30mm prominent yellow jarosite (from pyrite) mottles; heavy clay; subangular blocky weak 2-5mm structure; weak wet; wet when sampled; slowly permeable; imperfectly drained; clear to
B24i	1.5 to 1.8	Dark grey (N40) moist; common 10- 20% very coarse >30mm prominent yellow jarosite (from pyrite) mottles common 10-20% medium 5-15mm distinct orange mottles, common 10- 20% medium 5-15mm distinct brown mottles; medium clay; massive structure; weak wet; wet when sampled; slowly permeable; imperfectly drained; clear to
B25i	1.8 to 2.4	Grey (2.5Y51) moist; common 10-20% medium 5-15mm distinct red mottles, common 10-20% medium 5-15mm distinct orange mottles; light clay; massive structure; very weak wet; strong wet; wet when sampled; gradual to
B26	2.4 to 2.75	Grey (2.5Y51) moist; common 10-20% medium 5-15mm distinct red mottles, common 10-20% medium 5-15mm distinct orange mottles; medium heavy clay; massive structure; very firm wet; wet when sampled; gradual to
D1	2.75 to 3.25	Grey (2.5Y51) moist; few 2-10% fine <5mm distinct red mottles, few 2-10% fine <5mm faint orange mottles; medium heavy clay; massive structure; firm wet; wet when sampled; clear to
D2	3.25 to 3.5	Greenish grey (10Y51) moist; few 2-10% medium 5-15mm distinct yellow mottles, many 20- 50% medium 5-15mm prominent orange mottles; medium heavy clay; massive structure; many 20-50% fine <2mm ferruginous fragments; very firm wet; wet when sampled; clear to
D3	3.5 to 3.75	Greenish grey (5GY51) moist; fine sandy medium heavy clay; massive structure; very firm wet;wet when sampled; clear to
D4	3.75 to 3.95	Grey (N60) moist; sandy light clay; massive structure; weak wet; wet when sampled; clear to
D5	3.95 to 4.6	Grey (2.5Y61) moist; fine sandy medium heavy clay; massive structure; strong wet; wet when sampled; abrupt to
D6	4.6 to 4.85	Yellowish brown (10YR56) moist; many 20-50% very coarse >30mm distinct yellow mottles, many 20-50% medium 5-15mm prominent grey mottles; fine sandy medium clay; many 20-50% fine <2mm ferruginous fragments; wet when sampled

Project: MAS Site: 8 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.8	3.4
.3	1	3.7	2.9
.6	1	3.5	2.6
.8		3.4	2.4
1		3.5	2.4
1.25		3.4	2.4
1.5		3.7	2.4
1.75		3.8	1.9
2		3.8	2.5
2.25		3.8	2.8
2.5		4.1	2.8
2.75		4.5	3.1
3	4	6.2	6.7
3.25	4	6.1	7.4
3.5	4	6.3	7.0
3.75	4	6.3	6.3
4	4	6.4	5.7
4.25	4	6.1	5.9
4.5	4	5.9	6.1
4.75	4	6.0	6.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation 3.95-4.6m horizon - sodic.

Vegetation U(w1.0)5M Acacia spp. \ G(g1.0)2D Grasses

Project: MAS Site: 9 Observation: 1

Soil Name: a1S0 - PASS at 0.5-1.0m with pH of 4-5 at 0.5-1.0m

Location: GDA 94 ZONE 56 504146mE 6987933mN Lat: -27.23141 Long: 153.04187

Described By: Jonathan Walton (WALJ) Date: 29/APR/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: swamp Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 1 % Drainage: Very poorly drained

Depth to Water: 0.01

Classifications:

ASC: HUMOSE-ACIDIC, SULFIDIC, OXYAQUIC, Hydrosol, Medium, Non-gravelly, Peaty, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
P1	0 to .1	Red (10R46) moist; fibric peat; massive structure; very weak wet; highly permeable; poorly drained; abrupt to
A1u	.1 to .25	Black (10YR21) moist; clay loam; massive structure; weak wet; moderately permeable; poorly drained; abrupt to
B2u	.25 to .55	Greenish grey (10Y51) moist; few 2-10% fine <5mm distinct orange mottles; light clay; massive structure; weak wet; slowly permeable; poorly drained; abrupt to
B3u	.55 to 1.05	Dark greenish grey (10Y41) moist; light clay; massive structure; strong wet; slowly permeable; very poorly drained; gradual to
C1u	1.05 to 1.5	Dark greenish grey (5GY41) moist; light clay; massive structure; firm wet; slowly permeable; very poorly drained; abrupt to
2Cu	1.5 to 1.6	Dark greenish grey (10Y41) moist; clayey coarse sand; massive structure; weak wet; highly permeable; very poorly drained; abrupt to
2Du	1.6 to 1.8	Greenish black (10Y2.5/1) moist; sandy light clay; massive structure; strong wet; slowly permeable; very poorly drained; abrupt to
2D2u	1.8 to 2.08	Grey (N60) moist; few 2-10% medium 5-15mm prominent red mottles, few 2-10% medium 5- 15mm prominent orange mottles; sandy medium heavy clay; massive structure; strong moist; very slowly permeable; very poorly drained; clear to
2D3	2.08 to 2.6	Greenish grey (10Y51) moist; medium heavy clay; massive structure; strong moist; very slowly permeable; very poorly drained; abrupt to
2D4	2.6 to 2.72	Greenish grey (10Y51) moist; common 10-20% coarse 15-30mm prominent red mottles, few 2- 10% medium 5-15mm distinct orange mottles; heavy clay; massive structure; strong moist; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.7	3.4
.3	2	5.9	4.1
.6	2	4.7	3.1
.8	1	4.8	3.1
1	4	5.3	3.5
1.25	4	5.1	1.3
1.5	4	5.4	1.3
1.75	4	5.9	4
2	4	6.4	4.1
2.25	4	6.3	5.3
2.5	3	6.2	5.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Vegetation U(g1.0)4D *Phragmites australis* (common reed)

Project: MAS Site: 10 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 504227mE 6987696mN Lat: -27.23355 Long: 153.04269

Described By: Lauren OBrien (OBRL) Date: 29/APR/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: swamp Landform Pattern: alluvial plain

Permeability: Very slowly permeable Drainage: Very poorly drained

Depth to Water: 0.1 Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Peaty, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Very dark brown (10YR22) moist; fibric peat; massive structure; abundant <1mm roots; highly permeable; very poorly drained; abrupt to
B21i	.2 to .4	Dark greyish brown (2.5Y42) moist; common 10-20% fine <5mm distinct orange mottles, very few <2% fine <5mm faint red mottles; light medium clay; massive structure; common <1mm roots; very slowly permeable; poorly drained; clear to
B22ia	.4 to .7	Olive grey (5Y42) moist; few 2-10% medium 5-15mm prominent yellow jarosite (from pyrite) mottles, very few <2% very coarse >30mm distinct dark mottles; medium clay; massive structure; few 2-10% medium 2-6mm ferruginous root linings; very slowly permeable; poorly drained; clear to
2B21ia	.7 to 1.1	Light olive grey (5Y62) moist; few 2-10% medium 5-15mm prominent yellow jarosite (from pyrite) mottles; fine sandy light clay; massive structure; few 2-10% medium 2-6mm ferruginous root linings; very slowly permeable; poorly drained
2B22i	1.1 to 1.7	Olive grey (5Y42) moist; very few <2% fine <5mm faint orange mottles; clay loam, fine sandy; massive structure; few 2-10% fine <2mm ferruginous root linings; slowly permeable; very poorly drained; gradual to
2B3	1.7 to 1.9	Light brownish grey (2.5Y62) moist; very few <2% fine <5mm faint orange mottles; clay loam, fine sandy; massive structure; slowly permeable; very poorly drained; diffuse to
3C1	1.9 to 2.2	Light grey (10YR71) moist; clayey sand; single grain structure; moderately permeable; very poorly drained; clear to
3C2	2.2 to 2.5	Grey (10YR61) moist; light clay; massive structure; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.04	2.9
.3	2	4.6	2.7
.6	1	4.24	3.1
.8	1	4.48	3.2
1	2	4.42	3.15
1.25		4.22	3.13
1.5	2	4.4	3.19
1.75	2	4.22	3.26
2	1	4.34	3.1
2.25	1	4.69	3.66
2.5	1	4.98	3.61

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation	Mango Hill, Swamp
Vegetation	G(g1.0)3D Grasses

Project: MAS Site: 11 Observation: 1

Soil Name: a1LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0.5-1.0m

Location: GDA 94 ZONE 56 503424mE 6988583mN Lat: -27.22554 Long: 153.03458

Described By: Jonathan Walton (WALJ) Date: 11/MAY/10

Landscape:

Geology: Qr - Qr-9543: Residual soil, colluvium; sand, soil, clay, rock debris

Element: plain Landform Pattern: alluvial plain

Permeability: slowly permable Runoff: Very slow

Slope: 1 % Drainage: Poorly drained

Depth to Water: .01

Surface Condition: Soft

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: HUMOSE-ACIDIC, KANDOSOLIC, OXYAQUIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
O	0 to .1	Very dark brown (10YR22) moist; fibric light clay; wet when sampled; highly permeable; well drained; sharp to
A11	.1 to .2	Very dark greyish brown (2.5Y32) moist; sapric light medium clay; subangular blocky weak <2mm structure; wet when sampled; slowly permeable; moderately well drained; abrupt to
A12	.2 to .35	Very dark grey (2.5Y31) moist; sapric medium heavy clay; massive structure; wet when sampled; slowly permeable; imperfectly drained; abrupt to
B21	.35 to .52	Grey (2.5Y61) moist; many 20-50% coarse 15-30mm prominent orange mottles; fine sandy light clay; massive structure; wet when sampled; slowly permeable; imperfectly drained; abrupt to
B22	.52 to .9	Light grey (2.5Y71) moist; fine sandy light clay; massive structure; wet when sampled; slowly permeable; poorly drained; clear to
B23	.9 to 1.35	Grey (N60) moist; medium clay; massive structure; wet when sampled; slowly permeable; poorly drained; clear to
2B24	1.35 to 1.6	Light greenish grey (10Y71) moist; few 2-10% coarse 15-30mm distinct yellow mottles; fine sandy light clay; massive structure; wet when sampled; slowly permeable; poorly drained; clear to
2B25	1.6 to 1.75	Light greenish grey (10Y71) moist; fine sandy light clay; massive structure; moist when sampled; moderately permeable; poorly drained; abrupt to
3C	1.75 to 1.9	Light grey (2.5Y71) moist; sand; massive structure; moist when sampled; clear to
4C1	1.9 to 2.05	Light grey (2.5Y71) moist; sandy loam; massive structure; moist when sampled; clear to
4C2	2.05 to 2.25	Light greenish grey (10Y71) moist; sandy loam; massive structure; moist when sampled; clear to
4C3	2.25 to 2.3	Grey (2.5Y61) moist; sandy loam; massive structure; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.11	2	5.8	2.1
.3	2	5.9	2.4
.5	1	5.2	3.3
.8	1	5.0	3.4
1	1	5.1	3.5
1.25		5.2	3.7
1.5		5.3	4.2
1.75		5.3	4.1
2		5.1	4.7
2.25		5.2	4.1
2.3		5.6	4.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 11 Observation: 1

Horizon Notes:

Horizon	O	fibric organic horizon
Horizon	A11	organics in H202 test
Horizon	A12	organics in fox test

Vegetation U(g1.0)4S *Phragmites australis* (common reed)

Project: MAS Site: 12 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 504697mE 6988858mN Lat: -27.22306 Long: 153.04744

Described By: Jonathan Walton (WALJ) Date: 11/MAY/10

Landscape:

Geology: Qr - Qr-9543: Residual soil, colluvium; sand, soil, clay, rock debris

Element: plain Landform Pattern: alluvial plain

Permeability: Very slowly permeable Runoff: Slow

Slope: 1 % Drainage: Poorly drained

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MELACIC-MOTTLED, MESOTROPHIC, BROWN, Kandosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .22	Dark greyish brown (10YR42) moist; clay loam; subangular blocky weak 5-10mm structure; moist when sampled; highly permeable; well drained; abrupt to
B21i	.22 to .5	Dark brown (10YR33) moist; light medium clay; subangular blocky moderate 5-10mm structure; moist when sampled; slowly permeable; imperfectly drained; clear to
B22ia	.5 to .65	Dark grey (N40) moist; common 10-20% medium 5-15mm distinct red mottles, few 2-10% medium 5-15mm distinct yellow jarosite (from pyrite) mottles; light medium clay; massive structure; moist when sampled; slowly permeable; imperfectly drained; clear to
2B23ia	.65 to .95	Olive grey (5Y52) moist; common 10-20% medium 5-15mm distinct red mottles, few 2-10% medium 5-15mm distinct yellow jarosite (from pyrite) mottles; sandy light clay; massive structure; few 2-10% medium 2-6mm ferruginous concretions; moist when sampled; slowly permeable; poorly drained; clear to
3B24ia	.95 to 1.4	Grey (N60) moist; common 10-20% coarse 15-30mm prominent orange mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; medium clay; massive structure; moist when sampled; very slowly permeable; poorly drained; clear to
3B25	1.4 to 2.7	White (N80) moist; many 20-50% coarse 15-30mm prominent red mottles, few 2-10% medium 5- 15mm distinct yellow mottles; medium clay; massive structure; moist when sampled; very slowly permeable; poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5	2.7
.3	2	4.4	2.5
.6	1	4.1	2
.8		4.2	2.5
1		4.4	3
1.25		4.3	3.2
1.5		4.4	3.4
1.75		4.4	3.2
2		4.3	3.5
2.25		4.3	3.5
2.5		4.5	3.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 12 Observation: 1

Observation Notes:

Vegetation	Melaleuca along road, pasture grasses

Horizon Notes:

Horizon	A1	organics in pHfox test
Horizon	B21i	organics in pHfox test
Horizon	2B23ia	Jarosite patchy in horizon 4
Horizon	3B24ia	Jarosite in top 0.2m of horizon 5.
Horizon	3B25	patches of yellow mottle from 2.3m

Project: MAS Site: 13 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 504583mE 6988158mN Lat: -27.22938 Long: 153.04629

Described By: Jonathan Walton (WALJ) Date: 12/MAY/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable Runoff: Very slow

Drainage: Poorly drained

Depth to Water: 0.8

Surface Condition: Firm

Disturbances: No effective disturbance

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .15	Very dark brown (10YR22) moist; sapric clay loam; angular blocky weak 2-5mm structure; moderately permeable; moderately well drained
B1i	.15 to .22	Dark brown (7.5YR32) moist; light medium clay; subangular blocky moderate 10-20mm structure; moderately permeable; moderately well drained
B21i	.22 to .4	Weak red (7.5R44) moist; medium heavy clay; slowly permeable; imperfectly drained
B22ia	.4 to .7	Grey (10YR51) moist; many 20-50% coarse 15-30mm prominent orange mottles, few 2-10% medium 5-15mm distinct yellow jarosite (from pyrite) mottles; medium heavy clay; massive structure; slowly permeable; imperfectly drained
B23ia	.7 to 1.75	Greenish grey (10Y51) moist; common 10-20% medium 5-15mm distinct yellow jarosite (from pyrite) mottles; medium heavy clay; massive structure; very slowly permeable; poorly drained
B24i	1.75 to 2.9	Greenish grey (10Y51) moist; few 2-10% fine <5mm distinct orange mottles, few 2-10% fine <5mm faint grey mottles; medium heavy clay
2B25	2.9 to 3.2	Greenish grey (10GY61) moist; common 10-20% coarse 15-30mm distinct brown mottles; sandy medium clay; massive structure
2B26	3.2 to 3.3	Light grey (N70) moist; many 20-50% coarse 15-30mm distinct brown mottles; sandy medium clay; massive structure

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	3.9	3.2
.2	1	3.7	2.4
.3		3.6	2.5
.4		3.5	2.5
.6		3.6	2.6
.8		3.7	2.6
1		3.7	2.3
1.25		3.6	2.2
1.5		3.6	2.3
1.75		4.4	1.9
2	4	4.5	2.8
2.25	4	5.9	4.1
2.5	4	5.9	5.0
2.75	4	6.1	6.1
3	4	6.3	6.4
3.25	4	6.0	6.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 14 Observation: 1

Soil Name: A2S4 - AASS at 1-2m and PASS at 3-4m

Location: GDA 94 ZONE 56 505147mE 6988175mN Lat: -27.22922 Long: 153.05198

Described By: Jonathan Walton (WALJ) Date: 12/MAY/10

Landscape:

Geology: Qpa - Qpa-SEQ: High level alluvium; silt, clay, sand, gravel

Element: hillslope Landform Pattern: rises

Permeability: Slowly permeable Runoff: Very slow

Slope: 3 % Drainage: Poorly drained

Depth to Water: 2.1

Surface Condition: Firm

Disturbances: Extensive clearing

Classifications:

ASC: ACIDIC, KANDOSOLIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .15	Very dark grey (10YR31) moist; sandy clay loam; weak structure; moderately moist when sampled; highly permeable; well drained; clear to
A12	.15 to .3	Dark greyish brown (10YR42) moist; sandy clay loam; weak structure; moderately moist when sampled; highly permeable; well drained; gradual to
A2	.3 to .8	Pale brown (10YR63) moist; clayey sand; single grain structure; moderately moist when sampled; highly permeable; rapidly drained; gradual to
B1	.8 to 1.1	Very pale brown (10YR73) moist; very few <2% fine <5mm faint orange mottles; fine sandy loam; weak structure; moderately moist when sampled; highly permeable; well drained; clear to
B21	1.1 to 1.6	Very pale brown (10YR74) moist; common 10-20% medium 5-15mm faint orange mottles; fine sandy loam; massive structure; moist when sampled; highly permeable; moderately well drained; clear to
B22	1.6 to 2.32	Grey (10YR61) moist; common 10-20% medium 5-15mm distinct orange mottles; heavy fine sandy clay loam; massive structure; wet when sampled; moderately permeable; imperfectly drained; abrupt to
B23	2.32 to 2.6	Grey (5Y61) moist; many 20-50% medium 5-15mm distinct orange mottles, few 2-10% medium 5-15mm prominent red mottles; fine sandy light clay; massive structure; wet when sampled; slowly permeable; poorly drained; abrupt to
B24	2.6 to 3.18	Light grey (N70) moist; very few <2% fine <5mm faint yellow mottles; fine sandy light clay; massive structure; wet when sampled; slowly permeable; poorly drained; clear to
2B25u	3.18 to 3.45	Grey (N50) moist; light medium clay; massive structure; wet when sampled; clear to
2B26u	3.45 to 3.6	Grey (N50) moist; very few <2% fine <5mm faint yellow mottles; fine sandy light clay; common 10-20% subrounded sandstone medium pebbles 6-20 mm; massive structure; wet when sampled; abrupt to
3B27	3.6 to 4.1	Yellow (10YR76) moist; common 10-20% medium 5-15mm prominent red mottles, few 2-10% medium 5-15mm distinct gley mottles; medium heavy clay; massive structure; wet when sampled

Project: MAS Site: 14 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.4	2.1
.3	1	5.4	3
.6		5.1	4.1
.8		5.1	4
1		5.7	4.6
1.25		5.8	4.8
1.5		4.4	3.0
1.75		3.7	2.7
2		3.9	2.5
2.25		3.7	2.7
2.5		3.7	2.6
2.75		4	2.4
3		4.1	2.6
3.25		4.8	2.4
3.5	4	5.8	1.4
3.75	1	5.9	3
4	1	5.6	3.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0) Ironbark ~10m, Casuarina ~8m, G(f1.0)3D *Pteridium esculentum* (bracken fern)

Project: MAS Site: 15 Observation: 1

Soil Name: A0S3 - AASS at 0-0.5m and PASS at 2-3m

Location: GDA 94 ZONE 56 505356mE 6988499mN Lat: -27.22629 Long: 153.05409

Described By: Kate Goulding (GOUK) Date: 12/MAY/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable Runoff: Slow

Drainage: Poorly drained

Depth to Water: 1.65

Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: MELACIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .25	Black (10YR21) moist; clay loam; weak structure; moist when sampled; highly permeable; well drained; abrupt to
B21i	.25 to .55	Brownish yellow (10YR66) moist; few 2-10% fine <5mm distinct grey mottles, few 2-10% fine <5mm distinct orange mottles; medium clay; angular blocky moderate 10-20mm structure; moist when sampled; slowly permeable; moderately well drained; clear to
2B22i	.55 to 1.05	Grey (10YR61) moist; many 20-50% medium 5-15mm distinct yellow mottles, few 2-10% fine <5mm distinct orange mottles; fine sandy clay loam; massive structure; moist when sampled; slowly permeable; imperfectly drained; gradual to
3B23ia	1.05 to 1.65	Grey (10YR51) moist; common 10-20% medium 5-15mm distinct yellow jarosite (from pyrite) mottles; medium clay; massive structure; wet when sampled; slowly permeable; poorly drained; abrupt to
3B24i	1.65 to 1.95	Grey (10YR51) moist; few 2-10% medium 5-15mm distinct brown mottles; medium clay; massive structure; wet when sampled; gradual to
3B25i	1.95 to 2.25	Grey (10YR51) moist; medium heavy clay; massive structure; wet when sampled; gradual to
3B26u	2.25 to 3.9	Grey (N50) moist; medium heavy clay; massive structure; wet when sampled; clear to
3B27u	3.9 to 4.1	Grey (N50) moist; fine sandy light medium clay; massive structure; wet when sampled; clear to
4B28u	4.1 to 5.25	Light grey (N70) moist; loamy fine sand; massive structure; wet when sampled; clear to
5B29u	5.25 to 5.95	Dark grey (N40) moist; common 10-20% coarse 15-30mm distinct brown mottles; medium heavy clay; massive structure; moist when sampled; clear to
6B30	5.95 to 6	Greenish grey (5G61) moist; many 20-50% coarse 15-30mm distinct brown mottles; medium heavy clay; massive structure; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		4.4	2.9
.3		3.9	2.8
.6		3.8	2.7
.8		3.6	2.7
1		3.6	2.4
1.25		3.3	2
1.5		3.4	2.3
1.75		3.4	2.1
2		3.6	2.2
2.25	4	4	1.4
2.5	4	4.2	1.4
2.75	4	5	1.5

Project: MAS Site: 15 Observation: 1

Depth	H2O2-	PH-2	PH-3
3	4	5	1.5
3.25	4	5.9	1.2
3.5	4	6.3	1.4
3.75	4	6.4	1.2
4	4	6.7	1.3
4.25	4	6.75	1.7
4.5	4	6.8	1.6
5.5	4	7.7	4.6
5.75	4	8	7.3
6	4	6.8	7.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)6M Eucalyptus spp. / U(w1.0)5M Acacia spp.
M(w3.0)4D *Lantana camara*
G(g1.0)2D Grass app.

Horizon Notes:

Horizon	3B24i	No sample collected for this horizon
Horizon	3B26u	Few plant remains
Horizon	3B27u	Few plant remains
Horizon	4B28u	pushed through horizon and lost some sample
Horizon	5B29u	Field tests indicate ANC in horizon?

Project: MAS Site: 16 Observation: 1

Soil Name: S5+ - PASS at greater than 5m depth

Location: GDA 94 ZONE 56 495782mE 6983681mN Lat: -27.2698 Long: 152.95738

Described By: Jonathan Walton (WALJ) Date: 13/MAY/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay;

Element: valley flat Landform Pattern: alluvial plain

Permeability: Highly permeable Runoff: Slow

Drainage: Rapidly drained

Depth to Water: 3

Surface Coarse Fragments: Few 2-10%, Cobbles 60-200 mm, Quartz

Surface Condition: Firm

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: BASIC, FLUVIC, CLASTIC, Rudosol, Moderately Gravelly, Sandy

Profile Morphology:

Horizon	Depth (m)	Description
AC	0 to .4	Dark yellowish brown (10YR44) moist; sand; many 20-50% rounded quartz large pebbles 20-60 mm; single grain structure; moderately moist when sampled; highly permeable; rapidly drained; gradual to
C1	.4 to 1.1	Yellowish brown (10YR54) moist; sand; abundant 50-90% rounded quartz large pebbles 20-60 mm; single grain structure; moderately moist when sampled; highly permeable; rapidly drained; abrupt to
2C2	1.1 to 1.5	Brown (10YR43) moist; fine sandy clay loam; common 10-20% subrounded quartz medium pebbles 6-20 mm; single grain structure; moderately moist when sampled; highly permeable; rapidly drained; gradual to
3C3	1.5 to 4.1	Yellowish brown (10YR56) moist; clayey sand; abundant 50-90% subrounded quartz large pebbles 20-60 mm; single grain structure; wet when sampled; gradual to
4C4	4.1 to 4.4	Yellowish brown (10YR56) moist; loamy sand; common 10-20% subrounded quartz medium pebbles 6-20 mm; single grain structure; wet when sampled; gradual to
5C5	4.4 to 7	Yellowish brown (10YR56) moist; coarse sand; abundant 50-90% subrounded quartz cobbles 60-200 mm; wet when sampled; sharp to
R	7 to 7.2	Greenish grey (5G51) moist; gravel; strong moderately moist; moderately moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.2	3.8
.3	2	5.8	4.3
.6	1	6.3	4.3
.8	1	6	4.2
1	1	6.5	5.4
1.25	1	6.1	3.4
1.5	1	6.2	6.4
1.75	4	6.5	4.6
2	4	6.5	7.5
2.25	4	6.7	7.6
2.5	4	6.7	6.7
2.75	4	6.8	7.3
3	4	6.6	7.2
3.25	4	6.7	7.3
3.5	4	6.6	7.4
3.75	4	6.7	7.6

Project: MAS Site: 16 Observation: 1

Depth	H2O2-	PH-2	PH-3
4	4	6.7	7.7
4.25	4	7	5.8
4.5	4	6.9	2.8
4.75	4	6.6	5.7
5	4	6.5	6.1
5.25		6.4	5.8
5.5		6.5	5.8
5.75		6.5	6.7
6		6.5	6.1
6.25		6.7	5.8
6.5		6.9	5.7
6.75		6.9	5.7
7	4	6.9	1.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w3.0)7M unknown spp

Horizon Notes:

Horizon 5C5 Extra horizon from 7-7.2 not described (probably weathered rock, most likely siltstone. pHfox test indicates ASS. Sample collected (15).
Hit hard rock at 7.2m - couldn't penetrate.

