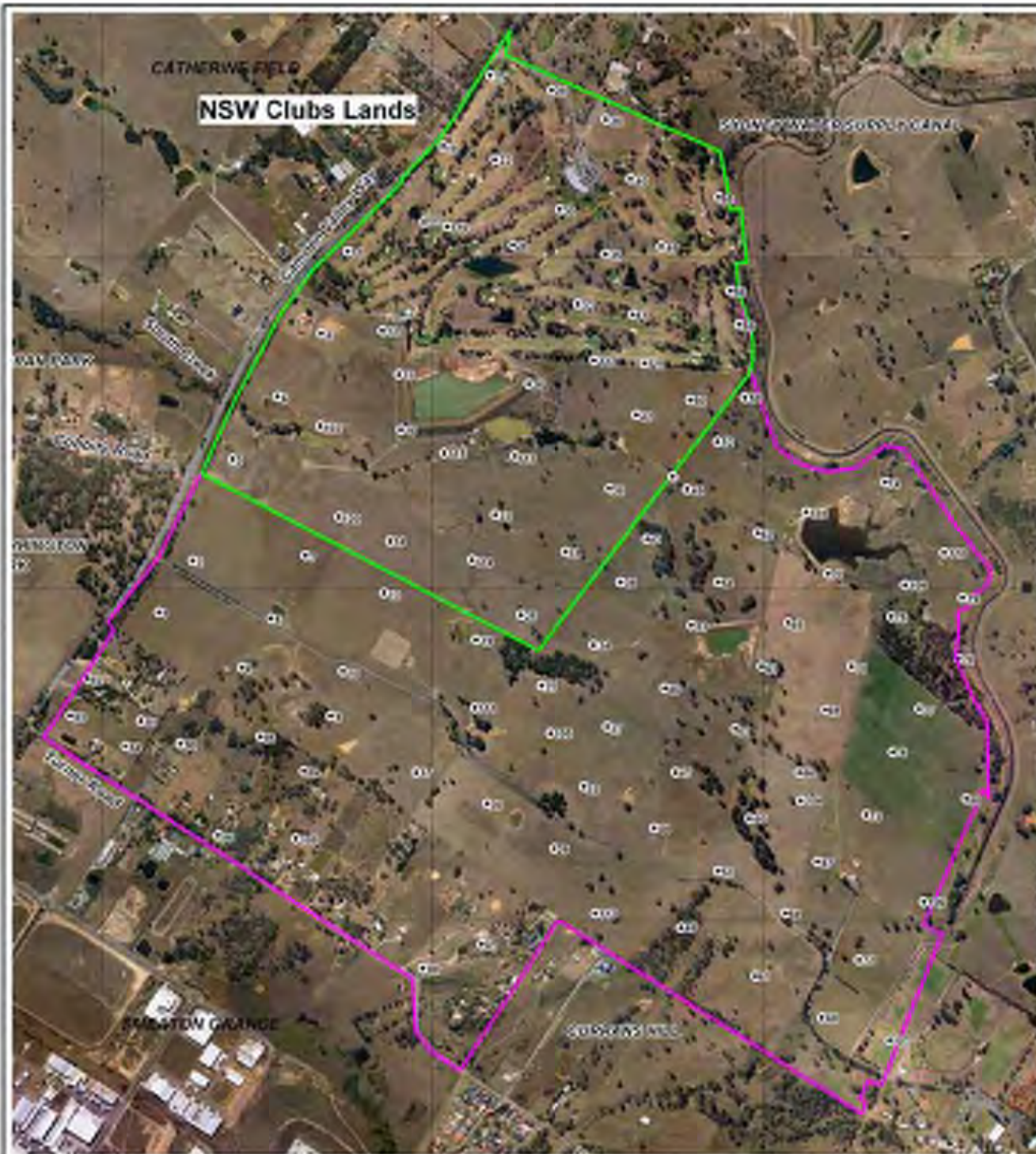





Appendix B

Extracts from Land Capability Assessment 40741



 Boundary of NSW Clubs Lands (approximate)
 Boundary of Great Road Precinct
 Location of Previous Test Pit



Douglas Partners
 Geotechnics · Environment · Construction

Brisbane, Cairns, Canberra,
 Darwin, Gold Coast, Melbourne,
 Minto, Newcastle, Perth,
 Sunshine Coast, Sydney,
 Townsville, Wollongong, Wymong

TITLE: LOCATION OF PREVIOUS TEST PITS
 NSW CLUBS LANDS
 TURNER ROAD PRECINCT
 CATHERINE FIELD

CLIENT: Penrith Council (Roads)

