coffey environments

Engineering Log - Borehole

Borehole No.	***BH26***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***30.5.2008***
Principal:	
Date completed:	***30.5.2008***
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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT									**TURF/ GRASS**				FILL
									FILL: GRAVELLY SAND: fine to medium grained, brown. Gravel is fine to medium grained, pale brown to dark brown.	D	L		
				E					**FILL: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Gravel is fine to medium grained, brown to dark brown.	D	L		PID: 0.9
						1			**GRAVELLY SANDY CLAY:** low plasticity, pale brown to brown mottled dark brown. Gravel is fine grained, grey to pale brown.	D	F		RESIDUAL
				E									PID: 0.8
									SANDY SILTY CLAY: low plasticity, grey to pale brown. Sand is fine grained, grey.	D	F		
				E		2							PID: 0.7
									GRAVELLY SAND: fine to medium grained, grey to pale brown. Gravel is fine grained, grey.	D	L		
				E									PID: 0.7
									Borehole BH26 terminated at 2.7m				
						3							
						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.	***BH27***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***28.5.2008***
Principal:	
Date completed:	***28.5.2008***
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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT DT						0			**CONCRETE**				FILL
				E					**FILL: GRAVELLY SILTY CLAY:** medium plasticity, brown to dark brown. Gravel is medium grained, grey to dark brown.	M	S		PID: 1.0
				E+ DUPZ 8		1							PID: 0.8
									SANDY CLAY: low plasticity, pale brown mottled grey.	M	S		RESIDUAL
				E					**GRAVELLY SAND:** fine to medium grained, grey to pale brown. Gravel is fine to medium grained, grey to pale brown. Some shale and ironstone fragments.	D	L		PID: 0.7
				E		2							PID: 0.5
									Borehole BH27 terminated at 2m				
						3							
						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.	***BH28***
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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT DT									**CONCRETE**				FILL
									FILL: SANDY GRAVELLY CLAY: low plasticity, pale brown to brown. Sand is fine to medium grained brown. Gravel is medium grained, pale brown to grey.	M	S		
				E						D	L		RESIDUAL PID: 0.5
						1			**GRAVELLY SAND:** fine to medium grained, pale brown to brown. Gravel is medium grained, grey to brown. Some grey shale and ironstone fragments.				
				E									PID: 0.4
									Borehole BH28 terminated at 1.7m				
						2							
						3							
						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.	**BH29**
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
									FILL: GRAVELLY SAND fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to dark brown.	M	L		
				E		1			**SILTY CLAY:** medium plasticity, pale brown to brown.	M	F		RESIDUAL PID: 0.4
				E					**GRAVELLY SAND:** fine to medium grained, pale brown to brown. Gravel is medium grained, pale brown to brown. Some grey shale and ironstone fragments.	D	L		PID: 0.2
						2			Borehole BH29 terminated at 1.7m				
						3							
						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. **BH3**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***19.5.2008***

Principal:

Date completed: ***19.5.2008***

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 SAND: Fine to medium grained, red to brown. Gravel is medium to coarse, red to brown. Some coarse cobbles and pebbles.	D	L		
				E									PID: 55ppm
						1			**Sandy Gravelly CLAY:** Low plasticity, dark brown to brown, sand is fine to medium grained, dark brown to brown. Gravel is fine to medium, dark brown to brown.	D-M	L		
				E									PID: 600ppm
				E					**Sandy CLAY:** Low to medium plasticity, dark brown to brown mottled pale brown. Some medium to coarse angular gravels, brown to pale brown.	D	S		PID: 82ppm
											F		RESIDUAL.
						2			**Sandy CLAY:** Medium plasticity, brown to pale brown.				
									Gravelly SAND: Brwon to red brown, fine to medium, gravel is medium to coasre.		L		
				E									PID: 230ppm
						3							
				E									
						4							
				E									
						5							
				E									
									Borehole BH3 terminated at 5.5m				
						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.	***BH30***
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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT DT									**CONCRETE**				FILL
				E + DUPZ 1					**FILL: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to dark brown. Some porcellain fragments.	D	L		PID: 0.4
						1			**FILL: SANDY GRAVELLY CLAY:** low plasticity, pale brown to brown mottled grey. Gravel is medium grained, grey to brown. Some grey shale and ironstone fragments.	M	S		
				E					**SILTY CLAY:** medium plasticity, pale brown to brown mottled grey.	M	F		RESIDUAL PID: 0.5
				E		2							PID: 0.3
						3			Borehole BH30 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.	***BH31***
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: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, grey to dark brown.	D	L		PID: 0.4
						1			**SILTY CLAY:** low plasticity, grey.	D	S		RESIDUAL
				E									PID: 0.4
									GRAVELLY SAND: fine to medium grained, grey to pale brown. Gravel is fine to medium grained, grey. Some grey shale and ironstone fragments.	D	L		
				F		2							PID: 0.3
									Borehole BH31 terminated at 2m				
						3							
						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.	**BH32**
Sheet	1 of 1
Office Job No.:	**ENVILCOV00315AH**
Client:	***Valad Property Group***
Date started:	***29.5.2008***
Principal:	
Date completed:	***29.5.2008***
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									**TURF/ GRASS**				FILL
									FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is fine grain, pale brown to grey brown. Traces of rootlets.	M	L		
										M	S		RESIDUAL
				E					**FILL: GRAVELLY SILTY CLAY:** low plasticity, brown to dark brown. Gravel is fine grained, pale brown to dark brown.				PID: 1.1
						1							
				E									PID: 0.8
									SILTY CLAY: medium plasticity, brown to dark brown.	M	S		PID: 0.8
				E									
						2			**SILTY CLAY:** low plasticity, pale brown to brown mottled grey.	M	F		
									GRAVELLY SAND: fine to medium grained, pale brown to grey. Gravel is fine grained, pale brown to grey.	D	L		
				E									PID: 0.7
									Borehole BH32 terminated at 2.7m				
						3							
						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. **BH33**

