YS/

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	12.12.13	Time: arrive	1105 depart
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	J.L
Well ID:	BE-MW02	Weather:	Fine

Equipment

Water quality equipment description: 90-FLMW V914 Interface probe number: SXD 3954 - 60m

Purging equipment (please cirlce): Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
7.820 m (-) 3.090 m (=) 4.73 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
4.73 m (x) 1.96 (=) ~9 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: 1111 Ending purge time: 1126

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	1114	11.23	21.9	17.41	0.81	12	3.520	Clear, No odour
2	1117	10.44	20.3	17.44	0.37	-3	3.880	
3	1120	9.95	20.1	17.42	0.29	-7	4.100	
4	1123	7.16	20.1	17.43	0.41	-8	4.350	
5	1126	10.44	20.1	17.41	0.38	-9	4.870	
								* Potential pH sensor error -
								readings jumping around & appear
								high
								* Temp error

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

5 **Total Well Volume** Actual amount of water prior to sampling Sample time 1130 Containers used 7

~250 **Flow rate** mL/minute Did field parameters stabilise? Y N NA Was the well dry purged? Y N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID _____
Rinsate blank collected?	Y	N		Rinsate blank ID _____

7.812
3.090
4.73

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	12.12.13	Time: arrive	1005 depart 1100
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	J. Grant
Well ID:	BE-MW03	Weather:	Fine

Equipment

Water quality equipment description: 90-FLMW U9114 Interface probe number: SYD 3954 60m

Purging equipment: (please cirlce) Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
7.040 m (-) 2.020 m (=) 5.020 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
5.020 m (x) 1.96 (=) ~ 10 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: 1016 Ending purge time:

Litres	Time	PH	Temp °C	Cond mS/cm	DO ~~mg/L~~ ppm	Redox mV	Drawdown <10cm	Comments
1	1019	10.97	20.2	9.02	2.03	386	2.470	Cloudy brown/green - No odour
2	1023	10.71	19.7	8.67	3.40	412		
3	1027	10.73	19.6	8.62	3.35	353	2.930	
4	1031	10.59	19.6	8.58	3.11	335	3.130	
5	1034	10.53	19.6	8.56	3.03	330	3.240	
6	1037	10.47	19.6	8.54	3.01	329	3.360	* Potential faulty pH sensor
7	1040	10.40	19.6	8.55	2.94	325	3.460	checked meter with tap water
								read - ~7pH however pH
								jumping around.

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

7 **Total Well Volume** Actual amount of water prior to sampling Sample time 1045 Containers used 7

~250 **Flow rate** mL/minute Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

See notes about

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	(Y)	N	NA
Duplicate sample collected?	Y	(N)	Duplicate sample ID _____
Rinsate blank collected?	Y	(N)	Rinsate blank ID _____

Groundwater - Well Sampling Data Form

Job Information

Date: 4/12/13	Time: Arrive 14:57 Depart 15:50
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: K.F.
Well ID: BE_MW04	Weather: Fine

Equipment

Water quality equipment description: 45111K101262 Interface probe number: NSW42253 30m

Purging equipment: (please circle) Bailer type: Plastic Teflon

Pump type: **Peristaltic** Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr²h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 9.59 m (-) Water level 6.72 m (=) Water Column 2.87 m

Water Column 2.87 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 5.62 L

Depth to product: ✓ m Product Thickness: ✓ m Verified with Bailer: ~~Y~~ N

Water Quality Parameters

Beginning purge time: 15:10 Ending purge time: 15:30 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 0.0ppm
1	15:15	6.10	20.1	3695	6.81	40.5	6.74	slightly cloudy, no odour
2	15:20	6.38	19.8	3744	0.20	43.9	6.74	" "
3	15:25	6.46	20.0	3860	0.05	51.5	6.74	" "
4	15:30	6.46	19.9	3895	0.0	48.4	6.73	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume
Actual amount of water prior to sampling

Sample time 15:40 Containers used 7

≈ 200 Flow rate mL/minute

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	Y	(N)	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID ____
Rinsate blank collected?	Y	(N)		Rinsate blank ID ____

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 4/12/13	Time: arrive 15:00 depart
Project Name: Symphony	Project Number: 0244193
Site Location: Bayswater	Sampler: C. Henry
Well ID: BE_MW05	Weather: sunny / hot

Equipment

Water quality equipment description: U5443 Interface probe number: 1220097747.1

Purging equipment: (please cirlce) ~~Bailer type:~~ ~~Plastic~~ ~~Teflon~~

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	(1.96)	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
8.135 m (-) ~~5.935~~ m (=) 3.200 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
3.200 m (x) 1.96 (=) ~6.1 L

Depth to product: / m Product Thickness: / m Verified with Bailer: ~~Y~~ ~~N~~ NA

Water Quality Parameters

Beginning purge time: 15:09 Ending purge time: intake depth ≈ 7.0m

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
0.5								PID = 0.0 ppm
~~1.0~~	15:12	6.29	24.4	7480	1.39	49	6.010	Slightly cloudy, no odour
1.0	15:18	6.32	24.0	7430	0.97	45	6.070	" "
1.5	15:22	6.33	22.2	7450	0.92	37	6.090	" "
2.0	15:25	6.30	21.9	7410	0.56	44	6.110	" "
2.5	15:30	6.32	22.0	7420	0.66	45	6.120	" "
								* Sample taken

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

2.5 **Total Well Volume** Actual amount of water prior to sampling Sample time 15:30 Containers used 7+7

~100 **Flow rate** mL/minute Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	Triplicate ID: TO1_041213
Was sample for metals field filtered prior to preservations?	Y	N	(NA)	ORC
Duplicate sample collected?	Y	(N)		Duplicate sample ID /
Rinsate blank collected?	Y	(N)		Rinsate blank ID /

Groundwater - Well Sampling Data Form

Job Information

Date: 4/12/13	Time: arrive 16:00 depart 17:00
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: K.F.
Well ID: BE_MW06	Weather: Fine

Equipment

Water quality equipment description: 451 11K101 262 Interface probe number: NSW4253 30m

Purging equipment: (please circle) Bailer type: Plastic Teflon

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	(1.96)	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 9.85 m (-) Water level 4.23 m (=) Water Column 5.62 m

Water Column 5.26 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume ~11 L

Depth to product: ✓ m Product Thickness: ✓ m Verified with Bailer: ~~Y~~ N

Water Quality Parameters

Beginning purge time: 16:[illegible]13 Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond µS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 0.0ppm
1	16:18	6.43	20.4	6300	~~0.00~~ 0.02	41.6	4.40	Clear, no odour
2	16:24	6.51	20.6	6659	—	31.3	4.43	" "
3	16:30	6.48	20.5	6735	—	13.0	4.43	" "
4	16:37	6.48	20.5	6798	—	8.8	4.47	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

	Total Well Volume Actual amount of water prior to sampling
~166	**Flow rate** mL/minute

Sample time _____ Containers used 7

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	Y	(N)	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID _____
Rinsate blank collected?	(Y)	N		Rinsate blank ID R01_041213_KF

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 4/12/13	Time: arrive 16:10 depart
Project Name: Symphony	Project Number: 0244193
Site Location: Bayswater	Sampler: C. Henry
Well ID: BE_MW07	Weather: fine

Equipment

Water quality equipment description: U5443 Interface probe number: 122009747.1

Purging equipment: (please circle) ~~Bailer type:~~ ~~Plastic~~ ~~Teflon~~

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
8.635 m (-) 2.550 m (=) 6.085 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
6.085 m (x) 1.96 (=) ~12 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y / N NA

Water Quality Parameters

Beginning purge time: 16:23 Ending purge time: intake depth ≈ 7.0m

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID reading = 0.0 ppm
1	16:26	6.80	20.5	13000	0.60	29	2.680	Clear, no odour
2	16:33	6.73	20.5	13000	0.31	23	2.77	" "
3	16:37	6.82	20.5	13800	0.40	26	2.84	" "
4	16:41	6.81	20.5	14400	0.43	21	2.93	" "
								* sample taken