DRAWN BY: HLB

DATE: 10/10/2014

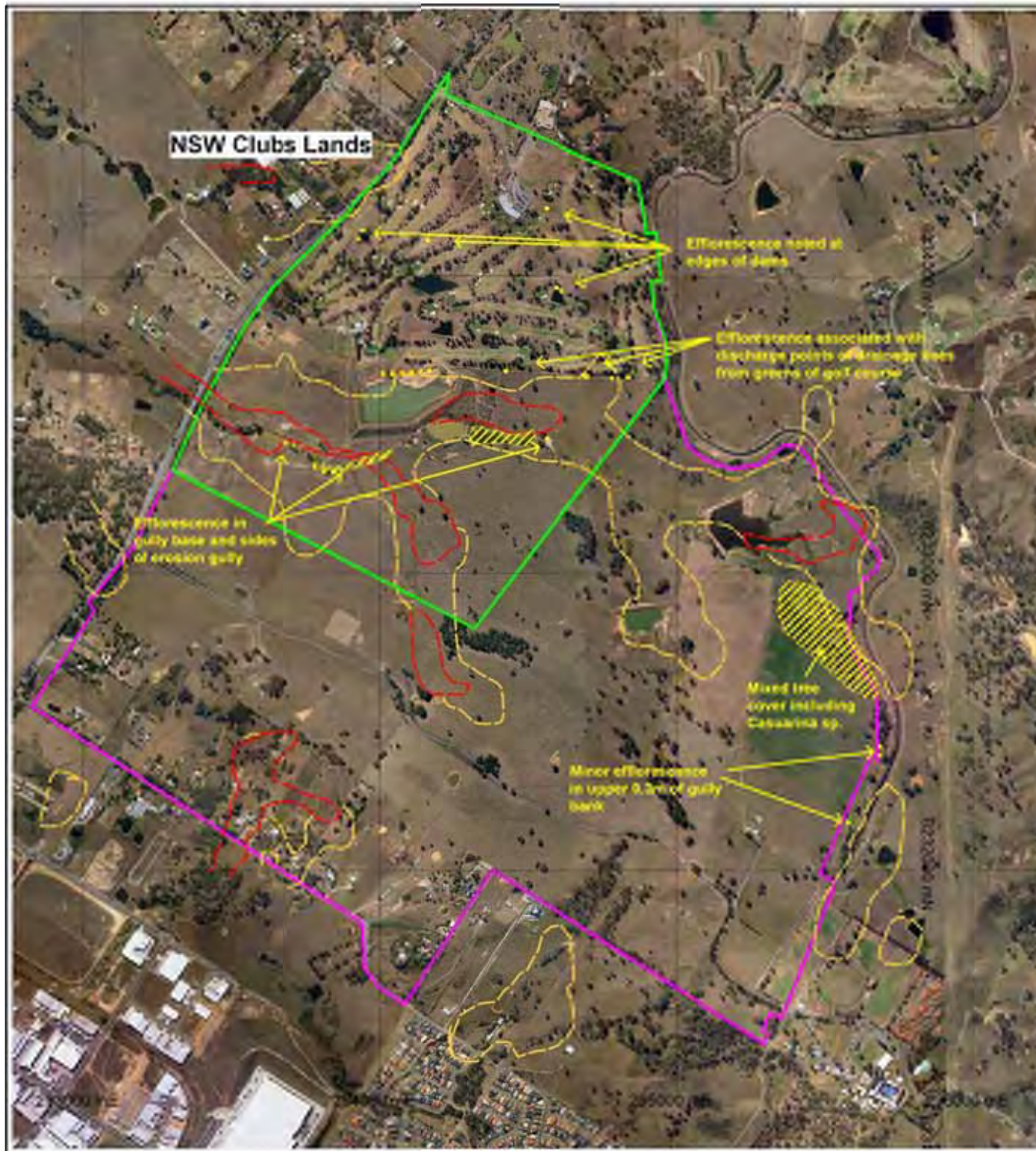
PROJECT No: 4014-10

OFFICE: WOL

APPROVED BY:

DATE: 24-JUL-2014

DRAWING No: 2



LEGEND

- Turner Road Precinct Boundary
- NSW Clubs Lands Boundary (the subject site)
- Known Salt Occurrences
- Salinity High Risk Zones
- Efflorescence
- Salt Tolerant Vegetation (e.g. Casuarina & Melaleuca sp.)

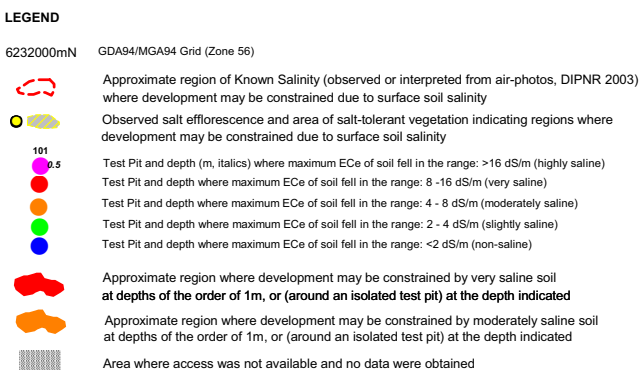



Douglas Partners
Consultants • Environmental • Construction

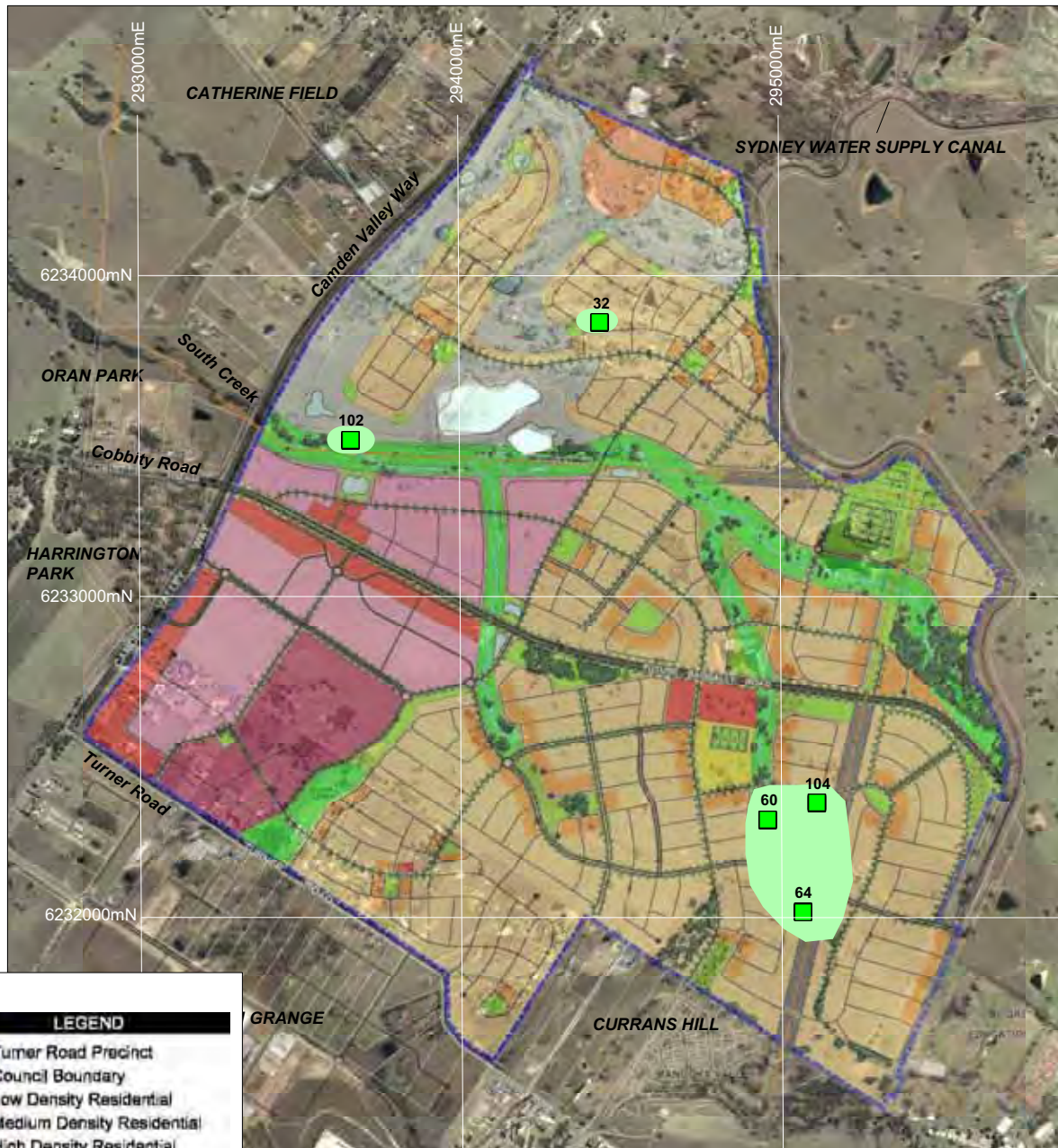
Brisbane, Cairns, Canberra,
Darwin, Gold Coast, Melbourne,
Minto, Newcastle, Perth,
Sunshine Coast, Sydney,
Townsville, Wollongong, Wyong

