

Appendix F: Field Notes

Field Reporting Cover Sheet



PROJECT NAME:	MOOREBANK SIMTA		PROJECT NO:	50342
FIELD DATES:	16-17/12/14		JBS PM:	B. GOMEZ
FIELD STAFF:	G. BLACH			
WEATHER:	FINE			
PROPOSED WORKS:	TEST PITS			
SUMMARY OF FIELDWORK:	COMPLETE TPS within Glenfield waste GOLF course and TPS 25 + 26			
IMPORTANT OUTCOMES TO NOTE:	- irrigation pipe struck at TP45 incident report conducted - DNS inaccessible during this mobilisation.			
COC SENT?	YES		DATE SAMPLES SENT:	17/12/14
PRIMARY LAB:	EUROFINS		SECONDARY LAB:	ENVIROLAB

POST-FIELDWORK CHECKLIST
☒ COC checked with PM ☒ Site map updated and attached ☒ Field data sheets attached (bore logs, well monitoring sheets) ☒ Calibration and decontamination sheets attached ☒ Field notes attached ☒ Photos downloaded to file ☐ Electronic bore logs completed and checked
OUTSTANDING ACTIONS:



Daily Field Report

Page 1 of 1

Date: 16/12/14
Arrival Time: 7:00am
Depart Time: 4:00pm
Site Address: MOOREBAND AVE, MOOREBAND

Completed by: A. Bloom
Weather: fine
Subcontractor(s): KEN COLES
MILSEARCH

Purpose of Visit: TEST PITS

Notes

(include sketch
or attach site
map/plan)

- * arrive at Glenfield waste services site at 7:00am
- go through safety + SWMS + toolbox with Ken Coles (Wayne)
- sign onto Glenfield waste sheet.
- * Wayne + JBS&G go to test pit locations
- + conduct TP46.
- * Paul (Golders) arrives at 8:00am and says he will conduct TP's 47 + 48 (shared locations) for me
- JBS&G sample TP48 via Golder Backhoe.
- * George + Wayne leave Glenfield Waste to meet Bentree JBS + Milsearch at Pass office at 9:15am
- * Bentree + Milsearch + Rockwell (Bryan) the location clear locations in Golf course + 2 locations in Cammereworth land.
- * Wayne + George return to Glenfield to complete paperwork.
- conduct TP 47 through Golder
- conduct 49 → SI
- * Call Paul (Milsearch) who escorts myself and Wayne to Golf course at 2:00pm
- * Conduct TP 45 → 44 + MW06
- * Hit injection pipe at TP45
- no one to contact at Golf course
- incident report to be submitted
- * Report site at 3:45pm

Associated
Completed
Forms

(eg, bore logs,
PID/XRF
calibration
forms)

Note

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 JBS&G	Test Pit: TP <i>404 MW06</i>	Project No: <i>50342</i>	
	Borehole: <i>SS</i>	Client: <i>TACTICAL GROUP</i>	
	Well: <i>NW</i>	Project Name: <i>SIMTA MOOREBANK</i>	
		Site Address: <i>MOOREBANK AVENUE, MOOREBANK, NSW</i>	
Date: <i>16/12/14</i>	Easting (MGA94):	Water Level Initial (m bgs):	Date: Time:
Logged By: <i>RH. C.B</i>	Northing (MGA94):	Water Level Static (m bgs):	Date: Time:
Contractor: <i>Ken Coles</i>	Zone/Area:	Surface Finish:	
Total Hole Depth (m bgs): <i>1.4</i>	Reference Level:	Casing Type:	Depth To (m bgs):
Bore Diameter (mm) / Pit Dimension (m²):	Elevation (m):	Screen Type:	Depth To (m bgs):
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):

SUBSURFACE PROFILE				SAMPLE			WELL	
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description: <i>Grassy</i>					
		<i>AC</i>	<i>Sand, grey-brown, hetero, damp, fine, med. rootlets</i> <i>0.2</i>	<i>MW06</i> <i>TP44</i> <i>0-0.1</i> <i>Bentj</i>	<i>-</i>	<i>D</i>	<i>No obs</i> <i>Acm. S</i> <i>or O.</i>	
		<i>NAT</i>	<i>Sand, yellow, homo, damp, dense, fine.</i> <i>1.1</i>	<i>MW06</i> <i>TP44</i> <i>0.3-0.4</i> <i>J</i>		<i>D</i>	<i>" "</i>	
		<i>NAT</i>	<i>SS 1.1</i> <i>Silty clay, red, grey, yellow, hetero, damp, fine, med. root ss nodules</i> <i>End of 1.4m bgs</i> <i>Program Depth</i>	<i>MW06</i> <i>TP45</i> <i>1.2-1.4</i> <i>J</i>		<i>D</i>	<i>" "</i>	

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification - All Soils				Coarse Grained Soils				Fine Grained Soils				All Soils				Surface	Rocks
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks		
FILL (FL) NATURAL (NT)	GRAVEL (GW) GRAVEL (GP) Silty GRAVEL (GM) Clayey GRAVEL (GC) SAND (SW) SAND (SP) Silty SAND (SM) Clayey SAND (SC) SILT (ML) CLAY (CL) Organic SILT (OL) SILT (MH) CLAY (CH) Organic CLAY (OH) PEAT (Pt)	gravelly sandy silty clayey organic	poorly graded well graded	boulders cobbles coarse gravel medium gravel fine gravel coarse sand medium sand fine sand	very angular angular sub-angular sub-rounded rounded well rounded	very loose loose medium dense dense very dense	non-plastic low plasticity medium plasticity high plasticity	very soft soft firm stiff very stiff hard	white black grey red brown orange yellow green blue	homogeneous heterogeneous stratified laminated lens root holes occasional inter-bedded mottled	dry damp moist wet saturated	and (35-50%) some (20-35%) little (10-20%) trace (0-10%)	odour staining solid waste	CONCRETE (CC) BITUMINOUS CONCRETE (BC) TOPSOIL (TS)	LIMESTONE (LS) SANDSTONE (SS) MUDSTONE (MS) SHALE (SH) CONGLOMERATE (CG) PHYLLITE (PH) TUFF (TF) GRANITE (GR) DOLERITE (DL) BASALT (BS) COAL (CO) COLLUVIUM (CV)		
														Surface Description bare ground grass lightly vegetated heavily vegetated paved sealed			

**JBS&G**

Test Pit: TP 44

Borehole: SB

Well: MW

Project No: 50342

Client: TACTICAL GROUP

Project Name: SIMTA MOOREBANK

Site Address: MOOREBANK AVENUE, MOOREBANK, NSW

Date: 16/12/14	Easting (MGA94):	Water Level Initial (m bgs):	Date:	Time:
Logged By: B.H. C.B.	Northing (MGA94):	Water Level Static (m bgs):	Date:	Time:
Contractor: Ken Coles	Zone/Area:	Surface Finish:		
Total Hole Depth (m bgs):	Reference Level:	Casing Type:	Depth To (m bgs):	
Bore Diameter (mm) / Pit Dimension (m ²):	Elevation (m):	Screen Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	

SUBSURFACE PROFILE				SAMPLE				WELL
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description:					
		Fin	Sand, brown segs, holes, dense, fine	TP44 0-0.1 b-s	1.2	D	No obs Ach. S 0-0.	
			- - - - 0.2 - - -					
		As	above light brown	TP44 0.2-0.3 j	1.2	D	" "	
		NAT	Sand, brown, red yellow mottly, dense, dense	TP44 0.8-1.0 j	1.0	D	" "	
			End @ 1.6 m bgs					
			Progn - Berth					

