PointID : BH205 Depth Range: 16.00 - 20.60 m

drawn		coffey geotechnics SPECIALISTS MANAGING THE EARTH	client:	Lend Lease Development Pty Ltd	
approved			project:	SICEEP - International Convention Centre (ICC) Hotel Darling Harbour, Sydney	
date	**07/06/2013**		title:	**CORE PHOTOGRAPH BH205**	
scale	**N.T.S.**				
original size	**A4**		project no: GEOTLCOV24303AH	fig no: **FIGURE 18**	rev:

CDF_0_9_04AL.GLB GrfcTbl COF PHOTO CORE PHOTO 1 PER PAGE GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 07/06/2013 10:27

coffey geotechnics

Engineering Log - Borehole

Borehole ID.	***BH206***		
sheet:	1 of 4		
project no.	***GEOTLCOV24303AH***		
client:	***Lend Lease Development Pty Ltd***	date started:	***27 May 2013***
principal:		date completed:	***27 May 2013***
project:	***SICEEP - International Convention Centre (ICC) Hotel***	logged by:	***CL***
location:	***Darling Harbour, Sydney***	checked by:	***DS***

position: E: 333,376.20; N: 6,250,483.20 (Datum Not Specified) surface elevation : 2.70m (Datum Not Specified) angle from horizontal: 90°

drill model: DP520 mounting: Track Casing Diameter : HQ

drilling information | **material substance**

method & support	penetration	water	samples & field tests	RL (m)	depth (m)	graphic log	classification symbol	material description (SOIL TYPE: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	hand penetrometer (kPa)	structure and additional observations
AD/T; HQ Casing			E; E; E; SPT 6, 10, 13 N*=23	2; 1	1.0; 2.0		SM	**ASPHALT**: 0.08m.	D			**PAVEMENT**
								FILL: Gravelly SAND: fine to coarse, dark grey, fine to medium igneous gravel.				**ROADBASE** PID = 1.7ppm at 0.6m, no odour or staining PID = 0ppm at 0.4m, no odour or staining
								from 0.8m - becoming dark grey mottled orange brown				PID = 0ppm at 0.9m, no odour or staining
								Silty SAND: fine to medium, mottled orange brown, brown, pale grey and pink, with a trace of fine grained sandstone gravel.		D		**RESIDUAL SOIL**
								SANDSTONE: fine to medium grained, orange brown mottled grey and pink, highly weathered, estimated low strength				**BEDROCK**
				0; -1; -2; -3; -4; -5	3.0; 4.0; 5.0; 6.0; 7.0			Borehole BH206 continued as cored hole				

CDF_0_9_04AL.GLB Log COF BOREHOLE: NON CORED GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 11/07/2013 15:13

method
- AD auger drilling*
- AS auger screwing*
- 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. AD/T

support
- M mud
- N nil
- C casing

penetration
1 2 3 — no resistance ranging to refusal

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- U## undisturbed sample ##mm diameter
- D disturbed sample
- B bulk disturbed sample
- E environmental sample
- HP hand penetrometer (kPa)
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- VS vane shear peak/remouded (uncorrected kPa)
- R refusal

classification symbol & soil description based on Unified Classification System

moisture
- D dry
- M moist
- W wet

consistency / relative density
- 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 geotechnics

Engineering Log - Cored Borehole

client:	*Lend Lease Development Pty Ltd*	Borehole ID.	***BH206***
principal:		sheet:	2 of 4
project:	*SICEEP - International Convention Centre (ICC) Hotel*	project no.	***GEOTLCOV24303AH***
location:	*Darling Harbour, Sydney*	date started:	***27 May 2013***
		date completed:	***27 May 2013***
		logged by:	***CL***
		checked by:	***DS***

position: E: 333,376.20; N: 6,250,483.20 (Datum Not Specified) surface elevation : 2.70m (Datum Not Specified) angle from horizontal: 90°

