Contract No. HY/2011/03

Hong Kong-Zhuhai-Macao Bridge Hong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Silt Curtain Pilot Test Report

Rev. 11

February 2015

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1. Introduction

1.1 Background

The Hong Kong-Zhuhai-Macao Bridge ("HZMB") Hong Kong Link Road ("HKLR") serves to connect the HZMB Main Bridge at the Hong Kong Special Administrative Region ("HKSAR") Boundary and the HZMB Hong Kong Boundary Crossing Facilities ("HKBCF") located at the north eastern waters of the Hong Kong International Airport ("HKIA").

The Contract Number and Contract Title of this Contract are HY/2011/03 and HZMB Hong Kong Link Road – Section between Scenic Hill and Hong Kong Boundary Crossing Facilities respectively. The location of the site is shown in **Figure 2**.

The Pilot Test was undertaken on the 28th November 2013 in accordance with the approved Method Statement – Silt Curtain Pilot Test (Rev.9) ("hereafter referred to as "Method Statement"). This report is to document the Pilot Test results.

2. Silt Curtain

2.1 Introduction

In accordance with Section 9.6 of the Updated Environmental Monitoring and Audit ("EM&A") Manual, suitable silt curtains shall be deployed by the contractor, China State Construction Engineering (Hong Kong) Ltd. ("CSHK"), enclosing the entire site at all times during the contract.

The silt curtains are intended as a measure to prevent the displacement and movement of sediments during the construction and reclamation activities at the site. Therefore, the effectiveness of silt curtain removal was assessed in accordance with the Method Statement.

2.2 Pilot Test

The contract documents require that silt curtains are needed during the course of the project. In order to ensure that the type of silt curtain that deployed at the site is effective in preventing the movement of silt plume from the contract area, a Pilot Test was conducted in accordance with the approved methodology.

The Pilot Test was carried out on 28th November 2013 during construction and reclamation activities to confirm that the silt curtains that have been deployed by CSHK meet the required silt removal efficiency. During the sampling period, the silt curtain was properly installed and there was no malfunction of silt curtain. A copy of the silt curtain inspection checklist is provided in **Appendix F**.

The required silt removal rates, as specified in Section 9.6.4 of the Updated EM&A Manual, are defined as a percentage of reduction of suspended solid ("SS") by comparing the level of SS inside of the silt curtain with the level of SS outside the silt curtain are provided in **Table 1**.

Table 1 Required Removal Efficiency of Silt Curtain for Filling Activities

Testing Scenario	Silt Removal Rate to be Tested
	Filling Activities
Scenario 1 - Floating Type Single Silt Curtain	45%

2.3 Construction Activities and Marine Traffic Movements

During the silt curtain pilot test on 28th November 2013, the activities noted in **Table 2** were taking place within the HKLR site. The location of these activities is shown in **Figure 3**.

Table 2 Summary of Construction Activities and Marine Traffic Movements

Approximate Time and Duration	Activity
0800 – 1800 (10 hours)	Sand filling at SWCH1100 – 1200 behind leading seawall
0800 – 1800 (10 hours)	Geotextile tube installation at SWCH1650
1900 – 2230 (3.5 hours)	Public filling at SWCH360 – 380 behind leading seawall
2045 – 2230 (1 hour and 45 minutes.)	A tug boat moved intermittently around the sampling points

During the filling activities outlined in **Table 2,** approximately 2,712m^3 of sand fill and 612m^3 of public fill were used.

3. Silt Curtain – Pilot Test

3.1 Objectives

As outlined in Section 2 above, the silt curtains need to be effective at reducing the concentration of SS. The performance of the silt curtains, for this contract, was measured as a percentage of reduction of SS by comparing the level of SS inside the silt curtain with the level of SS outside the silt curtain. In order to determine the efficiency of the silt curtains, water quality data was collected from the sampling points inside and outside the area delineated by the silt curtains specified in the Method Statement. Two control points were also sampled to provide background data on the conditions that are typically present in the area of the project.

3.2 Pilot Test Sampling Points

In order to determine the effectiveness of the single layer of silt curtain, a suitable number of sampling points (see Section 3.2.2 below) inside and outside the area delineated by the silt curtains was proposed, along with the use of two control points.

In situ measurements and water samples for SS analysis were collected from each of the sampling points at up to three different depths, depending upon the water depth (see Section 3.2.1 below) encountered at each sampling point.

3.2.1 Sample Depths

In situ water parameters and concentrations of SS were collected at the following depths at each sampling location and control point location:

- 1m below the surface of the water;
- mid-depth; and
- 1m above the sea bed.

In accordance with the Method Statement, for sampling locations where the depth of the water was less than 3m, only the mid depth sample and parameters were taken.

The depth of water at each of the sampling locations and control point locations was measured using the following echo sounders:

- Eagle Cuda-168; and
- Lowrance X-4.

3.2.2 Sampling Points

A total of 10 sampling points were proposed. These include eight sampling points inside and outside the silt curtains, one upstream control point and one downstream control point. Filling work was undertaken at Seawall Chainage ("SWCH") 360 – 380 and SWCH 1100 -1200 behind the leading seawall during the Pilot Test. **Figure 3** indicates the position of the sampling points for the Pilot Test.

Control data for the Pilot Test, comprising in-situ water parameters and SS water samples were collected from the impact monitoring Control Stations CS2 and CS(Mf)5 (see **Figure 1**). The water current at each sampling point was determined prior to undertaking the proposed testing. **Table 3** provides details on the number of monitoring points. The tide information recorded at Chek Lap Kok Tide Station for the sampling date is provided in **Appendix D**.

Table 3 Monitoring Details for Silt Curtain Pilot Test

Monitoring Details	Single Layer of Floating Type Silt Curtain
Control Stations	CS2 and CS(Mf)5
Sampling Points	4 number of sampling points for each tidal condition, were collected on the same day. See **Figure 3**. Additionally, sampling points within the perimeter were sampled first.
	(i) Ebb condition when filling works were undertaking at SWCH 360-380 – Undertake water sampling work at upstream (S1 and S3) and downstream (S2 and S4) locations. (ii) Flood condition when filling works were undertaking at SWCH 1100-1200 – Undertake water sampling work at upstream (S6 and S8) and downstream (S5 and S7) locations.
Collection of Parameters at Depth	1m below the water surface, mid-depth and 1m above the seabed
Water Sample (for SS) Depths	

3.3 Sampling Parameters and Equipment

3.3.1 Sampling Parameters

The silt removal efficiency of the silt curtains was determined by the analysis of collected SS water samples, the following parameters, outlined in **Table 4**, were analyzed.

Table 4 Parameters Required for the Silt Curtain Pilot Test

Parameter	Data Recorded in situ with Meter	Water Sample Required
Dissolved Oxygen	✓	
Salinity	✓	
Temperature	✓	
pH	✓	
Turbidity	✓	
SS		✓
Water depth	✓	
Water velocity and direction	✓	

3.3.2 Quality Assurance / Quality Control

The water samples were kept stored in high density polythene bottle ware with no preservatives added (cooled to 4°C without being frozen), kept in the dark and transported to an HOKLAS approved testing laboratory within 24 hours of the sample being collected. The analysis method for SS is summarized in **Table 5**.

Table 5 Laboratory Analysis for Suspended Solids

Parameter	Instrumentation	Reference Method	Detection Limit
SS	Weighting	APHA 2540-D	0.5mg/l

3.4 Pilot Test Duration and Sampling Frequency

3.4.1 Pilot Test Duration

In order to ascertain the efficiency of the silt curtains that are intended for use by CSHK during filling activities, the Pilot Test lasted for a minimum period of 4 hours as required in the Method Statement and was undertaken during ebb and flood tides, subject to marine construction activities.

3.4.2 Sampling Frequency

Water parameters and water samples for SS outlined in **Table 3** were collected from the sampling points, before commencement of the Pilot Test, at commencement of the Pilot Test, and then at intervals of approximately 30 minutes for 2 hours dependent upon the tide condition for the duration of the Pilot Test.

3.5 Determination of Silt Removal Efficiency

The laboratory results of the pilot test were utilized to determine the efficiency of the silt curtains that was deployed at the site. In order to quantify the effectiveness of the silt curtain type that is deployed by CSHK, the concentrations of SS and the levels of turbidity inside and outside of the curtains were compared. The percent reduction in the level of SS is to be used as the effectiveness parameter. Percent reduction is defined as 100 times the ratio of the difference in readings of SS upstream and downstream of the silt curtain.

The overall reduction in the concentrations of SS was determined and an overall reduction was calculated for all depths to provide the silt removal efficiency of the silt curtain.

The SS removal efficiency was calculated by:

$$SS\ reduction\ \% = \frac{\text{Upstream SS (mg/l)} - \text{Downstream SS (mg/l)}}{\text{Upstream SS (mg/l)}} \text{ x } 100$$

4. Silt Curtain – Pilot Test Results

4.1 Introduction

The silt curtain is intended to act as a barrier to SS by holding them in a stagnation pocket behind the curtain. The effectiveness of the silt curtain was quantified by comparing the level of SS on the inside of the curtain with that on the outside at locations along the curtain. The percent reduction in the concentration of SS was used as the effectiveness parameter.

4.2 Background Conditions at Control Points

Water samples and in situ measurements were taken at control points CS2 and CS(Mf)5 from 1m below the water surface, mid depth and 1m above the seabed. A summary of the measurements made at control point CS2 is provided in **Table 6** and the measurements at control point CS(Mf)5 are provided in **Table 7**.

Table 6 Measurements at Control Point CS2

Sample	Date	Sampling Time	Depth (m)	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (degrees*)
CS2 (Mid Ebb)	2013-11-28	18:59:38	S	21.9	8.2	31.0	98.1	7.2	4.2	4.8	14.5	246.8
	2013-11-28	19:00:32	S	21.5	8.2	31.1	97.1	7.2	4.2	5.7	14.8	262.6
	2013-11-28	18:59:11	M	21.5	8.1	31.0	97.5	7.2	4.8	4.6	37.1	74.6
	2013-11-28	19:00:07	M	21.8	8.2	31.0	96.6	7.1	4.6	4.4	38.1	86.2
	2013-11-28	18:59:42	B	22.0	8.2	32.8	98.0	7.1	4.8	6.3	44.8	27.5
	2013-11-28	18:58:41	B	21.7	8.2	32.8	98.4	7.1	4.8	6.7	43.2	27.1

Notes:
S denotes 1m below the water surface
M denotes mid-depth
B denotes 1m above the seabed
* North is zero and the degrees go clockwise.

The background SS concentrations in the vicinity of CS2 for mid ebb tide ranged from 4.4 mg/l to 6.7 mg/l and the corresponding measurements of turbidity ranged from 4.2 to 4.8 NTU. The water current velocities at CS2 ranged from 14.5 cm/s to 44.8 cm/s. It was found that the current direction varied at different sampling depths during the mid-ebb tide.

Table 7 Measurements at Control Point CS(Mf)5

Sample	Date	Sampling Time	Depth (m)	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (degrees*)
CS(MF)5 (Mid Flood)	2013-11-28	12:43:24	S	22.2	8.0	32.8	92.4	6.7	1.8	3.3	25.9	268.4
	2013-11-28	12:45:05	S	22.2	8.0	32.7	91.8	6.6	1.8	4.2	23.3	245.4
	2013-11-28	12:44:30	M	22.4	8.0	33.2	89.8	6.4	2.3	4.6	19.0	15.3
	2013-11-28	12:42:52	M	22.4	8.0	33.2	90.7	6.5	2.0	5.9	17.1	5.5
	2013-11-28	12:42:09	B	22.4	8.0	33.4	92.0	6.6	3.1	8.6	42.2	7.8
	2013-11-28	12:44:00	B	22.4	8.0	33.3	90.1	6.5	3.3	8.5	40.5	354.2

Notes:
S denotes 1m below the water surface
M denotes mid-depth
B denotes 1m above the seabed
* North is zero and the degrees go clockwise.

The background SS concentration in the vicinity of CS(Mf)5 for mid flood tide ranged from 3.3 mg/l to 8.6 mg/l and the corresponding measurements of turbidity ranged from 1.8 to 3.3 NTU at CS(Mf)5. The water current velocities at CS(Mf)5 ranged from 17.1 cm/s to 42.2 cm/s. It was found that the current direction varied at different sampling depths during the mid-flood tide.

The measurement data is provided in **Appendix A** of this report and the SS test results and chain of custody records are provided in **Appendix B** of this report.