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite ZSP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification – All Soils																Surface	Rocks
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks		
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravely sandy silty clayey organic	poorly graded well graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%)	odour staining solid waste	CONCRETE (CC)	LIMESTONE (LS)		
	GRAVEL (GP)			cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp	some (20-35%)		BITUMINOUS	SANDSTONE (SS)		
	Silty GRAVEL (GM)			coarse gravel	sub-angular	medium dense	medium plasticity	firm	grey	stratified	moist	little (10-20%)		CONCRETE (BC)	MUDSTONE (MS)		
	Clayey GRAVEL (GC)			medium gravel	sub-rounded	dense	stiff	red	laminated	wet	trace (0-10%)	TOPSOIL (TS)		SHALE (SH)			
	SAND (SW)			fine gravel	rounded	very dense	very stiff	brown	lens	saturated					CONGLOMERATE (CG)		
	SAND (SP)			coarse sand	well rounded		hard	orange	root holes						PHYLLITE (PH)		
	Silty SAND (SM)			medium sand				yellow	occasional						TUFF (TF)		
	Clayey SAND (SC)			fine sand				green	inter-bedded						GRANITE (GR)		
	SILT (ML)							blue	mottled						DOLERITE (DL)		
	CLAY (CL)														BASALT (BS)		
	Organic SILT (OL)														COAL (CO)		
	SILT (MH)														COLLUVIUM (CV)		
	CLAY (CH)																
	Organic CLAY (OH)																
	PEAT (PI)																

 JBS&G	Test Pit: TP 45	Project No: 50342		
	Borehole: SB	Client: TACTICAL GROUP		
	Well: MW	Project Name: SIMTA MOOREBANK		
		Site Address: MOOREBANK AVENUE, MOOREBANK, NSW		
Date: 16/12/14	Easting (MGA94):	Water Level Initial (m bgs):	Date:	Time:
Logged By: R.H. G.B.	Northing (MGA94):	Water Level Static (m bgs):	Date:	Time:
Contractor: Ken Coles	Zone/Area:	Surface Finish:		
Total Hole Depth (m bgs):	Reference Level:	Casing Type:	Depth To (m bgs):	
Bore Diameter (mm) / Pit Dimension (m³):	Elevation (m):	Screen Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	

SUBSURFACE PROFILE				SAMPLE			WELL	
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description:					
		fine	Sand brown, silty, clay, red, rhyolite nodules 0.3	TP45 0-0.1 bgs	1.7	✓		
		fine	Silty clay, orange to grey + red, mottled, silty, LP 0.9	TP45 0.3-0.4 bgs	0.5	✓		
		NAT	Sand, white, hard, dense, R-1, LP dense 1.3	TP45 1.1-1.3 bgs	0.8	✓		
		NAT	As above yellow END @ 1.5m bgs	TP45 1.3-1.5 bgs	0.5	✓		
			Natural material encountered					

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils		All Soils				Surface	Rocks			
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks		
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravelly sandy silty clayey organic	poorly graded well graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%)	odour staining solid waste	CONCRETE (CC)	LIMESTONE (LS)		
	GRAVEL (GP)			cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp	some (20-35%)		BITUMINOUS	SANDSTONE (SS)		
	Silty GRAVEL (GM)			coarse gravel	sub-angular	medium dense	medium plasticity	grey	stratified	moist	little (10-20%)	CONCRETE (BC)		MUDSTONE (MS)			
	Clayey GRAVEL (GC)			medium gravel	sub-rounded	dense	high plasticity	red	laminated	wet	trace (0-10%)	TOPSOIL (TS)		SHALE (SH)			
	SAND (SW)			fine gravel	rounded	very dense		brown	lens	saturated				CONGLOMERATE (CG)			
	SAND (SP)			coarse sand	well rounded			orange	root holes					PHYLLITE (PH)			
	Silty SAND (SM)			medium sand				yellow	occasional					TUFF (TF)			
	Clayey SAND (SC)			fine sand				green	inter-bedded					GRANITE (GR)			
	SILT (ML)							blue	mottled					DOLERITE (DL)			
	CLAY (CL)													basal ground	BASALT (BS)		
	Organic SILT (OL)													grass	COAL (CO)		
	SILT (MH)													lightly vegetated	heavily vegetated	COLLUVIUM (CV)	
	CLAY (CH)													paved	sealed		
	Organic CLAY (OH)																
	PEAT (Pt)																



Test Pit: TP46
Borehole: 88
Well: MTW

Project No: 50342
Client: TACTICAL GROUP
Project Name: SIMTA MOOREBANK
Site Address: MOOREBANK AVENUE, MOOREBANK, NSW

Date: 15/12/14
Logged By: G.B.
Contractor: Ken Coles
Total Hole Depth (mbgs): 2.7
Bore Diameter (mm) / Pit Dimension (m³):
Method: Depth To (mbgs):
Method: Depth To (mbgs):
Method: Depth To (mbgs):

Easting (MGA94):
Northing (MGA94):
Zone/Area:
Reference Level:
Elevation (m):
Comment:
Comment:
Comment:

Water Level Initial (mbgs):
Water Level Static (mbgs):
Surface Finish:
Casing Type:
Screen Type:
Backfill Type:
Backfill Type:
Backfill Type:

Date:
Date:
Date:
Depth To (mbgs):
Depth To (mbgs):
Depth To (mbgs):
Depth To (mbgs):
Depth To (mbgs):

SUBSURFACE PROFILE				SAMPLE			WELL	
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description: <i>Grass</i>					
		FLU	Silty clay, brown, lumpy, damp, fine, LP rel.	TP46 0-0.1 ACOI ACOI/A b r j	0.2	D	No obs ACM, S or O.	
0.3				TP46 0.2-0.5 j	0.2	D		
		FILL	Sandy gravel, grey, lumpy, damp, dense, med gravel coarse sand, med. shale, broken, rocky timber, ss	TP46 0.5-0.7 j r j	0.6	D	Slight rotten odour, No S or O.	
				TP46 1.0-1.2 j	0.5	D		
1.7				TP46 1.2-2.0 j	0.1	A	No obs S, O or ACM.	
		FILL	Gravelly clay, yellow grey, lumpy, damp, fine, MP rel. shale, ss large boulders	TP46 2.4-2.6 j	0.1	D		
End @ 2.7mbgs								

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils		All Soils				Surface	Rocks		
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks	
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravely sandy silty clayey organic	poorly graded well graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%) some (20-35%) little (10-20%) trace (0-10%)	odour staining solid waste	CONCRETE (CC)	LIMESTONE (LS)	
	GRAVEL (GP)			cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp			BITUMINOUS	SANDSTONE (SS)	
	Silty GRAVEL (GM)			coarse gravel	sub-angular	medium dense	medium plasticity	grey	stratified	moist	CONCRETE (BC)			MUDSTONE (MS)		
	Clayey GRAVEL (GC)			medium gravel	sub-rounded	dense	high plasticity	red	laminated	wet	TOPSOIL (TS)			SHALE (SH)		
	SAND (SW)			fine gravel	rounded	very dense		brown	lens	saturated				CONGLOMERATE (CG)		
	SAND (SP)			coarse sand	well rounded			orange	root holes					PHYLLITE (PH)		
	Silty SAND (SM)			medium sand				yellow	occasional					TUFF (TF)		
	Clayey SAND (SC)			fine sand				green	inter-bedded					GRANITE (GR)		
	SILT (ML)							blue	mottled					DOLERITE (DL)		
	CLAY (CL)													BASALT (BS)		
	Organic SILT (OL)													lightly vegetated	COAL (CO)	
	SILT (MH)													heavily vegetated	COLLUVIUM (CV)	
	CLAY (CH)													paved		
	Organic CLAY (OH)													sealed		
PEAT (PI)																

	Test Pit: TP 47	Project No: 50342
	Borehole: SB	Client: TACTICAL GROUP
	Well: MW	Project Name: SIMTA MOOREBANK
		Site Address: MOOREBANK AVENUE, MOOREBANK, NSW
Date: 16/12/14	Easting (MGA94):	Water Level Initial (m bgs):
Logged By: P.H. G.B	Northing (MGA94):	Water Level Static (m bgs):
Contractor: Ken Coles	Zone/Area:	Surface Finish:
Total Hole Depth (m bgs):	Reference Level:	Casing Type:
Bore Diameter (mm) / Pit Dimension (m³):	Elevation (m):	Screen Type:
Method: Depth To (m bgs):	Comment:	Backfill Type:
Method: Depth To (m bgs):	Comment:	Backfill Type:
Method: Depth To (m bgs):	Comment:	Backfill Type:

