



Newcastle Terminal Monitoring Data

The following ATOM Newcastle Terminal pollution monitoring data has been collected under conditions of the applicable Environmental Protection Licence number 527 and published in accordance with section 66(6) of the POEO Act.

Release Point: POINT 1: Water discharge
Frequency: Representative sample of each discharge event
Contaminant: Oil and Grease
Limit: 100 percentile concentration limit: 10mg/L

Sample date	Reference (ALS)	Result (mg/L)	Discharge Flow (kL)
25/10/2024	EN2413608	<2	1000
15/10/2024	EN2412873	<2	1000
26/09/2024	EN2411708	<2	3000
02/07/2024	EN2406059	<2	2500
03/06/2024	WN2406729	3	2500
21/05/2024	WN2406107	<2	1500
19/04/2024	WN2404794	<2	22000
04/04/2024	WN2404042	<2	2000
19/02/2024	WN2401991	<2	2000
06/11/2023	WN2313250	<2	2000
14/08/2023	WN2309837	<2	1000
24/07/2023	WN2309060	<2	500
29/5/2023	WN2306768	<2	500
21/04/2023	WN2305052	<2	500
27/3/2023	WN2303911	<2	1000
22/2/2023	WN2302318	2	2000
14/11/2022	WN2214306	2	500
27/09/2022	WN2212033	<2	2000
04/07/2022	WN2207640	<2	2000
20/06/2022	WN2207002	<2	1000
23/05/2022	WN2205958	<2	2000
11/04/2022	WN2204155	<2	1000
24/03/2022	WN2203489	<2	2000
02/03/2022	WN2202127	<2	1500
09/02/2022	WN2201337	<2	3500
23/11/2021	WN2113524	<2	2500
11/11/2021	WN2112817	<2	1000
12/10/2021	WN2111710	<2	1000
16/09/2021	WN2110551	<2	500
25/08/2021	WN2109493	<2	7500

16/03/2021	WN2102959	<2	6000
18/02/2020	WN2101819	<2	2500
30/01/2020	WN2100892	<2	2500
22/12/2020	WN2011443	<2	1500
19/10/2020	WN2009550	<2	5000
27/07/2020	WN2006627	<2	2500
16/07/2020	WN2006349	<2	1000
10/06/2020	WN2005267	<2	1000
27/05/2020	WN2004717	<2	1000
27/03/2020	WN2002625	<2	2000
27/02/2020	WN2001864	<2	1000
10/02/2020	WN2001081	<2	2500
14/10/2019	WN1907870	<2	500
18/09/2019	WN1906881	<2	1000
30/08/2019	WN1906315	<2	1500
31/07/2019	WN1905420	<2	500
25/06/2019	WN1904284	<2	2500
05/06/2019	WN1903667	<2	1000
01/04/2019	WN1902180	<2	500
09/10/2018	WN1805824	3	2000
04/09/2018	WN1804921	<2	1500
19/06/2018	WN1802865	<2	2000
04/06/2018	WN1802464	<2	3500
30/04/2018	WN1801846	<2	1000
09/04/2018	WN1801529	6	1000
22/03/2018	WN1801287	<2	2000
22/02/2018	WN1800876	<2	1000
07/11/2017	WN1705005	<2	1000
23/10/2017	WN1704792	<2	5000
13/07/2017	WN1703094	<2	500
13/06/2017	ES1714600	<5	5000
3/04/2017	ES1708035	<5	1000
15/03/2017	ES1706307	<5	5000
2/03/2017	ES1705028	<5	1500
21/02/2017	ES1704250	<5	1500
25/01/2017	ES1701891	<5	500
5/01/2017	ES1700288	<5	500
16/12/2016	ES1629525	<5	3000
14/11/2016	ES1625980	<5	1000
24/10/2016	ES1624033	<5	1500
13/10/2016	ES1623262	<5	1500



