



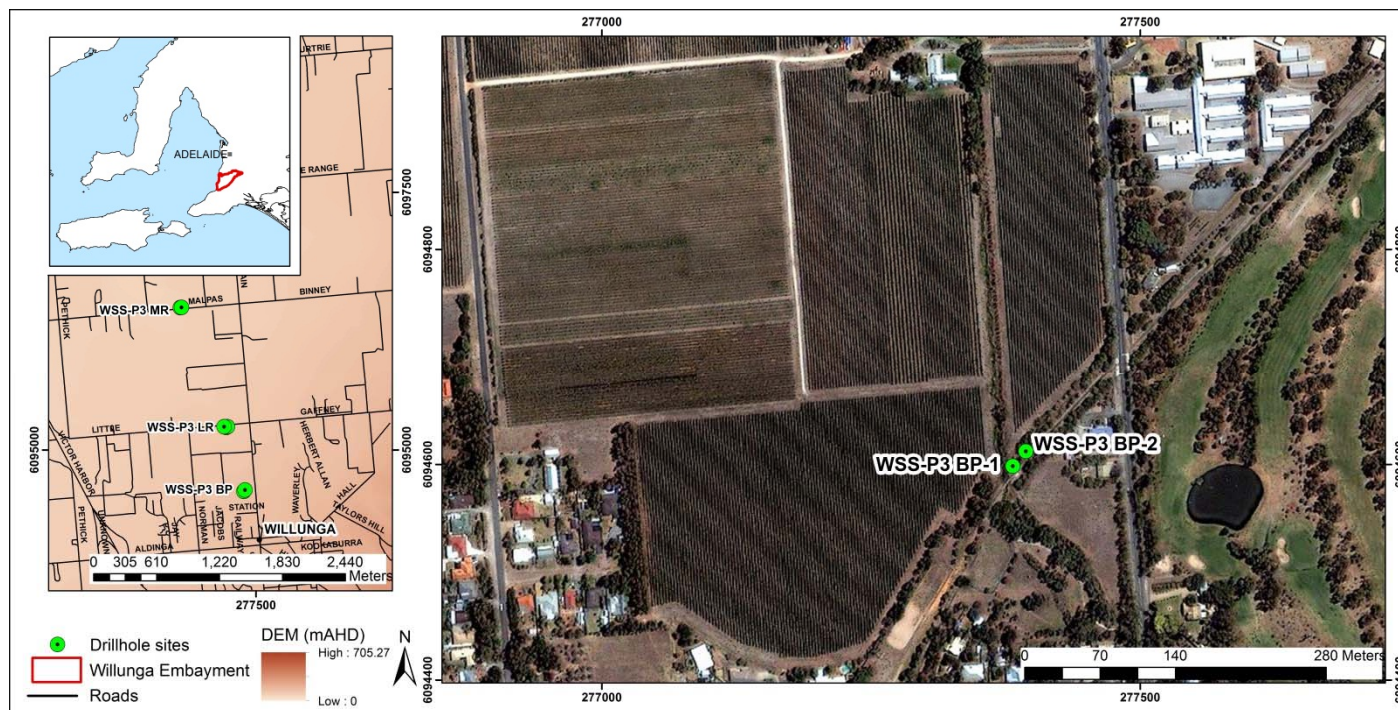
An Australian Government Initiative

Groundwater Education Investment Fund Project

Borehole Infrastructure Report

Borehole Type		Piezometer Monitoring Bore	Location	Willunga Super Science Site
Unique Well ID		WSS-P3BP-2	Installed By	Town & Country Drilling Services
Completion Date		06/08/2012	Depth Installed	23.12 mBGS
Drilled By		Town & Country Drilling Services	Depth Drilled	23.5 mBGS
Monument Type		Flush mounted	Drilled Diameter/Method	150 mm/Auger
Monument Diameter/Width		165 mm	Screen Depth	22.12-23.12 mBGS
T.O.M. offset from G.L. (Top of Open Monument)		0 m	Screen Size/Aperture/Type	50 mm/slotted/PVC 18
PVC Casing to T.O.M offset		-0.065 m	Level of Bentonite	21-21.6 mBGS
Ground Elevation (mAHD)		101.591	Casing Size/Type	50 mm/PVC 18
GPS Easting	(MGA-94 Zone 54)	277394	SWL after Development	15.68 mTOC
GPS Northing		6094612	Development Details	Air vacuum/submersible pump

Project Comments: WSS-P3BP-2 is a single piezometer monitoring bore, located on the bike path in Willunga, west of Main Rd.



