

Borehole No. **BH48**

Engineering Log - Borehole

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: Hand Auger | | Easting: | | slope: -90° | | R.L. Surface: | | | | | |
|--|-------------|----------|---------------------------------|--|-------------|--|--|--|--|---|--|
| hole diameter: 75 mm | | Northing | | bearing: | | datum: | | | | | |
| drilling information | | | | material substance | | | | | | | |
| method | penetration | support | notes samples, tests, etc | depth metres | graphic log | classification symbol | material soil type: plasticity or particle characteristics, colour, secondary and minor components. | | | | |
| 1 | 2 | 3 | | RL | | | | | | | |
| 1 | 2 | 3 | | 1 | | | ASPHALT FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is fine to medium grained, dark brown. Some blue metal gravels and roadbase mix. Refusal onto unknown metal object, what appeared to be underground storage tank. Borehole BH48 terminated at 0.1m | | | | |
| | | | | 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 WL 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 No. **BH5**

Engineering Log - Borehole

Sheet 1 of 1
Office Job No.: **ENVILCOV00315AH**

Client: **Valad Property Group**

Date started: **23.5.2008**

Principal:

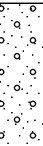
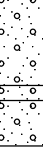


Date completed: **23.5.2008**

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: | | slope: -90° | | R.L. Surface: | | | | | |
|--|-------------|-------------------------|-------|--|----|--|--|--------------------------|---|---|-------------------------------|---|--|
| hole diameter: | | 100 mm | | Northing: | | bearing: | | datum: | | | | | |
| drilling information | | | | material substance | | | | | | | | | |
| method | penetration | 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 | structure and additional observations |
| ADRSV | 1 2 3 | | | E | | 1 |  | | ASPHALT FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is fine to medium grained, red to brown with some dark brown. Some brick fragments. | D | L | | FILL PID: 1.2 |
| | | | | E + DUP 10 | | | | | FILL: GRAVELLY SAND: fine to medium grained, red to brown. Gravel is medium grained, red to pale brown. (crushed brick) | D | L | | PID: 6.5 |
| | | | | E + DUP 11, 11a | | | | | FILL: GRAVELLY SAND: fine to medium grained, brown to red brown. Gravel is medium grained, brown. Low hydrocarbon odour. | D | L | | PID: 27 |
| | | | | | | 2 |  | | FILL: GRAVELLY SAND: fine to medium grained, red to grey brown. Gravel is fine grained, red to brown. (crushed brick) Low hydrocarbon odour. | M | L | | |
| | | | | | | | | | GRAVELLY SAND: fine to medium grained, pale brown to brown. Gravel is medium grained, brown. Some grey shale and ironstone fragments. Some brick fragments. | D | L | | RESIDUAL PID: 1.0 |
| | | | | E | | | | | GRAVELLY SAND: fine to medium grained, pale brown to brown. Gravel is medium grained, pale brown to brown. | D | L | | |
| | | | | | | 3 | | | Borehole BH5 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 WL 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 No. **BH50**

Engineering Log - Borehole

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: 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 | depth metres | graphic log | classification symbol | material soil type: plasticity or particle characteristics, colour, secondary and minor components. | | | | |
| H ADT | | | | 0.25 |  | | CONCRETE FILL: GRAVELLY SAND: fine to medium grain, brown. Gravels are fine grained, brown to dark brown. Borehole BH50 terminated at 0.25m | | | | |
| | | | | 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 WL 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 No. **BH51**

Engineering Log - Borehole

Client: **Valad Property Group**

Principal:

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





Borehole Location: **KAS Autopower**

Sheet 1 of 1

Office Job No.: **ENVILCOV00315AH**Date started: **31.5.2008**Date completed: **31.5.2008**

Logged by: **NC**

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 + DUPZ 14 | | | | | | FILL: GRAVELLY SAND: fine to medium grained, brown. Some fine gravels, brown to dark brown. FILL: GRAVELLY SILTY CLAY: low plasticity, brown to dark brown. Gravel is fine to medium grained, red to dark brown. Some brick fragments, some dark staining (black). Low hydrocarbon odour. FILL: GRAVELLY SAND: fine to medium grained, dark brown. Gravel is medium grained, grey to dark brown. Some white porcelain material. Some dark staining (black). Low hydrocarbon odour. Borehole BH51 terminated at 0.7m | D M D | L S L | | | | PID: 1.7 | | | |
| | | | | | | | | 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 WL 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 No. **BH52**