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22/09/2016	ES1621440	6	1500
5/09/2016	ES1619713	<5	1500
4/08/2016	ES1617315	<5	2000
25/07/2016	ES1616372	<5	2000
21/06/2016	ES1613391	<5	2000
1/06/2016	ES1611955	<5	3000
2/05/2016	ES1609375	<5	1000
15/04/2016	ES1608496	<5	1000
21/03/2016	ES1606373	<5	1000
15/02/2016	ES1603460	<5	500
18/01/2016	ES1601333	<5	1000
8/01/2016	ES1600517	<5	6000
28/12/2015	ES1539529	<5	2000
10/12/2015	ES1538671	<5	1000
16/11/2015	ES1536608	<5	750
4/11/2015	ES1535556	<5	1000

Release Point: POINTS 3 - 31: Groundwater Monitoring

Frequency: Six monthly

Monitoring summaries are extracted from Groundwater Monitoring reports prepared by external qualified Groundwater monitoring consultants.

November 2023 and June 2024 Monitoring Summary

4.1 Comparison Against Adopted Beneficial Use Criteria

The laboratory analytical reports have been provided in **Appendix D** and all analytical results have been provided in **Table A1** and **Table A2** within the “Tables” of this report. The analytical results have been summarised in Table 6 below. **Green** indicates the adopted environmental value was not exceeded, **orange** indicates that concentrations reported were within 25% of the adopted criteria, and **red** indicates that the criteria was exceeded.

The adopted assessment criteria has been selected based on the current site and surrounding land uses (commercial/industrial) and receiving environment as outlined in the GMP.

Table 6: Terminal Groundwater Analytical Results (µg/L)					
Contaminant	Conc. Range	Human Health ¹	Marine Aquatic Ecosystems ²	NHMRC ADWG Health (µg/L) ³	NHMRC ADWG Aesthetic (µg/L) ³
Benzene	<1 µg/L	●	●	●	-
Toluene	<2 – 3 µg/L	●	-	●	●
Ethylbenzene	<2 µg/L	●	-	●	●
Xylene	<2 µg/L	●	-	●	●
TRH (F1)	<20 µg/L	●	-	-	-
TRH (F2)	<100 -150 µg/L	●	-	-	-
Naphthalene	<5 µg/L	●	●	-	-

Table 5: Pipeline Groundwater Analytical Results (µg/L)					
Contaminant	Conc. Range	Human Health ¹	Marine Aquatic Ecosystems ²	NHMRC ADWG Health (µg/L) ³	NHMRC ADWG Aesthetic (µg/L) ³
Benzene	<1 µg/L	●	●	●	-
Toluene	<2 µg/L	●	-	●	●
Ethylbenzene	<2 µg/L	●	-	●	●
Xylene	<2 µg/L	●	-	●	●
TRH (F1)	<20 µg/L	●	-	-	-
TRH (F2)	<100 -150 µg/L	●	-	-	-
Naphthalene	<5 µg/L	●	●	-	-

November 2022 and June 2023 Monitoring Summary

3 Results

3.1 Comparison Against Adopted Beneficial Use Criteria

The laboratory analytical reports have been provided in **Appendix D** of this report and Chain of Custody documents have been provided in **Appendix E** of this report. The analytical results have been summarised in **Table 4** below. Green indicates the adopted beneficial criteria was not exceeded, orange indicates that concentrations reported were within 25% of the adopted criteria, and red indicates that the criteria was exceeded.

Table 4: Pipeline: Groundwater Analytical Results (µg/L)				
Contaminant	Conc. Range	Marine Aquatic Ecosystems ¹	Recreational & Aesthetic Guidelines ²	Health Based Criteria ³
Benzene	< 1 µg/L	●	●	●
Toluene	< 2 µg/L		●	●
Ethylbenzene	< 2 µg/L		●	●
Xylene	< 2 µg/L		●	●
TRH F1	< 0.02 mg/L			●
TRH F2	< 0.1 mg/L			●
Naphthalene	< 5 µg/L	●		●
Terminal: Groundwater Analytical Results (µg/L)				
Contaminant	Conc. Range	Marine Aquatic Ecosystems ¹	Recreational & Aesthetic Guidelines ²	Health Based Criteria ³
Benzene	< 1 µg/L	●	●	●
Toluene	< 2 - 52µg/L		●	●
Ethylbenzene	< 2 µg/L		●	●
Xylene	< 2 µg/L		●	●
TRH F1	< 0.02 mg/L			●
TRH F2	< 0.1 – 0.32 mg/L			●
Naphthalene	< 5 µg/L	●		●

