



# APPENDIX A

## Reports of Test Pits and Auger Holes



# REPORT OF BOREHOLE: BCAH01

**CLIENT:** SunWater **COORDS:** 664230 m E 7581072 m N MGA94 **SHEET:** 1 OF 1  
**PROJECT:** Connors River Dam and Pipelines **SURFACE RL:** m **DATUM:** AHD **DRILL RIG:** HAND  
**LOCATION:** Bee Creek **INCLINATION:** -90° **DRILLER:** Golder  
**JOB NO:** 077632049 **HOLE DIA:** 70 mm **HOLE DEPTH:** 1.80 m **LOGGED:** ACF **DATE:** 11/7/09  
**CHECKED:** AB **DATE:** 8/10/09

Drilling			Sampling		Field Material Description														
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.6.3.2) Blows per 100 mm								
											0	5	10	15	20	25			
HAND	M	11/07/09	0.0	0.10	DS 0.00-0.10m		SP	SAND Medium to coarse, pale grey and pale brown, trace fine angular gravel . becoming moist	D										
			0.5		DS 0.40-0.50m				M										
			1.5	1.60	DS 1.70-1.80m				W										
			1.80					END OF BOREHOLE @ 1.80 m											
			2.0																
			2.5																
			3.0																
			3.5																
			4.0																
			4.5																
			5.0																

077632049\_CUSTOMGFX (COLOUR).GLB FULL PAGE J:\BRISBANE\77632049\CONNORS\_RIVER\_DAM\GINT\077632049\_BH.GPJ GAPS\_1.GDT 08/10/2009 2:20:09 PM

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# REPORT OF BOREHOLE: BCAH02

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Bee Creek  
 JOB NO: 077632049

COORDS: 664871 m E 7580149 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 INCLINATION: -90°  
 HOLE DIA: 70 mm HOLE DEPTH: 1.80 m

SHEET: 1 OF 1  
 DRILL RIG: HAND  
 DRILLER: Golder  
 LOGGED: ACF DATE: 11/7/09  
 CHECKED: AB DATE: 8/10/09

Drilling			Sampling		Field Material Description													
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm							
											0	5	10	15	20	25		
HAND	M	Groundwater not encountered	0.0	0.10	DS 0.00-0.10m		SP	SAND Medium to coarse, pale grey and pale brown, trace fine angular gravel sand becoming fine to medium	D	VL								
			0.5		DS 0.80-0.90m													
			1.0															
	H		1.40				SP	Gravelly SAND Medium to coarse, pale brown and brown, fine gravel, some subangular and rounded cobbles to 0.06m	M	MD-D								
1.5				DS 1.70-1.80m														
			1.80					END OF BOREHOLE @ 1.80 m Refusal on roots at 1.8m. Best of 3 attempts. Backfilled on completion.										
			2.0															
			2.5															
			3.0															
			3.5															
			4.0															
			4.5															
			5.0															

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# REPORT OF BOREHOLE: BCAH04

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Bee Creek  
 JOB NO: 077632049

COORDS: 662766 m E 7578206 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 INCLINATION: -90°  
 HOLE DIA: 70 mm HOLE DEPTH: 1.10 m

DRILL RIG: HAND  
 DRILLER: Golder  
 LOGGED: ACF DATE: 11/7/09  
 CHECKED: AB DATE: 8/10/09

Drilling			Sampling		Field Material Description												
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm					
												0	5	10	15	20	25
HAND	M	11/07/09	0.0	0.10	DS 0.00-0.10m	[Yellow dotted pattern]	SP	SAND Medium, pale grey and pale brown . becoming moist	D	M	VL						
			0.35	0.50	DS 0.50-0.80m			. becoming grey and pale brown, wet, trace fine gravel									
			1.0	1.10				END OF BOREHOLE @ 1.10 m Borehole abandoned due to caving. Sidewalls caving below 0.3m. Backfilled on completion.									
			1.5														
			2.0														
			2.5														
			3.0														
			3.5														
			4.0														
			4.5														
			5.0														

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# REPORT OF BOREHOLE: BHAH01

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Boothill Creek  
 JOB NO: 077832049

COORDS: 697624 m E 7582147 m N 55 MGA94  
 SURFACE RL: m DATUM: AHD  
 INCLINATION: -90°  
 HOLE DIA: 70 mm HOLE DEPTH: 0.90 m

DRILL RIG: HAND  
 DRILLER: Golder  
 LOGGED: ACF DATE: 15/7/09  
 CHECKED: AB DATE: 8/10/09

Drilling			Sampling		Field Material Description											
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm					
											0	5	10	15	20	25
HAND	M-H	Groundwater not encountered	0.0	0.10			SP	Gravelly SAND Medium to coarse, pale grey and pale brown, fine to medium gravel becoming moist	D	VL						
			0.5	DS 0.50-0.80m	M											
			0.90					END OF BOREHOLE @ 0.90 m Auger hole discontinued due to limit reach of operator. Backfilled on completion.								
			1.0													
			1.5													
			2.0													
			2.5													
			3.0													
			3.5													
			4.0													
			4.5													
			5.0													