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4 **Total Well Volume** Actual amount of water prior to sampling Sample time 16:42 Containers used 7

~300 **Flow rate** mL/minute Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	Y	N	(NA)	ORC
Duplicate sample collected?	Y	(N)		Duplicate sample ID /
Rinsate blank collected?	(Y)	N		Rinsate blank ID R01-041213

Groundwater - Well Sampling Data Form

ERM

Job Information	
Date: 5/12/13	Time: arrive 08:35 depart 09:35
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: K.F.
Well ID: BE_MW08	Weather: Cloudy, heavy rain showers

Equipment

Water quality equipment description: YSI 11K101262 Interface probe number: SWL 4253 30m

Purging equipment (please circle): Bailer type: Plastic Teflon

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	(1.96)	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
7.47 m (-) 2.76 m (=) 4.71 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
4.71 m (x) 1.96 (=) 9.23 L

Depth to product: ✓ m Product Thickness: ✓ m Verified with Bailer: ~~Y~~ N

Water Quality Parameters

Beginning purge time: 08:54 Ending purge time:

Litres	Time	PH	Temp °C	Cond ~~mS~~/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments PID = 0.0ppm
1	08:58	5.65	20.5	5971	5.92	87.6	2.81	Slightly cloudy, no odour
2	09:03	4.86	20.3	5655	1.71	110.2	2.80	" "
3	09:09	4.67	20.3	5476	0.13	115.2	2.81	" "
4	09:14	4.69	20.2	5355	—	92.7	2.80	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

	Total Well Volume Actual amount of water prior to sampling	Sample time 09:18	Containers used 7
200	**Flow rate** mL/minute	Did field parameters stabilise? (Y) N NA	Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	Y	(N)	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID ✓
Rinsate blank collected?	Y	(N)		Rinsate blank ID

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	18.12.13	Time: arrive	1015 depart
Project Name:	Symphony	Project Number:	0224193
Site Location:	Drysdale - Antinere	Sampler:	S. Grant
Well ID:	BF-MW01	Weather:	Fine

Equipment						
Water quality equipment description:	U9117			Interface probe number:	~~SYD~~ 3954 60cm	
Purging equipment: (please cirlce)	Bailer type:	Plastic	Teflon			
	Pump type:	Peristaltic	Submersible	Micro-purge	Amazon	Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
14.870 m (-) 10.265 m (=) 4.605 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
4.605 m (x) 1.96 (=) 9 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y | N

Water Quality Parameters

Beginning purge time: 1122 Ending purge time: VOC 0.1

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
0.5	1124	7.10	27.0	~~4.31~~	2.22	4		Cloudy milky No odour
1.0	1126	7.08	25.3	4.55	1.27	4	10.390	
1.5	1128	7.05	24.5	4.56	0.78	3	10.410	
2.0	1130	7.02	24.2	4.58	0.53	2	10.430	
2.5	1132	6.98	24.0	4.42	0.33	-3	10.460	
3.0	1134	6.98	23.9	4.45	0.27	-6	10.490	

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume (Actual amount of water prior to sampling)

Flow rate 250 mL/minute

Sample time 1135 Containers used 6

Did field parameters stabilise? Y | N | NA Was the well dry purged? Y | N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID
Rinsate blank collected?	Y	N		Rinsate blank ID

14.870
10.265
4.605

ERM

Groundwater - Well Sampling Data Form

Job Information			
Date:	18.12.13	Time: arrive 1200	depart
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater - Antree	Sampler:	J.G / H.C
Well ID:	BF-MW02	Weather:	fine

Equipment

Water quality equipment description: 90 MC U9117 Interface probe number: SYD 3954 60m

Purging equipment: (please cirlce) Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** (circled) **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96 (circled)	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = P r x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
16.020 m (-) 12.600 m (=) 3.420 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
3.420 m (x) 1.96 (=) ~7 L

Depth to product: ______ m Product Thickness: ______ m Verified with Bailer: Y N

Water Quality Parameters

Beginning purge time: 1212 Ending purge time: NDC 0.4

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
0.5	1214	7.14	28.1	5.83	5.05	162		light brown turbid water
1.0	1216	7.13	27.2	5.94	4.34	152	13.090	No odor
1.5	1218	7.09	26.3	5.95	4.20	127		
2.0	1220	7.04	26.0	5.97	4.22	110	13.200	
2.5	1222	7.05	26.0	5.97	4.23	105		
3.0	1224	6.99	25.9	5.91	4.18	98		

pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

3	**Total Well Volume** Actual amount of water prior to sampling	Sample time 1225	Containers used 6
250	**Flow rate** mL/minute	Did field parameters stabilise? Y (circled) N NA	Was the well dry purged? Y N (circled)

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y (circled)	N			
Was pre-cleaning sampling equipment properly protected from contamination?	Y (circled)	N			
Was documentation of equipment conducted?	Y (circled)	N	NA		
Were air bubbles present in vials at time of collection?	Y	N (circled)	NA		
Was sample for metals field filtered prior to preservations?	Y (circled)	N	NA		
Duplicate sample collected?	Y	N (circled)		Duplicate sample ID	______
Rinsate blank collected?	Y	N (circled)		Rinsate blank ID	______

Groundwater - well sampling data form.cdr 11/04

16.02
12.60
3.42

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	18.12.13	Time: arrive	1250 depart 1330
Project Name:	Symphony	Project Number:	0224193
Site Location:	Burgswater	Sampler:	J.G / H.C
Well ID:	BF_MW03	Weather:	fine

Equipment

Water quality equipment description: 90FLMV U9117 Interface probe number: Syd 3954 60m

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 20.040 m (-) Water level 19.390 m (=) Water Column 0.65 m

Water Column 0.65 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume ~1.2 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: Ending purge time: Pump Intake Depth (mbtoc): VOC 0.1

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								No parameters given
								due to lack of
								water
								Water milky cloudy -
								no odour

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

/ **Total Well Volume** Actual amount of water prior to sampling Sample time 1315 Containers used 6

/ **Flow rate** mL/minute Did field parameters stabilise? Y N (NA) Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID _____
Rinsate blank collected?	Y	(N)		Rinsate blank ID _____

2/6/14

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	18.12.13	Time: arrive	1345 depart 1550
Project Name:	0224197 - Shoalhaven	Project Number:	0224193
Site Location:	Daysmeadow - Ravensworth	Sampler:	J. Grant
Well ID:	DF_MW05	Weather:	Sunny

Equipment

Water quality equipment description: Interface probe number: SN1 3954 60m

Purging equipment (please circle) — Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
9.930 m (-) 8.870 m (=) 1.060 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
1.060 m (x) 1.96 (=) ~2L L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: Ending purge time: VOC 0.4

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1L	1540	6.71	27.1	9.76	1.41	107		Milky light brown - very turbid - No odour.
								Peristaltic pump fail - Switch to micro purge - grab sample taken first due to lack of water.
								Parimeters taken after sample

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

/ **Total Well Volume** Actual amount of water prior to sampling — Sample time 1530 — Containers used 4 7

/ **Flow rate** mL/minute — Did field parameters stabilise? Y N (NA) — Was the well dry purged? (Y) N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____

9.930
8.870
1.060

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 19.12.13	Time: arrive 16:30 depart 17:25
Project Name: Symphony	Project Number: 0224193
Site Location: Bays water	Sampler: JN
Well ID: BEMW09	Weather: Sunny

Equipment

Water quality equipment description: Airmet 90 PCMC Interface probe number: Airmet NSW 4254 30m.