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						0			CONCRETE				FILL
				E					FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is medium to coarse grained. Some broken concrete, some brick fragments and some timber pieces.	D	L		PID: 0.8
				E		1							PID: 0.8
				E		2			GRAVELLY SAND: fine to medium grained, red brown to brown. Gravel is medium grained, red brown to brown. Some grey shale and ironstone fragments.	D	L		RESIDUAL PID: 0.5
				E					GRAVELLY SAND: fine to medium grained, pale brown. Gravel is fine grained, pale brown. Some grey shale and ironstone fragments.	D	L		PID: 0.5
						3			Borehole BH33 terminated at 2.4m				
						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. **BH34**

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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT/DT									**CONCRETE**				FILL
				E					**FILL: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to dark brown. Some brick fragments.	D	L		PID: 0.3
				E + DUPZ 2, 2a		1			**SILTY CLAY**: low to medium plasticity, pale brown to brown.	M	F		RESIDUAL PID: 0.3
				F		2							PID: 0.4
									Borehole BH34 terminated at 2m				
						3							
						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.	***BH35***
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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT/DT									**CONCRETE**				FILL
									FILL: GRAVELLY SANDY CLAY: low to medium plasticity, brown to pale brown. Gravel is medium grained, brown to dark brown.	M	S		
				E									PID: 0.3
						1							
				E									PID: 0.4
									FILL: SAND: fine to medium grained, pale yellow to orange.	M	L		Sand suspected easement material of underground service, hole terminated.
									Borehole BH35 terminated at 1.2m				
						2							
						3							
						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. **BH36**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***28.5.2008***

Principal:

Date completed: ***28.5.2008***

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				E					**CONCRETE**				FILL
									FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is fine grained, red to brown, some brick fragments.	D	L		PID: 0.6
									FILL: CONCRETE				
						1			**FILL: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Gravel is fine grained, red to brown, some brick fragments.	D	L		
				E									PID: 0.5
									SANDY SILTY CLAY: low plasticity, grey mottled red to pale brown.	M	F		RESIDUAL
				E		2							PID: 0.7
									GRAVELLY SAND: fine to medium grained, pale brown to grey. Gravel is fine grained, pale brown to grey.	M	F		
				E									PID: 0.6
						3				D	L		
									Borehole BH36 terminated at 3.4m				
						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

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coffey environments

Engineering Log - Borehole

Borehole No. **BH37**

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 + DUPZ 5					FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is medium grained, pale brown to dark brown.	D	L		PID: 0.4
				E		1			FILL: SANDY GRAVELLY CLAY: low to medium plasticity, grey to brown. Gravel is fine grained. Some rubble, cobbles and blue metal gravels.	M	S		PID: 0.5
				E									PID: 0.3
						2			SILTY CLAY: medium plasticity, pale brown to brown mottled grey to red.	M	S		RESIDUAL
				E									PID: 0.3
						3			GRAVELLY SAND: fine to medium grained, pale brown to brown with some grey. Gravel is fine to medium grained, pale brown to grey. Some grey shale and ironstone fragments.	D	L		
				E		4			Borehole BH37 terminated at 4m				PID: 0.4
						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

