

Appendix 6-2

Laboratory Test Results of Water Sample at W3

**D.D. 104 Kam Pok Road Residential Development
Environmental Impact Assessment - Laboratory Test Results of Water Sampling at W3**

Summary

In order to offset the additional pollution load generated from the proposed residential development, it is proposed to extract water from Ngau Tam Mei channel for co-treatment.

A total of 39 water samples have been collected from September 2012 to September 2013 and from March 2015 to April 2015 at the proposed extract point of the drainage channel. The location of the water sampling point (W3) is shown on Figure 6-3. The laboratory testing results of the water samples are summarised in the table below.

According to the Practice Note No. 1/2004 published by Drainage Services Department, dry season is defined as from November to the following March. **Wet season is from April to October.**
The average values of BOD, TN-N, TP, TSS, NH₃-N, E. Coli are used in the offsetting calculations.

The assessment shows that the requirement of "no net increase in pollution loading to Deep Day" can be met.

Laboratory Testing Results of Water Samples (Sampling ID W3)

Sampling Date	BOD (mg/L)	TN-N (mg/L)	TP (mg/L)	SS (mg/L)	NH ₃ -N (mg/L)	E. Coli (no./100mL)	Flow Rate (L/s)	Water Depth (m)
Wet Season								
23-Sep-12	6	5.64	1.0	259	1.34	69,000	24	0.2
26-Sep-12	2	4.59	0.5	13	2.49	11,000	490	1.6
29-Sep-12	4	10.29	0.8	19	5.28	12,000	306	1.6
2-Oct-12	4	7.94	0.9	48	4.97	2,700	370	1.2
4-Oct-12	6	8.60	1.0	139	4.93	30,000	130	0.4
6-Oct-12	6	7.79	0.8	93	4.10	15,000	38	0.3
8-Oct-12	3	6.29	0.5	17	3.13	11,000	87	1.2
10-Oct-12	4	5.79	0.4	8	3.42	6,400	87	1.3
12-Oct-12	4	6.66	0.5	11	3.00	4,100	290	2.3
15-Oct-12	4	7.56	0.9	67	4.69	11,000	140	1.2
17-Oct-12	11	8.36	1.2	226	4.67	27,000	230	0.7
19-Oct-12	8	6.91	1.5	N/A	2.69	23,000	9	0.1
19-Aug-13	2	2.92	n/a	34	1.36	66,000	45	2.4
21-Aug-13	3	3.65	n/a	25	2.23	17,000	<1.0*	2.2
23-Aug-13	3	6.41	n/a	35	3.22	41,000	10	2.1
26-Aug-13	5	4.45	n/a	37	2.52	43,000	<1.0*	1.7
28-Aug-13	5	3.38	n/a	108	1.23	31,000	60	1.3
30-Aug-13	5	2.75	n/a	64	1.52	26,000	120	1.9
2-Sep-13	2	3.10	n/a	14	0.42	12,000	110	1.0
4-Sep-13	3	2.04	n/a	60	0.81	44,000	100	1.3
6-Sep-13	2	3.79	n/a	42	1.80	180,000	<1.0*	2.4
9-Sep-13	2	3.86	n/a	69	2.04	11,000	<1.0*	2.0
11-Sep-13	3	4.68	n/a	51	2.21	27,000	<1.0*	1.9
13-Sep-13	3	3.39	n/a	92	0.58	2,200	<1.0*	0.7
Average (Wet Season)	4	5.45	0.8	67	2.69	30,100	110	1.4
Dry Season								
28-Dec-12	6	10.76	n/a	39	7.70	58,000	29	0.5
3-Jan-13	8	5.85	n/a	165	4.00	68,000	8	0.3
10-Jan-13	12	11.76	n/a	83	6.91	34,000	100	0.9
17-Jan-13	9	6.97	n/a	265	3.53	44,000	5	0.2
25-Mar-15	4	10.37	0.9	25	5.16	8,200	200	2.0
27-Mar-15	5	8.39	1.1	34	5.65	8,800	300	1.5
30-Mar-15	12	9.85	1.1	30	7.89	52,000	320	1.6
1-Apr-15	8	9.07	1.3	24	7.06	50,000	360	1.8
10-Apr-15	5	7.98	1.1	33	6.02	46,000	210	2.1
13-Apr-15	4	3.14	0.6	37	1.55	20,000	340	1.7
15-Apr-15	6	8.95	1.2	34	6.42	81,000	380	1.9
17-Apr-15	6	9.00	0.9	31	6.36	21,000	340	1.7
20-Apr-15	4	8.86	0.6	32	5.58	15,000	290	2.9
22-Apr-15	5	10.12	1.0	29	3.72	14,000	190	1.9
24-Apr-15	4	8.12	0.9	47	5.62	18,000	160	1.6
Average (Dry Season)	7	8.61	1.0	61	5.54	35,867	215	1.5
Design Concentration for Offsetting Calculations⁽²⁾	4	5.45	0.8	61	2.69	30,100		

Notes:

- (1) The flow rate in m³/day is based on the assumption that the measured flow rate in L/s is constant throughout the whole day.
- (2) Minimum value of Wet Season Average and Dry Season Average of SS, BOD, TN-N, NH₃-N, E-Coli and TP is used for offsetting calculation.
- (3) Samples taken between 25 Mar 2015 to 24 Apr 2015 are regarded as within dry season, as there are only 0 - 3.5 mm rainfall depth recorded at the nearest rain gauge station at Au Tau.