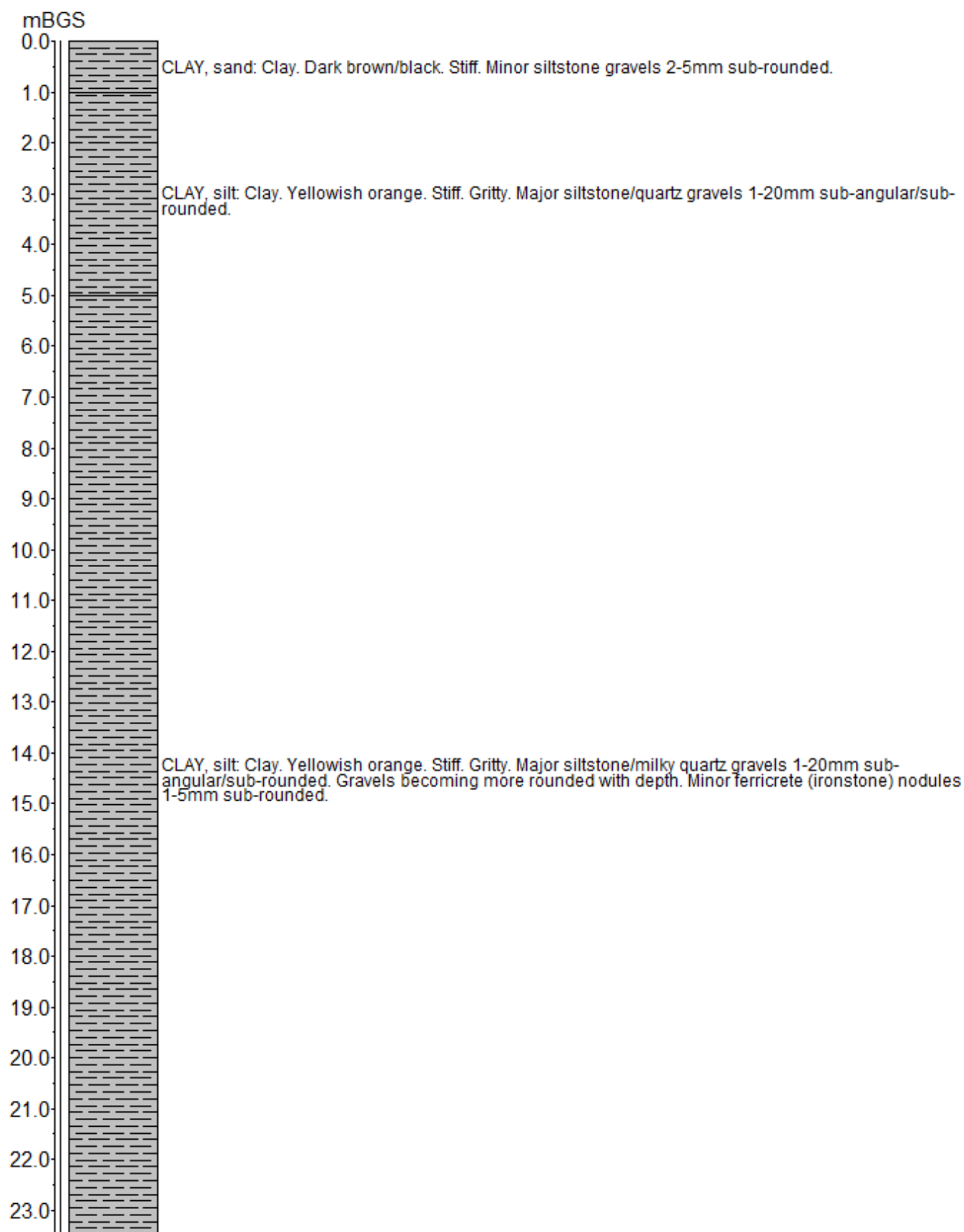
Map of Willunga Super Science Project Shallow Monitoring Well Sites

Note* Appendix includes Lithology and Well Completion Logs, Geophysical Logs, Hydraulic Test and Chemical Analysis.