**FILE: SALINITY OBSERVATIONS
NSW CLUBS LANDS
TURNER ROAD PRECINCT
CATHERINE FIELD**

CLIENT: Agriculture - H&P, SA			
DRAWN BY: [redacted]	DATE:	PROJECT No.: 4874705	OFFICE: WOL
APPROVED BY:		DATE: 18 JULY 2018	DRAWING No.: 3



 Douglas Partners <i>Geotechnics . Environment . Groundwater</i>	Sydney, Newcastle, Brisbane, Melbourne, Perth, Darwin, Wyong, Campbelltown, Canberra Townsville, Cairns, Wollongong
	TITLE: SALINITY CONSTRAINTS LAND CAPABILITY STUDY TURNER ROAD PRECINCT CATHERINE FIELD AND CURRANS HILL
CLIENT: APP CORPORATION PTY LTD	
DRAWN BY: JL	SCALE: 1:15,000 @ A3
APPROVED BY:	PROJECT NO: 40741
DATE: FEBRUARY 2007	OFFICE: SYDNEY
DRAWING NO:	16



LEGEND	
	Turner Road Precinct
	Council Boundary
	Low Density Residential
	Medium Density Residential
	High Density Residential
	Employment
	Light Industrial Activities
	Clubhouse Precinct
	Commercial / Retail
	Park
	Riparian Corridor
	Golf Course
	Primary School Site
	Detention / Bio-retention
	Wetlands
	Powerline Easement
	Powerline 330kV, Pylon

Legend for Indicative Layout Plan (ILP) dated 7 Feb 07
(translucent underlay to constraint features)

LEGEND

6232000mN GDA94/MGA94 Grid (Zone 56)



Test Pit where pH of soil at 0.5m depth was 4.5 - 5 (mildly aggressive to concrete)



Approximate region where development may be constrained by mild aggressivity of soil to concrete at depths of the order of 0.5m



Douglas Partners
Geotechnics . Environment . Groundwater

Sydney, Newcastle, Brisbane,
Melbourne, Perth, Darwin,
Wyong, Campbelltown, Canberra
Townsville, Cairns, Wollongong

TITLE:

**AGGRESSIVITY CONSTRAINTS - DEPTH 0.5m
LAND CAPABILITY STUDY
TURNER ROAD PRECINCT
CATHERINE FIELD AND CURRANS HILL**

CLIENT: APP CORPORATION PTY LTD

DRAWN BY: JL

SCALE: 1:15,000 @ A3

PROJECT No: 40741

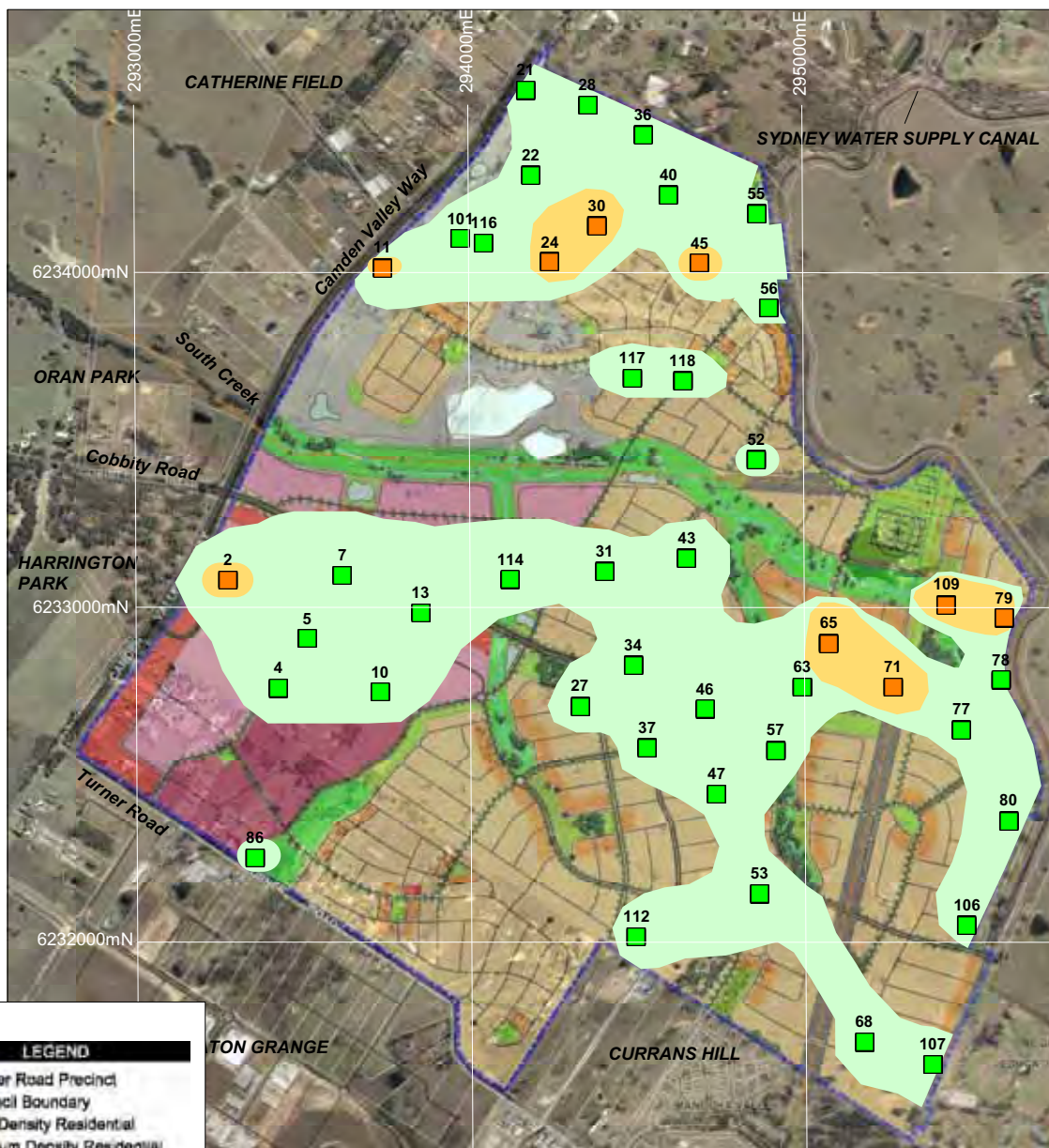
OFFICE: SYDNEY

APPROVED BY:

DATE: FEBRUARY 2007

DRAWING No:

17



Legend for Indicative Layout Plan (ILP) dated 7 Feb 07
(translucent underlay to constraint features)



LEGEND

6232000mN GDA94/MGA94 Grid (Zone 56)

- 71 Test Pit where pH of soil at 1m depth was 4 - 4.5 (moderately aggressive to concrete)
- Test Pit where pH of soil at 1m depth was 4.5 - 5 (mildly aggressive to concrete)
- Approximate region where development may be constrained by moderate aggressivity of soil to concrete at depths of the order of 1m
- Approximate region where development may be constrained by mild aggressivity of soil to concrete at depths of the order of 1m



Douglas Partners
Geotechnics . Environment . Groundwater

Sydney, Newcastle, Brisbane,
Melbourne, Perth, Darwin,
Wyong, Campbelltown, Canberra
Townsville, Cairns, Wollongong

TITLE: **AGGRESSIVITY CONSTRAINTS - DEPTH 1m**
LAND CAPABILITY STUDY
TURNER ROAD PRECINCT
CATHERINE FIELD AND CURRANS HILL

CLIENT: APP CORPORATION PTY LTD

DRAWN BY: JL SCALE: 1:15,000 @ A3 PROJECT No: 40741 OFFICE: SYDNEY

APPROVED BY: DATE: FEBRUARY 2007 DRAWING No: **18**

Appendix C




Test Pit Logs

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 98.0 mAHD
EASTING: 294458
NORTHING: 6233381
DIP/AZIMUTH: 90°/--

PIT No: 1
PROJECT No: 76510.00
DATE: 19/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
98		TOPSOIL - brown silt with some clay and rootlets		E	0.1							
	0.3	CLAY - dark orange mottled light orange-grey clay with some fine grained ironstone gravel		D	0.5							
				E	0.6							
97	1			D	1.0			1				
				E	1.1							
	1.3	SANDSTONE - very low to low strength, moderately weathered, black and grey shale with iron indurated bands		D	1.5							
96	2			D	2.0			2				
				D	2.5							
95	2.9	Pit discontinued at 2.9m - limit of investigation		D	3.0			3				
94	4							4				

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 101.7 mAHD **PIT No:** 2
EASTING: 294380 **PROJECT No:** 76510.00
NORTHING: 6233276 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets		E	0.1							
				E	0.2							
	0.4	CLAY - dark orange-red mottled light orange brown clay		E	0.4							
				D	0.5							
	0.7	SHALY CLAY - grey mottled orange slightly sandy shaly clay										
				D	1.0							
	1.1	SANDSTONE - very low to low strength, highly weathered, grey, orange and brown medium to coarse grained sandstone		D	1.5							
		- becoming low to medium strength with iron indurated bands below 1.8m		D	2.0							
				D	2.5							
	2.7	Pit discontinued at 2.7m - refusal on medium strength sandstone										
	3											
	4											
	4.7											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
Gregory Hills

SURFACE LEVEL: 102.7 mAHD **PIT No:** 3
EASTING: 294325 **PROJECT No:** 76510.00
NORTHING: 6233188 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/- **SHEET 1 OF 1**

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Sample BD1/180112 collected

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 101.6 mAHD **PIT No:** 4
EASTING: 294219 **PROJECT No:** 76510.00
NORTHING: 6233131 **DATE:** 19/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
101	0.2	TOPSOIL - brown clayey silt with rootlets		E	0.1							
		CLAY - red mottled grey clay with trace fine grained ironstone gravel		E	0.2							
		- becoming grey mottled red clay below 0.7m		D	0.5							
				E	0.6							
	1	- grey clay with red fine grained ironstone bands below 0.9m		D	1.0			1				
				E	1.1							
	1.8	SHALY CLAY - grey and red shaly clay with very low strength, red brown iron indurated shale bands		D	1.5							
				D	2.0			2				
	2.3	SHALE - very low to low strength, highly weathered, brown and red shale with iron indurated bands		D	2.5							
				D	3.0			3				
99	3.0	- becoming low to medium strength, purple black brown and grey shale below 2.9m		D	3.0							
		Pit discontinued at 3.0m - limit of investigation										
98	4											
97												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 99.5 mAHD
EASTING: 294175
NORTHING: 6232985
DIP/AZIMUTH: 90°/--