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# REPORT OF BOREHOLE: BHAH02

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Boothill Creek  
 JOB NO: 077632049

COORDS: 697347 m E 7562020 m N 55 MGA94  
 SURFACE RL: m DATUM: AHD  
 INCLINATION: -90°  
 HOLE DIA: 70 mm HOLE DEPTH: 0.90 m

DRILL RIG: HAND  
 DRILLER: Golder  
 LOGGED: ACF  
 CHECKED: AB

DATE: 15/7/09  
 DATE: 8/10/09

Drilling			Sampling		Field Material Description											
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.6.3.2) Blows per 100 mm					
											0	5	10	15	20	25
HAND	M-H	Groundwater not encountered	0.0	0.10	DS 0.00-0.10m		GP	Sandy GRAVEL Fine to coarse, angular, pale grey and pale brown, medium to coarse sand becoming brown and pale brown, some silt in sand	D	VL						
			0.5		DS 0.40-0.50m											
			0.90					END OF BOREHOLE @ 0.90 m Auger hole discontinued due to limit reach of operator. Backfilled on completion.								
			1.0													
			1.5													
			2.0													
			2.5													
			3.0													
			3.5													
			4.0													
			4.5													
			5.0													

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# REPORT OF TEST PIT: BHCTP02

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Boothill Creek  
 JOB NO: 077632049

COORDS: 697497 m E 7582089 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 0.80 m  
 BUCKET TYPE: 0.3 m

MACHINE: St Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 6/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation			Sampling			Field Material Description										
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm					
											0	5	10	15	20	25
EX	L	Groundwater not encountered	0.0		DS 0.00-0.10m		SP	SAND Medium to coarse, pale brown, some fine to medium angular gravel	D	VL						
			0.40					COBBLES (70%) and SAND (30%) COBBLES: rounded to 0.25m SAND: medium to coarse, pale brown, some fine to medium gravel								M
M			0.5		DS 0.70-0.80m			TEST PIT DISCONTINUED @ 0.80 m Sidewall caving below 0.8m. Backfilled upon completion.								
			0.80													
			1.0													
			1.5													
			2.0													
			2.5													
			3.0													
			3.5													
			4.0													
			4.5													
			5.0													

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## REPORT OF PHOTOGRAPHS:

BHCTP02

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Boothill Creek  
JOB NO: 077632049

COORDS: 697497 m E 7582089 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 0.80m  
BUCKET TYPE: 0.3m

DEPTH RANGE: 0.00 – 0.80m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 6/07/09  
CHECKED: AB DATE: 8/10/09






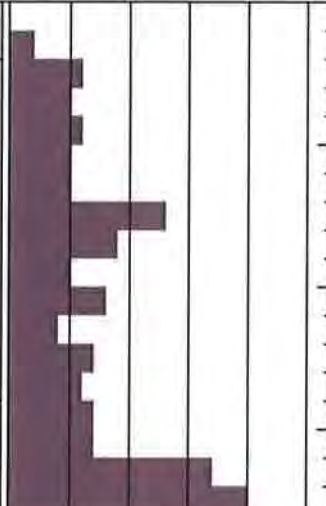

# REPORT OF TEST PIT: BHCTP03

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Boothill Creek  
 JOB NO: 077632049

COORDS: 697435 m E 7582081 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 2.50 m  
 BUCKET TYPE: 0.3 m

MACHINE: St Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 6/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation		Sampling		Field Material Description												
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.8.3.2) Blows per 100 mm					
											0	5	10	15	20	25
EX	L	Groundwater not encountered	0.0		DS 0.00-0.10m		SP	SAND Medium to coarse, pale brown, some fine to medium angular gravel	D	L-MD						
			0.20				GW	Sandy GRAVEL (70%) and COBBLES (30%) Sandy GRAVEL: fine to coarse, angular, pale brown, medium to coarse sand COBBLES: rounded to 0.17m	M	MD						
			0.5													
EX	M	Groundwater not encountered	1.40		DS 1.40-1.50m			... composition becoming Sandy GRAVEL (30%) and COBBLES (70%), some silt	M	MD-D						
			1.5													
			2.50		DS 2.20-2.30m			TEST PIT DISCONTINUED @ 2.50 m Sidewalls caving below 1.9m. Backfilled upon completion.								
			2.5													
			3.0													
			3.5													
			4.0													
			4.5													
			5.0													