4.3 Measurements at Sampling Points

Sampling points S1, S3, S6 and S8 were located within the perimeter delineated by the silt curtain and sampling points S2, S4, S5 and S7 were located outside the silt curtain. The in situ monitoring data and SS water sampling data for all of the sampling points is provided in **Table 8** and the laboratory analytical test data and Chain of Custody records are provided in **Appendix B** of this report.

Table 8 Measurements and Water Sampling Data for All Sampling Points

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
S1/1	Mid Ebb	2013-11-28	19:51:22	S	21.2	8.2	29.9	94.4	7.1	51.1	92.9	15.5	226.8
		2013-11-28	19:49:40	S	21.2	8.2	29.9	95.8	7.1	51.4	90.7	14.6	215.5
		2013-11-28	19:50:39	M	21.2	8.2	29.9	94.8	7.1	55.6	124.0	17.0	147.0
		2013-11-28	19:49:13	M	21.2	8.2	29.9	96.8	7.2	54.1	123.0	16.0	144.5
		2013-11-28	19:48:45	B	21.2	8.1	29.9	99.9	7.5	53.4	115.0	30.6	69.2
		2013-11-28	19:50:12	B	21.2	8.2	29.9	95.0	7.1	55.3	118.0	29.0	62.1
S2/1	Mid Ebb	2013-11-28	19:46:32	S	21.2	8.0	29.8	97.4	7.3	17.2	25.4	10.1	13.7
		2013-11-28	19:44:53	S	21.2	8.0	29.8	98.8	7.4	15.9	23.4	9.9	16.1
		2013-11-28	19:45:20	M	21.2	8.0	29.8	98.3	7.3	17.3	24.7	20.3	89.0
		2013-11-28	19:44:28	M	21.2	8.0	29.8	100.0	7.5	16.7	24.3	19.2	90.4
		2013-11-28	19:43:58	B	21.2	7.9	29.9	103.3	7.7	16.6	30.3	18.0	16.1
		2013-11-28	19:45:05	B	21.2	8.0	29.9	98.7	7.4	17.7	28.8	17.3	19.5
S3/1	Mid Ebb	2013-11-28	19:58:43	S	21.2	8.1	29.9	94.6	7.1	56.0	82.0	17.2	243.9
		2013-11-28	19:59:45	S	21.2	8.2	29.9	93.1	7.0	53.9	89.0	16.4	250.8
		2013-11-28	19:58:09	M	21.2	8.2	29.9	93.1	7.0	55.2	89.0	22.6	88.3
		2013-11-28	19:59:18	M	21.2	8.2	29.9	93.1	7.0	55.7	85.0	22.9	88.5
		2013-11-28	19:57:44	B	21.2	8.1	29.8	97.4	7.3	56.9	92.0	25.0	64.7
		2013-11-28	19:59:16	B	21.2	8.2	29.9	93.4	7.0	54.9	88.0	27.5	67.2
S4/1	Mid Ebb	2013-11-28	19:51:37	S	21.4	8.0	29.8	94.6	7.0	51.8	42.8	11.3	211.0
		2013-11-28	19:50:22	S	21.4	8.0	29.8	95.1	7.1	47.7	43.4	9.9	231.1
		2013-11-28	19:51:14	M	21.4	8.0	29.8	94.5	7.0	53.8	72.7	16.1	56.8
		2013-11-28	19:49:57	M	21.4	8.0	29.8	95.3	7.1	53.7	72.1	14.1	57.2
		2013-11-28	19:50:52	B	21.4	8.0	29.8	94.5	7.0	49.2	87.3	15.1	75.4
		2013-11-28	19:49:36	B	21.5	8.0	29.8	96.9	7.2	51.7	82.8	17.0	74.4

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
S5/1	Mid Flood	2013-11-28	14:03:22	S	21.5	8.2	30.1	97.6	7.2	9.9	15.8	13.4	44.1
		2013-11-28	14:07:00	S	21.5	8.2	30.1	96.4	7.1	10.4	14.4	18.8	46.6
		2013-11-28	14:06:16	M	21.5	8.2	30.0	97.9	7.3	10.8	15.6	15.7	60.8
		2013-11-28	14:03:00	M	21.5	8.2	30.1	97.8	7.2	10.2	16.5	18.2	53.8
		2013-11-28	14:02:39	B	21.5	8.2	30.1	98.8	7.3	11.2	19.6	16.6	64.7
		2013-11-28	14:05:49	B	21.5	8.1	30.0	101.8	7.6	11.6	20.3	10.9	56.6
S6/1	Mid Flood	2013-11-28	14:05:18	S	21.5	8.0	30.2	95.8	7.1	19.3	24.6	9.1	206.8
		2013-11-28	14:04:29	S	21.4	8.0	30.2	96.7	7.1	22.7	25.6	8.5	215.2
		2013-11-28	14:04:10	M	21.4	8.0	30.3	97.0	7.1	23.2	25.3	14.7	180.6
		2013-11-28	14:05:04	M	21.5	8.0	30.2	95.9	7.1	21.0	25.9	17.1	178.7
		2013-11-28	14:04:46	B	21.4	8.0	30.3	96.1	7.1	25.1	28.1	23.4	48.4
		2013-11-28	14:03:45	B	21.4	8.0	30.3	99.4	7.4	25.1	27.9	23.4	41.0
S7/1	Mid Flood	2013-11-28	14:12:53	S	21.5	8.2	30.2	98.3	7.3	5.9	9.9	19.1	61.0
		2013-11-28	14:14:11	S	21.5	8.2	30.2	97.7	7.2	5.7	9.5	19.4	54.0
		2013-11-28	14:12:25	M	21.5	8.2	30.2	99.1	7.3	6.1	11.3	20.5	25.0
		2013-11-28	14:13:52	M	21.6	8.2	30.2	97.7	7.2	5.9	11.0	21.8	39.0
		2013-11-28	14:12:02	B	21.5	8.2	30.2	101.1	7.5	5.8	14.7	18.7	49.1
		2013-11-28	14:13:24	B	21.6	8.2	30.3	97.9	7.2	6.1	15.0	20.0	30.8
S8/1	Mid Flood	2013-11-28	14:12:58	S	21.4	8.0	30.1	97.7	7.3	14.0	18.8	14.7	111.4
		2013-11-28	14:13:45	S	21.4	8.0	30.1	96.8	7.2	13.5	19.5	12.8	105.2
		2013-11-28	14:12:40	M	21.4	8.0	30.1	99.1	7.4	14.2	19.0	22.8	99.3
		2013-11-28	14:13:35	M	21.4	8.0	30.1	97.0	7.2	13.2	18.4	23.9	95.8
		2013-11-28	14:13:11	B	21.4	8.0	30.1	97.3	7.2	14.1	19.5	30.1	82.0
		2013-11-28	14:12:23	B	21.4	8.0	30.1	101.8	7.6	14.3	20.5	29.6	75.6
S1/2	Mid Ebb	2013-11-28	20:07:05	S	21.1	8.1	29.8	93.4	7.0	43.1	89.0	9.6	268.0

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	20:05:45	S	21.1	8.1	29.8	93.9	7.0	45.7	92.0	8.8	247.5
		2013-11-28	20:06:32	M	21.1	8.1	29.8	93.5	7.0	44.2	92.0	12.5	66.2
		2013-11-28	20:05:06	M	21.1	8.1	29.8	94.7	7.1	46.1	95.8	112.3	123.6
		2013-11-28	20:04:38	B	21.2	8.1	29.9	96.7	7.2	45.7	96.0	21.0	58.7
		2013-11-28	20:06:07	B	21.1	8.1	29.9	93.7	7.0	45.2	93.0	20.2	70.7
S2/2	Mid Ebb	2013-11-28	20:05:58	S	21.3	8.0	29.8	96.5	7.2	18.9	21.9	10.9	25.2
		2013-11-28	20:04:56	S	21.2	8.0	29.8	97.6	7.2	16.2	21.3	9.3	30.2
		2013-11-28	20:05:42	M	21.2	8.0	29.8	97.1	7.2	17.9	37.1	13.6	69.3
		2013-11-28	20:04:29	M	21.2	8.0	29.8	98.1	7.3	16.2	35.5	13.4	69.3
		2013-11-28	20:05:12	B	21.3	8.0	29.8	97.4	7.3	17.1	42.5	22.9	53.0
		2013-11-28	20:03:36	B	21.2	8.0	29.8	103.3	7.7	15.3	43.6	27.8	55.4
S3/2	Mid Ebb	2013-11-28	20:11:37	S	21.2	8.1	29.9	94.6	7.1	64.7	115.0	16.7	83.9
		2013-11-28	20:13:29	B	21.2	8.2	29.9	93.3	7.0	64.1	116.0	18.8	82.5
		2013-11-28	20:11:19	M	21.2	8.1	29.9	96.1	7.2	67.0	128.0	17.8	95.6
		2013-11-28	20:13:21	M	21.2	8.2	29.9	93.3	7.0	65.6	126.0	20.7	96.2
		2013-11-28	20:11:57	B	21.2	8.1	29.9	93.9	7.0	64.5	123.0	13.3	99.8
		2013-11-28	20:11:00	B	21.2	8.1	29.8	100.4	7.5	68.4	119.0	16.5	96.2
S4/2	Mid Ebb	2013-11-28	20:10:44	S	21.4	8.0	29.9	94.9	7.1	22.9	16.3	21.4	182.1
		2013-11-28	20:11:39	S	21.4	8.0	29.9	94.6	7.0	25.6	16.3	21.4	183.4
		2013-11-28	20:10:31	M	21.4	8.0	29.9	94.9	7.1	22.7	36.3	21.4	85.1
		2013-11-28	20:11:24	M	21.4	8.0	29.9	94.5	7.0	26.2	34.4	21.4	84.7
		2013-11-28	20:10:03	B	21.4	8.0	29.9	94.9	7.1	25.5	37.9	21.4	70.0
		2013-11-28	20:11:11	B	21.5	8.0	29.9	94.5	7.0	26.6	36.8	21.5	77.4
S5/2	Mid Flood	2013-11-28	14:25:43	S	21.5	8.2	30.1	96.3	7.1	16.0	17.7	14.2	43.5
		2013-11-28	14:24:30	S	21.5	8.2	30.1	97.5	7.2	15.5	17.8	13.1	11.8

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	14:25:12	M	21.5	8.2	30.1	96.6	7.2	14.8	20.2	18.2	50.1
		2013-11-28	14:24:20	M	21.5	8.2	30.1	97.6	7.2	14.5	21.6	17.1	41.2
		2013-11-28	14:23:34	B	21.5	8.2	30.1	102.3	7.6	13.9	22.1	20.8	37.8
		2013-11-28	14:24:48	B	21.5	8.2	30.1	97.0	7.2	14.0	23.4	20.6	39.5
S6/2	Mid Flood	2013-11-28	14:27:31	S	21.5	8.0	30.1	95.4	7.1	30.9	32.6	12.2	46.8
		2013-11-28	14:26:45	S	21.5	8.0	30.1	96.5	7.2	28.9	33.6	13.4	45.4
		2013-11-28	14:26:30	M	21.5	8.0	30.1	97.6	7.2	31.0	39.9	20.2	59.7
		2013-11-28	14:27:22	M	21.5	8.0	30.1	95.6	7.1	31.7	39.2	16.5	53.8
		2013-11-28	14:27:02	B	21.5	8.0	30.1	95.8	7.1	34.5	43.0	27.9	45.6
		2013-11-28	14:26:01	B	21.4	8.0	30.1	103.2	7.7	32.9	43.0	25.4	42.7
S7/2	Mid Flood	2013-11-28	14:32:02	S	21.5	8.2	30.2	99.6	7.3	6.6	10.6	14.3	51.6
		2013-11-28	14:33:22	S	21.5	8.2	30.2	98.4	7.3	6.7	9.7	12.3	50.7
		2013-11-28	14:31:41	M	21.5	8.2	30.2	100.9	7.5	6.7	11.7	19.2	56.4
		2013-11-28	14:32:47	M	21.5	8.2	30.2	98.5	7.3	6.6	11.8	17.3	63.5
		2013-11-28	14:31:20	B	21.5	8.2	30.2	104.0	7.7	6.9	11.9	14.7	69.7
		2013-11-28	14:32:18	B	21.5	8.2	30.2	99.0	7.3	6.7	12.7	13.6	69.3
S8/2	Mid Flood	2013-11-28	14:33:49	S	21.4	8.0	30.0	96.8	7.2	17.0	20.6	12.8	128.9
		2013-11-28	14:33:03	S	21.4	8.0	30.0	97.8	7.3	16.3	19.6	11.6	116.4
		2013-11-28	14:32:42	M	21.4	8.0	30.0	98.8	7.3	16.8	18.1	8.5	128.7
		2013-11-28	14:33:37	M	21.4	8.0	30.0	96.8	7.2	17.1	18.3	9.9	109.4
		2013-11-28	14:33:17	B	21.4	8.0	30.0	97.2	7.2	17.8	22.4	26.3	17.0
		2013-11-28	14:32:28	B	21.4	7.96	30.0	100.7	7.5	16.8	22.5	26.0	27.7
S1/3	Mid Ebb	2013-11-28	20:31:47	S	21.1	8.1	29.9	96.4	7.2	50.3	79.5	14.2	266.3
		2013-11-28	20:32:46	S	21.1	8.1	29.9	94.6	7.1	49.6	79.2	12.6	235.2
		2013-11-28	20:31:30	M	21.2	8.1	29.9	98.1	7.3	52.7	80.7	26.0	132.5