Purging equipment (please circle): Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 16.04 m (-) Water level 13.55 m (=) Water Column _____ m

Water Column _____ m (x) Conversion Factor _____ (=) Litres per 1 Well Volume _____ L

Depth to product: _____ m Product Thickness: _____ m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 16:42 Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1.0	16:47	7.44	23.4	1.83	5.53	149	13.78	cloudy. no odour.
1.5	16:50	7.32	20.7	1.82	6.10	143	13.86	as above.
2.0	16:53	7.40	20.4	1.82	5.89	142	13.94	as above.
2.5	16:56	7.31	20.2	1.85	5.87	139	14.05	as above.
3.0	16:59	7.21	20.2	1.86	5.94	138	14.11	as above.
3.5	17:02	7.20	20.2	1.87	5.83	137	14.18	as above.
4.0	17:05	7.23	20.2	1.86	5.84	138	14.24	as above.

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4.0L **Total Well Volume** Actual amount of water prior to sampling Sample time 17:07 Containers used 7

150 **Flow rate** mL/minute Did field parameters stabilise? Y / N / NA Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N	4 x vials 3 x amber 1 x metals.
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID BQ1_191213_JN.

Groundwater - Well Sampling Data Form

Job Information

Date: 3/12/13	Time: arrive 0900 depart
Project Name: Symphony	Project Number: 022#193
Site Location: Bayswater	Sampler: N.H
Well ID: BG-MW01	Weather: Fine, hot

Equipment

Water quality equipment description: YSI Interface probe number: SYD 3954

Purging equipment: (please circle) Bailer type: Plastic / Teflon

Pump type: Peristaltic / Submersible / Micro-purge / Amazon / Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr²xh
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 6.03 m (-) Water level 0.0 m (=) Water Column 6.03 m

Water Column 6.03 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 11.82 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 09:13 Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	09:21	3.83	20.1	32011	0.77	324.7	0.24	No PID taken. No head space. Water @ TOC. Cloudy to clear. slight sulfur odour.
2	09:28	3.84	20.1	32070	0.78	324.7	0.52	Cloudy to clear
3	09:36	3.84	20.1	32072	0.85	310.2	0.69	Clear
4	09:45	3.84	20.0	32065	1.02	303.9	0.83	Clear

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4L. Total Well Volume (Actual amount of water prior to sampling)

Sample time 09:55

Containers used: 4x40ml H_2SO_4 vials, 3x100ml Amber, 1 ORC ultratrace metals, 1 HNO_3 meter

125 Flow rate mL/minute

Did field parameters stabilise? Y / N / NA

Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID: TD1_031213_NH
Rinsate blank collected?	Y	N		Rinsate blank ID:

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 3/12/13	Time: arrive 10:35 depart
Project Name: Symphony	Project Number: 0224913
Site Location: Bayswater	Sampler: N. H
Well ID: BG_MW02	Weather: Fine, hot.

Equipment

Water quality equipment description: YSI Interface probe number: SYD 3954

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 6.560 m (-) Water level 0.0 m (=) Water Column 6.560 m

Water Column 6.560 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 12.858 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 10:40 Ending purge time: Pump Intake Depth (mbtoc): 6.0

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	10:49	5.57	22.3	10733	3.3	92.2	0.0	No PID taken. Water @ TOC. No head space turbid, brown. No odour.
2	10:58	5.50	21.9	10665	0.11	107.1	0.0	turbid, brown, becoming clearer.
3	11:06	5.48	21.8	10609	0.13	94.7	0.0	Cloudy to clear,
4	11:12	5.47	21.8	10646	0.14	92.2	0.0	

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4L — **Total Well Volume** Actual amount of water prior to sampling

125 — **Flow rate** mL/minute

Sample time 11:20

Containers used 4x 40ml H2SO4 vials, 3x 100ml Amber, 1x ORC ultra trace metals.

Did field parameters stabilise? Y / N / NA

Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____

Groundwater - Well Sampling Data Form

Job Information

Date: 3/12/13	Time: arrive 11:45 depart
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: N.H
Well ID: BG-MW03	Weather: Fine, hot

Equipment

Water quality equipment description: YSI Interface probe number: SYD 3954

Purging equipment (please circle): Bailer type: Plastic Teflon

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	(1.96)	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 3.730 m (-) Water level 1.07 m (=) Water Column 2.66 m

Water Column 2.66 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 5.214 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y N

Water Quality Parameters

Beginning purge time: 11:55 Ending purge time: 12:32 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	12:02	6.03	22.2	13646	0.36	56.4	1.320	PID = 1.2. Cloudy to clear, no odour
2	12:10	6.00	22.1	12936	0.41	81.1	1.560	Clear, no odour
3	12:18	5.99	22.1	12173	0.49	109.0	1.780	Clear, no odour
4	12:25	5.98	22.0	12153	0.46	90.4	1.930	Clear, no odour
5	12:32	5.97	22.0	12130	0.46	83.0	1.155	Clear, no odour

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

5L **Total Well Volume** Actual amount of water prior to sampling

135 **Flow rate** mL/minute

Sample time 12:35 Containers used 4x40mL H_2SO_4 vials, 3x100mL Amber, 1x ORC ultratrace metal

Did field parameters stabilise? (Y) N NA

Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N	
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	(Y)	N	NA
Duplicate sample collected?	Y	(N)	Duplicate sample ID: —
Rinsate blank collected?	Y	(N)	Rinsate blank ID: —

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 3/12/13	Time: arrive 13:10 depart
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: N.H
Well ID: BG_MW04	Weather: Fine, hot

Equipment

Water quality equipment description: YSI Interface probe number: SYD 3954

Purging equipment (please cirlce): Bailer type: Plastic Teflon

Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 4.590 m (-) Water level 2.060 m (=) Water Column 2.53 m

Water Column 2.53 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 4.96 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y N

Water Quality Parameters

Beginning purge time: 13:21 Ending purge time: 13:49 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 1.4
1	13:28	6.46	21.8	15714	0.38	33.7	2.335	Clear, no odour
2	13:35	6.47	21.8	15741	0.33	37.9	2.406	clear, no odour
3	13:42	6.46	22.0	15885	0.34	40.9	2.540	clear, no odour
4	13:49	6.46	22.0	15788	0.37	45.9	2.625	clear, no odour

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4L. **Total Well Volume** Actual amount of water prior to sampling

Sample time 13:55 Containers used 4x40mL H_2SO_4 vials, 3x100mL Amber glass, 1x ORC ultratrace metal

142 **Flow rate** mL/minute

Did field parameters stabilise? Y N NA

Was the well dry purged? Y N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID ____
Rinsate blank collected?	Y	N		Rinsate blank ID ____

Groundwater - Well Sampling Data Form

ERM

Job Information	
Date: 3/12/13	Time: arrive 14:20 depart
Project Name: Symphony	Project Number: 0224493
Site Location: Bayswater	Sampler: N.H
Well ID: BG_MW05	Weather: Fine, hot

Equipment

Water quality equipment description: YSI Interface probe number: SYD3954

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 5.560 m (-) Water level 1.885 m (=) Water Column 3.675 m

Water Column 3.675 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 7.203 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 14:30 Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	14:37	4.04	21.2	17826	2.60	376.4	2.385	PID = 2-4 Clear, no odour
2	14:43	4.11	21.1	17394	2.60	380.1	2.650	Clear, no odour
3	14:50	4.32	21.3	16713	2.37	347.2	2.680	Clear, no odour
4	14:56	4.43	21.2	16396	2.28	334.0	2.710	Clear, no odour
5	15:02	4.44	21.2	16317	2.24	327.9	2.730	" "
6	15:08	4.45	21.2	16301	2.35	325.1	2.750	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

6L **Total Well Volume** Actual amount of water prior to sampling Sample time 15:15 Containers used: 4x40mL HCl 50x vials, 3x100mL Amber, 1xORC ultratrace Metals

151 **Flow rate** mL/minute Did field parameters stabilise? Y / N / NA Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID ____
Rinsate blank collected?	Y	N		Rinsate blank ID ____

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	3/12/13	Time: arrive / depart	16:16
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	N.H
Well ID:	BG-MW06	Weather:	Fine, hot

Equipment

Water quality equipment description: Interface probe number:

Purging equipment: (please cirlce) Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Total Well Depth 6.035 m (-) Water level 2.795 m (=) Water Column 3.24 m