Project: MAS Site: 17 Observation: 1

Soil Name: S5+ - PASS at greater than 5m depth

Location: GDA 94 ZONE 56 497356mE 6983363mN Lat: -27.27267 Long: 152.97329

Described By: Kate Goulding (GOUK) Date: 13/MAY/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable Runoff: Slow

Depth to Water: 1.8

Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: HAPLIC, MESOTROPHIC, BROWN, Kandosol, Thin, Non-gravelly, Clay Loamy, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .05	Very dark greyish brown (10YR32) moist; clay loam; weak structure; moderately moist when sampled; moderately permeable; well drained; clear to
B21	.05 to .4	Brown (10YR43) moist; silty clay loam; subangular blocky weak 2-5mm structure; moderately moist when sampled; moderately permeable; well drained; gradual to
B22	.4 to .7	Brown (10YR43) moist; common 10-20% fine <5mm distinct pale mottles; silty clay loam; subangular blocky weak 2-5mm structure; moderately moist when sampled; moderately permeable; moderately well drained; clear to
B3	.7 to 1	Greyish brown (10YR52) moist; common 10-20% fine <5mm distinct brown mottles; heavy light clay; common 10-20% subangular quartz medium pebbles 6-20 mm; subangular blocky weak 2-5mm structure; moist when sampled; slowly permeable; imperfectly drained; abrupt to
C1	1 to 1.3	Yellowish brown (10YR54) moist; sand; abundant 50-90% subrounded quartz cobbles 60-200mm; single grain structure; moist when sampled; highly permeable; rapidly drained; gradual to
C2	1.3 to 1.6	Light yellowish brown (10YR64) moist; sand; abundant 50-90% subrounded quartz medium pebbles 6-20 mm; single grain structure; moist when sampled; highly permeable; poorly drained; gradual to
2C3	1.6 to 1.8	Greyish brown (10YR52) moist; clay loam; abundant 50-90% subrounded quartz large pebbles 20-60 mm; single grain structure; wet when sampled; gradual to
3C4	1.8 to 4.5	Pale brown (10YR63) moist; clayey sand; abundant 50-90% subrounded quartz cobbles 60-200 mm; single grain structure; wet when sampled; gradual to
4C5	4.5 to 7.3	Pale brown (10YR63) moist; coarse sand; abundant 50-90% subrounded quartz small pebbles 2-6 mm; many 20-50% subrounded quartz cobbles 60-200 mm; single grain structure; wet when sampled; clear to
5D	7.3 to 7.5	Greenish grey (5G51) moist; light clay; subangular blocky moderate 2-5mm structure; few 2-10% fine <2mm ferruginous laminae; wet when sampled

Project: MAS Site: 17 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.4	3
.3	2	5.8	2.9
.6	4	6.1	3.6
.8	2	6.5	3
1	4	6.8	4
1.25	1	6.9	5
1.5	1	6.6	4.7
1.75	1	5.6	4.6
2	1	6.7	5.7
3.25	1	6.9	5.7
3.5	1	6.8	6.1
3.75	1	6.8	5.7
4	2	6.7	5.8
4.25	2	6.8	5.7
4.5	2	6.8	6.5
4.75	2	7	6.1
5	1	7	6.1
5.25	1	6.9	6
5.5	1	6.9	6.1
5.75	1	6.9	6.1
6	1	7.1	5.9
6.25	1	6.8	5.9
6.5	1	7	6
6.75	1	7	5.8
7	1	7	5.4
7.25	4	7.1	7.5
7.5	4	7.1	8.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)7M Eucalyptus spp

Project: MAS Site: 18 Observation: 1

Soil Name: S1 - PASS at 0.5-1m

Location: GDA 94 ZONE 56 497233mE 6983398mN Lat: -27.27236 Long: 152.97204

Described By: Kate Goulding (GOUK) Date: 13/MAY/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: supratidal flat Landform Pattern: alluvial plain

Permeability: Moderately permeable Runoff: Very slow

Drainage: Moderately well drained

Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: MOTTLED, MESOTROPHIC, BROWN, Kurosol, Medium, Slightly Gravelly, Clay Loamy, Clayey, Deep

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .1	Dark brown (7.5YR32) moist; sandy clay loam; few 2-10% rounded quartz large pebbles 20-60 mm; weak structure; moderately moist when sampled; moderately permeable; moderately well drained; clear to
A12	.1 to .2	Dark yellowish brown (10YR44) moist; clayey sand; many 20-50% rounded quartz large pebbles 20-60 mm; weak structure; moderately moist when sampled; moderately permeable; well drained; clear to
A2	.2 to .4	Yellowish brown (10YR54) moist; clayey sand; single grain structure; moderately moist when sampled; moderately permeable; well drained; clear to
B21	.4 to .6	Yellowish brown (10YR54) moist; few 2-10% fine <5mm distinct red mottles; silty clay loam; weak structure; moist when sampled; moderately permeable; moderately well drained; abrupt to
B22	.6 to .75	Dark grey (2.5Y41) moist; light clay; many 20-50% rounded quartz medium pebbles 6-20 mm; angular blocky moderate 5-10mm structure; moist when sampled; moderately permeable; moderately well drained; clear to
2B23u	.75 to 1.3	Dark greyish brown (2.5Y43) moist; clayey sand; many 20-50% rounded quartz medium pebbles 6-20 mm; massive structure; moist when sampled; moderately permeable; well drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	6.4	3.6
.3	2	6.4	5.1
.6	3	5.2	4.6
.8	4	6.4	7.2
1	4	6.5	5.2
1.25		7	5.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0) Casuarina ~7m, black tea tree ~7m, G(g1.0)1D *Sporobolus virginicus* (Salt couch)

Project: MAS Site: 19 Observation: 1

Soil Name: A3S3 - AASS and PASS at 2-3m

Location: GDA 94 ZONE 56 499950mE 6978844mN Lat: -27.31347 Long: 152.99949

Described By: Fiona McCartney (MCCF) Date: 20/MAY/10

Landscape:

Geology: Qa - Qa-SEQ: Clay, silt, sand, gravel; flood plain alluvium

Element: drainage depression Landform Pattern: flood plain

Permeability: Slowly permeable

Drainage: Imperfectly drained

Depth to Water: 2.8

Surface Condition: Firm

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: HUMOSE-ACIDIC, CHROMOSOLIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Loamy, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Very dark brown (10YR22) moist; fibric loam; massive structure; dry when sampled; highly permeable; well drained; gradual to
B21	.3 to .9	Olive brown (2.5Y44) moist; few 2-10% medium 5-15mm faint red mottles; light medium clay; massive structure; moderately moist when sampled; slowly permeable; imperfectly drained; clear to
B22	.9 to 1.5	Dark olive brown (2.5Y33) moist; few 2-10% medium 5-15mm faint red mottles; medium heavy clay; massive structure; moist when sampled; slowly permeable; imperfectly drained; clear to
B23	1.5 to 2.15	Olive grey (5Y42) moist; few 2-10% medium 5-15mm faint red mottles, few 2-10% medium 5-15mm distinct orange mottles; medium heavy clay; massive structure; moist when sampled;clear to
2B24ia	2.15 to 2.45	Olive grey (5Y42) moist; few 2-10% coarse 15-30mm prominent yellow jarosite (from pyrite) mottles, few 2-10% coarse 15-30mm distinct orange mottles; light clay; massive structure; wet when sampled; abrupt to
2C1	2.45 to 2.8	Dark greenish grey (10Y31) moist; light clay; massive structure; wet when sampled; gradual to
2C2u	2.8 to 3.5	Dark greenish grey (5BG41) moist; light clay; massive structure; wet when sampled; abrupt to
3C4u	3.5 to 3.9	Dark grey (N40) moist; loamy sand; massive structure; wet when sampled; gradual to
3C5u	3.9 to 4.6	Greenish grey (10Y51) moist; loamy sand; very few <2% rounded quartz large pebbles 20-60 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; many 20-50% subangular quartz small pebbles 2-6 mm; massive structure; wet when sampled; clear to
3C6u	4.6 to 5.65	Greenish grey (10Y51) moist; loamy sand; very few <2% rounded quartz large pebbles 20-60 mm; very few <2% subangular quartz medium pebbles 6-20 mm; common 10-20% subangular quartz small pebbles 2-6 mm; wet when sampled; abrupt to
3C7u	5.65 to 6.35	Very dark grey (2.5Y31) moist; clay loam, fine sandy; massive structure; wet when sampled;clear to
4Cu	6.35 to 7.45	Grey (2.5Y51) moist; coarse sandy light clay; very few <2% rounded quartz large pebbles 20-60 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; common 10-20% subangular quartz small pebbles 2-6 mm; massive structure; wet when sampled

Project: MAS Site: 19 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	6.5	4
.3	2	7	3.3
.6	2	5.6	3
.8	1	5	2.9
1	3	5.5	2.9
1.25	4	5.8	4.2
1.5		5.6	4.3
1.75		5.4	4.1
2		5.1	3.8
2.25	1	4.4	2.4
2.5	4	5.1	2.4
2.75	3	4.9	1.7
3	4	5.9	2
3.25	4	5.8	1.8
3.5	4	6.1	1.3
3.75	4	6.3	1.3
4	4	6.5	1.7
4.25		6.6	3.7
4.5	4	6.7	2.2
4.75		6.8	4.7
5		6.8	5
5.25	1	6.8	5.3
5.5	1	6.6	6
5.75	2	6.4	4
6	1	6.5	3.6
6.25	1	6.3	4.3
6.5		6.9	5.5
6.75	1	7.1	5.9
7	1	6.9	5.4
7.25	4	7.3	7.7
7.45	3	7.6	7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	4Cu	riverine material?

Project: MAS Site: 20 Observation: 1

Soil Name: S4 - PASS at 3-4m

Location: GDA 94 ZONE 56 500129mE 6978411mN Lat: -27.31738 Long: 153.0013

Described By: Fiona McCartney (MCCF) Date: 20/MAY/10

Landscape:

Geology: Qa - Qa-SEQ: Clay, silt, sand, gravel; flood plain alluvium

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Drainage: Imperfectly drained

Depth to Water: 3.65

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MOTTLED, EUTROPHIC, BROWN, Kandosol, Thick, Non-gravelly, Clay Loamy, Clayey, Giant to 3.6m over

ASC: EUTROPHIC, SULFIDIC, OXYAQUIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .3	Dark yellowish brown (10YR34) moist; clay loam, fine sandy; subangular blocky strong 5-10mm structure; moderately moist when sampled; moderately permeable; moderately well drained; gradual to
A12	.3 to 1	Brown (10YR43) moist; clay loam, fine sandy; subangular blocky moderate 5-10mm structure; moderately moist when sampled; moderately permeable; moderately well drained; gradual to
B21	1 to 1.9	Dark yellowish brown (10YR24) moist; common 10-20% coarse 15-30mm distinct brown mottles; light clay; massive structure; moist when sampled; moderately permeable; imperfectly drained; clear to
B22	1.9 to 2.45	Dark reddish brown (2.5YR24) moist; many 20-50% very coarse >30mm prominent orange mottles; light medium clay; massive structure; moist when sampled; clear to
B3	2.45 to 3	Greenish grey (10Y51) moist; few 2-10% medium 5-15mm faint orange mottles; sandy light clay; massive structure; moist when sampled; abrupt to
2B2	3 to 3.65	Dark greenish grey (10Y41) moist; common 10-20% very coarse >30mm prominent orange mottles, very few <2% medium 5-15mm distinct yellow mottles; clayey sand; few 2-10% rounded quartz large pebbles 20-60 mm; common 10-20% rounded quartz medium pebbles 6-20 mm; common 10-20% subangular quartz small pebbles 2-6 mm; single grain structure; wet when sampled; abrupt to
2Cu	3.65 to 4.5	Dark greenish grey (10Y41) moist; clayey sand; few 2-10% subangular quartz large pebbles 20-60 mm; common 10-20% rounded quartz medium pebbles 6-20 mm; common 10-20% subangular quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
3Cu	4.5 to 5.65	Greenish grey (10Y51) moist; loamy sand; few 2-10% subangular quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
4Cu	5.65 to 6.22	Greenish grey (10Y51) moist; loamy sand; few 2-10% subangular quartz large pebbles 20-60mm; common 10-20% subangular quartz medium pebbles 6-20 mm; common 10-20% subangular quartz small pebbles 2-6 mm; single grain structure; wet when sampled; abrupt to
5D	6.22 to 6.4	Olive grey (5Y52) moist; common 10-20% coarse 15-30mm faint yellow mottles; coarse sandy light clay; few 2-10% subangular quartz large pebbles 20-60 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; common 10-20% subangular quartz small pebbles 2-6 mm; massive structure; wet when sampled

Project: MAS Site: 20 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.6	3.6
.3	2	5.8	2.9
.6	4	6.2	3.5
.8	4	6.3	5.4
1	4	6.8	5.6
1.25	4	6.3	5
1.5		6.6	4.7
1.75		6.0	3.5
2		6	3.8
2.25		5.6	3.4
2.5		5.4	3.3
2.75		5.6	3.1
3		5.3	3.6
3.25		5.7	4.6
3.5	2	5.2	2.2
3.75	4	6.1	2.4
4	4	6.4	1.9
4.25	4	6.8	2.3
4.5	4	6.4	1.9
4.75	1	6.2	2.2
5	1	6.4	2.3
5.25	1	6.3	2.3
5.5	1	6.4	2
5.75	4	6.7	2.1
6	4	6.9	2.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 21 Observation: 1

Soil Name: A2S2 - AASS at 1-2m and PASS at 1-2m

Location: GDA 94 ZONE 56 499898mE 6978350mN Lat: -27.31793 Long: 152.99897

Described By: Lauren OBrien (OBRL) Date: 20/MAY/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: stream channel Landform Pattern: alluvial plain

Permeability: Slowly permeable Runoff: Moderately rapid

Drainage: Poorly drained

Depth to Water: 1.2

Surface Condition: Firm

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MELACIC, KANDOSOLIC, OXYAQUIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .1	Very dark greyish brown (2.5Y32) moist; silty light clay; granular moderate 2-5mm structure; moist when sampled; moderately permeable; moderately well drained; clear to
A3	.1 to .4	Very dark greyish brown (2.5Y32) moist; very few <2% fine <5mm faint orange mottles; silty light clay; granular moderate <2mm structure; moist when sampled; slowly permeable; imperfectly drained; clear to
B21	.4 to .7	Dark grey (2.5Y41) moist; few 2-10% fine <5mm faint brown mottles; fine sandy light clay;massive structure; moist when sampled; slowly permeable; imperfectly drained; clear to
B22	.7 to 1.1	Very dark grey (2.5Y31) moist; very few <2% fine <5mm faint dark mottles; silty clay loam; massive structure; very few <2% fine <2mm manganiferous soft segregations; wet when sampled; slowly permeable; imperfectly drained; clear to
B23i	1.1 to 1.65	Very dark greyish brown (2.5Y32) moist; few 2-10% medium 5-15mm distinct orange mottles, very few <2% medium 5-15mm distinct red mottles; silty clay loam; massive structure; few 2-10% fine <2mm ferruginous root linings; wet when sampled; very slowly permeable; poorly drained; clear to
C1u	1.65 to 2.2	Black (N2.5/0) moist; sapric silty light clay; massive structure; wet when sampled; clear to
C2u	2.2 to 2.5	Dark grey (N40) moist; silty light clay; massive structure; wet when sampled; clear to
2C1u	2.5 to 3	Dark grey (N40) moist; clayey sand; single grain structure; wet when sampled; clear to
2C2u	3 to 3.5	Dark grey (N40) moist; sandy light clay; massive structure; wet when sampled; clear to
3C1u	3.5 to 4.6	Dark grey (N40) moist; loamy sand; single grain structure; massive structure; wet when sampled; clear to
3C2u	4.6 to 5.3	Dark grey (N40) moist; coarse sand; common 10-20% subangular quartz medium pebbles 6-20 mm; many 20-50% subangular quartz small pebbles 2-6 mm; single grain structure; wet when sampled; clear to
3C3u	5.3 to 5.6	Dark grey (N40) moist; sandy light clay; very few <2% subrounded quartz small pebbles 2-6mm; massive structure; wet when sampled; clear to
3C4u	5.6 to 7.2	Grey (N50) moist; loamy sand; common 10-20% subangular quartz medium pebbles 6-20 mm; single grain structure; wet when sampled; diffuse to
4C1u	7.2 to 7.5	Grey (N60) moist; clayey coarse sand; very few <2% subrounded quartz small pebbles 2-6mm; few 2-10% angular quartz medium pebbles 6-20 mm; single grain structure; very many >50% fine <2mm ferruginous-organic soft segregations; common 10-20% coarse 6-20mm argillaceous soft segregations; wet when sampled

Project: MAS Site: 21 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.19	2.6
.3	2	5.32	3.0
.6	4	6.15	3.5
.8	4	6.39	4.3
1	2	5.79	3.6
1.25	4	4.68	2.8
1.5	2	4.6	2.0
1.75	4	5.89	1.7
2	4	5.44	1.9
2.25	4	5.29	1.7
2.5	4	6.18	3.0
2.75	2	6.27	2.6
3	4	6.54	2.0
3.25	4	5.93	1.7
3.5	4	6.1	1.8
3.75	4	6.09	2.0
4	4	6.26	2.4
4.25	4	6.42	1.9
4.5	4	6.52	1.9
4.75	4	6.28	1.7
5	4	6.92	1.8
5.25	4	7.08	1.7
5.5	4	7.53	1.7
5.75	3	7.56	2.2
6	4	7.87	2.1
6.25	4	7.08	1.9
6.5	4	6.93	1.6
6.75	4	7.01	1.9
7	4	6.88	1.5
7.25	4	7.6	2.2
7.5	4	7.6	2.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location	adjacent rail bridge between Strathpine and Bald hills
Soil	extremely variable textures

Horizon Notes:

Horizon	C1u	Preserved organic material
Texture	3C1u	Clay lenses throughout
Horizon	4C1u	some sorting in barrel 5

Project: MAS Site: 22 Observation: 1

Soil Name: A3S4 - AASS at 2-3m and PASS at 3-4m

Location: GDA 94 ZONE 56 499685mE 6978782mN Lat: -27.31403 Long: 152.99682

Described By: Lauren Eyre (EYRL) Date: 27/MAY/10

Landscape:

Geology: Qa - Qa-SEQ: Clay, silt, sand, gravel; flood plain alluvium

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable

Drainage: Poorly drained

Surface Condition: Firm

Disturbances: Highly disturbed e.g. mining, urban

Classifications:

ASC: MELANIC-MOTTLED, MESOTROPHIC, GREY, Kandosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
M	0 to .11	Reddish brown (5YR44) moist; light clay; dry when sampled; moderately permeable; moderately well drained; sharp to
A1	.11 to .34	Black (10YR21) moist; very few <2% fine <5mm distinct brown mottles; light medium clay; subangular blocky moderate 5-10mm structure; moderately permeable; moderately well drained; gradual to
AB	.34 to .75	Very dark greyish brown (10YR32) moist; very few <2% fine <5mm distinct orange mottles; light medium clay; subangular blocky weak 10-20mm structure; very few <2% fine <2mm ferromanganiferous nodules; slowly permeable; imperfectly drained; gradual to
B21	.75 to 1.15	Greyish brown (10YR52) moist; common 10-20% medium 5-15mm prominent orange mottles; light medium clay; massive structure; very few <2% medium 2-6mm manganiferous soft segregations; slowly permeable; poorly drained; gradual to
B22	1.15 to 1.8	Greyish brown (2.5Y52) moist; common 10-20% medium 5-15mm prominent orange mottles; medium clay; subangular blocky weak 20-50mm structure; slowly permeable; poorly drained; gradual to
2B21	1.8 to 2.1	Grey (2.5Y51) moist; sandy light clay; massive structure; clear to
2B22	2.1 to 2.3	Grey (2.5Y51) moist; few 2-10% medium 5-15mm distinct orange mottles; sandy clay loam; massive structure; gradual to
3B21ia	2.3 to 2.55	Grey (5Y51) moist; common 10-20% medium 5-15mm prominent orange mottles, few 2-10% fine <5mm distinct yellow jarosite (from pyrite) mottles; sandy light clay; massive structure; very few <2% fine <2mm ferruginous soft segregations; clear to
3B22	2.55 to 3.4	Grey (10YR51) moist; few 2-10% medium 5-15mm prominent orange mottles; medium clay; subangular blocky weak 5-10mm structure; very few <2% fine <2mm ferruginous soft segregations; clear to
3C1u	3.4 to 3.65	Dark grey (N40) moist; silty medium clay; massive structure; abrupt to
4C1u	3.65 to 3.98	Greenish grey (5GY51) moist; sand; few 2-10% subangular quartz small pebbles 2-6 mm; very few <2% subangular quartz medium pebbles 6-20 mm; single grain structure; abrupt to
5C1	3.98 to 4.2	Light brownish grey (2.5Y62) moist; sand; common 10-20% subangular quartz small pebbles 2-6 mm; very few <2% subangular quartz medium pebbles 6-20 mm; single grain structure

Project: MAS Site: 22 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.4	3.2
.3	4	6.8	5.2
.6	3	6.8	5.1
.8	3	6.9	5.3
1	1	7	5.4
1.25		6.7	5.3
1.5		5.3	4.1
1.75		5.2	3.9
2		5.2	4.0
2.25		4.8	4.1
2.5		4.7	3.7
2.75		4.9	4.1
3		5	4.0
3.25		5	3.7
3.5	1	5.5	4.3
3.75	4	6	1.8
4		6.6	5.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	M	Top 11cm is fill
Horizon	B22	Roots present - rooting depth to 1.8m approx
Texture	B22	Sodic
Horizon	3B22	Mottles mainly in top half of this horizon
Texture	3B22	Sand lens at 3.38m - approx 1cm thick

Project: MAS Site: 23 Observation: 1

Soil Name: S2 - PASS at 1-2m

Location: GDA 94 ZONE 56 499716mE 6979098mN Lat: -27.31118 Long: 152.99713

Described By: Lauren Eyre (EYRL) Date: 27/MAY/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: drainage depression Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Drainage: Poorly drained

Depth to Water: 1.5

Surface Condition: Firm

Disturbances: Extensive clearing

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, EXTRATIDAL, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .25	Dark grey (10YR41) moist; light clay; subangular blocky strong 2-5mm structure; very few <2% fine <2mm manganiferous soft segregations; moderately moist when sampled; moderately permeable; well drained; gradual to
B1	.25 to .7	Dark grey (10YR41) moist; few 2-10% fine <5mm faint red mottles, very few <2% fine <5mm faint grey mottles; light clay; subangular blocky moderate 5-10mm structure; subangular blocky moderate 2-5mm structure; very few <2% fine <2mm manganiferous laminae; moist when sampled; moderately permeable; moderately well drained; gradual to
B21	.7 to 1.05	Dark grey (5Y41) moist; few 2-10% fine <5mm distinct red mottles; fine sandy light medium clay; subangular blocky weak 10-20mm structure; very few <2% fine <2mm manganiferous soft segregations; moist when sampled; slowly permeable; imperfectly drained; gradual to
B22	1.05 to 1.35	Olive grey (5Y52) moist; common 10-20% fine <5mm prominent red mottles; fine sandy light medium clay; subangular blocky weak 2-5mm structure; very few <2% fine <2mm manganiferous soft segregations; wet when sampled; very slowly permeable; poorly drained; gradual to
C1u	1.35 to 2.4	Dark grey (5YR41) moist; silty light clay; massive structure; wet when sampled; gradual to
2C2u	2.4 to 2.7	Dark greenish grey (5GY41) moist; sandy loam; common 10-20% subangular quartz small pebbles 2-6 mm; very few <2% subangular quartz medium pebbles 6-20 mm; single grain structure; wet when sampled; gradual to
3C3	2.7 to 3	Light olive grey (5Y62) moist; coarse sand; common 10-20% subangular quartz small pebbles 2-6 mm; few 2-10% subangular quartz medium pebbles 6-20 mm; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	3	5.9	3.9
.3	2	5.7	3.8
.6	4	5.8	6.3
.8	4	6.4	6.7
1	1	6.4	5.0
1.25	4	6.4	5.0
1.5	4	6.5	1.6
1.75	4	6.6	1.5
2	4	6.6	1.8
2.25	4	6.7	1.6
2.5	4	6.9	1.1
2.75		7.1	4.2
3		7.2	5.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 23 Observation: 1

Site Notes:

Site	Gouge auger taken from mangroves to north. See photo. 499730E 6979135N.

Observation Notes:

Soil	Roots down to water table (1.5m)
Vegetation	U(w1.0)6V *Avicennia marina* (grey mangrove), G(g1.0)1D *Sporobolus virginicus* (Salt couch)

Horizon Notes:

Horizon	C1u	Organic material in this horizon

Project: MAS Site: 24 Observation: 1

Soil Name: A0S2 - AASS at 0-0.5m and PASS at 1-2m

Location: GDA 94 ZONE 56 499648mE 6979865mN Lat: -27.30425 Long: 152.99644

Described By: Lauren Eyre (EYRL) Date: 27/MAY/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: plain

Landform Pattern: alluvial plain

Permeability: Slowly permeable

Drainage: Poorly drained

Depth to Water: 1.25

Surface Condition: Firm

Disturbances: Highly disturbed e.g. mining, urban

Classifications:

ASC: NO AVAILABLE CLASS, SULFURIC, EXTRATIDAL, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Dark greyish brown (10YR42) moist; very few <2% fine <5mm faint dark mottles; light clay; very few <2% subangular quartz small pebbles 2-6 mm; subangular blocky moderate 10-20mm structure; very few <2% fine <2mm manganiferous soft segregations; dry when sampled; moderately permeable; well drained; abrupt to
D1	.2 to .4	Greyish brown (2.5Y52) moist; sand; common 10-20% subangular quartz small pebbles 2-6mm; single grain structure; dry when sampled; highly permeable; rapidly drained; abrupt to
D2ia	.4 to .55	Dark grey (2.5Y41) moist; few 2-10% fine <5mm distinct brown mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; light medium clay; platy weak <2mm structure; moderately moist when sampled; moderately permeable; moderately well drained; clear to
2A1bi	.55 to .75	Very dark grey (5Y31) moist; few 2-10% fine <5mm distinct red mottles; medium heavy clay; angular blocky weak 10-20mm structure; very few <2% fine <2mm manganiferous soft segregations; moderately moist when sampled; slowly permeable; imperfectly drained; clear to
2B21	.75 to 1.3	Dark grey (5Y41) moist; common 10-20% fine <5mm prominent brown mottles; medium clay; subangular blocky weak 5-10mm structure; few 2-10% fine <2mm manganiferous root linings; moist when sampled; slowly permeable; poorly drained; gradual to
2C1u	1.3 to 2.1	Dark greenish grey (5GY41) moist; silty medium clay; massive structure; wet when sampled;abrupt to
3C2u	2.1 to 3	Greenish grey (5GY51) moist; sand; single grain structure; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	4	5.6	3.9
.3		5.7	3.4
.5		3.8	1.5
.6		3.9	1.8
.8	4	4.6	3.3
1	4	5	4.8
1.25	2	6	4.6
1.5	4	4.9	1.7
1.75	4	5.9	1.9
2	4	6.4	1.3
2.25	4	7.3	1.2
2.5	4	7.3	1.4
2.75	1	7.4	1.4
3	4	7.1	1.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 24 Observation: 1

Observation Notes:

Observation	Saline scald approx 20m north of site - extent 30m x 20m
Soil	Rooting depth is approx 1.3m

Horizon Notes:

Horizon	D2ia	Horizon has lots of thin layers made up of jarosite, sand lenses and goethite
Horizon	2A1bi	Mottles follow root linings

Project: MAS Site: 25 Observation: 1

Soil Name: LP - Low Probability of ASS in areas below 5m AHD

Location: GDA 94 ZONE 56 498422mE 6983348mN Lat: -27.27281 Long: 152.98406

Described By: Lauren OBrien (OBRL) Date: 08/JUN/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable

Drainage: Imperfectly drained

Depth to Water: 5

Surface Condition: Firm

Disturbances: Limited clearing

Classifications:

ASC: MOTTLED, EUTROPHIC, GREY, Kandosol, Thick, Non-gravelly, Clay Loamy, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .3	Dark greyish brown (2.5Y43) moist; very few <2% fine <5mm faint orange mottles, very few <2% fine <5mm faint dark mottles; silty clay loam; granular strong 2-5mm structure; firm dry; few 1-2mm roots; many <1mm roots; dry when sampled; moderately permeable; imperfectly drained; gradual to
A12	.3 to .6	Dark greyish brown (2.5Y42) moist; very few <2% fine <5mm faint brown mottles; clay loam; subangular blocky weak 2-5mm structure; firm dry; few <1mm roots; dry when sampled; moderately permeable; imperfectly drained; clear to
B21	.6 to 1.3	Greyish brown (2.5Y52) moist; common 10-20% medium 5-15mm distinct orange mottles, few 2-10% fine <5mm distinct dark mottles; clay loam; angular blocky weak 5-10mm structure; few 2-10% fine <2mm ferromanganiferous root linings; very firm moderately moist; few 1-2mm roots; few <1mm roots; moderately moist when sampled; slowly permeable; imperfectly drained; clear to
B22	1.3 to 1.7	Grey (5Y51) moist; very few <2% medium 5-15mm distinct orange mottles, very few <2% medium 5-15mm distinct dark mottles; light medium clay; massive structure; few 2-10% medium 2-6mm ferromanganiferous soft segregations; very firm moderately moist; few <1mm roots; moderately moist when sampled; slowly permeable; imperfectly drained; abrupt to
2B21	1.7 to 1.98	Grey (5Y51) moist; very few <2% fine <5mm faint orange mottles; clayey sand; massive structure; very few <2% fine <2mm ferruginous root linings; weak moderately moist; few <1mm roots; moderately moist when sampled; abrupt to
2B22	1.98 to 2.3	Grey (5Y61) moist; very few <2% medium 5-15mm faint orange mottles; clayey sand; massive structure; weak moderately moist; few <1mm roots; moderately moist when sampled; clear to
2B23	2.3 to 3.2	Light grey (5Y71) moist; many 20-50% very coarse >30mm prominent orange mottles, few 2- 10% medium 5-15mm distinct dark mottles; fine sandy clay loam; few 2-10% rounded gravel medium pebbles 6-20 mm; massive structure; very firm moderately moist; moderately moist when sampled; clear to
2B24	3.2 to 3.5	Grey (5Y51) moist; common 10-20% coarse 15-30mm prominent orange mottles; light medium clay; massive structure; few 2-10% medium 2-6mm ferromanganiferous soft segregations; firm moderately moist; moderately moist when sampled; clear to
3B21	3.5 to 4.55	Reddish brown (5YR44) moist; few 2-10% medium 5-15mm distinct gley mottles; sandy clay loam; massive structure; firm moderately moist; moderately moist when sampled; gradual to
3B22	4.55 to 4.9	Dark brown (7.5YR34) moist; very few <2% medium 5-15mm distinct gley mottles; sandy clay loam; very few <2% subrounded gravel small pebbles 2-6 mm; massive structure; very firm moist; moist when sampled; gradual to
3B23	4.9 to 5.4	Dark brown (10YR33) moist; very few <2% medium 5-15mm distinct gley mottles; sandy clay loam; very few <2% subangular gravel large pebbles 20-60 mm; few 2-10% subangular gravel medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; abrupt to
4B21	5.4 to 7.2	Dark yellowish brown (10YR44) moist; clayey coarse sand; abundant 50-90% subrounded quartz small pebbles 2-6 mm; few 2-10% subrounded gravel medium pebbles 6-20 mm; very few <2% subrounded gravel large pebbles 20-60 mm; single grain structure; loose wet; wet when sampled; clear to
4B22	7.2 to 8.2	Dark greyish brown (2.5Y43) moist; clayey coarse sand; many 20-50% subrounded gravel small pebbles 2-6 mm; common 10-20% subrounded gravel medium pebbles 6-20 mm; very few <2% subrounded gravel large pebbles 20-60 mm; single grain structure; loose wet; wet when sampled; diffuse to
4B23	8.2 to 9.8	Dark yellowish brown (10YR44) moist; clayey coarse sand; few 2-10% subrounded quartz large pebbles 20-60 mm; common 10-20% subrounded quartz medium pebbles 6-20 mm; many 20-50% subrounded quartz small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled

Project: MAS Site: 25 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.5	3.7
.3	3	6	3.5
.6	1	6.2	4.2
.8	1	6.4	4.6
1	1	6.1	4.7
1.25	1	6.6	4.9
1.5	2	6.7	5.6
1.75	1	6.7	5.2
2	1	6.8	5.2
2.25	4	7	6.7
2.5	4	6.8	7
2.75		6.6	5.5
3	4	6.8	6.6
3.25	4	7.5	7.5
3.5	2	6.9	6
3.75	4	6.7	6.9
4	2	6.6	5.7
4.25	1	6.4	5.2
4.5	1	6.6	5.2
4.75	1	6.6	5
5		6.6	5.4
6.75		6.7	6.4
7		6.6	6.3
7.25		7	5.9
7.5		6.9	6.3
7.75		6.9	6.1
8		7.3	6.2
8.25		7.2	6.2
8.5		7.1	6.2
8.75	1	7	6.7
9		7	6.1
9.25		7	6.1
9.5		7.2	6
9.75	1	7.1	6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site	Amcor paper mill at Petrie

Observation Notes:

Vegetation	U(w1.0)7D Eucalyptus spp M(w3.0)5M Lantana spp G(g1.0)3D Grasses

Horizon Notes:

Horizon	3B23	No pHf/pHfox tests from 5.25 - 6.50m (Sample lost)
Texture	4B22	bands of SCL

Project: MAS Site: 26 Observation: 1

Soil Name: S0 - PASS at 0-0.5m

Location: GDA 94 ZONE 56 498969mE 6984143mN Lat: -27.26563 Long: 152.98958

Described By: Lauren OBrien (OBRL) Date: 02/JUN/10

Landscape:

Geology: Qpa/1 - Qpa/1-9543: Stranded river terrace (above floodplain); clay, silt, sand, gravel

Element: creek terrace Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Drainage: Very poorly drained

Depth to Water: .01

Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, EXTRATIDAL, Hydrosol, Thin, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .05	Dark greyish brown (2.5Y42) moist; many 20-50% medium 5-15mm distinct orange mottles; sapric silty clay loam; massive structure; loose wet; abundant <1mm roots; wet when sampled; slowly permeable; imperfectly drained; sharp to
B21	.05 to .12	Dark greyish brown (2.5Y43) moist; many 20-50% medium 5-15mm distinct orange sharp mottles; sapric silty clay loam; massive structure; loose wet; abundant <1mm roots; wet when sampled; slowly permeable; poorly drained; sharp to
C1u	.12 to .75	Black (2.5Y2.5/1) moist; sapric silty light clay; massive structure; very weak wet; few 1-2mm roots; many <1mm roots; wet when sampled; slowly permeable; poorly drained; clear to
2C2u	.75 to 1.6	Dark grey (N40) moist; very few <2% fine <5mm faint orange mottles; fine sandy light clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	6.3	4.1
.3	2	6.8	1.9
.6	4	6.4	1.3
.8	4	6.6	1.6
1	4	6.8	2.0
1.25	2	6.8	2.3
1.5		6.7	1.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site Creek behind Amcor plant

Observation Notes:

Vegetation U(w1.0)6D *Avicenna marina*
M(w3.0)3D Lantana spp
G(g1.0)1D *Sporobolus virginicus* (Salt couch)