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	20:32:25	M	21.1	8.1	29.9	94.9	7.1	50.3	84.3	24.7	114.4
		2013-11-28	20:32:04	B	21.1	8.1	29.9	95.6	7.1	55.9	92.4	29.3	22.2
		2013-11-28	20:31:22	B	21.2	8.1	29.9	99.4	7.4	54.3	95.0	30.9	22.4
S2/3	Mid Ebb	2013-11-28	20:36:04	S	21.3	8.0	29.9	94.7	7.0	28.3	33.7	17.1	319.4
		2013-11-28	20:34:49	S	21.4	8.0	29.9	95.2	7.1	28.6	32.5	15.8	315.3
		2013-11-28	20:35:32	M	21.5	8.0	30.0	94.8	7.0	27.8	39.5	7.0	338.5
		2013-11-28	20:34:14	M	21.6	8.0	30.1	97.1	7.2	27.2	38.3	6.2	344.8
		2013-11-28	20:35:17	B	21.4	8.0	30.0	94.9	7.1	29.1	41.7	7.3	64.9
		2013-11-28	20:33:48	B	21.6	8.0	30.1	103.6	7.7	29.7	41.8	7.3	63.4
S3/3	Mid Ebb	2013-11-28	20:37:46	S	21.1	8.1	29.9	94.1	7.0	52.1	83.6	16.7	190.9
		2013-11-28	20:39:04	S	21.2	8.2	29.9	93.1	7.0	53.7	86.5	16.2	192.4
		2013-11-28	20:38:46	M	21.1	8.2	29.9	93.2	7.0	55.1	99.4	26.0	98.7
		2013-11-28	20:37:22	M	21.1	8.1	29.9	96.0	7.2	54.2	91.7	22.1	104.1
		2013-11-28	20:37:04	B	21.1	8.1	29.9	98.9	7.4	53.2	99.1	28.3	93.3
		2013-11-28	20:38:07	B	21.2	8.1	29.9	93.4	7.0	51.4	99.8	36.1	36.2
S4/3	Mid Ebb	2013-11-28	20:40:10	S	21.4	7.9	30.0	95.4	7.1	27.5	34.3	10.5	122.2
		2013-11-28	20:40:57	S	21.4	7.9	30.0	94.3	7.0	23.5	33.6	11.1	121.9
		2013-11-28	20:40:41	M	21.5	7.9	30.0	94.4	7.0	25.5	42.7	10.5	203.5
		2013-11-28	20:39:46	M	21.4	7.9	30.0	96.6	7.2	30.8	42.3	11.5	199.4
		2013-11-28	20:39:24	B	21.4	7.9	30.0	100.8	7.5	32.4	44.2	16.6	3.0
		2013-11-28	20:40:26	B	21.5	7.9	30.0	94.8	7.0	28.9	45.0	18.3	6.7
S5/3	Mid Flood	2013-11-28	14:48:34	S	21.5	8.2	30.1	97.0	7.2	13.9	13.8	13.4	78.6
		2013-11-28	14:47:42	S	21.5	8.2	30.1	98.4	7.3	13.7	13.8	13.4	74.6
		2013-11-28	14:48:20	M	21.5	8.2	30.1	97.0	7.2	13.4	17.2	18.8	60.8
		2013-11-28	14:47:18	M	21.5	8.2	30.1	100.1	7.4	13.3	17.2	18.8	76.5

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	14:46:50	B	21.5	8.2	30.1	103.8	7.7	13.7	25.8	17.2	43.9
		2013-11-28	14:47:56	B	21.5	8.2	30.1	97.7	7.2	13.8	25.9	19.4	55.8
S6/3	Mid Flood	2013-11-28	14:48:01	S	21.5	8.0	30.1	95.5	7.1	24.9	23.7	14.3	134.3
		2013-11-28	14:47:18	S	21.5	8.0	30.0	96.6	7.2	23.3	22.9	13.7	148.5
		2013-11-28	14:47:48	M	21.5	8.0	30.1	95.8	7.1	25.2	30.1	15.9	102.7
		2013-11-28	14:47:00	M	21.5	8.0	30.1	97.4	7.2	21.0	30.9	12.1	89.0
		2013-11-28	14:46:44	B	21.5	8.0	30.1	98.8	7.3	21.2	31.5	14.9	160.0
		2013-11-28	14:47:33	B	21.5	8.0	30.1	96.1	7.1	24.2	32.0	18.0	163.6
S7/3	Mid Flood	2013-11-28	14:52:48	S	21.5	8.2	30.2	100.9	7.5	5.3	6.8	16.4	81.1
		2013-11-28	14:53:50	S	21.5	8.2	30.2	99.6	7.4	5.2	5.2	18.1	72.3
		2013-11-28	14:52:31	M	21.5	8.2	30.2	101.4	7.5	5.1	6.9	16.4	76.9
		2013-11-28	14:53:33	M	21.5	8.2	30.3	99.9	7.4	5.2	6.9	18.2	75.7
		2013-11-28	14:53:02	B	21.5	8.2	30.3	100.3	7.4	5.3	8.2	20.0	76.5
		2013-11-28	14:52:05	B	21.5	8.2	30.3	103.6	7.7	5.3	8.3	20.6	72.0
S8/3	Mid Flood	2013-11-28	14:53:34	S	21.5	8.0	30.0	96.4	7.2	15.9	15.3	20.7	137.7
		2013-11-28	14:52:41	S	21.5	8.0	30.0	96.8	7.2	15.7	16.6	21.0	145.3
		2013-11-28	14:52:27	M	21.5	8.0	30.0	97.4	7.2	16.2	16.0	13.8	128.5
		2013-11-28	14:53:13	M	21.5	8.0	30.0	96.4	7.2	15.7	15.5	10.1	114.0
		2013-11-28	14:52:03	B	21.4	8.0	30.0	98.8	7.3	16.8	17.8	16.5	74.2
		2013-11-28	14:53:04	B	21.5	8.0	30.0	96.4	7.2	15.6	17.8	16.1	87.2
S1/4	Mid Ebb	2013-11-28	21:00:56	S	21.1	8.1	30.0	96.0	7.2	47.9	79.4	10.9	241.4
		2013-11-28	21:01:49	S	21.1	8.2	30.0	94.5	7.1	48.0	81.1	9.6	255.5
		2013-11-28	21:01:27	M	21.1	8.1	30.0	95.0	7.1	48.6	82.6	22.8	175.1
		2013-11-28	21:00:41	M	21.1	8.1	30.0	97.4	7.3	48.5	79.9	23.7	169.9
		2013-11-28	21:00:25	B	21.1	8.1	30.0	99.9	7.5	49.7	88.2	33.6	174.7

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	21:01:14	B	21.1	8.1	30.0	95.4	7.1	48.4	87.2	35.9	172.5
S2/4	Mid Ebb	2013-11-28	21:06:18	S	21.3	8.0	29.9	95.9	7.1	30.7	30.7	9.9	71.2
		2013-11-28	21:07:04	S	21.3	8.0	29.9	94.5	7.0	32.2	29.5	9.5	75.4
		2013-11-28	21:06:52	M	21.4	8.0	30.0	94.8	7.0	29.1	39.0	8.8	68.5
		2013-11-28	21:05:52	M	21.5	7.9	30.0	98.2	7.3	25.3	41.6	8.7	66.6
		2013-11-28	21:06:28	B	21.4	7.9	30.0	95.6	7.1	25.1	59.2	15.6	19.8
		2013-11-28	21:05:39	B	21.6	7.9	30.2	102.5	7.6	23.1	56.4	16.7	22.5
S3/4	Mid Ebb	2013-11-28	21:06:26	S	21.1	8.1	29.9	94.9	7.1	46.9	80.0	19.1	215.3
		2013-11-28	21:07:33	S	21.1	8.2	29.9	93.7	7.0	46.7	74.2	20.1	222.6
		2013-11-28	21:07:21	M	21.1	8.1	29.9	93.7	7.0	46.8	82.2	23.5	142.6
		2013-11-28	21:06:12	M	21.1	8.1	29.9	96.0	7.2	46.6	86.7	24.8	138.1
		2013-11-28	21:05:58	B	21.1	8.1	29.9	98.1	7.3	48.7	95.2	24.9	150.9
		2013-11-28	21:07:03	B	21.1	8.1	29.9	93.9	7.0	48.4	94.3	27.4	146.8
S4/4	Mid Ebb	2013-11-28	21:12:44	S	21.3	8.0	29.9	94.1	7.0	34.4	44.2	9.0	61.6
		2013-11-28	21:11:57	S	21.4	8.0	30.0	95.7	7.1	33.1	43.0	10.0	65.8
		2013-11-28	21:12:26	M	21.4	8.0	30.0	94.3	7.0	29.3	43.7	5.3	0.5
		2013-11-28	21:11:33	M	21.4	8.0	30.0	97.9	7.3	29.3	41.4	7.0	7.4
		2013-11-28	21:12:14	B	21.5	8.0	30.1	94.7	7.0	24.8	50.9	8.0	36.2
		2013-11-28	21:11:19	B	21.5	7.9	30.1	101.6	7.5	20.7	52.0	9.3	26.3
S5/4	Mid Flood	2013-11-28	15:17:54	S	21.5	8.2	30.2	99.3	7.4	10.4	15.2	21.1	77.7
		2013-11-28	15:16:43	S	21.5	8.2	30.2	99.2	7.4	10.4	15.0	20.0	81.1
		2013-11-28	15:16:25	M	21.5	8.2	30.2	100.0	7.4	11.3	15.8	23.7	84.1
		2013-11-28	15:17:29	M	21.5	8.2	30.2	99.4	7.4	10.9	15.9	21.4	80.4
		2013-11-28	15:16:03	B	21.5	8.2	30.2	102.1	7.6	11.2	19.5	37.9	65.4
		2013-11-28	15:17:06	B	21.5	8.2	30.2	99.1	7.3	11.1	19.2	32.2	63.3

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
S6/4	Mid Flood	2013-11-28	15:16:50	S	21.5	8.0	30.0	96.6	7.2	18.5	23.8	4.3	189.3
		2013-11-28	15:17:40	S	21.5	8.0	30.0	96.3	7.1	17.8	23.0	4.8	192.3
		2013-11-28	15:16:30	M	21.5	8.0	30.0	96.8	7.2	18.8	26.7	5.7	167.5
		2013-11-28	15:17:21	M	21.4	8.0	30.0	96.5	7.2	17.2	26.4	5.6	155.4
		2013-11-28	15:17:09	B	21.5	8.0	30.0	96.4	7.2	17.9	28.5	19.9	31.5
		2013-11-28	15:15:26	B	21.5	8.0	30.0	102.7	7.6	18.8	29.4	18.2	38.4
S7/4	Mid Flood	2013-11-28	15:22:15	S	21.5	8.2	30.2	100.6	7.5	5.4	11.4	9.9	70.4
		2013-11-28	15:23:02	S	21.5	8.2	30.2	100.0	7.4	5.5	10.8	10.1	69.8
		2013-11-28	15:22:48	M	21.5	8.2	30.2	100.3	7.4	5.3	10.3	8.1	64.9
		2013-11-28	15:21:58	M	21.5	8.2	30.2	101.4	7.5	5.4	10.0	7.1	69.1
		2013-11-28	15:21:42	B	21.5	8.2	30.2	102.5	7.6	5.1	17.3	10.6	69.7
		2013-11-28	15:22:31	B	21.5	8.2	30.2	100.3	7.4	5.2	19.1	13.2	75.7
S8/4	Mid Flood	2013-11-28	15:21:44	S	21.5	8.0	30.0	98.8	7.3	13.6	14.6	21.1	67.9
		2013-11-28	15:22:34	S	21.5	8.0	30.0	97.6	7.2	13.8	15.2	21.1	68.0
		2013-11-28	15:22:25	M	21.5	8.0	30.0	97.8	7.3	14.0	13.2	25.9	2.3
		2013-11-28	15:21:34	M	21.5	8.0	30.0	99.7	7.4	13.7	15.0	23.8	3.7
		2013-11-28	15:21:20	B	21.4	8.0	30.0	101.2	7.5	13.2	20.7	17.9	5.1
		2013-11-28	15:22:03	B	21.5	8.0	30.0	97.9	7.3	13.2	20.6	20.8	4.2
S1/5	Mid Ebb	2013-11-28	21:34:13	S	21.0	8.2	29.9	95.9	7.1	50.3	107.0	8.0	243.2
		2013-11-28	21:35:44	S	21.0	8.2	29.9	94.3	7.1	50.1	114.0	8.2	260.2
		2013-11-28	21:33:52	M	21.0	8.2	29.9	97.1	7.3	52.3	122.0	25.5	239.0
		2013-11-28	21:35:01	M	21.0	8.2	29.9	94.6	7.1	51.7	114.0	26.1	228.3
		2013-11-28	21:34:40	B	21.0	8.2	29.9	95.1	7.1	55.8	113.0	30.5	216.5
		2013-11-28	21:33:15	B	21.0	8.1	29.9	101.5	7.6	55.2	107.0	33.8	226.8
S2/5	Mid Ebb	2013-11-28	21:34:45	S	21.2	7.9	29.9	96.0	7.2	33.7	43.2	6.3	134.9