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# REPORT OF PHOTOGRAPHS:

BHCTP03

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Boothill Creek  
JOB NO: 077632049

COORDS: 697435 m E 7582081 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.50m  
BUCKET TYPE: 0.3m

DEPTH RANGE: 0.00 – 2.50m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 6/07/09  
CHECKED: AB DATE: 8/10/09







# REPORT OF PHOTOGRAPHS:

CRTP01

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Connors River & Sandy Creek Jct  
JOB NO: 077632049

COORDS: 715967 m E 7560197 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.40 m  
BUCKET TYPE: 0.6 m

DEPTH RANGE: 0.00 – 2.40m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 7/07/09  
CHECKED: AB DATE: 8/10/09





# REPORT OF TEST PIT: CRTP02

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Connors River & Sandy Creek Jct  
 JOB NO: 077632049

COORDS: 715891 m E 7560290 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 1.80 m  
 BUCKET TYPE: 0.6 m

SHEET: 1 OF 1  
 MACHINE: 5 Tonne Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 7/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation			Sampling			Field Material Description											
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.6.3.2) Blows per 100 mm					
												0	5	10	15	20	25
L			0.0	0.10				SM	Silty SAND Fine to coarse, brown, some organic matter, some fine to coarse angular gravel COBBLES & BOULDERS (70%) and Sandy GRAVEL (30%) COBBLES & BOULDERS: rounded and subangular to 0.35m Sandy GRAVEL: fine to coarse, angular, brown, coarse sand	D	VL						
EX	M	7/07/09	0.5		DS 0.80-0.90m					M	MD-D						
			1.0														
			1.40						becoming wet	W	D-V/D						
			1.80														
			2.0						TEST PIT DISCONTINUED @ 1.80 m Test pit discontinued due to caving in. Sidewalls caving below 1.6m. Backfilled on completion.								
			2.5														
			3.0														
			3.5														
			4.0														
			4.5														
			5.0														

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## REPORT OF PHOTOGRAPHS:

CRTP02

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Connors River & Sandy Creek Jct  
JOB NO: 077632049

COORDS: 715891 m E 7560290 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 1.80 m  
BUCKET TYPE: 0.6 m

DEPTH RANGE: 0.00 – 1.80m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 7/07/09  
CHECKED: AB DATE: 8/10/09





# REPORT OF TEST PIT: CRTP02A

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Connors River & Sandy Creek Jct  
 JOB NO: 077632049

COORDS: 715796 m E 7560357 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 0.90 m  
 BUCKET TYPE: 0.6 m

SHEET: 1 OF 1  
 MACHINE: 5 Tonne Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 7/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation			Sampling			Field Material Description													
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.6.3.2) Blows per 100 mm							
												0	5	10	15	20	25		
EX	L	Groundwater not encountered	0.0	0.10	DS 0.00-0.10m				Gravelly SAND Medium to coarse, pale brown, fine gravel . becoming moist	D									
			0.5	0.60	DS 0.70-0.80m				COBBLES (70%) and Sandy GRAVEL (30%) COBBLES: angular and subangular Sandy GRAVEL: medium to coarse, pale brown, angular, medium to coarse sand	M	VL								
	M			0.90					TEST PIT DISCONTINUED @ 0.90 m Test pit discontinued due to caving in. Sidewalls caving below 0.9m. Backfilled on completion.	MD-D									
			1.0																
			1.5																
			2.0																
			2.5																
			3.0																
			3.5																
			4.0																
			4.5																
			5.0																

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# REPORT OF PHOTOGRAPHS:

# CRTP02A

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Connors River & Sandy Creek Jct  
JOB NO: 077632049

COORDS: 715796 m E 7560357 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 0.90 m  
BUCKET TYPE: 0.6 m

DEPTH RANGE: 0.00 – 0.90m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 7/07/09  
CHECKED: AB DATE: 8/10/09







## REPORT OF PHOTOGRAPHS:

CRTP03

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Connors River & Sandy Creek Jct  
JOB NO: 077632049

COORDS: 715645 m E 7560482 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.60 m  
BUCKET TYPE: 0.6 m


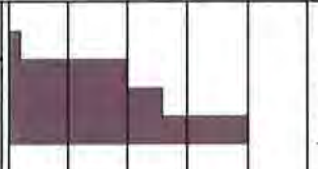

DEPTH RANGE: 0.00 – 2.60m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 7/07/09  
CHECKED: AB DATE: 8/10/09