Sheet 1 of 1
Office Job No.: **ENVILCOV00315AH**

Engineering Log - Borehole

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: Hand Auger | | Easting: | | slope: -90° | | R.L. Surface: | | | | | |
|--|-------------|----------|---------------------------------|--|-------------|--|--|---|--|---|--|
| hole diameter: 75 mm | | Northing | | bearing: | | datum: | | | | | |
| drilling information | | | | material substance | | | | | | | |
| method | penetration | support | notes samples, tests, etc | depth metres | graphic log | classification symbol | material soil type: plasticity or particle characteristics, colour, secondary and minor components. | | | | |
| 1 | 2 | 3 | | | | | | | | | |
| ADT | | | E | | | | CONCRETE | | | | |
| | | | E | | | | FILL: SAND: fine to medium grained, brown. Some fine gravels. | | | | |
| | | | E | | | | SILTY CLAY: low to medium plasticity, pale brown to grey mottled brown. | | | | |
| | | | E | | | | SILTY CLAY: low plasticity, grey mottled pale brown. | | | | |
| | | | E | | | | GRAVELLY SAND: fine to medium grained, pale brown to grey with some brown. Gravel is fine grained, pale brown to grey. Some grey shale fragments. | | | | |
| | | | | | | | Borehole BH52 terminated at 1.2m | | | | |
| | | | | 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 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 WL 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 No. **BH7**

Engineering Log - Borehole

Sheet 1 of 2
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: 204.043 slope: -90° R.L. Surface: 10.41
hole diameter: 100 mm Northing 140.9171 bearing: datum:

| drilling information | | | | | | material substance | | | | | | | | | | |
|----------------------|-------------|---|---|---------|-------|---------------------------------|----|-----------------|-------------|--------------------------|--|-----------------------|-------------------------------|------------------------------------|--|----------|
| method | penetration | | | 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 | structure and additional observations | |
| | 1 | 2 | 3 | | | | | | | | | | | | | |
| ADV | | | | | | | | | | | | | | | | |
| | | | | | | | | 10 | | | ASPHALT | D | L | | | FILL |
| | | | | | | | | | | | Gravelly SAND: Fine to medium grained, brown to dark brown. Gravel is medium to coarse, brown to dark brown. | | | | | PID: 0.9 |
| | | | | | | | | 1 | | | Colour becoming darker and moist. | | | | | PID: 0.7 |
| | | | | | | | | | | | | | | | | PID: 0.5 |
| | | | | | | | | 9 | | | | | | | | |
| | | | | | | | | | | | Clayey Gravelly SAND: Fine to medium grained, brown to dark brown. Gravel is medium to coarse, brown to dark brown. | M | L | | | PID: 1.7 |
| | | | | | | | | 2 | | | | | | | | |
| | | | | | | | | 8 | | | Sheen on water on material. Oily odour-SLIGHT. | W | | | | |
| | | | | | | | | | | | | M | F | | | PID: 0.7 |
| | | | | | | | | 3 | | | Silty CLAY: Medium plasticity, pale brown to brown mottled grey. | | | | | |
| | | | | | | | | 7 | | | | | | | | PID: 0.7 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | Silty CLAY: Medium plasticity, pale brown, orange and red mottled grey. Some fine gravels, shale and ironstone. | M | F | | | PID: 0.7 |
| | | | | | | | | 4 | | | | | | | | |
| | | | | | | | | 6 | | | Silty CLAY: Medium plasticity, brown to pale brown, mottled grey. Some fine gravels, shale, ironstone. Traces of rootlets. | M | F | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | 5 | | | | | | | | PID: 0.6 |
| | | | | | | | | | | | Sandy Gravelly CLAY: Low plasticity, dark brown to black. Sand is fine to medium, gravels are medium grained. Some rootlets, some 'coke'/ burnt waste material, some glass. | | | | | |
| | | | | | | | | 5 | | | | | | | | |
| | | | | | | | | 6 | | | | | | | | |

