2002

Appendix F
Bore Logs

Contamination Assessment
630 - 726 Princes Highway, Tempe

coffey environments

Engineering Log - Borehole

Borehole No. **BH11**

Sheet 1 of 2

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***23.5.2008***

Principal:

Date completed: ***23.5.2008***

Project: ***ESA 630-726 Princess Highway Tempe***

Logged by: ***NC***

Borehole Location: ***Kennards Self Storage***

Checked by: ***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 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
AD/V									**ASPHALT**	D	L		FILL
									FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravels are medium grained, brown to dark brown. Some brick fragments and roadbase gravels.	D	L		
				E									PID: 0.3
						1			**FILL: GRAVELLY SAND:** fine to medium grained, red to brown. Gravel is fine to medium grained, red to brown. (crushed brick)	D	L		
				E					**FILL: GRAVELLY SAND:** fine to medium grained, brown with some red. Gravel is fine to medium grained, brown to red. (less crushed brick)				PID: 0.3
				E + DUP 7									PID: 0.6
						2			**FILL: GRAVELLY SILTY CLAY:** medium plasticity, brown mottled red to orange. Gravel is fine grained, brown to red. Some brick fragments, some ironstone fragments.	M	S		
				E									PID: 0.6
						3			**FILL: SANDY CLAY:** low plasticity, dark brown.	M	S		
									FILL: GRAVELLY SANDY CLAY: low plasticity, dark brown. Gravel is medium grained, brown to red. Some brick fragments.	M	S		
				E		4							PID: 0.4
				E					**FILL: GRAVELLY SAND:** fine to medium grained, dark brown mottled red. Some brick fragments.	D	L		PID: 0.4
						5							
						6							
						7				W			
				E									PID: 0.4
						8				D			

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. **BH11**

Sheet 2 of 2

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***23.5.2008***

Principal:

Date completed: ***23.5.2008***

Project: ***ESA 630-726 Princess Highway Tempe***

Logged by: ***NC***

Borehole Location: ***Kennards Self Storage***

Checked by: ***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 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						9			**FILL: GRAVELLY SAND:**fine to medium grained, dark brown mottled red. Some brick fragments. *(continued)*	D	L		
				E									PID: 0.5
						10							
						11							
						12							
				E					**FILL: GRAVELLY SAND:**fine to medium grained, pale brown to grey. Gravel is fine to medium grained, grey. Some grey shale fragments.		L		PID: 0.6
						13			Borehole BH11 terminated at 12.6m				
						14							
						15							
						16							

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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Engineering Log - Borehole

Borehole No. **BH12**

Sheet 1 of 2

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***23.5.2008***

Principal:

Date completed: ***23.5.2008***

Project: ***ESA 630-726 Princess Highway Tempe***

Logged by: ***NC***

Borehole Location: ***Kennards Self Storage***

Checked by: ***BS***

drill model and mounting: Truck mounted drill rig | Easting: 217.8739 | slope: -90° | R.L. Surface: 10.33

hole diameter: 100 mm | Northing 111.7773 | 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 ASV									**ASPHALT**				FILL
				E	10	1			**FILL: GRAVELLY SAND:** fine grained, brown. Gravel is fine to medium grained, grey to brown.	D	L		
				E									
					9	2							
				E									
					8	3							
				E									
					7	4							
					6	5							
					5	6							
					4	7							
				E					**FILL: GRAVELLY SILTY CLAY:** low plasticity, dark brown to grey. Gravel is fine to medium grained. Some brick fragments.	M	L		
					3	8			**FILL: GRAVELLY SAND:** fine to medium grained, dark brown. Gravel is medium to coarse grained brown to dark brown. Some glass, tin, wire and porcellain.	M	L		

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. **BH12**

Sheet 2 of 2

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***23.5.2008***

Principal:

Date completed: ***23.5.2008***

Project: ***ESA 630-726 Princess Highway Tempe***

Logged by: ***NC***

Borehole Location: ***Kennards Self Storage***

Checked by: ***BS***

drill model and mounting: Truck mounted drill rig | Easting: 217.8739 | slope: -90° | R.L. Surface: 10.33

hole diameter: 100 mm | Northing 111.7773 | 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				E	2	9			**FILL: GRAVELLY SAND:** fine to medium grained, dark brown. Gravel is medium to coarse grained brown to dark brown. Some glass, tin, wire and porcellain. *(continued)*	M	L		
					1				Amount of rubbish, including glass, timber, tin, metal, wire, porcellain increasing.	W	L		
				E		10							
					0	11			Borehole BH12 terminated at 10m				
					-1	12							
					-2	13							
					-3	14							
					-4	15							
					-5	16							