# REPORT OF TEST PIT: CRTP05

**CLIENT:** SunWater **COORDS:** 716204 m E 7560904 m N MGA94 **SHEET:** 1 OF 1  
**PROJECT:** Connors River Dam and Pipelines **SURFACE RL:** m **DATUM:** AHD **MACHINE:** 5 Tonne Excavator  
**LOCATION:** Connors River **PIT DEPTH:** 2.60 m **CONTRACTOR:** Peter Warner  
**JOB NO:** 077632049 **BUCKET TYPE:** 0.6 m **LOGGED:** ACF **DATE:** 8/7/09  
**CHECKED:** AB **DATE:** 8/10/09

Excavation		Sampling	Field Material Description																
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm							
												0	5	10	15	20	25		
EX	L	M	0.0	0.10	DS 0.00-0.10m		SP	SAND Coarse, pale brown, trace fine angular gravel . becoming moist	D	VL	D-VD	VD							
			0.5	0.60	DS 0.40-0.50m			COBBLES (80%) and Sandy GRAVEL (20%) COBBLES: rounded and subangular to 0.16m Sandy GRAVEL: medium to coarse, pale brown, angular, coarse sand										M	
			1.70	1.70	DS 2.10-2.20m		W	becoming wet	W										
			2.5	2.60				TEST PIT DISCONTINUED @ 2.60 m Test pit discontinued due to limit reach of machine. Sidewalls caving below 2.4m. Backfilled on completion.											
			3.0																
			3.5																
			4.0																
			4.5																
			5.0																

077632049\_CUSTOMGFX (COLOUR).GLB FULL PAGE J:\BRISBANE\7\GEOTECH\077632049\_CONNORS\_RIVER\_DAM\GINT\077632049\_BH.GPJ GAP5\_1.GDT 08/10/2009 2:20:32 PM

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CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Connors River & Sandy Creek Jct  
JOB NO: 077632049

COORDS: 716204 m E 7560904 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.60 m  
BUCKET TYPE: 0.6 m

DEPTH RANGE: 0.00 – 2.60m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 8/07/09  
CHECKED: AB DATE: 8/10/09





# REPORT OF TEST PIT: CRTP06

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Connors River  
 JOB NO: 077632049

COORDS: 716230 m E 7560943 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 2.80 m  
 BUCKET TYPE: 0.6 m

SHEET: 1 OF 1  
 MACHINE: 5 Tonne Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 8/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation			Sampling			Field Material Description														
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm								
												0	5	10	15	20	25			
EX L M	K  after 15min, 8/07/09	▽	0.0	0.10	DS 0.00-0.10m		SP	SAND Coarse, pale brown, trace fine angular gravel . becoming moist	D-M	VL										
			0.5	0.60				COBBLES (80%) and Sandy GRAVEL/Gravelly SAND (20%) COBBLES: rounded and subangular to 0.14m Sandy GRAVEL/Gravelly SAND: medium to coarse sand, fine to medium gravel, angular, pale brown											M	MD
			1.5		DS 1.40-1.50m															
			2.0	1.80																
			2.5	2.20	DS 2.20-2.30m				W	D-VD										
			5.0	2.60				TEST PIT DISCONTINUED @ 2.60 m Test pit discontinued due to limit reach of machine. Sidewalls caving below 2.4m. Backfilled on completion.												

077632049\_CUSTOMGFX (COLOUR).GLB FULL PAGE J:\BRISBANE\07\GEO\TECH\077632049\_CONNORS\_RIVER\_DAM\GINT\077632049\_BH.LOP.J\_GAPS\_1.GDT 08/10/2009 2:20:34 PM

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.



# REPORT OF PHOTOGRAPHS:

# CRTP06

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Connors River & Sandy Creek Jct  
JOB NO: 077632049

COORDS: 716230 m E 7560943 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.60 m  
BUCKET TYPE: 0.6 m

DEPTH RANGE: 0.00 – 2.60m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 8/07/09  
CHECKED: AB DATE: 8/10/09









# REPORT OF PHOTOGRAPHS:

CRTP07

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Connors River & Sandy Creek Jct  
JOB NO: 077632049

COORDS: 716267 m E 7560967 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.60 m  
BUCKET TYPE: 0.6 m

DEPTH RANGE: 0.00 – 2.60m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 8/07/09  
CHECKED: AB DATE: 8/10/09





# REPORT OF TEST PIT: CRTP08

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Connors River  
 JOB NO: 077632049

COORDS: 716298 m E 7561009 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 2.50 m  
 BUCKET TYPE: 0.6 m

MACHINE: 5 Tonne Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 8/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation				Sampling			Field Material Description														
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.6.3.2) Blows per 100 mm										
											0	5	10	15	20	25					
EX	M		0.0					COBBLES (90%) and Sandy GRAVEL (10%) COBBLES: rounded and subangular to 0.21m Sandy GRAVEL: medium to coarse, pale brown and grey, angular, coarse sand	MD	D											
			0.40																		
			0.5										. becoming dense to very dense								
			1.0																		
H			1.40		DS 1.40-1.50m			. becoming moist	M	D-V-D											
			1.5																		
			1.70-1.80m																		
			2.00					. becoming wet	W												
			2.50																		
			2.5					TEST PIT DISCONTINUED @ 2.50 m Test pit discontinued due to limit reach of machine. Backfilled on completion.													
			3.0																		
			3.5																		
			4.0																		
			4.5																		
			5.0																		

077632049\_CUSTOMGFX (COLOUR).GLB FULL PAGE JABRISBANE.077632049\_CONNORS\_RIVER\_DAM.gINT.077632049\_BH.GPJ GAP5\_1.GDT 08/10/2009 2:20:39 PM

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.



