



Table 2
Summary of Groundwater Field Parameters - September 2021

Well ID	Sampling Event	Date Measured	SWL (mbTOC)	BOC (mbTOC)	Dissolved Oxygen (ppm)	Electrical Conductivity (us/cm)	pH	Ox-Red Potential (mV)	Temperature (°C)	Comments
CSM_BH02	Event 36 - Sept 2021	28/09/2021	26.09	32.81	2.55	429.3	5.97	150.3	19.8	Light brown, some sediment, no odour/sheen
CSM_BH04	Event 36 - Sept 2021	28/09/2021	21.945	33.23	4.79	468.3	5.91	61.1	20.8	Light brown, cloudy, no odour/sheen
CSM_BH06	Event 36 - Sept 2021	29/09/2021	26.34	35.43	3.18	902	5.62	129.4	19.1	Light brown, some sediment, no odour/sheen
CSM_BH08	Event 36 - Sept 2021	28/09/2021	18.435	35.16	0.83	615	6.32	-20	19.9	Light brown, cloudy, no odour/sheen
CSM_BH10S	Event 36 - Sept 2021	28/09/2021	4.39	9.67	0.53	234.3	5.16	200.1	20.5	Slightly cloudy, no odour/sheen
CSM_BH12S	Event 36 - Sept 2021	28/09/2021	4.815	6.49	0.78	655	5.68	74.4	19.8	Brown, cloudy, no odour/sheen
CSM_BH13	Event 36 - Sept 2021	29/09/2021	22.29	33.67	1.95	1000	7.24	-84.3	20.5	Orange, cloudy, no odour/sheen
CSM_BH14S	Event 36 - Sept 2021	29/09/2021	2.45	5.59	3.52	160.2	6.67	98.1	17.6	Slight yellow, no odour/sheen
GASW_BH10	Event 36 - Sept 2021	29/09/2021	23.74	24.74	-	-	-	-	-	Grey, cloudy, slight sulphurous odour, no sheen
GASW_BH11	Event 36 - Sept 2021	28/09/2021	7.175	8.05	2.23	278.1	5.93	40.8	18.5	Grey, slightly cloudy, slight sulphurous odour, no sheen
GASW_BH23	Event 36 - Sept 2021	29/09/2021	2.87	3.91	0.38	651	7.11	-144.2	18.2	Grey to clear, hydrocarbon odour, no sheen
GASW_BH25A	Event 36 - Sept 2021	29/09/2021	1.44	2.94	2.64	213.1	7.99	-110.4	17.8	Clear, hydrocarbon odour, no sheen
GASW_BH7	Event 36 - Sept 2021	28/09/2021	DRY	6.2	-	-	-	-	-	DRY
SRT_BH047	Event 36 - Sept 2021	30/09/2021	4.43	7.03	2.24	206.6	5.61	215.7	19.6	Clear, no odour/sheen
SRT_BH050	Event 36 - Sept 2021	30/09/2021	DRY	2.75	-	-	-	-	-	DRY
SRT_BH052	Event 36 - Sept 2021	30/09/2021	6.22	7.88	3.36	320.4	6.04	193.9	19.8	Clear, no odour/sheen



Table 1
Summary of Groundwater Analytical Results - September 2021

	Inorganics			Cyanide	Acidity & Alkalinity						Major Ions						Nutrients	Metals							
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Ammonia as N	Arsenic (Filtered)	Cadmium (Filtered)	Chromium (III+VI) (Filtered)	Copper (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Zinc (Filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
EQL	0.1	10	1	0.004	10	20	20	20	5	0.5	0.5	0.5	0.5	1	5	0.01	0.001	0.0002	0.001	0.001	0.001	0.005	0.0001	0.001	0.005
ADWG 2011 Recreational (v3.6 updated 2021)				0.8										5000		0.1	0.02		20	0.1	5	0.01	0.2		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004											0.91	0.0055	0.0044	0.0013	0.0044		0.0004	0.07	0.008		
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																									
2-4m																									
4-8m																									
>8m																									