Horizon Notes:

Horizon	A1	organics
Horizon	B21	organics
Horizon	C1u	organics

Project: MAS Site: 27 Observation: 1

Soil Name: S0 - PASS at 0-0.5m

Location: GDA 94 ZONE 56 498858mE 6984107mN Lat: -27.26596 Long: 152.98846

Described By: Lauren OBrien (OBRL) Date: 02/JUN/10

Landscape:

Geology: Qpa/1 - Qpa/1-9543: Stranded river terrace (above floodplain); clay, silt, sand, gravel

Element: creek terrace Landform Pattern: alluvial plain

Permeability: Very slowly permeable Runoff: No runoff

Drainage: Very poorly drained

Depth to Water: 0.01

Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, EXTRATIDAL, Hydrosol, Thin, Non-gravelly, Clay Loamy, Clayey, Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .05	Dark yellowish brown (10YR44) moist; clay loam; massive structure; weak wet; few <1mm roots; wet when sampled; slowly permeable; imperfectly drained; abrupt to
B2	.05 to .4	Olive brown (2.5Y44) moist; few 2-10% medium 5-15mm distinct orange mottles; clay loam; massive structure; weak wet; few <1mm roots; wet when sampled; slowly permeable; poorly drained; abrupt to
2C1u	.4 to .65	Black (2.5Y2.5/1) moist; clayey sand; massive structure; very weak wet; few <1mm roots; wet when sampled; slowly permeable; poorly drained; abrupt to
3C2u	.65 to .95	Dark grey (5Y41) moist; silty light clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained; abrupt to
3C3u	.95 to 1	Very dark grey (N30) moist; clayey sand; massive structure; very weak wet; wet when sampled; moderately permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.6	4.9
.3	1	4.4	3
.6	1	6.4	2
.8	1	6.7	3
1	4	6.6	1.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site Creek behind Amcor, upstream from site 26

Observation Notes:

Vegetation U(w1.0)6M *Avicenna marina*
M(f1.0)4V *Acrostichum speciosum* (Mangrove fern)
G(g1.0)2D *Sporobolus virginicus* (Salt couch)

Horizon Notes:

Horizon	3C3u	Insufficient sample
Horizon	3C3u	organics

Project: MAS Site: 28 Observation: 1

Soil Name: S2 - PASS at 1-2m

Location: GDA 94 ZONE 56 499371mE 6983969mN Lat: -27.2672 Long: 152.99365

Described By: Lauren Eyre (EYRL) Date: 03/JUN/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: stream channel Landform Pattern: alluvial plain

Permeability: Slowly permeable

Drainage: Imperfectly drained

Depth to Water: 1.2

Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: NO AVAILABLE CLASS, DERMOSOLIC, EXTRATIDAL, Hydrosol, Thin, Non-gravelly, Clay Loamy, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .03	Very dark grey (7.5YR31) moist; fibric clay loam; subangular blocky strong 2-5mm structure; very weak moderately moist; very weak moderately moist; moderately moist when sampled; moderately permeable; well drained; abrupt to
B21	.03 to .65	Brown (10YR53) moist; very few <2% fine <5mm faint pale mottles; light medium clay; subangular blocky moderate 5-10mm structure; firm moist; moist when sampled; moderately permeable; moderately well drained; gradual to
B22	.65 to 1	Brown (10YR53) moist; few 2-10% fine <5mm distinct red mottles, very few <2% fine <5mm faint pale mottles; silty light medium clay; subangular blocky weak 5-10mm structure; very few <2% fine <2mm manganiferous soft segregations; weak moist; moist when sampled; slowly permeable; imperfectly drained; gradual to
B23	1 to 1.2	Olive grey (5Y52) moist; common 10-20% fine <5mm distinct brown mottles; fine sandy light medium clay; subangular blocky weak 5-10mm structure; firm moist; moist when sampled; slowly permeable; imperfectly drained; clear to
C1u	1.2 to 1.45	Greenish grey (5GY51) moist; fine sandy light medium clay; massive structure; weak moist; moist when sampled; slowly permeable; imperfectly drained; clear to
2C1	1.45 to 2.15	Dark greyish brown (10YR42) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; single grain structure; loose wet; wet when sampled; gradual to
2C21	2.15 to 3.7	Yellowish brown (10YR54) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; single grain structure; loose wet; wet when sampled; gradual to
3C1u	3.7 to 4	Greenish grey (5GY51) moist; coarse sandy light clay; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; gradual to
4C1u	4 to 4.35	Olive grey (5Y52) moist; coarse sand; many 20-50% subangular quartz medium pebbles 6-20 mm; few 2-10% subangular quartz small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled; clear to
5C1u	4.35 to 5.75	Olive grey (5Y52) moist; many 20-50% medium 5-15mm prominent brown mottles; light medium clay; few 2-10% subangular quartz large pebbles 20-60 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; common 10-20% subangular quartz small pebbles 2-6 mm; massive structure; firm wet; wet when sampled; abrupt to

Project: MAS Site: 28 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	6.8	5.4
.3	4	6.4	6.1
.6	4	6.4	6.7
.8	4	6.3	6.2
1	4	6.5	6.7
1.25		6.5	5.4
1.5	4	6.2	7.5
1.75	4	6.5	8.2
2	4	6.8	8.5
2.25		6.4	4.8
2.5	3	6.9	7.3
2.75		6.5	6.1
3		6.9	5.8
3.25		6.5	6.5
3.5		6.8	6.5
3.75		6.5	5.9
4	1	6.6	2.8
4.25		6.7	3.7
4.5	4	6.8	6.1
4.75	4	7.1	6.5
5	3	6.4	5.9
5.25	4	6.8	6.7
5.5	1	6.9	3.6
5.75	4	6.8	.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site	Amcor - inner creek bend

Observation Notes:

Vegetation	U(w1.0)6M Casuarina spp G(w3.0)4D *Lantana camara*

Horizon Notes:

Horizon	B21	Unsure if horizon is a A3/B1 horizon. Colour seems like A, but structure is moderate. This will change classification
Texture	B23	Thin sand lenses at 1.23, 1.32, 1.38, less than 1cm thick
Horizon	C1u	Old roots and organic matter in this horizon
Horizon	2C1	Organic layer at 2.22-2.25. Colour 10YR42
Horizon	3C1u	Less gravel in this horizon
Horizon	4C1u	Fresh gravel, very little soil. Hard to determine colour
Horizon	5C1u	Mangrove tree? from 5.8-6.0

Project: MAS Site: 29 Observation: 1

Soil Name: S5+ - PASS at greater than 5m depth

Location: GDA 94 ZONE 56 499106mE 6983928mN Lat: -27.26757 Long: 152.99097

Described By: Lauren Eyre (EYRL) Date: 03/JUN/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable

Drainage: Imperfectly drained

Depth to Water: 1.5

Surface Condition: Firm

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: MELANIC, DERMOSOLIC, OXYAQUIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .18	Very dark grey (10YR31) moist; light clay; subangular blocky strong 2-5mm structure; very firm moderately moist; moderately moist when sampled; moderately permeable; well drained; clear to
B21	.18 to .5	Very dark greyish brown (10YR32) moist; few 2-10% fine <5mm faint pale mottles; light clay; subangular blocky moderate 5-10mm structure; very few <2% fine <2mm manganiferous soft segregations; very firm moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; gradual to
B22	.5 to .9	Brown (10YR43) moist; few 2-10% fine <5mm distinct gley mottles, few 2-10% fine <5mm distinct orange mottles; light clay; subangular blocky moderate 5-10mm structure; very few <2% fine <2mm manganiferous soft segregations; very firm dry; dry when sampled; moderately permeable; moderately well drained; gradual to
B23	.9 to 1.2	Dark yellowish brown (10YR44) moist; few 2-10% fine <5mm distinct gley mottles, common 10-20% fine <5mm distinct orange mottles; fine sandy light clay; angular blocky weak 5-10mm structure; very few <2% fine <2mm manganiferous soft segregations; firm moderately moist; moderately moist when sampled; slowly permeable; imperfectly drained; gradual to
B24	1.2 to 1.5	Weak red (2.5YR52) moist; common 10-20% fine <5mm distinct red mottles, few 2-10% fine<5mm distinct orange mottles; fine sandy light medium clay; massive structure; few 2-10% medium 2-6mm manganiferous soft segregations; firm moist; moist when sampled; slowly permeable; imperfectly drained; gradual to
C1	1.5 to 1.7	Reddish grey (5YR52) moist; fine sandy light medium clay; very few <2% subangular quartz small pebbles 2-6 mm; massive structure; weak wet; wet when sampled; clear to
2C1	1.7 to 2	Grey (5Y51) moist; sandy light medium clay; abundant 50-90% subangular quartz small pebbles2-6 mm; weak wet; wet when sampled; gradual to
2C2	2 to 2.35	Brown (7.5YR44) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; single grain structure; loose wet; wet when sampled; clear to
2C3	2.35 to 2.6	Dusky red (2.5YR32) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; single grain structure; loose wet; wet when sampled; gradual to
2C4	2.6 to 2.9	Dark greyish brown (2.5Y42) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; single grain structure; loose wet; wet when sampled; gradual to
2C5	2.9 to 5.9	Dark yellowish brown (10YR46) moist; coarse sand; abundant 50-90% subangular quartz small pebbles 2-6 mm; many 20-50% subangular quartz medium pebbles 6-20 mm; few 2-10% subangular gravel medium pebbles 6-20 mm; single grain structure; weak wet; wet when sampled; clear to
3C1u	5.9 to 6.2	Dark greenish grey (10Y41) moist; light medium clay; few 2-10% subangular gravel large pebbles 20-60 mm; common 10-20% subangular gravel medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; clear to
4C1u	6.2 to 6.75	Light greenish grey (5GY71) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; single grain structure; loose wet; wet when sampled; clear to
5C1	6.75 to 7.45	Light greenish grey (10G71) moist; coarse sandy medium clay; few 2-10% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; few 2-10% subangular quartz large pebbles 20-60 mm; massive structure; firm wet; wet when sampled

Project: MAS Site: 29 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	4	7.9	7.7
.3	4	7.9	7.9
.6	4	8	7.8
.8	4	7.9	6.8
1	4	7.5	7.2
1.25	4	7.7	7.5
1.5		7.6	6.7
1.6		7.5	6.5
1.75		7.7	7.1
2		7.2	6.3
2.25		7.2	7.7
2.5		7.9	8.7
2.75	4	7.9	8.8
3	3	8.1	8.1
3.25		8	6.7
3.5		7.6	6.5
3.75		7.7	6.8
4		7.1	6.6
4.25		7.8	6.5
4.5	1	7.8	7.2
4.75	3	7.1	7.8
5	3	7.2	7.8
5.25		7.6	6.4
5.5		7.6	6.5
5.75		7.7	6.5
6	4	7.6	1.8
6.25	4	7.2	1.8
6.5		8.5	6.8
6.75		8.7	6.9
7		7.4	6.8
7.25		7.2	6.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)7M *Carya illinoinensis* (Pecan orchard)

Horizon Notes:

Horizon	B22	Macropore evident in this horizon
Horizon	B22	Large tree root at 60cm
Horizon	2C1	Gravel lenses 5cm thick, lenses at 1.7-1.75, 1.83-1.87 - colour 7.5yr 4/4
Horizon	2C5	This horizon has layers of different coloured gravels. Some parts are redder in colour
Horizon	5C1	Sand lense between 7.3-7.38 - brown in colour (2.5Y6/6). 1cm thick lense at 6.82 and 7.0

Project: MAS Site: 30 Observation: 1

Soil Name: S1 - PASS at 0.5-1m

Location: GDA 94 ZONE 56 499126mE 6983879mN Lat: -27.26802 Long: 152.99117

Described By: Lauren OBrien (OBRL) Date: 03/JUN/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: channel bench Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Drainage: Very poorly drained

Depth to Water: 0.5

Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, INTERTIDAL, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Moderate

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Very dark greyish brown (2.5Y32) moist; clay loam; massive structure; weak wet; wet when sampled; very slowly permeable; very poorly drained; sharp to
B2	.1 to .6	Reddish brown (2.5YR43) moist; very few <2% fine <5mm faint gley mottles, very few <2% fine <5mm faint orange mottles; light clay; massive structure; weak wet; wet when sampled; very slowly permeable; very poorly drained; abrupt to
Cu	.6 to .8	Dark greenish grey (10Y31) moist; silty light clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.01	4	7.1	6.5
.1	4	7	7.2
.2	4	7	7.2
.3	4	7	7.2
.4	4	7.1	7.2
.5	4	6.8	5.7
.6	4	6.8	7.2
.7	4	7.2	5
.8	4	7.2	3.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site Mangrove flat adjacent to Pecan orchard, Amcor.

Site Hand augered, stopped by dense gravel/rock

Observation Notes:

Vegetation U(w1.0)7D *Avicennia marina*
U(w1.0)6M *Excoecaria agallocha* (milky mangrove)
G(f1.0)4V *Acrostichum speciosum* (Mangrove fern)
Bare ground

Project: MAS Site: 31 Observation: 1

Soil Name: A2 - AASS at 1-2m

Location: GDA 94 ZONE 56 500928mE 6981109mN Lat: -27.29302 Long: 153.00938

Described By: Lauren Eyre (EYRL) Date: 22/JUN/10

Landscape:

Geology: Qha/2 - Qha/2-9543: Second river terrace; sand, silt, clay gravel

Element: plain Landform Pattern: flood plain

Permeability: Moderately permeable Runoff: Slow

Drainage: Very poorly drained

Depth to Water: 1

Surface Condition: Firm

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: MELANIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .25	Very dark grey (10YR31) moist; few 2-10% fine <5mm faint brown mottles; clay loam; subangular blocky moderate 2-5mm structure; firm moderately moist; moderately moist when sampled; moderately permeable; imperfectly drained; clear to
B21	.25 to .6	Brown (10YR53) moist; many 20-50% fine <5mm faint brown mottles; light medium clay; subangular blocky moderate 2-5mm structure; firm moderately moist; moderately moist when sampled; moderately permeable; imperfectly drained; diffuse to
2B21	.6 to 1.05	Light brownish grey (2.5Y62) moist; common 10-20% fine <5mm distinct brown mottles; sandy light medium clay; massive structure; weak moist; moist when sampled; moderately permeable; poorly drained; gradual to
2B22ia	1.05 to 1.6	Light olive grey (5Y62) moist; very few <2% fine <5mm faint yellow jarosite (from pyrite) mottles, few 2-10% fine <5mm distinct brown mottles; sandy light clay; massive structure; very weak wet; wet when sampled; moderately permeable; very poorly drained; diffuse to
2C	1.6 to 2	Grey (2.5Y51) moist; sandy light clay; massive structure; very weak wet; wet when sampled; moderately permeable; very poorly drained; clear to
3C	2 to 2.2	Greenish grey (10Y51) moist; light clay; massive structure; very weak wet; wet when sampled; slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.5	3
.25	2	6.2	3.8
.5	1	4.7	3.9
.75	1	4.1	3.4
1	1	4.2	3.3
1.25		3.6	3.0
1.5		3.8	3.1
1.75	1	3.8	3
2.05	4	4	1.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site 2-3m of water on surface during last flood

Observation Notes:

Observation EC of water in auger hole 13.9dS/m
pH of water in auger hole 3.78

Vegetation G(g1.0)1D Sporobolus spp, Blue couch, paspalum?

Project: MAS Site: 32 Observation: 1

Soil Name: S1 - PASS at 0.5-1m

Location: GDA 94 ZONE 56 500236mE 6980338mN Lat: -27.29998 Long: 153.00239

Described By: Jonathan Walton (WALJ) Date: 22/JUN/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: supratidal flat Landform Pattern: tidal flat

Permeability: Very slowly permeable

Drainage: Very poorly drained

Depth to Water: 0.6

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, EXTRATIDAL, Hydrosol, Thin, Non-gravelly, Clayey, Clayey, Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .05	Black (10YR21) moist; common 10-20% fine <5mm faint brown mottles; fibric silty light clay; granular strong <2mm structure; weak moist; moist when sampled; moderately permeable; poorly drained; abrupt to
B21	.05 to .23	Grey (10YR51) moist; many 20-50% fine <5mm distinct brown mottles; silty light clay; subangular blocky strong 2-5mm structure; firm moist; moist when sampled; moderately permeable; poorly drained; clear to
B22	.23 to .72	Grey (2.5Y51) moist; many 20-50% fine <5mm distinct brown mottles; silty light clay; subangular blocky strong 2-5mm structure; very weak moist; moist when sampled; moderately permeable; poorly drained; abrupt to
C1u	.72 to .85	Grey (5Y51) moist; common 10-20% fine <5mm distinct brown mottles; silty light clay; subangular blocky moderate 2-5mm structure; very weak wet; wet when sampled; slowly permeable; very poorly drained; gradual to
C2u	.85 to 1.1	Dark grey (5Y41) moist; silty light clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained; gradual to
C3u	1.1 to 1.4	Dark grey (5Y41) moist; silty light clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.01	1	6.1	5.2
.1	1	6.3	4.9
.3	4	6.6	6.2
.6	4	6.3	6.3
.8	1	6.2	5.4
1	4	6.4	1.4
1.4	4	6.6	1.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site Push tube to 0.5m, then gouge auger to 1.4m

Observation Notes:

Vegetation U(w1.0)7V *Avicennia marina*
G(g1.0)2D *Sporobolus virginicus* (Salt couch)

Project: MAS Site: 33 Observation: 1

Soil Name: a1S3 - PASS at 2-3m with pH of 4-5 at 0.5-1.0m

Location: GDA 94 ZONE 56 499933mE 6980196mN Lat: -27.30127 Long: 152.99932

Described By: Lauren Eyre (EYRL) Date: 22/JUN/10

Landscape:

Geology: Qpa/1 - Qpa/1-9543: Stranded river terrace (above floodplain); clay, silt, sand, gravel

Element: scroll plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Drainage: Imperfectly drained

Depth to Water: 2.3

Surface Condition: Firm

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: HAPLIC, EUTROPHIC, BROWN, Dermosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

ASC: EUTROPHIC, RUDOSOLIC, OXYAQUIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Dark grey (10YR41) moist; fine sandy clay loam; subangular blocky moderate 2-5mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; diffuse to
B21	.2 to .5	Dark greyish brown (10YR42) moist; fine sandy light clay; subangular blocky strong 2-5mm structure; firm moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; diffuse to
B22	.5 to 1.1	Brown (10YR43) moist; silty light clay; subangular blocky moderate 2-5mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; clear to
B23	1.1 to 1.4	Brown (10YR53) moist; many 20-50% fine <5mm distinct brown mottles; silty light clay; subangular blocky moderate 5-10mm structure; very few <2% medium 2-6mm manganiferous soft segregations; weak moderately moist; moderately moist when sampled; moderately permeable; imperfectly drained; clear to
B24	1.4 to 1.8	Light brownish grey (10YR62) moist; many 20-50% fine <5mm distinct brown mottles; silty medium clay; subangular blocky strong 2-5mm structure; very few <2% medium 2-6mm manganiferous soft segregations; firm moderately moist; moderately moist when sampled; moderately permeable; imperfectly drained; diffuse to
B25	1.8 to 2.1	Greyish brown (10YR52) moist; common 10-20% medium 5-15mm prominent orange mottles; silty light medium clay; weak moist; moist when sampled; slowly permeable; poorly drained; clear to
2C1	2.1 to 2.3	Grey (2.5Y51) moist; sandy light clay; common 10-20% angular gravel medium pebbles 6-20 mm; very few <2% angular gravel large pebbles 20-60 mm; massive structure; very weak wet; wet when sampled; moderately permeable; very poorly drained; diffuse to
3C2u	2.3 to 2.6	Grey (2.5Y51) moist; sandy clay loam; abundant 50-90% angular gravel medium pebbles 6-20 mm; few 2-10% angular gravel large pebbles 20-60 mm; massive structure; very weak wet;wet when sampled; clear to
4C3u	2.6 to 2.7	Grey (2.5Y51) moist; sand; abundant 50-90% angular gravel small pebbles 2-6 mm; few 2-10%angular gravel small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled

Project: MAS Site: 33 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.4	3
.3	1	5.6	2.8
.6		5.1	3.6
.8		4.8	3.7
1	1	4.7	3.5
1.25	4	5	4
1.5	4	5.5	5.9
1.75	2	5.2	3.6
2		5.1	3.8
2.25	1	5.6	3.7
2.5	4	6.4	1.6
2.7	4	6.5	1.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site Push tube to 1.6m then hand auger to 2.7m

Observation Notes:

Australian Soil Classification Dermosol to 2.1m (alluvial sediments) over a hydrosol (estuarine sediments).

Vegetation G(g1.0)1D *Sporobolus virginicus*, *Chloris gayana* (rhodes grass), blue couch

Horizon Notes:

Horizon B25 Structure destroyed during hand augering

Project: MAS Site: 34 Observation: 1

Soil Name: S2 - PASS at 1-2m

Location: GDA 94 ZONE 56 499812mE 6980313mN Lat: -27.30021 Long: 152.9981

Described By: Jonathan Walton (WALJ) Date: 22/JUN/10

Landscape:

Geology: Qha/2 - Qha/2-9543: Second river terrace; sand, silt, clay gravel

Element: drainage depression Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Drainage: Very poorly drained

Depth to Water: 0.2

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: EUTROPHIC, SULFIDIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Very dark grey (10YR31) moist; clay loam; granular moderate 2-5mm structure; very weak moist; moist when sampled; moderately permeable; poorly drained; abrupt to
B21	.1 to .2	Grey (5Y51) moist; many 20-50% fine <5mm distinct brown mottles; light medium clay; lenticular moderate <2mm structure; weak moist; moist when sampled; slowly permeable; poorly drained; clear to
B22	.2 to .35	Dark grey (5Y41) moist; common 10-20% fine <5mm faint brown mottles; light medium clay; massive structure; weak wet; wet when sampled; slowly permeable; poorly drained; gradual to
2A1	.35 to .72	Very dark grey (2.5Y31) moist; common 10-20% medium 5-15mm faint brown mottles; silty light medium clay; massive structure; weak wet; wet when sampled; slowly permeable; very poorly drained; clear to
2B1	.72 to 1	Dark grey (5Y41) moist; common 10-20% medium 5-15mm distinct brown mottles; silty light clay; massive structure; very weak wet; wet when sampled; slowly permeable; very poorly drained; clear to
2B2	1 to 1.28	Grey (2.5Y51) moist; silty light clay; massive structure; very weak wet; wet when sampled; slowly permeable; very poorly drained; gradual to
3Cu	1.28 to 1.65	Greenish grey (10Y51) moist; few 2-10% medium 5-15mm faint yellow mottles; sandy light clay; many 20-50% angular quartz small pebbles 2-6 mm; very few <2% subrounded quartz large pebbles 20-60 mm; massive structure; very weak wet; wet when sampled; moderately permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.05	1	5.5	2.4
.11	1	5.5	2.4
.3	4	6.3	2.4
.6	4	6.6	2.8
.8	4	6.7	2.9
1	4	6.7	2.6
1.25	4	6.9	2.6
1.5	4	6.6	2.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 35 Observation: 1

Soil Name: a1LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0.5-1.0m

Location: GDA 94 ZONE 56 500052mE 6981453mN Lat: -27.28992 Long: 153.00053

Described By: Jonathan Walton (WALJ) Date: 23/JUN/10

Landscape:

Geology: Qha/2 - Qha/2-9543: Second river terrace; sand, silt, clay gravel

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable

Drainage: Poorly drained

Depth to Water: 3

Surface Condition: Firm

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: ACIDIC-MOTTLED, MESOTROPHIC, GREY, Dermosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .1	Dark brown (7.5YR32) moist; light clay; granular strong 2-5mm structure; weak moist; moist when sampled; moderately permeable; imperfectly drained; abrupt to
A12	.1 to .35	Dark greyish brown (10YR42) moist; light clay; subangular blocky strong 2-5mm structure; weak moist; moist when sampled; moderately permeable; imperfectly drained; clear to
B21	.35 to .55	Grey (10YR61) moist; many 20-50% medium 5-15mm prominent red mottles; medium clay; subangular blocky strong 2-5mm structure; firm moist; moist when sampled; moderately permeable; imperfectly drained; abrupt to
B22	.55 to 1	Light brownish grey (10YR62) moist; common 10-20% medium 5-15mm distinct yellow mottles, few 2-10% fine <5mm prominent red mottles; medium heavy clay; lenticular moderate 2-5mm structure; firm moist; moist when sampled; slowly permeable; poorly drained; gradual to
B23	1 to 1.5	Light brownish grey (10YR62) moist; common 10-20% fine <5mm distinct yellow mottles; medium heavy clay; lenticular moderate 2-5mm structure; firm moist; moist when sampled; slowly permeable; poorly drained; clear to
B24	1.5 to 2	Grey (10YR61) moist; many 20-50% fine <5mm prominent yellow mottles; heavy clay; massive structure; very firm moist; moist when sampled; clear to
B25	2 to 2.4	Light brownish grey (10YR62) moist; many 20-50% coarse 15-30mm prominent yellow mottles, few 2-10% coarse 15-30mm prominent red mottles; sandy heavy clay; massive structure; very firm moist; moist when sampled; clear to
B26	2.4 to 2.7	Light grey (2.5Y71) moist; common 10-20% medium 5-15mm distinct brown mottles; sandy heavy clay; massive structure; very firm moist; moist when sampled; clear to
2B	2.7 to 3.2	Light grey (2.5Y71) moist; many 20-50% coarse 15-30mm prominent brown mottles; sandy medium clay; massive structure; firm wet; wet when sampled; clear to
3B21	3.2 to 3.5	Grey (2.5Y61) moist; common 10-20% coarse 15-30mm prominent brown mottles, few 2-10% fine <5mm prominent red mottles; heavy clay; massive structure; very firm moist; moist when sampled; clear to
3B22	3.5 to 4	Light grey (2.5Y71) moist; common 10-20% medium 5-15mm prominent red mottles, common 10-20% medium 5-15mm prominent brown mottles; sandy heavy clay; massive structure; very firm moist; moist when sampled

Project: MAS Site: 35 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.01	3	5.05	3.6
.1	3	5.3	3.6
.3	1	5.1	4.0
.6		5	3.6
.8		5.1	3.6
1		5	4
1.25		5.1	4
1.5		5.2	4.3
1.75		5.9	5.1
2		5.9	5.3
2.25		6.1	5.4
2.5		6	5.4
2.75		6.1	5
3		6	5
3.25		6.1	4.8
3.5		5.9	5.5
3.75		5.2	5
4		5.4	5.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site	Push tube to 1.5m then hand auger

Horizon Notes:

Texture	3B21	Organic matter in horizon 10

Project: MAS Site: 36 Observation: 1

Soil Name: a0S0 - PASS at 0-0.5m with pH of 4-5 at 0-0.5m

Location: GDA 94 ZONE 56 500148mE 6981365mN Lat: -27.29071 Long: 153.0015

Described By: Lauren OBrien (OBRL) Date: 30/JUN/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: supratidal flat Landform Pattern: flood plain

Permeability: Very slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.01

Surface Condition: Soft

Disturbances: No effective disturbance except grazing by hoofed animals

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, SUPRATIDAL, Hydrosol, Medium, Non-gravelly, Peaty, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .12	Very dark grey (10YR31) moist; fibric peat; massive structure; firm wet; abundant <1mm roots; wet when sampled; slowly permeable; poorly drained; sharp to
A12	.12 to .2	Black (5Y2.5/1) moist; fibric peat; massive structure; weak wet; many <1mm roots; wet when sampled; very slowly permeable; very poorly drained; sharp to
B21	.2 to .8	Dark grey (10YR41) moist; fibric silty medium clay; massive structure; very weak wet; few 1-2mm roots; common <1mm roots; wet when sampled; very slowly permeable; very poorly drained; diffuse to
B22u	.8 to 2.5	Dark grey (N40) moist; fibric fine sandy light clay; massive structure; very weak wet; few <1mm roots; few 1-2mm roots; wet when sampled; very slowly permeable; very poorly drained; gradual to
C1u	2.5 to 3	Dark grey (N40) moist; sandy light clay; very few <2% subrounded quartz small pebbles 2-6mm; massive structure; very weak wet; wet when sampled; clear to
2C2	3 to 3.6	Light olive grey (5Y62) moist; very few <2% coarse 15-30mm faint brown mottles; loamy coarse sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled; clear to
2C3	3.6 to 4.25	Grey (N50) moist; clayey coarse sand; common 10-20% subrounded quartz small pebbles 2-6mm; massive structure; loose wet; wet when sampled; clear to
3C4	4.25 to 4.5	Light olive brown (2.5Y54) moist; few 2-10% medium 5-15mm faint gley mottles; sandy clay loam; few 2-10% subrounded quartz small pebbles 2-6 mm; very few <2% subrounded quartz medium pebbles 6-20 mm; massive structure; very firm wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.2	4.4
.2	2	6	4.3
.3	1	7.1	4.6
.6	1	6.9	3.9
.8	4	7.1	1.3
1	4	6.6	1.6
1.25	4	6.3	1.5
1.5	4	6.4	1.7
1.75	4	6.7	1.7
2	4	6.9	1.9
2.25	4	7.2	2.0
2.5	4	7.9	2.9
2.75	4	7	1.7
3		6	5.9
3.25		6.6	5.9
3.5		6.5	5.7

Project: MAS Site: 36 Observation: 1

Depth	H2O2-	PH-2	PH-3
3.75		7.1	6.1
4		7.3	6.1
4.25		6.9	5.9
4.5		6.8	5.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site	Organics throughout, bad smell (H2S)
Site	Raining

Observation Notes:

Vegetation	U(w1.0)6S Mangrove spp
	G(g1.0)1D *Sporobolus virginicus* (Salt couch)

Project: MAS Site: 37 Observation: 1

Soil Name: LP - Low Probability of ASS in areas below 5m AHD

Location: GDA 94 ZONE 56 499390mE 6982261mN Lat: -27.28262 Long: 152.99384

Described By: Lauren OBrien (OBRL) Date: 30/JUN/10

Landscape:

Geology: Qpa/1 - Qpa/1-9543: Stranded river terrace (above floodplain); clay, silt, sand, gravel