Method:		Depth To (mbgs):		Comment:		Backfill Type:		
SUBSURFACE PROFILE				SAMPLE			WELL	
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description:					
		fine	Gravelly sand, yellow-grey, lumpy, dense, fine med. poorly sorted med. rootlets, ss gravel	TP47 0-0.1 bry	0.3	D	Mo. sh. ACM. S or 0	
		fin	Gravelly sand, grey leucy, clay, dense, med-coarse gravel, poorly sorted.	TP47 0.3-0.5 b	0.3	D	" "	
		fin	Gravelly clay, orange, with grey, leucy, clay, stiff, MP med. shale, rootlets	TP47 0.8-1.0 b	0.2	D	" "	
				TP47 1.6-1.8 b	0.2	D	" "	
		NAT	Silty clay, grey, leucy, clay-damp, stiff, MP	TP47 2.8-3.0 b	0.2	D	" "	
			END 3.1 m bgs					
			Program Depth					

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification – All Soils		Coarse Grained Soils				Fine Grained Soils		All Soils					Surface	Rocks	
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravely sandy silty clayey organic	poorly graded well graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%)	odour staining solid waste	CONCRETE (CC) BITUMINOUS CONCRETE (BC) TOPSOIL (TS)	LIMESTONE (LS) SANDSTONE (SS) MUDSTONE (MS) SHALE (SH) CONGLOMERATE (CG) PHYLLITE (PH) TUFF (TF) GRANITE (GR) DOLERITE (DL) BASALT (BS) COAL (CO) COLLUVIUM (CV)
	GRAVEL (GP)			cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp	some (20-35%)			
	Silty GRAVEL (GM)			coarse gravel	sub-angular	medium dense	medium plasticity	firm	grey	stratified	moist	little (10-20%)			
	Clayey GRAVEL (GC)			medium gravel	sub-rounded	dense	high plasticity	stiff	red	laminated	wet	trace (0-10%)			
	SAND (SW)			fine gravel	rounded	very dense		very stiff	brown	lens	saturated				
	SAND (SP)			coarse sand	well rounded			hard	orange	root holes					
	Silty SAND (SM)			medium sand					yellow	occasional					
	Clayey SAND (SC)			fine sand					green	inter-bedded					
	SILT (ML)								blue	mottled					
	CLAY (CL)														
	Organic SILT (OL)														
	SILT (MH)														
	CLAY (CH)														
	Organic CLAY (OH)														
	PEAT (Pi)														

	Test Pit: TP48 Borehole: S3 Well: MW		Project No: 50342 Client: TACTICAL GROUP Project Name: SIMTA MOOREBANK Site Address: MOOREBANK AVENUE, MOOREBANK, NSW	
	Date: 1/12/14 Logged By: R.H. G.B. Contractor: Ken Coles		Easting (MGA94): Northing (MGA94): Zone/Area: Reference Level: Elevation (m):	
	Total Hole Depth (m bgs): Bore Diameter (mm) / Pit Dimension (m³): Method: Depth To (m bgs): Comment:		Water Level Initial (m bgs): Date: Time: Water Level Static (m bgs): Date: Time: Surface Finish: Casing Type: Depth To (m bgs): Screen Type: Depth To (m bgs): Backfill Type: Depth To (m bgs): Backfill Type: Depth To (m bgs): Backfill Type: Depth To (m bgs):	
	Method: Depth To (m bgs): Comment:		Method: Depth To (m bgs): Comment:	

SUBSURFACE PROFILE				SAMPLE			WELL	
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description:					
		FILL	Gravelly sand	TP48 0.0-0.1 bgs	0.1	B	No clay dec. s or o	
		FILL	Gravelly clay, c. orange, lichen, chips, fine MP, slight slump	TP48 0.3-0.4 j	0.1	A	Slight slump No clay or ACM	
		NAT	Sand, brown, lichen, dense, fine, well sorted, no inclusions, oolite ss, inclusions	TP48 0.6-0.8 j	0.0	D	No clay ACM, s or o.	
			As above slight brown.	TP48				
			EOH @ 3.0-3.5 Prague Decker					

Method HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	Sample Type D - Disturbed U - Undisturbed	Reference Level AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Screen/Casing Type Class 18 PVC (50mm) - PVC50	Backfill Type BK - Backfill BN - Bentonite ZSP - 2mm Graded Sand	Well Finish RB - Roadbox MT - Monument SP - Standpipe	Pit Dimensions (m) A: B: C:	Well Development Details
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Lithologic Classification - All Soils			Coarse Grained Soils				Fine Grained Soils		All Soils				Surface		Rocks	
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Surface Description	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW) GRAVEL (GP) Silty GRAVEL (GM) Clayey GRAVEL (GC) SAND (SW) SAND (SP) Silty SAND (SM) Clayey SAND (SC) SILT (ML) CLAY (CL) Organic SILT (OL) SILT (MH) CLAY (CH) Organic CLAY (OH) PEAT (Pt)	gravely sandy silty clayey organic	poorly graded well graded	boulders cobbles coarse gravel medium gravel fine gravel coarse sand medium sand fine sand	very angular angular sub-angular sub-rounded rounded well rounded	very loose loose medium dense dense very dense	non-plastic low plasticity medium plasticity high plasticity	very soft soft firm stiff very stiff hard	white black gray red brown orange yellow green blue	homogeneous heterogeneous stratified laminated lens root holes occasional inter-bedded mottled	dry damp moist wet saturated	and (35-50%) some (20-35%) little (10-20%) trace (0-10%)	odour staining solid waste	CONCRETE (CC) BITUMINOUS CONCRETE (BC) TOPSOIL (TS)	bare ground grass lightly vegetated heavily vegetated paved sealed	LIMESTONE (LS) SANDSTONE (SS) MUDSTONE (MS) SHALE (SH) CONGLOMERATE (CG) PHYLLITE (PH) TUFF (TF) GRANITE (GR) DOLERITE (DL) BASALT (BS) COAL (CO) COLLUVIUM (CV)

		Test Pit: TP 49		Project No: 50342					
		Borehole: SB		Client: TACTICAL GROUP					
		Well: MW		Project Name: SIMTA MOOREBANK					
				Site Address: MOOREBANK AVENUE, MOOREBANK, NSW					
Date: 16/12/14		Easting (MGA94):		Water Level Initial (m bgs):		Date:		Time:	
Logged By: RA. C.B		Northing (MGA94):		Water Level Static (m bgs):		Date:		Time:	
Contractor: Ken Coles		Zone/Area:		Surface Finish:					
Total Hole Depth (m bgs): 3.1		Reference Level:		Casing Type:		Depth To (m bgs):			
Bore Diameter (mm) / Pit Dimension (m³):		Elevation (m):		Screen Type:		Depth To (m bgs):			
Method: Depth To (m bgs):		Comment:		Backfill Type:		Depth To (m bgs):			
Method: Depth To (m bgs):		Comment:		Backfill Type:		Depth To (m bgs):			
Method: Depth To (m bgs):		Comment:		Backfill Type:		Depth To (m bgs):			

SUBSURFACE PROFILE				SAMPLE		WELL		
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
Surface Description: Soil / gravel								
		Fin	Gravelly sand, yellow, below, dense, coarse, poorly sorted, med ss	TP49 0-0.1 5-3 TP49	1.5	D	No ss ACM, S or O	
			0.4	TP49 0.2-0.3 5	1.0	D	" "	
		Fin	Gravelly clay, grey, below, damp, fm, MP med. shale, ~ 30% shale	TP49 0.5-0.7 5	0.5	D	" "	
			As above	TP49 1.0-1.2 8.5	0.5	D	" "	
			As above med. moisture at 2.0.	TP49 2.0-2.2 5	0.3	D	" "	
			As above	TP49 2.3-3.0 5	0.3	D	" "	
			Coarse shale boulders					
			End of 3.1 m bgs					
			Program Depth					