Field_ID	Location_Code	Sampled_Date_Time	Sample_Type	pH	TDS	TSS	Cyanide	Alk1	Alk2	Alk3	Alk4	Hardness	Ca	Mg	K	Na	Cl	Sulfate	Ammonia	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Nickel	Zinc
CSM_BH02	CSM_BH02	28/09/2021	Normal	6.9	260	1800	<0.004	<10	120	<20	120	100	14	<0.5	<0.5	<0.5	56	36	0.13	<0.001	<0.0002	<0.001	<0.001	<0.001	0.059	<0.0001	0.033	0.01
CSM_BH04	CSM_BH04	28/09/2021	Normal	6.5	260	460	<0.004	<10	88	<20	88	81	7.3	15	2.5	69	78	38	<0.1	<0.001	<0.0002	<0.001	<0.001	<0.001	0.47	<0.0001	0.039	0.017
CSM_BH06	CSM_BH06	29/09/2021	Normal	6.3	470	680	<0.004	<10	140	<20	140	190	26	30	5.1	110	210	30	0.16	<0.001	<0.0002	<0.001	0.013	<0.001	0.38	<0.0001	0.034	0.067
CSM_BH08	CSM_BH08	28/09/2021	Normal	7	350	1000	<0.004	<10	100	<20	100	150	21	24	3.9	88	120	48	0.1	<0.001	<0.0002	<0.001	0.003	<0.001	0.42	<0.0001	0.019	0.025
QC02	CSM_BH08	28/09/2021	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001	<0.001	-	<0.0001	0.017	0.008
CSM_BH10S	CSM_BH10S	28/09/2021	Normal	5.9	170	750	<0.004	<10	<20	<20	<20	31	3.4	5.5	2.2	33	23	55	0.04	<0.001	<0.0002	<0.001	0.002	<0.001	0.6	<0.0001	0.002	0.018
CSM_BH12S	CSM_BH12S	28/09/2021	Normal	6.4	390	75	<0.004	<10	60	<20	60	33	2.2	6.8	1.9	120	76	170	<0.1	0.002	<0.0002	<0.001	<0.001	<0.001	0.91	<0.0001	0.032	0.13
CSM_BH13	CSM_BH13	29/09/2021	Normal	7.8	570	110	<0.004	<10	180	<20	180	210	51	19	6.4	130	230	43	<0.1	<0.001	<0.0002	<0.001	0.001	<0.001	0.43	<0.0001	0.007	0.007
CSM_BH14S	CSM_BH14S	29/09/2021	Normal	7.1	110	3.4	<0.004	<10	40	<20	40	48	15	2.6	1.6	13	28	13	0.07	<0.001	<0.0002	<0.001	0.002	<0.001	<0.005	<0.0001	<0.001	0.016
GASW_BH10	GASW_BH10	29/09/2021	Normal	7.4	690	1600	<0.004	<10	440	<20	440	380	83	41	11	120	190	<5	0.02	0.002	<0.0002	<0.001	0.004	<0.001	0.097	<0.0001	<0.001	0.009
GASW_BH11	GASW_BH11	28/09/2021	Normal	7.1	220	480	<0.004	<10	110	<20	110	54	13	4.2	2	33	37	45	0.19	<0.001	<0.0002	<0.001	0.001	<0.001	0.16	<0.0001	0.002	0.088
GASW_BH23	GASW_BH23	29/09/2021	Normal	7.9	230	22	0.004	<10	230	<20	230	330	110	10	7.4	22	13	150	0.43	0.002	<0.0002	<0.001	<0.001	<0.001	0.39	0.0003	<0.001	0.031
GASW_BH25A	GASW_BH25A	29/09/2021	Normal	7.3	140	5.6	<0.004	<10	71	<20	71	70	25	2.2	2.6	14	21	19	0.28	0.005	<0.0002	<0.001	0.004	<0.001	<0.005	<0.0001	<0.001	<0.005
SRT_BH047	SRT_BH047	30/09/2021	Normal	6.3	160	33	<0.004	<10	<20	<20	<20	49	6.6	8	0.6	21	18	13	<0.2	<0.001	<0.0002	<0.001	0.005	<0.001	0.025	<0.0001	0.004	0.035
QC01	SRT_BH047	30/09/2021	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.001	<0.001	-	<0.0001	0.004	0.033
SRT_BH052	SRT_BH052	30/09/2021	Normal	6.8	230	25	<0.004	<10	57	<20	57	48	13	3.6	1.5	47	47	40	0.3	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.005	<0.0001	<0.001	<0.005