Water Column 3.24 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 6.35 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y / N

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Water Quality Parameters

Beginning purge time: 15:26 Ending purge time: 15.51 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	15:31	3.74	21.0	18435	1.94	217.6	2.41	Slightly cloudy no odour
2	15:36	3.79	20.8	20777	1.78	215.8	2.69	" "
3	15:41	3.80	20.9	21737	2.13	231.2	2.89	" "
4	15:46	3.75	20.8	22338	2.17	242.6	3.07	" "
5	15:51	3.74	20.8	22834	2.12	242.0	3.08	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume Actual amount of water prior to sampling

Sample time 15:54 Containers used 8

200 **Flow rate** mL/minute

Did field parameters stabilise? Y / N / NA Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID _____
Rinsate blank collected?	Y	N		Rinsate blank ID _____

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	11/12/13	Time: arrive	15 35 depart 16:50
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	ICF
Well ID:	BG_MW07	Weather:	Fine

Equipment

Water quality equipment description: 451 11K101262 Interface probe number: NSW 4253 30m

Purging equipment (please circle): Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 5.33 m (-) Water level 3.91 m (=) Water Column 1.42 m

Water Column 1.42 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume ~2.78 L

Depth to product: ____ m Product Thickness: ____ m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 15:55 Ending purge time: 16:14 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments PID = 0.0ppm
0.5	16:00	6.11	20.6	4214	0.76	~~-144.3~~	4.08	Slightly cloudy, slight sulphur odour
1	16:05	6.15	20.3	4169	0.30	-140.8	4.20	" "
1.5	16:10	6.21	20.4	4202	0.06	-133.1	4.43	" "
2	16:14	6.25	20.5	4231	0.02	-128.9	4.52	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume Actual amount of water prior to sampling

Sample time 16:20 Containers used 8+8

105 **Flow rate** mL/minute

Did field parameters stabilise? Y / N / NA Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID ____
Rinsate blank collected?	(Y)	N		Rinsate blank ID RB1-111213-KF

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	2/12/13	Time: arrive	14:55 depart
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	C.M. + K.F.
Well ID:	BH_MW01	Weather:	Fine

Equipment

Water quality equipment description: YSI 120100012 Interface probe number: 3954 60M

Purging equipment (please circle): Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
9.235 m (-) 3.920 m (=) 5.685 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
5.685 m (x) 1.96 (=) ~ 11.2 L

Depth to product: - m Product Thickness: - m Verified with Bailer: Y / N NA

Water Quality Parameters

Beginning purge time: 15:25 Ending purge time: intake depth ≈ 7.5m

Litres	Time	PH	Temp °C	Cond µS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	15:29	4.35	23.1	5616	0.18	238.4	4.45	Light Brown, cloudy, no odour
2	15:36	4.19	23.1	5865	0.29	254.8	4.70	" "
3	15:42	4.03	22.9	5671	0.20	280.1	4.90	" "
4	15:46	3.98	22.9	5663	0.19	286.8	5.10	" "
5	15:50	3.89	22.9	5676	0.13	286.4	5.50	" "
								* sample taken

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

5 **Total Well Volume** Actual amount of water prior to sampling

~250 **Flow rate** mL/minute

Sample time 15:50 Containers used 10

Did field parameters stabilise? Y / N / NA

Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID -
Rinsate blank collected?	Y	N		Rinsate blank ID -

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	2/12/13	Time: arrive	14:55 depart
Project Name:	Symphony Bayswater	Project Number:	0224193
Site Location:		Sampler:	N.H
Well ID:	BH_MW02	Weather:	Fine.

Equipment						
Water quality equipment description:	YSI [illegible] 11010075 2			Interface probe number:	SYD 3954	
Purging equipment: (please cirlce)	Bailer type:	Plastic	Teflon			
	Pump type:	~~Peristaltic~~	Submersible	Micro-purge	Amazon	Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	~~1.96~~	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 8.255 m (-) Water level 2.710 m (=) Water Column 5.545 m

Water Column 5.545 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 10.87 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 15:10 Ending purge time: Pump Intake Depth (mbtoc): 7.5m

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	15:17	5.38	21.9	10144	0.41	74.4	3.050	PID=0.4 clear, no odour
2	15:24	5.41	21.8	10161	1.23	73.0	3.315	clear, no odour
3	15:31	5.42	21.9	10173	1.84	70.1	3.605	clear, no odour
4	15:40	5.42	21.5	10123	2.14	68.9	3.815	clear, no odour

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4 L **Total Well Volume** Actual amount of water prior to sampling

~130 **Flow rate** mL/minute

Sample time 15:50

Containers used 4x 40ml vials, 2x 100ml vials, 3xORL ultratrace metals - 2 for cations + anion, 1x HNO3 metals

Did field parameters stabilise? (Y) N NA

Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N	
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	(Y)	N	NA
Duplicate sample collected?	Y	(N)	Duplicate sample ID —
Rinsate blank collected?	(Y)	(N)	Rinsate blank ID Rinsate_021213_NH

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 3/12/13	Time: arrive 10:20 depart 11:20
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: N.H
Well ID: BH_MW03	Weather: Fine, hot

Equipment

Water quality equipment description: YSI — Interface probe number: SYD 3954

Purging equipment: (please cirlce) — Bailer type: Plastic / Teflon — Pump type: **Peristaltic** (circled) / Submersible / Micro-purge / Amazon / Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96 (circled)	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 9.060 m (-) Water level 1.315 m (=) Water Column 7.745 m

Water Column 7.745 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 15.18 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y / N NA.

Water Quality Parameters

Beginning purge time: 10:29 Ending purge time: 11:01 Pump Intake Depth (mbtoc): ~9.5

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID=0.0 - cap loose
1	10:35	4.65	23.7	12748	3.59	189.1	1.770	Clear, no odour
2	10.41	4.71	23.4	12776	3.96	180.0	2.035	Clear
3	10:47	4.92	23.4	13660	3.74	161.7	2.250	clear
4	10:54	5.17	23.4	13682	3.46	138.7	2.480	clear
5	11:01	5.18	23.4	13665	3.42	128.5	2.630	Clear

pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

5L — **Total Well Volume** Actual amount of water prior to sampling — Sample time 11:05 — Containers used: 4x40mL H2SO4 vials, 2x100mL Ambers, 1x ORC ultratrace metal, 1x unpreserved plast

~156 — **Flow rate** mL/minute — Did field parameters stabilise? **Y** (circled) / N / NA — Was the well dry purged? Y / **N** (circled)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y (circled)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y (circled)	N		
Was documentation of equipment conducted?	Y (circled)	N	NA	
Were air bubbles present in vials at time of collection?	Y	N (circled)	NA	
Was sample for metals field filtered prior to preservations?	Y (circled)	N	NA	
Duplicate sample collected?	Y	N (circled)		Duplicate sample ID
Rinsate blank collected?	Y (circled)	N		Rinsate blank ID RB1_041213_NH

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 4/12/13	Time: arrive 11:45 depart 12:40
Project Name: Symphony	Project Number: 0224493
Site Location: Bayswater	Sampler: N.H
Well ID: BH_MW04	Weather: Fine, hot

Equipment

Water quality equipment description: 45T Interface probe number: 540 3959

Purging equipment: (please circle)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 9.060 m (-) Water level 3.390 m (=) Water Column 5.67 m

Water Column 5.67 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 11.11 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y / N NA.