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification - All Soils			Coarse Grained Soils			Fine Grained Soils			All Soils			Surface		Rocks	
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW) GRAVEL (GP) Silty GRAVEL (GM) Clayey GRAVEL (GC) SAND (SW) SAND (SP) Silty SAND (SM) Clayey SAND (SC) SILT (ML) CLAY (CL) Organic SILT (OL) SILT (MH) CLAY (CH) Organic CLAY (OH) PEAT (PI)	gravelly sandy silty clayey organic	poorly graded well graded	boulders cobbles coarse gravel medium gravel fine gravel coarse sand medium sand fine sand	very angular angular sub-angular sub-rounded rounded well rounded	very loose loose medium dense dense very dense	non-plastic low plasticity medium plasticity high plasticity	very soft soft firm stiff very stiff hard	white black grey red brown orange yellow green blue	homogeneous heterogeneous stratified laminated lens root holes occasional inter-bedded mottled	dry damp moist wet saturated	and (35-50%) some (20-35%) little (10-20%) trace (0-10%)	odour staining solid waste	CONCRETE (CC) BITUMINOUS CONCRETE (BC) TOPSOIL (TS)	LIMESTONE (LS) SANDSTONE (SS) MUDSTONE (MS) SHALE (SH) CONGLOMERATE (CG) PHYLLITE (PH) TUFF (TF) GRANITE (GR) DOLERITE (DL) BASALT (BS) COAL (CO) COLLUVIUM (CV)
														Surface Description	
														bare ground grass lightly vegetated heavily vegetated paved sealed	

**JBS&G****Test Pit: TP 50**
Borehole: SB
Well: MW**Project No:** 50342
Client: TACTICAL GROUP
Project Name: SIMTA MOOREBANK
Site Address: MOOREBANK AVENUE, MOOREBANK, NSW

Date: 16/12/14	Easting (MGA94):	Water Level Initial (m bgs):	Date:	Time:
Logged By: R.H. G.B.	Northing (MGA94):	Water Level Static (m bgs):	Date:	Time:
Contractor: Ken Coles	Zone/Area:	Surface Finish:		
Total Hole Depth (m bgs): 2.9	Reference Level:	Casing Type:	Depth To (m bgs):	
Bore Diameter (mm) / Pit Dimension (m²):	Elevation (m):	Screen Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	

SUBSURFACE PROFILE				SAMPLE				WELL
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description: gravel soil					
		fill	Gravelly soil, grey-brown hetero, dense coarse sand, incl. shale & igneous gravel	TP50 0-0.1 b + j	1.9	D	No ch ACM, S 0.0	
			0.2					
			As above incl soil.	TP50 0.2-0.3 j	0.1	D	" "	
				TP50 0.5-0.6 j	0.1	D	" "	
			0.9					
		fine	Gravelly clay, yellow-grey-brown hetero, damp fine, silty shale, igneous gravel	TP50 1.0-1.2 j	0.1	D	" "	
			1.8					
			As above increases clay less shale	TP50 2.0-2.2 j	0.1	D	" "	
			2.2					
		fine	Shale / igneous gravel boulders grey					
			2.4					
			End of logs					

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed NAT	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface Silty clay, red, hard	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

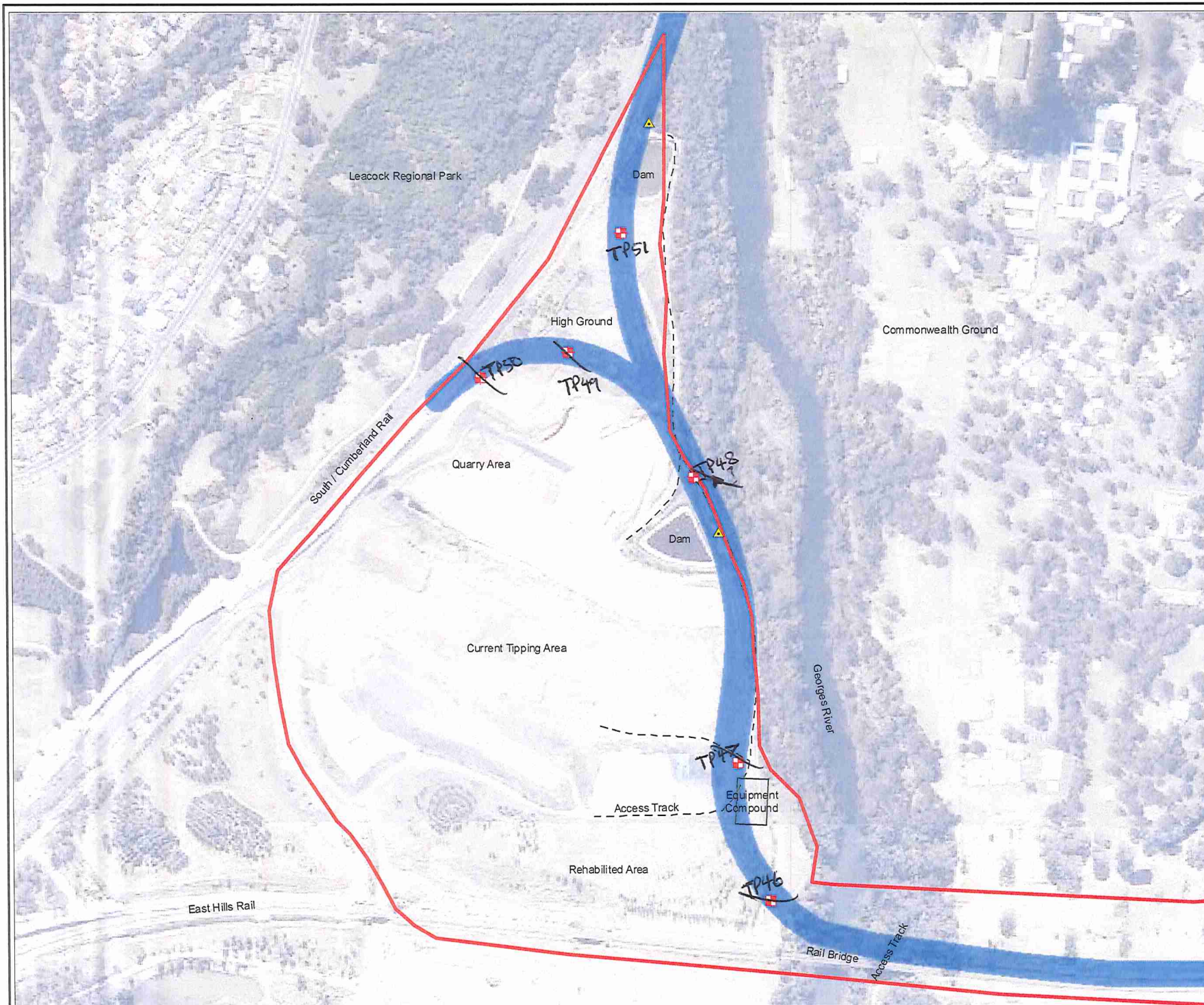
Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils			All Soils				Surface	Rocks
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravelly	poorly graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%)	odour staining solid waste	CONCRETE (CC)	LIMESTONE (LS)
	GRAVEL (GP)	sandy	well graded	cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp	some (20-35%)		BITUMINOUS	SANDSTONE (SS)
	Silty GRAVEL (GM)	silty		coarse gravel	sub-angular	medium dense	medium plasticity	firm	grey	stratified	moist	little (10-20%)		CONCRETE (BC)	MUDSTONE (MS)
	Clayey GRAVEL (GC)	clayey		medium gravel	sub-rounded	dense	high plasticity	stiff	red	laminated	wet	trace (0-10%)		TOPSOIL (TS)	SHALE (SH)
	SAND (SW)	organic		fine gravel	rounded	very dense		very stiff	brown	lens	saturated				CONGLOMERATE (CG)
	SAND (SP)			coarse sand	well rounded			hard	orange	root holes					PHYLLITE (PH)
	Silty SAND (SM)			medium sand					yellow	occasional					TUFF (TF)
	Clayey SAND (SC)			fine sand					green	inter-bedded					GRANITE (GR)
	SILT (ML)								blue	mottled					DOLERITE (DL)
	CLAY (CL)														BASALT (BS)
	Organic SILT (OL)														COAL (CO)
	SILT (MH)														COLLUVIUM (CV)
	CLAY (CH)														
	Organic CLAY (OH)														
	PEAT (PT)														