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Engineering Log - Borehole

Borehole No.	***BH38***
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				E + DUPZ 3		1			**CONCRETE**				FILL
				E					**FILL: SANDY GRAVELLY CLAY:** low plasticity, brown to dark brown. Gravel is fine to medium grained, grey to dark brown. Some brick fragments.	M	S		
				E		2			**FILL: SANDY GRAVEL:** coarse grained, brown to dark brown.	S	L		
				E					**FILL: SANDY GRAVELLY CLAY** low to medium plasticity, red brown to brown. Gravel is medium to coarse grained, grey to brown.	D	H		
				E		3			**SILTY CLAY:** medium plasticity, red brown to brown mottled grey.	D	H		RESIDUAL
				F		4			**GRAVELLY SAND:** fine to medium grained, pale brown to brown grey. Gravel is medium grained. Some grey shale fragments.	D	L		
						5			Borehole BH38 terminated at 5.5m				
						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. **BH39**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***29.5.2008***

Principal:

Date completed: ***29.5.2008***

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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT DT						0			**CONCRETE**				FILL
				E + DUPZ11, 11a					**FILL: GRAVELLY SILTY CLAY:** low to medium plasticity, dark brown. Gravel is fine to medium grained, grey to dark brown.	M	S		PID: 0.8
				E		1							PID: 0.9
				E					**SILTY CLAY**: medium plasticity, pale brown to red.	M	F		RESIDUAL PID: 0.7
				E		2							PID: 0.7
						3			**SANDY SILTY CLAY:** low plasticity, grey mottled red to pale brown.	M	F		
				E		4							PID: 0.7
				E		5			**GRAVELLY SAND:** fine to medium grained, pale brown to grey. Gravel is fine grained, pale brown to grey.	D	L		PID: 0.6
									Borehole BH39 terminated at 5m				
						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

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Engineering Log - Borehole

Borehole No. **BH4**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***20.5.2008***

Principal:

Date completed: ***20.5.2008***

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 / ADT									**ASPHALT**				
									Sandy GRAVEL: Medium to coarse grained, dark brown to black. Sand is fine to medium, brown (roadbase).	D	L		FILL.
									Gravelly Clayey SAND: Fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, brown to pale brown.	D	L		
				E									PID: 0.3
				E		1							PID: 0.5
				E					**Gravelly SAND:** Fine to medium grained, brown. Gravel is medium grained, grey to brown.				PID: 0.8
						2			**Gravelly SAND:** Fine to medium grained, brown. Gravel is medium to coarse, brown.				RESIDUAL.
				E									PID: 0.8
						3							
				E									PID: 0.7
									Borehole BH4 terminated at 3.7m				
						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

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Engineering Log - Borehole

Borehole No.	***BH40***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***30.5.2008***
Principal:	
Date completed:	***30.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***ATECO***
Checked by:	***BS***

drill model and mounting:	Hand Auger	Easting:	slope:	-90°	R.L. Surface:
hole diameter:	75 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 penetro-meter kPa 100 200 300 400	structure and additional observations
HADT									**CONCRETE**				FILL
				E					**FILL: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Gravel is fine to medium grained, pale brown to dark brown.	D	L		PID: 0.6
						1			**FILL: GRAVELLY SANDY CLAY:** low plasticity, brown to dark brown. Gravel is fine grained, pale brown to brown.	M	S		RESIDUAL
				E									PID: 0.6
				E					**SILTY CLAY**: low plasticity, pale brown to red.	M	F		PID: 0.6
									Borehole BH40 terminated at 1.4m				
						2							
						3							
						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. **BH41**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***30.5.2008***

Principal:

Date completed: ***30.5.2008***

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 + DUPZ 12					**FILL: GRAVELLY SILTY CLAY:** Low to medium plasticity, brown to dark brown. Gravel is Fine grained, red to dark brown.	M	S		PID: 1.0
						1			**SILTY CLAY:** medium plasticity, brown with some mottled dark brown.	M	S		RESIDUAL
				E						M	S-F		PID: 0.8
				E					**SILTY CLAY:** low plasticity, red mottled grey.	M	F		PID: 0.7
						2			**GRAVELLY SAND:** fine to medium grained, pale brown to grey. Gravel is fine to medium, pale brown to grey.	M	L		
				E									PID: 0.7
						3			Borehole BH41 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