drill model: DP520 mounting: Track Casing Diameter : HQ

drilling information				material substance						rock mass defects		
method & support	water	RL (m)	depth (m)	graphic log	material description **ROCK TYPE**: grain characterisics, colour, structure, minor components	weathering & alteration	estimated strength & Is50 (X = axial; O = diametral) VL L M H VH EH	samples, field tests & Is(50) (MPa) a = axial; d = diametral	core run & RQD	defect spacing (mm) 30 100 300 1000 3000	additional observations and defect descriptions (type, inclination, planarity, roughness, coating, thickness, other) particular / general
		2									
			1.0								
		1									
			2.0		start coring at 2.30m						
NMLC		0	3.0		**SANDSTONE**: medium to coarse grained, yellow brown mottled brown with dark grey laminae, iron stained, distinctly cross bedded at 0-5° 2.65m - 3.4m: coarse grained	MW		a=0.68 d=0.47	96%		SM, Clayey sand, 10 mm PT, 0°, PL, RO, CN PT, 0°, PL, RO, CN
		-1						a=1.74 d=1.15			JT, 10°, PL, RO, CN PT, 0°, PL, RO, Fe SN
			4.0					a=1.27 d=1.68			
		-2									JT, 10°, PL, RO, CN PT, 0°, PL, RO, CN
			5.0		5.1m - becoming mottled yellow brown and pale grey with dark grey laminae			a=0.77 d=0.23	97%		PT, 0°, PL, RO, Fe SN PT, 0°, PL, RO, CN
		-3									
			6.0								JT, 20°, PL, RO, CN
		-4						a=0.50 d=2.06			PT, 0°, PL, RO, CN PT, 0°, PL, RO, CN
			7.0		**SANDSTONE**: medium to coarse grained, pale grey with dark grey shale lenticules	XW					
					SHALE: dark grey with a trace of fine grained pale grey sandstone laminae	FR		a=0.06 d=0.06	92%		Highly fractured zone, 40mm XW SM, 20mm
		-5			**SANDSTONE**: fine to medium grained, pale grey with some dark grey laminae, distinctly cross bedded at 0-10°						

method & support

DT	diatube
AS	auger screwing
AD	auger drilling
RR	roller/tricone
CB	claw or blade bit
W	washbore
NMLC	NMLC core (51.9 mm)
NQ	wireline core (47.6mm)
HQ	wireline core (63.5mm)
PQ	wireline core (85.0mm)
SPT	standard penetration test

water

- 10/10/12, water level on date shown
- water inflow
- complete drilling fluid loss
- partial drilling fluid loss
- 25uL water pressure test result (lugeons) for depth interval shown

graphic log / core recovery

- core recovered (graphic symbols indicate material)
- no core recovered

core run & RQD

- barrel withdrawn

RQD = Rock Quality Designation (%)

weathering & alteration*

RS	residual soil
XW	extremely weathered
HW	highly weathered
DW	distinctly weathered
MW	moderately weathered
SW	slightly weathered
FR	fresh

*W replaced with A for alteration

strength

VL	very low
L	low
M	medium
H	high
VH	very high
EH	extremely high

defect type

PT	parting
JT	joint
SZ	shear zone
SS	shear surface
CS	crushed seam
SM	seam
DB	drilling break

planarity

PL	planar
CU	curved
UN	undulating
ST	stepped
IR	Irregular

roughness

SL	slickensided
POL	polished
SO	smooth
RO	rough
VR	very rough

coating

CN	clean
SN	stain
VN	veneer
CO	coating

CDF_0_9_04AL.GLB Log COF BOREHOLE: CORED GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 11/07/2013 15:10

coffey geotechnics

Engineering Log - Cored Borehole

client:	***Lend Lease Development Pty Ltd***	Borehole ID.	***BH206***
principal:		sheet:	3 of 4
project:	***SICEEP - International Convention Centre (ICC) Hotel***	project no.	***GEOTLCOV24303AH***
location:	***Darling Harbour, Sydney***	date started:	***27 May 2013***
		date completed:	***27 May 2013***
		logged by:	***CL***
		checked by:	***DS***