Water Quality Parameters

Beginning purge time: 11:54 Ending purge time: Pump Intake Depth (mbtoc): ~8.5

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	12:00	6.36	21.8	14448	0.05	42.8	3.430	Cloudy, no odour
2	12:06	6.38	21.9	14367	0.01	10.4	3.430	Cloudy, no odour
3	12:12	6.38	21.6	14244	0.0	-3.7	3.430	Cloudy, no odour
4	12:18	6.39	21.8	14218	0.0	-12.1	3.430	" " "
5	12:26	6.40	21.8	14259	0.0	-14.6	3.430	" " "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

5L — **Total Well Volume** Actual amount of water prior to sampling

~156 — **Flow rate** mL/minute

Sample time 12:30

Containers used: 4x40mL vials, 2x100mL Amber, 1x ORC ultratrace metals, 1x unpreserved plastic

Did field parameters stabilise? Y / N / NA

Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	
Rinsate blank collected?	Y	N	

Duplicate sample ID DUP_041213_NH

Rinsate blank ID —

m

Groundwater - Well Sampling Data Form

Job Information

Date:	4/12/13	Time: arrive 09:15	depart 10:20
Project Name:	Symphony	Project Number:	0224193
Site Location:	~~BH~~ Bayswater	Sampled:	K.F.
Well ID:	BH_MW05	Weather:	Fine

Equipment

Water quality equipment description: YSI 11K401262 Interface probe number: NSW 4253 30m

Purging equipment: (please circle) Bailer type: Plastic Teflon

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	(1.96)	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V
= Pr r r h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 10.62 m (-) Water level 7.64 m (=) Water Column 2.98 m

Water Column 2.98 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 5.84 l

Depth to product: ~~/~~ m Product Thickness: ~~/~~ m Verified with Bailer: ~~Y~~ N

Water Quality Parameters

Beginning purge time: 09:25 Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond ~~mS~~/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 0.0 ppm
1	09:34	6.32	22.7	5485	0.40	31.8	7.85	Slightly cloudy, no odour
2	09:41	6.33	22.8	5431	0.24	34.1	7.95	" "
3	09:48	6.33	22.8	5392	0.20	31.2	8.06	" "
4	09:55	6.34	22.9	5379	0.14	28.4	8.16	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

	Total Well Volume (Actual amount of water prior to sampling)	Sample time 10:05	Containers used 8
133	Flow rate mL/minute	Did field parameters stabilise? (Y) N NA	Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	Y	(N)	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID ~~/~~
Rinsate blank collected?	Y	(N)		Rinsate blank ID

Groundwater - Well Sampling Data Form

ERM

Job Information	
Date: 4/12/13	Time: arrive 09:15 depart
Project Name: Symphony	Project Number: 0244193
Site Location: Bayswater	Sampler: C. Henry
Well ID: BH-MW06	Weather: sunny/hot

Equipment

Water quality equipment description: U5443 solonist Interface probe number: 1220097747.1

Purging equipment (please circle): ~~Bailer type:~~ Plastic Teflon

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
3.495 m (-) 4.815 m (=) 3.680 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
3.680 m (x) 1.96 (=) ~ 7.1 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N) NA

Water Quality Parameters

Beginning purge time: 09:44 Ending purge time: interface depth ≈ 7.0m

Litres	Time	PH	Temp °C	Cond µS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
			24.5					PID reading ≈ 0.0 ppm
0.5	09:50	←	7.30	88.4	7.05	89.0	/	Turbid, light brown, no odour
1.0	10:00	7.30	24.5	4400	0.91	77.0	4.83	" "
1.5	10:03	7.29	24.2	4360	0.65	79.0	4.85	" "
2.0	10:08	7.31	23.2	4270	0.55	80.0	4.86	" "
2.5	10:10	7.30	24.1	4260	0.51	79.0	4.87	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

2.5 **Total Well Volume** Actual amount of water prior to sampling

Sample time 10:10 Containers used 7

~250 **Flow rate** mL/minute

Did field parameters stabilise? (Y) N NA

Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	4/12/13	Time: arrive	13:00 depart
Project Name:	Symphony	Project Number:	0244193
Site Location:	Bayswater	Sampler:	C. Henry
Well ID:	BH-MW07	Weather:	Sunny / hot

Equipment

Water quality equipment description: US443 Interface probe number: 1220097747.1

Purging equipment: ~~Bailer type:~~ ~~Plastic~~ ~~Teflon~~ (please cirlce)

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
3.660 m (-) 3.100 m (=) 0.560 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
0.560 m (x) 1.96 (=) ~1.0 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y / ~~N~~ NA

Water Quality Parameters

Beginning purge time: Ending purge time: intake depth ~ 3.4

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 0.0 ppm
0.5	13:10	6.52	26.5	4620	0.61	9.0	3.085	Clear, no odour
1.0	13:13	6.39	27.2	4560	0.49	30	3.085	" "
1.5	13:16	6.10	26.9	4330	0.60	71	3.090	" "
2.0	13:19	6.07	27.4	4340	0.53	80	3.090	" "
2.5	13:23	6.01	26.5	4290	0.49	84	3.090	" "
								* sample taken

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

2.5 **Total Well Volume** Actual amount of water prior to sampling Sample time 13:23 Containers used 8

~250 **Flow rate** mL/minute Did field parameters stabilise? Y / N / NA Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	Y	N	(NA)	ORC
Duplicate sample collected?	Y	(N)		Duplicate sample ID /
Rinsate blank collected?	Y	(N)		Rinsate blank ID /

Groundwater - Well Sampling Data Form

Job Information

Date:	4/12/13	Time: arrive 12:41	depart 13:40
Project Name:	Symphony	Project Number:	022493
Site Location:	Bayswater	Sampler:	K. F.
Well ID:	BH_MW08	Weather:	Fine, warm

Equipment

Water quality equipment description: YSI 11K101262 Interface probe number: NSW4253 30m

Purging equipment (please circle) — Bailer type: Plastic Teflon

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	(1.96)	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 7.00 m (-) Water level 1.99 m (=) Water Column 5.01 m

Water Column 5.01 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 9.82 l

Depth to product: ✓ m Product Thickness: ✓ m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 12:59 Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 0.1ppm
1	13:04	7.31	23.2	2452	3.20	15.0	2.16	clear, no odour
2	13:09	7.34	23.8	2569	2.39	34.6	2.11	" "
3	13:15	7.28	23.5	2626	1.60	37.6	2.14	" "
4	13:21	7.28	23.4	2631	0.28	37.1	2.16	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

	Total Well Volume — Actual amount of water prior to sampling	Sample time 13:26	Containers used 8
181	Flow rate mL/minute	Did field parameters stabilise? (Y) N NA	Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	Y	(N)	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID
Rinsate blank collected?	Y	(N)		Rinsate blank ID ✓

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date: 2/12/13		Time: arrive 8:45	depart
Project Name: Symphony		Project Number: 0224193	
Site Location: Bayswater		Sampler: N.H	
Well ID: BT_MW01		Weather: Fine	

Equipment

Water quality equipment description: YSI Interface probe number: 540 3954

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 13.385 m (-) Water level 7.710 m (=) Water Column 5.675 m

Water Column 5.675 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 11.123 L

Depth to product: ~ m Product Thickness: ~ m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 09:22 Ending purge time: Pump Intake Depth (mbtoc): 11.5

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	09:29	5.61	23.3	8747	0.47	45.3	7.755	clear, no odour.
2	09:38	5.51	24.3	8376	0.12	60.7	7.790	clear, no odour. Temp affected by sun on probe
3	09:55	5.50	23.6	8053	0.27	60.8	7.810	clear, no odour Temp affected by sun on probes.
4	10:03	5.49	23.1	7673	0.17	58.4	7.810	clear, no odour
5	10:10	5.48	23.0	7623	0.19	60.9	7.810	clear, no odour
6	10:17	5.47	22.9	7593	0.19	61.4	7.810	clear, no odour

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

6 **Total Well Volume** Actual amount of water prior to sampling Sample time 10:20

109 **Flow rate** mL/minute Did field parameters stabilise? Y / N / NA

Containers used 4x 40mL 15ml vials, 2x 100mL Amber glass, 3x ORC ultratrace metals → 2 for cations + anions, 1x HNO_3 metals -

Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	2/12/13	Time: arrive	12-20 depart
Project Name:	Symphony	Project Number:	0224193
Site Location:	Beyswater	Sampler:	N.H
Well ID:	BI-MW02	Weather:	Fine

Equipment

Water quality equipment description: YSI 1101001S2 Interface probe number: SYD 3954

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 10.320 m (-) Water level 7.260 m (=) Water Column 3.18 m

Water Column 3.18 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 6.23 L

Depth to product: — m Product Thickness: — m Verified with Bailer: Y N

Water Quality Parameters

Beginning purge time: 12:41 Ending purge time: Pump Intake Depth (mbtoc): 5.5

Litres	Time	PH	Temp °C	Cond µS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments PID=0.9
1	12:55	4.13	24.1	6273	1.60	229.9	7.245	cloudy to clear. No odour. Stopped pump to get IP metre.
2	13:06	4.05	24.2	6323	1.89	254.5	7.34	" " "
3	13:16	3.98	24.8	6290	1.88	260.9	7.365	Clear. No odour.
4	13:25	3.91	22.4	6255	1.86	261.4	7.390	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4 **Total Well Volume** Actual amount of water prior to sampling

90 **Flow rate** mL/minute

Sample time 13:30

Containers used 4x 40mL H_2SO_4 vials, 2x 100mL Amber, 3x ORC ultratrace metals → 2 for cations/anions, 2 HNO_3 metals.