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable

Slope: 1 % Drainage: Imperfectly drained

Surface Condition: Firm

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: MANGANIC, EUTROPHIC, BROWN, Kandosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Dark greyish brown (2.5Y43) moist; clay loam; weak 5-10mm structure; very weak moderately moist; many <1mm roots; moderately moist when sampled; moderately permeable; moderately well drained; abrupt to
B1	.1 to .3	Dark greyish brown (2.5Y43) moist; clay loam; granular strong <2mm structure; common 10-20% fine <2mm manganiferous nodules; strong dry; common <1mm roots; dry when sampled; moderately permeable; well drained; clear to
B21	.3 to .5	Light olive brown (2.5Y54) moist; light clay; granular strong 2-5mm structure; common 10-20% fine <2mm manganiferous nodules; strong dry; common <1mm roots; dry when sampled; moderately permeable; well drained; clear to
B22	.5 to 1.1	Yellowish brown (10YR54) moist; very few <2% fine <5mm faint pale mottles, very few <2% fine <5mm prominent dark mottles; medium clay; massive structure; very few <2% fine <2mm manganiferous soft segregations; very firm moderately moist; few <1mm roots; moderately moist when sampled; slowly permeable; imperfectly drained; diffuse to
B23	1.1 to 1.4	Yellowish brown (10YR58) moist; few 2-10% medium 5-15mm distinct pale mottles; light medium clay; massive structure; common 10-20% fine <2mm manganiferous soft segregations; firm moderately moist; moderately moist when sampled; slowly permeable; imperfectly drained; clear to
B24	1.4 to 2	Yellowish brown (10YR58) moist; common 10-20% medium 5-15mm distinct pale mottles, very few <2% fine <5mm distinct dark mottles; light clay; massive structure; very few <2% fine <2mm manganiferous soft segregations; firm moderately moist; moderately moist when sampled; slowly permeable; imperfectly drained; clear to
B25	2 to 2.7	Yellowish brown (10YR58) moist; common 10-20% medium 5-15mm distinct pale mottles, common 10-20% fine <5mm distinct dark mottles; light clay; massive structure; firm moderately moist; moderately moist when sampled; clear to
2B21	2.7 to 3.25	Greenish grey (10Y61) moist; common 10-20% coarse 15-30mm distinct orange mottles; medium clay; massive structure; very firm moderately moist; moderately moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.4	3.9
.3	4	6.1	5.2
.6	4	6.5	5.4
.8	1	6.7	5.8
1	4	7	6.6
1.25	4	7.4	8.5
1.5	4	7.4	8.1
1.75	4	7.4	8.1
2	4	7.6	8.1
2.25	4	7.6	8.4
2.5		7.6	6.6
2.75		7.9	6.5
3		7.7	6.3
3.25		7.4	6.3

Project: MAS Site: 37 Observation: 1

Depth	H2O2-	PH-2	PH-3
.1	1	5.4	3.9
.3	4	6.1	5.2
.6	4	6.5	5.4
.8	1	6.7	5.8
1	4	7	6.6
1.25	4	7.4	8.5
1.5	4	7.4	8.1
1.75	4	7.4	8.1
2	4	7.6	8.1
2.25	4	7.6	8.4
2.5		7.6	6.6
2.75		7.9	6.5
3		7.7	6.3
3.25		7.4	6.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation G(g3.0)3D Grasses

Horizon Notes:

Texture	B22	Sodic
Texture	B23	Sodic
Texture	B24	Sodic, subplastic
Texture	B25	Sodic, subplastic
Texture	2B21	Sodic

Project: MAS Site: 38 Observation: 1

Soil Name: a0S3 - PASS at 2-3m with pH of 4-5

Location: GDA 94 ZONE 56 499387mE 6981869mN Lat: -27.28616 Long: 152.99381

Described By: Fiona McCartney (MCCF) Date: 01/JUL/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable

Slope: 1 % Drainage: Poorly drained

Depth to Water: 1.6

Surface Condition: Firm

Disturbances: Cultivation - Irrigated, past or present

Classifications:

ASC: ACIDIC, KANDOSOLIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Clayey, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .15	Very dark greyish brown (10YR32) moist; few 2-10% fine <5mm faint red sharp mottles, few 2-10% fine <5mm faint orange mottles; fibric light clay; granular strong 2-5mm structure; few 2-10% fine <2mm ferruginous-organic root linings; firm moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; gradual to
A12	.15 to .3	Very dark brown (10YR22) moist; few 2-10% fine <5mm faint red sharp mottles, few 2-10% fine <5mm faint orange diffuse mottles; light medium clay; granular strong 2-5mm structure; few 2-10% fine <2mm ferruginous-organic root linings; firm moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; clear to
B21	.3 to .6	Dark grey (10YR41) moist; few 2-10% fine <5mm faint red sharp mottles, common 10-20% medium 5-15mm distinct orange diffuse mottles; medium clay; massive structure; few 2-10% fine <2mm ferruginous-organic root linings; firm moist; moist when sampled; slowly permeable; imperfectly drained; clear to
B22	.6 to .9	Very dark grey (2.5Y31) moist; few 2-10% fine <5mm faint red sharp mottles, few 2-10% medium 5-15mm distinct orange diffuse mottles; medium heavy clay; massive structure; few 2-10% fine <2mm ferruginous-organic root linings; firm moist; moist when sampled; slowly permeable; imperfectly drained; abrupt to
B23i	.9 to 1.15	Dark grey (2.5Y41) moist; few 2-10% fine <5mm faint red sharp mottles, common 10-20% coarse 15-30mm distinct orange clear mottles; light medium clay; massive structure; firm moist; moist when sampled; slowly permeable; poorly drained; clear to
B24i	1.15 to 1.3	Dark yellowish brown (10YR46) moist; few 2-10% fine <5mm faint red sharp mottles, common 10-20% coarse 15-30mm distinct grey clear mottles; medium clay; subangular blocky weak 2-5mm structure; firm moist; moist when sampled; slowly permeable; poorly drained; abrupt to
B25	1.3 to 1.6	Dark grey (2.5Y41) moist; few 2-10% fine <5mm faint red sharp mottles, few 2-10% medium 5-15mm prominent orange clear mottles; medium clay; massive structure; firm moist; moist when sampled; slowly permeable; poorly drained; abrupt to
C	1.6 to 2	Grey (2.5Y51) moist; coarse sandy light clay; few 2-10% angular quartz large pebbles 20-60 mm; common 10-20% angular quartz medium pebbles 6-20 mm; common 10-20% angular quartz small pebbles 2-6 mm; massive structure; loose wet; wet when sampled; clear to
2C	2 to 2.7	Dark grey (5Y41) moist; coarse sand; very few <2% angular quartz large pebbles 20-60 mm; common 10-20% angular quartz medium pebbles 6-20 mm; abundant 50-90% angular quartz small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled; abrupt to
3Cu	2.7 to 4.8	Dark greenish grey (5GY41) moist; coarse sand; very few <2% angular quartz large pebbles 20-60 mm; common 10-20% angular quartz medium pebbles 6-20 mm; abundant 50-90% angular quartz small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled; abrupt to
4B2	4.8 to 5.8	Grey (5Y61) moist; few 2-10% medium 5-15mm faint brown clear mottles, very few <2% fine <5mm faint red sharp mottles, many 20-50% very coarse >30mm prominent orange diffuse mottles; sandy heavy clay; very few <2% angular quartz small pebbles 2-6 mm; very few <2% angular quartz medium pebbles 6-20 mm; massive structure; very few <2% fine <2mm ferruginous-organic root linings; firm moist; moist when sampled

Project: MAS Site: 38 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.3	3.4
.3	2	4.5	3.1
.6	2	5	2.7
.8	2	5.1	2.8
1	1	5.3	2.6
1.25	1	4.6	3.0
1.5	4	5.8	3.3
1.75	4	6.4	3.5
2	2	6.7	2.8
2.25	4	6.7	3.2
2.5	1	6.6	2.7
2.75	1	7	2.7
3	4	6.2	4.0
3.25	4	6	1.5
3.5	4	6.1	1.6
3.75	4	6.3	1.4
4	4	5.8	2.0
4.25	4	6.2	1.8
4.5	4	5.8	2.0
5	4	5.7	3.5
5.25	4	5.8	4.0
5.5	4	6.2	2.3
5.75	3	6.4	4.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation	U(w1.0)7S *Eucalyptus tereticornis* G(g4.0)1D Pasture grass

Horizon Notes:

Horizon	B24i	Old oxidised zone? ex AASS?
Texture	3Cu	Clay lenses
Horizon	4B2	Coarse fragments at 5.4-5.6m.

Project: MAS Site: 39 Observation: 1

Soil Name: A2S2 - AASS at 1-2m and PASS at 1-2m

Location: GDA 94 ZONE 56 496533mE 6982705mN Lat: -27.27861 Long: 152.96497

Described By: Fiona McCartney (MCCF) Date: 01/JUL/10

Landscape:

Geology: Qha/2 - Qha/2-9543: Second river terrace; sand, silt, clay gravel

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable

Drainage: Poorly drained

Depth to Water: 1.3

Surface Condition: Firm

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: ACIDIC, SULFURIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Dark greyish brown (10YR42) moist; many 20-50% fine <5mm distinct red mottles, few 2-10% medium 5-15mm distinct brown mottles; light clay; massive structure; firm moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; gradual to
B21	.3 to .95	Dark grey (10YR41) moist; common 10-20% fine <5mm distinct red mottles, many 20-50% fine <5mm faint brown mottles; medium clay; massive structure; firm moist; moist when sampled; slowly permeable; imperfectly drained; clear to
B22i	.95 to 1.3	Grey (2.5Y51) moist; very few <2% fine <5mm faint brown mottles, many 20-50% medium 5- 15mm prominent orange mottles; medium clay; angular blocky weak structure; firm wet; wet when sampled; slowly permeable; poorly drained; clear to
B23i	1.3 to 1.7	Dark grey (5Y41) moist; very few <2% fine <5mm distinct brown mottles; medium clay; massive structure; weak wet; wet when sampled; very slowly permeable; very poorly drained; abrupt to
C1i	1.7 to 1.85	Dark grey (5Y41) moist; very few <2% fine <5mm faint brown mottles; silty clay loam; massive structure; very weak wet; wet when sampled; clear to
C2i	1.85 to 2.2	Dark grey (N40) moist; silty clay loam; massive structure; very weak wet; wet when sampled; abrupt to
C3u	2.2 to 3.95	Dark grey (N40) moist; silty clay loam; massive structure; very weak wet; wet when sampled; clear to
2C1u	3.95 to 4.25	Olive (5Y53) moist; coarse sand; many 20-50% subangular quartz small pebbles 2-6 mm; common 10-20% subangular quartz medium pebbles 6-20 mm; few 2-10% subrounded quartz large pebbles 20-60 mm; single grain structure; loose wet; wet when sampled; clear to
2C2	4.25 to 4.5	Pale olive (5Y64) moist; coarse sand; many 20-50% angular quartz large pebbles 20-60 mm; common 10-20% angular quartz medium pebbles 6-20 mm; common 10-20% subangular quartz small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.3	3
.3	4	6.1	4
.6	4	6.2	3.9
.8	1	5.4	2.7
1		4.9	2.7
1.25		4.6	2.7
1.5		4.6	3
1.75	1	4.4	2.4
2	4	5.1	1.6
2.25	4	5.8	1.4
2.5	4	6.2	1.7

Project: MAS Site: 39 Observation: 1

Depth	H2O2-	PH-2	PH-3
2.5	4	6.2	1.7
2.75	4	6.2	1.6
3	4	6.3	1.9
3.25	4	6.2	2
3.5	4	6.4	2
3.75	4	6.4	1.6
4	4	6.8	1.4
4.25	3	6.7	5.2
4.5	2	6.4	5.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site	Ron Thomason Park, Lawnton

Observation Notes:

Vegetation	G(g4.1)1D Grass

Horizon Notes:

Texture	B22i	Slightly sodic
Horizon	B23i	preserved organics

Project: MAS Site: 40 Observation: 1

Soil Name: LP - Low Probability of ASS in areas below 5m AHD

Location: GDA 94 ZONE 56 496461mE 6983487mN Lat: -27.27155 Long: 152.96424

Described By: Fiona McCartney (MCCF) Date: 01/JUL/10

Landscape:

Geology: Qha/2 - Qha/2-9543: Second river terrace; sand, silt, clay gravel

Element: plain Landform Pattern: terrace

Slope: 1 % Drainage: Moderately well drained

Depth to Water: 4.2

Surface Condition: Firm

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: HAPLIC, MESOTROPHIC, BROWN, Kandosol, Very Thick, Non-gravelly, Clayey, Clayey, Very Deep

ASC: EUTROPHIC, RUDOSOLIC, OXYAQUIC, Hydrosol

Profile Morphology:

Horizon	Depth (m)	Description
M1	0 to .3	Dark greyish brown (10YR42) moist; common 10-20% fine <5mm distinct brown mottles, very few <2% fine <5mm distinct orange mottles; light clay; subangular blocky strong 5-10mm structure; few 2-10% fine <2mm manganiferous nodules; firm moderately moist; moderately moist when sampled; moderately permeable; well drained; clear to
M2	.3 to .65	Very dark grey (10YR31) moist; common 10-20% fine <5mm distinct yellow mottles, very few <2% fine <5mm distinct orange mottles; sandy light clay; subangular blocky strong 5-10mm structure; few 2-10% fine <2mm manganiferous nodules; firm moderately moist; moderately moist when sampled; moderately permeable; well drained; clear to
B21b	.65 to 1.25	Brown (7.5YR42) moist; many 20-50% fine <5mm faint grey mottles; fine sandy light clay; subangular blocky weak <2mm structure; very few <2% fine <2mm manganiferous nodules; firm moist; moist when sampled; moderately permeable; moderately well drained; gradual to
B22b	1.25 to 2.25	Brown (7.5YR43) moist; very few <2% fine <5mm faint grey mottles; fine sandy light clay; subangular blocky weak <2mm structure; very few <2% fine <2mm manganiferous soft segregations; firm moist; moist when sampled; moderately permeable; moderately well drained; gradual to
B23b	2.25 to 3.35	Brown (7.5YR43) moist; very few <2% fine <5mm faint pale mottles, very few <2% fine <5mm faint orange mottles; sandy clay loam; massive structure; very few <2% fine <2mm manganiferous soft segregations; firm moist; moist when sampled; gradual to
B24b	3.35 to 3.7	Brown (7.5YR43) moist; few 2-10% fine <5mm distinct grey mottles; fine sandy light clay; massive structure; very few <2% fine <2mm manganiferous soft segregations; firm wet; wet when sampled; clear to
B25b	3.7 to 4.15	Greyish brown (2.5Y52) moist; many 20-50% medium 5-15mm distinct orange mottles; sandy light clay; massive structure; very few <2% fine <2mm manganiferous soft segregations; firm wet; wet when sampled; abrupt to
2C	4.15 to 4.35	Dark grey (N40) moist; very few <2% fine <5mm distinct orange mottles; sandy light clay; very few <2% subangular gravel medium pebbles 6-20 mm; few 2-10% subangular gravel small pebbles 2-6 mm; massive structure; firm wet; wet when sampled; clear to
3C	4.35 to 6	Dark grey (2.5Y41) moist; coarse sand; common 10-20% subangular gravel large pebbles 20-60 mm; many 20-50% subangular gravel medium pebbles 6-20 mm; abundant 50-90% subangular gravel small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled

Project: MAS Site: 40 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	4	5.7	3.9
.3	4	6.3	4.7
.6	4	6.3	4.4
.8	4	6.1	4.4
1	4	6.1	4.1
1.25	4	5.6	4.7
1.5	4	5.6	5.1
1.75	4	6	5.0
2	4	6.1	4.1
2.25	4	5.9	4.6
2.5	4	5.8	4.5
2.75	4	5.8	4.6
3	4	6.2	4.4
3.25	4	5.7	5.4
3.5	4	5.7	4.8
3.75	4	5.8	5.6
4	1	6	4.3
4.25	2	6.1	2
4.5	4	6.1	1.3
4.75	3	6.5	1.7
5.5	1	6.5	3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Site Notes:

Site	Mungarra reserve, Petrie

Observation Notes:

Australian Soil Classification	Kandosol from 0 - 4.35m, Hydrosol from 4.35 - 6.00m
Vegetation	lawn

Project: MAS Site: 41 Observation: 1

Soil Name: S2 – PASS at 1-2m

Location: GDA 94 ZONE 56 499884mE 6983671mN Lat: -27.26989 Long: 152.99883

Described By: Lauren OBrien (OBRL) Date: 13/JUL/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: supratidal flat Landform Pattern: alluvial plain

Runoff: Slow

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.1

Surface Condition: Firm

Disturbances: No effective disturbance, No effective disturbance except grazing by hoofed animals

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, EXTRATIDAL, Hydrosol, Thick, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Dark greyish brown (10YR42) moist; few 2-10% fine <5mm faint orange sharp mottles; clay loam; massive structure; few 2-10% medium 2-6mm ferruginous root linings; weak wet; common <1mm roots; wet when sampled; slowly permeable; poorly drained; gradual to
B21	.3 to .7	Dark greyish brown (2.5Y42) moist; common 10-20% fine <5mm faint orange diffuse mottles; light clay; massive structure; very few <2% fine <2mm manganiferous soft segregations; weak wet; few <1mm roots; wet when sampled; slowly permeable; poorly drained; gradual to
B22	.7 to 1.05	Greyish brown (2.5Y52) moist; common 10-20% medium 5-15mm distinct orange mottles; light clay; massive structure; common 10-20% medium 2-6mm manganiferous soft segregations; weak wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; diffuse to
C1u	1.05 to 1.4	Greenish grey (10Y51) moist; light clay; massive structure; weak wet; wet when sampled; very slowly permeable; very poorly drained; clear to
2C2u	1.4 to 2	Dark grey (N40) moist; fine sandy clay loam; massive structure; very weak wet; few >5mm roots; wet when sampled; abrupt to
2C3u	2 to 2.4	Dark grey (N40) moist; clay loam, fine sandy; massive structure; very weak wet; wet when sampled; abrupt to
3C4u	2.4 to 2.6	Dark grey (5Y41) moist; loamy sand; massive structure; loose wet; wet when sampled; clear to
4C5	2.6 to 4	Dark grey (5Y41) moist; coarse sand; very few <2% subangular gravel large pebbles 20-60 mm; common 10-20% subangular gravel medium pebbles 6-20 mm; many 20-50% subangular gravel small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	6.5	4.7
.3	4	6.4	6.2
.6	4	6.3	7
.8	4	6.3	6.9
1		6.2	5.1
1.25	3	6.3	1.7
1.5	4	6.1	2.3
1.75	4	6.1	2
2	4	6.2	1.4
2.25	4	6.5	1.5
2.5	1	7.5	1.5
2.75		7.2	1.4
3.25		6.7	5.4
3.75		7.1	5.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 41 Observation: 1

Observation Notes:

Location	STP, Murrumba Downs. East of outfall pipe on salt couch flats
Vegetation	U(w1.0)6I *Eucalyptus tereticornis* M(w1.0)5L *Casuarina glauca* G(g1.0)2D *Sporobolus virginicus* (Salt couch)

Horizon Notes:

Texture	2C2u	Clay content somewhat variable
Horizon	4C5	Poor sample recovery from 3.0-4.5m

Project: MAS Site: 42 Observation: 1

Soil Name: a0LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0-0.5m

Location: GDA 94 ZONE 56 502198mE 6984177mN Lat: -27.26532 Long: 153.02221

Described By: Lauren OBrien (OBRL) Date: 13/JUL/10

Landscape:

Geology: Qr - Qr-9543: Residual soil, colluvium; sand, soil, clay, rock debris

Element: fill-top Landform Pattern: alluvial plain

Permeability: Very slowly permeable Runoff: Very slow

Slope: 1 % Drainage: Poorly drained

Surface Condition: Firm

Disturbances: Highly disturbed e.g. mining, urban

Classifications:

ASC: BLEACHED-ACIDIC, SULFURIC, OXYAQUIC, Hydrosol, Thick, Non-gravelly, Clayey, Clayey, Very Deep

ASC: SPOLIC, Anthroposol

Profile Morphology:

Horizon	Depth (m)	Description
M1	0 to .95	Dark grey (10YR41) moist; common 10-20% coarse 15-30mm distinct orange mottles, very few <2% medium 5-15mm distinct red mottles, few 2-10% medium 5-15mm faint gley mottles; clay loam; angular blocky weak structure; firm moderately moist; common <1mm roots; moderately moist when sampled; moderately permeable; imperfectly drained; abrupt to
2A1	.95 to 1.3	Black (N20) moist; silty medium clay; massive structure; firm moist; common <1mm roots; moist when sampled; very slowly permeable; poorly drained; gradual to
2A2	1.3 to 1.55	Dark grey (5Y41) moist; light medium clay; massive structure; firm moist; few <1mm roots; moist when sampled; very slowly permeable; poorly drained; clear to
2B2	1.55 to 2.3	Grey (5Y51) moist; very few <2% fine <5mm distinct orange mottles; medium clay; massive structure; abrupt to
3B2	2.3 to 3	Red (2.5YR46) moist; few 2-10% very coarse >30mm distinct gley sharp mottles, few 2-10% coarse 15-30mm distinct orange diffuse mottles; medium heavy clay; massive structure; common 10-20% extremely coarse >60mm ferruginous soft segregations

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	4	4.5	3
.3	4	4.2	2.1
.6	4	4.1	2.6
.8	2	5.5	2.1
1	4	5.7	1.9
1.25	4	5.8	3.2
1.5	1	4.5	3
1.75	4	3.8	2.8
2	4	3.8	2.9
2.25	4	4	3.1
2.5	1	3.5	2.5
2.75	1	3.8	2.8
3	1	4.1	3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 42 Observation: 1

Observation Notes:

Australian Soil Classification	Anthroposol from 0 - 0.95m, Hydrosol from 0.95 - 3.00m
Location	Park on Jade Lane cnr Ultramarine Drive, Griffin
Soil	Fill to 0.95m

Horizon Notes:

Horizon	3B2	Orange mottles possibly old jarosite?

Project: MAS Site: 43 Observation: 1

Soil Name: a0LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0-0.5m

Location: GDA 94 ZONE 56 502547mE 6984092mN Lat: -27.26609 Long: 153.02573

Described By: Jonathan Walton (WALJ) Date: 13/JUL/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: drainage depression Landform Pattern: alluvial plain

Permeability: Slowly permeable

Slope: 0 % Drainage: Poorly drained

Depth to Water: 0.01

Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: HUMOSE-ACIDIC, SULFIDIC, OXYAQUIC, Hydrosol, Thick, Non-gravelly, Silty, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .3	Black (5Y2.5/1) moist; sapric silty clay loam; subangular blocky weak 2-5mm structure; firm wet; wet when sampled; moderately permeable; poorly drained; clear to
A12	.3 to .55	Dark grey (5Y41) moist; sapric sandy light clay; subangular blocky weak 2-5mm structure; firm wet; wet when sampled; moderately permeable; poorly drained; abrupt to
2B2	.55 to 1	Light brownish grey (10YR62) moist; few 2-10% medium 5-15mm distinct brown mottles, very few <2% fine <5mm faint orange mottles; sand; single grain structure; loose moist; moist when sampled; highly permeable; poorly drained; gradual to
3B21	1 to 1.32	Light grey (2.5Y71) moist; few 2-10% medium 5-15mm distinct brown mottles; clayey sand; very few <2% subangular quartz medium pebbles 6-20 mm; massive structure; firm moist; moist when sampled; highly permeable; poorly drained; gradual to
3B22	1.32 to 1.85	Light grey (2.5Y71) moist; few 2-10% medium 5-15mm distinct brown mottles; sandy light clay; subangular blocky weak 2-5mm structure; very firm moist; moist when sampled; slowly permeable; poorly drained; gradual to
3B24	1.85 to 2.9	Grey (2.5Y61) moist; many 20-50% very coarse >30mm prominent orange mottles, many 20-50% very coarse >30mm prominent red mottles, many 20-50% very coarse >30mm prominent yellow mottles; medium heavy clay; subangular blocky weak 2-5mm structure; common 10-20% coarse 6-20mm ferruginous nodules; strong moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	4	5.2	2.2
.3	4	5.6	2.9
.4	4	5.4	2.7
.6	1	4.9	1.9
.8	1	4.6	2.4
1	1	4.2	2.4
1.25	1	4.7	2.8
1.5	1	4.4	2.4
1.75	2	4.5	2.9
2.25	1	4.2	2.5
2.5	4	4.3	3
2.75	1	4.1	2.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location Adjacent powerlines

Vegetation U(w1.0)7D *Melaleuca quinquenervia*
G(f1.0)2I *Pteridium esculentum* (bracken fern), Sedges

Project: MAS Site: 44 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 503043mE 6983162mN Lat: -27.27449 Long: 153.03075

Described By: Lauren OBrien (OBRL) Date: 14/JUL/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: blackplain Landform Pattern: flood plain

Permeability: Slowly permeable Runoff: Very slow

Slope: 0 % Drainage: Poorly drained

Depth to Water: 0.6

Surface Condition: Soft

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: MELANIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .25	Dark brown (7.5YR32) moist; fine sandy clay loam; subangular blocky weak 2-5mm structure; firm dry; many <1mm roots; dry when sampled; moderately permeable; moderately well drained; sharp to
2B21ia	.25 to .6	Light olive brown (2.5Y54) moist; few 2-10% fine <5mm distinct grey diffuse mottles, very few<2% fine <5mm faint yellow diffuse jarosite (from pyrite) mottles; fine sandy clay loam; massive structure; weak moderately moist; few <1mm roots; moderately moist when sampled; moderately permeable; imperfectly drained; gradual to
2B22ia	.6 to 1.2	Greyish brown (2.5Y53) moist; common 10-20% medium 5-15mm distinct gley clear mottles, few 2-10% fine <5mm prominent yellow sharp jarosite (from pyrite) mottles; clay loam, fine sandy; massive structure; weak wet; few <1mm roots; wet when sampled; slowly permeable; poorly drained; gradual to
2B23ia	1.2 to 1.55	Light olive grey (5Y62) moist; very few <2% fine <5mm distinct orange clear mottles, very few <2% medium 5-15mm prominent orange clear mottles, few 2-10% medium 5-15mm prominent yellow sharp mechanical mixing mottles; loamy sand; single grain structure; very weak wet; wet when sampled; highly permeable; poorly drained; sharp to
3B21	1.55 to 2	White (5Y81) moist; very few <2% fine <5mm faint orange diffuse mottles, very few <2% fine <5mm faint yellow sharp jarosite (from pyrite) mottles; fine sandy medium heavy clay; massive structure; very firm moist; moist when sampled; clear to
3B22	2 to 3	White (5Y81) moist; common 10-20% very coarse >30mm prominent orange clear mottles; sandy medium clay; massive structure; very few <2% medium 2-6mm ferruginous soft segregations; very firm moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.7	3.8
.3		4.5	3.3
.6		4.1	3.1
.8		4	3.1
1		3.8	3.1
1.25		4.3	3.3
1.5		4.3	3.1
1.75	1	4.8	3.8
2	1	4.9	3.6
2.25	1	4.6	3.8
2.5	1	4.9	4.1
2.75	1	5	4.8
3	1	5.1	4.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 44 Observation: 1

Observation Notes:

Vegetation	U(w1.0)6I *Casuarina glauca* M(g1.0)3M Grasses, reeds G(g1.0)2L *Sporobolus virginicus* (Salt couch)

Horizon Notes:

Horizon	3B21	Jarosite only in very top of horizon
Texture	3B21	Sodic from 1.55m

Project: MAS Site: 45 Observation: 1

Soil Name: a0S0 - Pass at 0-0.5m with pH of 4-5 at 0-0.5m

Location: GDA 94 ZONE 56 503220mE 6982998mN Lat: -27.27597 Long: 153.03253

Described By: Lauren OBrien (OBRL) Date: 14/JUL/10

Landscape:

Geology: Qhal - Qhal-SEQ: Linear depressions (ox-bows); mud, clay

Element: swamp

Landform Pattern: flood plain

Permeability: Very slowly permeable

Slope: 0 %

Drainage: Very poorly drained

Depth to Water: 0.01

Surface Condition: Soft

Disturbances: No effective disturbance except grazing by hoofed animals

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, SUPRATIDAL, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .25	Black (N20) moist; silty light clay; massive structure; very firm wet; abundant <1mm roots; wet when sampled; very slowly permeable; very poorly drained; abrupt to
B2	.25 to .65	Grey (5Y51) moist; many 20-50% coarse 15-30mm prominent orange clear mottles; silty light clay; massive structure; very weak wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; abrupt to
C	.65 to 1.5	Dark grey (5Y41) moist; clayey sand; single grain structure; very weak wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; sharp to
2D	1.5 to 3.7	Pinkish white (5YR82) moist; few 2-10% fine <5mm prominent red sharp mottles, common 10-20% coarse 15-30mm distinct red diffuse mottles, very few <2% fine <5mm prominent orange sharp mottles, common 10-20% medium 5-15mm prominent orange clear mottles, few 2-10% coarse 15-30mm distinct grey mottles; silty light clay; massive structure; very few <2% fine <2mm ferruginous root linings; very few <2% medium 2-6mm ferruginous soft segregations; firm moist; uncemented continuous massive organic pan; moist when sampled; abrupt to
2D2	3.7 to 3.95	Grey (5Y51) moist; few 2-10% fine <5mm distinct orange clear mottles; sandy light clay; massive structure; very firm dry; dry when sampled; sharp to
2D3	3.95 to 4.15	Black (10YR21) moist; sandy clay loam; massive structure; weakly cemented continuous massive organic pan; dry when sampled; clear to
2D4	4.15 to 5.2	Grey (5Y61) moist; very few <2% medium 5-15mm distinct orange clear mottles; fine sandy light clay; massive structure; firm moderately moist; moderately moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.5	3.1
.3	1	5.3	3
.6		5.1	2.8
.8		4.7	3.5
1	1	4.8	3.1
1.25	1	4.3	2.7
1.5	1	4.4	3.2
1.75	1	4.3	2.2
2	2	4	2.2
2.25	3	4.3	2.2
2.5	4	4.1	2.3
2.75	4	4.4	2.2
3	4	4.6	2.2
3.25	4	4.1	2.6

Project: MAS Site: 45 Observation: 1

Depth	H2O2-	PH-2	PH-3
3.5	4	4. 2	2.5
3.75	4	4.4	2.7
4	3	4.4	1.7
4.25	2	4.3	1.7
4.5	4	4.4	2.5
4.75	4	4.3	2.6
5	1	4.6	2.5
5.2	1	4.6	2.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Location	North of Dohles Rocks Rd near Koala tree rehab area.
Observation	Monosulfidic black ooze present on surface, iron staining, bacterial scum in surface water.
Vegetation	G(g1.0)2M *Sporobolus virginicus*

Horizon Notes:

Horizon	2D	Red mottles actually pink in field, but no pink field in sali
Texture	2D3	Variable texture, possibly burnt peat or coal
Texture	2D4	slightly sodic

Project: MAS Site: 46 Observation: 1

Soil Name: A0S0 - AASS and PASS at 0-0.5m

Location: GDA 94 ZONE 56 502854mE 6983240mN Lat: -27.27378 Long: 153.02884

Described By: Lauren OBrien (OBRL) Date: 14/JUL/10

Landscape:

Geology: Qhal - Qhal-SEQ: Linear depressions (ox-bows); mud, clay

Element: swamp Landform Pattern: flood plain

Permeability: Very slowly permeable Runoff: Very slow

Slope: 0 % Drainage: Very poorly drained

Depth to Water: .0.1

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .45	Black (10YR21) moist; sapric clay loam; massive structure; weak wet; abundant <1mm roots; wet when sampled; slowly permeable; very poorly drained; clear to
B21i	.45 to .7	Grey (5Y51) moist; many 20-50% coarse 15-30mm distinct orange clear mottles; light clay; massive structure; weak wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; gradual to
B22ia	.7 to 1.1	Grey (5Y51) moist; few 2-10% fine <5mm prominent yellow sharp jarosite (from pyrite) mottles, very few <2% fine <5mm faint brown clear mottles; fine sandy light clay; massive structure; very weak wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; gradual to
B23ia	1.1 to 1.5	Grey (5Y51) moist; few 2-10% fine <5mm distinct yellow clear jarosite (from pyrite) mottles; fine sandy clay loam; massive structure; loose wet; wet when sampled; slowly permeable; very poorly drained
B	1.5 to 2.5	(No sample recovery) very soft silt, wet when sampled, very poorly drained
2B2	2.5 to 3	Yellowish brown (10YR54) moist; common 10-20% medium 5-15mm prominent gley clear mottles; fine sandy light clay; massive structure; weak wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	3.9	1.9
.3	2	4.2	2.8
.6	1	4.2	2.0
.8	1	3.9	2.3
1	1	3.5	2.1
1.25	1	3.9	2.2
2.51	2	3.8	1.5
2.75	3	4.8	2.4
3	4	5.1	2.6

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation	U(w1.0)6D *Melaleuca quinquenervia* G(f1.0)3M *Pteridium esculentum* (bracken fern),
Vegetation	Site clear in 1958 photos - veg is regrowth.