| method | support | notes, samples, tests | classification symbols and soil description | consistency/density index |
|---|---|--|--|---|
| AS AD RR W CT HA DT B V T *bit shown by suffix e.g. ADT | M mud C casing penetration 1 2 3 4 water 10/1/98 water level on date shown water inflow water outflow | 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 | based on unified classification system moisture D dry M moist W wet Wp plastic limit W _L liquid limit | 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 |

| method | support | notes, samples, tests | classification symbols and soil description | consistency/density index |
|----------------------------------|----------|--|---|---------------------------|
| AS auger screwing* | M mud | U ₅₀ undisturbed sample 50mm diameter | based on unified classification system | VS very soft |
| AD auger drilling* | C casing | U ₆₃ undisturbed sample 63mm diameter | | S soft |
| RR roller/tricone | | D disturbed sample | | F firm |
| W washbore | | N standard penetration test (SPT) | | St stiff |
| CT cable tool | | N* SPT - sample recovered | | VSt very stiff |
| HA hand auger | | Nc SPT with solid cone | | H hard |
| DT diatube | | V vane shear (kPa) | | Fb friable |
| B blank bit | | P pressuremeter | | VL very loose |
| V V bit | | Bs bulk sample | | L loose |
| T TC bit | | E environmental sample | | MD medium dense |
| *bit shown by suffix e.g. ADT | | R refusal | | D dense |
| | | | | VD very dense |

Borehole No. **BH7**

Sheet 2 of 2
Office Job No.: **ENVILCOV00315AH**

Engineering Log - Borehole

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: 204.043 | | slope: -90° | | R.L. Surface: 10.41 | | | | | |
|--|-------------|-------------------------|-------|--|----|--|-------------|--------------------------|--|---|-------------------------------|---|--|
| hole diameter: | | 100 mm | | Northing: 140.9171 | | bearing: | | datum: | | | | | |
| drilling information | | | | material substance | | | | | | | | | |
| method | penetration | 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 | structure and additional observations |
| ADV | 1 2 3 | | | | | | | | Sandy Gravelly CLAY: Low plasticity, dark brown to black. Sand is fine to medium, gravels are medium grained. Some rootlets, some 'coke' burnt waste material, some glass. (continued) | M | S | | PID: 0.9 |
| | | | | E | | 7 | | | | | | | |
| | | | | | | 3 | | | | | | | |
| | | | | | | 8 | | | Becoming saturated. | S | S-L | | |
| | | | | E | | 9 | | | | | | | PID: 0.8 |
| | | | | | | 10 | | | Borehole BH7 terminated at 9m | | | | |
| | | | | | | 11 | | | | | | | |
| | | | | | | 12 | | | | | | | |
| method AS auger screwing* AD auger drilling* RR roller/tricone W washbore CT cable tool HA hand auger DT diatube B blank bit V V bit T TC bit *bit shown by suffix e.g. ADT | | | | support M mud C casing 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 WL 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 No. **BH8**

Sheet 1 of 1
Office Job No.: **ENVILCOV00315AH**

Engineering Log - Borehole

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 | 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 | structure and additional observations |
| ADRSV | 1 2 3 | | | | | | | | ASPHALT FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravels are medium grained. Some brick fragments. | D | L | | FILL PID: 0.2 PID: 0.4 PID: 0.5 |
| | | | | E | | 1 | | | | | | | |
| | | | | E | | | | | | | | | |
| | | | | E | | 2 | | | | | | | |
| | | | | | | | | | FILL: SANDY GRAVELLY CLAY: low plasticity, brown. Gravel is medium grained, pale brown to brown. Some brick fragments. Refusal onto FILL material. Borehole BH8 terminated at 2.7m | D | F | | PID: 0.3 |
| | | | | E | | 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 WL 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 No. **BH9**

Sheet 1 of 1
Office Job No.: **ENVILCOV00315AH**

Engineering Log - Borehole

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 penetro- meter kPa 100 200 300 400 | structure and additional observations | | |
| ADT | | | | | 1 | | | ASPHALT FILL: SANDY GRAVEL: gravel is coarse grained, dark brown to brown. Sand is fine to medium grained, dark brown. (roadbase mix) FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravels are medium to coarse grained, pale brown to dark brown. | D | L | | FILL | | |
| | | | E | | | | | | M | L | | PID: 400 | | |
| | | | E | | | | | | M | L | | PID: 465 | | |
| | | | | | 2 | | | FILL: GRAVELLY SAND: fine to medium grained, brown. Gravels are medium to coarse grained, dark brown. Some brick fragments. | M | L | | PID: 45.5 | | |
| | | | E + DUP 1 | | | | | | | | | PID: 242 | | |
| | | | E | | 4 | | | Refusal at 4.4m onto FILL material. | | | | PID: 328 | | |
| | | | | | 5 | | | Borehole BH9 terminated at 4.4m | | | | | | |
| | | | | | 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 WL 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 No. **MW17**