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. **BH13**

Sheet 1 of 2

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***23.5.2008***

Principal:

Date completed: ***23.5.2008***

Project: ***ESA 630-726 Princess Highway Tempe***

Logged by: ***PD***

Borehole Location: ***Kennards Self Storage***

Checked by: ***BS***

drill model and mounting: Truck mounted drill rig | Easting: 231.4704 | slope: -90° | R.L. Surface: 10.35

hole diameter: 100 mm | Northing 135.6572 | 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 V									ASPHALT	D	L		FILL
				E	10				FILL: GRAVELLY SAND: fine to medium grained, brown to red. Gravel is medium grained, brown with some red. Some brick fragments				PID: 0.6
				E		1			FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is fine to medium grained, dark brown. Some brick and concrete fragments.	D	L		PID: 0.5
					9								
				E + DUP 8, 8a		2							PID: 1.0
					8								
				E									PID: 0.5
						3							
					7								
				E		4							PID: 0.5
					6								
						5							
				E	5				FILL: GRAVELLY SANDY CLAY: low plasticity, brown to dark brown. Gravel is fine to medium grained dark brown. Minor brick fragments.	M	S		PID: 0.9
						6							
					4								
				E		7				W	S		PID: 0.5
										Wp	S		
					3								
						8							

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. **BH13**

Sheet 2 of 2

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***23.5.2008***

Principal:

Date completed: ***23.5.2008***

Project: ***ESA 630-726 Princess Highway Tempe***

Logged by: ***PD***

Borehole Location: ***Kennards Self Storage***

Checked by: ***BS***

drill model and mounting: Truck mounted drill rig | Easting: 231.4704 | slope: -90° | R.L. Surface: 10.35

hole diameter: 100 mm | Northing 135.6572 | 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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT					2	9			FILL: GRAVELLY SANDY CLAY: low plasticity, brown to dark brown. Gravel is fine to medium grained dark brown. Minor brick fragments. *(continued)*	Wp	S		
					1	10			Borehole BH13 terminated at 10m				
					0	11							
					-1	12							
					-2	13							
					-3	14							
					-4	15							
					-5	16							

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.	***BH17***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***21.5.2008***
Principal:	
Date completed:	***21.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***Kennards Self Storage***
Checked by:	***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface: 14.04

hole diameter: 100 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
AD/S V									**ASPHALT**				
									FILL: GRAVELLY CLAYEY SAND: fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, pale brown to dark brown. Some brick fragments and roadbase gravels.	D	L		FILL
				E									PID: 1.2
					13	1							
				E									PID: 1.1
				E					**GRAVELLY SANDY CLAY:** medium plasticity, pale brown to brown. Gravels are fine medium grained, dark brown to brown. Some crushed brick.	M	F		RESIDUAL PID: 0.9
					12	2			**SILTY GRAVELLY CLAY:** medium plasticity, grey to red brown. Gravel is medium grained, brown to grey. Some grey shale fragments.	M	F		
				E									PID: 0.4
									Borehole BH17 terminated at 2.7m				
					11	3							
					10	4							
					9	5							
					8	6							
					7	7							
						8							

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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Engineering Log - Borehole

Borehole No.	***BH18***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***21.5.2008***
Principal:	
Date completed:	***21.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***Kennards Self Storage***
Checked by:	***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 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
ADTV									**ASPHALT**				
									FILL: GRAVELLY CLAYEY SAND fine to medium grained, brown to dark brown. Gravel is medium grained, brown to dark brown.	D	L		FILL
				E									PID: 0.9
						1			**FILL: GRAVELLY SAND:** fine to medium grained, pale brown to brown. Gravel is medium to coarse grained, grey to pale brown with some brown.	D	L		
				E + DUP 6						D	L		PID: 0.6
									FILL: GRAVELLY CLAYEY SAND: fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to dark brown. Some metal wire and tin.	M	L		PID: 0.7
				E		2			**FILL: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Some medium grained gravel, dark brown. Minor brick fragments.				
									SANDY CLAY: low to medium plasticity, pale brown to brown.	M	F		RESIDUAL
				E		3			**GRAVELLY SAND:** fine to medium grained, grey to pale brown with some brown. Gravel is medium grained, grey to brown. Some grey shale fragments.	D	L		PID: 0.4
				E									PID: 0.4
						4			Borehole BH18 terminated at 3.7m				
						5							
						6							
						7							
						8							