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	21:35:21	S	21.3	8.0	30.0	94.9	7.1	32.9	41.5	7.2	113.0
		2013-11-28	21:34:28	M	21.3	7.9	30.0	97.3	7.2	34.3	43.9	5.0	132.6
		2013-11-28	21:35:12	M	21.3	8.0	30.0	94.9	7.1	34.1	43.6	5.7	146.4
		2013-11-28	21:34:59	B	21.3	8.0	30.0	95.4	7.1	33.4	56.0	16.1	44.7
		2013-11-28	21:34:08	B	21.2	7.9	30.0	101.8	7.6	32.8	56.7	13.5	45.7
S3/5	Mid Ebb	2013-11-28	21:40:49	S	21.1	8.1	29.9	92.3	6.9	36.8	43.8	20.2	209.7
		2013-11-28	21:42:01	S	21.1	8.1	29.9	92.0	6.9	35.9	43.6	19.2	201.2
		2013-11-28	21:40:25	M	21.1	8.1	29.9	93.8	7.0	36.3	67.9	25.6	196.8
		2013-11-28	21:41:37	M	21.0	8.1	29.9	91.8	6.9	36.6	64.1	23.5	199.2
		2013-11-28	21:39:52	B	21.1	8.1	29.8	93.6	7.0	35.8	68.9	23.2	207.0
		2013-11-28	21:41:14	B	21.0	8.1	29.9	91.7	6.9	36.4	70.3	22.2	202.2
S4/5	Mid Ebb	2013-11-28	21:40:46	S	21.3	8.0	29.9	94.3	7.0	31.9	43.3	7.3	71.8
		2013-11-28	21:39:59	S	21.3	8.0	29.9	95.6	7.1	32.6	41.2	7.0	66.6
		2013-11-28	21:39:35	M	21.3	7.9	30.0	97.9	7.3	31.9	40.6	6.4	0.9
		2013-11-28	21:40:28	M	21.4	8.0	30.0	94.6	7.0	28.9	41.7	7.5	2.2
		2013-11-28	21:39:23	B	21.4	7.9	30.0	100.6	7.5	30.1	41.8	6.2	126.3
		2013-11-28	21:40:11	B	21.3	8.0	30.0	95.2	7.1	31.7	42.8	6.0	110.5
S5/5	Mid Flood	2013-11-28	15:46:31	S	21.5	8.2	30.2	99.4	7.4	8.2	12.4	14.7	60.8
		2013-11-28	15:45:40	S	21.5	8.2	30.2	101.1	7.5	7.8	13.8	14.3	54.3
		2013-11-28	15:45:27	M	21.5	8.2	30.2	101.7	7.5	8.0	14.9	13.2	64.2
		2013-11-28	15:46:16	M	21.5	8.2	30.2	99.7	7.4	8.4	13.0	15.5	65.7
		2013-11-28	15:45:20	B	21.5	8.2	30.2	102.3	7.6	8.0	14.3	13.0	66.3
		2013-11-28	15:46:01	B	21.5	8.2	30.2	100.2	7.4	8.3	13.8	14.0	67.8
S6/5	Mid Flood	2013-11-28	15:45:45	S	21.4	8.0	30.0	97.5	7.2	17.1	17.0	11.9	273.1
		2013-11-28	15:45:03	S	21.4	8.0	30.0	98.4	7.3	16.7	16.4	13.6	282.4

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	15:44:40	M	21.4	8.0	30.0	99.9	7.4	16.4	18.3	10.7	269.9
		2013-11-28	15:45:27	M	21.5	8.0	30.0	97.7	7.3	18.6	18.6	8.4	293.3
		2013-11-28	15:44:17	B	21.4	8.0	30.0	104.3	7.7	17.8	16.6	19.9	48.01
		2013-11-28	15:45:15	B	21.4	8.0	30.0	97.8	7.3	18.3	17.2	17.1	54.3
S7/5	Mid Flood	2013-11-28	15:51:29	S	21.5	8.2	30.2	103.5	7.7	3.1	5.6	25.5	74.7
		2013-11-28	15:52:14	S	21.5	8.2	30.2	101.7	7.5	3.2	6.4	20.7	79.5
		2013-11-28	15:51:58	M	21.5	8.2	30.2	102.1	7.6	3.4	4.1	22.5	70.4
		2013-11-28	15:51:18	M	21.5	8.2	30.2	104.1	7.7	3.4	5.2	25.6	68.2
		2013-11-28	15:51:44	B	21.5	8.2	30.2	102.8	7.6	3.5	7.4	16.2	81.3
		2013-11-28	15:51:05	B	21.5	8.2	30.2	105.5	7.8	3.7	8.2	20.0	78.2
S8/5	Mid Flood	2013-11-28	15:49:13	S	21.4	8.0	30.0	99.1	7.4	12.9	11.4	14.8	77.4
		2013-11-28	15:50:07	S	21.4	8.0	30.0	98.3	7.3	11.8	11.8	13.9	76.6
		2013-11-28	15:49:04	M	21.4	8.0	30.0	99.3	7.4	13.1	13.1	10.4	111.0
		2013-11-28	15:49:49	M	21.4	8.0	30.0	98.5	7.3	12.0	12.0	10.6	93.2
		2013-11-28	15:49:31	B	21.4	8.0	30.0	98.5	7.3	12.1	14.9	18.6	37.6
		2013-11-28	15:48:44	B	21.4	8.0	30.0	101.3	7.5	12.7	15.2	17.3	33.9
S1/6	Mid Ebb	2013-11-28	22:01:46	S	21.0	8.1	29.9	92.6	7.1	62.6	118.0	13.6	277.7
		2013-11-28	22:02:35	S	21.0	8.1	29.9	92.1	7.1	62.1	124.0	12.3	261.1
		2013-11-28	22:02:16	M	21.0	8.1	29.9	92.8	7.1	62.8	140.0	26.8	188.6
		2013-11-28	22:01:27	M	21.0	8.1	29.9	93.6	7.2	63.6	132.0	24.8	193.1
		2013-11-28	22:01:14	B	21.0	8.1	29.9	93.2	7.3	63.2	138.0	16.2	167.7
		2013-11-28	22:02:01	B	21.0	8.1	29.9	93.9	7.1	63.9	131.0	17.4	161.3
S2/6	Mid Ebb	2013-11-28	21:59:33	S	21.2	8.0	29.9	94.5	7.1	33.2	41.7	11.3	157.2
		2013-11-28	21:58:43	S	21.2	8.0	29.9	96.6	7.2	32.5	38.6	10.1	163.1
		2013-11-28	21:58:31	M	21.2	8.0	29.9	97.9	7.3	30.9	44.3	7.1	122.0

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	21:59:11	M	21.3	8.0	30.0	95.0	7.1	33.3	42.5	8.9	111.7
		2013-11-28	21:58:11	B	21.4	8.0	30.0	103.4	7.7	30.9	45.4	9.9	180.2
		2013-11-28	21:59:03	B	21.3	8.0	30.0	95.5	7.1	32.7	46.3	8.1	198.6
S3/6	Mid Ebb	2013-11-28	22:07:27	S	20.9	8.1	29.8	91.3	6.9	33.3	89.0	14.1	226.1
		2013-11-28	22:08:31	S	20.9	8.1	29.8	90.2	6.8	34.1	91.0	13.9	220.2
		2013-11-28	22:06:55	M	20.9	8.1	29.8	93.6	7.0	52.9	81.0	16.1	120.2
		2013-11-28	22:08:04	M	20.9	8.1	29.8	90.4	6.8	52.4	99.0	14.9	126.9
		2013-11-28	22:07:48	B	20.9	8.1	29.8	90.9	6.8	53.6	90.0	23.3	110.3
		2013-11-28	22:06:39	B	21.0	8.1	29.8	97.3	7.3	55.3	81.0	25.2	113.8
S4/6	Mid Ebb	2013-11-28	22:04:03	S	21.2	8.0	30.0	94.3	7.0	30.8	40.4	3.8	17.4
		2013-11-28	22:03:07	S	21.3	8.0	30.0	95.6	7.1	32.4	39.1	4.0	16.4
		2013-11-28	22:02:50	M	21.3	8.0	30.0	97.6	7.3	33.0	47.7	7.2	245.8
		2013-11-28	22:03:42	M	21.2	8.0	30.0	94.5	7.0	31.3	49.8	8.7	228.5
		2013-11-28	22:03:29	B	21.2	8.0	30.0	94.8	7.1	31.4	58.6	9.3	151.4
		2013-11-28	22:02:37	B	21.2	8.0	30.0	100.7	7.5	32.3	56.6	8.9	134.7
S5/6	Mid Flood	2013-11-28	16:17:16	S	21.5	8.2	30.2	101.2	7.5	7.2	11.0	27.9	68.1
		2013-11-28	16:18:20	S	21.5	8.2	30.2	99.3	7.4	6.8	12.0	25.7	68.4
		2013-11-28	16:17:57	M	21.5	8.2	30.2	99.8	7.4	6.5	11.2	19.6	73.0
		2013-11-28	16:17:03	M	21.5	8.2	30.2	102.0	7.6	6.7	12.3	149.2	72.3
		2013-11-28	16:16:54	B	21.5	8.2	30.2	102.6	7.6	6.7	12.6	16.4	77.8
		2013-11-28	16:17:30	B	21.5	8.2	30.2	100.6	7.5	7.0	12.6	17.0	73.2
S6/6	Mid Flood	2013-11-28	16:16:29	S	21.4	8.0	30.0	98.8	7.3	15.9	18.0	11.7	234.5
		2013-11-28	16:17:29	S	21.4	8.0	30.0	97.8	7.3	14.4	16.9	10.4	204.2
		2013-11-28	16:17:00	M	21.4	8.0	30.0	98.1	7.3	15.0	16.8	4.0	70.6
		2013-11-28	16:16:00	M	21.4	8.0	30.0	100.5	7.5	16.2	16.6	6.6	72.0

Sample	Tide	Sampling Date	Sampling Time	Depth	Temp (°C)	pH	Salinity (ppt)	DO (%)	DO (mg/L)	Turbidity (NTU)	SS (mg/l)	Current Velocity (cm/s)	Current Direction (Degrees*)
		2013-11-28	16:15:36	B	21.4	8.0	30.0	104.8	7.8	16.6	17.6	19.2	76.9
		2013-11-28	16:16:51	B	21.4	8.0	30.0	98.3	7.3	15.1	16.4	19.9	71.4
S7/6	Mid Flood	2013-11-28	16:22:47	S	21.5	8.2	30.3	103.1	7.6	4.5	7.2	20.9	77.7
		2013-11-28	16:23:35	S	21.5	8.2	30.3	102.5	7.6	4.6	7.4	22.6	78.9
		2013-11-28	16:23:23	M	21.5	8.2	30.3	102.5	7.6	5.4	7.4	22.4	67.4
		2013-11-28	16:22:35	M	21.5	8.2	30.3	103.4	7.7	5.3	6.8	20.6	61.4
		2013-11-28	16:23:07	B	21.5	8.2	30.3	102.7	7.6	5.3	7.9	17.6	64.4
		2013-11-28	16:22:21	B	21.5	8.2	30.3	104.2	7.7	5.5	7.0	20.8	67.8
S8/6	Mid Flood	2013-11-28	16:20:41	S	21.4	8.0	30.0	100.3	7.5	11.2	12.3	11.8	87.2
		2013-11-28	16:21:27	S	21.4	8.0	30.0	99.8	7.4	10.8	13.2	14.6	80.1
		2013-11-28	16:20:29	M	21.4	8.0	30.1	100.9	7.5	11.4	14.5	11.4	22.2
		2013-11-28	16:21:13	M	21.4	8.0	30.1	99.7	7.4	11.9	14.0	11.4	21.6
		2013-11-28	16:20:59	B	21.4	8.0	30.1	99.7	7.4	10.8	13.1	12.9	23.3
		2013-11-28	16:20:02	B	21.4	8.0	30.1	102.6	7.6	11.1	14.0	12.4	23.7

Notes:

S denotes 1m below the water surface.