Horizon Notes:

Texture	B23ia	Very very soft, too wet to texture properly.

Project: MAS Site: 47 Observation: 1

Soil Name: A0S4 - AASS at 0-0.5m and PASS at 3-4m

Location: GDA 94 ZONE 56 504428mE 6984914mN Lat: -27.25866 Long: 153.04473

Described By: Jonathan Walton (WALJ) Date: 21/JUL/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable Runoff: Very slow

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.9

Surface Condition: Firm

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: ACIDIC, SULFURIC, REDOXIC, Hydrosol, Thin, Non- gravelly, Sandy, Clay Loamy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .12	Black (2.5Y2.5/1) moist; sapric clay loam, fine sandy; granular moderate 2-5mm structure; firm moist; moist when sampled; moderately permeable; moderately well drained; clear to
B21	.12 to .35	Dark grey (2.5Y41) moist; many 20-50% fine <5mm distinct orange mottles, common 10-20% fine <5mm distinct brown mottles; heavy clay loam, fine sandy; angular blocky weak <2mm structure; firm moist; moist when sampled; moderately permeable; imperfectly drained; clear to
B22ia	.35 to .85	Grey (2.5Y61) moist; few 2-10% medium 5-15mm distinct yellow jarosite (from pyrite) mottles, many 20-50% very coarse >30mm distinct orange mottles; sandy loam; massive structure; firm moist; moist when sampled; highly permeable; poorly drained; clear to
B23	.85 to 1.25	Light olive grey (5Y62) moist; few 2-10% medium 5-15mm distinct orange mottles; clayey sand; massive structure; weak wet; wet when sampled; highly permeable; poorly drained; clear to
B24	1.25 to 1.9	Greenish grey (10Y51) moist; many 20-50% very coarse >30mm prominent orange mottles, very few <2% fine <5mm faint pale mottles; sandy clay loam; common 10-20% angular shell medium pebbles 6-20 mm; very few <2% angular shell medium pebbles 6-20 mm; massive structure; few 2-10% coarse 6-20mm ferruginous nodules; firm wet; wet when sampled; highly permeable; very poorly drained; gradual to
C1u	1.9 to 3.52	Dark greenish grey (10Y41) moist; common 10-20% medium 5-15mm prominent red mottles; loamy sand; common 10-20% angular shell medium pebbles 6-20 mm; very few <2% angular shell small pebbles 2-6 mm; massive structure; weak wet; wet when sampled; gradual to
2D1u	3.52 to 3.75	Greenish grey (10Y51) moist; common 10-20% medium 5-15mm prominent red mottles, common 10-20% medium 5-15mm distinct yellow mottles; medium clay; massive structure; firm moist; moist when sampled; clear to
2D2u	3.75 to 3.95	Greenish grey (10Y51) moist; very few <2% fine <5mm distinct red mottles; medium clay; common 10-20% subangular charcoal large pebbles 20-60 mm; massive structure; very firm moist; moist when sampled; abrupt to
2D3u	3.95 to 4.35	Greenish grey (10GY51) moist; common 10-20% fine <5mm prominent red mottles; medium heavy clay; massive structure; very firm moist; moist when sampled

:

Project: MAS Site: 47 Observation: 1

Field Tests:

Depth	PH-2	PH-3
.1	5	2.2
.3	4.4	3.1
.6	4.4	3.4
.8	6.0	4.6
1	6.3	5.2
1.25	6.7	5.8
1.5	6.5	5.9
1.75	7.4	6.4
2	7.6	5.1
2.25	7.6	1.9
2.5	7.7	2.5
2.75	7.9	2.1
3.5	7.5	1.5
3.75	7.6	5.8
4	8.1	7.2
4.25	8.4	8.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Horizon Notes:

Horizon	2D1u	sodic
Horizon	2D2u	sodic
Horizon	2D3u	sodic

Project: MAS Site: 48 Observation: 1

Soil Name: A1S2 - AASS at 0.5-1m and PASS at 1-2m

Location: GDA 94 ZONE 56 504060mE 6985030mN Lat: -27.25762 Long: 153.04102

Described By: Jonathan Walton (WALJ) Date: 21/JUL/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable Runoff: Very slow

Slope: 0 % Drainage: Poorly drained

Depth to Water: .9

Surface Condition: Firm

Disturbances: Limited clearing

Classifications:

ASC: ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clay Loamy, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .18	Very dark brown (10YR22) moist; common 10-20% fine <5mm distinct orange mottles; sapric clay loam, fine sandy; subangular blocky strong 5-10mm structure; firm moist; moist when sampled; moderately permeable; moderately well drained; sharp to
B21	.18 to .35	Greyish brown (2.5Y52) moist; common 10-20% fine <5mm distinct orange mottles; clay loam, fine sandy; subangular blocky weak <2mm structure; firm moist; moist when sampled; moderately permeable; imperfectly drained; clear to
B22	.35 to .55	Grey (2.5Y51) moist; common 10-20% medium 5-15mm distinct orange mottles; clay loam, fine sandy; massive structure; firm moist; moist when sampled; moderately permeable; imperfectly drained; abrupt to
B23ia	.55 to 1.3	Grey (2.5Y51) moist; few 2-10% fine <5mm distinct orange mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; sandy clay loam; massive structure; firm wet; wet when sampled; moderately permeable; poorly drained; clear to
B24	1.3 to 1.7	Grey (2.5Y51) moist; common 10-20% medium 5-15mm distinct brown mottles; sandy clay loam; massive structure; firm wet; wet when sampled; moderately permeable; poorly drained; abrupt to
C1u	1.7 to 2.3	Dark greenish grey (10Y31) moist; sandy clay loam; massive structure; firm wet; wet when sampled; sharp to
2C2u	2.3 to 3.6	Dark greenish grey (10Y31) moist; clay loam, sandy; few 2-10% angular shell medium pebbles 6-20 mm; common 10-20% angular shell small pebbles 2-6 mm; very few <2% rounded gravel medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; gradual to
3C3u	3.6 to 5.75	Very dark grey (N30) moist; silty light clay; very few <2% angular shell small pebbles 2-6 mm; massive structure; very weak wet; wet when sampled; abrupt to
4C4	5.75 to 5.9	Very dark grey (N30) moist; clay loam, sandy; massive structure; very weak wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		4.5	3.0
.3		4.5	3.2
.5		4.3	2.9
.8		4.3	2.7
1		4.3	2.7
1.25		4.3	3.0
1.5		5.0	3.4
1.75	4	6.6	1.8
2	4	7.2	2.3
2.25	4	7.6	2.2
2.5	4	7.7	2.2
2.75	4	8.1	2.5
3	4	8.0	2.4
3.25	4	7.9	2.2

Project: MAS Site: 48 Observation: 1

Depth	H2O2-	PH-2	PH-3
3.5	4	7.9	2.2
3.75	4	8.2	2.2
4	4	8.4	2.1
4.25	4	8.2	2.4
4.5	4	8.4	2.3
4.75	4	8.2	2.0
5	4	8.4	2.1
5.25		8.4	2.1
5.5		8.2	2.1
5.75		8.1	2.3
5.9		7.7	2.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)T7V *Eucalyptus tereticornis*
U(w1.0)T6M *Melaleuca quinquenervia*
G(g1.0)3D Grass

Project: MAS Site: 49 Observation: 1

Soil Name: S3 - PASS at 2-3m

Location: GDA 94 ZONE 56 504840mE 6984625mN Lat: -27.26127 Long: 153.0489

Described By: Fiona McCartney (MCCF) Date: 22/JUL/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Highly permeable

Slope: 1 % Drainage: Very poorly drained

Depth to Water: 1.2 Surface Condition: Firm

Disturbances: No effective disturbance except grazing by hoofed animals

Classifications:

ASC: HUMOSE, KANDOSOLIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Clay Loamy, Clay Loamy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .35	Black (10YR21) moist; sapric clay loam, fine sandy; granular moderate 5-10mm structure; weak moderately moist; moderately moist when sampled; highly permeable; well drained; abrupt to
B21	.35 to 1.1	Pale olive (5Y63) moist; many 20-50% coarse 15-30mm distinct orange mottles; clay loam, fine sandy; massive structure; weak moist; moist when sampled; highly permeable; rapidly drained; clear to
B22	1.1 to 1.75	Light olive grey (5Y62) moist; many 20-50% very coarse >30mm prominent orange clear mottles; loamy fine sand; massive structure; weak moist; moist when sampled; highly permeable; very poorly drained; abrupt to
2B	1.75 to 2.2	Dark yellowish brown (10YR46) moist; few 2-10% medium 5-15mm distinct red clear mottles; clay loam, sandy; many 20-50% subangular gravel medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; gradual to
3Cu	2.2 to 2.6	Greenish grey (10Y51) moist; few 2-10% medium 5-15mm prominent red sharp mottles, few 2-10% medium 5-15mm distinct orange clear mottles; clay loam, sandy; very few <2% subangular gravel small pebbles 2-6 mm; few 2-10% subangular gravel large pebbles 20-60 mm; massive structure; weak wet; moist when sampled; abrupt to
4D	2.6 to 3	Light greenish grey (10Y71) moist; many 20-50% very coarse >30mm prominent red sharp mottles, common 10-20% coarse 15-30mm distinct orange clear mottles; sandy light medium clay; massive structure; common 10-20% very coarse 20-60mm ferruginous soft segregations; few 2-10% coarse 6-20mm ferruginous concretions; very firm moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	6.2	4.4
.3		7.3	5.5
.6		7.3	5.8
.8		7.4	6.1
1		7.4	6.2
1.25		7.5	6.3
1.5		7.7	6.0
1.75		7.6	6.3
2		7.1	5.7
2.25	4	6.9	1.9
2.5	4	6.9	2.3
2.75	1	6.7	5.6
3	3	6.6	6.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)7I *Casuarina glauca*
G(g4.1)1D Grass

Project: MAS Site: 50 Observation: 1

Soil Name: S0 - PASS at 0-0.5m

Location: GDA 94 ZONE 56 504544mE 6984393mN Lat: -27.26337 Long: 153.04591

Described By: Fiona McCartney (MCCF) Date: 22/JUL/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: intertidal flat Landform Pattern: alluvial plain

Slope: 1 % Drainage: Very poorly drained

Depth to Water: 0.05

Surface Condition: Firm

Disturbances: No effective disturbance

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, SUPRATIDAL, Hydrosol, Thick, Non-gravelly, Clay Loamy, Clay Loamy,

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Black (10YR21) moist; common 10-20% very coarse >30mm prominent brown clear mottles, few 2-10% medium 5-15mm faint red diffuse mottles; fibric peat; massive structure; firm moist; moist when sampled; highly permeable; very poorly drained; abrupt to
B21	.2 to .65	Dark grey (10YR41) moist; common 10-20% coarse 15-30mm prominent brown clear mottles, few 2-10% medium 5-15mm faint red sharp mottles; sandy clay loam; massive structure; weak wet; wet when sampled; highly permeable; very poorly drained; abrupt to
C1	.65 to 1.2	Dark grey (N40) moist; sandy clay loam; massive structure; weak wet; wet when sampled; highly permeable; very poorly drained; clear to
C2u	1.2 to 2	Dark greenish grey (10Y31) moist; sandy clay loam; few 2-10% angular shell medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; highly permeable; very poorly drained; clear to
C3u	2 to 2.4	Dark greenish grey (10Y31) moist; clay loam, fine sandy; few 2-10% angular shell medium pebbles 6-20 mm; very few <2% subangular gravel medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; gradual to
2C4u	2.4 to 3.2	Dark grenish grey (5GY31) moist; silty light clay; massive structure; weak wet; wet when sampled; clear to
2C5u	3.2 to 3.45	Dark grenish grey (5GY31) moist; fibric fine sandy light clay; massive structure; weak wet; wet when sampled; clear to
2C6u	3.45 to 3.7	Dark grenish grey (5GY31) moist; sapric sandy light clay; massive structure; weak wet; wet when sampled; abrupt to
3C7u	3.7 to 3.9	Grey (10YR51) moist; sandy loam; few 2-10% subrounded quartz large pebbles 20-60 mm; few 2-10% subrounded gravel small pebbles 2-6 mm; massive structure; weak wet; wet when sampled; abrupt to
D	3.9 to 4.5	Olive brown (2.5Y44) moist; many 20-50% very coarse >30mm prominent grey clear mottles, very few <2% medium 5-15mm distinct red clear mottles; light medium clay; massive structure; firm wet; wet when sampled

Project: MAS Site: 50 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	6.2	2.7
.3	1	6.6	4.5
.6	1	6.6	3.6
.8	1	6.6	3.6
1	1	6.3	3.2
1.25	4	6.1	1.3
1.5	4	6.4	1.6
1.75	4	6.7	2.1
2	4	7.0	2.2
2.25	4	7.2	2.5
2.5	4	7.2	2.7
2.75	3	7.0	3.0
3	3	7.6	4.0
3.25	4	6.9	1.3
3.5	4	6.8	1.2
3.75	4	6.6	1.3
4	1	6.7	3.6
4.25	3	6.7	5.7
4.5	3	6.6	6.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation G(g1.0)1D *Sporobolus virginicus* (Salt couch), reeds
Wetland type: 10

Project: MAS Site: 51 Observation: 1

Soil Name: A1 - AASS at 0.5-1m

Location: GDA 94 ZONE 56 504284mE 6984411mN Lat: -27.26321 Long: 153.04328

Described By: Fiona McCartney (MCCF) Date: 22/JUL/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Slope: 1 % Drainage: Very poorly drained

Depth to Water: 0.6

Surface Condition: Firm

Disturbances: No effective disturbance except grazing by hoofed animals

Classifications:

ASC: MELACIC, SULFURIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Clay Loamy, Clay Loamy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A	0 to .3	Black (7.5YR2.5/1) moist; very few <2% fine <5mm distinct orange mottles, very few <2% fine <5mm distinct grey mottles; sapric clay loam, fine sandy; very few <2% angular gravel small pebbles 2-6 mm; weak structure; weak moderately moist; moderately moist when sampled; moderately permeable; well drained; clear to
B21	.3 to .6	Greyish brown (2.5Y52) moist; few 2-10% fine <5mm distinct yellow mottles, few 2-10% fine <5mm distinct red mottles; heavy sandy clay loam; massive structure; very few <2% medium 2-6mm ferruginous root linings; very weak moist; moist when sampled; highly permeable; rapidly drained; clear to
B22ia	.6 to 1	Grey (5Y51) moist; few 2-10% fine <5mm distinct brown mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; sandy clay; massive structure; very few <2% medium 2-6mm ferruginous root linings; very weak wet; wet when sampled; highly permeable; very poorly drained; abrupt to
B23ia	1 to 1.2	Grey (5Y51) moist; few 2-10% fine <5mm distinct yellow jarosite (from pyrite) mottles, many 20-50% medium 5-15mm distinct orange mottles; sandy clay loam; massive structure; few 2- 10% medium 2-6mm ferruginous root linings; very weak wet; wet when sampled; highly permeable; very poorly drained; abrupt to
B24	1.2 to 1.9	Grey (5Y51) moist; few 2-10% fine <5mm distinct orange mottles, few 2-10% fine <5mm distinct brown mottles, very few <2% fine <5mm distinct grey mottles; sandy clay loam; massive structure; very weak wet; wet when sampled; highly permeable; very poorly drained; clear to
B25	1.9 to 2.2	Dark grey (5Y41) moist; common 10-20% fine <5mm distinct brown mottles, common 10-20% fine <5mm faint grey mottles; heavy sandy clay loam; massive structure; very weak wet; wet when sampled; abrupt to
D1	2.2 to 2.45	Dark yellowish brown (10YR48) moist; common 10-20% coarse 15-30mm prominent grey mottles, common 10-20% coarse 15-30mm prominent red mottles; coarse sandy light medium clay; massive structure; very firm moderately moist; moderately moist when sampled; sharp to
D2	2.45 to 2.9	White (N80) moist; few 2-10% coarse 15-30mm prominent red mottles, few 2-10% coarse 15-30mm prominent orange mottles; sandy light medium clay; massive structure; very firm moderately moist; moderately moist when sampled

Project: MAS Site: 51 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	3	5.1	2.1
.3	2	4.8	3.1
.6		4.8	3.3
.8		5.3	4.1
1		5.7	4.6
1.25	4	6.4	6.0
1.5	4	6.5	6.1
1.75	3	6.5	5.6
2	3	6.5	5.6
2.25	1	6.5	5.3
2.5	1	6.3	5.4
2.75	3	6.2	6.2
2.9	4	6.2	6.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation	U(w1.0)6M	*Casuarina glauca*
	G(g4.1)1D	Grass

Project: MAS Site: 52 Observation: 1

Soil Name: A1S4 - AASS at 0.5-1m and PASS at 3-4m

Location: GDA 94 ZONE 56 503768mE 6985025mN Lat: -27.25766 Long: 153.03807

Described By: Fiona McCartney (MCCF) Date: 22/JUL/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Highly permeable

Slope: 1 % Drainage: Very poorly drained

Depth to Water: 1

Surface Coarse Fragments: Common 10-20%, Medium pebbles 6-20 mm, Quartz

Surface Condition: Loose

Disturbances: Cultivation - Rainfed

Classifications:

ASC: ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Gravelly, Sandy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Dark greyish brown (10YR42) moist; loamy fine sand; common 10-20% subrounded quartz medium pebbles 6-20 mm; single grain structure; loose dry; dry when sampled; highly permeable; rapidly drained; clear to
B1	.2 to .4	Yellowish brown (10YR56) moist; many 20-50% fine <5mm distinct orange mottles; clayey fine sand; common 10-20% subrounded quartz small pebbles 2-6 mm; single grain structure; loose dry; dry when sampled; highly permeable; rapidly drained; clear to
B21i	.4 to .7	Light yellowish brown (2.5Y64) moist; many 20-50% fine <5mm distinct orange mottles; clayey fine sand; single grain structure; loose dry; dry when sampled; highly permeable; rapidly drained; clear to
B22i	.7 to 1	Light brownish grey (2.5Y63) moist; common 10-20% fine <5mm faint orange mottles; clayey fine sand; massive structure; very weak moist; moist when sampled; highly permeable; rapidly drained; abrupt to
B23i	1 to 1.7	Light brownish grey (2.5Y62) moist; common 10-20% fine <5mm distinct orange mottles, few 2-10% fine <5mm faint brown mottles; clayey fine sand; massive structure; very weak moist;moist when sampled; highly permeable; very poorly drained; clear to
B24ia	1.7 to 1.9	Light brownish grey (2.5Y62) moist; many 20-50% coarse 15-30mm prominent orange mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; sandy clay loam; massive structure; very weak wet; wet when sampled; abrupt to
B25ia	1.9 to 3	Light brownish grey (2.5Y62) moist; many 20-50% very coarse >30mm distinct brown mottles, common 10-20% medium 5-15mm prominent yellow jarosite (from pyrite) mottles; sandy clay loam; massive structure; weak wet; wet when sampled; abrupt to
2B1ia	3 to 3.3	Dark grey (5Y41) moist; few 2-10% fine <5mm distinct yellow jarosite (from pyrite) mottles, common 10-20% medium 5-15mm distinct brown mottles; fine sandy light clay; massive structure; weak wet; wet when sampled; clear to
2B2u	3.3 to 3.6	Dark grey (5Y41) moist; common 10-20% coarse 15-30mm distinct grey mottles; sandy light clay; massive structure; weak wet; wet when sampled; clear to
3Du	3.6 to 4.1	Grey (N60) moist; common 10-20% very coarse >30mm prominent grey mottles, many 20-50% coarse 15-30mm distinct brown mottles; sandy medium clay; massive structure; very firm moist; weakly cemented continuous massive organic pan; moist when sampled; clear to
4D	4.1 to 4.5	Grey (5Y61) moist; common 10-20% medium 5-15mm distinct orange mottles, very few <2% fine <5mm faint grey mottles, very few <2% fine <5mm distinct red mottles; sandy medium heavy clay; massive structure; few 2-10% medium 2-6mm ferruginous nodules; very firm moderately moist; moderately moist when sampled

Project: MAS Site: 52 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.0	3.3
.3	1	5.8	4.0
.6	1	5.3	4.3
.8		4.5	3.3
1		4.0	3.0
1.25		3.6	2.7
1.5		3.5	2.7
1.75		3.6	2.4
2		3.2	2.1
2.25		3.2	1.9
2.5		3.4	2.1
2.75	1	3.6	1.8
3	3	5.0	2.1
3.25	3	5.7	2.8
3.5	4	5.5	1.4
3.75	4	5.5	2.8
4	4	5.5	2.2
4.25	3	5.5	2.5
4.5	2	5.6	3.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)7M Eucalyptus spp.

Horizon Notes:

Horizon	2B2u	Preserved organics in this horizon
Horizon	3Du	Preserved organics in this horizon

Project: MAS Site: 53 Observation: 1

Soil Name: S4 - PASS at 3-4m

Location: GDA 94 ZONE 56 502349mE 6981653mN Lat: -27.28811 Long: 153.02374

Described By: Lauren Eyre (EYRL) Date: 17/AUG/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Slope: 1 % Drainage: Poorly drained

Depth to Water: 0.85

Surface Condition: Firm

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MELANIC, KANDOSOLIC, REDOXIC, Hydrosol, Thick, Non- gravelly, Clayey, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .05	Very dark grey (10YR31) moist; light clay; subangular blocky strong 2-5mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; well drained; clear to
A12	.05 to .35	Very dark grey (10YR31) moist; very few <2% fine <5mm faint red mottles; sandy light clay; subangular blocky moderate 10-20mm structure; firm moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; clear to
B21	.35 to .6	Dark grey (10YR41) moist; many 20-50% fine <5mm distinct orange mottles; medium clay; subangular blocky moderate 20-50mm structure; firm moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; clear to
B22	.6 to 1	Greyish brown (10YR52) moist; common 10-20% medium 5-15mm distinct orange mottles; sandy clay loam; subangular blocky weak 10-20mm structure; weak moist; moist when sampled; moderately permeable; imperfectly drained; clear to
B23	1 to 1.4	Greyish brown (10YR52) moist; common 10-20% medium 5-15mm prominent orange mottles; coarse sandy clay loam; very few <2% subangular consolidated rock (unidentified) small pebbles 2-6 mm; massive structure; weak moist; moist when sampled; moderately permeable; poorly drained; gradual to
B24	1.4 to 2.6	Grey (5Y51) moist; common 10-20% fine <5mm prominent orange mottles; sandy light clay; massive structure; very weak moist; moist when sampled; gradual to
2B21	2.6 to 3.5	Olive grey (5Y42) moist; common 10-20% fine <5mm distinct brown mottles; loamy sand; very few <2% angular platy shell small pebbles 2-6 mm; massive structure; very weak wet; wet when sampled; gradual to
2B22	3.5 to 3.75	Dark grey (5Y41) moist; sandy loam; very few <2% subangular charcoal medium pebbles 6-20 mm; very few <2% angular platy shell small pebbles 2-6 mm; massive structure; very weak wet; wet when sampled; clear to
2B23	3.75 to 4	Dark greenish grey (10Y41) moist; common 10-20% fine <5mm distinct brown mottles; sandy light clay; very few <2% subangular quartz small pebbles 2-6 mm; very few <2% subangular gravel small pebbles 2-6 mm; massive structure; weak moist; moist when sampled; clear to
3B21	4 to 4.5	Greenish grey (10GY51) moist; common 10-20% medium 5-15mm prominent orange mottles; sandy light medium clay; massive structure; very few <2% medium 2-6mm manganiferous nodules; very firm moist; moist when sampled

Project: MAS Site: 53 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.05	1	5.83	3.1
.1	3	5.9	3.0
.3	4	6.5	4.3
.6	1	6.0	4.4
.8	1	5.8	4.5
1		5.8	4.4
1.25		5.6	4.3
1.5		5.6	4.1
1.75		6.0	5.0
2		5.8	5.2
2.25		5.8	5.0
2.5		5.8	5.5
2.75	1	6.3	4.4
3	1	6.5	5.0
3.25	1	7.1	6.4
3.5	3	7.4	6.5
3.75	3	6.7	3.0
4	4	8.2	8.1
4.25	4	7.5	7.8
4.5	4	7.2	8.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Soil	Effective rooting depth 1.2m
Vegetation	Pasture

Horizon Notes:

Texture	A12	A12 mottles: mottle lining root channels
Texture	2B21	2B21 Mottles more mottles in the top part of this horizon
Texture	2B21	2B21 Coarse Fragments: shells mainly in lower part of horizon
Texture	2B22	2B22 Mottle 11APSS: shell bond between 3.5-3.6m

Project: MAS Site: 54 Observation: 1

Soil Name: a0S3 - PASS at 2-3m with pH of 4-5

Location: GDA 94 ZONE 56 502399mE 6981366mN Lat: -27.2907 Long: 153.02424

Described By: Lauren Eyre (EYRL) Date: 17/AUG/10

Landscape:

Geology: Qhav - Qhav-SEQ: Levee banks; sand, gravel, silt

Element: prior stream Landform Pattern: alluvial plain

Permeability: Moderately permeable

Slope: 0 % Drainage: Poorly drained

Depth to Water: 0.75

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MELACIC, KANDOSOLIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Black (7.5YR2.5/1) moist; few 2-10% fine <5mm distinct red mottles; light clay; very few <2% subangular quartz small pebbles 2-6 mm; subangular blocky moderate 10-20mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; clear to
B21	.3 to .6	Greyish brown (10YR52) moist; many 20-50% medium 5-15mm distinct brown mottles; coarse sandy medium clay; few 2-10% subangular gravel small pebbles 2-6 mm; subangular blocky weak 20-50mm structure; weak moist; moist when sampled; moderately permeable; imperfectly drained; clear to
B22	.6 to .9	Grey (2.5Y61) moist; common 10-20% medium 5-15mm distinct brown mottles; coarse sandy medium clay; few 2-10% subangular gravel medium pebbles 6-20 mm; abundant 50-90% subangular gravel small pebbles 2-6 mm; massive structure; very weak moist; moist when sampled; highly permeable; poorly drained; gradual to
2B21	.9 to 1.2	Light brownish grey (2.5Y62) moist; common 10-20% medium 5-15mm distinct brown mottles; coarse sandy medium clay; few 2-10% subangular gravel medium pebbles 6-20 mm; abundant 50-90% subangular gravel small pebbles 2-6 mm; massive structure; weak moist; moist when sampled; highly permeable; poorly drained; gradual to
2B22	1.2 to 2.3	Light olive grey (5Y62) moist; common 10-20% medium 5-15mm distinct brown mottles; clayey coarse sand; common 10-20% subrounded gravel large pebbles 20-60 mm; many 20-50% subangular gravel medium pebbles 6-20 mm; many 20-50% subangular gravel small pebbles 2-6 mm; single grain structure; loose wet; wet when sampled; highly permeable; poorly drained; diffuse to
2B23	2.3 to 3	Grey (2.5Y61) moist; few 2-10% medium 5-15mm distinct brown mottles; clayey coarse sand; common 10-20% subrounded gravel large pebbles 20-60 mm; many 20-50% subangular gravel medium pebbles 6-20 mm; many 20-50% subangular gravel small pebbles 2-6 mm; single grain structure; very weak wet; wet when sampled; gradual to
3C1	3 to 4.2	Olive grey (5Y52) moist; sandy light clay; very few <2% angular platy shell small pebbles 2-6 mm; massive structure; loose wet; wet when sampled; gradual to
4C	4.2 to 6	Dark grey (N40) moist; silty light medium clay; very few <2% angular platy shell small pebbles 2-6 mm; massive structure; very weak wet; wet when sampled

Project: MAS Site: 54 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.9	3.5
.3	1	5.2	4.1
.6		4.6	3.6
.8		4.1	3.2
1		4.5	3.3
1.25		5.1	3.2
1.5		5.6	3.7
1.75		5.9	4.4
2		6.0	3.2
2.25		4.9	3.5
2.5	1	5.2	5.5
2.75	3	6.8	2.0
3	1	5.9	2.4
3.25	1	7.0	7.4
3.5	1	7.1	7.7
3.75	1	7.2	7.0
4	1	7.1	6.7
4.25	2	7.5	6.3
4.5	4	7.7	3.0
4.75	4	7.1	3.5
5	4	7.2	2.2
5.25	2	7.2	7.4
5.5	4	7.8	7.7
5.75	4	8.1	4.2
6	2	7.5	7.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation	Microrelief: Biotic other depression. 0.5m deep, 2m diameter. could be pig wallows
Soil	Effective rooting depth 1m - most roots stop at pan/hard layer at 1m
Vegetation	U(w1.0)7M *Eucalyptus moluccana*, Iron Bark

Horizon Notes:

Texture	A1	A1: Orange layer from 0-2cm
Texture	2B21	2B21 Pans: hard layer approx 10m thick. Unsure how continual it is. Auger couldn't get through it. occurs at 1m

Project: MAS Site: 55 Observation: 1

Soil Name: A2S4 - AASS at 1-2m and PASS at 3-4m

Location: GDA 94 ZONE 56 502683mE 6981813mN Lat: -27.28667 Long: 153.02711

Described By: Lauren Eyre (EYRL) Date: 17/AUG/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Slope: 1 % Drainage: Poorly drained

Depth to Water: 0.5 Surface Condition: Firm

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: MELANIC-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Very dark grey (10YR31) moist; clay loam; subangular blocky moderate 5-10mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; gradual to
B21	.3 to .8	Yellowish brown (10YR54) moist; few 2-10% fine <5mm distinct orange mottles, common 10-20% fine <5mm distinct red mottles; medium clay; subangular blocky weak 10-20mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; imperfectly drained; diffuse to
B22	.8 to 1.5	Light brownish grey (2.5Y62) moist; many 20-50% medium 5-15mm prominent orange mottles; clayey sand; massive structure; weak moist; moist when sampled; highly permeable; poorly drained; gradual to
2B21	1.5 to 2.35	Grey (5Y51) moist; few 2-10% medium 5-15mm distinct brown mottles, common 10-20% fine <5mm distinct yellow jarosite (from pyrite) mottles; sandy loam; massive structure; very weak wet; wet when sampled; gradual to
2B22	2.35 to 3	Dark greenish grey (10Y41) moist; common 10-20% medium 5-15mm distinct brown mottles; sandy loam; massive structure; very weak wet; wet when sampled; diffuse to
3C1	3 to 3.8	Dark greenish grey (10Y41) moist; sandy clay loam; few 2-10% angular platy shell medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; gradual to
4C1	3.8 to 4.5	Dark grey (N40) moist; sandy light medium clay; massive structure; very weak wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	6.0	3.1
.6	1	4.4	3.2
.8		4.3	3.2
1		4.3	3.0
1.25		3.8	3.1
1.5	2	3.9	2.7
1.75	2	4.0	2.7
2	2	4.7	3.0
2.25	2	5.3	2.8
2.5	2	6.0	3.6
2.75	2	6.1	2.8
3	4	6.3	2.0
3.25	4	6.4	2.3
3.5	4	6.5	3.9
3.75	4	6.8	3.1
4	4	6.8	4.4
4.25	4	6.9	2.6
4.5	4	6.3	3.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 55 Observation: 1

Observation Notes:

Observation	Microrelief: slight undulations - possibly from cultivation
Soil	Effective rooting depth 1.2m
Vegetation	Pasture

Horizon Notes:

Texture	B21	Mottle M21DO: More mottles occurring in the lower part of this horizon probably associated with fluctuating water table
Texture	B21	Mottle M31DR: Mottles lining Duct channels
Texture	2B21	Mottles J31DY: Jarosite is mainly in top part of horizon (1.5-1.7m) formed in layers
Texture	3C1	Coarse Fragment 22APSS: shells mainly occur in a band from 3.6-3.8 (100mm of rain 1 week ago)
Horizon	4C1	Texture SLMC: 3cm of sand at bottom of horizon

Project: MAS Site: 56 Observation: 1

Soil Name: a1LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0.5-1.0m

Location: GDA 94 ZONE 56 502659mE 6982138mN Lat: -27.28373 Long: 153.02687

Described By: Jonathan Walton (WALJ) Date: 18/AUG/10

Landscape:

Geology: RJl - Landsborough Sandstone: Lithofeldspathic labile and quartzose sandstone, siltstone, shale, minor coal, ferruginous oolite marker

Element: hillcrest Landform Pattern: plain

Permeability: Slowly permeable

Slope: 1 % Drainage: Poorly drained

Surface Condition: Firm

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: MELANIC, MESOTROPHIC, GREY, Kandosol, Medium, Non-gravelly, Clayey, Clayey, Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .25	Very dark grey (10YR31) moist; sapric light clay; few 2-10% subangular sandstone small pebbles 2-6 mm; few 2-10% subangular sandstone medium pebbles 6-20 mm; subangular blocky moderate 2-5mm structure; firm moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; abrupt to
B1	.25 to .55	Brown (7.5YR44) moist; common 10-20% fine <5mm distinct red mottles, common 10-20% medium 5-15mm distinct pale mottles; light clay; subangular blocky moderate 2-5mm structure; very few <2% medium 2-6mm ferruginous nodules; firm moderately moist; moderately moist when sampled; slowly permeable; imperfectly drained; diffuse to
B2	.55 to 1.2	Pinkish grey (7.5YR72) moist; many 20-50% coarse 15-30mm prominent red mottles, few 2-10% medium 5-15mm distinct yellow mottles; medium heavy clay; subangular blocky weak <2mm structure; few 2-10% coarse 6-20mm ferruginous nodules; firm moderately moist; moderately moist when sampled; slowly permeable; poorly drained

Field Tests:

Depth	PH-2
.1	6.6
.3	4.6
.6	4.1
.8	3.9
1	4.0
1.2	4.2

PH-2: pH using electrode probe

Observation Notes:

Observation Push rig only recovered to 1.2m.