# REPORT OF PHOTOGRAPHS:

CRTP08

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Connors River & Sandy Creek Jct  
JOB NO: 077632049

COORDS: 716298 m E 7561009 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.50 m  
BUCKET TYPE: 0.6 m

DEPTH RANGE: 0.00 – 2.50m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 8/07/09  
CHECKED: AB DATE: 8/10/09





# REPORT OF BOREHOLE: DCAH01

SHEET: 1 OF 1  
 DRILL RIG: HAND  
 DRILLER: Golder  
 LOGGED: ACF DATE: 14/7/09  
 CHECKED: AB DATE: 8/10/09

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Dennison Creek  
 JOB NO: 077632049

COORDS: 683396 m E 7583833 m N 55 MGA94  
 SURFACE RL: m DATUM: AHD  
 INCLINATION: -90°  
 HOLE DIA: 70 mm HOLE DEPTH: 0.90 m

Drilling			Sampling	Field Material Description															
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm							
												0	5	10	15	20	25		
HAND	M		0.0	0.10	DS 0.00-0.10m	[Graphic Log: Yellow dotted pattern]	SP	Gravelly SAND Medium to coarse, pale grey and pale brown, fine to medium gravel . becoming moist		D									
	M-H		0.40	0.40	DS 0.40-0.50m														
			0.5	0.50						VL									
			0.90	0.90				END OF BOREHOLE @ 0.90 m Auger hole discontinued due to caving. DCP reached limit of rod Sidewalls caving below 0.4m. Backfilled on completion.											
			1.0																
			1.5																
			2.0																
			2.5																
			3.0																
			3.5																
			4.0																
			4.5																
			5.0																

077632049\_CUSTOMGFX(COLOUR)\GLB\_FULL\_PAGE Brisbane.071GEO TECH-070707632049\_CONNORS\_RIVER\_DAM\GINT\077632049\_BH.GPJ GAPS\_1.GDT 08/10/2009 2:20:41 PM

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# REPORT OF BOREHOLE: DCAH02

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Dennison Creek  
 JOB NO: 077632049

COORDS: 682194 m E 7582542 m N 55 MGA94  
 SURFACE RL: m DATUM: AHD  
 INCLINATION: -90°  
 HOLE DIA: 70 mm HOLE DEPTH: 1.10 m

SHEET: 1 OF 1  
 DRILL RIG: HAND  
 DRILLER: Golder  
 LOGGED: ACF DATE: 14/7/09  
 CHECKED: AB DATE: 8/10/09

Drilling			Sampling			Field Material Description																															
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm																								
													0	5	10	15	20	25																			
HAND	M	14/07/08	0.0	0.10	DS 0.20-0.30m	[Symbol]	[Symbol]	SP	Gravelly SAND Medium to coarse, pale grey and pale brown, fine to medium gravel becoming moist	D	VL																										
			0.5	0.80																																	
	M-H		1.0	1.10	DS 0.90-1.00m				becoming wet	W																											
			1.5						END OF BOREHOLE @ 1.10 m Auger hole discontinued due to caving. Sidewalls caving below 0.8m. Backfilled on completion.																												
			2.0																																		
			2.5																																		
			3.0																																		
			3.5																																		
			4.0																																		
			4.5																																		
			5.0																																		

077632049\_CUSTOMGFX (COLOUR) GLB FULL PAGE J:\BRISBANE\077632049\_CONNORS\_RIVER\_DAM\GINT\077632049\_BH.GPJ GAP5\_1.GDT 08/10/2009 2:20:43 PM

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# REPORT OF BOREHOLE: DCAH03

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Dennison Creek  
 JOB NO: 077632049

COORDS: 682105 m E 7581060 m N 55 MGA94  
 SURFACE RL: m DATUM: AHD  
 INCLINATION: -90°  
 HOLE DIA: 70 mm HOLE DEPTH: 1.10 m