Infrastructure Report prepared by:	Contact Details:	Checked by:
	stephanie.villeneuve@flinders.edu.au Office: 08 8201 2724	Prof Peter Cook

Lithology

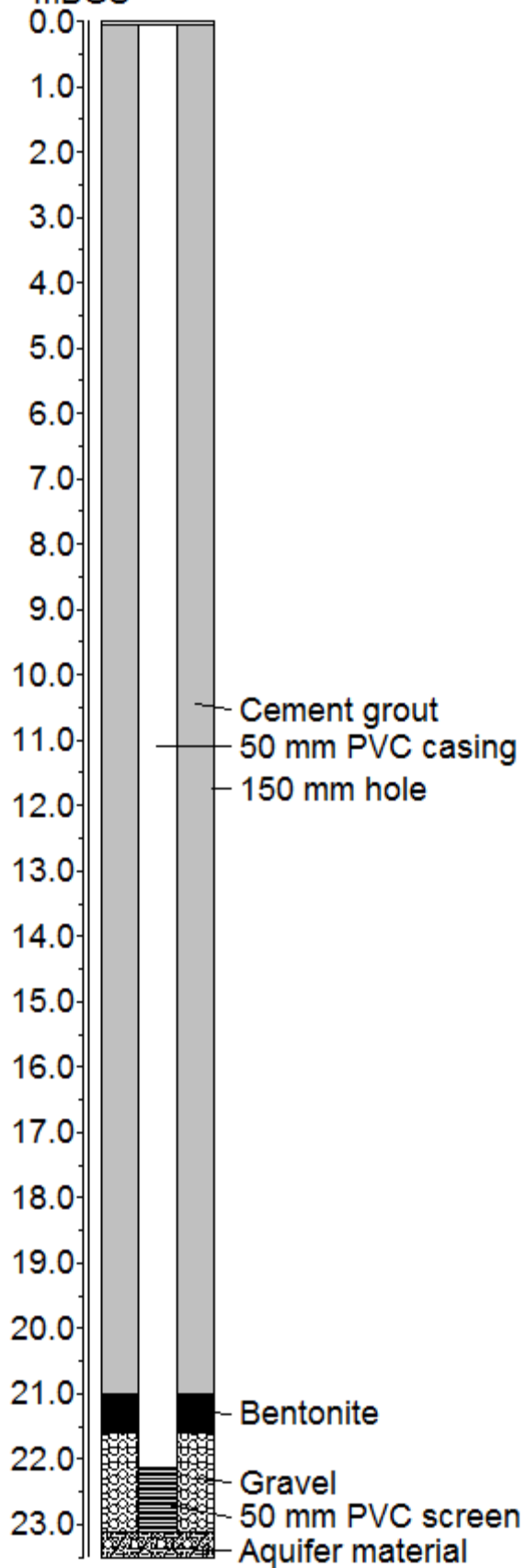
WSS-P3BP-2



Well Completion Log

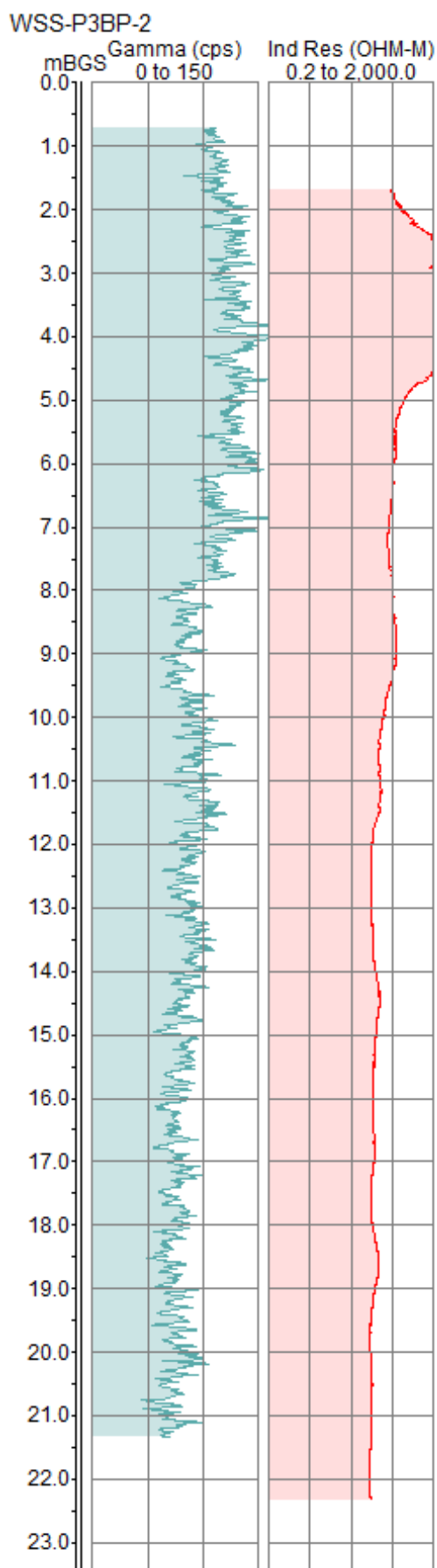
WSS-P3BP-2

mBGS



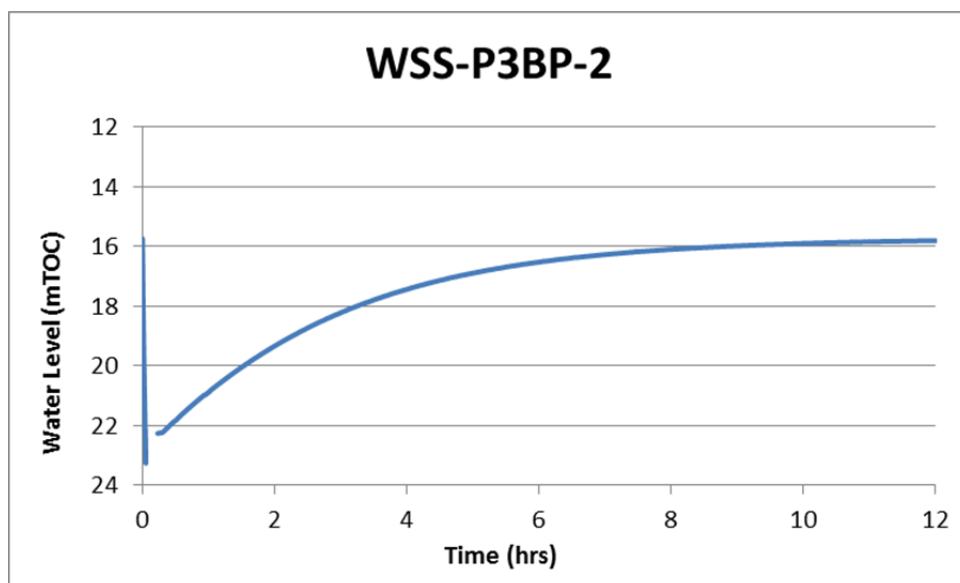
Geophysical Logs

The portable Mount Sopris logging system was used to collect geophysical data from bore WSS-P3BP-2. The 2PGS probe was used to collect natural gamma measurements, and the 2PIA probe was used to measure conductivity/induced resistivity.



Slug Test

A slug test was performed on piezometer WSS-P3BP-2 on 21/11/2012 with a water level logger and a submersible pump using a flow rate of 6.7 L/min until the pump went dry. The results of the test are presented below. The report author may be contacted for the full data set.



Chemical Analysis

The results of major ion chemistry on WSS-P3BP-2 are presented below, along with chemical parameters measured in the field.

Well ID	Date Sampled	SWL mTOC	Field Parameters				Laboratory Analyses @ CSIRO ASU											
			pH	EC	Temp	Alkalinity	pH	E.C.	Total Alkalinity	F ⁻	Cl ⁻	Br ⁻	NO ₃ ⁻	SO ₄ ⁼	Ca	K	Mg	
				μS/cm	°C	meq/L		μS/cm	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
WSS-P3BP-2	23/11/2012	15.68	7.0	2626	21.6	7.5	7.6	2666	8.1	0.3	614	1.4	4.8	68	166	8.51	89.7	
							Na	S	Al	As	B	Cd	Co	Cr	Cu	Fe	Mn	
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
							276	22	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	
							Mo	Ni	P	Pb	Sb	Se	Si	Sr	Zn			
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
							<0.05	<0.05	<0.1	<0.05	<0.1	<0.05	9.99	1.58	0.076			