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. **BH2**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***21.5.2008***

Principal:

Date completed: ***21.5.2008***

Project: ***ESA 630-726 Princess Highway Tempe***

Logged by: ***NC***

Borehole Location: ***Kennards Self Storage***

Checked by: ***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 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									**ASPHALT**				
									GRAVELLY SAND: Fine to medium grained, brown to dark brown, gravel is medium to coarse, brown to black.	D	L		FILL.
				E+DUP2,2a					**Gravelly CLAYEY SAND:** Fine to coarse grained, black to brown, gravel is fien to coarse grained, grey to brown (crushed brick).	D	L		DUP 2, 2a. PID: 1.2
						1			**Sandy CLAY:** Medium plasticity, brown to red mottled grey.	M	F		RESIDUAL.
				E									PID: 1.0
ADT						2			**Gravelly SAND:** Fine to medium grained, brown. Gravel is medium grained, brown, some weathered shale cobbles (grey, mod strength).	D	L		
				E									PID: 0.8
									Borehole BH2 terminated at 2.7m				
						3							
						4							
						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
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 ENVILCOV00315AH.GPJ COFFEY.GDT 25.6.08

Form GEO 5.3 Issue 3 Rev.2

coffey environments

Engineering Log - Borehole

Borehole No.	***BH20***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***23.5.2008***
Principal:	
Date completed:	***23.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***Kennards Self Storage***
Checked by:	***BS***

drill model and mounting: Truck mounted drill rig | Easting: 198.4531 | slope: -90° | R.L. Surface: 14.35

hole diameter: 100 mm | Northing 229.4893 | 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
AD/V									**ASPHALT**	D	L		FILL
					14				**FILL: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Gravel is medium grained, red to dark brown. Some brick fragments and roadbase mix gravels	M	F		RESIDUAL
				E									PID: 0.5
						1			**GRAVELLY SANDY CLAY:** medium plasticity, brown to red. Gravel is medium grained, some brick fragments.	M	F		
				E									PID: 0.6
					13				**SANDY CLAY**: medium plasticity, brown to pale brown mottled red.				
						2			**GRAVELLY SAND:** fine to medium grained, pale brown to brown. Gravel is fine to medium grained pale brown to brown. Some grey shale and ironstone fragments.	D	L		
				E									PID: 0.4
					12								
				E									PID: 0.4
						3			Borehole BH20 terminated at 2.7m				
					11								
						4							
					10								
						5							
					9								
						6							
					8								
						7							
					7								
						8							

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.	**BH21**
Sheet	1 of 1
Office Job No.:	**ENVILCOV00315AH**
Client:	***Valad Property Group***
Date started:	***21.5.2008***
Principal:	
Date completed:	***21.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***Kennards Self Storage***
Checked by:	***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 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
ADTV									**ASPHALT**	D	L		FILL
									FILL: GRAVELLY SAND fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to dark brown.	D	L		
				E					**FILL: GRAVELLY SAND:**fine to medium grained, brown to red. Gravel is coarse grained, brown to red. (crushed brick)				PID: 0.5
						1			**FILL: GRAVELLY SAND:**fine to medium grained, brown to red. Gravel is medium to coarse grained, brown to red. (crushed brick)	D	L		PID: 0.5
				E + DUP 5, 5a					**GRAVELLY SAND:**fine to medium grained, brown with some red. Gravel is coarse grained, brown. Some grey shale fragments	D	L		RESIDUAL PID: 0.5
				E		2							PID: 0.4
						3			Borehole BH21 terminated at 2.7m				
						4							
						5							
						6							
						7							
						8							

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 ENVILCOV00315AH.GPJ COFFEY.GDT 25.6.08