M denotes mid-depth.

B denotes 1m above the seabed.

S1/1 indicates the first round of sampling from sampling point S1, therefore, S1/6 indicates the sixth round of sampling at S1.

* North is zero and the degrees go clockwise.

The in-situ parameters of temperature, pH, salinity, DO (%) and DO that were monitored at the sampling points were similar to that were monitored at the control points CS2 and CS(Mf)5. For example, the concentration of salinity measured at the sampling points ranged from 29.8 ppt to 30.3 ppt, compared with measured concentrations of 31.0 ppt to 33.4 ppt at the control points. It is therefore considered that the samples of SS that were taken are representative of the conditions.

Table 8 indicates that the current direction record at different sampling locations varied at different sampling depth. For illustrative purpose, a drawing showing the current direction recorded during the second and fifth round of sampling have been included in **Appendix E**.

In general, it was noted that the undertaking of the marine construction activities resulted in an increase of SS and turbidity in the water measurements and the water samples that were collected. The reported concentrations of SS and turbidity at the sampling points were higher than the conditions reported at the control points. This increase in SS and turbidity is considered to be representative of the marine construction activities that were taking place at the time of the water sampling activities.

4.4 Settlement of Suspended Solids within Silt Curtain

Given the distance between the filling operations at the site and the perimeter silt curtain, sampling points (S3 and S8) approximately 110m from the silt curtain were also sampled to determine if sediments in the water column settled prior to reaching the silt curtain. Water samples for SS analysis were taken at these locations to determine the levels of SS that would be generated by marine filling activities and if the concentrations of SS at the silt curtain were representative of SS within the perimeter of the HKLR site.

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The range in SS concentrations and the construction activities being undertaken in the vicinity of S3 and S1 is shown in **Table 9**.

Table 9 Range in Suspended Solids Concentrations S3 – S1

Sample	Sampling Time	Depth	S3 SS (mg/l)	S3 Average SS (mg/l)	S1 SS (mg/l)	S1 Average SS (mg/l)	SS Difference (mg/l)	Construction Activity
S3/1 – S1/1	19:48 – 19:59	S	82	87.5	92.9	110.6	-23.1	• Filling of public fill at SWCH360 – 380
		S	89		90.7			
		M	89		124.0			
		M	85		123.0			
		B	92		115.0			
		B	88		118.0			
S3/2 – S1/2	20:04 – 20:13	S	115	121.2	89.0	93.0	28.2	• Filling of public fill at SWCH360 – 380
		S	116		92.0			
		M	128		92.0			
		M	126		95.8			
		B	123		96.0			
		B	119		93.0			
S3/3 – S1/3	20:31 – 20:39	S	83.6	93.4	79.5	85.2	8.2	• Filling of public fill at SWCH360 – 380
		S	86.5		79.2			
		M	99.4		80.7			
		M	91.7		84.3			
		B	99.1		92.4			
		B	99.8		95.0			
S3/4 – S1/4	21:00 – 21:07	S	80	85.4	79.4	83.1	2.4	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	74.2		81.1			
		M	82.2		82.6			
		M	86.7		79.9			
		B	95.2		88.2			
		B	94.3		87.2			
S3/5 – S1/5	21:33 – 21:42	S	43.8	59.8	107	112.8	-53.1	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	43.6		114			
		M	67.9		122			
		M	64.1		114			
		B	68.9		113			
		B	70.3		107			
S3/6 – S1/6	22:01 – 22:08	S	89	88.5	118	130.5	-42.0	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	91		124			
		M	81		140			
		M	99		132			
		B	90		138			
		B	81		131			

Notes:
S denotes 1m below the water surface
M denotes mid-depth.
B denotes 1m above the seabed
S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

The SS difference between S3 and S1 ranged from -53.1mg/l to +28.2mg/l.

The SS concentration of S1 and S3 are significantly higher than the SS concentration of control station CS2, which demonstrates that SS plumes had been picked up at S1 and S3 as no other source of SS was noted during the pilot test (Table 2 refers). For rounds 1, 5 and 6, the SS of S1 are higher than SS of S3, this demonstrates that the SS are hold in a stagnation pocket behind the curtain which act as a barrier as mentioned Section 4.1.

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The range in SS concentrations between S8 and S6 and the construction activities being undertaking in the vicinity of the sampling points is shown in **Table 10**.

Table 10 Range in Suspended Solids Concentrations S8 – S6

Sample	Sampling Time	Depth	S8 SS (mg/l)	S8 Average SS (mg/l)	S6 SS (mg/l)	S6 Average SS (mg/l)	SS Difference (mg/l)	Construction Activity
S8/1 – S6/1	14:03 - 14:13	S	18.8	19.3	24.6	26.2	-6.9	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	19.5		25.6			
		M	19		25.3			
		M	18.4		25.9			
		B	19.5		28.1			
		B	20.5		27.9			
S8/2 – S6/2	14:26 - 14:33	S	20.6	20.3	32.6	38.6	-18.3	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	19.6		33.6			
		M	18.1		39.9			
		M	18.3		39.2			
		B	22.4		43.0			
		B	22.5		43.0			
S8/3 – S6/3	14:46 - 14:53	S	15.3	16.5	23.7	28.5	-12.0	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	16.6		22.9			
		M	16.0		30.1			
		M	15.5		30.9			
		B	17.8		31.5			
		B	17.8		32.0			
S8/4 – S6/4	15:15 - 15:22	S	14.6	16.6	23.8	26.3	-9.7	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	15.2		23.0			
		M	13.2		26.7			
		M	15.0		26.4			
		B	20.7		28.5			
		B	20.6		29.4			
S8/5 – S6/5	15:44 - 15:50	S	11.4	13.1	17.0	17.4	-4.3	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	11.8		16.4			
		M	13.1		18.3			
		M	12.0		18.6			
		B	14.9		16.6			
		B	15.2		17.2			
S8/6 – S6/6	16:15 - 16:21	S	12.3	13.5	18.0	17.1	-3.6	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	13.2		16.9			
		M	14.5		16.8			
		M	14.0		16.6			
		B	13.1		17.6			
		B	14.0		16.4			

Notes:

S denotes 1m below the water surface
M denotes mid-depth.
B denotes 1m above the seabed
S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

The SS difference between S8 and S6 ranged from -18.3mg/l to -3.6mg/l and are all in negative values.

The SS concentration of S6 and S8 are similar to the SS concentration of control station CS(Mf)5, which demonstrates that the majority of SS was settled before reaching the silt curtain with the mitigation measures, such as sand fill behind leading seawall with 580m buffer distance, in place. The SS of S6 are higher than SS of S8, this demonstrates that the SS are hold in a stagnation pocket behind the curtain which act as a barrier as mentioned in Section 4.1. As the majority of SS was settled before reaching the silt curtain, measurements taken during flood tide became irrelevant to this study. Therefore, the data of flood tide presented in this report are for reference only and was not used for determination of silt curtain efficiency.

4.5 Effectiveness of the Silt Curtain

As mentioned in Section 4.4, the data of flood tide presented in this report are for reference only and was not used for determination of silt curtain efficiency.

As the filling activities and other marine works are carried out within silt curtain, the SS concentrations in the upstream (within silt curtain) should be higher than those in downstream (outside silt curtain). This principle was used to develop the Method Statement. Therefore, if the SS concentrations in the upstream are lower than those in downstream, these sampling results will be considered as invalid and not included for study of silt curtain efficiency. In addition, if the SS concentrations for sampling points S1, S3, S6 and S8 are similar to the background condition at control points (CS2 and CS(Mf)5), the monitoring results obtained at these stations will be considered as invalid and not included for analysis.

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Tables 11, **12**, **13** and **14** show the SS reduction between S1 and S2, S1 and S4, S3 and S2 and S3 and S4, respectively.

Table 11 Reduction in Suspended Solids Concentrations between Sampling Points S1 and S2

Sample	Sampling Time	Depth	Current Direction (Degrees)		SS (mg/l)		SS Reduction (%)	Total Average SS Reduction (%)	Construction Activity
			S1	S2	Upstream (S1)	Downstream (S2)			
S1/1 – S2/1	19:43 - 19:51	S	226.8	13.7	92.9	25.4	72.7	76.1	• Filling of public fill at SWCH360 – 380
		S	215.5	16.1	90.7	23.4	74.2		
		M	147.0	89.0	124.0	24.7	80.1		
		M	144.5	90.4	123.0	24.3	80.2		
		B	69.2	16.1	115.0	30.3	73.7		
		B	62.1	19.5	118.0	28.8	75.6		
S1/2 – S2/2	20:03 - 20:07	S	268.0	25.2	89.0	21.9	75.4	64.0	• Filling of public fill at SWCH360 – 380
		S	247.5	30.2	92.0	21.3	76.8		
		M	66.2	69.3	92.0	37.1	59.7		
		M	123.6	69.3	95.8	35.5	62.9		
		B	58.7	53.0	96.0	42.5	55.7		
		B	70.7	55.4	93.0	43.6	53.1		
S1/3 – S2/3	20:31 - 20:36	S	266.3	319.4	79.5	33.7	57.6	55.5	• Filling of public fill at SWCH360 - 380
		S	235.2	315.3	79.2	32.5	58.9		
		M	132.5	338.5	80.7	39.5	51.1		
		M	114.4	344.8	84.3	38.3	54.6		
		B	22.2	64.9	92.4	41.7	54.9		
		B	22.4	63.4	95.0	41.8	56		
S1/4 – S2/4	21:00 - 21:07	S	241.4	71.2	79.4	30.7	61.3	49.0	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	255.5	75.4	81.1	29.5	63.6		
		M	175.1	68.5	82.6	39.0	52.8		
		M	169.9	66.6	79.9	41.6	47.9		
		B	174.7	19.8	88.2	59.2	32.9		
		B	172.5	22.5	87.2	56.4	35.3		
S1/5 – S2/5	21:33 - 21:35	S	243.2	134.9	107.0	43.2	59.6	57.7	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	260.2	113.0	114.0	41.5	63.6		
		M	239.0	132.6	122.0	43.9	64.0		
		M	228.3	146.4	114.0	43.6	61.8		
		B	216.5	44.7	113.0	56.0	50.4		
		B	226.8	45.7	107.0	56.7	47.0		
S1/6 – S2/6	21:58 - 22:02	S	277.7	157.2	118.0	41.7	64.7	66.9	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	261.1	163.1	124.0	38.6	68.9		
		M	188.6	122.0	140.0	44.3	68.4		
		M	193.1	111.7	132.0	42.5	67.8		
		B	167.7	180.2	138.0	45.4	67.1		
		B	161.3	198.6	131.0	46.3	64.7		
							Average Reduction	**61.5**	--

Notes:
S denotes 1m below the water surface
M denotes mid-depth.
B denotes 1m above the seabed
S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

Table 12 Reduction in Suspended Solids Concentrations between Sampling Points S1 and S4