position: E: 333,376.20; N: 6,250,483.20 (Datum Not Specified) surface elevation : 2.70m (Datum Not Specified) angle from horizontal: 90°

drill model: DP520 mounting: Track Casing Diameter : HQ

drilling information | **material substance** | **rock mass defects**

method & support	water	RL (m)	depth (m)	graphic log	material description **ROCK TYPE**: grain characterisics, colour, structure, minor components	weathering & alteration	estimated strength & Is50 (X = axial; O = diametral) VL L M H VH EH	samples, field tests & Is(50) (MPa) a = axial; d = diametral	core run & RQD	defect spacing (mm) 30 100 300 1000 3000	additional observations and defect descriptions (type, inclination, planarity, roughness, coating, thickness, other) particular / general
NMLC					**SANDSTONE**: fine to medium grained, pale grey with some dark grey laminae, distinctly cross bedded at 0-10° *(continued)*	FR		a=1.38 d=0.82			PT, 0°, PL, RO, CN
		-6									XW SM, 10mm
			9.0		**SANDSTONE**: fine to medium grained, pale grey with dark grey carbonaceous flecks, massive				92%		
		-7						a=1.56 d=1.22			PT, 0°, PL, RO, CN
			10.0						100%		
		-8									
			11.0		11m - 11.45m: indistinctly cross bedded at 20°			a=1.56 d=1.93			
								a=2.12 d=2.05			PT, 0°, PL, RO, CN JT, 15°, PL, RO, CN
		-9									
			12.0					d=1.65			
		-10							100%		
			13.0								
					SANDSTONE: fine to medium grained, pale grey with grey laminae, distinctly cross bedded at 0-5° 13.55m: shale band 60mm 13.65m: shale clast 20mm			a=1.57 d=2.10			PT, 0°, PL, RO, CN
		-11									
			14.0					a=1.36 d=1.32			
		-12									
			15.0					a=1.81 d=1.57	100%		
		-13									SM, Clay, 20 mm
					from 15.8 to 15.88m - shale clast inclusion				60% 90%		

method & support

DT	diatube
AS	auger screwing
AD	auger drilling
RR	roller/tricone
CB	claw or blade bit
W	washbore
NMLC	NMLC core (51.9 mm)
NQ	wireline core (47.6mm)
HQ	wireline core (63.5mm)
PQ	wireline core (85.0mm)
SPT	standard penetration test

water

10/10/12, water level on date shown
water inflow
complete drilling fluid loss
partial drilling fluid loss
25uL water pressure test result (lugeons) for depth interval shown

graphic log / core recovery

core recovered (graphic symbols indicate material)
no core recovered

core run & RQD

barrel withdrawn

RQD = Rock Quality Designation (%)

weathering & alteration*

RS	residual soil
XW	extremely weathered
HW	highly weathered
DW	distinctly weathered
MW	moderately weathered
SW	slightly weathered
FR	fresh

*W replaced with A for alteration

strength

VL	very low
L	low
M	medium
H	high
VH	very high
EH	extremely high

defect type

PT	parting
JT	joint
SZ	shear zone
SS	shear surface
CS	crushed seam
SM	seam
DB	drilling break

planarity

PL	planar
CU	curved
UN	undulating
ST	stepped
IR	Irregular

roughness

SL	slickensided
POL	polished
SO	smooth
RO	rough
VR	very rough

coating

CN	clean
SN	stain
VN	veneer
CO	coating

CDF_0_9_04AL.GLB Log COF BOREHOLE: CORED GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 11/07/2013 15:10

coffey geotechnics

Engineering Log - Cored Borehole

Borehole ID.	***BH206***		
sheet:	4 of 4		
project no.	***GEOTLCOV24303AH***		
client:	***Lend Lease Development Pty Ltd***	date started:	***27 May 2013***
principal:		date completed:	***27 May 2013***
project:	***SICEEP - International Convention Centre (ICC) Hotel***	logged by:	***CL***
location:	***Darling Harbour, Sydney***	checked by:	***DS***