 JBS&G		Test Pit: TP 61 Borehole: S3 Well: AH	Project No: 50342 Client: TACTICAL GROUP Project Name: SIMTA MOOREBANK Site Address: MOOREBANK AVENUE, MOOREBANK, NSW
Date: 16 / 12 / 14 Logged By: A.T. G.B. Contractor: Ken Coles	Easting (MGA94): Northing (MGA94): Zone/Area: Reference Level: Elevation (m):	Water Level Initial (mbgs): Water Level Static (mbgs): Surface Finish: Casing Type: Screen Type: Backfill Type:	Date: Time: Depth To (mbgs): Depth To (mbgs): Depth To (mbgs): Depth To (mbgs):
Total Hole Depth (mbgs): 2.5 Bore Diameter (mm) / Pit Dimension (m³): Method: Depth To (mbgs): Comment:	Method: Depth To (mbgs): Comment:	Method: Depth To (mbgs): Comment:	Method: Depth To (mbgs): Comment:

SUBSURFACE PROFILE				SAMPLE			WELL	
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description:					
		FILL	Sandy gravel, yellow-brown, latero, damp-brown, CP red shale grade	TPSP 0-0.1 b.s.	0.1	0	No other AEM, 6 or 0.	
		FILL	Gravelly shale, gray, latero, dry, dense, coarse-large shale occasional clay, ss and green gravel rebar	TPS1 0.2-0.3 J	0.1	0	" "	
		FILL	Gravelly clay, dark brown, latero, damp, brown, CP red shale.	TPS1 0.3-1.0 J	0.1	0	" "	
		FILL	Gravelly clay, yellow, latero, damp, fine, MP red fine shale + green gravel	TPS1 1.8-2.0	0.0	0	" "	
		NAT	Sand, brown, heavy, dense, fine, well sorted	TPS1 2.2-2.4	0.0	0	" "	
204 E 2.5m bgs Program Depth								

Method HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	Sample Type D - Disturbed U - Undisturbed	Reference Level AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Screen/Casing Type Class 18 PVC (50mm) - PVC50	Backfill Type BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	Well Finish RB - Roadbox MT - Monument SP - Standpipe	Pit Dimensions (m) A: B: C:	Well Development Details
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Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils		All Soils				Surface		Rocks
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravelly sandy silty clayey organic	poorly graded well graded	boulders	very angular angular sub-angular sub-rounded rounded well rounded	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%) some (20-35%) little (10-20%) trace (0-10%)	odour staining solid waste	CONCRETE (CC)	LIMESTONE (LS)
	GRAVEL (GP)			cobbles		loose	low plasticity	soft	black	heterogeneous	damp			BITUMINOUS	SANDSTONE (SS)
	Silty GRAVEL (GM)			coarse gravel		medium dense	gray	stratified	moist	CONCRETE (BC)	MUDSTONE (MS)				
	Clayey GRAVEL (GC)			medium gravel		dense	red	laminated	wet	TOPSOIL (TS)	SHALE (SH)				
	SAND (SW)			fine gravel		very dense	brown	lens	saturated		CONGLOMERATE (CG)				
	SAND (SP)			coarse sand			orange	root holes		PHYLLITE (PH)					
	Silty SAND (SM)			medium sand			yellow	occasional		TUFF (TF)					
	Clayey SAND (SC)			fine sand			green	inter-bedded		GRANITE (GR)					
	SILT (ML)						blue	mottled		DOLERITE (DL)					
	CLAY (CL)									BASALT (BS)					
	Organic SILT (OL)									COAL (CO)					
	SILT (MH)									COLLUVIUM (CV)					
	CLAY (CH)														
	Organic CLAY (OH)														
PEAT (Pt)															



Legend:

- Investigation Area
- Rail Alignment
- ▲ Existing Monitoring Point
- Proposed Test Pit Location

All Locations Approximate



Job No: 50342

Client: Qube Property Management

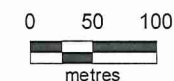
Version: R01 Rev A

Date: 04-Dec-2014

Drawn By: SE

Checked By: BG

Scale 1:6,000



Coor. Sys. GDA 1994 MGA Zone 56

SIMTA Moorebank, NSW

**GLENFIELD WASTE FACILITY
AND WESTERN RAIL LAND
PROPOSED SAMPLING LOCATIONS**

FIGURE 10

Field Equipment Calibration and Decontamination



PROJECT NAME:	S1 MTA MOOREBANK	PROJECT NO:	8-50342
FIELD DATES:	16/12/14	FIELD STAFF:	

CALIBRATION SUMMARY	
EQUIPMENT:	PID
CALIBRATION STANDARD:	isobutylene 100ppm

DATE	TIME	READING (ppm _v)	COMMENTS
16/12/14	8:00am	0 ppm	OK Calibrated
		100 ppm	OK Calibrated

DECONTAMINATION SUMMARY			
EQUIPMENT: _____			

1. Was the equipment decontaminated appropriately prior to sampling at each location?	☒ Y	☐ N	☐ NA
2. Was excess soil removed by scraping, brushing or wiping with disposable towels?	☒ Y	☐ N	☐ NA
3. Was the equipment contaminated with grease, tar or similar material?	☐ Y	☐ N	☒ NA
If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	☐ Y	☐ N	
4. Was phosphate-free detergent used to wash the equipment?	☒ Y	☐ N	☐ NA
5. Was the equipment rinsed with clean water?	☒ Y	☐ N	☐ NA
6. Was the equipment then rinsed with deionised water?	☐ Y	☒ N	☐ NA
7. Were all sample containers cleaned and acid or solvent washed prior to sample collection?	☒ Y	☐ N	☐ NA
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS.			
A fresh pair of nitrile gloves were worn for each sample collected.			



Daily Field Report

Page 1 of 1

Date: 17/12/14
Arrival Time: 7:30am
Depart Time: 11:45am
Site Address: MOOREBANK AVE, MOOREBANK
Completed by: G. BEACH
Weather: FINE
Subcontractor(s): MILSEARCH, KEN COLES

Purpose of Visit

TEST PITS

Notes

(include sketch
or attach site
map/plan)

* Arrive on site at 7:30am
- meet Milsearch
Wayne (Ken Coles)
Beatrice at Pass office
* Head to Golf course conduct TP 40 → 43
* Notify gardener of pipe struck on 16th
he seems ok
* head to TP25 + TP26 complete TPs
* Milsearch + Ken Coles depart site at 11:00am
* JBS & G depart site at 11:45am

Associated
Completed
Forms

(eg, bore logs,
PID/XRF
calibration
forms)

Note

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Field Equipment Calibration and Decontamination



PROJECT NAME:	SIMTA MOOREBANK	PROJECT NO:	850342
FIELD DATES:	17/12/14	FIELD STAFF:	

CALIBRATION SUMMARY	
EQUIPMENT:	PID
CALIBRATION STANDARD:	ISOBUTYLENE 100 PPM

DATE	TIME	READING (ppm _v)	COMMENTS
17/12/14	7:50am	0 ppm	Calibrated
		100 ppm	Calibrated

DECONTAMINATION SUMMARY			
EQUIPMENT: _____			

1. Was the equipment decontaminated appropriately prior to sampling at each location?	☒ Y	☐ N	☐ NA
2. Was excess soil removed by scraping, brushing or wiping with disposable towels?	☒ Y	☐ N	☐ NA
3. Was the equipment contaminated with grease, tar or similar material? If so, was the equipment steam cleaned or rinsed with pesticide-grade acetone:hexane?	☐ Y	☐ N	☒ NA
4. Was phosphate-free detergent used to wash the equipment?	☒ Y	☐ N	☐ NA
5. Was the equipment rinsed with clean water?	☒ Y	☐ N	☐ NA
6. Was the equipment then rinsed with deionised water?	☐ Y	☒ N	☐ NA
7. Were all sample containers cleaned and acid or solvent washed prior to sample collection?	☒ Y	☐ N	☐ NA
WERE ANY ADDITIONAL DECONTAMINATION MEASURES REQUIRED? PROVIDE DETAILS.			
A fresh pair of disposable nitrile gloves were worn for each sample collected,			

