

APPENDIX D

GROUNDWATER MONITORING WELL

PROJECT : Maroota- Hitchcock Rd		JOB NO: E2W-0238 Earth2Water Pty Ltd	
LOCATION: PF166MW-2s		DATE STARTED: 16/05/2017	
SUPERVISOR: Dino Parisotto (Lic DL1977)		DATE COMPLETED: 16/05/2017	
Contractor: TerraTest Pty Ltd		Method: SFA 125 mm diam	
Rig: Hydrapower Scout		Depth: 8.5 m	R.L. Ground (m):
Datum: Ground level		Water Level: approx 4 mbgl	R.L. WL (m):
Well ID: MW-2s			
Lithological Log	Comments	Depth (m)	Bore Construction Details
Maroota Sands Outcrop- rehab area 0 - 4 m Sandy Clay (fill): medium brown firm, moist, slightly plastic some quartz pebbles 4- 5.5 m Sand: light grey, some silt & granules, loose, saturated/wet (palaeochannel) 5.5- 8.5m Sandy Clay: med brown, stiff plastic, moist 8.5 m End of Borehole (target depth- sandy clay) ingress Monument- steel PVC/50mm stick-up (+0.65m) cement plug around PVC sleeve drill cuttings & bentonite 50mm PVC class 18 Casing ('+0.65m to 4.9m) Bentonite seal (2- 4.2m) 4.2 - 8 m Gravel pack (2mm) 4.9- 7.9m, 50mm PVC cl 18 screen 0.45mm aperture, screw coupling PVC end cap at 7.9 m			
		0	
		1.0	
		2.0	
		3.0	
		4.0	
		5.0	
		6.0	
		7.0	
		8.0	
		9.0	
		10.0	
		11.0	

GROUNDWATER MONITORING WELL

PROJECT :	Maroota- Hitchcock Rd	JOB NO:	E2W-0238 Earth2Water Pty Ltd
LOCATION:	PF166MW-2D	DATE STARTED:	16/05/2017
SUPERVISOR:	Dino Parisotto (Lic DL1977)	DATE COMPLETED:	17/05/2017
Contractor: TerraTest Pty Ltd	Method:	SFA 125 mm diam to 11m , RAB from 11-30m (100mm diam)	
Rig: Hydrapower Scout	Depth:	29.4 m	R.L. Ground (m):
Datum: Ground level	Water Level: approx 25 mbgl		R.L. WL (m):

Well ID: MW-2D

Lithological Log	Comments	Depth (m)	Bore Construction Details
Maroota Sands Outcrop- rehab area			Monument- steel PVC/50mm stick-up (+0.6m)
0 - 4 m Sandy Clay (fill): medium brown firm, moist, slightly plastic some quartz pebbles		0	cement plug around PVC sleeve
3.5- 5.7m Sand: light brown, some silt & granules, loose, saturated/wet (palaeochannel)	ingress	2.5	drill cuttings & bentonite
5.7-6.3 m Hard band (iron stone)		5.0	50mm PVC class 18 Casing ('+0.6m to 26.4m)
6.3- 9.5m Sandy Clay: med brown, stiff plastic, moist		7.5	
9.5-29.4m Sandstone/Siltstone (soft); light grey fine grained, clay matrix, moist weathered	11m RAB	10.0	
dusty drill cuttings- light grey		12.5	
moderately hard siltstone/sandstone		15.0	
		17.5	
moderately hard siltstone/sandstone		20.0	
light grey, clay matrix		22.5	Bentonite seal (23- 29.4m)
	minor ingress <0.01 L/sec	25.0	25 -29.4m Gravel pack (2mm)
		27.5	26.4- 29.4m, 50mm PVC cl 18 screen 0.45mm aperture, screw coupling
29.4 m End of Borehole (target depth- hard sandstone/siltstone)		30.0	PVC end cap at 29.4m

GROUNDWATER MONITORING WELL

PROJECT : Maroota- Hitchcock Rd		JOB NO: E2W-0238 Earth2Water Pty Ltd	
LOCATION: PF167MW-3D		DATE STARTED: 17/05/2017	
SUPERVISOR: Dino Parisotto (Lic DL1977)		DATE COMPLETED: 17/05/2017	
Contractor: TerraTest Pty Ltd	Method:	SFA 125 mm diam to 3m , RAB from 3-23m (100mm diam)	
Rig: Hydrapower Scout	Depth:	23 m	R.L. Ground (m):
Datum: Ground level	Water Level: approx 14 mbgl		R.L. WL (m):
Well ID: MW-3D			
Lithological Log	Comments	Depth (m)	Bore Construction Details
Maroota Sands & Sandstone (extraction pit)	SFA	0	Monument- steel PVC/50mm stick-up (+0.75m)
		1.5	cement plug around PVC sleeve
0 to 23m Sandstone/Siltstone (soft): light grey fine grained, weathered, clay matrix slight moisture	3m RAB	3.0	drill cuttings & bentonite
hard light grey sandstone- dry		4.5	50mm PVC class 18 Casing (+0.75m to 20m)
dusty drill cuttings- light grey		6.0	
		7.5	
		9.0	
		10.5	
		12.0	
moderately hard siltstone/sandstone		13.5	
		15.0	
		16.5	Bentonite seal (16- 18.6m)
dusty drill cuttings- light grey		18.0	
moderately hard siltstone/sandstone		19.5	
		21.0	20 - 23 m, 50mm PVC cl 18 screen 0.45mm aperture, screw coupling
dusty drill cuttings- light grey		22.5	18.6- 23m Gravel pack (2mm)
		24.0	PVC end cap at 23 m
23 m End of Borehole (target depth- moderate hard sandstone)	dry	25.5	