position: E: 333,376.20; N: 6,250,483.20 (Datum Not Specified) surface elevation : 2.70m (Datum Not Specified) angle from horizontal: 90°

drill model: DP520 mounting: Track Casing Diameter : HQ

drilling information | **material substance** | **rock mass defects**

method & support	water	RL (m)	depth (m)	graphic log	material description **ROCK TYPE**: grain characterisics, colour, structure, minor components	weathering & alteration	estimated strength & Is50 (X = axial; O = diametral) VL L M H VH EH	samples, field tests & Is(50) (MPa) a = axial; d = diametral	core run & RQD	defect spacing (mm) 30 100 300 1000 3000	additional observations and defect descriptions (type, inclination, planarity, roughness, coating, thickness, other) particular / general
NMLC					**SANDSTONE**: fine to medium grained, pale grey with grey laminae, distinctly cross bedded at 0-5° *(continued)*	FR		a=1.96 d=1.53			PT, 0°, PL, RO, CN
		-14									
			17.0								
									90%		
		-15						a=2.42 d=2.58			Highly fractured zone, 80mm PT, 0°, PL, RO, CN PT, 0°, PL, RO, CN
			18.0								PT, 0°, PL, RO, CN SM, Clay, 10 mm
		-16									
			19.0					a=2.56 d=2.36 a=2.46 d=2.30			
		-17							100%		
			20.0					a=1.96 d=2.17			
					Borehole BH206 terminated at 20.40 m						
		-18									
			21.0								
		-19									
			22.0								
		-20									
			23.0								
		-21									

method & support

DT	diatube
AS	auger screwing
AD	auger drilling
RR	roller/tricone
CB	claw or blade bit
W	washbore
NMLC	NMLC core (51.9 mm)
NQ	wireline core (47.6mm)
HQ	wireline core (63.5mm)
PQ	wireline core (85.0mm)
SPT	standard penetration test

water

10/10/12, water level on date shown
water inflow
complete drilling fluid loss
partial drilling fluid loss
25uL water pressure test result (lugeons) for depth interval shown

graphic log / core recovery

core recovered (graphic symbols indicate material)
no core recovered

core run & RQD

barrel withdrawn

RQD = Rock Quality Designation (%)

weathering & alteration*

RS	residual soil
XW	extremely weathered
HW	highly weathered
DW	distinctly weathered
MW	moderately weathered
SW	slightly weathered
FR	fresh

*W replaced with A for alteration

strength

VL	very low
L	low
M	medium
H	high
VH	very high
EH	extremely high

defect type

PT	parting
JT	joint
SZ	shear zone
SS	shear surface
CS	crushed seam
SM	seam
DB	drilling break