	Test Pit: TP 25	Project No: 50342		
	Borehole: SB	Client: TACTICAL GROUP		
	Well: MW	Project Name: SIMTA MOOREBANK		
		Site Address: MOOREBANK AVENUE, MOOREBANK, NSW		
Date: 9/12/14	Easting (MGA94):	Water Level Initial (m bgs):	Date:	Time:
Logged By: RA. C.B.	Northing (MGA94):	Water Level Static (m bgs):	Date:	Time:
Contractor: Ken Coles	Zone/Area:	Surface Finish:		
Total Hole Depth (m bgs): 0.5	Reference Level:	Casing Type:	Depth To (m bgs):	
Bore Diameter (mm) / Pit Dimension (m ²):	Elevation (m):	Screen Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):	

SUBSURFACE PROFILE				SAMPLE			WELL	
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description: Soil/gravel					
		NAT FILL	Sand, light brown, homo, clay fine, coarse, igneous grains, rootlets 0.2	TP25 0-0.1 b=J	0.3	0	TP on access track No obs ACM, S or O	
		NAT	Silty sandy clay, yellow grey, hetero, clay, fine, cl. rel. ss End of 0.5-3ss Program 2014	TP25 0.3-0.4 G	0.1	0	" "	

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils		All Soils				Surface	Rocks	
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravelly	poorly graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%)	odour	CONCRETE (CC)	LIMESTONE (LS)
	GRAVEL (GP)	sandy	well graded	cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp	some (20-35%)	staining	BITUMINOUS	SANDSTONE (SS)
	Silty GRAVEL (GM)	silty		coarse gravel	sub-angular	medium dense	medium plasticity	firm	gray	stratified	moist	little (10-20%)	solid waste	CONCRETE (BC)	MUDSTONE (MS)
	Clayey GRAVEL (GC)	clayey		medium gravel	sub-rounded	dense	high plasticity	stiff	red	laminated	wet	trace (0-10%)		TOPSOIL (TS)	SHALE (SH)
	SAND (SW)	organic		fine gravel	rounded	very dense		very stiff	brown	lens	saturated				CONGLOMERATE (CG)
	SAND (SP)			coarse sand	well rounded			hard	orange	root holes					PHYLLITE (PH)
	Silty SAND (SM)			medium sand					yellow	occasional					TUFF (TF)
	Clayey SAND (SC)			fine sand					green	inter-bedded					GRANITE (GR)
	SILT (ML)								blue	mottled					DOLERITE (DL)
	CLAY (CL)														BASALT (BS)
	Organic SILT (OL)														COAL (CO)
	SILT (MH)														COLLUVIUM (CV)
	CLAY (CH)														
	Organic CLAY (OH)														
PEAT (Pt)															

		Test Pit: TP 26		Project No: 50342	
		Borehole: SB		Client: TACTICAL GROUP	
		Well: MW		Project Name: SIMTA MOOREBANK	
				Site Address: MOOREBANK AVENUE, MOOREBANK, NSW	
Date: 17/12/14		Easting (MGA94):		Water Level Initial (m bgs):	
Logged By: J.H. C.B.		Northing (MGA94):		Water Level Static (m bgs):	
Contractor: Ken Coles		Zone/Area:		Surface Finish:	
Total Hole Depth (m bgs): 0.7		Reference Level:		Casing Type:	
Bore Diameter (mm) / Pit Dimension (m³):		Elevation (m):		Screen Type:	
Method: Depth To (m bgs):		Comment:		Backfill Type:	
Method: Depth To (m bgs):		Comment:		Backfill Type:	
Method: Depth To (m bgs):		Comment:		Backfill Type:	

SUBSURFACE PROFILE				SAMPLE				WELL
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description: Gravel/sand					
		ALL	Sand, brown, lumpy, dense, fine with some gravel	TP26 0-0.1 b+j	0.2	D	No ACN S or O.	
		NAT	Sand, yellow, lumpy, dense, fine, well sorted				" "	
		NAT	Silty clay, red-grey, lumpy, dense, stiff, CP and ss	TP26 0.3-0.5 j	0.1	D	" "	
			EOL @ 0.7 m bgs					
			Progr - Reck					

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils		All Soils				Surface		Rocks			
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks			
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravelly sandy silty clayey organic	poorly graded well graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%)	odour staining solid waste	CONCRETE (CC)	LIMESTONE (LS)			
	GRAVEL (GP)			cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp	some (20-35%)		BITUMINOUS	SANDSTONE (SS)			
	Silty GRAVEL (GM)			coarse gravel	sub-angular	medium dense	firm	grey	stratified	moist	little (10-20%)	CONCRETE (BC)		MUDSTONE (MS)				
	Clayey GRAVEL (GC)			medium gravel	sub-rounded	dense	stiff	red	laminated	wet	trace (0-10%)	TOPSOIL (TS)		SHALE (SH)				
	SAND (SW)			fine gravel	rounded	very dense	very stiff	brown	lens	saturated		CONGLOMERATE (CG)		PHYLLITE (PH)				
	SAND (SP)			coarse sand	well rounded		hard	orange	root holes									
	Silty SAND (SM)			medium sand				yellow	occasional									
	Clayey SAND (SC)			fine sand				green	inter-bedded									
	SILT (ML)							blue	mottled									
	CLAY (CL)																	
	Organic SILT (OL)																	
	SILT (MH)																	
	CLAY (CH)																	
Organic CLAY (OH)																		
PEAT (Pt)																		
									</									



Test Pit: TP 40
Borehole: S8
Well: MW

Project No: 50342
Client: TACTICAL GROUP
Project Name: SIMTA MOOREBANK
Site Address: MOOREBANK AVENUE, MOOREBANK, NSW

Date: 7/12/14
Logged By: R.H. C.B.
Contractor: Ken Coles
Total Hole Depth (m bgs): 0.8
Bore Diameter (mm) / Pit Dimension (m³):
Method: Depth To (m bgs):
Method: Depth To (m bgs):
Method: Depth To (m bgs):
Easting (MGA94):
Northing (MGA94):
Zone/Area:
Reference Level:
Elevation (m):
Comment:
Comment:
Comment:
Water Level Initial (m bgs):
Water Level Static (m bgs):
Surface Finish:
Casing Type:
Screen Type:
Backfill Type:
Backfill Type:
Backfill Type:
Date:
Date:
Date:
Time:
Time:
Time:
Depth To (m bgs):
Depth To (m bgs):
Depth To (m bgs):
Depth To (m bgs):
Depth To (m bgs):
Depth To (m bgs):

SUBSURFACE PROFILE

SAMPLE

WELL

Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description: Grass					
		fine	Sand brown, lumpy, dense, fine	TP40 0.0-0.1 bgs	0.2	D	No ch ACM, 5 or 0	
				TP40 0.2-0.23	0.1	D	" "	
		NAT	Silty sandy clay, yellow-red, lumpy, stiff, MP, ss. smooth	TP40 0.5-0.7	0.0	D	" "	
			End 0.8 m bgs					
			Progr - 100%					

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils		All Soils				Surface	Rocks	
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravely	poorly graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%)	odour	CONCRETE (CC)	LIMESTONE (LS)
	GRAVEL (GP)	sandy	well graded	cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp	some (20-35%)	staining	BITUMINOUS	SANDSTONE (SS)
	Silty GRAVEL (GM)	silty		coarse gravel	sub-angular	medium dense	medium plasticity	firm	grey	stratified	moist	little (10-20%)	solid waste	CONCRETE (BC)	MUDSTONE (MS)
	Clayey GRAVEL (GC)	clayey		medium gravel	sub-rounded	dense	high plasticity	stiff	red	laminated	wet	trace (0-10%)		TOPSOIL (TS)	SHALE (SH)
	SAND (SW)	organic		fine gravel	rounded	very dense		very stiff	brown	lens	saturated				CONGLOMERATE (CG)
	SAND (SP)			coarse sand	well rounded			hard	orange	root holes					PHYLLITE (PH)
	Silty SAND (SM)			medium sand					yellow	occasional					TUFF (TF)
	Clayey SAND (SC)			fine sand					green	inter-bedded					GRANITE (GR)
	SILT (ML)								blue	mottled					DOLERITE (DL)
	CLAY (CL)														BASALT (BS)
	Organic SILT (OL)														COAL (CO)
	SILT (MH)														COLLUVIUM (CV)
	CLAY (CH)														
	Organic CLAY (OH)														
PEAT (PT)															



