coffey geotechnics

Engineering Log - Piezometer

Borehole No. **NBH30**

Sheet 1 of 1

Project No: **GEOTLCOV24303AC**

Client: ***Infrastructure NSW***

Date started: ***27.4.2012***

Principal:

Date completed: ***27.4.2012***

Project: ***SICEEP***

Logged by: ***ACM***

Borehole Location: ***See Figure 3***

Checked by: ***DS***

drill model & mounting: XP60 Truck | Easting: | slope: -90° | R.L. Surface: 2.7

hole diameter: 100 | Northing: | bearing: N/A | datum: AHD

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	well details	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	structure and additional observations
ADT		N		E						**ASPHALTIC CONCRETE:** (0.1m)	D		PAVEMENT
										FILL: Clayey GRAVEL: Medium to coarse grained, subangular to angular sandstone, pale brown, medium plasticity clay fines	M		FILL
				E		2			CL		D		No Odour, PID = 0.3ppm
							1			**FILL: SAND:** Fine to medium grained, pale grey, mottled pale brown, cement stablized	<Wp	VS	ALLUVIUM
										Sandy CLAY: Medium to high plasticity, pale brown, mottled orange-brown, fine to medium grained sand			No Odour, Dup 12 + Dup 12a
ADT				SPT 1,0,0 N*=0		1	2		CH	**Sandy CLAY:** Medium to high plasticity, pale brown, mottled red-brown, medium to coarse grained sand			No Odour, PID = 0.9ppm
						0	3		CL	**Silty CLAY:** Medium plasticity, dark grey, mottled black	>Wp	F	No Odour, PID = 1.7ppm
				SPT 1,3,1 N*=4		-1	4						
				SPT 0,0,1 N*=1		-2	5		CL	**CLAY:** Medium plasticity, pale grey		VS	No Odour, PID = 1.8ppm
						-3	6			Borehole terminated at 5m			
						-4	7						
						-5	8						

PIEZOMETER GINTGEOTLCOV24303AC_COMBINED WITH AA GINT.GPJ COFFEY.GDT 24.5.12

Form GEO 5.10 Issue 3 Rev.0

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
DT	diatube
B	blank bit
V	V bit
T	TC bit
TBX	Tubex

*bit shown by suffix e.g. ADT

support

C casing N nil

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
P	pressure meter
Bs	bulk sample
R	refusal
E	environmental sample
PID	PID measurement
WS	water sample
PZ	piezometer
ALT	air lift test

classification symbols and soil description based on unified classification system

moisture

D	dry	W	wet
M	moist	Wp	plastic limit
		W_L	liquid limit

well details

betonite

sand

slotted PVC

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Engineering Log - Borehole

Borehole No.	**CBH5**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AD**
Date started:	**25.7.2012**
Date completed:	**25.7.2012**
Logged by:	**PD**
Checked by:	**ML**

Client: **INSW**

Principal:

Project: **SICEEP, Darling Harbour, Sydney NSW**

Borehole Location: **SICEEP Darling Harbour, Sydney NSW**

drill model and mounting: B80 MOBILE DRILL TRACK Easting: slope: -90° R.L. Surface:

hole diameter: 120 mm Northing bearing: datum:

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
ADV / ADT				E+-3.1ppm		0.5			**BRICK:**				
									SAND: Yellow brown, medium grained.	D	F		No odour or staining.
									ROADBASE:				
									FILL: Gravelly clayey sand, grey brown, fine grained gravel dark grey rock material.				Dup 4
				E+-4.2ppm		1.0							
						1.5			White gravel fragments.				
				E+-5.8ppm					**FILL:** Gravelly clay, low plasticity, dark grey gravel, glass/shell fragments.				
				E+-6.2ppm		2.0							
									Borehole CBH5 terminated at 2.2m				
						2.5							
						3.0							
						3.5							
						4.0							
						4.5							
						5.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil

C casing

penetration 1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

BOREHOLE GEOTLCOV24303AD.GPJ COFFEY.GDT 15.8.12

Form GEO 5.3 Issue 3 Rev.2

coffey environments

Engineering Log - Borehole

Borehole No.	**CBH5A**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AD**
Date started:	**27.7.2012**
Date completed:	**27.7.2012**
Logged by:	**PD**
Checked by:	**ML**