PIT No: 5
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: Relocated, as test pit was located on stockpile. Stockpile is located on western end of test pit

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	▷	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test ls(50) (MPa)
		PL(D)	Point load diametral test ls(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)





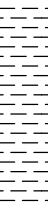
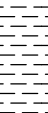
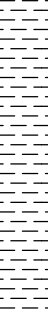
Douglas Partners
Geotechnics | Environment | Groundwater

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 98.6 mAHD
EASTING: 294310
NORTHING: 6233341
DIP/AZIMUTH: 90°/--

PIT No: 6
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets		E	0.1							
	0.2	CLAY - dark orange mottled light orange slightly silty clay with some fine grained ironstone gravel		E	0.2							
				D	0.5							
				E*	0.6							
	0.9	SHALE - extremely low to very low strength, extremely to highly weathered, orange and grey shale		D	1.0							
				E	1.1							
		- becoming very low to low strength, grey and brown shale with bands of extremely low strength, extremely weathered, grey shale with iron indurated bands below 1.2m		D	1.5							
	2			D	2.0							
		- becoming very low strength with iron indurated and extremely low strength, extremely weathered bands below 2.4m		D	2.5							
	3	Pit discontinued at 3.0m - limit of investigation		D	3.0							
	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Sample BD2/180112 collected

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 100.6 mAHD **PIT No:** 7
EASTING: 294250 **PROJECT No:** 76510.00
NORTHING: 6233254 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
100 99 98 97 96	0.3	TOPSOIL - brown clayey silt		E	0.1							
				E	0.2							
	0.8	SILTY CLAY - orange silty clay		D	0.5							
		- becoming red mottled orange silty clay with some ironstone gravel and coarse grained sand		E	0.6							
	1	SANDSTONE - extremely low to very low strength, extremely to moderately weathered, orange and grey medium to coarse grained sandstone with some orange and grey clayey sand bands		D	1.0							
				E	1.1							
				D	1.5							
				D	2.0							
	2.2	Pit discontinued at 2.2m - refusal on medium strength sandstone		D	2.2							
3 4	3											
	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND










A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 96.9 mAHD
EASTING: 294109
NORTHING: 6233114
DIP/AZIMUTH: 90°/-

PIT No: 8
PROJECT No: 76510.00
DATE: 19/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets		E	0.1							
	0.3	CLAY - red mottled grey clay with trace fine grained ironstone gravel		E	0.2							
		- becoming light orange mottled grey clay with some fine grained ironstone gravel below 0.7m		D	0.5							
				E	0.6							
	1	- becoming grey mottled orange clay with fine grained ironstone gravel bands below 1.3m		D	1.0			1				
		- grey clay with some iron indurated and ironstone gravel bands below 1.7m		D	1.5							
	2	SHALE - extremely low strength, extremely weathered, grey orange shale with grey clay and iron indurated bands		D	2.0			2				
	2.4	SHALE - extremely low strength, extremely weathered, grey and red shale with iron indurated bands		D	2.5							
	2.7	SHALE - extremely low to very low strength, extremely weathered, grey orange red shale with grey clay and iron indurated bands		D	3.0			3				
	3.1	Pit discontinued at 3.1m - limit of investigation										
	4							4				

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 97.2 mAHD
EASTING: 294178
NORTHING: 6233349
DIP/AZIMUTH: 90°/-

PIT No: 10
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
97 0.25 0.9 1 1.8 2 3 3.0 4	0.25	TOPSOIL - brown clayey silt with rootlets		E	0.1							
				E	0.2							
	0.9	CLAY - orange mottled grey-brown slightly silty clay		D	0.5							
				E	0.6							
		SHALY CLAY - grey mottled orange brown shaly clay		D	1.0							
				E	1.1							
	1.8			D	1.5							
		SHALE - low strength, moderately weathered, purple brown and grey shale		D	2.0							
		- band of extremely low strength, extremely weathered, grey orange shale between 2.4 - 2.6m		D	2.5							
	3.0	Pit discontinued at 3.0m - limit of investigation		D	3.0							

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 96.7 mAHD
EASTING: 294110
NORTHING: 6233211
DIP/AZIMUTH: 90°/--

PIT No: 11
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _{seep}	Water seep
E	Environmental sample	W _{level}	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 96.6 mAHD
EASTING: 294024
NORTHING: 6233184
DIP/AZIMUTH: 90°/--

PIT No: 12
PROJECT No: 76510.00
DATE: 19/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: Infilling from 0.6 - 1.2m, possibly from adjacent creek

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

SAMPLING AND TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	WS	Water seep
E	Environmental sample	WL	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 97.7 mAHD
EASTING: 293995
NORTHING: 6233086
DIP/AZIMUTH: 90°/--

PIT No: 13
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - brown silty clay/clayey silt		E	0.1							
	0.3	SILTY CLAY - grey black clay with gravel (swampy odour) and rootlets		D	0.5							
	0.7	CLAY - red mottled grey clay		E*	0.6							
	1			D	1.0			1				
				E	1.1							
	1.6	GRAVELLY CLAY - red mottled grey gravelly (ironstone) clay		D	1.5							
	1.9	SHALY CLAY - grey red shaly clay with iron indurated bands		D	2.0			2				
				D	2.5							
	3	Pit discontinued at 3.0m - limit of investigation		D	3.0			3				
	4							4				

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: Edge of stockpile; * Sample BD1/200112 collected

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 95.6 mAHD
EASTING: 294055
NORTHING: 6233331
DIP/AZIMUTH: 90°/--

PIT No: 14
PROJECT No: 76510.00
DATE: 19/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets			0.1							
	0.2	CLAY - yellow brown mottled orange slightly silty clay		E	0.2							
					0.5							
				D	0.6							
	0.9	SILTY CLAY - orange mottled grey silty clay			1.0							
				E	1.1							
		- becoming gravelly (ironstone gravel) silty clay below 1.4m		D	1.5							
	1.8	SHALE - extremely low strength, extremely weathered, grey shale with some grey clay bands			2.0							
				D	2.5							
		- becoming very low to low strength, black, grey and red shale below 2.3m		D	2.5							
	3.0	Pit discontinued at 3.0m - limit of investigation		D	3.0							