Test Pit: TP 41
Borehole: SB
Well: MW

Project No: 50342
Client: TACTICAL GROUP
Project Name: SIMTA MOOREBANK
Site Address: MOOREBANK AVENUE, MOOREBANK, NSW

Date: 17/12/14
Logged By: R.H. G.B.
Contractor: Ken Coles
Total Hole Depth (m bgs): 0.8
Bore Diameter (mm) / Pit Dimension (m²):
Method: Depth To (m bgs):
Method: Depth To (m bgs):
Method: Depth To (m bgs):

Easting (MGA94):
Northing (MGA94):
Zone/Area:
Reference Level:
Elevation (m):
Comment:
Comment:
Comment:

Water Level Initial (m bgs):
Water Level Static (m bgs):
Surface Finish:
Casing Type:
Screen Type:
Backfill Type:
Backfill Type:

Date:
Date:
Date:
Depth To (m bgs):
Depth To (m bgs):
Depth To (m bgs):
Depth To (m bgs):
Depth To (m bgs):

SUBSURFACE PROFILE				SAMPLE				WELL
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description:					
		FILL	Sand, brown, heavy, dense, fine	TP41 0-0.1	0.2	D	No obs Rem. S 0.0	
		FILL	Gravelly sand, yellow, heavy, damp, dense, med ss, gravel.	TP41 0.2-0.4	0.0	D	" "	
		NAT	Silly sandy clay, yellow red + g-y, heavy, damp, dense, med, ss	TP41 0.5-0.7	0.5	D	" "	
FOH E 0.8-m bgs								
Program Data								

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C: 	

Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils			All Soils				Surface	Rocks
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravelly sandy silty clayey organic	poorly graded well graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%) some (20-35%) little (10-20%) trace (0-10%)	odour staining solid waste	CONCRETE (CC)	LIMESTONE (LS)
	GRAVEL (GP)			cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp			BITUMINOUS	SANDSTONE (SS)
	Silty GRAVEL (GM)			coarse gravel	sub-angular	medium dense	medium plasticity	grey	stratified	moist	CONCRETE (BC)			MUDSTONE (MS)	
	Clayey GRAVEL (GC)			medium gravel	sub-rounded	dense	stiff	red	laminated	wet	TOPSOIL (TS)			SHALE (SH)	
	SAND (SW)			fine gravel	rounded	very dense	very stiff	brown	lens	saturated				CONGLOMERATE (CG)	PHYLLITE (PH)
	SAND (SP)			coarse sand	well rounded		hard	orange	root holes					TUFF (TF)	GRANITE (GR)
	Silty SAND (SM)			medium sand				yellow	occasional					DOLERITE (DL)	BASALT (BS)
	Clayey SAND (SC)			fine sand				green	inter-bedded					lightly vegetated	COAL (CO)
	SILT (ML)							blue	mottled					heavily vegetated	COLLUVIUM (CV)
	CLAY (CL)													paved	
	Organic SILT (OL)													sealed	
	SILT (MH)														
	CLAY (CH)														
	Organic CLAY (OH)														
	PEAT (PT)														

		Test Pit: TP <u>42</u>		Project No: <u>50342</u>					
		Borehole: <u>S3</u>		Client: <u>TACTICAL GROUP</u>					
		Well: <u>MTW</u>		Project Name: <u>SIMTA MOOREBANK</u>					
				Site Address: <u>MOOREBANK AVENUE, MOOREBANK, NSW</u>					
Date: <u>7/12/14</u>		Easting (MGA94):		Water Level Initial (m bgs):		Date:		Time:	
Logged By: <u>Ken Coles</u>		Northing (MGA94):		Water Level Static (m bgs):		Date:		Time:	
Contractor: <u>Ken Coles</u>		Zone/Area:		Surface Finish:					
Total Hole Depth (m bgs): <u>0.8</u>		Reference Level:		Casing Type:		Depth To (m bgs):			
Bore Diameter (mm) / Pit Dimension (m³):		Elevation (m):		Screen Type:		Depth To (m bgs):			
Method: Depth To (m bgs):		Comment:		Backfill Type:		Depth To (m bgs):			
Method: Depth To (m bgs):		Comment:		Backfill Type:		Depth To (m bgs):			
Method: Depth To (m bgs):		Comment:		Backfill Type:		Depth To (m bgs):			

SUBSURFACE PROFILE				SAMPLE				WELL
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description: <u>Grassy</u>					
			<u>fine Sand, brown, loose, damp,</u> <u>fine, dense, fine, red</u> <u>rocky</u> <u>0.2</u> <u>As above, yellow</u> <u>0.5</u> <u>NAT Silty sandy clay, yellow</u> <u>grey, loose, v stiff,</u> <u>LP</u> <u>EOH @ 0.8 mbgs</u> <u>Program Depth</u>	<u>TP42</u> <u>0.0-0.1</u> <u>Q002</u> <u>Q002/A</u>	<u>0.5</u>	<u>D</u>	<u>No obs</u> <u>ACMIS</u> <u>or O.</u>	
				<u>TP42</u> <u>0.2-0.3</u>	<u>0.2</u>	<u>D</u>	<u>"</u>	<u>4</u>
				<u>TP42</u> <u>0.5-0.7</u>	<u>0.2</u>	<u>N</u>	<u>"</u>	<u>7</u>

Method	Sample Type	Reference Level	Screen/Casing Type	Backfill Type	Well Finish	Pit Dimensions (m)	Well Development Details
HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	D - Disturbed U - Undisturbed	AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Class 18 PVC (50mm) - PVC50	BK - Backfill BN - Bentonite ZSP - 2mm Graded Sand	RB - Roadbox MT - Monument SP - Standpipe	A: B: C:	