October 2021 and May 2022 Monitoring Summary

3.1 Comparison Against Adopted Beneficial Use Criteria

The laboratory analytical reports have been provided in Appendix D of this report and Chain of Custody documents have been provided in Appendix E of this report. The analytical results have been summarised in Table 4 below. Green indicates the adopted beneficial criteria was not exceeded, orange indicates that concentrations reported were within 25% of the adopted criteria, and red indicates that the criteria was exceeded.

Table 4: Pipeline: Groundwater Analytical Results (µg/L)			
Contaminant	Conc. Range	Marine Aquatic Ecosystems ¹	Recreational & Aesthetic Guidelines ²
Benzene	< 1 µg/L	●	●
Toluene	< 2 µg/L	●	●
Ethylbenzene	< 2 µg/L	●	●
Xylene	< 2 µg/L	●	●
TRH F1	< 0.02 mg/L	●	●
TRH F2	< 0.1 mg/L	●	●
Naphthalene	< 5 ug/L	●	●

Terminal: Groundwater Analytical Results (µg/L)			
Contaminant	Conc. Range	Marine Aquatic Ecosystems ¹	Recreational & Aesthetic Guidelines ²
Benzene	< 1 µg/L	●	●
Toluene	< 2 - 52µg/L	●	●
Ethylbenzene	< 2 µg/L	●	●
Xylene	< 2 µg/L	●	●
TRH F1	< 0.02 mg/L	●	●
TRH F2	< 0.1 – 0.14 mg/L	●	●
Naphthalene	< 5 ug/L	●	●

May 2021 - Terminal Monitoring Wells

Table 4: Groundwater Analytical Results (µg/L)			
Contaminant	Conc. Range	Marine Aquatic Ecosystems ¹	Recreational & Aesthetic Guidelines ²
Benzene	< 1 µg/L	●	●
Toluene	< 2 µg/L	●	●
Ethylbenzene	< 2 µg/L	●	●
Xylene	< 2 µg/L	●	●
TRH F1	< 0.02 mg/L	●	●
TRH F2	< 0.1 – 0.37 mg/L	●	●
Naphthalene	< 5 µg/L	●	●

¹NEPM 2013, GIL, Marine waters, 95% species protection for slightly to moderately disturbed ecosystems.
²ANZECC/ARMCANZ 2000, Recreational and Aesthetic Guidelines.

May 2021 - Pipeline Monitoring Wells

Table 4: Groundwater Analytical Results (µg/L)			
Contaminant	Conc. Range	Marine Aquatic Ecosystems ¹	Recreational & Aesthetic Guidelines ²
Benzene	< 1 µg/L	●	●
Toluene	< 2 µg/L	●	●
Ethylbenzene	< 2 µg/L	●	●
Xylene	< 1 µg/L	●	●
TRH F1	< 0.02 mg/L	●	●
TRH F2	< 0.1 mg/L	●	●
Naphthalene	< 5 µg/L	●	●

¹NEPM 2013, GIL, Marine waters, 95% species protection for slightly to moderately disturbed ecosystems.
²ANZECC/ARMCANZ 2000, Recreational and Aesthetic Guidelines.

Nov 2020 - Terminal Monitoring Wells (no traffic light indicator table provided in report, however summary extract):