Sample	Sampling Time	Depth	Current Direction (Degrees)		SS (mg/l)		SS Reduction (%)	Total Average SS Reduction (%)	Construction Activity
			S1	S4	Upstream (S1)	Downstream (S4)			
S1/1 – S4/1	19:48 - 19:51	S	226.8	211.0	92.9	42.8	53.9	40.5	• Filling of public fill at SWCH360 – 380
		S	215.5	231.1	90.7	43.4	52.1		
		M	147.0	56.8	124.0	72.7	41.4		
		M	144.5	57.2	123.0	72.1	41.4		
		B	69.2	75.4	115.0	87.3	24.1		
		B	62.1	74.4	118.0	82.8	29.8		
S1/2 – S4/2	20:04 - 20:11	S	268.0	182.1	89.0	16.3	81.7	68.3	• Filling of public fill at SWCH360 – 380
		S	247.5	183.4	92.0	16.3	82.3		
		M	66.2	85.1	92.0	36.3	60.5		
		M	123.6	84.7	95.8	34.4	64.1		
		B	58.7	70.0	96.0	37.9	60.5		
		B	70.7	77.4	93.0	36.8	60.4		
S1/3 – S4/3	20:31 - 20:40	S	266.3	122.2	79.5	34.3	56.9	52.7	• Filling of public fill at SWCH360 - 380
		S	235.2	121.9	79.2	33.6	57.6		
		M	132.5	203.5	80.7	42.7	47.1		
		M	114.4	199.4	84.3	42.3	49.8		
		B	22.2	3.0	92.4	44.2	52.2		
		B	22.4	6.7	95.0	45.0	52.6		
S1/4 – S4/4	21:00 - 21:12	S	241.4	61.6	79.4	44.2	44.3	44.9	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	255.5	65.8	81.1	43.0	47.0		
		M	175.1	0.5	82.6	43.7	47.1		
		M	169.9	7.4	79.9	41.4	48.2		
		B	174.7	36.2	88.2	50.9	42.3		
		B	172.5	26.3	87.2	52.0	40.4		
S1/5 – S4/5	21:33 - 21:40	S	243.2	71.8	107.0	43.3	59.5	62.8	• Filling of public fill at SWCH360 – 380 • A tug boat moved intermittently around the sampling points
		S	260.2	66.6	114.0	41.2	63.9		
		M	239.0	0.9	122.0	40.6	66.7		
		M	228.3	2.2	114.0	41.7	63.4		
		B	216.5	126.3	113.0	41.8	63.0		
		B	226.8	110.5	107.0	42.8	60.0		
S1/6 – S4/6	22:01 - 22:04	S	277.7	17.4	118.0	40.4	65.8	62.8	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	261.1	16.4	124.0	39.1	68.5		
		M	188.6	245.8	140.0	47.7	65.9		
		M	193.1	228.5	132.0	49.8	62.3		
		B	167.7	151.4	138.0	58.6	57.5		
		B	161.3	134.7	131.0	56.6	56.8		
							Average Reduction	**55.3**	**--**

Notes:

S denotes 1m below the water surface

M denotes mid-depth.

B denotes 1m above the seabed

S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

Table 13 Reduction in Suspended Solids Concentrations between Sampling Points S3 and S2

Sample	Sampling Time	Depth	Current Direction (Degrees)		SS (mg/l)		SS Reduction (%)	Total Average SS Reduction (%)	Construction Activity
			S3	S2	Upstream (S3)	Downstream (S2)			
S3/1 – S2/1	19:43 - 19:59	S	243.9	13.7	82.0	25.4	69.0	70.1	• Filling of public fill at SWCH360 – 380
		S	250.8	16.1	89.0	23.4	73.7		
		M	88.3	89.0	89.0	24.7	72.2		
		M	88.5	90.4	85.0	24.3	71.4		
		B	64.7	16.1	92.0	30.3	67.1		
		B	67.2	19.5	88.0	28.8	67.3		
S3/2 – S2/2	20:03 - 20:13	S	83.9	25.2	115.0	21.9	81.0	72.4	• Filling of public fill at SWCH360 – 380
		S	82.5	30.2	116.0	21.3	81.6		
		M	95.6	69.3	128.0	37.1	71.0		
		M	96.2	69.3	126.0	35.5	71.8		
		B	99.8	53.0	123.0	42.5	65.4		
		B	96.2	55.4	119.0	43.6	63.4		
S3/3 – S2/3	20:33 - 20:39	S	190.9	319.4	83.6	33.7	59.7	59.4	• Filling of public fill at SWCH360 - 380
		S	192.4	315.3	86.5	32.5	62.4		
		M	98.7	338.5	99.4	39.5	60.3		
		M	104.1	344.8	91.7	38.3	58.2		
		B	93.3	64.9	99.1	41.7	57.9		
		B	36.2	63.4	99.8	41.8	58.1		
S3/4 – S2/4	21:05 - 21:07	S	215.3	71.2	80.0	30.7	61.6	50.7	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	222.6	75.4	74.2	29.5	60.2		
		M	142.6	68.5	82.2	39	52.6		
		M	138.1	66.6	86.7	41.6	52.0		
		B	150.9	19.8	95.2	59.2	37.8		
		B	146.8	22.5	94.3	56.4	40.2		
S3/5 – S2/5	21:34 - 21:42	S	209.7	134.9	43.8	43.2	1.4	18.6	• Filling of public fill at SWCH360 – 380 • A tug boat moved intermittently around the sampling points
		S	201.2	113.0	43.6	41.5	4.8		
		M	196.8	132.6	67.9	43.9	35.3		
		M	199.2	146.4	64.1	43.6	32.0		
		B	207.0	44.7	68.9	56	18.7		
		B	202.2	45.7	70.3	56.7	19.3		
S3/6 – S2/6	21:58- 22:08	S	226.1	157.2	89.0	41.7	53.1	50.9	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	220.2	163.1	91.0	38.6	57.6		
		M	120.2	122.0	81.0	44.3	45.3		
		M	126.9	111.7	99.0	42.5	57.1		
		B	110.3	180.2	90.0	45.4	49.6		
		B	113.8	198.6	81.0	46.3	42.8		
Average Reduction								**53.7**	**--**

Notes:

S denotes 1m below the water surface

M denotes mid-depth.

B denotes 1m above the seabed

S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

Table 14 Reduction in Suspended Solids Concentrations between Sampling Points S3 and S4

Sample	Sampling Time	Depth	Current Direction (Degrees)		SS (mg/l)		SS Reduction (%)	Total Average SS Reduction (%)	Construction Activity
			S3	S4	Upstream (S3)	Downstream (S4)			
S3/1 – S4/1	19:49 - 19:59	S	243.9	211.0	82.0	42.8	47.8	23.9	• Filling of public fill at SWCH360 – 380
		S	250.8	231.1	89.0	43.4	51.2		
		M	88.3	56.8	89.0	72.7	18.3		
		M	88.5	57.2	85.0	72.1	15.2		
		B	64.7	75.4	92.0	87.3	5.1		
		B	67.2	74.4	88.0	82.8	5.9		
S3/2 – S4/2	20:10 - 20:13	S	83.9	182.1	115.0	16.3	85.8	75.7	• Filling of public fill at SWCH360 – 380
		S	82.5	183.4	116.0	16.3	85.9		
		M	95.6	85.1	128.0	36.3	71.6		
		M	96.2	84.7	126.0	34.4	72.7		
		B	99.8	70.0	123.0	37.9	69.2		
		B	96.2	77.4	119.0	36.8	69.1		
S3/3 – S4/3	20:37 - 20:40	S	190.9	122.2	83.6	34.3	59.0	56.9	• Filling of public fill at SWCH360 - 380
		S	192.4	121.9	86.5	33.6	61.2		
		M	98.7	203.5	99.4	42.7	57.0		
		M	104.1	199.4	91.7	42.3	53.9		
		B	93.3	3.0	99.1	44.2	55.4		
		B	36.2	6.7	99.8	45.0	54.9		
S3/4 – S4/4	21:05 - 21:12	S	215.3	61.6	80.0	44.2	44.8	46.2	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	222.6	65.8	74.2	43.0	42.0		
		M	142.6	0.5	82.2	43.7	46.8		
		M	138.1	7.4	86.7	41.4	52.2		
		B	150.9	36.2	95.2	50.9	46.5		
		B	146.8	26.3	94.3	52.0	44.9		
S3/5 – S4/5	21:39 - 21:42	S	209.7	71.8	43.8	43.3	1.1	26.7	• Filling of public fill at SWCH360 - 380 A tug boat moved intermittently around the sampling points
		S	201.2	66.6	43.6	41.2	5.5		
		M	196.8	0.9	67.9	40.6	40.2		
		M	199.2	2.2	64.1	41.7	34.9		
		B	207.0	126.3	68.9	41.8	39.3		
		B	202.2	110.5	70.3	42.8	39.1		
S3/6 – S4/6	22:02- 22:08	S	226.1	17.4	89.0	40.4	54.6	44.6	• Filling of public fill at SWCH360 - 380 • A tug boat moved intermittently around the sampling points
		S	220.2	16.4	91.0	39.1	57.0		
		M	120.2	245.8	81.0	47.7	41.1		
		M	126.9	228.5	99.0	49.8	49.7		
		B	110.3	151.4	90.0	58.6	34.9		
		B	113.8	134.7	81.0	56.6	30.1		
Average Reduction								**45.7**	**--**

Notes:
S denotes 1m below the water surface
M denotes mid-depth.
B denotes 1m above the seabed
S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

The average percentage reduction for SS with the adoption of silt curtain is 54.1% which exceeds the requirement outlined in the updated EM&A Manual of 45%.

Flood Tide

The SS concentrations between S6 and S5, S6 and S7, S8 and S5, and S8 and S7 are presented in **Tables 15**, **16**, **17** and **18**. As discussed in Section 4.4, the majority of SS was settled before reaching the silt curtain during the flood tide measurements and the sampling results obtained during the flood tide measurements are for reference and was not used for determination of silt curtain efficiency.

Table 15 Reduction in Suspended Solids Concentrations between Sampling Points S6 and S5

Sample	Sampling Time	Depth	Current Direction (Degrees)		SS (mg/l)		SS Reduction (%)	Total Average SS Reduction (%)	Construction Activity
			S6	S5	Upstream (S6)	Downstream (S5)			
S6/1 – S5/1	14:02 – 14:07	S	206.8	44.1	24.6	15.8	35.8	35.3	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	215.2	46.6	25.6	14.4	43.8		
		M	180.6	60.8	25.3	15.6	38.3		
		M	178.7	53.8	25.9	16.5	36.3		
		B	48.4	64.7	28.1	19.6	30.2		
		B	41.0	56.6	27.9	20.3	27.2		
S6/2 – S5/2	14:23 – 14:27	S	46.8	43.5	32.6	17.7	45.7	46.9	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	45.4	11.8	33.6	17.8	47.0		
		M	59.7	50.1	39.9	20.2	49.4		
		M	53.8	41.2	39.2	21.6	44.9		
		B	45.6	37.8	43.0	22.1	48.6		
		B	42.7	39.5	43.0	23.4	45.6		
S6/3 – S5/3	14:46 – 14:48	S	134.3	78.6	23.7	13.8	41.8	34.3	• Sand filling at CH1100 -1200 • Geotextile tube installation SWCH1650
		S	148.5	74.6	22.9	13.8	39.7		
		M	102.7	60.8	30.1	17.2	42.9		
		M	89.0	76.5	30.9	17.2	44.3		
		B	160.0	43.9	31.5	25.8	18.1		
		B	163.6	55.8	32.0	25.9	19.1		
S6/4 – S5/4	15:15 – 15:17	S	189.3	77.7	23.8	15.2	36.1	36.3	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	192.3	81.1	23.0	15.0	34.8		
		M	167.5	84.1	26.7	15.8	40.8		
		M	155.4	80.4	26.4	15.9	39.8		
		B	31.5	65.4	28.5	19.5	31.6		
		B	38.4	63.3	29.4	19.2	34.7		
S6/5 – S5/5	15:44 – 15:46	S	273.1	60.8	17.0	12.4	27.1	20.9	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	282.4	54.3	16.4	13.8	15.9		
		M	269.9	64.2	18.3	14.9	18.6		
		M	293.3	65.7	18.6	13.0	30.1		
		B	48.0	66.3	16.6	14.3	13.9		
		B	54.3	67.8	17.2	13.8	19.8		
S6/6 – S5/6	16:15 – 16:18	S	234.5	68.1	18.0	11.0	38.9	29.8	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	204.2	68.4	16.9	12.0	29.0		
		M	70.6	73.0	16.8	11.2	33.3		
		M	72.0	72.3	16.6	12.3	25.9		
		B	76.9	77.8	17.6	12.6	28.4		
		B	71.4	73.2	16.4	12.6	23.2		
							Average Reduction	**33.9**	**--**

Notes:
S denotes 1m below the water surface

M denotes mid-depth.
B denotes 1m above the seabed
S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

Table 16 Reduction in Suspended Solids Concentrations between Sampling Points S6 and S7