SHEET: 1 OF 1  
 DRILL RIG: HAND  
 DRILLER: Golder  
 LOGGED: ACF DATE: 14/7/09  
 CHECKED: AB DATE: 8/10/09

Drilling			Sampling		Field Material Description													
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.6.3.2) Blows per 100 mm						
												0	5	10	15	20	25	
HAND	M	Groundwater not encountered	0.0	0.10				SP	Gravelly SAND Medium to coarse, pale grey and pale brown, fine to medium gravel becoming moist	D								
			0.5	0.60	DS 0.60-0.70m (clay lense sample)					clay lense, grey	M	VL						
			1.0	1.10					END OF BOREHOLE @ 1.10 m Auger hole discontinued due to limit reach of operator. DCP reached limit of rods. Backfilled on completion.									
			1.5															
			2.0															
			2.5															
			3.0															
			3.5															
			4.0															
			4.5															
			5.0															

077632049\_CUSTOMGFX (COLOUR).GLB FULL PAGE J:\BRISBANE\DT\GEO\TECH\07077632049\_CONNORS\_RIVER\_DAM\GINT\077632049\_BH.GPJ GAPS\_1.GDT 08/10/2009 2:20:45 PM

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# REPORT OF BOREHOLE: FCAH01

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Funnel Creek  
 JOB NO: 077632049

COORDS: 694594 m E 7578173 m N 55 MGA94  
 SURFACE RL: m DATUM: AHD  
 INCLINATION: -90°  
 HOLE DIA: 70 mm HOLE DEPTH: 0.80 m

SHEET: 1 OF 1  
 DRILL RIG: HAND  
 DRILLER: Golder  
 LOGGED: ACF DATE: 15/7/09  
 CHECKED: AB DATE: 8/10/09

Drilling			Sampling			Field Material Description													
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm							
												0	5	10	15	20	25		
HAND	M	Groundwater not encountered	0.0		DS 0.00-0.10m	[Graphic Log: Yellow background with black dots and 'S' symbols]	SP	Gravelly SAND Coarse, pale grey and pale brown, fine gravel becoming moist	D	VL									
	H		0.40		DS 0.50-0.60m			M											
			0.5																
			0.80					END OF BOREHOLE @ 0.80 m Auger hole discontinued due to limit reach of operator and caving. Backfilled on completion.											
			1.0																
			1.5																
			2.0																
			2.5																
			3.0																
			3.5																
			4.0																
			4.5																
			5.0																

HB: best of 2 attempts

077632049\_CUSTOMGFX (COLOUR);GLB FULL PAGE J:\BRISBANE\07\GEO\TECH\07\077632049\_CONNORS\_RIVER\_DAM\GINT\077632049\_BH1.GPJ GAPS\_1.GDT 08/10/2008 2:20:47 PM

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# REPORT OF BOREHOLE: FCAH02

**CLIENT:** SunWater  
**PROJECT:** Connors River Dam and Pipelines  
**LOCATION:** Funnel Creek  
**JOB NO:** 077632049

**COORDS:** 694679 m E 7578441 m N 55 MGA94  
**SURFACE RL:** m **DATUM:** AHD  
**INCLINATION:** -90°  
**HOLE DIA:** 70 mm **HOLE DEPTH:** 0.80 m

**SHEET:** 1 OF 1  
**DRILL RIG:** HAND  
**DRILLER:** Golder  
**LOGGED:** ACF **DATE:** 15/7/09  
**CHECKED:** AB **DATE:** 8/10/09

Drilling			Sampling			Field Material Description										
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.6.3.2) Blows per 100 mm					
											0	5	10	15	20	25
HAND	M	Groundwater not encountered	0.0		DS 0.00-0.10m		SP	Gravelly SAND Coarse, pale grey and pale brown, fine to medium gravel becoming moist some roots	D	VL						
	M-H		0.20													
			0.40		DS 0.40-0.50m				M							
			0.50													
			0.80					END OF BOREHOLE @ 0.80 m Auger hole discontinued due to limit reach of operator. Backfilled on completion.								
			1.00													
			1.50													
			2.00													
			2.50													
			3.00													
			3.50													
			4.00													
			4.50													
			5.00													

077632049\_CUSTOMGFX (COLOUR).GLB FULL PAGE \\BRISBANE\077632049\_CONNORS\_RIVER\_DAM\GINT\077632049\_BH.GPJ GAP5\_1.GDT 09/10/2009 2:20:48 PM

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# REPORT OF BOREHOLE: FCAH03

**CLIENT:** SunWater **COORDS:** 694341 m E 7577908 m N 55 MGA94 **SHEET:** 1 OF 1  
**PROJECT:** Connors River Dam and Pipelines **SURFACE RL:** m **DATUM:** AHD **DRILL RIG:** HAND  
**LOCATION:** Funnel Creek **INCLINATION:** -90° **DRILLER:** Golder  
**JOB NO:** 077632049 **HOLE DIA:** 70 mm **HOLE DEPTH:** 0.80 m **LOGGED:** ACF **DATE:** 15/7/09  
**CHECKED:** AB **DATE:** 8/10/09