		BTEX						PAH			TRH												
		Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	Naphthalene	Ch - C9	Ch-C10	Ch-C10 less BTEX (F1)	C10 - C14	C10-C16	+C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	C15 - C28	C16-C34	C29-C36	C34-C40	F2-NAPHTHALENE		
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L		
Practical Quantitative Limit		1	2	2	2	2	2	0.001	5	20	0.02	0.02	50	0.1	50	100	100	0.1	50	0.1	0.1		
NEPM 2013 Table 1C GILs, Marine Waters		500							50														
ANZECC/ARMCANZ 2000, Recreational and Aesthetic Guidelines		10	8000	3000			6000		70														
Field_ID	Sampled_Date-Time	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW18_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW19_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW21_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW23_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW25_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW27_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW33_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW34_121120	12/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		
78936-06_MW12_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	90	0.19	570	570	480	0.38	70	<0.1	0.19		
78936-06_MW13_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	60	0.09	320	0.34	830	790	440	0.45	70	<0.1	0.34
78936-06_MW14_121120	12/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<20	<0.02	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1		

Nov 2020 - Pipeline Monitoring Wells (no traffic light indicator table provided in report, however summary extract):

		BTEX						PAH			TRH										
		Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	Naphthalene	Ch - C9	Ch-C10	Ch-C10 less BTEX (F1)	C10 - C14	C10-C16	+C10 - C36 (Sum of total)	C10 - C40 (Sum of total)	C15 - C28	C16-C34	C29-C36	C34-C40	F2-NAPHTHALENE
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
Practical Quantitative Limit		1	2	2	2	2	2	0.001	5	20	0.02	0.02	50	0.1	50	100	100	0.1	50	0.1	0.1
ANZECC/ARMCANZ 2000, Recreational and Aesthetic Guidelines		10	8000	3000			6000		70												
NEPM 2013 Table 1C GILs, Marine Waters		500							50												
Field_ID	Sampled_Date-Time	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_FD1_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW11_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW15_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW16_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW17_111120	11/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW18A_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW23_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW25_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW27_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW28_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW29_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW3_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW32_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW33_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW34_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW4_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW5A_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW6_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1
78936-06_PL_MW7_101120	10/11/2020	<1	<2	<2	<2	<2	<2	<0.001	<5	<0.02	<20	<0.02	<50	<0.1	<50	<100	<100	<0.1	<50	<0.1	<0.1

June 2020 - Terminal Monitoring Wells:

3.1 Comparison Against Adopted Beneficial Use Criteria

The laboratory analytical reports have been provided in **Appendix D** of this report and Chain of Custody documents have been provided in **Appendix E** of this report. The analytical results have been summarised in **Table 4** below. Green indicates the adopted beneficial criteria was not exceeded, orange indicates that concentrations reported were within 25% of the adopted criteria, and red indicates that the criteria was exceeded.

Table 4: Groundwater Analytical Results (µg/L)			
Contaminant	Conc. Range	Marine Aquatic Ecosystems ¹	Recreational & Aesthetic Guidelines ²
Benzene	<1 µg/L	●	●
Toluene	<2 µg/L	●	●
Ethylbenzene	<2 µg/L	●	●
Xylene	<2 µg/L	●	●
TRH F1	<0.02 mg/L	●	●
TRH F2	<0.1 – 0.18 mg/L	●	●
Naphthalene	<5 µg/L	●	●

¹ NEPM 2013, GIL, marine waters, 95% species protection for slightly to moderately disturbed ecosystems.
² ANZECC/ARMCANZ 2000, Recreational and Aesthetic Guidelines.

June 2020 - Pipeline Monitoring Wells:

3.1 Comparison Against Adopted Beneficial Use Criteria

The laboratory analytical reports have been provided in **Appendix D** of this report and Chain of Custody documents have been provided in **Appendix E** of this report. The analytical results have been summarised in **Table 4** below. Green indicates the adopted beneficial criteria was not exceeded, orange indicates that concentrations reported were within 25% of the adopted criteria, and red indicates that the criteria was exceeded.

Table 4: Groundwater Analytical Results (µg/L)			
Contaminant	Conc. Range	Marine Aquatic Ecosystems ¹	Recreational & Aesthetic Guidelines ²
Benzene	<1 µg/L	●	●
Toluene	<2 µg/L	●	●
Ethylbenzene	<2 µg/L	●	●
Xylene	<1 µg/L	●	●
TRH F1	<0.02 mg/L	●	●
TRH F2	<0.1 mg/L	●	●
Naphthalene	<5 µg/L	●	●

¹ NEPM 2013, GIL, marine waters, 95% species protection for slightly to moderately disturbed ecosystems.
² ANZECC/ARMCANZ 2000, Recreational and Aesthetic Guidelines.