Project: MAS Site: 57 Observation: 1

Soil Name: a2LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 1-2m

Location: GDA 94 ZONE 56 502092mE 6981955mN Lat: -27.28538 Long: 153.02114

Described By: Jonathan Walton (WALJ) Date: 18/AUG/10

Landscape:

Geology: Qr - Qr-9543: Residual soil, colluvium; sand, soil, clay, rock debris

Element: swamp Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.01

Surface Condition: Soft

Disturbances: No effective disturbance except grazing by hoofed animals

Classifications:

ASC: ACIDIC, KANDOSOLIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
M1	0 to .15	Grey (2.5Y61) moist; few 2-10% fine <5mm prominent orange mottles, very few <2% fine <5mm faint grey mottles; light clay; massive structure; firm wet; wet when sampled; very slowly permeable; very poorly drained; abrupt to
2A1	.15 to .3	Grey (2.5Y61) moist; sapric clay loam, sandy; massive structure; very few <2% coarse 6- 20mm ferruginous nodules; firm wet; wet when sampled; moderately permeable; very poorly drained; gradual to
2B21	.3 to .75	Light olive brown (2.5Y54) moist; few 2-10% fine <5mm faint grey mottles; heavy clay loam, sandy; massive structure; very few <2% very coarse 20-60mm ferruginous nodules; few 2- 10% coarse 6-20mm ferruginous nodules; weak wet; wet when sampled; moderately permeable; very poorly drained; gradual to
2B22	.75 to 1.08	Greyish brown (2.5Y53) moist; common 10-20% medium 5-15mm distinct orange mottles, very few <2% fine <5mm faint grey mottles; sandy light clay; massive structure; very few <2% very coarse 20-60mm ferruginous nodules; common 10-20% coarse 6-20mm ferruginous nodules; firm moist; moist when sampled; moderately permeable; very poorly drained; clear to
2B23	1.08 to 1.35	Yellowish brown (10YR56) moist; many 20-50% medium 5-15mm prominent red mottles, few 2-10% medium 5-15mm prominent grey mottles; sandy light clay; subangular blocky moderate 5-10mm structure; few 2-10% medium 2-6mm ferruginous nodules; firm moderately moist;moderately moist when sampled; slowly permeable; very poorly drained; clear to
2B24	1.35 to 1.5	Yellowish red (5YR46) moist; common 10-20% coarse 15-30mm prominent grey mottles, many 20-50% very coarse >30mm prominent brown mottles; sandy medium clay; massive structure; very firm moderately moist; slowly permeable; very poorly drained; clear to
2B25	1.5 to 1.9	Grey (2.5Y61) moist; common 10-20% coarse 15-30mm prominent brown mottles, common 10-20% coarse 15-30mm prominent red mottles; sandy medium heavy clay; massive structure;very firm moderately moist; moderately moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	4	6.4	5.0
.2	4	6.4	3.5
.4	1	6.3	2.6
.6	1	6.1	3.2
.8	1	5.9	2.6
1	2	5.7	3.2
1.25		4.7	3.5
1.5		4.2	3.2
1.75		4.4	3.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation Northern end of dams, surface water. grey clay at eastern end of dams but non estuarine

Vegetation U(w1.0)7S *Melaleuca quinquenervia*

Project: MAS Site: 58 Observation: 1

Soil Name: a1LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0.5-1.0m

Location: GDA 94 ZONE 56 502219mE 6982054mN Lat: -27.28449 Long: 153.02242

Described By: Lauren OBrien (OBRL) Date: 18/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: drainage depression Landform Pattern: plain

Permeability: Slowly permeable Runoff: Very slow

Slope: 1 % Drainage: Very poorly drained

Depth to Water: 0.01 Surface Condition: Soft

Disturbances: No effective disturbance except grazing by hoofed animals

Classifications:

ASC: MELACIC, KANDOSOLIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .2	Very dark grey (5Y31) moist; sandy light clay; very few <2% subrounded gravel medium pebbles 6-20 mm; weak structure; very few <2% fine <2mm ferruginous root linings; firm moist; many <1mm roots; moist when sampled; moderately permeable; very poorly drained; clear to
A12	.2 to .45	Very dark grey (2.5Y31) moist; fine sandy light clay; subangular blocky moderate 2-5mm structure; very few <2% fine <2mm ferruginous root linings; firm moist; common <1mm roots; moist when sampled; slowly permeable; very poorly drained; clear to
B21	.45 to .85	Greyish brown (2.5Y52) moist; very few <2% coarse 15-30mm faint orange mottles; sandy light clay; massive structure; weak wet; few <1mm roots; wet when sampled; slowly permeable; very poorly drained; abrupt to
B22	.85 to 1.2	Grey (5Y51) moist; very few <2% fine <5mm faint orange mottles, common 10-20% medium 5-15mm prominent red mottles; medium heavy clay; massive structure; very firm moist; moist when sampled; slowly permeable; very poorly drained; abrupt to
B23	1.2 to 1.65	Grey (N50) moist; few 2-10% medium 5-15mm distinct orange mottles, very few <2% fine <5mm distinct red mottles; medium clay; massive structure; very firm moderately moist; moderately moist when sampled; gradual to
B24	1.65 to 2.6	Light grey (5Y71) moist; common 10-20% very coarse >30mm prominent orange mottles, very few <2% very coarse >30mm distinct yellow mottles; sandy medium clay; massive structure; very firm moderately moist; moderately moist when sampled; clear to
B25	2.6 to 2.8	Yellowish brown (10YR56) moist; very few <2% medium 5-15mm distinct grey mottles; fine sandy light clay; granular strong <2mm structure; very firm moderately moist; moderately moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.1	2.3
.3	1	5.2	2.7
.6		5.3	3.7
.8		5.2	3.6
1		5.0	3.0
1.25	1	4.9	3.3
1.5		4.5	4.1
1.75		4.8	3.8
2		4.8	4.0
2.25		4.7	3.6
2.5		4.9	4.5
2.75		4.7	3.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)7D *Melaleuca quinquenervia*
G(g1.0)1M Grasses

Project: MAS Site: 59 Observation: 1

Soil Name: a2LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 1-2m

Location: GDA 94 ZONE 56 503113mE 6983827mN Lat: -27.26848 Long: 153.03145

Described By: Jonathan Walton (WALJ) Date: 18/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: flood plain

Permeability: Highly permeable Runoff: Slow

Slope: 0 % Drainage: Poorly drained

Depth to Water: 0.7

Surface Condition: Soft, Loose

Disturbances: Cultivation - Rainfed

Classifications:

ASC: MELANIC-ACIDIC, TENOSOLIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Loamy, Loamy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1p	0 to .3	Black (2.5Y2.5/1) moist; heavy sandy loam; massive structure; firm moist; few 2-5mm roots;moist when sampled; highly permeable; well drained; gradual to
A2	.3 to .7	Dark greyish brown (2.5Y42) moist; clayey sand; single grain structure; weak wet; wet when sampled; highly permeable; moderately well drained; gradual to
B21	.7 to 1.1	Light yellowish brown (2.5Y64) moist; common 10-20% medium 5-15mm faint orange diffuse mottles, common 10-20% coarse 15-30mm faint pale diffuse mottles; clayey sand; single grain structure; firm wet; few <1mm roots; wet when sampled; highly permeable; imperfectly drained; clear to
B22	1.1 to 1.5	Light yellowish brown (10YR64) moist; common 10-20% fine <5mm distinct gley sharp mottles, few 2-10% medium 5-15mm distinct gley sharp mottles; heavy sandy loam; single grain structure; firm wet; wet when sampled; highly permeable; poorly drained; abrupt to
C1	1.5 to 2.1	Grey (5Y51) moist; very few <2% fine <5mm distinct brown mottles; clay loam, sandy; single grain structure; weak wet; wet when sampled; diffuse to
C2	2.1 to 3	Dark grey (5Y41) moist; few 2-10% fine <5mm distinct brown mottles; clay loam, sandy; single grain structure; weak wet; wet when sampled; clear to
2B	3 to 4	Light grey (5Y71) moist; few 2-10% medium 5-15mm distinct grey mottles, many 20-50% very coarse >30mm prominent orange mottles, very few <2% fine <5mm prominent red mottles; sandy medium clay; very few <2% subangular quartz medium pebbles 6-20 mm; massive structure; few 2-10% medium 2-6mm ferruginous nodules; very firm moist; moist when sampled; clear to
D	4 to 4.6	Light grey (5Y71) moist; many 20-50% very coarse >30mm prominent red mottles, common 10-20% coarse 15-30mm prominent orange mottles, few 2-10% medium 5-15mm faint grey mottles; sandy medium heavy clay; few 2-10% subrounded sandstone large pebbles 20-60 mm; massive structure; many 20-50% medium 2-6mm ferruginous nodules; very firm moist; moist when sampled

Project: MAS Site: 59 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.7	2.5
.3		5.6	3.3
.6		5.4	5.0
.8		5.4	5.3
1		5.1	4.7
1.25		4.7	3.2
1.5		4.3	3.5
1.75	1	4.5	3.3
2	1	4.9	3.5
2.25	1	5.5	3.2
2.5	2	5.4	3.4
2.75	2	5.7	2.9
3	1	5.6	3.0
3.25		4.7	3.2
3.5		4.9	3.5
3.75		4.8	3.1
4		4.7	3.3
4.25		4.9	3.2
4.5		5.0	3.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 60 Observation: 1

Soil Name: A1S3 - AASS at 0.5-1m and PASS at 2-3m

Location: GDA 94 ZONE 56 503686mE 6983528mN Lat: -27.27118 Long: 153.03724

Described By: Lauren OBrien (OBRL) Date: 19/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Microrelief: Swamp hummock

Slope: 0 % Drainage: Poorly drained

Depth to Water: 0.5

Surface Condition: Firm

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MELACIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Loamy, Giant

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Black (10YR21) moist; fine sandy clay loam; weak structure; firm moist; few 1-2mm roots; many <1mm roots; moist when sampled; moderately permeable; moderately well drained; gradual to
B21	.3 to .65	Grey (2.5Y51) moist; many 20-50% coarse 15-30mm distinct orange diffuse mottles; fine sandy loam; massive structure; firm wet; common <1mm roots; wet when sampled; highly permeable; imperfectly drained; clear to
B22	.65 to .95	Greyish brown (2.5Y52) moist; common 10-20% coarse 15-30mm distinct orange clear mottles, few 2-10% medium 5-15mm prominent yellow sharp jarosite (from pyrite) mottles; fine sandy loam; massive structure; weak wet; few <1mm roots; wet when sampled; highly permeable; poorly drained
B23	.95 to 1.5	Greyish brown (2.5Y52) moist; many 20-50% coarse 15-30mm distinct orange clear mottles; fine sandy loam; massive structure; weak wet; wet when sampled; highly permeable; poorly drained
B3	1.5 to 2.3	Dark grey (5Y41) moist; very few <2% fine <5mm faint brown clear mottles; loamy sand; massive structure; weak wet; wet when sampled; clear to
C1u	2.3 to 2.95	Dark greenish grey (10Y31) moist; loamy sand; common 10-20% angular platy shell medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; gradual to
C2u	2.95 to 3.8	Dark greenish grey (10Y31) moist; clay loam, fine sandy; common 10-20% angular platy shell medium pebbles 6-20 mm; massive structure; very weak wet; wet when sampled; gradual to
C3u	3.8 to 5.4	Dark greenish grey (10Y31) moist; fine sandy light clay; common 10-20% angular platy shell medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; diffuse to
C4u	5.4 to 6	Dark greenish grey (10Y31) moist; silty light medium clay; very few <2% angular platy shell small pebbles 2-6 mm; very weak wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	5.1	2.1
.3	1	4.6	2.5
.6		4.2	2.8
.8		4.2	2.7
1		4.0	2.7
1.25		4.3	2.8
1.5		5.7	4.2
2.25	1	6.6	2.4
2.5	1	7.2	3.0
2.75	4	7.2	3.4
3	4	7.3	3.2
3.25	4	7.5	3.0
3.5	3	7.6	3.7

Project: MAS Site: 60 Observation: 1

Depth	H2O2-	PH-2	PH-3
3.75	3	7.4	3.9
4	4	7.6	3.0
4.25	4	7.5	2.5
4.5	4	7.7	2.2
4.75	4	7.3	2.1
5	4	7.0	2.6
5.25	4	7.4	1.8
5.5	4	7.4	2.4
5.75	4	7.7	1.8
6	4	7.7	1.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation	U(w1.0)6l *Eucalyptus tereticornis* G(g1.0)2D pasture grass.

Horizon Notes:

Texture	C4u	fine sand in C4u

Project: MAS Site: 61 Observation: 1

Soil Name: a0S2 - PASS at 1.0-2.0m with pH of 4-5 at 0-0.5m

Location: GDA 94 ZONE 56 503516mE 6983425mN Lat: -27.27211 Long: 153.03552

Described By: Jonathan Walton (WALJ) Date: 19/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: supratidal flat Landform Pattern: tidal flat

Permeability: Very slowly permeable Runoff: No runoff

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.5

Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, SUPRATIDAL, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .15	Black (10YR21) moist; sapric clay loam; subangular blocky moderate 2-5mm structure; very firm wet; abundant <1mm roots; wet when sampled; moderately permeable; moderately well drained; clear to
B21	.15 to .5	Grey (10YR51) moist; many 20-50% medium 5-15mm prominent orange mottles; fine sandy light clay; subangular blocky weak 2-5mm structure; common 10-20% coarse 6-20mm ferruginous nodules; firm wet; wet when sampled; slowly permeable; imperfectly drained; gradual to
B22	.5 to .8	Grey (10YR51) moist; very few <2% fine <5mm distinct orange mottles; fine sandy light clay; massive structure; weak wet; wet when sampled; slowly permeable; very poorly drained; gradual to
C1	.8 to 1.35	Dark grey (2.5Y41) moist; fine sandy light clay; massive structure; weak wet; wet when sampled; very slowly permeable; very poorly drained; clear to
C2	1.35 to 2.75	Dark greenish grey (10Y31) moist; clay loam, fine sandy; massive structure; weak wet; wet when sampled; moderately permeable; very poorly drained; gradual to
C3	2.75 to 3	Greenish black (10Y2.5/1) moist; sandy clay loam; massive structure; firm wet; wet when sampled; clear to
D1	3 to 3.3	Greenish grey (5GY51) moist; common 10-20% medium 5-15mm distinct brown mottles; fine sandy medium clay; common 10-20% angular shell medium pebbles 6-20 mm; few 2-10% subrounded sandstone medium pebbles 6-20 mm; massive structure; few 2-10% coarse 6-20mm other concretions; very firm wet; wet when sampled; clear to
D2	3.3 to 3.95	Greenish grey (5GY51) moist; common 10-20% fine <5mm distinct brown mottles; medium clay; massive structure; very firm moist; moist when sampled; diffuse to
D3	3.95 to 4.45	Greenish grey (5GY51) moist; common 10-20% very coarse >30mm distinct brown mottles; medium heavy clay; massive structure; very firm moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.2	2.5
.3		4.3	2.9
.6		5.3	4.0
.8	1	5.6	2.1
1	1	5.6	4.5
1.25	1	5.4	3.3
1.5	4	6.0	1.5
1.75	3	5.9	1.5
2	4	6.1	1.6
2.25	4	6.4	1.8
2.5	4	6.4	2.1
2.75	4	6.5	2.1
3	4	6.7	2.0
3.25	4	7.5	6.3

Project: MAS Site: 61 Observation: 1

Depth	H2O2-	PH-2	PH-3
3.5	4	7.5	8.1
3.75	3	7.7	8.4
4	3	8.4	8.4
4.25	3	7.8	8.3
4.45	2	7.5	7.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation G(g1.0)1M *Sporobolus virginicus* (Salt couch) and bare earth patches

Project: MAS Site: 62 Observation: 1

Soil Name: a0S2 – PASS at 1.0-2.0m with pH of 4-5 at 0-0.5m

Location: GDA 94 ZONE 56 503584mE 6983817mN Lat: -27.26857 Long: 153.03621

Described By: Jonathan Walton (WALJ) Date: 19/AUG/10

Landscape:

Geology: Qha/1 - Qha/1-9543: Lowest river terrace; gravel, sand, silt, clay

Element: drainage depression Landform Pattern: flood plain

Permeability: Moderately permeable Runoff: No runoff

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.3

Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: NO AVAILABLE CLASS, SULFIDIC, SUPRATIDAL, Hydrosol, Medium, Non-gravelly, Clay Loamy, Sandy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Black (2.5Y2.5/1) moist; fibric clay loam; subangular blocky weak <2mm structure; very firm moist; abundant <1mm roots; moist when sampled; moderately permeable; moderately well drained; abrupt to
B21	.2 to .7	Grey (2.5Y51) moist; very few <2% medium 5-15mm distinct orange clear mottles; heavy loamy sand; massive structure; very few <2% fine <2mm ferruginous root linings; firm moist; common <1mm roots; few 1-2mm roots; moist when sampled; highly permeable; imperfectly drained; sharp to
C1	.7 to 1.3	Grey (5Y51) moist; loamy sand; massive structure; weak wet; few <1mm roots; wet when sampled; highly permeable; very poorly drained; clear to
C2	1.3 to 1.95	Dark grey (5Y41) moist; sandy loam; very few <2% angular shell medium pebbles 6-20 mm; few 2-10% subrounded other medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; moderately permeable; very poorly drained; gradual to
C3	1.95 to 2.5	Dark grey (5Y41) moist; fine sandy light clay; very few <2% angular charcoal small pebbles 2-6mm; massive structure; weak wet; wet when sampled; gradual to
C4	2.5 to 2.8	Dark grey (5Y41) moist; clay loam, fine sandy; massive structure; weak wet; wet when sampled; sharp to
D	2.8 to 3	Dark yellowish brown (10YR46) moist; sandy light clay; very few <2% subrounded sandstone medium pebbles 6-20 mm; massive structure; very firm moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.5	3.4
.3	1	4.7	3.5
.6		5.3	4.3
.8		5.8	4.4
1	1	5.4	4.8
1.25	1	5.8	3.7
1.5	3	5.8	2.1
1.75	4	5.9	1.8
2	4	6.0	2.0
2.25	4	5.7	2.2
2.5	4	5.4	3.0
2.75	4	5.8	2.1
3	3	5.8	4.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)5L Casuarina glauca

G(g1.0)2M *Sporobolus virginicus* (Salt couch) and -20% bare ground (patch)

Project: MAS Site: 63 Observation: 1

Soil Name: a0S2 - PASS at 1.0-2.0m with pH of 4-5 at 0-0.5m

Location: GDA 94 ZONE 56 504502mE 6983032mN Lat: -27.27566 Long: 153.04549

Described By: Jonathan Walton (WALJ) Date: 19/AUG/10

Landscape:

Geology: Qhe - Qhe-9543: Estuarine channels and banks; sandy mud, muddy sand, minor gravel

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.9 Surface Condition: Firm

Disturbances: Complete clearing - pasture - cultivation at some stage

Classifications:

ASC: HUMOSE-ACIDIC, SULFIDIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Sandy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .22	Black (10YR21) moist; sapric fine sandy light clay; subangular blocky weak <2mm structure; firm moist; moist when sampled; moderately permeable; moderately well drained; clear to
B2	.22 to 1.3	Light brownish grey (10YR62) moist; common 10-20% coarse 15-30mm distinct orange mottles, few 2-10% very coarse >30mm faint pale mottles; loamy sand; massive structure; firm wet; wet when sampled; highly permeable; poorly drained; diffuse to
C1	1.3 to 3.25	Dark grey (N40) moist; clayey sand; common 10-20% angular shell medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; highly permeable; very poorly drained; diffuse to
C2	3.25 to 4	Dark greenish grey (10Y31) moist; fine sandy light clay; very few <2% angular shell small pebbles 2-6 mm; massive structure; weak wet; wet when sampled; diffuse to
C3	4 to 4.5	Dark greenish grey (10Y31) moist; silty light medium clay; massive structure; weak wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	4.5	2.8
.3		4.7	4.0
.6		4.1	3.3
.8		4.8	3.5
1		4.2	3.4
1.25		4.7	3.9
1.5		6.5	4.8
1.75	4	6.6	1.7
2	4	6.9	2.1
2.25	4	7.0	2.0
2.5	4	7.0	2.0
2.75	3	7.3	2.2
3	4	7.2	2.2
3.25	4	7.4	2.1
3.5	4	7.6	3.8
3.75	3	7.4	3.1
4	4	7.3	2.0
4.25	4	7.4	2.1
4.5	4	7.4	2.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation Horse paddock,

Vegetation L(g1.0)1/2M Pasture grass.

Project: MAS Site: 64 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 502194mE 6982628mN Lat: -27.27931 Long: 153.02217

Described By: Lauren Eyre (EYRL) Date: 25/AUG/10

Landscape:

Geology: Qr - Qr-9543: Residual soil, colluvium; sand, soil, clay, rock debris

Element: swamp Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Microrelief: Other

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.3

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
M	0 to .25	Light brownish grey (2.5Y62) moist; many 20-50% fine <5mm distinct dark mottles, few 2-10% fine <5mm distinct brown mottles; medium clay; very few <2% subangular platy charcoal small pebbles 2-6 mm; subangular blocky moderate 5-10mm structure; weak moist; moist when sampled; slowly permeable; imperfectly drained; clear to
2A1b	.25 to .55	Black (7.5YR2.5/1) moist; sapric light clay; subangular blocky weak 10-20mm structure; very weak wet; wet when sampled; moderately permeable; moderately well drained; clear to
2B21b	.55 to .85	Grey (2.5Y61) moist; common 10-20% fine <5mm distinct yellow mottles, common 10-20% fine <5mm prominent red mottles; medium clay; very few <2% subangular platy charcoal small pebbles 2-6 mm; subangular blocky weak 10-20mm structure; very weak moist; moist when sampled; slowly permeable; imperfectly drained; gradual to
3B21b	.85 to 1.6	Grey (2.5Y61) moist; olive yellow (2.5Y66) moist; common 10-20% fine <5mm distinct yellow mottles, common 10-20% fine <5mm prominent yellow jarosite (from pyrite) mottles; medium heavy clay; massive structure; moist when sampled; very slowly permeable; very poorly drained; diffuse to
3B22b	1.6 to 2.1	Grey (2.5Y51) moist; many 20-50% fine <5mm distinct yellow jarosite (from pyrite) mottles, common 10-20% fine <5mm prominent red mottles; heavy clay; firm moist; moist when sampled; diffuse to
3B23b	2.1 to 2.4	Grey (2.5Y51) moist; common 10-20% fine <5mm distinct yellow jarosite (from pyrite) mottles, many 20-50% fine <5mm prominent red mottles; heavy clay; massive structure; firm moist; moist when sampled; gradual to
3B24b	2.4 to 2.5	Grey (2.5Y51) moist; common 10-20% fine <5mm prominent yellow jarosite (from pyrite) mottles, many 20-50% medium 5-15mm prominent red mottles; heavy clay; massive structure; very firm moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.05		4.3	3.2
.1	1	4.2	3.1
.3	1	4.2	3.1
.6	4	5.3	3.3
.8	4	4.1	2.7
1		4.0	2.6
1.25		4.2	2.8
1.5		4.1	2.9
1.75		4.5	2.8
2		4.5	3.0
2.25		4.0	3.0
2.5		4.2	3.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 64 Observation: 1

Site Notes:

Geology	Morph Type: Man made depression

Observation Notes:

Observation	Disturbance: soil has been changed from nearby depression and spread around adjacent land. Site has 0.25m of fill on top
Observation	Microrelief: ND - Sodic Microrelief
Observation	Gouge auger to 2m then hand auger to 2.5m
Soil	Effective rooting depth 1.2 - roots stop at 1.20m
Vegetation	G(g6.0)2M Rushes

Horizon Notes:

Horizon	2A1b	Colour: 0.03m band of darker material at top of 2nd horizon (0.25-0.28) colour N2.5/O
Texture	2A1b	horizon has a lot of highly decomposed organic material which makes it hard to determine the texture.
Texture	3B24b	soil is very firm to texture

Project: MAS Site: 65 Observation: 1

Soil Name: a1LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0.5-1.0m

Location: GDA 94 ZONE 56 502369mE 6983231mN Lat: -27.27386 Long: 153.02394

Described By: Lauren Eyre (EYRL) Date: 25/AUG/10

Landscape:

Geology: RJl - Landsborough Sandstone: Lithofeldspathic labile and quartzose sandstone, siltstone, shale, minor coal, ferruginous oolite marker

Element: hillslope Landform Pattern: rises

Permeability: Slowly permeable Runoff: Moderately rapid

Slope: 10 % Drainage: Poorly drained

Depth to Water: 0.5

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MELANIC-MOTTLED, MESOTROPHIC, RED, Dermosol, Medium, Moderately Gravelly, Clay Loamy, Clayey, Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Very dark grey (10YR31) moist; sandy clay loam; few 2-10% subangular gravel small pebbles 2-6 mm; common 10-20% subangular gravel medium pebbles 6-20 mm; subangular blocky weak 10-20mm structure; subangular blocky weak 2-5mm structure; very weak moderately moist; moderately moist when sampled; moderately permeable; well drained; abrupt to
A2	.2 to .45	Light brownish grey (2.5Y63) moist; coarse sandy clay loam; few 2-10% subrounded gravel small pebbles 2-6 mm; subangular blocky moderate 2-5mm structure; very few <2% medium 2-6mm manganiferous nodules; weak moist; moist when sampled; moderately permeable; moderately well drained; abrupt to
B21	.45 to .65	Brownish yellow (10YR66) moist; few 2-10% fine <5mm faint red mottles; light clay; few 2-10% subrounded gravel small pebbles 2-6 mm; angular blocky moderate 2-5mm structure; firm moderately moist; moderately moist when sampled; slowly permeable; moderately well drained; gradual to
B22	.65 to 1.2	Red (10R46) moist; many 20-50% fine <5mm distinct grey mottles, many 20-50% fine <5mm distinct brown mottles; light medium clay; very few <2% subrounded gravel medium pebbles 6-20 mm; subangular blocky moderate 2-5mm structure; weak moist; moist when sampled; slowly permeable; imperfectly drained; gradual to
B23	1.2 to 1.45	Light grey (5Y71) moist; many 20-50% fine <5mm distinct brown mottles, common 10-20% fine<5mm prominent red mottles; light medium clay; very few <2% subrounded gravel medium pebbles 6-20 mm; subangular blocky moderate 2-5mm structure; firm moist; moist when sampled; slowly permeable; poorly drained

Field Tests:

Depth	PH-2
.05	5.9
.1	6.1
.3	6.2
.6	5.6
.8	5.1
1	4.6
1.25	4.8

PH-2: pH using electrode probe

Observation Notes:

Soil	Effective rooting depth 0.60m
Vegetation	Pasture.