Did field parameters stabilise? Y N NA

Was the well dry purged? Y N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID ____
Rinsate blank collected?	Y	N		Rinsate blank ID ____

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 2/12/13	Time: arrive 12:25 depart
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: C. Henry
Well ID: BI-MW03	Weather: fine

Equipment

Water quality equipment description: 12D10000 12 Interface probe number: 395460M

Purging equipment: ~~Bailer type:~~ ~~Plastic~~ ~~Teflon~~
(please circle)
Pump type: **Peristaltic** Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
12.140 m (-) 7.375 m (=) 4.765 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
4.765 m (x) 1.96 (=) ~9.2 L

Depth to product: ✓ m Product Thickness: ✓ m Verified with Bailer: ~~Y~~ ~~N~~ NA

Water Quality Parameters

Beginning purge time: 12:45 Ending purge time: Intake depth ≈ 10 m

Litres	Time	PH	Temp °C	Cond µS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
0.5	12:50	6.08	27.1	14301	0.35	-69.2	7,630	Slightly cloudy, no odour
1.0	12:53	6.09	27.3	14353	0.33	-83.6	7,900	" "
1.5	12:56	6.09	27.5	14404	0.35	-89.1	8,300	" "
2.0	13:00	6.09	27.6	14400	0.37	-99.4	8,700	" "
2.5	13:03	6.10	27.6	14381	0.33	-98.1	8,900	" "
								* sample taken

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

2.5 **Total Well Volume** Actual amount of water prior to sampling Sample time 13:03 Containers used 10

~300 **Flow rate** mL/minute Did field parameters stabilise? Y N NA Was the well dry purged? Y ~~N~~

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID ✓
Rinsate blank collected?	Y	N	Rinsate blank ID

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	16.12.13	Time: arrive	820 depart 915
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	J. Grant
Well ID:	BK-MW04	Weather:	fine

Equipment

Water quality equipment description: Interface probe number: 3978

Purging equipment (please cirlce): Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
10.625 m (-) 8.620 m (=) 2.005 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
2.005 m (x) 1.96 (=) ~4 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: 828 Ending purge time:

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
0.5	830	7.00	19.8	1940.10	2.21	-10	8.750	Cloudy grey/brown - No odour
1.0	832	7.07	19.6	3.14	1.86	-15	8.810	
1.5	834	7.07	19.5	3.07	1.74	-9	8.860	
2.0	836	7.06	19.2	3.01	2.16	5	8.910	0.0 VOC
2.5	838	7.06	19.2	2.99	2.35	13	8.940	
3.0	840	7.06	19.0	3.02	2.37	22	8.980	
3.5	842	7.06	19.0	2.99	2.36	27	9.030	
4.0	844	7.06	19.0	2.99	2.37	28	9.060	

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

~~Only~~ 4 **Total Well Volume** Actual amount of water prior to sampling Sample time 900 Containers used 7 (+7)

~250 **Flow rate** mL/minute Did field parameters stabilise? Y N NA Was the well dry purged? Y N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID
Rinsate blank collected?	(Y)	N		Rinsate blank ID R01-161213-JG

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	11/12/13	Time: arrive	08:05 depart 09:35
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	K.F.
Well ID:	BL-MW01	Weather:	Fine.

Equipment

Water quality equipment description: 45/11K101262 Interface probe number: NSW4253 30m

Purging equipment: (please circle)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 6.04 m (-) Water level 1.42 m (=) Water Column 4.62 m

Water Column 4.62 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume ~9.05 L

Depth to product: ✓ m Product Thickness: ✓ m Verified with Bailer: ~~Y~~ N

Water Quality Parameters

Beginning purge time: 08:53 Ending purge time: 09:16 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 0.2ppm
1	08:59	5.14	21.7	4584	2.70	111.8	1.55	slightly cloudy, no odour
2	09:04	4.90	21.6	4436	2.06	108.8	1.65	clear, no odour
3	09:10	4.75	21.8	4482	1.37	115.9	1.65	" "
4	09:16	4.69	21.6	4393	0.79	118.5	1.68	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume Actual amount of water prior to sampling

Sample time 09:22 Containers used 9

173. **Flow rate** mL/minute

Did field parameters stabilise? (Y) N NA

Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N	
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	(Y)	N	NA
Duplicate sample collected?	Y	(N)	Duplicate sample ID ✓
Rinsate blank collected?	Y	(N)	Rinsate blank ID ✓

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 18-12-13	Time: arrive 13:39 depart 13:10
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: JN / TH
Well ID: BW - MW02	Weather: Sunny

Equipment

Water quality equipment description: Airmet 90 FLMV Interface probe number: Airmet

Purging equipment: (please cirlce)
Bailer type: **Plastic** (**Teflon**)
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 9.350 m (-) Water level 9.008 m (=) Water Column ____ m

Water Column ____ m (x) Conversion Factor ____ (=) Litres per 1 Well Volume ____ L

PID 0.8 ppm.

Depth to product: ____ m Product Thickness: ____ m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								Not enough water to purge. Took grab sample.

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

—
Total Well Volume
Actual amount of water prior to sampling
Sample time 13:45 Containers used 7

—
Flow rate
mL/minute
Did field parameters stabilise? Y / N / NA Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N	4x vial. 1x 1L amber. 1x metal 1x PFOS
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	Y	(N)	NA
Duplicate sample collected?	Y	(N)	Duplicate sample ID —
Rinsate blank collected?	Y	(N)	Rinsate blank ID —

Final DTW - Dry.

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	12.12.13	Time: arrive	1515 depart 1530
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	J. Grant
Well ID:	BE-MW02	Weather:	fine

Equipment

Water quality equipment description: /

Interface probe number: SYD 3954 60m

Purging equipment (please cirlce): Bailer type: Plastic / Teflon

Pump type: Peristaltic / Submersible / Micro-purge / Amazon / Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column

9.310 m (-) 9.020 m (=) 0.29 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume

0.29 m (x) 1.96 (=) 560 mL

Depth to product: / m Product Thickness: / m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: Ending purge time:

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								Poor discharge - unable to
								sample

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume
Actual amount of water prior to sampling

Sample time _____ Containers used _____

Flow rate
mL/minute

Did field parameters stabilise? Y / N / NA Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID _____
Rinsate blank collected?	Y	N		Rinsate blank ID _____

Groundwater - Well Sampling Data Form

ERM

Job Information

Date:	11/12/13	Time: arrive 10:00	depart 11:00
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	K.F.
Well ID:	BL-MW03	Weather:	Fine

Equipment

Water quality equipment description: YSI 11K101262 Interface probe number: WLW 4253 30m

Purging equipment: (please circle)

Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 3.92 m (-) Water level 1.90 m (=) Water Column 2.02 m

Water Column 2.02 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 3.95 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y N