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Summary of Groundwater Analytical Results - September 2021

	PAHs - standard 16																	
	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05
ADWG 2011 Recreational (v3.6 updated 2021)					0.1													
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)					0.2						1.4			70	2			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																		
2-4m														NL				
4-8m														NL				
>8m														NL				

Field_ID	Location_Code	Sampled_Date_Time	Sample_Type	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc
CSM_BH02	CSM_BH02	28/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
CSM_BH04	CSM_BH04	28/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
CSM_BH06	CSM_BH06	29/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
CSM_BH08	CSM_BH08	28/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
QC02	CSM_BH08	28/09/2021	Interlab_D	<0.1	<0.1	<0.1	0.2	0.39	0.4	0.1	0.3	0.2	<0.1	0.2	<0.1	0.2	<0.1	<0.1	0.3	2.3	0.5
CSM_BH10S	CSM_BH10S	28/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
CSM_BH12S	CSM_BH12S	28/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
CSM_BH13	CSM_BH13	29/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
CSM_BH14S	CSM_BH14S	29/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
GASW_BH10	GASW_BH10	29/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	-
GASW_BH11	GASW_BH11	28/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
GASW_BH23	GASW_BH23	29/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
GASW_BH25A	GASW_BH25A	29/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
SRT_BH047	SRT_BH047	30/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
QC01	SRT_BH047	30/09/2021	Field_D	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-
SRT_BH052	SRT_BH052	30/09/2021	Normal	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-



Table 1
Summary of Groundwater Analytical Results - September 2021

	PAHs - extended					Phenols - Halogenated										Phenols - Non-Halogenated										Herbicides	SVOCs
	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	tetrachlorophenols	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)		
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.1	0.1	0.1	0.1	0.1	3	3	10	10	3	10	10	30	10	3	10	3	6	3	30	30	100	30	10	100	100	0.1
ADWG 2011 Recreational (v3.6 updated 2021)						3000	2000		200					100													
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)														22													
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																											
2-4m																											
4-8m																											
>8m																											

Field_ID	Location_Code	Sampled_Date_Time	Sample_Type	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	tetrachlorophenols	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Herbicides	SVOCs
CSM_BH02	CSM_BH02	28/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
CSM_BH04	CSM_BH04	28/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
CSM_BH06	CSM_BH06	29/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
CSM_BH08	CSM_BH08	28/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
QC02	CSM_BH08	28/09/2021	Interlab_D	<0.1	<0.1	<0.1	0.3	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-
CSM_BH10S	CSM_BH10S	28/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
CSM_BH12S	CSM_BH12S	28/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
CSM_BH13	CSM_BH13	29/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
CSM_BH14S	CSM_BH14S	29/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
GASW_BH10	GASW_BH10	29/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
GASW_BH11	GASW_BH11	28/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
GASW_BH23	GASW_BH23	29/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
GASW_BH25A	GASW_BH25A	29/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
SRT_BH047	SRT_BH047	30/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-
QC01	SRT_BH047	30/09/2021	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	30/09/2021	Normal	-	-	-	-	-	<3	<3	<10	<10	<3	<10	<10	<30	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	<100	-