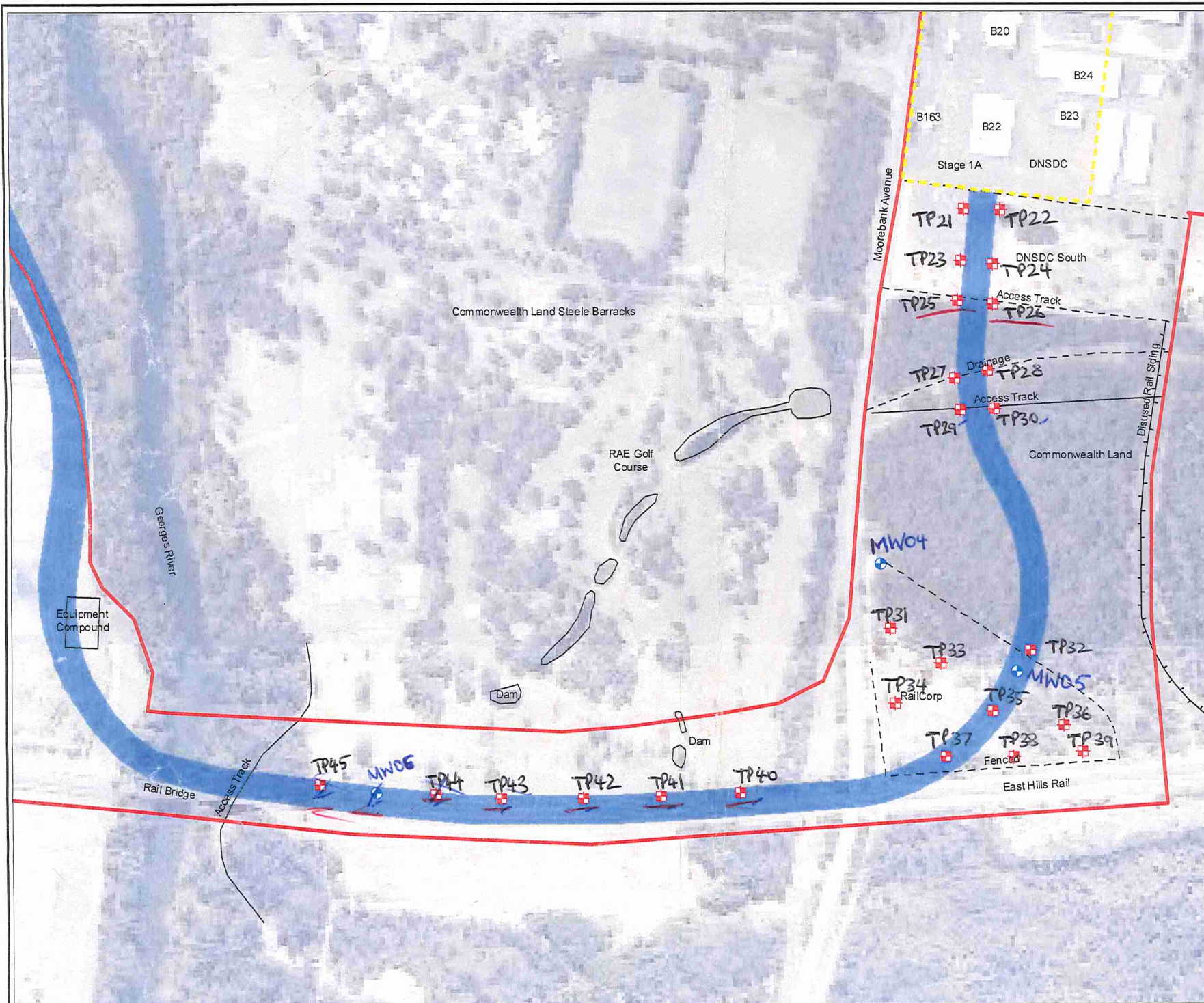
Lithologic Classification - All Soils			Coarse Grained Soils			Fine Grained Soils			All Soils			Surface			Rocks	
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks	
FILL (FL) NATURAL (NT)	GRAVEL (GW) GRAVEL (GP) Silty GRAVEL (GM) Clayey GRAVEL (GC) SAND (SW) SAND (SP) Silty SAND (SM) Clayey SAND (SC) SILT (ML) CLAY (CL) Organic SILT (OL) SILT (MH) CLAY (CH) Organic CLAY (OH) PEAT (PT)	gravelly sandy silty clayey organic	poorly graded well graded	boulders cobbles coarse gravel medium gravel fine gravel coarse sand medium sand fine sand	very angular angular sub-angular sub-rounded rounded well rounded	very loose loose medium dense dense very dense	non-plastic low plasticity medium plasticity high plasticity	very soft soft firm stiff very stiff hard	white black gray red brown orange yellow green blue	homogeneous heterogeneous stratified laminated lens root holes occasional inter-bedded mottled	dry damp moist wet saturated	and (35-50%) some (20-35%) little (10-20%) trace (0-10%)	odour staining solid waste	CONCRETE (CC) BITUMINOUS CONCRETE (BC) TOPSOIL (TS)	LIMESTONE (LS) SANDSTONE (SS) MUDSTONE (MS) SHALE (SH) CONGLOMERATE (CG) PHYLLITE (PH) TUFF (TF) GRANITE (GR) DOLERITE (DL) BASALT (BS) COAL (CO) COLLUVIUM (CV)	
														Surface Description bare ground grass lightly vegetated heavily vegetated paved sealed		

		Test Pit: TP 43 Borehole: 85 Well: MW	Project No: 50342 Client: TACTICAL GROUP Project Name: SIMTA MOOREBANK Site Address: MOOREBANK AVENUE, MOOREBANK, NSW
Date: 17/12/14	Easting (MGA94):	Water Level Initial (m bgs):	Date: Time:
Logged By: R.A. G.B.	Northing (MGA94):	Water Level Static (m bgs):	Date: Time:
Contractor: Ken Coles	Zone/Area:	Surface Finish:	
Total Hole Depth (m bgs): 1.2m	Reference Level:	Casing Type:	Depth To (m bgs):
Bore Diameter (mm) / Pit Dimension (m³):	Elevation (m):	Screen Type:	Depth To (m bgs):
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):
Method: Depth To (m bgs):	Comment:	Backfill Type:	Depth To (m bgs):

SUBSURFACE PROFILE				SAMPLE				WELL
Depth (m)	Lithologic Type	Lithologic Class	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments	Construction
			Surface Description: Grass					
		AC	Soil brown, loam, clays dense, fine, rootlets	TP43 0-0.1	0.6	D	No dis ACM. S or Q.	
				0.2-0.3			"	
		Gravel	Soil yellow, loam, dense, fine, well sorted	TP43 0.4-0.5	0.2	D	"	
							"	
		MAR	Silty sandy clay, orange brown w grey, red mottling, loam, clay, shiff, MP med. fine ss gravel	TP43 0.8-1.0	0.2	D	"	
							"	
			End of 1.2m ss					
			Program ends					

Method HA - Hand Auger NDD - Non Destructive Drilling SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tube AH - Air Hammer TP - Test Pit	Sample Type D - Disturbed U - Undisturbed	Reference Level AHD - Australian Height Datum TOC - Top of Casing GS - Ground Surface	Screen/Casing Type Class 18 PVC (50mm) - PVC50	Backfill Type BK - Backfill BN - Bentonite 2SP - 2mm Graded Sand	Well Finish RB - Roadbox MT - Monument SP - Standpipe	Pit Dimensions (m) A: B: C:	Well Development Details
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Lithologic Classification – All Soils			Coarse Grained Soils				Fine Grained Soils		All Soils				Surface	Rocks	
Lithologic Type	Lithologic Class - Soil	Texture	Grading	Grain Size	Angularity	Density	Plasticity	Consistency	Colour	Structure	Moisture	Inclusions	Contamination	Surface Materials	Lithologic Class - Rocks
FILL (FL) NATURAL (NT)	GRAVEL (GW)	gravely	poorly graded	boulders	very angular	very loose	non-plastic	very soft	white	homogeneous	dry	and (35-50%)		CONCRETE (CC)	LIMESTONE (LS)
	GRAVEL (GP)	sandy	well graded	cobbles	angular	loose	low plasticity	soft	black	heterogeneous	damp	some (20-35%)		BITUMINOUS	SANDSTONE (SS)
	Silty GRAVEL (GM)	silty		coarse gravel	sub-angular	medium dense	medium plasticity	firm	grey	stratified	moist	little (10-20%)	odour	CONCRETE (BC)	MUDSTONE (MS)
	Clayey GRAVEL (GC)	clayey		medium gravel	sub-rounded	dense	high plasticity	stiff	red	laminated	wet	trace (0-10%)	staining	TOPSOIL (TS)	SHALE (SH)
	SAND (SW)	organic		fine gravel	rounded	very dense		very stiff	brown	lens	saturated		solid waste		CONGLOMERATE (CG)
	SAND (SP)			coarse sand	well rounded			hard	orange	root holes					PHYLLITE (PH)
	Silty SAND (SM)			medium sand					yellow	occasional				TUFF (TF)	
	Clayey SAND (SC)			fine sand					green	inter-bedded					GRANITE (GR)
	SILT (ML)								blue	mottled					DOLERITE (DL)
	CLAY (CL)														BASALT (BS)
	Organic SILT (OL)														COAL (CO)
	SILT (MH)													heavily vegetated	COLLUVIUM (CV)
	CLAY (CH)													paved	
	Organic CLAY (OH)													sealed	
	PEAT (PI)														



Legend:

- Investigation Area
- Stage 1 Boundary
- Rail Alignment
- Proposed Monitoring Well Location
- Proposed Test Pit Location

All Locations Approximate



Job No: 50342

Client: Qube Property Management

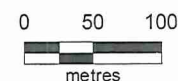
Version: R01 Rev A

Date: 02-Dec-2014

Drawn By: SE

Checked By: BG

Scale 1:5,500



Coord. Sys. GDA 1994 MGA Zone 56

SIMTA Moorebank, NSW

SOUTHERN COMMONWEALTH
AND RAIL LAND PROPOSED
SAMPLING LOCATIONS

FIGURE 9