Drilling			Sampling		Field Material Description													
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm						
												0	5	10	15	20	25	
HAND	M	Groundwater not encountered	0.0		DS 0.00-0.10m	[Yellow dotted pattern]	SP	SAND Medium to coarse, pale grey and pale brown, some fine to medium gravel	D	VL								
	M-H		0.20		DS 0.30-0.40m		SP	Gravelly SAND Coarse, pale grey and brown, fine sand										
			0.5															
			0.80					END OF BOREHOLE @ 0.80 m Auger hole discontinued due to limit reach of operator. Backfilled on completion.										
			1.0															
			1.5															
			2.0															
			2.5															
			3.0															
			3.5															
			4.0															
			4.5															
			5.0															

077632049\_CUSTOMSFX (COLOUR).GLB FULL PAGE \_NBRISBANE.077632049\_CONNORS\_RIVER\_DAM\GINTU77632049\_BH.GPJ GAPS\_1.GDT 08/10/2009 2:20:51 PM

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# REPORT OF TEST PIT: FCTP01

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Boot Hill & Funnel Creek Junction  
 JOB NO: 077632049

COORDS: 693770 m E 7580743 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 2.50 m  
 BUCKET TYPE: 0.6 m

MACHINE: 5 Tonne Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 7/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation			Sampling		Field Material Description															
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm								
												0	5	10	15	20	25			
EX	L	Groundwater not encountered	0.0	0.10	DS 0.00-0.10m		SP	SAND Medium to coarse, pale brown, trace fine angular gravel		D	R									
			0.5	0.70	DS 0.70-0.80m		SP	SAND Medium to coarse, pale brown, some fine gravel, trace rounded cobbles to 0.15m												
			0.85																	
M			1.0																	
			1.5		DS 1.60-1.70m															
			2.0																	
			2.5	2.50				TEST PIT DISCONTINUED @ 2.50 m Test pit discontinued at 2.5m due to limit reach of machine. Sidewalls caving below 2.3m. Backfilled on completion.												
			3.0																	
			3.5																	
			4.0																	
			4.5																	
			5.0																	

077632049\_CUSTOMGFX (COLOUR) GLOB FULL PAGE - BRISBANE.07GEO TECH.07077632049\_CONNORS\_RIVER\_DAM.GINT.077632049\_BH.GPJ GAP5\_1.50T 09/10/2009 2:20:53 PM

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

GAP gINT FN. F01f  
RL2



# REPORT OF TEST PIT: FCTP02

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Boot Hill & Funnel Creek Junction  
 JOB NO: 077632049

COORDS: 693726 m E 7580637 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 2.50 m  
 BUCKET TYPE: 0.6 m

MACHINE: 5 Tonne Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 7/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation			Sampling			Field Material Description																															
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm																									
												0	5	10	15	20	25																				
EX	L	Groundwater not encountered	0.0		DS 0.00-0.10m			Gravelly SAND (50%) and COBBLES (50%) Gravelly SAND: Medium to coarse, pale brown, fine to medium angular gravel COBBLES: rounded to subangular to 0.15m ratio change to 80% sand and 20% cobbles																													
			0.30																																		
			0.5		DS 0.50-0.60m																																
			0.80																																		
M			1.0		DS 1.20-1.30m			ratio change to 60% sand and 40% cobbles																													
			1.5																																		
			2.0		DS 2.20-2.30m			ratio change to 40% sand and 60% cobbles																													
			2.5	2.50			TEST PIT DISCONTINUED @ 2.50 m Test pit discontinued at 2.5m due to limit reach of machine. Backfilled on completion.																														
			3.0																																		
			3.5																																		
			4.0																																		
			4.5																																		
			5.0																																		

077632049\_CUSTOMGFX (COLOUR) GLB FULL PAGE J:BRISBANE.077632049\_CONNORS\_RIVER\_DAM:GINT077632049\_BH.GPJ GAP5\_1.GDT 08/10/2008 2:20:55 PM

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## REPORT OF PHOTOGRAPHS:

FCTP02

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Boot Hill & Funnel Creek Jct  
JOB NO: 077632049

COORDS: 693726 m E 7580637 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.50 m  
BUCKET TYPE: 0.9 m

DEPTH RANGE: 0.00 – 2.50m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 7/07/09  
CHECKED: AB DATE: 8/10/09





# REPORT OF TEST PIT: FCTP03

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Funnal Creek & Boot Hill Junction  
 JOB NO: 077632049

COORDS: 693808 m E 7580606 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 2.60 m  
 BUCKET TYPE: 0.6 m