planarity

PL	planar
CU	curved
UN	undulating
ST	stepped
IR	Irregular

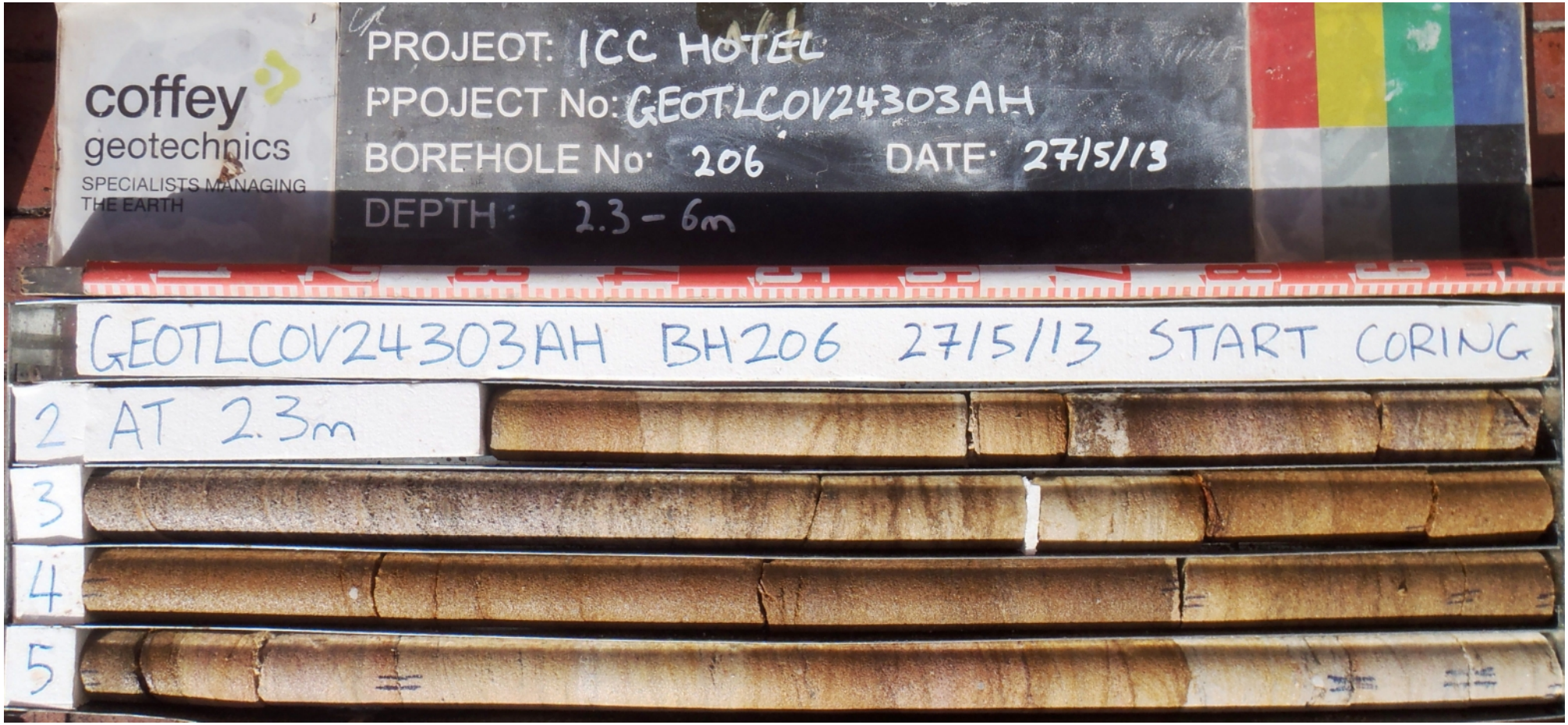
roughness

SL	slickensided
POL	polished
SO	smooth
RO	rough
VR	very rough

coating

CN	clean
SN	stain
VN	veneer
CO	coating

CDF_0_9_04AL.GLB Log COF BOREHOLE: CORED GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 11/07/2013 15:10



PointID : BH206 Depth Range: 2.30 - 6.00 m

drawn		coffey geotechnics SPECIALISTS MANAGING THE EARTH	client:	Lend Lease Development Pty Ltd	
approved			project:	SICEEP - International Convention Centre (ICC) Hotel Darling Harbour, Sydney	
date	**07/06/2013**		title:	**CORE PHOTOGRAPH BH206**	
scale	**N.T.S.**				
original size	**A4**		project no: GEOTLCOV24303AH	fig no: **FIGURE 19**	rev:

CDF_0_9_04AL.GLB GrfcTbl COF PHOTO CORE PHOTO 1 PER PAGE GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 07/06/2013 10:27

PointID : BH206 Depth Range: 6.00 - 11.00 m

drawn		coffey geotechnics SPECIALISTS MANAGING THE EARTH	client:	Lend Lease Development Pty Ltd	
approved			project:	SICEEP - International Convention Centre (ICC) Hotel Darling Harbour, Sydney	
date	**07/06/2013**		title:	**CORE PHOTOGRAPH BH206**	
scale	**N.T.S.**				
original size	**A4**		project no: GEOTLCOV24303AH	fig no: **FIGURE 20**	rev:

CDF_0_9_04AL.GLB GrfcTbl COF PHOTO CORE PHOTO 1 PER PAGE GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 07/06/2013 10:28

PointID : BH206 Depth Range: 11.00 - 16.00 m

drawn		coffey geotechnics SPECIALISTS MANAGING THE EARTH	client:	Lend Lease Development Pty Ltd	
approved			project:	SICEEP - International Convention Centre (ICC) Hotel Darling Harbour, Sydney	
date	**07/06/2013**		title:	**CORE PHOTOGRAPH BH206**	
scale	**N.T.S.**				
original size	**A4**		project no: GEOTLCOV24303AH	fig no: **FIGURE 21**	rev:

CDF_0_9_04AL.GLB GrfcTbl COF PHOTO CORE PHOTO 1 PER PAGE GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 07/06/2013 10:28

PointID : BH206 Depth Range: 16.00 - 20.40 m

drawn		coffey geotechnics SPECIALISTS MANAGING THE EARTH	client: Lend Lease Development Pty Ltd	
approved			project: SICEEP - International Convention Centre (ICC) Hotel Darling Harbour, Sydney	
date	07/06/2013		title: **CORE PHOTOGRAPH BH206**	
scale	N.T.S.			
original size	A4		project no: GEOTLCOV24303AH	fig no: **FIGURE 22** rev:

CDF_0_9_04AL.GLB GrfcTbl COF PHOTO CORE PHOTO 1 PER PAGE GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 07/06/2013 10:28

coffey geotechnics

Engineering Log - Borehole

client:	*Lend Lease Development Pty Ltd*	Borehole ID.	***BH207***
principal:		sheet:	1 of 4
project:	***SICEEP - International Convention Centre (ICC) Hotel***	project no.	***GEOTLCOV24303AH***
location:	***Darling Harbour, Sydney***	date started:	***14 May 2013***
		date completed:	***15 May 2013***
		logged by:	***JW***
		checked by:	***DS***

position: E: 333,380.80; N: 6,250,502.90 (Datum Not Specified) surface elevation : 2.80m (Datum Not Specified) angle from horizontal: 90°

drill model: DP520 mounting: Track Casing Diameter : HQ

drilling information | **material substance**

method & support	penetration	water	samples & field tests	RL (m)	depth (m)	graphic log	classification symbol	material description (SOIL TYPE: plasticity or particle characteristic, colour, secondary and minor components)	moisture condition	consistency / relative density	hand penetrometer (kPa)	structure and additional observations
HA			E					**BRICK PAVER**: 0.1m.				**PAVEMENT**
								FILL: SAND: fine to medium, brown and orange brown.	M			**FILL**
			E					becoming dark brown				PID = 0.0ppm at 0.2m, no odour or staining
				-2				**FILL: SAND**: fine to medium, mottled grey, pale grey and brown, with a trace of clay and fine gravel.				PID = 0.0ppm at 0.5m, no odour or staining
			E		1.0			**FILL: SAND**: fine to medium, pale orange and brown.				
AD/V								with a trace of shell				PID = 0.0ppm at 1.1m, no odour or staining
			SPT 6, 14, 33/120mm N*=R	-1			SC	**Clayey SAND**: medium to coarse, mottled grey, brown, dark red purple.		MD / D		**RESIDUAL SOIL**
HQ Casing					2.0			**SANDSTONE**: medium to coarse grained, grey with carbonaceous laminae, highly weathered, low strength				**BEDROCK**
AD/T												
				-0	3.0			Borehole BH207 continued as cored hole				
				-1	4.0							
				-2	5.0							
				-3	6.0							
				-4	7.0							
				-5								

method
- AD auger drilling*
- AS auger screwing*
- 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. AD/T

support
- M mud
- N nil
- C casing

penetration
1 2 3 — no resistance ranging to refusal

water
- 10-Oct-12 water level on date shown
- water inflow
- water outflow

samples & field tests
- U## undisturbed sample ##mm diameter
- D disturbed sample
- B bulk disturbed sample
- E environmental sample
- HP hand penetrometer (kPa)
- N standard penetration test (SPT)
- N* SPT - sample recovered
- Nc SPT with solid cone
- VS vane shear peak/remouded (uncorrected kPa)
- R refusal

classification symbol & soil description based on Unified Classification System

moisture
- D dry
- M moist
- W wet

consistency / relative density
- 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