Sample	Sampling Time	Depth	Current Direction (Degrees)		SS (mg/l)		SS Reduction (%)	Total Average SS Reduction (%)	Construction Activity
			S6	S7	Upstream (S6)	Downstream (S7)			
S6/1 – S7/1	14:03 – 14:14	S	206.8	61.0	24.6	9.9	59.8	54.9	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	215.2	54.0	25.6	9.5	62.9		
		M	180.6	25.0	25.3	11.3	55.3		
		M	178.7	39.0	25.9	11.0	57.5		
		B	48.4	49.1	28.1	14.7	47.7		
		B	41.0	30.8	27.9	15	46.2		
S6/2 – S7/2	14:26 – 14:33	S	46.8	51.6	32.6	10.6	67.5	70.3	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	45.4	50.7	33.6	9.7	71.1		
		M	59.7	56.4	39.9	11.7	70.7		
		M	53.8	63.5	39.2	11.8	69.9		
		B	45.6	69.7	43.0	11.9	72.3		
		B	42.7	69.3	43.0	12.7	70.5		
S6/3 – S7/3	14:46 – 14:53	S	134.3	81.1	23.7	6.8	71.3	75.2	• Sand filling at CH1100 -1200 • Geotextile tube installation SWCH1650
		S	148.5	72.3	22.9	5.2	77.3		
		M	102.7	76.9	30.1	6.9	77.1		
		M	89.0	75.7	30.9	6.9	77.7		
		B	160.0	76.5	31.5	8.2	74.0		
		B	163.6	72.0	32.0	8.3	74.1		
S6/4 – S7/4	15:15 – 15:23	S	189.3	70.4	23.8	11.4	52.1	50.5	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	192.3	69.8	23.0	10.8	53.0		
		M	167.5	64.9	26.7	10.3	61.4		
		M	155.4	69.1	26.4	10.0	62.1		
		B	31.5	69.7	28.5	17.3	39.3		
		B	38.4	75.7	29.4	19.1	35.0		
S6/5 – S7/5	15:44 – 15:52	S	273.1	74.7	17.0	5.6	67.1	64.2	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	282.4	79.5	16.4	6.4	61.0		
		M	269.9	70.4	18.3	4.1	77.6		
		M	293.3	68.2	18.6	5.2	72.0		
		B	48.0	81.3	16.6	7.4	55.4		
		B	54.3	78.2	17.2	8.2	52.3		
S6/6 – S7/6	16:15 – 16:23	S	234.5	77.7	18.0	7.2	60.0	57.3	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	204.2	78.9	16.9	7.4	56.2		
		M	70.6	67.4	16.8	7.4	56.0		
		M	72.0	61.4	16.6	6.8	59.0		
		B	76.9	64.4	17.6	7.9	55.1		
		B	71.4	67.8	16.4	7.0	57.3		
							Average Reduction	**62.1**	**--**

Notes:
S denotes 1m below the water surface
M denotes mid-depth.
B denotes 1m above the seabed
S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

Table 17 Reduction in Suspended Solids Concentrations between Sampling Points S8 and S5

Sample	Sampling Time	Depth	Current Direction (Degrees)		SS (mg/l)		SS Reduction (%)	Total Average SS Reduction (%)	Construction Activity
			S8	S5	Upstream (S8)	Downstream (S5)			
S8/1 – S5/1	14:02 – 14:13	S	111.4	44.1	18.8	15.8	16.0	14.3	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	105.2	46.6	19.5	14.4	26.2		
		M	99.3	60.8	19.0	15.6	17.9		
		M	95.8	53.8	18.4	16.5	10.3		
		B	82.0	64.7	19.5	19.6	-0.5*		
		B	75.6	56.6	20.5	20.3	1.0		
S8/2 – S5/2	14:23 – 14:33	S	128.9	43.5	20.6	17.7	14.1	8.2	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	116.4	11.8	19.6	17.8	9.2		
		M	128.7	50.1	18.1	20.2	-11.6*		
		M	109.4	41.2	18.3	21.6	-18.0*		
		B	17.0	37.8	22.4	22.1	1.3		
		B	27.7	39.5	22.5	23.4	-4.0*		
S8/3 – S5/3	14:46– 14:53	S	137.7	78.6	15.3	13.8	9.8	13.4	• Sand filling at CH1100 -1200 • Geotextile tube installation SWCH1650
		S	145.3	74.6	16.6	13.8	16.9		
		M	128.5	60.8	16.0	17.2	-7.5*		
		M	114.0	76.5	15.5	17.2	-11.0*		
		B	74.2	43.9	17.8	25.8	-44.9*		
		B	87.2	55.8	17.8	25.9	-45.5*		
S8/4 – S5/4	15:16– 15:22	S	67.9	77.7	14.6	15.2	-4.1*	4.6	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	68.0	81.1	15.2	15	1.3		
		M	2.3	84.1	13.2	15.8	-19.7*		
		M	3.7	80.4	15.0	15.9	-6.0*		
		B	5.1	65.4	20.7	19.5	5.8		
		B	4.2	63.3	20.6	19.2	6.8		
S8/5 – S5/5	15:45 – 15:50	S	77.4	60.8	11.4	12.4	-8.8*	6.6	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	76.6	54.3	11.8	13.8	-16.9*		
		M	111.0	64.2	13.1	14.9	-13.7*		
		M	93.2	65.7	12.0	13	-8.3*		
		B	37.6	66.3	14.9	14.3	4.0		
		B	33.9	67.8	15.2	13.8	9.2		
S8/6 – S5/6	16:16 – 16:21	S	87.2	68.1	12.3	11	10.6	11.4	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	80.1	68.4	13.2	12	9.1		
		M	22.2	73.0	14.5	11.2	22.8		
		M	21.6	72.3	14.0	12.3	12.1		
		B	23.3	77.8	13.1	12.6	3.8		
		B	23.7	73.2	14.0	12.6	10.0		
							Average Reduction	**9.8**	**--**

Notes:

S denotes 1m below the water surface

M denotes mid-depth.

B denotes 1m above the seabed

S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

* As explained in Section 4.5, this data is considered invalid and not used for calculating the average reduction.

Table 18 Reduction in Suspended Solids Concentrations between Sampling Points S8 and S7

Sample	Sampling Time	Depth	Current Direction (Degrees)		SS (mg/l)		SS Reduction (%)	Total Average SS Reduction (%)	Construction Activity
			S8	S7	Upstream (S8)	Downstream (S7)			
S8/1 – S7/1	14:12 – 14:14	S	111.4	61.0	18.8	9.9	47.3	38.5	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	105.2	54.0	19.5	9.5	51.3		
		M	99.3	25.0	19.0	11.3	40.5		
		M	95.8	39.0	18.4	11.0	40.2		
		B	82.0	49.1	19.5	14.7	24.6		
		B	75.6	30.8	20.5	15	26.8		
S8/2 – S7/2	14:31 – 14:33	S	128.9	51.6	20.6	10.6	48.5	43.4	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	116.4	50.7	19.6	9.7	50.5		
		M	128.7	56.4	18.1	11.7	35.4		
		M	109.4	63.5	18.3	11.8	35.5		
		B	17.0	69.7	22.4	11.9	46.9		
		B	27.7	69.3	22.5	12.7	43.6		
S8/3 – S7/3	14:52– 14:53	S	137.7	81.1	15.3	6.8	55.6	57.3	• Sand filling at CH1100 -1200 • Geotextile tube installation SWCH1650
		S	145.3	72.3	16.6	5.2	68.7		
		M	128.5	76.9	16.0	6.9	56.9		
		M	114.0	75.7	15.5	6.9	55.5		
		B	74.2	76.5	17.8	8.2	53.9		
		B	87.2	72.0	17.8	8.3	53.4		
S8/4 – S7/4	15:21 – 15:23	S	67.9	70.4	14.6	11.4	21.9	21.6	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	68.0	69.8	15.2	10.8	28.9		
		M	2.3	64.9	13.2	10.3	22.0		
		M	3.7	69.1	15.0	10.0	33.3		
		B	5.1	69.7	20.7	17.3	16.4		
		B	4.2	75.7	20.6	19.1	7.3		
S8/5 – S7/5	15:48 – 15:52	S	77.4	74.7	11.4	5.6	50.9	53.1	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	76.6	79.5	11.8	6.4	45.8		
		M	111.0	70.4	13.1	4.1	68.7		
		M	93.2	68.2	12.0	5.2	56.7		
		B	37.6	81.3	14.9	7.4	50.3		
		B	33.9	78.2	15.2	8.2	46.1		
S8/6 – S7/6	16:20 – 16:23	S	87.2	77.7	12.3	7.2	41.5	45.9	• Sand filling at SWCH1100 -1200 • Geotextile tube installation SWCH1650
		S	80.1	78.9	13.2	7.4	43.9		
		M	22.2	67.4	14.5	7.4	49.0		
		M	21.6	61.4	14.0	6.8	51.4		
		B	23.3	64.4	13.1	7.9	39.7		
		B	23.7	67.8	14.0	7.0	50.0		
							Average Reduction	**43.3**	--

Notes:

S denotes 1m below the water surface

M denotes mid-depth.

B denotes 1m above the seabed

S1/1 indicates the first round of sampling for sampling point S1, therefore, S1/6 denotes the sixth round of sampling point S1.

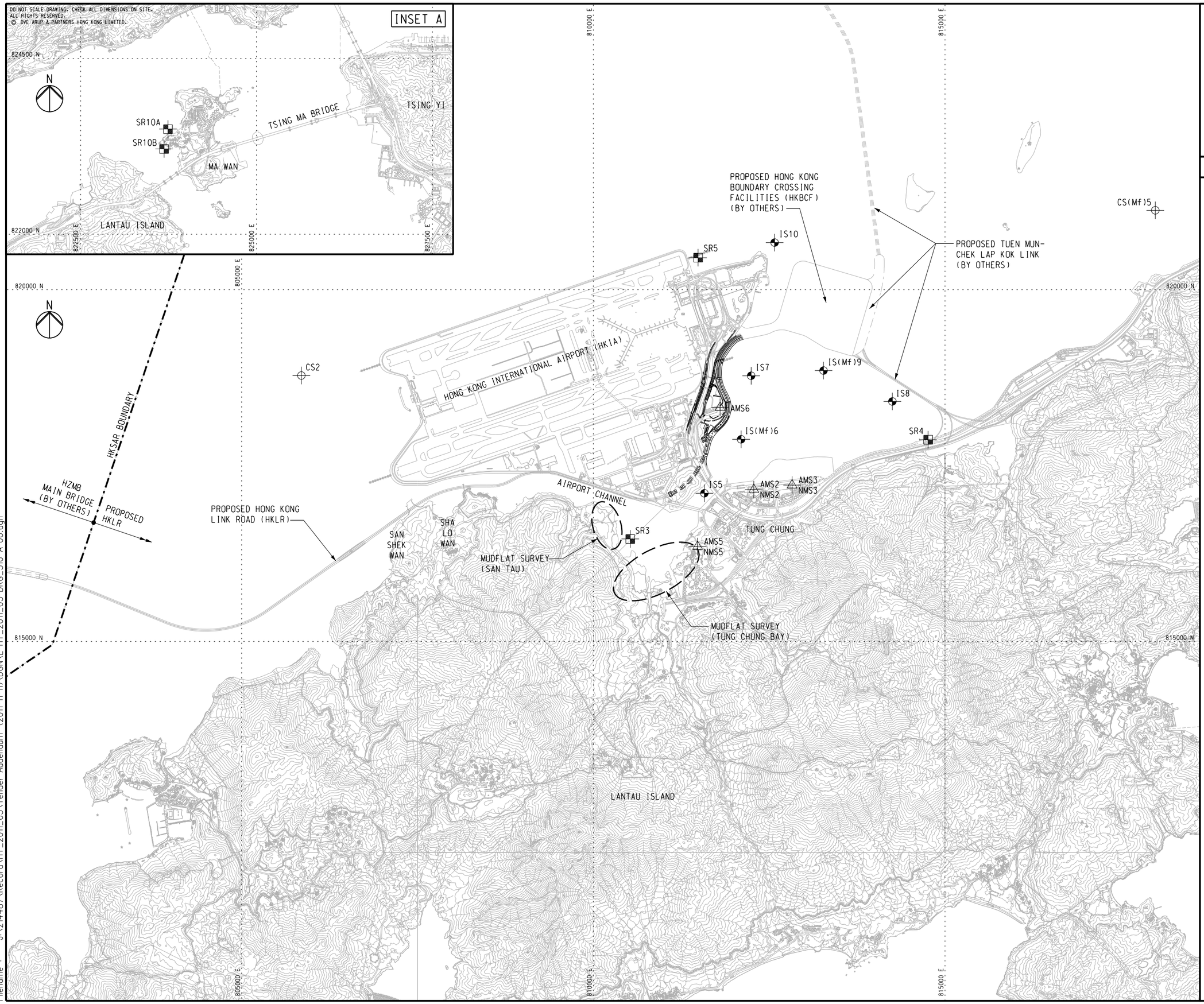
5. Conclusion

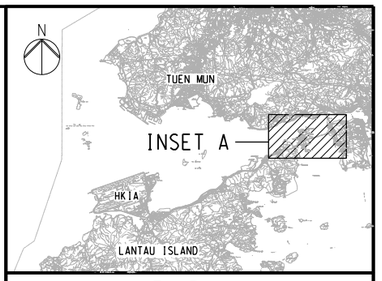
CSHK has deployed the same make and model of silt curtain across the HKLR site. The details of the silt curtain that is deployed by CSHK at the HKLR site are provided in **Appendix C**. As the majority of SS was settled before reaching the silt curtain, measurements taken during flood tide became irrelevant to this study. Therefore, the measurement data obtained during the flood tide are for reference only and was not used for determination of silt curtain efficiency.