MACHINE: 5 Tonne Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 7/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation			Sampling		Field Material Description												
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	DCP TEST (AS1289.6.3.2) Blows per 100 mm						
											0	5	10	15	20	25	
EX	L	Groundwater not encountered	0.0	0.10	DS 0.30-0.40m		SP	SAND Medium to coarse, pale brown, some fine to coarse angular gravel . becoming moist, trace cobbles	D	VL							
			0.5	0.80				DS 0.90-1.00m		M		Gravelly SAND (60%) and COBBLES (40%) Gravelly SAND: medium to coarse, pale brown, fine to medium gravel COBBLES: rounded and subangular to 0.19m  ratio change to 35% sand and 65% cobbles	M	MD			
			1.0	1.30	DS 1.80-1.90m		M					Silty SAND (60%) and COBBLES (40%) Gravelly SAND: medium to coarse, pale brown, fine to medium gravel COBBLES: rounded and subangular to 0.19m	MD-D				
			1.5	1.50													
			2.0	2.60				TEST PIT DISCONTINUED @ 2.60 m Test pit discontinued at 2.6m due to limit reach of machine. Sidewalls caving below 0.8m. Backfilled on completion.									
			2.5														
			3.0														
			3.5														
			4.0														
			4.5														
			5.0														

077632049\_CUSTOMGFX\_COLOUR\_GLB\_FULL\_PAGE\_JBRISBANE\_07GEO TECH\_070707632049\_CONNORS\_RIVER\_DAM\_gINT07632049\_BH.GPJ\_GAPS\_1.GDT\_08/10/2009 2:30:58 PM

This report of test pit must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

GAP gINT FN. F01f  
RL2



## REPORT OF PHOTOGRAPHS:

FCTP03

CLIENT: SunWater  
PROJECT: Connors River Dam Pipeline  
LOCATION: Boot Hill & Funnel Creek Jct  
JOB NO: 077632049

COORDS: 693808 m E 7580606 m N MGA94  
SURFACE RL: m DATUM: AHD  
PIT DEPTH: 2.60m  
BUCKET TYPE: 0.9m

DEPTH RANGE: 0.00 – 2.60m  
MACHINE: 5 Tonne Excavator  
CONTRACTOR: Peter Warner  
LOGGED: ACF DATE: 7/07/09  
CHECKED: AB DATE: 8/10/09





# REPORT OF TEST PIT: FCTP04

SHEET: 1 OF 1

CLIENT: SunWater  
 PROJECT: Connors River Dam and Pipelines  
 LOCATION: Funnel Creek & Boot Hill Junction  
 JOB NO: 077632049

COORDS: 693648 m E 7580685 m N MGA94  
 SURFACE RL: m DATUM: AHD  
 PIT DEPTH: 2.60 m  
 BUCKET TYPE: 0.6 m

MACHINE: 5 Tonne Excavator  
 CONTRACTOR: Peter Warner  
 LOGGED: ACF DATE: 7/7/09  
 CHECKED: AB DATE: 8/10/09

Excavation			Sampling		Field Material Description											
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USC Symbol	SOIL / ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	DCP TEST (AS1289.6.3.2) Blows per 100 mm					
											0	5	10	15	20	25
L	Groundwater not encountered		0.0		DS 0.00-0.10m	[Yellow dotted pattern]	SP	SAND	D	L/MD/VL	[DCP Test Graph]					
			0.10		DS 0.10-0.20m		SM	Medium, pale brown, some organic matter, trace roots								
M			0.20					Silty SAND								
			0.50					Medium, dark grey, some fine to medium angular gravel								
EX			1.00		DS 0.90-1.00m			Gravelly SAND	M							
			1.30					Medium to coarse, pale brown, fine to coarse gravel								
			1.50					becoming dense	D							
			2.00													
			2.50													
			2.60													
			3.00					TEST PIT DISCONTINUED @ 2.60 m								
			3.50					Test pit discontinued at 2.6m due to limit reach of machine.								
			4.00					Sidewalls caving below 1.2m.								
			4.50					Backfilled on completion.								
			5.00													

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**Golder  
Associates**

**REPORT OF PHOTOGRAPHS:**

**FCTP04**

CLIENT: SunWater

PROJECT: Connors River Dam Pipeline

LOCATION: Boot Hill & Funnel Creek Jct

JOB NO: 077632049

COORDS: 693648 m E 7580685 m N MGA94

SURFACE RL: m DATUM: AHD

PIT DEPTH: 2.60m

BUCKET TYPE: 0.9m

DEPTH RANGE: 0.00 – 2.60m

MACHINE: 5 Tonne Excavator

CONTRACTOR: Peter Warner

LOGGED: ACF DATE: 7/07/09

CHECKED: AB DATE: 8/10/09