CDF_0_9_04AL.GLB Log COF BOREHOLE: NON CORED GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 11/07/2013 15:13

coffey geotechnics

Engineering Log - Cored Borehole

Borehole ID.	**BH207**		
sheet:	2 of 4		
project no.	**GEOTLCOV24303AH**		
client:	**Lend Lease Development Pty Ltd**	date started:	**14 May 2013**
principal:		date completed:	**15 May 2013**
project:	**SICEEP - International Convention Centre (ICC) Hotel**	logged by:	**JW**
location:	**Darling Harbour, Sydney**	checked by:	**DS**

position: E: 333,380.80; N: 6,250,502.90 (Datum Not Specified) surface elevation : 2.80m (Datum Not Specified) angle from horizontal: 90°

drill model: DP520 mounting: Track Casing Diameter : HQ

drilling information				material substance						rock mass defects		
method & support	water	RL (m)	depth (m)	graphic log	material description **ROCK TYPE**: grain characterisics, colour, structure, minor components	weathering & alteration	estimated strength & Is50 (X = axial; O = diametral) VL L M H VH EH	samples, field tests & Is(50) (MPa) a = axial; d = diametral	core run & RQD	defect spacing (mm) 30 100 300 1000 3000	additional observations and defect descriptions (type, inclination, planarity, roughness, coating, thickness, other) particular / general
		2	1.0								
		1	2.0		start coring at 2.70m						
NMLC		0	3.0		**SANDSTONE**: medium to coarse grained, grey with dark grey laminate, indistinctly laminated at 0-20°	SW XW SW		a=0.13 a=1.07 d=0.77	0%		Highly fractured zone, 120mm SM, 100 mm, XW PT, 0°, PL, RO, CN PT, 0°, PL, RO, Clay CO PT, 0°, PL, RO, CN PT, 0°, PL, RO, Fe SN
		-1	4.0		**SANDSTONE**: medium to coarse grained, pale grey brown with some shale breccia, iron oxide bedding, indistinctly laminated at 10-20°				72%		PT, 0°, PL, RO, Fe SN JT, 20°, PL, RO, CN
		-2	5.0		**SANDSTONE**: medium to coarse grained, pale grey, yellow brown and red brown, indistinctly laminated at 0-20°, heavily iron stained	MW SW		a=0.32 d=1.12	63%		PT, 10°, PL, RO, CN JT, 20°, PL, RO, CN PT, 10°, PL, RO, CN
		-3	6.0			MW		a=2.18 d=1.48 a=1.25 d=1.35	97%		CS, 10 mm PT, 0 - 10°, IR, RO, Fe SN PT, 0°, PL, RO, Fe SN PT, 0°, IR, RO, Fe SN
		-4	7.0		**SANDSTONE**: medium to coarse grained, grey, with carbonaceous laminae, and shale clast, indistinctly bedded	FR		d=0.51			PT, 10°, IR, RO, X VN PT, 5°, IR, VR, CN SM, 50 mm, XW
		-5			**INTERBEDDED SHALE AND SANDSTONE**: shanle is dark grey, sandstone is medium grained, pale grey	HW			45%		SM, Clay, 480 mm PT, 0 - 5°, IR - PL, SO, CN

method & support

DT	diatube
AS	auger screwing
AD	auger drilling
RR	roller/tricone
CB	claw or blade bit
W	washbore
NMLC	NMLC core (51.9 mm)
NQ	wireline core (47.6mm)
HQ	wireline core (63.5mm)
PQ	wireline core (85.0mm)
SPT	standard penetration test

water

- 10/10/12, water level on date shown
- water inflow
- complete drilling fluid loss
- partial drilling fluid loss
- 25uL water pressure test result (lugeons) for depth interval shown

graphic log / core recovery

- core recovered (graphic symbols indicate material)
- no core recovered

core run & RQD

- barrel withdrawn

RQD = Rock Quality Designation (%)

weathering & alteration*

RS	residual soil
XW	extremely weathered
HW	highly weathered
DW	distinctly weathered
MW	moderately weathered
SW	slightly weathered
FR	fresh