Horizon Notes:

Texture	A1	Coarse Fragments: Gravels are concentrated in the lower part of horizon (5-10cm)

Project: MAS Site: 66 Observation: 1

Soil Name: A1 - AASS at 0.5-1m

Location: GDA 94 ZONE 56 502449mE 6983266mN Lat: -27.27355 Long: 153.02474

Described By: Kate Goulding (GOUK) Date: 25/AUG/10

Landscape:

Geology: RJl - Landsborough Sandstone: Lithofeldspathic labile and quartzose sandstone, siltstone, shale, minor coal, ferruginous oolite marker

Element: pediment Landform Pattern: rises

Permeability: Very slowly permeable Microrelief: Zero or none

Slope: 1 % Drainage: Very poorly drained

Depth to Water: 0.3

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MELACIC, SULFURIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .45	Very dark grey (7.5YR31) moist; light clay; subangular blocky moderate 10-20mm structure; very few <2% medium 2-6mm ferruginous nodules; very weak moderately moist; common 1-2mm roots; moderately moist when sampled; moderately permeable; moderately well drained;abrupt to
B21	.45 to .65	Light brownish grey (2.5Y62) moist; common 10-20% medium 5-15mm distinct yellow clear mottles; medium clay; subangular blocky weak 10-20mm structure; firm moderately moist; few 1-2mm roots; moderately moist when sampled; slowly permeable; imperfectly drained; gradual to
B22	.65 to .85	Grey (2.5Y61) moist; common 10-20% coarse 15-30mm distinct yellow clear mottles; light medium clay; subangular blocky weak 10-20mm structure; firm moist; few 1-2mm roots; moist when sampled; moderately permeable; poorly drained; clear to
B23	.85 to 1.05	Light brownish grey (2.5Y62) moist; common 10-20% medium 5-15mm distinct yellow clear mottles, common 10-20% medium 5-15mm distinct red clear mottles; fine sandy loam; massive structure; very few <2% medium 2-6mm ferruginous nodules; very few <2% coarse 6-20mm ferruginous nodules; weak wet; wet when sampled; moderately permeable; poorly drained; clear to
B24	1.05 to 1.6	Light grey (N70) moist; few 2-10% medium 5-15mm distinct yellow clear mottles, common 10-20% medium 5-15mm prominent red clear mottles; medium heavy clay; massive structure; very few <2% medium 2-6mm ferruginous nodules; strong moist; moist when sampled; very slowly permeable; very poorly drained; diffuse to
B25	1.6 to 2	Light grey (N70) moist; few 2-10% fine <5mm distinct yellow diffuse mottles, common 10-20% fine <5mm distinct red diffuse mottles; medium heavy clay; massive structure; very few <2% coarse 6-20mm ferruginous nodules; very firm moist; moist when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	PH-2	PH-3
.1	5.3	3.7
.3	4.9	4.0
.6	4.4	3.4
.8	4.2	3.5
1	4.3	3.2
1.25	4.2	3.2
1.5	4.6	3.3
1.75	4.4	3.5
2	4.6	3.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation	Push tube to 1.2m then hand auger
Soil	Effective rooting depth 0.85m
Vegetation	Pasture

Project: MAS Site: 67 Observation: 1

Soil Name: A0S2 - AASS at 0-0.5m and PASS at 1-2m

Location: GDA 94 ZONE 56 504214mE 6985614mN Lat: -27.25235 Long: 153.04257

Described By: M (Mark) Sugars (SUGM) Date: 26/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Highly permeable

Slope: 0 % Drainage: Poorly drained

Depth to Water: 0.25 Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: MELACIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Sandy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Black (2.5Y2.5/1) moist; clay loam; subangular blocky weak <2mm structure; very weak moist; moist when sampled; highly permeable; well drained; abrupt to
B21i	.2 to .45	Grey (2.5Y51) moist; common 10-20% medium 5-15mm distinct yellow diffuse mottles; clayey sand; massive structure; weak moist; moderately moist when sampled; highly permeable; imperfectly drained; clear to
B22i	.45 to .8	Greyish brown (2.5Y52) moist; few 2-10% medium 5-15mm distinct yellow diffuse mottles; sandy clay; massive structure; weak wet; wet when sampled; highly permeable; imperfectly drained; diffuse to
B23i	.8 to 1.15	Grey (2.5Y51) moist; many 20-50% coarse 15-30mm distinct yellow diffuse mottles; clayey sand; massive structure; few 2-10% coarse 6-20mm sulphurous nodules; weak wet; wet when sampled; highly permeable; imperfectly drained; gradual to
B24ia	1.15 to 1.75	Dark grey (5Y41) moist; common 10-20% coarse 15-30mm distinct yellow diffuse mottles, few 2-10% fine <5mm distinct yellow diffuse jarosite (from pyrite) mottles; clayey sand; massive structure; weak wet; wet when sampled; highly permeable; poorly drained; diffuse to
B25u	1.75 to 2	Dark greenish grey (5BG31) moist; very few <2% medium 5-15mm distinct yellow diffuse mottles; clayey sand; massive structure; weak wet; wet when sampled; slowly permeable; gradual to
C1u	2 to 2.2	Dark greenish grey (5BG31) moist; very few <2% medium 5-15mm distinct yellow diffuse mottles; sandy light clay; massive structure; weak wet; wet when sampled; slowly permeable; clear to
C2u	2.2 to 2.5	Dark greenish grey (5BG31) moist; very few <2% medium 5-15mm distinct yellow diffuse mottles; sandy light clay; few 2-10% angular platy shell medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; slowly permeable; clear to
Du	2.5 to 2.7	Light bluish grey (10B71) moist; few 2-10% medium 5-15mm distinct yellow diffuse mottles; sandy light medium clay; few 2-10% subangular sandstone medium pebbles 6-20 mm; massive structure; very firm wet; wet when sampled; slowly permeable

Project: MAS Site: 67 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.05		4.6	3.7
.1		4.5	3.0
.3		4	2.7
.6		3.9	3.5
.8		3.8	3.0
1		3.4	2.6
1.25		3.8	2.7
1.5		4	2.2
1.75		5.7	2.1
2	4	6.4	1.8
2.2	4	7.1	1.8
2.5	1	7.6	5.6
2.6	1	8.1	2.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation	U(w1.0)6M	Casuarina spp, Melaleuca spp
	G(h1.0)0D	Couch spp

Project: MAS Site: 68 Observation: 1

Soil Name: A1S2 - AASS at 0.5-1m and PASS at 1-2m

Location: GDA 94 ZONE 56 504334mE 6985774mN Lat: -27.2509 Long: 153.04378

Described By: M (Mark) Sugars (SUGM) Date: 26/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: supratidal flat Landform Pattern: marine plain

Permeability: Highly permeable

Slope: 1 % Drainage: Poorly drained

Depth to Water: 0.5 Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: NO AVAILABLE CLASS, SULFURIC, EXTRATIDAL, Hydrosol, Medium, Non-gravelly, Clay Loamy, Sandy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Black (7.5YR2.5/1) moist; clay loam; subangular blocky weak 2-5mm structure; weak moderately moist; many 1-2mm roots; moderately moist when sampled; highly permeable; well drained; gradual to
B21	.2 to .4	Grey (2.5Y61) moist; many 20-50% medium 5-15mm distinct brown clear biological mixing mottles, few 2-10% medium 5-15mm distinct dark clear mottles; clayey sand; massive structure; very few <2% fine <2mm ferruginous-organic root linings; very weak moist; common 1-2mm roots; moist when sampled; highly permeable; imperfectly drained; gradual to
B22ia	.4 to .6	Grey (2.5Y61) moist; clayey sand; very weak wet; few <1mm roots; wet when sampled; highly permeable; imperfectly drained; clear to
B23ia	.6 to .9	Grey (2.5Y61) moist; few 2-10% medium 5-15mm faint yellow diffuse jarosite (from pyrite) mottles, many 20-50% medium 5-15mm distinct orange diffuse mottles; clayey sand; massive structure; very weak wet; few <1mm roots; wet when sampled; highly permeable; imperfectly drained; clear to
B24ia	.9 to 1.2	Grey (2.5Y51) moist; few 2-10% medium 5-15mm distinct orange clear mottles, very few <2% fine <5mm faint yellow diffuse jarosite (from pyrite) mottles; clayey sand; massive structure; weak wet; few <1mm roots; wet when sampled; highly permeable; imperfectly drained; gradual to
B25i	1.2 to 1.7	Greenish grey (10Y51) moist; clayey sand; massive structure; weak wet; few <1mm roots; wet when sampled; highly permeable; poorly drained; clear to
C1u	1.7 to 2.1	Dark greenish grey (10Y41) moist; sandy light clay; massive structure; very weak wet; wet when sampled; poorly drained; clear to
C2u	2.1 to 2.7	Dark greenish grey (10Y41) moist; sandy light clay; few 2-10% subangular shell medium pebbles 6-20 mm; very few <2% subangular shell large pebbles 20-60 mm; massive structure; very weak wet; wet when sampled; poorly drained; abrupt to

Field Tests:

Depth	H2O2-	PH-2	PH-3
.05		6.3	3.5
.1		4.9	3.4
.3		4.3	2.5
.5		4.1	2.7
.8		3.8	2.8
1		3.6	2.1
1.25		3.6	2.2
1.5		4.0	2.5
1.75	4	5.8	1.6
2	4	6.3	1.8
2.25	4	7	1.6
2.5	4	7	1.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Vegetation U(w1.0)5V Casuarina spp
G(h1.0)0D Couch spp

Project: MAS Site: 69 Observation: 1

Soil Name: a1LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0.5-1.0m

Location: GDA 94 ZONE 56 505198mE 6989573mN Lat: -27.2166 Long: 153.05249

Described By: Fiona McCartney (MCCF) Date: 26/AUG/10

Landscape:

Geology: RJl - Landsborough Sandstone: Lithofeldspathic labile and quartzose sandstone, siltstone, shale, minor coal, ferruginous oolite marker

Element: footslope Landform Pattern: plain

Permeability: Very slowly permeable

Slope: 5 % Drainage: Very poorly drained

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: MELANIC, MESOTROPHIC, GREY, Kurosol, Thick, Non-gravelly, Loamy, Clayey, Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .35	Dark brown (7.5YR32) moist; sandy loam; very few <2% rounded tabular charcoal medium pebbles 6-20 mm; subangular blocky moderate 2-5mm structure; weak moderately moist; common 1-2mm roots; moderately moist when sampled; highly permeable; well drained; gradual to
A2e	.35 to .5	Light grey (2.5Y72) dry; light brownish grey (2.5Y62) moist; clayey sand; subangular blocky moderate 20-50mm structure; very weak moderately moist; few <1mm roots; moderately moist when sampled; highly permeable; well drained; abrupt to
B21	.5 to .7	Grey (2.5Y51) moist; very few <2% very coarse >30mm distinct red clear mottles, many 20-50% medium 5-15mm faint orange diffuse mottles; sandy light medium clay; very few <2% rounded ferricrete medium pebbles 6-20 mm; subangular blocky moderate 10-20mm structure; very firm moist; few <1mm roots; moist when sampled; slowly permeable; imperfectly drained; abrupt to
B22	.7 to 1	Grey (2.5Y61) moist; many 20-50% medium 5-15mm distinct orange diffuse mottles, common10-20% fine <5mm prominent red diffuse mottles; fine sandy light medium clay; massive structure; few 2-10% coarse 6-20mm sulphurous nodules; weak wet; moist when sampled; very slowly permeable; poorly drained; gradual to
B23	1 to 1.5	White (2.5Y81) moist; few 2-10% fine <5mm prominent orange clear mottles, few 2-10% fine<5mm prominent red clear mottles; fine sandy medium heavy clay; very few <2% rounded ferricrete medium pebbles 6-20 mm; very few <2% rounded quartz medium pebbles 6-20 mm; lenticular moderate 20-50mm structure; strong moist; moist when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	PH-2
.05	6.1
.1	5.4
.3	5.7
.4	5.8
.6	5.1
1	4.4
1.25	4.5
1.5	4.5

PH-2: pH using electrode probe

Observation Notes:

Observation	Dry colour in A2e is 2.5Y7/2
Vegetation	(h1.0)6S Eucalyptus spp G(g1.0)0D Grass spp

Project: MAS Site: 70 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 502489mE 6983490mN Lat: -27.27153 Long: 153.02515

Described By: Fiona McCartney (MCCF) Date: 31/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.35 Surface Condition: Soft

Disturbances: No record

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .25	Black (10YR21) moist; sapric light clay; subangular blocky moderate 2-5mm structure; few 2-10% medium 2-6mm ferruginous-organic root linings; weak moist; common 1-2mm roots; common <1mm roots; moist when sampled; moderately permeable; moderately well drained; clear to
B21	.25 to .4	Greyish brown (2.5Y52) moist; common 10-20% medium 5-15mm faint brown mottles; light medium clay; subangular blocky weak 2-5mm structure; common 10-20% medium 2-6mm ferruginous-organic root linings; weak moist; few 1-2mm roots; few <1mm roots; moist when sampled; slowly permeable; imperfectly drained; clear to
B22	.4 to .65	Greyish brown (2.5Y53) moist; few 2-10% fine <5mm faint grey mottles, common 10-20% medium 5-15mm distinct brown mottles; light medium clay; massive structure; weak moist; few <1mm roots; moist when sampled; slowly permeable; very poorly drained; gradual to
B23	.65 to .9	Greyish brown (2.5Y53) moist; common 10-20% coarse 15-30mm faint grey mottles, few 2-10% medium 5-15mm prominent red mottles; sandy light clay; massive structure; very weak wet; wet when sampled; slowly permeable; very poorly drained; abrupt to
2B1	.9 to 1.4	Grey (2.5Y51) moist; many 20-50% coarse 15-30mm prominent red mottles, common 10-20% coarse 15-30mm distinct brown mottles; sandy clay loam; massive structure; few 2-10% fine <2mm ferruginous nodules; very weak wet; wet when sampled; moderately permeable; very poorly drained; clear to
2B2	1.4 to 1.7	Grey (10YR51) moist; common 10-20% coarse 15-30mm distinct grey mottles, many 20-50% coarse 15-30mm distinct brown mottles; sandy clay loam; massive structure; few 2-10% fine <2mm ferruginous nodules; very weak wet; wet when sampled; moderately permeable; very poorly drained; abrupt to
C	1.7 to 2.15	Greenish grey (10Y51) moist; common 10-20% very coarse >30mm prominent red mottles, few 2-10% coarse 15-30mm prominent yellow mottles; medium clay; few 2-10% subangular sandstone large pebbles 20-60 mm; massive structure; very few <2% fine <2mm ferruginous nodules; very firm wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	4.1	1.0
.3	1	4.2	2.9
.6		4.4	2.9
.8		4.3	2.8
1		4.2	2.2
1.25		4.2	2.0
1.5		4.2	2.6
1.75		4.7	3.0
2		4.7	2.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Soil	Pushed tube to 1.6m, then hard auger to 2.15m
Vegetation	U(w1.0)6M *Melaleuca quinquenervia*, Casuarina spp G(g1.0)1/2D Grass sp.

Project: MAS Site: 71 Observation: 1

Soil Name: A1S3 - AASS at 0.5-1m and PASS at 2-3m

Location: GDA 94 ZONE 56 503657mE 6983158mN Lat: -27.27452 Long: 153.03695

Described By: Fiona McCartney (MCCF) Date: 31/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Highly permeable

Slope: 0 % Drainage: Poorly drained

Depth to Water: 1.7

Surface Condition: Soft

Disturbances: Complete clearing - pasture - but never cultivated

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clay Loamy, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .3	Very dark brown (10YR22) moist; sapric sandy clay loam; subangular blocky weak 2-5mm structure; firm moderately moist; common <1mm roots; moderately moist when sampled; highly permeable; well drained; abrupt to
B21	.3 to .6	Brown (10YR53) moist; many 20-50% medium 5-15mm distinct orange mottles; sandy clay loam; subangular blocky weak 2-5mm structure; very firm moderately moist; common 1-2mm roots; moderately moist when sampled; highly permeable; moderately well drained; clear to
B22	.6 to 1.05	Light brownish grey (2.5Y62) moist; many 20-50% medium 5-15mm prominent red mottles, common 10-20% medium 5-15mm faint orange mottles; sandy clay loam; massive structure; firm moderately moist; common 1-2mm roots; moderately moist when sampled; highly permeable; moderately well drained; gradual to
B23ia	1.05 to 1.4	Grey (10YR61) moist; many 20-50% medium 5-15mm prominent orange mottles, few 2-10% fine <5mm faint brown mottles, very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles; sandy clay loam; massive structure; few 2-10% medium 2-6mm ferruginous nodules; firm moist; common <1mm roots; moist when sampled; highly permeable; imperfectly drained; clear to
B24i	1.4 to 1.7	Dark grey (7.5YR41) moist; few 2-10% medium 5-15mm prominent red mottles, few 2-10% medium 5-15mm distinct orange mottles, common 10-20% coarse 15-30mm distinct brown mottles; sandy clay loam; massive structure; very few <2% medium 2-6mm ferruginous nodules; firm wet; few <1mm roots; wet when sampled; highly permeable; poorly drained; clear to
B25	1.7 to 2.1	Grey (10YR51) moist; few 2-10% medium 5-15mm distinct red mottles; sandy clay loam; massive structure; very few <2% medium 2-6mm ferruginous nodules; weak wet; wet when sampled; clear to
C1	2.1 to 2.4	Dark grenish grey (5GY31) moist; heavy sandy clay loam; massive structure; very few <2% coarse 6-20mm ferruginous root linings; firm wet; wet when sampled; gradual to
C2u	2.4 to 3.15	Dark grenish grey (5GY31) moist; sandy clay loam; very few <2% angular sandstone medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled

Project: MAS Site: 71 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.4	1.9
.3	1	5.7	3.0
.6	1	4.5	3.0
.8		3.8	2.6
1		4.4	2.8
1.25		3.6	2.4
1.5		3.5	2.1
1.75		3.6	2.1
2	4	4.5	1.5
2.25	4	4.9	1.5
2.5	4	5.3	1.4
2.75	4	6.4	1.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Soil	Pushed tube to 1.6m, then hand auger to 3.15m
Vegetation	G(g4.1)1D Pasture species.

Project: MAS Site: 72 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 502430mE 6983888mN Lat: -27.26793 Long: 153.02455

Described By: Fiona McCartney (MCCF) Date: 31/AUG/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.2

Surface Condition: Soft

Disturbances: No record

Classifications:

ASC: HUMOSE-ACIDIC, KANDOSOLIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .15	Very dark brown (10YR22) moist; fibric sandy light clay; subangular blocky moderate 2-5mm structure; weak moderately moist; few 2-5mm roots; moderately moist when sampled; moderately permeable; moderately well drained; clear to
A3	.15 to .55	Very dark greyish brown (10YR32) moist; few 2-10% medium 5-15mm distinct brown mottles; sandy light clay; subangular blocky weak 2-5mm structure; weak moist; moist when sampled; moderately permeable; moderately well drained; abrupt to
B21	.55 to 1	Greyish brown (10YR52) moist; many 20-50% coarse 15-30mm distinct brown mottles; coarse sandy clay loam; very few <2% subrounded quartz small pebbles 2-6 mm; massive structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; gradual to
B22	1 to 1.3	Light brownish grey (10YR62) moist; common 10-20% coarse 15-30mm distinct brown mottles; coarse sandy clay loam; few 2-10% subrounded quartz medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; moderately permeable; very poorly drained; gradual to
2B21	1.3 to 1.45	Light grey (10YR71) moist; few 2-10% fine <5mm distinct brown mottles; clayey coarse sand; few 2-10% subangular quartz large pebbles 20-60 mm; massive structure; weak wet; wet when sampled; highly permeable; very poorly drained; clear to
2B22	1.45 to 1.55	Very pale brown (10YR73) moist; many 20-50% coarse 15-30mm distinct orange mottles; clayey coarse sand; few 2-10% subrounded quartz medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; highly permeable; very poorly drained; clear to
C1	1.55 to 1.7	Yellowish red (5YR56) moist; many 20-50% very coarse >30mm prominent red mottles; coarse sandy light medium clay; few 2-10% subangular quartz medium pebbles 6-20 mm; very firm moist; moist when sampled; gradual to
C2	1.7 to 2	Red (2.5YR48) moist; common 10-20% coarse 15-30mm prominent grey mottles; coarse sandy medium heavy clay; few 2-10% subangular sandstone medium pebbles 6-20 mm; strong moist; moist when sampled

Project: MAS Site: 72 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	4.6	1.7
.3	1	4.0	1.8
.6	1	3.7	2.9
.8	1	3.7	2.6
1		4.1	2.8
1.25		3.8	3.0
1.35	2	4.1	2.8
1.5		3.7	2.6
1.75		4.0	2.6
1.95		4.0	2.4

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Soil	Pushed tube to 1.6m, hand auger to 2.0m
Vegetation	U(w1.0)6S *Melaleuca quinquenervia*, Eucalyptus sp. G(g1.0)1D Grass spp.

Project: MAS Site: 73 Observation: 1

Soil Name: S1 - Pass at 0.5-1m

Location: GDA 94 ZONE 56 503133mE 6985253mN Lat: -27.25561 Long: 153.03165

Described By: Fiona McCartney (MCCF) Date: 01/SEP/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: swamp Landform Pattern: flood plain

Permeability: Very slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: .01

Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: HUMOSE, SULFIDIC, OXYAQUIC, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
O2	0 to .1	Very dark brown (10YR22) moist; fibric light clay; massive structure; weak wet; many 1-2mm roots; wet when sampled; slowly permeable; poorly drained; abrupt to
A1	.1 to .4	Black (10YR21) moist; sapric coarse sandy clay loam; massive structure; weak wet; common 1-2mm roots; wet when sampled; moderately permeable; poorly drained; abrupt to
C1	.4 to .6	Grey (10YR61) moist; clayey coarse sand; massive structure; very weak wet; few 1-2mm roots; wet when sampled; highly permeable; very poorly drained; gradual to
C2	.6 to 1	Grey (10YR51) moist; clayey coarse sand; massive structure; weak wet; few 1-2mm roots; wet when sampled; highly permeable; very poorly drained; gradual to
C3	1 to 1.1	Grey (10YR51) moist; heavy clay loam, coarse sandy; gradual to
2C4u	1.1 to 1.55	Grey (2.5Y51) moist; silty light clay; massive structure; few 2-10% organic (humified) root linings; firm wet; wet when sampled; very slowly permeable; very poorly drained; clear to
2C5u	1.55 to 4.2	Dark greenish grey (10Y31) moist; coarse sandy light medium clay; massive structure; common 10-20% medium 2-6mm organic (humified) root linings; firm wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	6.3	1.7
.3	3	6.4	2.4
.6		6.4	1.8
.8	1	6.3	1.7
1	2	6.3	1.5
1.25	4	6.3	1.9
1.5	4	6.3	0.9
1.75	4	6.0	0.8
2		4.7	1.5
2.25	4	6.4	1.5
2.5	4	5.8	0.8
2.75	4	6.1	0.8
3	4	6.1	0.8
3.25	4	6.4	0.8
3.5	4	6.6	0.8
3.75	4	6.5	0.8
4	4	6.6	0.8
4.2	4	6.6	0.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 73 Observation: 1

Observation Notes:

Soil	2cm sand lens at 3.8m. hand auger to 1.1m, then gouge auger to 4.2m.
Vegetation	U(w1.0)6D *Melaleuca quinquenervia*, *Eucalyptus tereticornis* L(g5.0)2S sedges, reeds

Project: MAS Site: 74 Observation: 1

Soil Name: a0LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0-0.5m

Location: GDA 94 ZONE 56 502643mE 6985689mN Lat: -27.25167 Long: 153.0267

Described By: Fiona McCartney (MCCF) Date: 01/SEP/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: swamp Landform Pattern: flood plain

Permeability: Very slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: .01

Surface Condition: Soft

Disturbances: No record

Classifications:

ASC: HUMOSE-ACIDIC, KANDOSOLIC, OXYAQUIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Moderate

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .1	Very dark grey (10YR31) moist; clay loam; massive structure; weak wet; common 1-2mm roots; wet when sampled; moderately permeable; imperfectly drained; clear to
A12	.1 to .18	Black (2.5Y2.5/1) moist; sapric clay loam, fine sandy; massive structure; firm wet; few 2-5mm roots; wet when sampled; moderately permeable; imperfectly drained; clear to
A3	.18 to .3	Very dark grey (2.5Y31) moist; sapric clay loam, fine sandy; few 2-10% subangular quartz small pebbles 2-6 mm; few 2-10% subangular quartz medium pebbles 6-20 mm; massive structure; weak wet; common 1-2mm roots; wet when sampled; moderately permeable; poorly drained; clear to
B21	.3 to .43	Grey (10YR51) moist; common 10-20% medium 5-15mm faint pale mottles; sandy light clay; few 2-10% subangular quartz small pebbles 2-6 mm; few 2-10% subangular quartz medium pebbles 6-20 mm; massive structure; few 2-10% fine <2mm organic (humified) root linings; weak wet; few <1mm roots; wet when sampled; slowly permeable; very poorly drained; clear to
B22	.43 to .7	Grey (10YR51) moist; sandy medium clay; common 10-20% subangular quartz small pebbles 2-6 mm; few 2-10% subangular quartz medium pebbles 6-20 mm; massive structure; few 2-10% fine <2mm organic (humified) root linings; very firm wet; wet when sampled; very slowly permeable; very poorly drained; gradual to
B23	.7 to .9	Grey (10YR51) moist; sandy medium heavy clay; common 10-20% subangular quartz small pebbles 2-6 mm; few 2-10% subangular quartz medium pebbles 6-20 mm; massive structure; few 2-10% fine <2mm organic (humified) root linings; very firm wet; wet when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		5.1	3.2
.3		5.1	3.2
.6		4.6	2.9
.8	1	4.5	2.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)6M *Melaleuca quinquenervia* M,
G(g6.0)2S Lomandra spp (g5.0)2S Sedges

Project: MAS Site: 75 Observation: 1

Soil Name: a0LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0-0.5m

Location: GDA 94 ZONE 56 503078mE 6989962mN Lat: -27.21309 Long: 153.03108

Described By: Fiona McCartney (MCCF) Date: 02/SEP/10

Landscape:

Geology: Qpa - Qpa-SEQ: High level alluvium; silt, clay, sand, gravel

Element: plain Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 1 % Drainage: Poorly drained

Surface Condition: Soft

Disturbances: Limited clearing

Classifications:

ASC: MELANIC, MESOTROPHIC, GREY, Dermosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Black (2.5Y2.5/1) moist; few 2-10% medium 5-15mm faint pale mottles; light clay; subangular blocky moderate 2-5mm structure; weak moist; common 2-5mm roots; few 1-2mm roots; few <1mm roots; moist when sampled; moderately permeable; moderately well drained; abrupt to
B21	.2 to .4	Dark grey (5Y41) moist; common 10-20% coarse 15-30mm distinct red mottles, few 2-10% fine <5mm faint red mottles; medium clay; lenticular moderate 2-5mm structure; very firm moist; few 1-2mm roots; common <1mm roots; moist when sampled; very slowly permeable; imperfectly drained; clear to
B22	.4 to .8	Dark grey (5Y41) moist; many 20-50% coarse 15-30mm prominent red mottles, common 10-20% medium 5-15mm distinct orange mottles; medium heavy clay; lenticular moderate 10-20mm structure; very firm wet; few 1-2mm roots; few <1mm roots; wet when sampled; very slowly permeable; poorly drained; gradual to
B23	.8 to 1.2	Dark grey (5Y41) moist; common 10-20% coarse 15-30mm prominent red mottles, common 10-20% coarse 15-30mm prominent orange mottles; medium heavy clay; lenticular moderate 10-20mm structure; very firm wet; wet when sampled; very slowly permeable; poorly drained; abrupt to
B24	1.2 to 1.45	Dark grey (2.5Y41) moist; few 2-10% medium 5-15mm prominent orange mottles; medium clay; lenticular moderate 2-5mm structure; very firm wet; wet when sampled; very slowly permeable; poorly drained; clear to
B25	1.45 to 1.65	Dark grey (2.5Y41) moist; many 20-50% coarse 15-30mm prominent red mottles, few 2-10% very coarse >30mm prominent orange mottles; light medium clay; lenticular strong 2-5mm structure; very firm wet; wet when sampled; slowly permeable; poorly drained; clear to
C1	1.65 to 1.85	Dark grey (2.5Y41) moist; very few <2% fine <5mm distinct red mottles, very few <2% fine<5mm prominent orange mottles; light medium clay; granular strong 5-10mm structure; very firm wet; wet when sampled; slowly permeable; poorly drained; clear to
C2	1.85 to 2	Grey (2.5Y51) moist; few 2-10% fine <5mm prominent red mottles, few 2-10% fine <5mm distinct orange mottles; light medium clay; granular strong 2-5mm structure; very firm wet; wet when sampled; slowly permeable; poorly drained; clear to
C3	2 to 2.1	Dark grey (2.5Y41) moist; very few <2% fine <5mm distinct red mottles, very few <2% fine<5mm prominent orange mottles; sandy light clay; granular strong 2-5mm structure; very firm wet; wet when sampled; slowly permeable; poorly drained

Project: MAS Site: 75 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.05	1	5.8	2.5
.1	1	5.8	2.2
.2	1	5.5	2.4
.3	1	5.0	3.1
.6		4.8	2.8
.8		4.5	2.9
1		4.7	3.1
1.25		4.6	3.3
1.5		4.4	3.2
1.75		4.4	3.3
1.95		4.3	3.3
2.1		4.4	3.5

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Soil	Pushed tube to 1.6m then hand auger to 2.1m
Vegetation	U(w1.0)6S Eucalyptus spp M(w1.0)5V Acacia spp G(g1.0)2D Grass sp.