Water Quality Parameters

Beginning purge time: 10:14 Ending purge time: 10:34 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments PID=0.8 ppm
0.5	10:18	6.32	22.0	2197	0.60	-12.3	1.91	Slightly cloudy, no odour.
1	10.21	6.57	21.7	2142	0.19	-9.7	1.91	" "
1.5	10:24	6.63	21.6	2096	0.05	-8.7	1.91	" "
2	10.28	6.67	21.6	2056	—	-8.2	1.91	" "
2.5	10:31	6.72	21.6	2048	—	-8.5	1.91	" "
3	10:34	6.75	21.7	2019	—	-10.7	1.91	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

	Total Well Volume Actual amount of water prior to sampling	Sample time 10:40	Containers used 9
150	**Flow rate** mL/minute	Did field parameters stabilise? (Y) N NA	Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID
Rinsate blank collected?	Y	(N)		Rinsate blank ID

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 11/12/13	Time: arrive 11:10 depart 12:05
Project Name: Symphony	Project Number: 0224493
Site Location: Bayswater	Sampler: IC F.
Well ID: BL-MW04	Weather: Fine

Equipment

Water quality equipment description: 451 11K101262 Interface probe number: NSW 4253 30m

Purging equipment (please cirlce): Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 3.52 m (-) Water level 1.59 m (=) Water Column 1.93 m

Water Column 1.93 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 3.78 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 11:28 Ending purge time: 11:48 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond ~~mS/cm~~ µS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
0.5	11:31	6.44	24.8	4853	1.87	58.6	1.72	PID=2.0ppm clear, no odour
1	11:34	6.56	24.8	4876	1.65	54.2	1.81	" "
1.5	11:37	6.59	24.9	5013	1.63	51.9	1.90	" "
2	11:41	6.59	24.8	5064	1.56	50.7	1.97	" "
2.5	11:44	6.59	24.7	5124	1.52	50.3	2.06	" "
3	11:48	6.60	24.7	5157	1.53	49.8	2.13	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume Actual amount of water prior to sampling

Sample time 11:55 Containers used 9

150 **Flow rate** mL/minute

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N	
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	(Y)	N	NA
Duplicate sample collected?	Y	(N)	Duplicate sample ID
Rinsate blank collected?	Y	(N)	Rinsate blank ID

Groundwater - Well Sampling Data Form

ERM

Job Information

Date: 11/12/13	Time: arrive 14:00 depart 15:05
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: K.F.
Well ID: BL-MW05	Weather: Fine

Equipment

Water quality equipment description: YSI 11K101262 Interface probe number: NSW 4253 30m

Purging equipment (please circle)
Bailer type: ~~Plastic~~ Teflon
Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 7.21 m (-) Water level 4.16 m (=) Water Column 3.05 m

Water Column 3.05 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume ~5.97 L

Depth to product: / m Product Thickness: / m Verified with Bailer: ~~Y~~ N

Water Quality Parameters

Beginning purge time: 14:28 Ending purge time: 14:50 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond ~~mS/cm~~	DO mg/L	Redox mV	Drawdown <10cm	Comments PID = 0.3ppm
~~1~~ 1	14:34	6.51	21.2	3349	0.39	38.5	4.22	clear, no odour
2	14:40	6.73	21.1	3257	0.25	40.0	4.19	" "
3	14:45	6.78	21.0	3206	0.23	40.5	4.21	" "
4	14:50	6.79	20.9	3183	0.33	41.4	4.20	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

	Total Well Volume Actual amount of water prior to sampling
18	**Flow rate** mL/minute

Sample time 14:55 Containers used 9

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N	
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	(Y)	N	NA
Duplicate sample collected?	Y	(N)	Duplicate sample ID
Rinsate blank collected?	Y	(N)	Rinsate blank ID

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	11/12/13	Time: arrive	12:45 depart 13:55
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	K.F.
Well ID:	BL-MW06	Weather:	Fine

Equipment

Water quality equipment description: YSI 11K101262 Interface probe number: NSW 4053 30m.

Purging equipment (please circle) — Bailer type: Plastic / Teflon

Pump type: **Peristaltic** / Submersible / Micro-purge / Amazon / Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Total Well Depth 4.27 m (-) Water level 3.49 m (=) Water Column 0.78 m

Water Column 0.78 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 1.52 L

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Depth to product: ____ m Product Thickness: ____ m Verified with Bailer: Y / N

Water Quality Parameters

Beginning purge time: 12:53 Ending purge time: 13:13 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond µS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments PID=0.2ppm
0.5	12:57	6.47	24.0	4309	0.31	34.2	3.85	Cloudy, no odour
1	B01	6.51	25.5	4507	0.51	39.9	3.86	" "
1.5	13:03	6.53	24.9	4326	0.34	35.1	3.96	" "
2	13:08	6.54	25.2	4515	0.52	35.1	4.04	" "
2.5	13:13	6.54	25.1	4457	0.38	34.3	4.08	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume Actual amount of water prior to sampling

Sample time 13:20 Containers used 9

150 **Flow rate** mL/minute

Did field parameters stabilise? Y / N / NA Was the well dry purged? Y / N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID ____
Rinsate blank collected?	Y	N	Rinsate blank ID ____

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	13.12.13	Time: arrive 850	depart 945
Project Name:	Symphony Bayswater	Project Number:	0224193
Site Location:		Sampler:	J. Hunt
Well ID:	BM_EW_MW01	Weather:	Fine

Equipment

Water quality equipment description: 90 FLMV U9117 Interface probe number: SYD 3954 60m

Purging equipment (please cirlce): Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
2.230 m (-) 0.510 m (=) 1.72 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
1.72 m (x) 1.96 (=) ~3.5 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: 905 Ending purge time:

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	909	6.82	12.0	3.37	1.78	-17	0.760	Very turbid reddish brown to
2	913	6.83	18.9	3.33	1.27	-11	1.130	Slightly cloudy - No odor
3	917	6.82	20.6	3.34	1.14	-10	1.330	
4	921	6.84	19.5	3.33	1.24	-8	1.470	* temp sensor questionable

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4 **Total Well Volume** Actual amount of water prior to sampling Sample time 930 Containers used 8 (+8)

~250 **Flow rate** mL/minute Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID
Rinsate blank collected?	(Y)	N		Rinsate blank ID RO1_131213_JH

Groundwater - well sampling data form.cdr 11/04

12.33
1.72

Groundwater - Well Sampling Data Form

ERM

Job Information

Date:	13.12.13	Time: arrive 950	depart 1045
Project Name:	Symphony Bayswater	Project Number:	0224193
Site Location:		Sampler:	J. Grant
Well ID:	BM-MW03	Weather:	Fine & hot

Equipment

Water quality equipment description: 90 FL MV U9117 Interface probe number: Std 3954 60m

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
3.920 m (-) 1.180 m (=) 2.74 m
1.18
2.74

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
2.74 m (x) 1.96 (=) ~5 L

Depth to product: ✓ m Product Thickness: ✓ m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: 1000 Ending purge time:

Litres	Time	PH	Temp °C	Cond mS/cm	DO ~~mg/L~~ %	Redox mV	Drawdown <10cm	Comments
1	1004	6.56	25.0	3.35	1.96	104	1.520	turbid reddish brown water
2	1008	6.60	25.0	3.33	1.11	162	1.550	No odour
3	1012	6.49	25.0	3.35	0.92	192	1.550	
4	1016	6.47	19.8	3.34	0.79	196	1.540	
5	1020	6.47	19.8	3.31	0.77	197	1.550	
								& Potential temp sensor error

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

5 **Total Well Volume** Actual amount of water prior to sampling Sample time 1030 Containers used 8

-250 **Flow rate** mL/minute Did field parameters stabilise? Y N NA Was the well dry purged? Y N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID
Rinsate blank collected?	Y	(N)		Rinsate blank ID

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	13.12.13	Time: arrive	750 depart 845
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	J. Grant
Well ID:	BM-MW05	Weather:	hot