Client: **INSW**

Principal:

Project: **SICEEP, Darling Harbour, Sydney NSW**

Borehole Location: **SICEEP Darling Harbour, Sydney NSW**

drill model and mounting: B80 MOBILE DRILL TRACK Easting: slope: -90° R.L. Surface:

hole diameter: 120 mm Northing bearing: datum:

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
ADV				E+ 0.7ppm		1			**BRICK.**	D	F		No odour, No staining observed.
									SAND: Medium grained, yellow and brown.				
									ROADBASE:				
									FILL: GRAVELY CLAYEYSAND, fine grained, grey brown. Gravel fine to medium grained, dark grey.				
				E+ 1.9ppm									
				E+ 5.0ppm		2			Some white gravel fragments.				
									GRAVELLY CLAY: Low plasticity, dark grey, 1-5 cm rockpieces, some white shell fragments.				
				E+ 3.0ppm									
				E+ 1.3ppm		3			Becoming brown, minor shell and shell fragments..	M			
				E+ 2.0ppm					Orange brick fragments, shells and shell fragments.				Dup8
				E+ 1.1ppm		4			Increasing sand content.	W			ASS1
				E+ 0.6ppm					Becoming grey.				
				E+ 0.9ppm									
				E+ 1.3ppm		5							
									Ironstone band, red grey.	D	H		
									SAND, Highly weathered. Sandstone, medium to fine grained, red.		F		
				E+ 1.9ppm		6							ASS2
									Borehole CBH5A terminated at 6m				
						7							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, C casing, N nil

penetration 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Engineering Log - Piezometer

Borehole No.	**CBH6/MW6**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AD**
Client:	**INSW**
Date started:	**25.7.2012**
Principal:	
Date completed:	**25.7.2012**
Project:	**SICEEP, Darling Harbour, Sydney NSW**
Logged by:	**PD**
Borehole Location:	**SICEEP Darling Harbour, Sydney NSW**
Checked by:	**ML**

drill model & mounting: B80 MOBILE DRILL TRACK | Easting: | slope: -90° | R.L. Surface:

hole diameter: | Northing: | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	well details	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	structure and additional observations
ADV / ADT				E+-9.0ppm			0			**BRICK:**			
										SAND: Yellow brown, medium grained.	D	S	No odour or staining.
										ROADBASE:		F	
										FILL: Gravelly clayey sand, fine grained, dark grey, fine gravel.			
				E+-9.0ppm			1			**GRAVELLY SANDY CLAY**: Low-medium plasticity, brown, coarse grey, cream, white gravel, igneous rocks and sandstone.			
										CLAY: Medium plasticity, red-grey.			
				E+-8.6ppm									
			►	E+-10.0ppm			2			Becoming slightly paler in colour.			
										GRAVELLY CLAY: medium plasticity, red. Coarse grey and orange gravel.	M		
				E+-10.2ppm									(ASS1)
										CLAYEY SAND: Fine grained, dark grey, shell fragments.			
				E+-9.7ppm			3						(ASS2)
										SANDY CLAY: Medium plasticity, dark grey, shell fragments.	W		
				E+-9.6ppm									(ASS3)
										CLAY: High plasticity, dark grey.	M		
				E+-9.7ppm			4						(ASS4)
										CLAYEY SAND: Medium grained, dark grey.		H	
				E+-10.0ppm									(ASS5)
							5			Orange grey mottled.			
				E+-13.9ppm									(ASS6)
				E+-15.8ppm									(ASS7)
							6			Borehole terminated at 5.6m			
							7						

PIEZOMETER GEOTLCOV24303AD.GPJ COFFEY.GDT 15.8.12

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method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
DT	diatube
B	blank bit
V	V bit
T	TC bit
TBX	Tubex

*bit shown by suffix e.g. ADT

support: C casing, N nil

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
P	pressure meter
Bs	bulk sample
R	refusal
E	environmental sample
PID	PID measurement
WS	water sample
PZ	piezometer
ALT	air lift test

classification symbols and soil description based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Engineering Log - Borehole

Borehole No.	**CBH7**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AD**
Date started:	**25.7.2012**
Date completed:	**25.7.2012**
Logged by:	**PD**
Checked by:	**ML**