Project: MAS Site: 76 Observation: 1

Soil Name: A0S0 – AASS and PASS at 0-0.5m

Location: GDA 94 ZONE 56 503346mE 6990094mN Lat: -27.2119 Long: 153.03379

Described By: Fiona McCartney (MCCF) Date: 02/SEP/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: swamp Landform Pattern: flood plain

Permeability: Very slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.01

Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Deep

Profile Morphology:

Horizon	Depth (m)	Description
A11	0 to .09	Dark olive grey (5Y32) moist; sapric clay loam, sandy; massive structure; weak wet; many 1-2mm roots; wet when sampled; moderately permeable; very poorly drained; abrupt to
A12	.09 to .2	Black (N2.5/0) moist; sapric clay loam, sandy; massive structure; firm wet; common <1mm roots; wet when sampled; moderately permeable; very poorly drained; abrupt to
A3	.2 to .3	Black (N2.5/0) moist; sapric sandy light clay; massive structure; firm wet; few <1mm roots; wet when sampled; moderately permeable; very poorly drained; clear to
B21	.3 to .5	Grey (N50) moist; very few <2% fine <5mm distinct red mottles, common 10-20% coarse 15-30mm prominent orange mottles; light medium clay; massive structure; few 2-10% medium 2-6mm other root linings; strong wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; clear to
B22	.5 to .7	Grey (N50) moist; many 20-50% medium 5-15mm distinct red mottles, many 20-50% coarse 15-30mm prominent grey mottles; light medium clay; massive structure; strong wet; wet when sampled; very slowly permeable; very poorly drained; abrupt to
B23	.7 to 1	Grey (N50) moist; few 2-10% medium 5-15mm prominent red mottles, common 10-20% coarse 15-30mm prominent orange mottles; light medium clay; massive structure; strong wet; wet when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.05	3	5.8	1.8
.1	3	4.8	1.7
.25	3	5.0	1.8
.35	4	4.2	2.3
.6	4	3.9	2.2
.8	4	3.9	2.1
1	3	4.0	1.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)6M Melaleuca sp, Eucalyptus sp.
G(g6.0)2M Reeds

Project: MAS Site: 77 Observation: 1

Soil Name: A0 - AASS at 0-0.5m

Location: GDA 94 ZONE 56 505234mE 6989303mN Lat: -27.21904 Long: 153.05286

Described By: Fiona McCartney (MCCF) Date: 02/SEP/10

Landscape:

Geology: Qhct - Qhct-9543: Tidal flats; sand, mud, grades offshore into Qhms

Element: plain Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.6

Surface Condition: Firm

Disturbances: No effective disturbance

Classifications:

ASC: ACIDIC-SODIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .18	Very dark brown (10YR22) moist; sapric sandy clay loam; granular moderate <2mm structure; weak moderately moist; many 1-2mm roots; moderately moist when sampled; moderately permeable; very poorly drained; abrupt to
B21	.18 to .35	Grey (10YR51) moist; common 10-20% coarse 15-30mm distinct orange mottles, few 2-10% fine <5mm prominent red mottles; light medium clay; lenticular moderate 2-5mm structure; very firm moist; common 1-2mm roots; moist when sampled; slowly permeable; imperfectly drained; abrupt to
B22ia	.35 to .55	Grey (2.5Y51) moist; few 2-10% medium 5-15mm prominent dark mottles, very few <2% fine <5mm prominent dark mottles, few 2-10% medium 5-15mm prominent yellow jarosite (from pyrite) mottles; light medium clay; lenticular moderate 2-5mm structure; firm moist; few <1mm roots; moist when sampled; slowly permeable; well drained; clear to
C1ia	.55 to .7	Dark grey (2.5Y41) moist; very few <2% fine <5mm distinct dark mottles, few 2-10% fine <5mm distinct yellow jarosite (from pyrite) mottles; light medium clay; lenticular moderate 5-10mm structure; firm wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; gradual to
C2ia	.7 to 1.3	Dark grey (2.5Y41) moist; common 10-20% coarse 15-30mm distinct yellow jarosite (from pyrite) mottles, very few <2% fine <5mm distinct orange mottles; light medium clay; massive structure; few 2-10% fine <2mm ferruginous-organic root linings; firm wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; gradual to
C3ia	1.3 to 1.5	Grey (2.5Y51) moist; few 2-10% fine <5mm prominent yellow jarosite (from pyrite) mottles, very few <2% fine <5mm prominent orange mottles; light clay; massive structure; weak wet; few <1mm roots; wet when sampled; very slowly permeable; very poorly drained; abrupt to
C4ia	1.5 to 1.7	Grey (2.5Y51) moist; very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles, very few <2% fine <5mm distinct orange mottles; light medium clay; massive structure; firm wet; few <1mm roots; wet when sampled; clear to
C5ia	1.7 to 2.1	Grey (2.5Y51) moist; few 2-10% medium 5-15mm distinct yellow jarosite (from pyrite) mottles, very few <2% fine <5mm prominent orange mottles; light medium clay; massive structure; very few <2% fine <2mm ferruginous fragments; firm wet; few <1mm roots; wet when sampled; gradual to
C6ia	2.1 to 2.3	Very dark grey (2.5Y31) moist; very few <2% fine <5mm distinct yellow jarosite (from pyrite) mottles, common 10-20% medium 5-15mm prominent orange mottles, very few <2% fine <5mm prominent red mottles; light medium clay; massive structure; few 2-10% medium 2-6mm ferruginous fragments; firm wet; few <1mm roots; wet when sampled

Project: MAS Site: 77 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.05		4.5	2.6
.1		4.1	3.4
.3		4.0	2.8
.5		3.7	2.7
.6		3.6	2.5
.8		3.5	2.1
1		3.8	2.2
1.25		3.7	2.1
1.4		4	2.2
1.55		4	2.2
1.75		3.8	2.7
2		4.1	2.6
2.25	4	4.8	2.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation	Push tube to 1.6m, gorge auger to 2.3m
Vegetation	U(w1.0)6S Casuarina spp M(w3.0)4V *Lantana camara* G(g1.0)1D Grass

Horizon Notes:

Horizon	C6ia	Push tube to 1.6 m, gouge auger to 2.3m
Texture	C6ia	sodic in Horizons 3 to 9

Project: MAS Site: 78 Observation: 1

Soil Name: A0S2 - AASS at 0-0.5m and PASS at 1-2m

Location: GDA 94 ZONE 56 504944mE 6987026mN Lat: -27.23959 Long: 153.04994

Described By: Sue Ellen Dear (DEAS) Date: 07/SEP/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable Runoff: Slow

Slope: 0.5 % Drainage: Poorly drained

Depth to Water: 0.35

Surface Coarse Fragments: No coarse fragments 0% Surface Condition: Loose

Disturbances: Limited clearing

Classifications:

ASC: ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .14	Black (10YR21) moist; sapric silty clay loam; granular moderate 2-5mm structure; very weak moderately moist; moderately moist when sampled; highly permeable; moderately well drained; clear to
B21i	.14 to .32	Greyish brown (2.5Y52) moist; many 20-50% fine <5mm prominent dark clear mottles; light clay; subangular blocky moderate 2-5mm structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; gradual to
B22ia	.32 to .6	Greyish brown (2.5Y52) moist; common 10-20% medium 5-15mm prominent orange clear mottles, very few <2% medium 5-15mm prominent yellow clear jarosite (from pyrite) mottles; light clay; subangular blocky moderate 5-10mm structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; diffuse to
B23ia	.6 to 1.5	Weak red (2.5YR42) moist; few 2-10% medium 5-15mm prominent orange clear mottles, few 2-10% medium 5-15mm prominent yellow clear jarosite (from pyrite) mottles; silty light clay; subangular blocky weak 5-10mm structure; weak wet; wet when sampled; moderately permeable; poorly drained; diffuse to
B24i	1.5 to 1.98	Dark greyish brown (2.5Y42) moist; few 2-10% coarse 15-30mm prominent orange clear mottles; silty light clay; massive structure; common 10-20% medium 2-6mm sulphurous soft segregations; weak wet; wet when sampled; diffuse to
C1u	1.98 to 2.45	Dark grey (5Y41) moist; very few <2% medium 5-15mm faint brown clear mottles; silty light clay; common 10-20% angular shell small pebbles 2-6 mm; few 2-10% angular shell medium pebbles 6-20 mm; massive structure; very weak wet; wet when sampled; gradual to
2C2u	2.45 to 2.6	Dark grey (5Y41) moist; silty light clay; very few <2% angular shell small pebbles 2-6 mm; massive structure; very weak wet; wet when sampled; gradual to
3C3u	2.6 to 2.9	Dark greenish grey (10GY41) moist; light medium clay; massive structure; firm wet; wet when sampled

Project: MAS Site: 78 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	3	4.2	1.8
.25	1	3.8	3.8
.5	1	3.5	2.4
.8	1	3.9	2.4
1	1	3.7	2.6
1.25		3.6	2.5
1.5		3.6	2.7
1.75	1	4.1	3.0
2	4	7.1	2.9
2.25	3	7.2	3.8
2.5	3	7.1	6.0
2.75	4	8.5	8.7
2.9	4	7.3	8.7

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation	Fine sand in horizon 7
Vegetation	U(w1.0)6M *Melaleuca quinquenervia*

Project: MAS Site: 79 Observation: 1

Soil Name: A0S3 - AASS at 0-0.5m and PASS at 2-3m

Location: GDA 94 ZONE 56 504459mE 6986168mN Lat: -27.24734 Long: 153.04504

Described By: Sue Ellen Dear (DEAS) Date: 07/SEP/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable Runoff: Very slow

Slope: 0.5 % Drainage: Imperfectly drained

Depth to Water: 0.35

Surface Condition: Loose

Disturbances: Limited clearing

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Very dark grey (2.5Y31) moist; sapric silty clay loam; granular moderate 2-5mm largest peds structure; very weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; abrupt to
A3	.1 to .28	Very dark grey (2.5Y31) moist; very few <2% medium 5-15mm prominent orange clear mottles; sapric silty clay loam; granular moderate 2-5mm structure; very weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; clear to
B21i	.28 to .68	Grey (2.5Y51) moist; few 2-10% medium 5-15mm prominent orange clear mottles; coarse sandy light clay; subangular blocky weak 5-10mm structure; weak moist; moist when sampled; moderately permeable; imperfectly drained; clear to
B22ia	.68 to .9	Grey (2.5Y51) moist; few 2-10% medium 5-15mm prominent orange clear mottles, very few <2% medium 5-15mm prominent yellow clear jarosite (from pyrite) mottles; coarse sandy light clay; subangular blocky weak 5-10mm structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; clear to
B23ia	.9 to 1.5	Grey (2.5Y61) moist; few 2-10% medium 5-15mm prominent orange clear mottles, very few <2% fine <5mm prominent yellow clear jarosite (from pyrite) mottles; sandy light clay; massive structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; diffuse to
B24i	1.5 to 1.95	Grey (2.5Y51) moist; few 2-10% coarse 15-30mm distinct orange clear mottles; sandy clay loam; massive structure; very few <2% coarse 6-20mm sulphurous soft segregations; weak wet; diffuse to
C1	1.95 to 2.25	Dark greenish grey (5BG31) moist; very few <2% coarse 15-30mm distinct brown clear mottles; clay loam, sandy; very few <2% angular shell small pebbles 2-6 mm; massive structure; firm wet; wet when sampled; clear to
D	2.25 to 2.6	White (10YR81) moist; few 2-10% medium 5-15mm distinct orange clear mottles, very few <2% medium 5-15mm distinct red clear mottles; coarse sandy light clay; very few <2% angular sandstone medium pebbles 6-20 mm; massive structure; firm wet; wet when sampled

Project: MAS Site: 79 Observation: 1

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		4.23	3.56
.25		3.96	3.6
.5		3.9	3.3
.8		3.9	3.6
1		4.1	3.9
1.25		5.5	4.9
1.45	2	6.5	5.9
1.75	1	6.4	6.1
2	2	7.0	2.0
2.2	1	7.2	5.0
2.5		7.2	6.9

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)6M *Melaleuca quinquenervia, Casuarina glauca*
M(w3.0)4V *Lantana camara*
G(g1.0)1D Grass

Project: MAS Site: 80 Observation: 1

Soil Name: A1S2 - AASS at 0.5-1m and PASS at 1-2m

Location: GDA 94 ZONE 56 504706mE 6986095mN Lat: -27.248 Long: 153.04754

Described By: Sue Ellen Dear (DEAS) Date: 07/SEP/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: supratidal flat Landform Pattern: alluvial plain

Permeability: Slowly permeable

Slope: 0.5 % Drainage: Imperfectly drained

Depth to Water: 0.2

Surface Condition: Loose

Disturbances: Limited clearing

Classifications:

ASC: NO AVAILABLE CLASS, SULFURIC, SUPRATIDAL, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .22	Black (10YR21) moist; sapric silty clay loam; granular strong <2mm structure; very weak moist;moist when sampled; moderately permeable; moderately well drained; clear to
B21	.22 to .5	Grey (2.5Y51) moist; very few <2% medium 5-15mm faint orange clear mottles; fine sandy light clay; massive structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; clear to
B22i	.5 to .72	Grey (2.5Y51) moist; many 20-50% coarse 15-30mm distinct orange clear mottles; silty light clay; massive structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; gradual to
B23ia	.72 to 1.38	Dark grey (2.5Y41) moist; very few <2% medium 5-15mm distinct yellow clear jarosite (from pyrite) mottles, few 2-10% medium 5-15mm distinct orange clear mottles; sandy light clay; massive structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; gradual to
C1	1.38 to 1.74	Dark grey (2.5Y41) moist; very few <2% medium 5-15mm distinct orange clear mottles; sandy light clay; massive structure; weak wet; wet when sampled; slowly permeable; imperfectly drained; gradual to
2C2	1.74 to 2.4	Dark greenish grey (5BG31) moist; very few <2% fine <5mm distinct orange clear mottles; sandy light clay; few 2-10% angular shell small pebbles 2-6 mm; very few <2% angular shell medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; gradual to
3C3	2.4 to 2.6	Greenish black (10Y2.5/1) moist; sandy light clay; very few <2% angular shell small pebbles 2-6 mm; massive structure; weak wet; wet when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		5.1	4.2
.3		4.6	3.8
.6		3.8	3.2
.8		3.9	3.0
1		4.1	3.4
1.25		5.3	4.5
1.5	2	5.8	2.4
1.7	2	6.3	2.0
2	3	3.7	1.8
2.25	3	6.8	2.8
2.5	3	6.9	1.8

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation Probably used to be tidal, but drain to east may have stopped tidal inundation

Vegetation G(g1.0)2D *Sporobolus virginicus* (Salt couch)

Project: MAS Site: 81 Observation: 1

Soil Name: a0LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0-0.5m

Location: GDA 94 ZONE 56 505143mE 6987584mN Lat: -27.23456 Long: 153.05195

Described By: Sue Ellen Dear (DEAS) Date: 08/SEP/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Moderately permeable

Slope: 0.5 % Drainage: Imperfectly drained

Depth to Water: 0.1 Surface Condition: Loose

Disturbances: Extensive clearing

Classifications:

ASC: MESOTROPHIC, KANDOSOLIC, REDOXIC, Hydrosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .14	Black (10YR21) moist; sapric clay loam; granular moderate <2mm structure; very weak moist; moist when sampled; moderately permeable; moderately well drained; clear to
A3	.14 to .28	Dark grey (2.5Y41) moist; few 2-10% medium 5-15mm prominent orange clear mottles; light clay; subangular blocky moderate 5-10mm structure; weak moist; moist when sampled; moderately permeable; moderately well drained; gradual to
B21	.28 to .67	Grey (2.5Y51) moist; common 10-20% medium 5-15mm prominent orange clear mottles; clay loam, sandy; subangular blocky weak 5-10mm structure; weak moist; moist when sampled; moderately permeable; imperfectly drained; diffuse to
B22	.67 to 1.3	Grey (2.5Y61) moist; few 2-10% coarse 15-30mm prominent orange clear mottles; sandy clay loam; massive structure; very few <2% coarse 6-20mm sulphurous soft segregations; weak wet; wet when sampled; moderately permeable; imperfectly drained; diffuse to
2B21	1.3 to 1.68	Grey (2.5Y51) moist; few 2-10% medium 5-15mm prominent orange clear mottles; sandy clay loam; common 10-20% angular shell small pebbles 2-6 mm; few 2-10% angular shell medium pebbles 6-20 mm; massive structure; weak wet; wet when sampled; moderately permeable; imperfectly drained; clear to
2B22	1.68 to 1.75	Dark greyish brown (2.5Y42) moist; common 10-20% fine <5mm prominent orange clear mottles; fine sandy light clay; massive structure; few 2-10% medium 2-6mm sulphurous nodules; weak wet; wet when sampled; abrupt to
D	1.75 to 3	White (10YR81) moist; very few <2% coarse 15-30mm prominent orange clear mottles, very few <2% medium 5-15mm prominent red clear mottles; fine sandy light medium clay; massive structure; firm moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		5.6	3.1
.25		5.3	4.7
.3		5.2	4.4
.6		5.9	4.8
.8		6.3	5.8
1		6.6	6.4
1.25		6.9	6.7
1.5		7.4	6.7
1.7	4	7.5	9.2
2		7.5	6.2
2.25		7.0	6.5
2.5		7.1	6.9
2.75		6.6	6.6
3		6.7	7.3

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 81 Observation: 1

Observation Notes:

Observation	Sodic D Horizon. Recent heavy rain standing surface water
Vegetation	*Melaleuca quinquenervia, Eucalyptus tereticornis, Casuarina glauca*

Project: MAS Site: 82 Observation: 1

Soil Name: a0LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0-0.5m

Location: GDA 94 ZONE 56 504347mE 6986689mN Lat: -27.24264 Long: 153.04391

Described By: Sue Ellen Dear (DEAS) Date: 08/SEP/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: plain Landform Pattern: alluvial plain

Permeability: Slowly permeable Runoff: Very slow

Slope: 0.5 % Drainage: Poorly drained

Surface Condition: Loose

Disturbances: Limited clearing

Classifications:

ASC: ACIDIC, MESOTROPHIC, GREY, Kandosol, Medium, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .18	Black (10YR21) moist; sapric clay loam; granular moderate 2-5mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; gradual to
B1	.18 to .42	Very dark grey (10YR31) moist; few 2-10% fine <5mm distinct orange mottles; fine sandy light clay; subangular blocky moderate 5-10mm structure; weak moderately moist; moderately moist when sampled; moderately permeable; moderately well drained; clear to
B21	.42 to .59	Brown (10YR43) moist; common 10-20% fine <5mm distinct orange mottles; sandy light clay; massive structure; weak moist; moist when sampled; moderately permeable; imperfectly drained; gradual to
B22	.59 to 1.04	Grey (10YR51) moist; many 20-50% fine <5mm distinct orange mottles, common 10-20% fine <5mm prominent orange mottles; coarse sandy light clay; massive structure; weak moist; moist when sampled; moderately permeable; imperfectly drained; sharp to
B23m	1.04 to 1.14	Grey (10YR51) moist; coarse sand; massive structure; uncemented discontinuous massive ortstein; slowly permeable; imperfectly drained; sharp to
B24	1.14 to 1.9	Grey (10YR61) moist; many 20-50% coarse 15-30mm prominent orange mottles; sandy light medium clay; massive structure; weak moist; moist when sampled; slowly permeable; poorly drained; diffuse to
R	1.9 to 2.4	Grey (10YR61) moist, Sandstone

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	3	5.5	2.6
.3	1	4.8	3.9
.5		4.9	4.0
.6		4.8	4.3
.8		4.9	4.3
1		5.0	4.0
1.25	1	4.5	3.6
1.5	1	4.5	3.5
1.75	2	5.4	4.1
2	1	5.3	4.0
2.25	1	5.9	5.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Observation Granite boulders everywhere (brought in) Drilling rig (geporobe) would not penetrate past 2.4m. Sandstone horizon from 1.7m

Vegetation *Melaleuca quinquenervia*

Project: MAS Site: 83 Observation: 1

Soil Name: A0S2 - AASS at 0-0.5m and PASS at 1-2m

Location: GDA 94 ZONE 56 503868mE 6988582mN Lat: -27.22555 Long: 153.03906

Described By: Sue Ellen Dear (DEAS) Date: 08/SEP/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: supratidal flat Landform Pattern: alluvial plain

Permeability: Very slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.8

Surface Condition: Loose

Disturbances: No record

Classifications:

ASC: NO AVAILABLE CLASS, SULFURIC, EXTRATIDAL, Hydrosol, Medium, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .2	Black (10YR21) moist; silty light clay; granular strong 2-5mm structure; firm moist; moist when sampled; moderately permeable; moderately well drained; clear to
B21	.2 to .61	Dark grey (10YR41) moist; few 2-10% coarse 15-30mm distinct orange mottles; silty light clay; massive structure; firm moist; moist when sampled; slowly permeable; imperfectly drained; diffuse to
B22i	.61 to .82	Dark greyish brown (10YR42) moist; common 10-20% coarse 15-30mm distinct orange mottles; silty light clay; massive structure; weak moist; moist when sampled; slowly permeable; imperfectly drained; gradual to
B23i	.82 to 1.3	Dark greenish grey (10Y31) moist; very few <2% medium 5-15mm distinct orange mottles; silty light clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained; diffuse to
C1	1.3 to 3.4	Dark greenish grey (5BG31) moist; silty light clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained; gradual to
2D1	3.4 to 3.6	Dark grey (2.5Y41) moist; very few <2% medium 5-15mm distinct orange mottles; silty light medium clay; massive structure; firm moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1		4.0	3.4
.3		4.0	2.5
.6		3.7	3.0
.8		3.9	3.0
1		3.8	3.4
1.25	2	3.8	1.3
1.5	2	4.4	1.5
1.75	4	5.0	1.3
2	1	5.3	2.3
2.25	4	5.3	3.2
2.5	1	5.5	3.0
2.75	1	5.6	1.3
3	1	5.9	1.3
3.25	4	6.1	1.9
3.5	3	6.4	6.1

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation G(g1.0)2D *Sporobolus virginicus* (Salt couch)

Project: MAS Site: 84 Observation: 1

Soil Name: S2 - Pass at 1-2m

Location: GDA 94 ZONE 56 502489mE 6985809mN Lat: -27.25059 Long: 153.02514

Described By: M (Mark) Sugars (SUGM) Date: 09/SEP/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: swamp Landform Pattern: flood plain

Permeability: Very slowly permeable Runoff: Very slow

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.1

Surface Condition: Soft

Disturbances: No record

Classifications:

ASC: HUMOSE, SULFIDIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Clayey, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
A1	0 to .1	Dark greyish brown (10YR42) moist; sandy loam; massive structure; weak wet; few 1-2mm roots; wet when sampled; slowly permeable; poorly drained; gradual to
A21	.1 to .2	Brown (10YR43) moist; common 10-20% medium 5-15mm distinct orange mottles; clay loam, sandy; massive structure; weak wet; few <1mm roots; wet when sampled; slowly permeable; poorly drained; gradual to
A22	.2 to .3	Dark grey (2.5Y41) moist; few 2-10% fine <5mm distinct orange mottles; clay loam, sandy; massive structure; very weak wet; wet when sampled; slowly permeable; poorly drained; clear to
2A	.3 to .7	Very dark grey (10YR31) moist; sapric light clay; massive structure; weak wet; few 2-5mm roots; wet when sampled; very slowly permeable; very poorly drained; gradual to
2B21	.7 to .9	Dark greyish brown (10YR42) moist; common 10-20% fine <5mm distinct orange mottles; light medium clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained; diffuse to
2B22	.9 to 1.15	Dark greyish brown (10YR42) moist; few 2-10% fine <5mm distinct orange mottles; light medium clay; massive structure; weak wet; wet when sampled; very slowly permeable; very poorly drained; gradual to
3C1	1.15 to 1.5	Dark reddish grey (2.5YR41) moist; silty medium clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained; diffuse to
3C2	1.5 to 3.5	Dark reddish grey (2.5YR31) moist; silty medium clay; massive structure; very weak wet; wet when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	4	6.7	3.0
.15	4	6.7	2.5
.3	4	6.5	3.2
.6	4	6.5	3.9
.8	4	6.3	3.6
1	4	6.6	3.2
1.25	3	6.5	2.7
1.5		6.4	2.0
1.75	4	5.9	1.4
2	4	5.5	1.5
2.25	4	6.4	1.5
2.5	2	6.5	2.3
2.75	3	6.8	1.6
3	4	6.7	2.0
3.25	3	7.1	2.7
3.5	3	7.2	2.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 84 Observation: 1

Observation Notes:

Observation	10cm of decomposing vegetation over soil. Top 3 horizons likely spoil from dam wall. Roots down to 0.7m
Vegetation	U(w1.0)6M Melaleuca spp, Casuarina sp. M(w3.0)4M *Lantana camara* G(g5.0)2D Sedges G(g1.0)2D Grasses

Project: MAS Site: 85 Observation: 1

Soil Name: a0LP - Low Probability of ASS in areas below 5m AHD and pH of 4- 5 at 0-0.5m

Location: GDA 94 ZONE 56 502058mE 6985935mN Lat: -27.24945 Long: 153.02079

Described By: Jonathan Walton (WALJ) Date: 09/SEP/10

Landscape:

Geology: Qha - Qha-SEQ: Clay, silt, sand; active stream channels and low terraces

Element: swamp Landform Pattern: flood plain

Permeability: Slowly permeable Runoff: Very slow

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.1

Surface Condition: Soft

Disturbances: Extensive clearing

Classifications:

ASC: HUMOSE, KANDOSOLIC, REDOXIC, Hydrosol, Thick, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
O2	0 to .15	Dark greyish brown (10YR42) moist; sapric clay loam; massive structure; very weak wet; wet when sampled; highly permeable; imperfectly drained; clear to
A11	.15 to .55	Very dark greyish brown (10YR32) moist; sapric clay loam; very few <2% angular tabular charcoal small pebbles 2-6 mm; massive structure; very weak wet; wet when sampled; moderately permeable; very poorly drained; gradual to
A12	.55 to .75	Black (2.5Y2.5/1) moist; heavy clay loam; very few <2% angular tabular charcoal small pebbles 2-6 mm; massive structure; very weak wet; wet when sampled; moderately permeable; very poorly drained; clear to
B21u	.75 to 1.15	Dark grey (2.5Y41) moist; common 10-20% fine <5mm faint brown mottles; light clay; massive structure; firm wet; wet when sampled; slowly permeable; very poorly drained; gradual to
B22u	1.15 to 1.3	Greenish grey (10Y51) moist; few 2-10% medium 5-15mm distinct orange mottles, very few <2% medium 5-15mm prominent red mottles; light clay; massive structure; firm moist; moist when sampled; slowly permeable; very poorly drained
B23u	1.3 to 1.5	Greenish grey (10Y51) moist; few 2-10% medium 5-15mm distinct orange mottles, very few <2% medium 5-15mm prominent red mottles; sandy light clay; massive structure; firm moist; moist when sampled; slowly permeable; very poorly drained; clear to
C1u	1.5 to 1.8	Dark grey (5Y41) moist; medium clay; massive structure; firm moist; moist when sampled; gradual to
C2u	1.8 to 2	Dark grey (5Y41) moist; light medium clay; very few <2% subangular quartz small pebbles 2-6 mm; massive structure; firm wet; wet when sampled; clear to
Du	2 to 2.15	Grey (2.5Y61) moist; many 20-50% coarse 15-30mm prominent orange mottles, few 2-10% medium 5-15mm prominent red mottles; medium clay; massive structure; very firm moist; moist when sampled

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	2	5.3	1.4
.3	3	5.9	3.0
.6	3	6.3	3.3
.8	4	6.4	3.9
1	4	6.3	2.9
1.25	4	6.1	2.8
1.5	4	5.6	2.6
1.75	4	5.9	2.7
2	4	5.7	2.6
2.15	3	5.4	3.0

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Observation Notes:

Vegetation U(w1.0)6M Casuarina glauca, Melaleuca sp.
G(g5.0)2M Sedges \ G(g1.0)2M Grass

Project: MAS Site: 86 Observation: 1

Soil Name: A0S1 - AASS at 0-0.5m with PASS at 0.5-1.0m.

Location: GDA 94 ZONE 56 502517mE 6982944mN Lat: -27.27645 Long: 153.02543

Described By: M (Mark) Sugars (SUGM) Date: 09/SEP/10

Landscape:

Geology: Qhc - Qhc-SEQ: Undifferentiated coastal plains; mud, sand, commonly with a veneer of Qha

Element: swamp Landform Pattern: flood plain

Permeability: Very slowly permeable

Slope: 0 % Drainage: Very poorly drained

Depth to Water: 0.1

Surface Condition: Soft

Disturbances: No effective disturbance

Classifications:

ASC: HUMOSE-ACIDIC, SULFURIC, OXYAQUIC, Hydrosol, Thick, Non-gravelly, Clay Loamy, Clayey, Very Deep

Profile Morphology:

Horizon	Depth (m)	Description
Mia	0 to .5	Dark greyish brown (10YR42) moist; few 2-10% fine <5mm distinct yellow jarosite (from pyrite) mottles; silty light medium clay; massive structure; strong moderately moist; few 1-2mm roots; moderately moist when sampled; very slowly permeable; very poorly drained; clear to
2A11	.5 to .7	Black (10YR21) moist; light clay loam; massive structure; weak wet; few <1mm roots; wet when sampled; moderately permeable; very poorly drained; diffuse to
2A12	.7 to .9	Black (10YR21) moist; sapric clay loam; massive structure; weak wet; few <1mm roots; wet when sampled; moderately permeable; very poorly drained; clear to
2B21	.9 to 1.1	Dark grey (2.5Y41) moist; many 20-50% medium 5-15mm prominent orange mottles; light clay; massive structure; firm moist; few <1mm roots; moist when sampled; slowly permeable; very poorly drained; clear to
3C1ia	1.1 to 2.45	Dark grey (2.5Y41) moist; few 2-10% fine <5mm distinct yellow jarosite (from pyrite) mottles; silty light medium clay; massive structure; firm moist; few <1mm roots; moist when sampled; very slowly permeable; very poorly drained; gradual to
3C2ia	2.45 to 2.8	Dark greenish grey (5GY41) moist; few 2-10% medium 5-15mm distinct yellow jarosite (from pyrite) mottles; silty light medium clay; polyhedral weak 2-5mm structure; common 10-20% medium 2-6mm sulphurous soft segregations; firm moist; few <1mm roots; moist when sampled; very slowly permeable; very poorly drained; gradual to
3C3ia	2.8 to 3	Dark grey (2.5Y41) moist; few 2-10% fine <5mm distinct yellow jarosite (from pyrite) mottles; silty medium clay; massive structure; very firm moist; few <1mm roots; moist when sampled; very slowly permeable; very poorly drained

Field Tests:

Depth	H2O2-	PH-2	PH-3
.1	1	3.5	2.0
.3	3	3.1	1.4
.6	4	4.7	2.9
.8	4	4.4	3.4
1	1	4.1	2.6
1.25	1	3.9	2.5
1.5	4	3.5	2.4
1.75	4	3.6	2.4
2	4	3.7	2.3
2.25	4	4.0	2.2
2.5	1	3.9	2.2
2.75	4	4.0	1.9
3	4	4.1	2.2

PH-2: pH using electrode probe

PH-3: pH of hydrogen peroxide extract

Project: MAS Site: 86 Observation: 1

Observation Notes:

Observation	Suspect that top 0.50m is spoil from excavation of adjacent water body. Horizon 2 is sapric
Vegetation	U(w1.0)6V Eucalyptus sp G(g5.0)2D Sedges \ G(g1.0)2D Grass