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 94.9 mAHd
EASTING: 293981
NORTHING: 6233280
DIP/AZIMUTH: 90°/-

PIT No: 15
PROJECT No: 76510.00
DATE: 19/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: Water infilling at 2.1m

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 95.7 mAHD
EASTING: 293930
NORTHING: 6233210
DIP/AZIMUTH: 90°/--

PIT No: 16
PROJECT No: 76510.00
DATE: 19/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets		E*	0.1							
					0.2							
	0.4	CLAY - orange mottled grey clay with some fine grained ironstone gravel		D	0.5							
				E	0.6							
	1			D	1.0							
	1.4	GRAVELLY CLAY - grey mottled orange gravelly (fine grained ironstone) clay, damp to wet		D	1.5							
	2			D	2.0							
				D	2.5							
	3			D	3.0							
	3.1	SHALE - low strength, moderately weathered, black and grey shale										
	3.2	Pit discontinued at 3.2m - limit of investigation										
	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: * Sample BD2/190112 collected

☐ Cone Penetrometer AS1289.6.3.2


SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 97.2 mAHD
EASTING: 293875
NORTHING: 6233127
DIP/AZIMUTH: 90°/-

PIT No: 17
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
97.0 96.0 95.0 94.0 93.0	0.4	FILLING - dark brown silty clay (reworked natural)		E*	0.1							
					0.2							
	1.4	CLAY - hard, yellow brown mottled orange clay - becoming grey mottled red with some fine grained ironstone gravel below 0.65m		D	0.5							
				E	0.6							
				D	1.0							
				D	1.5							
	2.3	SHALE - extremely low to very low strength, moderately weathered, red, brown and grey shale with grey shaly clay bands - becoming very low strength, grey brown shale below 1.7m		D	2.0							
				D	2.5							
	3.0	SILTSTONE - low to medium strength, moderately weathered, purple, black and grey siltstone		D	3.0							
				D	3.0							
94.0 93.0	3.0	Pit discontinued at 3.0m - limit of investigation										

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: On old track haul road; * Sample BD2/200112 collected

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 94.1 mAHD
EASTING: 293854
NORTHING: 6233283
DIP/AZIMUTH: 90°/-

PIT No: 18
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
94.1 94.0 93.9 93.8 93.7 93.6 93.5 93.4 93.3 93.2	0.25	TOPSOIL - brown clayey silt with rootlets		E	0.1							
				E	0.2							
	1	CLAY - brown mottled orange slightly silty clay, damp		D	0.5							
				E	0.6							
				D	1.0							
				E	1.1							
				D	1.5							
				E	1.6							
	2	- becoming grey mottled orange silty clay with trace fine grained ironstone gravel below 1.1m		D	2.0							
				D	2.2							
93.1 93.0 92.9 92.8	2.2	GRAVELLY CLAY - orange mottled grey slightly silty gravelly (black and red ironstone gravel) clay		D	2.5							
	2.6	SILTY CLAY - grey mottled orange silty clay with some fine grained ironstone gravel (possibly very fine grained sand)		D	2.6							
	3.0	Pit discontinued at 3.0m - limit of investigation		D	3.0							

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: Water seeping in at 2.3m on side walls

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:





SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	Δ	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 95.1 mAHD
EASTING: 293817
NORTHING: 6233227
DIP/AZIMUTH: 90°/-

PIT No: 19
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
95.0	0.8	TOPSOIL FILLING - brown clayey silt		E	0.1							
					0.2							
				D E	0.5							
					0.6							
				D E	1.0							
					1.1							
94.0	1.9	CLAY - dark orange mottled light orange-brown clay - mottled orange grey slightly gravelly (ironstone) clay, damp to moist below 1.3m		D	1.5							
					2.0							
				D	2.5							
					3.0							
93.0	2.9	GRAVELLY CLAY - orange, brown and black gravelly (ironstone gravel) clay, damp to moist - becoming orange mottled grey clayey gravel, moist to wet below 2.4m		D	2.0							
					2.5							
92.0	3.1	SILTY CLAY - grey and orange silty clay		D	3.0							
					3.1							
91.0	3.1	Pit discontinued at 3.1m - limit of investigation										

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: On stockpile within site

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 95.6 mAHD
EASTING: 293786
NORTHING: 6233164
DIP/AZIMUTH: 90°/--

PIT No: 20
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 94.8 mAHD
EASTING: 293719
NORTHING: 6233199
DIP/AZIMUTH: 90°/--

PIT No: 21
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U ₁	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W ₂	Water seep
E	Environmental sample	W ₃	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 93.6 mAHD
EASTING: 293769
NORTHING: 6233298
DIP/AZIMUTH: 90°/--

PIT No: 22
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL - brown slightly clayey silt with rootlets		E*	0.1							
		SILTY CLAY - brown mottled orange slightly silty clay			0.2							
				D	0.5							
				E	0.6							
	1	- grey mottled red brown silty clay with trace fine grained ironstone gravel, damp below 0.8m		D	1.0			1				
		- becoming orange mottled grey slightly sandy (very fine grained) silty clay, damp below 1.2m		D	1.5							
	1.6	GRAVELLY SILTY CLAY - orange mottled grey gravelly (fine grained ironstone) silty clay with grey silty clay bands, damp		D	2.0			2				
	2			D	2.5							
	3			D	3.0			3				
	3.1	Pit discontinued at 3.1m - limit of investigation										
	4							4				

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Sample BD3/20012 collected

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 93.4 mAH
EASTING: 293684
NORTHING: 6233298
DIP/AZIMUTH: 90°/-

PIT No: 23
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: Very slight infilling below 1.4m (possibly from adjacent dam)

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	▷	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test ls(50) (MPa)
		PL(D)	Point load diametral test ls(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



Douglas Partners
Geotechnics | Environment | Groundwater

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 94.5 mAHD
EASTING: 293592
NORTHING: 6233274
DIP/AZIMUTH: 90°/--