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coffey environments

Engineering Log - Borehole

Borehole No.	***BH42***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***29.5.2008***
Principal:	
Date completed:	***29.5.2008***
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
									FILL: GRAVELLY SAND: Fine to medium grained, brown to dark brown. Gravel is medium to coarse grained, grey to dark brown.	D M	L S		RESIDUAL
				E					**GRAVELLY SILTY CLAY** low plasticity, pale brown mottled red. Gravel is fine grained brown to dark brown.				PID: 1.0
						1			**SILTY CLAY:** low plasticity, red to pale brown.	M	F		
				E									PID: 0.8
													PID: 0.7
				E		2			**SILTY CLAY:** low to medium plasticity, grey to red mottled pale brown	M	F		
									GRAVELLY SAND: fine to medium grained, grey to pale brown. Gravel is fine grained grey to pale brown.	D	L		
				E									PID: 0.7
									Borehole BH42 terminated at 2.7m				
						3							
						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.	***BH43***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***30.5.2008***
Principal:	
Date completed:	***30.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***ATECO***
Checked by:	***BS***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 75 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 penetro-meter kPa 100 200 300 400	structure and additional observations
HADT						0			**CONCRETE**				FILL
									FILL: SANDY GRAVEL: medium to coarse grained, red brown to dark brown. Some brick fragments and cobbles. Sand is medium grained, brown to dark brown.	D	L		
									Borehole BH43 terminated at 0.3m				
						1							
						2							
						3							
						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. **BH44**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***30.5.2008***

Principal:

Date completed: ***30.5.2008***

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 penetro-meter kPa 100 200 300 400	structure and additional observations
ADT DT						0			**CONCRETE**				FILL
									FILL: SANDY GRAVEL: medium to coarse grained, dark brown to dark grey with some brown. Sand is medium grain, dark brown to dark grey.	M	L		
										M	S		RESIDUAL
				E					**GRAVELLY SANDY CLAY:** low plasticity, pale brown to brown, some grey. Gravel is fine to medium grained, brown.				PID: 0.7
						1			**SILTY CLAY:** medium plasticity, pale brown to grey with some brown.	M	S		PID: 0.6
				E					**GRAVELLY SAND:** fine to medium grained, pale brown to grey. Gravel is fine, brown to grey.	D	L		
													PID: 0.6
				E									
									Borehole BH44 terminated at 1.7m				
						2							
						3							
						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.	***BH45***
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						0			**CONCRETE**				FILL
				E					**FILL: GRAVELLY SANDY CLAY:** low plasticity, brown to dark brown. Gravel is coarse grained, grey to dark brown. Some roadbase gravels.	M	F		PID: 0.5
				E		1			**SILTY CLAY**: medium plasticity, red brown to brown mottled grey.	M	F		RESIDUAL PID: 0.6
				E									PID: 0.4
				E		2							PID: 0.5
						3			**GRAVELLY SAND:** fine to medium grained, grey to pale brown. Gravel is fine to medium grained, grey.	D	L		
				E		4			Borehole BH45 terminated at 4m				PID: 0.5
						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.	***BH46***
Sheet	1 of 1
Office Job No.:	***ENVILCOV00315AH***
Client:	***Valad Property Group***
Date started:	***30.5.2008***
Principal:	
Date completed:	***30.5.2008***
Project:	***ESA 630-726 Princess Highway Tempe***
Logged by:	***NC***
Borehole Location:	***ATECO***
Checked by:	***BS***

drill model and mounting: Hand Auger | Easting: | slope: -90° | R.L. Surface:

hole diameter: 75 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 penetro-meter kPa 100 200 300 400	structure and additional observations
HADT									**CONCRETE**				FILL
									FILL: GRAVELLY SAND: fine to medium grained, brown. Gravel is medium to coarse grained, grey to brown, some dark brown. Some brick fragments, some blue metal gravels.	D	L		
				E						D	L		PID: 0.7
						1			**FILL: GRAVELLY SAND:** fine to medium grained, brown to dark brown. Gravel is fine to medium grained, brown to dark brown.				
									Borehole BH46 terminated at 0.7m				
						2							
						3							
						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. **BH47**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**

Client: ***Valad Property Group***

Date started: ***31.5.2008***

Principal:

Date completed: ***31.5.2008***

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

Logged by: ***NC***

Borehole Location: ***KAS Autopower***

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
HADT									**CONCRETE**				FILL
				E					**FILL: GRAVELLY SANDY CLAY:** low plasticity, brown to dark brown. Gravel is fine to medium grained, red to brown.	M	S		PID: 0.8
				E					**SILTY CLAY:** medium plasticity, pale brown to brown. Some fine gravels.	M	S		RESIDUAL PID: 0.7
						1			**SILTY CLAY:** low plasticity, grey mottled pale brown to red.	M	S-F		
				E					**GRAVELLY SAND:** fine to medium grained, pale brown to grey, with some brown. Gravel is fine to medium grained, pale brown to grey.	D	L		PID: 0.7
									Borehole BH47 terminated at 1.2m				
						2							
						3							
						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

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