Equipment

Water quality equipment description: 90 FLMV - U9117 Interface probe number: SYP - 3954 - 60m

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
4.040 m (-) 1.820 m (=) 2.220 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
2.220 m (x) 1.96 (=) ~4.4 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: 816 Ending purge time:

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	819	6.71	25.0	3.75	1.51	143	1.880	turbid brown becoming clearly
2	822	6.69	25.0	3.69	0.82	147	1.890	No odour
3	825	6.68	25.0	3.66	0.67	148	1.890	
4	829	6.68	25.0	3.66	0.55	149	1.900	

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

4 **Total Well Volume** Actual amount of water prior to sampling Sample time 835 Containers used 8

~300 **Flow rate** mL/minute Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID _____
Rinsate blank collected?	Y	(N)		Rinsate blank ID _____

4.04
1.82
2.22

4 hrs 2 took, 2.0 hrs travelling / 1.0 - take down - as of the

Groundwater - Well Sampling Data Form

ERM

Job Information

Date:	13.12.13	Time: arrive 1115	depart 1225
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	J. Grant
Well ID:	BM_MW07	Weather:	Fine

Equipment

Water quality equipment description: 90 FLMV U9117 Interface probe number: SYD 3954 60m

Purging equipment: (please cirlce) Bailer type: Plastic Teflon

Pump type: (Peristaltic) Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	(1.96)	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
6.950 m (-) 5.895 m (=) 1.055 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
1.055 m (x) 1.96 (=) ~ 2 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: 1125 Ending purge time:

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
1	1129	5.06	22.6	3.22	1.37	191	5.900	Slightly Cloudy
2	1133	4.97	21.3	3.25	1.03	199	5.920	
3	1137	4.85	20.3	3.24	0.89	215	5.895	
4	1141	4.79	19.9	3.14	0.77	230		
5	1145	4.74	19.8	3.23	0.67	246	5.900	
6	1149	4.73	19.7	3.23	0.65	255	5.900	
								Good recharge

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

6	**Total Well Volume** Actual amount of water prior to sampling	Sample time 1155 Containers used 8
~250	**Flow rate** mL/minute	Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	(Y)	N	NA
Duplicate sample collected?	Y	(N)	Duplicate sample ID ______
Rinsate blank collected?	Y	(N)	Rinsate blank ID ______

8/4

6.950
5.895
1.055

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	11.12.13	Time: arrive	1405 depart 1440
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	J. Lucas
Well ID:	BN MW02	Weather:	fine

Equipment

Water quality equipment description: 90 - FLMW U9114 Interface probe number: SYD 3954 Com

Purging equipment: (please circle)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
10.245 m (-) 10.100 m (=) 0.145 m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
0.145 m (x) 1.96 (=) ~0.280 L

Depth to product: / m Product Thickness: / m Verified with Bailer: Y N

Water Quality Parameters

Beginning purge time: Ending purge time:

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								Unable to withdraw any water
								Checked BN-MW03 - dry as well
								No Sample taken

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume Actual amount of water prior to sampling

Flow rate mL/minute

Sample time _____ Containers used _____

Did field parameters stabilise? Y N NA

Was the well dry purged? Y N

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	18.12.13	Time: arrive 13:55 depart 13:30	
Project Name:	Symphony.	Project Number:	0224193
Site Location:	Bayswater	Sampler:	JN/TH
Well ID:	BN-MW02	Weather:	Sunny.

Equipment

Water quality equipment description: Airmet-90FLMV Interface probe number: Airmet NSW 4254 30m

Purging equipment: (please cirlce) Bailer type: **Plastic** (Teflon)

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 10.258 m (-) Water level 10.047 m (=) Water Column 0.21 m

Water Column 0.21 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume 0.42 L

PID 0-7ppm.

Depth to product: — m Product Thickness: — m Verified with Bailer: Y (N)

Water Quality Parameters

Beginning purge time: Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								Take a grab sample not enough water to purge.

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

— **Total Well Volume** Actual amount of water prior to sampling Sample time 13:10 Containers used 4

— **Flow rate** mL/minute Did field parameters stabilise? Y N (NA) Was the well dry purged? ~~Y~~ N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N	
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	
Was documentation of equipment conducted?	(Y)	N	NA
Were air bubbles present in vials at time of collection?	Y	(N)	NA
Was sample for metals field filtered prior to preservations?	Y	(N)	NA
Duplicate sample collected?	Y	(N)	
Rinsate blank collected?	Y	(N)	

Not enough water for all analysis took 2x vial. ½ 1L amber. metals not filtered

Duplicate sample ID —

Rinsate blank ID —

Groundwater - Well Sampling Data Form

ERM

Job Information

Date:	12/12/13	Time: arrive 08:05 depart	09:35
Project Name:	Symphony	Project Number:	0224193
Site Location:	Bayswater	Sampler:	I.C.F.
Well ID:	BO_MW01	Weather:	Fine

Equipment

Water quality equipment description: 457 11K101262 Interface probe number: NSW 42533 30m

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 10.90 m (-) Water level 10.26 m (=) Water Column 0.64 m

Water Column 0.64 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume ~1.25 L

Depth to product: / m Product Thickness: / m Verified with Bailer: ~~Y~~ N

Water Quality Parameters

Beginning purge time: Ending purge time: Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	µ Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 1.0ppm
0.1	08:39	8.27	24.7	7164	71.7	50.3	10:30	Turbid, no odour
0.2	08:47	7.25	22.8	8411	5.92	39.7	10:31	Turbid, no odour.
0.3	08:53	7.31	23.2	8953	5.59	39.7	10:33	" "
0.4	08:58	7.35	23.4	9111	5.39	40.4	10:34	" "
0.5	09:02	7.37	23.2	9143	5.35	40.9	10:36	" "
0.6	09:06	7.41	23.7	9470	5.12	40.8	10:37	" "
0.7	09:10	7.44	24.0	9666	5.00	40.4	10:41	" "
								Sample water taken
								straight away.

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume Actual amount of water prior to sampling Sample time _____ Containers used 8

Flow rate mL/minute Did field parameters stabilise? Y N NA Was the well dry purged? Y N

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID _____
Rinsate blank collected?	Y	(N)		Rinsate blank ID _____

Groundwater - Well Sampling Data Form

ERM

Job Information			
Date:	12/12/13	Time: arrive	10:00 depart 11:05
Project Name:	Symphony	Project Number:	0224493
Site Location:	Bayswater	Sampler:	K.F.
Well ID:	BO_MW02	Weather:	Fine

Equipment

Water quality equipment description: 451 11K101262 Interface probe number: NSW 4253 30m

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth 3.70 m (-) Water level 1.53 m (=) Water Column 2.17 m

Water Column 2.17 m (x) Conversion Factor 1.96 (=) Litres per 1 Well Volume ~4.2 L

Depth to product: ~ m Product Thickness: ~ m Verified with Bailer: ~~Y~~ N

Water Quality Parameters

Beginning purge time: 10:07 Ending purge time: 10:23 Pump Intake Depth (mbtoc):

Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments
								PID = 0.1 ppm
0.5	10:10	6.84	19.6	11257	7.58	49.3	1.83	clear, no odour
1	10:14	6.63	18.7	11333	7.58	46.1	1.83	" "
1.5	10:17	6.65	18.6	11520	7.61	44.9	1.81	" "
2	10:20	6.69	18.5	11871	7.42	44.8	1.92	" "
2.5	10:23	6.70	18.6	11880	7.42	44.9	1.93	" "

*pH, temp, cond readings not necessary if well is purged dry

Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth

Total Well Volume (Actual amount of water prior to sampling): Sample time 10:30 Containers used 8+8

Flow rate (mL/minute): 456 Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N)

Field QC Checks

Was pre-cleaned sampling equipment used for these samples?	(Y)	N		
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N		
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	(Y)	N		Duplicate sample ID D01_121213_KF
Rinsate blank collected?	Y	(N)		Rinsate blank ID ~