PIT No: 24
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PLA	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PLD	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	WS	Water seep	S	Standard penetration test
E	Environmental sample	WL	Water level	V	Shear vane (kPa)









TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 92.8 mAHD
EASTING: 293645
NORTHING: 6233375
DIP/AZIMUTH: 90°/-

PIT No: 25
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown silty clay		E*	0.1							
	0.3	CLAY - yellow brown/orange mottled grey clay		D	0.5							
				E	0.6							
	0.9	CLAY - grey mottled brown and orange clay with some fine grained ironstone gravel		D	1.0			1				
	1.4	GRAVELLY CLAY - black, brown, orange and grey gravelly (ironstone) clay		D	1.5							
	2			D	2.0			2				
	2.2	SHALE - extremely low strength, extremely weathered, grey and orange shale with bands of very low to low strength, orange medium to coarse grained sandstone and iron indurated bands		D	2.5							
	3	Pit discontinued at 3.0m - limit of investigation		D	3.0			3				
	4							4				

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: * Sample BD4/200112 collected

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 93.7 mAHD
EASTING: 293571
NORTHING: 6233347
DIP/AZIMUTH: 90°/-

PIT No: 26
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
93 1 1.3 1.45 92 2 91 3 3.1 90 4 89		FILLING (TOPSOIL stockpile) - light brown clayey silt, mc<pl		E	0.1							
				E	0.2							
				D	0.5							
				E	0.6							
				D	1.0							
				E	1.1							
		TOPSOIL - dark brown silty clay with frequent rootlets, decomposing, strong compost odour, mc<pl		D	1.5							
		SANDY SILTY CLAY - firm to stiff, orange brown mottled light grey sandy silty clay, mc<pl		E	1.6							
				D	2.0							
				E	2.1							
91 3 3.1 90 4 89		- becoming soft to firm, with some extremely low to low strength, extremely to highly weathered, coarse grained ironstone gravel pockets, mc>pl		D	2.5							
				D	3.0							
		Pit discontinued at 3.1m - limit of investigation										

RIG: JCB-4CX - 450mm bucket

LOGGED: DJM

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	Δ	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 93.3 mAHD
EASTING: 293500
NORTHING: 6233383
DIP/AZIMUTH: 90°/-

PIT No: 27A
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
89	0.1	FILLING - low to medium strength, moderately weathered to fresh, shale, sandstone and silty clay stockpile, blue grey boulders, brown mottled light brown silty clay, mc>pl		E	0.1							
				E	0.2							
				D	0.5							
				E	0.6							
				D	1.0							
1	1.1	Pit discontinued at 1.1m - refusal, relocated to base of stockpile										
89	2											
91	3											
90	4											
89												

RIG: JCB-4CX - 450mm bucket

LOGGED: DJM

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 93.3 mAHD
EASTING: 293506
NORTHING: 6233381
DIP/AZIMUTH: 90°/--

PIT No: 27B
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: DJM

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test ls(50) (MPa)
		PL(D)	Point load diametral test ls(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)




TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 94.8 mAHD
EASTING: 293476
NORTHING: 6233318
DIP/AZIMUTH: 90°/-

PIT No: 28
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - well compacted, shaly clay and light brown shale with some fine to coarse grained (igneous) gravel and very low to medium strength, extremely to slightly weathered, shale fragments, mc<pl		E	0.1							
				E	0.2							
	0.5	FILLING - light grey mottled dark brown silty clay with some rootlets		D	0.5							
				E	0.6							
	1			D	1.0							
				E	1.1							
				D	1.5							
				E	1.6							
	1.8	SILTY CLAY - stiff to very stiff, red brown silty clay with trace fine grained (ironstone) gravel and rootlet, mc<pl		D	2.0							
	2	- becoming mottled light grey		E	2.1							
				D	2.5							
		- becoming light grey mottled red brown		E	2.6							
	3	Pit discontinued at 3.0m - limit of investigation	D		3.0							
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	11											
	12											
	13											
	14											
	15											
	16											
	17											
	18											
	19											
	20											

RIG: JCB-4CX - 450mm bucket

LOGGED: DJM

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 93.8 mAHD
EASTING: 293410
NORTHING: 6233411
DIP/AZIMUTH: 90°/-

PIT No: 29
PROJECT No: 76510.00
DATE: 20/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
93	0.3	TOPSOIL - light brown clayey silt with some fine to coarse grained (igneous and shale) gravel with frequent rootlets, mc>pl		E	0.1							
				E	0.2							
		SILTY CLAY - stiff, red brown mottled light brown silty clay, mc<pl		D	0.5							
				E	0.6							
	1.0	GRAVELLY SANDY CLAY - soft to firm, light brown and yellow brown gravelly sandy clay with some extremely low strength, extremely weathered shale fragments, mc>pl		D	1.0			1				
				E	1.1							
	1.4	SILTY CLAY - soft, orange brown mottled light grey silty clay with some extremely low to very low strength, extremely weathered shale fragments, mc>pl		D	1.5							
	2	- increasing extremely low to very low strength, extremely to moderately weathered, shale bands		D	2.0			2				
92				D	2.5							
91	3.0	Pit discontinued at 3.0m - limit of investigation		D	3.0			3				
90												
89												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	Δ	Water seep	sp	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 97.5 mAHD
EASTING: 294415
NORTHING: 6233374
DIP/AZIMUTH: 90°/--

PIT No: 30
PROJECT No: 76510.00
DATE: 19/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown slightly clayey silt										
	0.4	SILTY CLAY - dark orange mottled orange slightly silty clay		D	0.5							
	0.6	Pit discontinued at 0.6m - limit of investigation										
	1											
	2											
	3											
	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:



SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 99.6 mAHD
EASTING: 294444
NORTHING: 6233328
DIP/AZIMUTH: 90°/--

PIT No: 31
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets										
	0.3	CLAY - dark orange-red mottled light orange brown clay with trace fine grained ironstone gravel		D	0.5							
	0.6	Pit discontinued at 0.6m - limit of investigation										
99												
1												
98												
2												
97												
3												
96												
4												
95												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 98.8 mAHD
EASTING: 294365
NORTHING: 6233341
DIP/AZIMUTH: 90°/--