Form GEO 5.3 Issue 3 Rev.2

coffey environments

Engineering Log - Borehole

Borehole No.	***BH22***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***21.5.2008***
Principal:	
Date completed:	***21.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***Kennards Self Storage***
Checked by:	***BS***

drill model and mounting:	Truck mounted drill rig	Easting:	slope:	-90°	R.L. Surface:
hole diameter:	100 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
ADTV									**ASPHALT**	D	L		FILL
									FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to dark brown.	M	S		
				E					**FILL: SANDY GRAVELLY CLAY:** low plasticity, brown to dark brown. Gravel is medium to coarse grained, grey to dark brown. Some brick fragments.				PID: 0.8
						1				M	S		RESIDUAL
				E					**GRAVELLY SANDY CLAY:** low to medium plasticity, brown to pale brown. Gravel is medium grain, grey to pale brown.				PID: 0.7
				E		2			**GRAVELLY SAND:** fine to medium grained, brown. Gravel is medium grained, brown. Some coarse grained grey shale fragments	D	L		PID: 0.5
				E									PID: 0.5
						3			Borehole BH22 terminated at 2.7m				
						4							
						5							
						6							
						7							
						8							

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.	**BH23**
Sheet	1 of 1
Office Job No.:	**ENVILCOV00315AH**
Client:	***Valad Property Group***
Date started:	***21.5.2008***
Principal:	
Date completed:	***21.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***Kennards Self Storage***
Checked by:	***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 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
ADSV									**ASPHALT**				FILL
									FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to dark brown.	D	L		
				E + DUP 4					**FILL: GRAVELLY SAND:** fine to medium grained, brown to red. Gravel is fine to medium grained, brown to red. (crushed brick)	D	L		PID: 0.2
				E		1			**FILL: GRAVELLY SAND:** fine to medium grained, red with some brown. Gravel is fine to medium grained, red with some brown. (redder coloured crushed brick)	D	L		PID: 0.6
				E									PID: 0.5
						2			**GRAVELLY SAND:** fine to medium grained, brown to grey. Gravel is medium to coarse grained, brown to grey. Some grey shale and ironstone fragments.	D	L		RESIDUAL
				E									PID: 0.4
				E		3							PID: 0.3
									Borehole BH23 terminated at 3m				
						4							
						5							
						6							
						7							
						8							

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 ENVILCOV00315AH.GPJ COFFEY.GDT 25.6.08

Form GEO 5.3 Issue 3 Rev.2

coffey environments

Engineering Log - Borehole

Borehole No.	***BH24***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***21.5.2008***
Principal:	
Date completed:	***21.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***Kennards Self Storage***
Checked by:	***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 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
AD/V									**ASPHALT**	D	L		FILL
									FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to dark brown.				
				E					**GRAVELLY SAND** fine to medium grained, brown with some red. Gravel is medium to coarse grained, brown. (crushed brick)	D	L		PID: 0.5
						1							
				E									PID: 0.4
				E									PID: 0.5
						2							
									GRAVELLY SAND: fine to medium grained, brown to grey. Gravel is medium grained, pale brown to grey. Some grey shale and ironstone fragments.	D	L		RESIDUAL
				E									PID: 0.4
				E		3							PID: 0.4
									Borehole BH24 terminated at 3m				
						4							
						5							
						6							
						7							
						8							

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.	***BH25***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***26.5.2008***
Principal:	
Date completed:	***26.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***ATECO***
Checked by:	***BS***

drill model and mounting: Truck mounted drill rig | Easting: | slope: -90° | R.L. Surface:

hole diameter: 100 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/DT									**CONCRETE**				FILL
				E					**FILL: SANDY GRAVELLY CLAY:** medium plasticity, brown mottled grey. Gravel is medium grained, pale brown to grey.	M	F		PID: 0.2
				E		1							PID: 0.2
				E		2			**FILL: SANDY GRAVELLY CLAY:** low plasticity, brown to dark brown. Gravel is medium grained, pale brown to dark brown. Some brick fragments.	M	S		PID: 0.3
				E		3			**SILTY CLAY:** medium plasticity, pale brown to brown.	M	F		RESIDUAL PID: 0.3
				E					**GRAVELLY SAND:** fine to medium grained, brown. Gravel is medium grained, pale brown to brown.	D	L		PID: 0.3
						4			Borehole BH25 terminated at 3.7m				
						5							
						6							
						7							
						8							

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