GROUNDWATER MONITORING WELL

PROJECT : Maroota- Hitchcock Rd		JOB NO: E2W-0238 Earth2Water Pty Ltd	
LOCATION: PF167MW-4s		DATE STARTED: 18/05/2017	
SUPERVISOR: Dino Parisotto (Lic DL1977)		DATE COMPLETED: 18/05/2017	
Contractor: TerraTest Pty Ltd		Method: SFA 125 mm diam	
Rig: Hydrapower Scout		Depth: 8 m	
Datum: Ground level		R.L. Ground (m):	
		R.L. WL (m):	
			Well ID: MW-4s
Lithological Log	Comments	Depth (m)	Bore Construction Details
Maroota Sands Outcrop- near Por167 Dam 0 - 2 m Sandy Silty Clay: medium brown firm, moist, uniform, slightly plastic 2- 3.5 m Sandy Clay: med brown/red brown firm-stiff, moist, uniform, slightly plastic 3.5-7.1m Sandy Silt: med brown, some clay (10%) & minor pebbles, firm, moist. 7.1- 8 m Sandstone/Siltstone (soft); light grey fine grained, clay matrix, moist weathered 8 m End of Borehole (target depth- moderate hard sandstone) minor ingress			
0 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 Monument- steel PVC/50mm stick-up (+0.5m) cement plug around PVC sleeve drill cuttings & bentonite 50mm PVC class 18 Casing ('+0.5m to 6.4m) Bentonite seal (2- 4m) 4 - 8 m Gravel pack (2mm) 5 - 8 m, 50mm PVC cl 18 screen 0.45mm aperture, screw coupling PVC end cap at 8 m			

GROUNDWATER MONITORING WELL

PROJECT : Maroota- Hitchcock Rd		JOB NO: E2W-0238 Earth2Water Pty Ltd	
LOCATION: PF167MW-4D		DATE STARTED: 18/05/2017	
SUPERVISOR: Dino Parisotto (Lic DL1977)		DATE COMPLETED: 18/05/2017	
Contractor: TerraTest Pty Ltd		Method: SFA 125 mm diam	
Rig: Hydrapower Scout		Depth: 15.5 m	
Datum: Ground level		R.L. Ground (m):	
		Water Level: approx 8.5 mbgl	
		R.L. WL (m):	
Well ID: MW-4D			
Lithological Log	Comments	Depth (m)	Bore Construction Details
Maroota Sands Outcrop- near Por167 Dam 0 - 2 m Sandy Silty Clay: medium brown firm, moist, uniform, slightly plastic 2- 3.5 m Sandy Clay: med brown/red brown firm-stiff, moist, uniform, slightly plastic 3.5-7.1m Sandy Silt: med brown, some clay (10%) & minor pebbles, firm, moist. 7.1-15.5 m Sandstone/Siltstone (soft); light grey fine grained, clay matrix, moist weathered muddy drill cutting returns 15.5 m End of Borehole (target depth- moderate hard sandstone) minor ingress Monument- steel PVC/50mm stick-up (+0.5m) cement plug around PVC sleeve drill cuttings & bentonite 50mm PVC class 18 Casing ('+0.5m to 12.5m) Bentonite seal (9.4- 11.4m) 12.5 - 15.5m, 50mm PVC cl 18 screen 0.45mm aperture, screw coupling 11.4-15.5m Gravel pack (2mm) PVC end cap at 15.5 m			

GROUNDWATER MONITORING WELL

PROJECT : Maroota- Hitchcock Rd		JOB NO: E2W-0238 Earth2Water Pty Ltd	
LOCATION: PF166MW-5D		DATE STARTED: 18/05/2017	
SUPERVISOR: Dino Parisotto (Lic DL1977)		DATE COMPLETED: 18/05/2017	
Contractor: TerraTest Pty Ltd		Method: SFA 125 mm diam	
Rig: Hydrapower Scout		Depth: 9.5 m	
Datum: Ground level		R.L. Ground (m):	
		Water Level: approx 3 mbgl	
		R.L. WL (m):	
Well ID: MW-5D			
Lithological Log	Comments	Depth (m)	Bore Construction Details
Sandstone Outcrop- near Silt Pond 0 to 9.5m Sandstone/Siltstone (soft): light grey fine grained, weathered, clay matrix moist becoming very moist hardness increasing moderately hard siltstone/sandstone light grey, clay matrix muddy drill cutting returns	minor ingress	0	Monument- steel PVC/50mm stick-up (+0.5m) cement plug around PVC sleeve
		1.0	
		2.0	50mm PVC class 18 Casing ('+0.5m to 6.4m)
		3.0	drill cuttings & bentonite
		4.0	Bentonite seal (3.5- 5.5m)
		5.0	
		6.0	
		7.0	6.4 - 9.4 m, 50mm PVC cl 18 screen 0.45mm aperture, screw coupling
		8.0	5.5-9.4 m Gravel pack (2mm)
		9.0	
9.5m End of Borehole (target depth- moderate hard sandstone)		10.0	PVC end cap at 9.4 m
		11.0	