Client: **INSW**

Principal:

Project: **SICEEP, Darling Harbour, Sydney NSW**

Borehole Location: **SICEEP Darling Harbour, Sydney NSW**

drill model and mounting: KOMATSU 05 TRACK | Easting: | slope: -90° | R.L. Surface:

hole diameter: 120 mm | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
ADV / V-BIT						0.0			**ASPHALT:**				
									ROADBASE:				
				E+-8.7ppm		0.5			**GRAVELLY CLAYEY SAND**: Yellow brown, fine to medium gravel, dark grey, cream, crushed stones.	D	F		FILL. No odour or staining.
				E+-9.6ppm		1.0							Dup 3 Dup 3A.
									GRAVELLY SAND: Low plasticity, grey, gravel, medium shale gravel.				
				E+-9.3ppm		1.5							
									Borehole CBH7 terminated at 1.6m				
						2.0							
						2.5							
						3.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description
based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Engineering Log - Borehole

Borehole No.	**CBH7A**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AD**
Date started:	**27.7.2012**
Date completed:	**27.7.2012**
Logged by:	**PD**
Checked by:	**ML**

Client: **INSW**

Principal:

Project: **SICEEP, Darling Harbour, Sydney NSW**

Borehole Location: **SICEEP Darling Harbour, Sydney NSW**

drill model and mounting: KOMATSU 05 TRACK | Easting: | slope: -90° | R.L. Surface:

hole diameter: 120 mm | Northing | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
ADT/DV				E+ 1.3ppm		1			**ASPHALT**:				
									ROADBASE:	D	F		No odour, no staining observed.
				E+ 1.1ppm					**FILL:** Gravelly sandy CLAY, ow plasticity, yellow brown. 1mm - 3 cm Gravel, dark grey and cream crushed stones/ rock pieces				
				E+ 5.4ppm		2			Becoming dark grey.				
				E+ 7.0ppm					**GRAVELLY CLAY**: Low plasticity, yellow brown, gravel (1-5cm), dark grey rock.				
									GRAVELLY SAND CLAY: Low plasticity, dark grey (1-5mm), grey.		S		
				E+ , 8.0ppm		3					F		Dup 7, Dup 7A, ASS4.
				E+ 9.7ppm									
				E+ 9.9ppm		4			Becoming grey brown, medium plasticity, medium shale gravel.				
				E+ 9.2ppm					**CLAY**: Redish brown, gravel (1-5cm), red brown, grey sandstone.				
								CL	**GRAVELLY SANDY CLAY**: Medium plasticity, dark grey, medium grained gravel.	M			
				E+ 9.3ppm		5							ASS1
				E+ 11.4ppm					**CLAY:** Less sandy, white shell and shell fragments.				
				E+ 12.1ppm		6							ASS3
									Borehole CBH7A terminated at 6m				
						7							

BOREHOLE GEOTLCOV24303AD.GPJ COFFEY.GDT 15.8.12

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method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit
*bit shown by suffix e.g.	ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description
based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Engineering Log - Borehole

Borehole No.	**CBH8**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AD**
Client:	**INSW**
Date started:	**24.7.2012**
Principal:	
Date completed:	**24.7.2012**
Project:	**SICEEP, Darling Harbour, Sydney NSW**
Logged by:	**PD**
Borehole Location:	**SICEEP Darling Harbour, Sydney NSW**
Checked by:	**ML**

drill model and mounting: KOMATSU 05 TRACK | Easting: | slope: -90° | R.L. Surface:

hole diameter: 120 mm | Northing | bearing: | datum:

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
V-BITS				E+9.9ppm		1			**ASPHALT:** **FILL:** Gravelly clayey silt, dark grey, medium dark grey gravel.	D	F		No odour or staining.
				E+10.9ppm					**GRAVEL**: Some sand, orange, clay/brick fragments.				
				E+11.2ppm					**GRAVELLY CLAY**: Low plasticity, grey, medium crushed shale gravel, some orange fragments.				ASS1
				E+11.1ppm		2			**GRAVELLY SANDY CLAY**: Low-medium plasticity, grey brown, gravelly gravel, orange-grey.	M			
				E+11.3ppm					Becoming orange in colour.				Organic matter odour, no staining.
				E+14.6ppm		3			**CLAYEY SAND:** Medium-fine grained, dark grey.				Dup1, Dup 1A
				E+12.9ppm					Increasing clay content, some white shell fragments.				ASS2
				E+12.5ppm		4							ASS3
				E+11.8ppm									ASS4
				E+12.8ppm		5			**GRAVELLY SANDY CLAY:** Medium plasticity, yellow brown, medium dark yellow grey gravel.				ASS5
				E+11.8ppm									Dup2, ASS6,
				E+12.7ppm		6							ASS7
									Borehole CBH8 terminated at 6m				
						7							