PIT No: 32
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets										
	0.2	SILTY CLAY - orange mottled grey slightly silty clay with trace fine grained ironstone gravel										
	0.6	Pit discontinued at 0.6m - limit of investigation		D	0.5							
98	1											
97	2											
96	3											
95	4											
94												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:



SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 100.3 mAHD **PIT No:** 33
EASTING: 294337 **PROJECT No:** 76510.00
NORTHING: 6233296 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
100	0.3	TOPSOIL - brown slightly clayey silt with rootlets		D	0.5							
		CLAY - red clay with trace fine grained ironstone gravel and some rootlets										
	0.6	Pit discontinued at 0.6m - limit of investigation										
1												
99												
2												
98												
3												
97												
4												
96												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 98.3 mAHD
EASTING: 294074
NORTHING: 6233031
DIP/AZIMUTH: 90°/--

PIT No: 9
PROJECT No: 76510.00
DATE: 19/1/2012
SHEET 1 OF 1

[illegible]

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Sample BD1/190112 collected

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U _n	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _{seep}	Water seep
E	Environmental sample	W _{level}	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 102.3 mAHD **PIT No:** 34
EASTING: 294362 **PROJECT No:** 76510.00
NORTHING: 6233237 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
102		TOPSOIL - brown clayey silt with rootlets		D	0.2							
	0.3	CLAY - dark orange mottled light orange clay										
	0.55	Pit discontinued at 0.55m - limit of investigation		D	0.5							
1												
101												
2												
100												
3												
99												
4												
98												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2



REMARKS:

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 102.2 mAHD **PIT No:** 35
EASTING: 294283 **PROJECT No:** 76510.00
NORTHING: 6233140 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
102		TOPSOIL - brown clayey silt with rootlets										
	0.3	SILTY CLAY - orange silty clay with trace rootlets										
	0.6	- becoming red orange mottled grey brown silty clay below 0.4m		D	0.5							
		Pit discontinued at 0.6m - limit of investigation										
1												
101												
2												
100												
3												
99												
4												
98												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 100.7 mAHD **PIT No:** 36
EASTING: 294238 **PROJECT No:** 76510.00
NORTHING: 6233098 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets										
	0.2	SILTY CLAY - orange mottled brown silty clay with ironstone gravel										
	0.4	CLAY - red mottled grey clay with trace fine grained ironstone gravel										
	0.6	Pit discontinued at 0.6m - limit of investigation		D	0.5							
100												
1												
99												
2												
98												
3												
97												
4												
96												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:



SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 98.4 mAHD
EASTING: 294169
NORTHING: 6233031
DIP/AZIMUTH: 90°/-

PIT No: 37
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with some rootlets		D	0.2							
	0.3	SILTY CLAY - dark orange mottled brown slightly gravelly (fine grained ironstone gravel) silty clay with some fine grained sandstone gravel and rootlets		D	0.5							
	0.6	- becoming more gravelly with depth										
		Pit discontinued at 0.6m - limit of investigation										
	1											
	2											
	3											
	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2


REMARKS:

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 100.1 mAHD **PIT No:** 38
EASTING: 294162 **PROJECT No:** 76510.00
NORTHING: 6232950 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
100		FILLING - brown silty clayey gravel (shale, siltstone and sandstone) with sandstone and shale cobbles										
	0.5	Pit discontinued at 0.5m - limit of investigation		D	0.5							
99	1											
98	2											
97	3											
96	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2




SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 99.0 mAH
EASTING: 294178
NORTHING: 6233117
DIP/AZIMUTH: 90°/-

PIT No: 39
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets										
	0.2	CLAY - red mottled brown grey clay with some fine grained ironstone gravel		D	0.2							
	0.7	Pit discontinued at 0.7m - limit of investigation		D	0.5							
98	1											
98	2											
98	3											
98	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:




SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 99.3 mAHD
EASTING: 294185
NORTHING: 6233170
DIP/AZIMUTH: 90°/--

PIT No: 40
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown silty clay with rootlets										
	0.25	CLAY - red mottled brown clay with trace fine grained ironstone gravel and rootlets										
	0.6											
	0.7	CLAY - grey clay with some red ironstone gravel										
		Pit discontinued at 0.7m - limit of investigation										
	1											
	2											
	3											
	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:



- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 101.6 mAHD **PIT No:** 41
EASTING: 294263 **PROJECT No:** 76510.00
NORTHING: 6233191 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets										
	0.35	CLAY - orange mottled grey-brown slightly silty clay with trace fine grained ironstone gravel		D	0.5							
	0.6	Pit discontinued at 0.6m - limit of investigation										
101												
1												
100												
2												
99												
3												
98												
4												
97												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:



- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 101.5 mAHD **PIT No:** 42
EASTING: 294305 **PROJECT No:** 76510.00
NORTHING: 6233232 **DATE:** 18/1/2012
DIP/AZIMUTH: 90°/-- **SHEET 1 OF 1**

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown clayey silt with rootlets										
	0.3	SILTY CLAY - red mottled brown grey slightly silty clay with trace fine grained ironstone gravel and rootlets		D	0.5							
	0.6	Pit discontinued at 0.6m - limit of investigation										
	1											
	2											
	3											
	4											

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Gregory Hills Corporate Park
PROJECT: Salinity Investigation and Management Plan
LOCATION: Lot 701 in Deposited Plan 1154772
 Gregory Hills

SURFACE LEVEL: 99.4 mAH
EASTING: 294279
NORTHING: 6233303
DIP/AZIMUTH: 90°/-

PIT No: 43
PROJECT No: 76510.00
DATE: 18/1/2012
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.25	TOPSOIL - brown clayey silt with rootlets		D	0.2							
		CLAY - yellow brown mottled orange slightly silty clay with trace fine grained ironstone gravel		D	0.5							
	0.6	Pit discontinued at 0.6m - limit of investigation										
1												
2												
3												
4												

RIG: JCB-4CX - 450mm bucket

LOGGED: BAH

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)