Engineering Log - Borehole

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 | 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 | structure and additional observations |
| ADT | 1 2 3 | | | | | 1 |  | | CONCRETE FILL: GRAVELLY SAND: fine to medium grained, brown. Gravel is fine to medium grained, pale brown to grey. | D | L | | FILL PID: 0.8 PID: 0.8 |
| | | | | E | | | | | | | | | |
| | | | | E | | | | | | | | | |
| | | | | | | 2 |  | | CONCRETE FILL: SAND: fine to medium grained, pale yellow to grey. (fill sand) | W | L | | PID: 1.1 |
| | | | | E | | | | | | | | | |
| | | | | | | | | | | | | | PID: 1.3 |
| | | | | E | | | | | | | | | |
| | | | | | | 3 | | | FILL: SANDY GRAVEL: coarse grained, dark brown to dark grey. Sand is fine to medium grained, dark brown. Borehole MW17 terminated at 2.8m | W | L | | |
| | | | | | | 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 WL 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 No. **MW18**

Engineering Log - Borehole

Sheet 1 of 2
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 | | | 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 | structure and additional observations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADTDT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Borehole No. **MW18**

Engineering Log - Borehole

Sheet 2 of 2
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 | 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 | structure and additional observations |
| Air Blade | 1 2 3 | | | | | 9 |  | | FILL: GRAVELLY SAND: fine to medium grained, pale brown to brown. Gravel is medium grained, red to brown. Some fragments of brick, some glass, some concrete, some metal pieces. <i>(continued)</i> | D | L | 100 200 300 400 | |
| | | | | | | 10 | | | Borehole MW18 terminated at 9m | | | | |
| | | | | | | 11 | | | | | | | |
| | | | | | | 12 | | | | | | | |
| | | | | | | 13 | | | | | | | |
| | | | | | | 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 WL 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 No. **BH10/ MW8**

Engineering Log - Piezometer

Sheet 1 of 2
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 & mounting: Truck mounted drill rig Easting: 230.7552 slope: -90° R.L. Surface: 10.35
hole diameter: Northing: 98.8424 bearing: datum:

| drilling information | | | | | | | material substance | | | | | | | | |
|----------------------|-------------|---|---|---------|-------|---------------------------------|--------------------|----|-----------------|-------------|--------------------------|---|-----------------------|-------------------------------|--|
| method | penetration | | | support | water | notes samples, tests, etc | well details | RL | depth metres | graphic log | classification symbol | material soil type: plasticity or particle characteristics, colour, secondary and minor components. | moisture condition | consistency/ density index | structure and additional observations |
| | 1 | 2 | 3 | | | | | | | | | | | | |
| ADRS V | | | | | | | | | | | | ASPHALT FILL: GRAVELLY SAND: fine to medium grained, brown to dark brown. Gravel is medium to coarse grained. Some large grey shale cobbles. | M | L | FILL PID: 1.1 PID: 1.5 PID: 0.9 PID: 1.1 PID: 1 PID: 1.3 PID: 1.5 PID: 1.2 |

| | | | | |
|--|--|---|---|---|
| method AS auger screwing* AD auger drilling* RR roller/tricone W washbore CT cable tool DT diatube B blank bit V V bit T TC bit TBX Tubex *bit shown by suffix e.g. ADT | support C casing N nil penetration 1 2 3 4  no resistance ranging to refusal water  10/1/98 water level on date shown  water inflow  water outflow | notes, samples, tests U ₅₀ undisturbed sample 50mm diameter D disturbed sample N standard penetration test (SPT) N* SPT - sample recovered Nc SPT with solid cone P pressure meter Bs bulk sample R refusal E environmental sample PID PID measurement WS water sample PZ piezometer ALT air lift test | classification symbols and soil description based on unified classification system moisture D dry M moist W wet W _p 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 |
|--|--|---|---|---|