BOREHOLE GEOTLCOV24303AD.GPJ COFFEY.GDT 15.8.12

Form GEO 5.3 Issue 3 Rev.2

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Engineering Log - Piezometer

Borehole No. **CBH9 / MW9**

Sheet 1 of 1

Office Job No.: **GEOTLCOV24303AD**

Client: **INSW**

Date started: **26.7.2012**

Principal:

Date completed: **26.7.2012**

Project: **SICEEP, Darling Harbour, Sydney NSW**

Logged by: **PD**

Borehole Location: **SICEEP Darling Harbour, Sydney NSW**

Checked by: **ML**

drill model & mounting: B80 MOBILE DRILL TRACK | Easting: | slope: -90° | R.L. Surface:

hole diameter: | Northing: | bearing: | datum:

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	well details	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	structure and additional observations
Sands				E+ 3.1 ppm			1			**BRICK:** **SAND:** **GRAVELLY CLAYEY SAND**: Fine grained, dark grey. Fine, dark grey gravel, minor orange rock shards.	D	F	FILL. No odour, no staining observed.
				E+ 5.2 ppm						Some yellow coarse grained sand, plus dark grey clayey sand, fragments of orange bricks.			
				E+ 6.4 ppm						Increasing clay content, orange brick fragments and ceramic pieces.			
				E+ 6.8 ppm			2			**CLAY:<<B> Medium plasticity, yellow brown.**			Dup 5A
				E+ 7.0 ppm						Becoming grey-red.			
			▶	E+ 6.7 ppm			3			**SANDY CLAY**: Medium plasticity, dark grey.	M		ASS1
				E+ 5.8 ppm						Minor white shell fragments.			ASS2
				E+ 3.0 ppm			4			White shells and shell fragments (1mm-7cm).	W		ASS3
				E+ 5.0 ppm						**CLAY:** Medium plasticity, red. slight yellow grey mottled.	D		ASS4
				E+ 4.2 ppm			5						ASS5
				E+ 4.5 ppm						Grey, red mottled.			ASS6
							6			Borehole terminated at 5.8m			
							7						

PIEZOMETER GEOTLCOV24303AD.GPJ COFFEY.GDT 15.8.12

Form GEO 5.10 Issue 3 Rev.0

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
DT	diatube
B	blank bit
V	V bit
T	TC bit
TBX	Tubex

*bit shown by suffix e.g. ADT

support

C casing N nil

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
P	pressure meter
Bs	bulk sample
R	refusal
E	environmental sample
PID	PID measurement
WS	water sample
PZ	piezometer
ALT	air lift test

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Engineering Log - Borehole

Borehole No.	**CBH10**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AD**
Date started:	**26.7.2012**
Date completed:	**26.7.2012**
Logged by:	**JG**
Checked by:	**ML**

Client: **INSW**

Principal:

Project: **SICEEP, Darling Harbour, Sydney NSW**

Borehole Location: **SICEEP Darling Harbour, Sydney NSW**

drill model and mounting: B80 MOBILE DRILL TRACK Easting: slope: -90° R.L. Surface:

hole diameter: 120 mm Northing bearing: datum:

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
									BRICK:	M			Brick pavement.
						0.5			**GRAVELLY SAND:** Medium to coarse grained, brown pale grey, fine to medium grained gravel (cemented material).				
				E+2.4 ppm					**GRAVELLY SANDY CLAY:** Low plasticity, dark grey / dark brow, with orange brown mottling, trace of cobbles.				
						1.0							
				E+2.3 ppm					**CLAYEY SAND:** Medium to coarse grained, grey pale grey with orange brown mottling, trace of fine to coarse gravel.				
						1.5							
				E+7.4 ppm					**SANDY CLAY:** Low plasticity, dark grey, medium grained sand, trace of fine to medium grained gravel.				
						2.0							
				E+7.3 ppm					**CLAY:**Low plasticity, motted grey pale, orange brown, dark grey, trace of fine grained sand.				Dup 5, Dup 5A
						2.5							
				E+4.8 ppm					**SANDY CLAY:** Fine to medium grained, pale yellow / pale brow.				
						3.0							
				E+6.3 ppm					**CLAY:** High plasticity, mottled grey / pale grey, orange brown, trace of fine gravels.				
				E+ 6.1 ppm		3.5		CH	**CLAY:**High plasticity, dark grey.	Wp			ASS1
				E+ 5.3 ppm		4.0			**SANDY CLAY:** Fine to medium grained, dark grey, trace of shell fragments.				ASS2
									Borehole CBH10 terminated at 4m				
						4.5							
						5.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

BOREHOLE GEOTLCOV24303AD.GPJ COFFEY.GDT 15.8.12

Form GEO 5.3 Issue 3 Rev.2

coffey environments

Engineering Log - Borehole

Borehole No.	**CBH11**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AD**
Date started:	**25.7.2012**
Date completed:	**25.7.2012**
Logged by:	**PD**
Checked by:	**ML**

Client: **INSW**

Principal:

Project: **SICEEP, Darling Harbour, Sydney NSW**

Borehole Location: **SICEEP Darling Harbour, Sydney NSW**

drill model and mounting: B80 MOBILE DRILL TRACK Easting: slope: -90° R.L. Surface:

hole diameter: 120 mm Northing bearing: datum:

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
ADV									**BRICK:**				
									SAND: medium grained, yellow brown.				
									ROADBASE: **FILL:** Gravelly sandy clay, low plasticity, dark grey, gravel, some orange clay brick fragments.	D	F		FILL. No odour or staining.
ADT				E+-4.2ppm					**CONCRETE:**				
						1			**FILL:** Gravelly sand, fine grained, dark grey gravel with grey rock pieces.				
				E+7.1ppm					**GRAVELLY SAND:** Medium grained, yellow-brown gravel, some red-brown fragments.		S		
				E+-9.2ppm					**GRAVELLY CLAY**: Low plasticity gravel, some grey-brown rock pieces.		F		
				E+-10.9ppm		2			Increasing clay content, medium plasticity, gravel with some stone pieces, yellow-brown.				
				E+11.7ppm									
				E+11.8ppm		3			**CLAY:** Medium high plasticity, dark grey with organic sediment.	M			
				E+12.1ppm									ASS1
				E+11.4ppm		4			Increase sand content, white shell fragments.	W			Dup6, Ass2
									Borehole CBH11 terminated at 4m				
						5							
						6							

BOREHOLE GEOTLCOV24303AD.GPJ COFFEY.GDT 15.8.12

Form GEO 5.3 Issue 3 Rev.2

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Borehole

Borehole No.	**BH118**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AF**
Date started:	**12.12.2012**
Date completed:	**12.12.2012**
Logged by:	**PD**
Checked by:	**ML**

Client: ***Infrastructure NSW***

Principal:

Project: ***SICEEP***

Borehole Location: ***Darling Harbour, NSW***

drill model and mounting: Komatsu 05 Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 mm | Northing | bearing: | datum: AHD

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
SS				E+2.0ppm					**ASPHALT**				
				E, A+1.5ppm					**FILL:** Gravelly SAND: Fine grained, dark grey brown. Gravel is fine crushed concrete and orange brick fragments	D	F		No odour or staining
				E, QC21, QC21A+1.6ppm		1			Some crushed concrete and metal pieces				
SPT				E+1.6ppm					**FILL:** Clayey SAND: Fine grained, brown	D	F		No odour or staining
				E, A+1.8ppm		2							
				E+2.0ppm									
			▼	E+1.5ppm		3			**ALLUVIUM:** SAND: Fine to medium grained, dark grey, organic	M	F		Organic matter odour, no staining
				E+1.6ppm						W			
				E+1.8ppm		4			Large white shell pieces				
				E+5.7ppm					Minor white shell fragments and sandstone pieces				
						5			Borehole BH118 terminated at 4.5m				
						6							