*W replaced with A for alteration

strength

VL	very low
L	low
M	medium
H	high
VH	very high
EH	extremely high

defect type

PT	parting
JT	joint
SZ	shear zone
SS	shear surface
CS	crushed seam
SM	seam
DB	drilling break

planarity

PL	planar
CU	curved
UN	undulating
ST	stepped
IR	Irregular

roughness

SL	slickensided
POL	polished
SO	smooth
RO	rough
VR	very rough

coating

CN	clean
SN	stain
VN	veneer
CO	coating

CDF_0_9_04AL.GLB Log COF BOREHOLE: CORED GEOTLCOV24303AH BH20X SERIES.GPJ <<DrawingFile>> 11/07/2013 15:10

coffey geotechnics

Engineering Log - Cored Borehole

client:	*Lend Lease Development Pty Ltd*	Borehole ID.	***BH207***
		sheet:	3 of 4
		project no.	***GEOTLCOV24303AH***
principal:		date started:	***14 May 2013***
project:	***SICEEP - International Convention Centre (ICC) Hotel***	date completed:	***15 May 2013***
location:	***Darling Harbour, Sydney***	logged by:	***JW***
		checked by:	***DS***

position: E: 333,380.80; N: 6,250,502.90 (Datum Not Specified) surface elevation : 2.80m (Datum Not Specified) angle from horizontal: 90°

drill model: DP520 mounting: Track Casing Diameter : HQ

drilling information | **material substance** | **rock mass defects**

method & support	water	RL (m)	depth (m)	graphic log	material description **ROCK TYPE**: grain characterisics, colour, structure, minor components	weathering & alteration	estimated strength & Is50 (X = axial; O = diametral) VL L M H VH EH	samples, field tests & Is(50) (MPa) a = axial; d = diametral	core run & RQD	defect spacing (mm) 30 100 300 1000 3000	additional observations and defect descriptions (type, inclination, planarity, roughness, coating, thickness, other) particular / general
NMLC					**SANDSTONE**: medium to coarse grained, carbonaceous laminae, rooted	HW		a=0.77 d=1.20	45%		SM, Clay, 100 mm SM, Clay, 60 mm
					8.35m - 9.45m: sandstone is medium to coarse grained, pale grey, with carbonaceous laminaes, indistinctly bedded at 0-15°	FR					
		-6	9.0								
					SANDSTONE: fine to medium grained, pale grey, with carbonaceous flecks, massive				100%		PT, 0°, PL, RO, CN
		-7	10.0					a=1.50 d=1.80			PT, 0°, PL, RO, CN PT, 0°, IR, RO, CN
		-8	11.0					a=1.37 d=1.93			
		-9	12.0					a=1.92 d=1.95	100%		
		-10	13.0					a=1.86 d=1.92 a=1.59 d=2.06			PT, 0°, PL, RO, CN
		-11	14.0						100%		
		-12	15.0					a=1.34 d=1.57			
					with shale clasts				100%		PT, 0 - 5°, PL - CU, RO, CN
		-13			**SANDSTONE**: medium to coarse grained, pale grey, with dark grey laminae, indistinctly cross bedded at 0-10°			a=1.76			PT, 5°, PL, RO, CN

method & support

DT	diatube
AS	auger screwing
AD	auger drilling
RR	roller/tricone
CB	claw or blade bit
W	washbore
NMLC	NMLC core (51.9 mm)
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