December 2019 – Terminal Monitoring Wells

8.1.3 Comparison against Adopted Beneficial Use Criteria

The laboratory analytical reports and Chain of Custody documentation have been provided in **Appendix G** of this report. The analytical results have been summarised below in **Table 5**. Green indicates the adopted beneficial criteria was not exceeded, orange indicates that concentrations reported were within 20% of the adopted criteria, and red indicates that the criteria was exceeded.

Table 5: Groundwater Analytical Results (µg/L)			
Contaminant	Conc. Range	Recreational & Aesthetic Guidelines ¹	GILs Marine Waters ²
Benzene	<1 µg/L	●	●
Toluene	<2 µg/L	●	●
Ethylbenzene	<2 µg/L	●	●
Xylene	<2 µg/L	●	●
TRH F1	<20 to 500 µg/L	N/A	N/A
TRH F2	1,040 to 1,100 µg/L	N/A	N/A
Naphthalene	<5 µg/L	●	●

¹ ANZECC/ARMCANZ 2000, Recreational and Aesthetic Guidelines
² NEPM 1999 as amended in 2013 Table C GILs, Marine Waters

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8.1.3 Comparison Against Adopted Beneficial Use Criteria

The analytical results have been summarised below in **Table 6**. Green indicates the adopted beneficial criteria was not exceeded, orange indicates that concentrations reported were within 20% of the adopted criteria, and red indicates that the criteria was exceeded.

Contaminant	Conc. Range	Recreational & Aesthetic Guidelines ¹	GILs Marine Waters ²
Benzene	<1 µg/L	●	●
Toluene	<2 µg/L	●	●
Ethylbenzene	<2 µg/L	●	●
Xylene	<2 µg/L	●	●
TRH F1	<20 µg/L	N/A	N/A
TRH F2	<100 µg/L	N/A	N/A
Naphthalene	<5 µg/L	●	●

¹ ANZECC/ARMCANZ 2000, Recreational and Aesthetic Guidelines

² NEPM 1999 as amended in 2013 Table C GILs, Marine Waters

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3.1 Comparison Against Adopted Beneficial Use Criteria

The laboratory analytical reports and Chain of Custody documents have been provided in **Appendix D** of this report. The analytical results have been summarised below in **Table 4**. Green indicates the adopted beneficial criteria was not exceeded, orange indicates that concentrations reported were within 20% of the adopted criteria, and red indicates that the criteria was exceeded.

Contaminant	Conc. Range	Human Health ¹	Marine Aquatic Ecosystems ²
Benzene	<1 µg/L	●	●
Toluene	<2 µg/L	●	●
Ethylbenzene	<2 µg/L	●	●
Xylene	<2 µg/L	●	●
TRH F1	<20µg/L	●	●
TRH F2	<100 – 240 µg/L	●	●
Naphthalene	<5µg/L	●	●

¹ NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (2-4m)

² NEPM 2013, GIL, marine waters, 95% species protection for slightly to moderately disturbed ecosystems

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3 Results

3.1 Comparison again Adopted Beneficial Use Criteria

The laboratory analytical reports and Chain of Custody documents have been provided in **Appendix D** of this report. The analytical results have been summarised below in **Table 5**. Green indicates the adopted beneficial criteria was not exceeded, orange indicates that concentrations reported were within 20% of the adopted criteria, and red indicates that the criteria was exceeded.

Contaminant	Conc. Range	Human Health ¹	Marine Aquatic Ecosystems ²
Benzene	<1 ug/L	●	●
Toluene	<2 ug/L	●	●
Ethylbenzene	<2 ug/L	●	●
Xylene	<2 ug/L	●	●
TRH F1	<20µg/L	●	●
TRH F2	<100µg/L	●	●
Naphthalene	<5 ug/L	●	●

¹ NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand (2-4m)

² NEPM 2013, GIL, marine waters, 95% species protection for slightly to moderately disturbed ecosystems