BOREHOLE GEOTLCOV24303AF.GPJ COFFEY.GDT 16.1.13

Form GEO 5.3 Issue 3 Rev.2

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

▼ 10/1/98 water level on date shown

► water inflow

◄ water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Borehole

Borehole No.	**BH119**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AF**
Client:	***Infrastructure NSW***
Date started:	**12.12.2012**
Principal:	
Date completed:	**12.12.2012**
Project:	***SICEEP***
Logged by:	**PD**
Borehole Location:	***Darling Harbour, NSW***
Checked by:	**ML**

drill model and mounting: Komatsu 05 Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 mm | Northing | bearing: | datum: AHD

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA									**CONCRETE**				
				E, A+1.1ppm					**SAND:** Medium grained, yellow to brown.	D	S		No odour or staining.
									FILL: Gravelly Clayey SAND: Fine grained, dark grey. Gravel fine to meidum, grey rock pieces.	D	F		No odour or staining.
				E					Asbestos fibrous sheet (approx 6mm)				
				E, QC20+1.3ppm		0.5			**FILL:** Gravelly CLAY: Low plasticity, orange to grey. Gravel fine, orange ironstone fragments.	D	F		No odour or staining.
									Gravelly Sandy CLAY: Low plasticity, dark grey. Gravel fine to medium, dark grey rock pieces.	D	H		No odour or staining.
				E+1.1ppm					**Clayey SAND:** Highly weathered sandstone, fine grained, orange to brown.	D	H		No odour or staining.
SPT						1.0							
				E, A+1.1ppm		1.5			**Sandy CLAY:** Low plasticity, yellow to brown.	D	H		No odour or staining.
				E+1.2ppm		2.0							
				E+1.3ppm					**Silty CLAY:** Organic, medium to high plasticity, dark grey. 1mm darker grey seams of potentiently organic matter.	D	H		No odour or staining.
						2.5							
				E+1.4ppm		3.0							
									Borehole BH119 terminated at 3m				
						3.5							
						4.0							

BOREHOLE GEOTLCOV24303AF.GPJ COFFEY.GDT 16.1.13

Form GEO 5.3 Issue 3 Rev.2

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Piezometer

Borehole No. **BH120/MW120**

Sheet 1 of 1

Office Job No.: **GEOTLCOV24303AF**

Client: ***Infrastructure NSW***

Date started: ***18.12.2012***

Principal:

Date completed: ***18.12.2012***

Project: ***SICEEP***

Logged by: ***PD***

Borehole Location: ***Darling Harbour, NSW***

Checked by: ***ML***

drill model & mounting: Komatsu 05 Track | Easting: 333679.383 | slope: -90° | R.L. Surface: 2.710

hole diameter: 115 | Northing: 6249893.26 | bearing: | datum: AHD

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	well details	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	structure and additional observations
SS				E, A+2.3ppm						**ASPHALT**			
										FILL: Silty GRAVEL: Fine to medium grained, grey	D	F	No odour or staining
				E+0.9ppm		2				**FILL:** Gravelly SAND: Fine to medium grained, cream, crushed sandstone	D	F	No odour or staining
				E+5.6ppm			1			Sandstone becoming more brown in colour, orange brick fragments		H	
				E, A+10ppm		1				Material turns grey and becomes slightly clayey			
				E+6.6ppm			2						
			▼	E+7.3ppm		0				**ALLUVIUM:** Clayey SAND: Fine grained, yellow brown	W	F	No odour or staining
				E, QC34+6.8ppm			3			**Clayey SAND:** Alluvial, fine grained, dark grey	W	F	No odour or staining
				E+5.5ppm		-1							organic matter odour, no staining
				E+5.9ppm			4			Abundant white shells			
										Borehole terminated at 4m			
						-2	5						
						-3	6						

PIEZOMETER GEOTLCOV24303AF.GPJ COFFEY.GDT 16.1.13

Form GEO 5.10 Issue 3 Rev.0

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
DT	diatube
B	blank bit
V	V bit
T	TC bit
TBX	Tubex

*bit shown by suffix e.g. ADT

support

C casing N nil

penetration

1 2 3 4 no resistance ranging to refusal

water

▼ 10/1/98 water level on date shown

water inflow

water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
P	pressure meter
Bs	bulk sample
R	refusal
E	environmental sample
PID	PID measurement
WS	water sample
PZ	piezometer
ALT	air lift test

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Borehole

Borehole No.	**BH121**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AF**
Client:	***Infrastructure NSW***
Date started:	***18.12.2012***
Principal:	
Date completed:	***18.12.2012***
Project:	***SICEEP***
Logged by:	***PD***
Borehole Location:	***Darling Harbour, NSW***
Checked by:	***ML***

drill model and mounting: Komatsu 05 Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 mm | Northing | bearing: | datum: AHD

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
SST				E+7.3ppm		0.5			**ASPHALT** **FILL:** Silty GRAVEL: Medium grained, brown. Gravel is fine to medium grey igneous rock pieces	D	F		No odour or staining
				E, A+9.3ppm					**FILL:** Gravelly Clayey SAND: Medium grained, dark grey. Gravel is fine to medium dark grey and orange brown rock fragments with some crushed orange brick fragments Concrete Slab Borehole BH121 terminated at 0.6m				
						1.0							
						1.5							
						2.0							

BOREHOLE GEOTLCOV24303AF.GPJ COFFEY.GDT 16.1.13

Form GEO 5.3 Issue 3 Rev.2

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Borehole

Borehole No.	**BH121A**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AF**
Date started:	**18.12.2012**
Date completed:	**18.12.2012**
Logged by:	**PD**
Checked by:	**ML**

Client: ***Infrastructure NSW***

Principal:

Project: ***SICEEP***

Borehole Location: ***Darling Harbour, NSW***

drill model and mounting: Komatsu 05 Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 mm | Northing | bearing: | datum: AHD

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
SST				E+3.1ppm					**ASPHALT**				
									FILL: Gravelly Clayey SAND: Fine to medium grained, dark grey. Gravel is fine to medium grained, Dark grey rock pieces	D	F		No odour or staining
				E+9.0ppm		0.5			**FILL:** Gravelly SAND: Fine grained, brown. Gravel is fine to medium grey brown rock pieces with some crushed red brick fragments	D	F		No odour or staining
				E, A+12ppm		1.0			**FILL:** Gravelly Sandy CLAY: Low plasticity, dark grey. Gravel is fine grey rock pieces and crushed concrete and orange brick fragments with some rusted metal pieces	D	F		No odour or staining
				E, QC35, QC35A+11.3ppm		1.5			White ceramic piece and more metal pieces and red/orange brick pieces				
				E+8.0ppm		2.0			More white ceramic/porcelain pieces				
			▼	E, A+8.0ppm		2.5			**ALLUVIUM:** Clayey SAND: Fine grained, yellow brown	M	F		No odour or staining
				E+4.6ppm		3.0			**Sandy CLAY:** Medium plasticity, dark grey	M	F		No odour or staining
				E+5.2ppm		3.5			Some white shells	W			
									Borehole BH121A terminated at 3.5m				
						4.0							

BOREHOLE GEOTLCOV24303AF.GPJ COFFEY.GDT 16.1.13

Form GEO 5.3 Issue 3 Rev.2

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

▼ 10/1/98 water level on date shown

► water inflow

◄ water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

coffey environments

Environmental Log - Borehole

Borehole No.	**BH122**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AF**
Client:	***Infrastructure NSW***
Date started:	***13.12.2012***
Principal:	
Date completed:	***13.12.2012***
Project:	***SICEEP***
Logged by:	***PD***
Borehole Location:	***Darling Harbour, NSW***
Checked by:	***ML***

drill model and mounting: Komatsu 05 Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 mm | Northing | bearing: | datum: AHD

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetro-meter kPa 100 200 300 400	structure and additional observations
HA				E, EC22+12.9ppm		0.0			**MULCH, SAWDUST AND TOPSOIL**	D	L		No odour or staining
									FILL: Gravelly SAND: Fine grained, brown. Gravel is very fine brown and dark grey rock pieces	D	S		No odour or staining
SS				E, A+19.9ppm		0.5			Crushed grey sandstone noted		H		
				E+19.8ppm		1.0			Ssandstone and dark grey igneous rocks and concrete noted				
SPT						1.5							
SS				E+19.9ppm					Occassional orange crushed brick fragments				
									Borehole BH122 terminated at 1.7m				
						2.0							
						2.5							
						3.0							
						3.5							
						4.0							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description
based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

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coffey environments

Environmental Log - Borehole

Borehole No.	**BH122A**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AF**
Date started:	**13.12.2012**
Date completed:	**13.12.2012**
Logged by:	**PD**
Checked by:	**ML**

Client: ***Infrastructure NSW***

Principal:

Project: ***SICEEP***

Borehole Location: ***Darling Harbour, NSW***

drill model and mounting: Komatsu 05 Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 mm | Northing | bearing: | datum: AHD

drilling information							material substance						
method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA				E, A+2.3ppm					**MULCH, SAWDUST AND TOPSOIL**	D	L		No odour or staining
SS/T									**FILL:** Gravelly SAND: Fine grained, grey brown. Gravel is very fine brown and dark grey rock fragments	D	H		No odour or staining
				E+1.5ppm					Sandstone and ballast and orange brick pieces and fragments				
				E+1.6ppm		1							
				E, A+1.6ppm									
						2			Some ironstone pieces				
SPT				E, QC25, QC25A+1.4ppm									
									ALLUVIUM: Sandy CLAY: Low plasticity, orange grey	D	F		No odour or staining
				E+2.0ppm									
						3							
				E, A+1.5ppm									
				E+1.9ppm					**SAND:** Alluvial, fine to medium grained, dark grey	D	H		No odour or staining
				E+2.5ppm		4							Slight organic matter odour, no staining
									Borehole BH122A terminated at 4m				
						5							
						6							

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support

M mud N nil
C casing

penetration

1 2 3 4 — no resistance ranging to refusal

water

10/1/98 water level on date shown
water inflow
water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
E	environmental sample
R	refusal

classification symbols and soil description

based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
W_L	liquid limit

consistency/density index

VS	very soft
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Form GEO 5.3 Issue 3 Rev.2

coffey environments

Environmental Log - Borehole

Borehole No.	**BH123**
Sheet	1 of 1
Office Job No.:	**GEOTLCOV24303AF**
Client:	***Infrastructure NSW***
Date started:	**13.12.2012**
Principal:	
Date completed:	**13.12.2012**
Project:	***SICEEP***
Logged by:	**PD**
Borehole Location:	***Darling Harbour, NSW***
Checked by:	**ML**

drill model and mounting: Komatsu 05 Track | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 mm | Northing | bearing: | datum: AHD

drilling information | **material substance**

method	penetration 1 2 3	support	water	notes samples, tests, etc	RL	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency/ density index	pocket penetrometer kPa 100 200 300 400	structure and additional observations
HA									**MULCH, WOODCHIP AND TOPSOIL**	D	L		No odour or staining
SS/T				E, A+19.2ppm					**FILL:** Gravelly Clayey SAND: Fine grained, brown. Gravel is very fine brown and dark grey rock fragments	D	H		No odour or staining
						0.5			Some white crushed concrete				
				E+20.1ppm									
						1.0			Some very fine crushed orange brick fragments				
				E+29.0ppm									
						1.5							
				E, A+41.7ppm									
						2.0			Borehole BH123 terminated at 1.7m				

method

AS	auger screwing*
AD	auger drilling*
RR	roller/tricone
W	washbore
CT	cable tool
HA	hand auger
DT	diatube
B	blank bit
V	V bit
T	TC bit

*bit shown by suffix e.g. ADT

support: M mud, N nil, C casing

penetration: 1 2 3 4 — no resistance ranging to refusal

water: 10/1/98 water level on date shown; water inflow; water outflow

notes, samples, tests

U_{50}	undisturbed sample 50mm diameter
U_{63}	undisturbed sample 63mm diameter
D	disturbed sample
N	standard penetration test (SPT)
N*	SPT - sample recovered
Nc	SPT with solid cone
V	vane shear (kPa)
P	pressuremeter
Bs	bulk sample
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R	refusal

classification symbols and soil description based on unified classification system

moisture

D	dry
M	moist
W	wet
Wp	plastic limit
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consistency/density index

VS	very soft
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