The SS concentration of S1 and S3 are significantly higher than the SS concentration of control station CS2, which demonstrates that SS plumes had been picked up at S1 and S3 as no other source of SS was noted during the pilot test. The SS data obtained during the ebb tide measurements is considered appropriate to determine an average reduction in SS for the silt curtain pilot test.

The silt curtain pilot test shows that the average SS reduction of all the sample locations for the ebb tide measurements is 54.1% which is above the required Updated EM&A Manual requirement of 45%.

FIGURES





KEY PLAN

NOTES

1. EXACT LOCATIONS OF MONITORING STATIONS ARE TO BE DETERMINED ON SITE. THE CONTRACTOR AND ENVIRONMENTAL TEAM (ET) SHALL AGREE WITH THE INDEPENDENT ENVIRONMENTAL CHECKER (IEC) AND ENVIRONMENTAL PROJECT OFFICE (ENPO) AND APPROVED BY THE SUPERVISING OFFICER FOR THE PROPOSED LOCATION OF THE MONITORING STATIONS.
2. THE LOCATION AND EXTENT OF MUDFLAT SURVEY SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. THE CONTRACTOR AND ET SHALL DETERMINE AND AGREE WITH THE IEC, ENPO AND SUPERVISING OFFICER THE DETAILS OF THE MUDFLAT SURVEY IN ACCORDANCE WITH THE REQUIREMENTS STIPULATED IN THE EIA REPORTS AND E&MA MANUALS.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS STIPULATED IN THE EM&A MANUALS TO CONDUCT THE ENVIRONMENTAL MONITORING AND AUDIT WORKS.

LEGEND

- IS — IMPACT STATIONS (WATER QUALITY)
- CS — CONTROL/FAR FIELD STATIONS (WATER QUALITY)
- SR — SENSITIVE RECEIVERS STATIONS (WATER QUALITY)
- ST — STATION FOR SENSITIVITY TEST RESULT (WATER QUALITY)
- AMS — MONITORING STATIONS (AIR QUALITY)
- NMS — MONITORING STATIONS (NOISE)

Rev	Description	By	Date
A	TENDER ADDENDUM ISSUE	AW	11/11

Consultant

ARUP 奧雅納工程顧問 Ove Arup & Partners Hong Kong Limited

Contract No. and Title:

Contract No. HY/2011/03

Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road -
Section Between Scenic Hill and
Hong Kong Boundary Crossing Facilities

Drawing title

ENVIRONMENTAL MONITORING STATIONS

Drawing no.	Rev.
Figure 1	0

Drawn	Date	Checked	Approved
RY	11/11	AW	SK

Scale: 1:25000 @A1 | Status: TENDER

路政署 HIGHWAYS DEPARTMENT
港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Printed by : 10/11/2011
Filename : J:\214487\Record\HY_2011_03\Tender Addendum (2011-11-11)\DGN\E-HY_2011_03-DRG_310-A-00.dgn

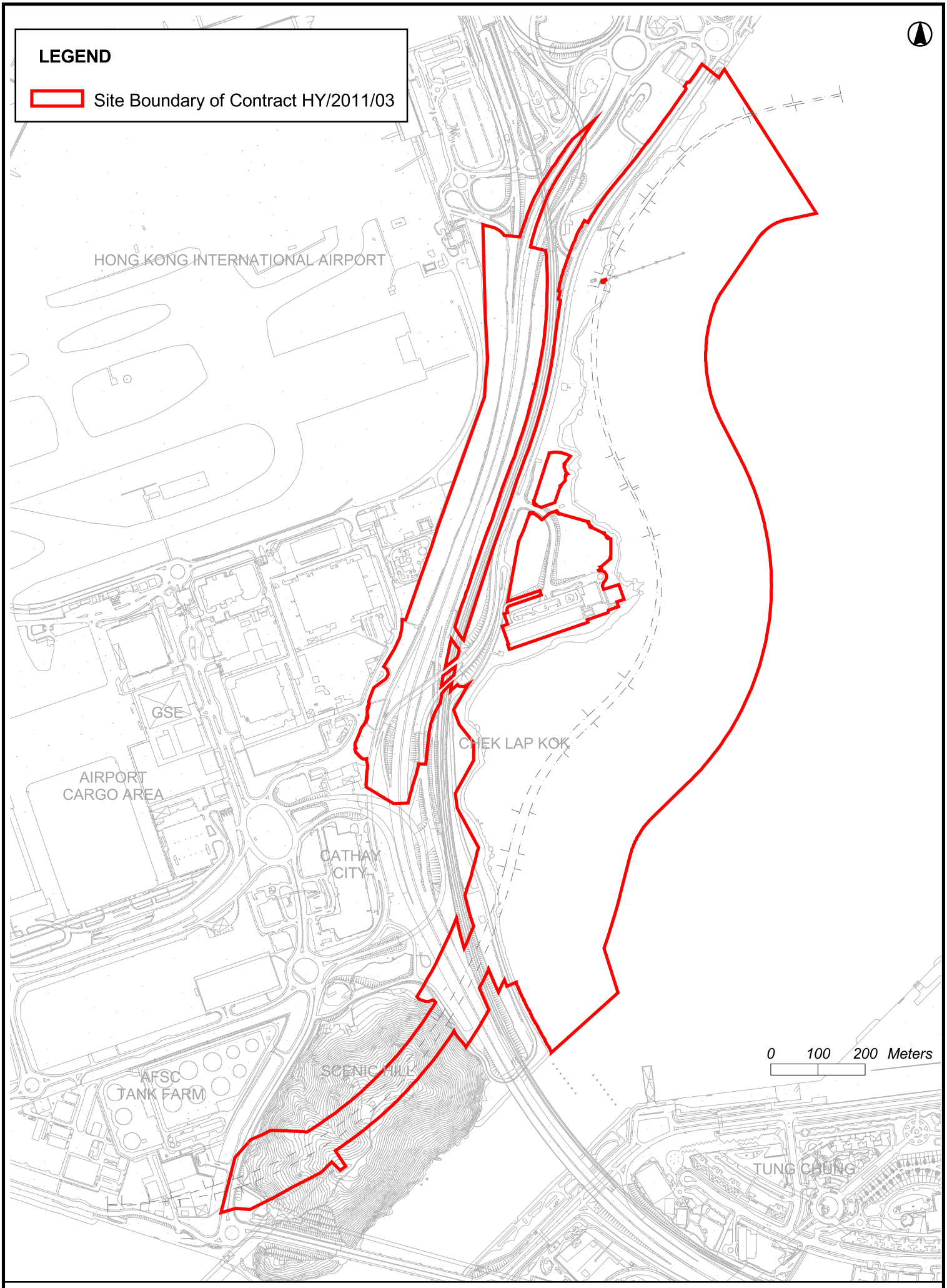


Figure 2 Location of the Site

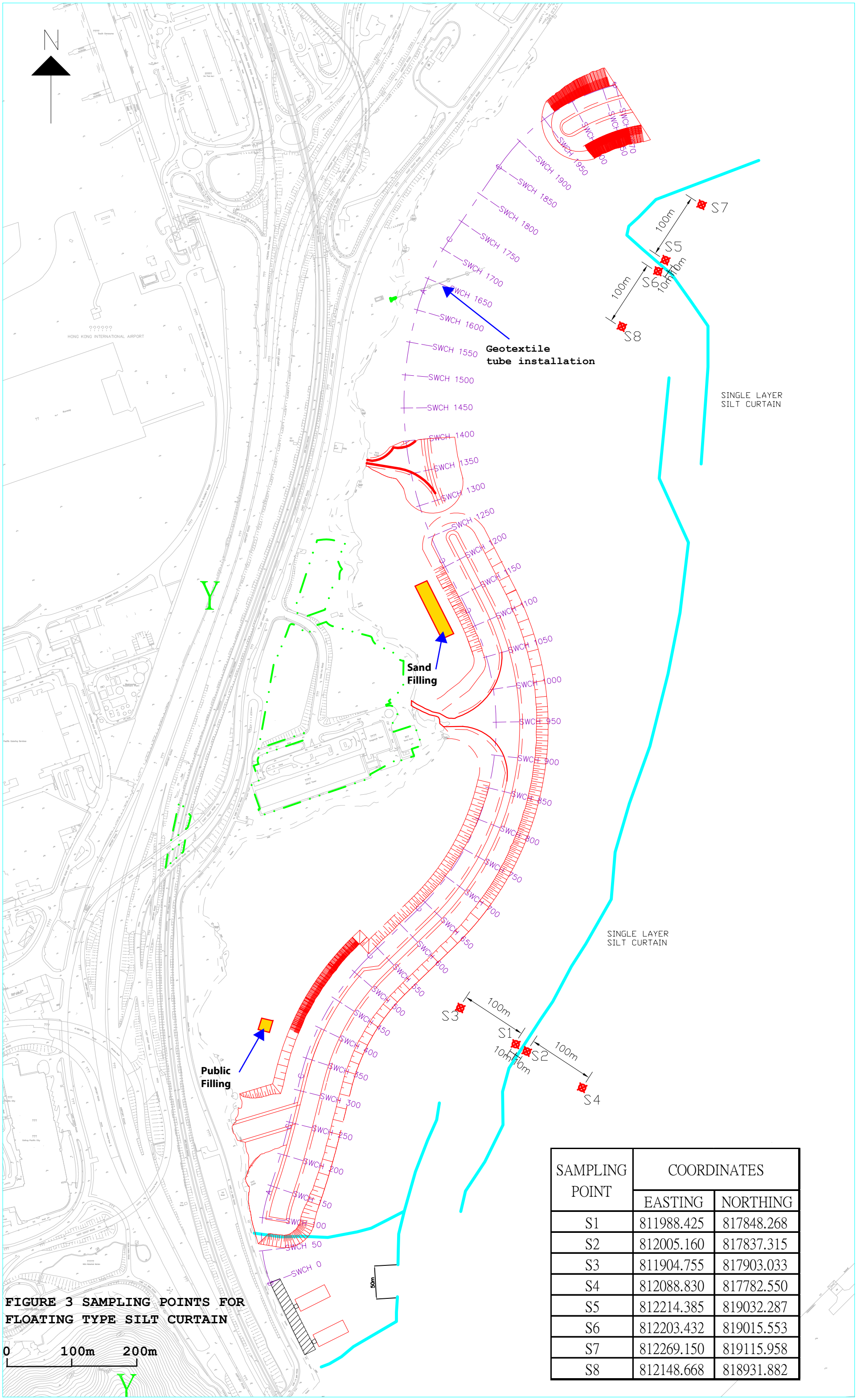


FIGURE 3 SAMPLING POINTS FOR FLOATING TYPE SILT CURTAIN

SAMPLING POINT	COORDINATES	
	EASTING	NORTHING
S1	811988.425	817848.268
S2	812005.160	817837.315
S3	811904.755	817903.033
S4	812088.830	817782.550
S5	812214.385	819032.287
S6	812203.432	819015.553
S7	812269.150	819115.958
S8	812148.668	818931.882

APPENDIX A – WATER MEASUREMENTS

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Round	Time	Depth, m	Level	Level_Code	Replicate	Temperature, ℃	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L	Current Velocity, cm/s	Current Direction	Site Observation
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS(Mf)5	1	19:06:47	1.0	Surface	1	1	22.01	7.99	32.2	91	6.6	2.7	5.3	20.7	48.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS(Mf)5	1	19:04:46	1.0	Surface	1	2	22.04	7.98	32.17	91.8	6.66	2.9	4.7	21.1	42.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS(Mf)5	1	19:06:26	6.7	Middle	2	1	22.36	7.99	32.53	90.5	6.51	3.2	5.4	14.1	36.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS(Mf)5	1	19:04:09	6.7	Middle	2	2	22.36	7.96	32.49	91.1	6.55	3	5.6	12.1	38.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS(Mf)5	1	19:03:11	12.3	Bottom	3	1	22.35	7.92	32.47	91.7	6.6	3.1	6.7	13.5	73.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS(Mf)5	1	19:05:46	12.3	Bottom	3	2	22.35	7.99	32.55	90.4	6.5	3	7.1	11.1	60.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS2	1	18:59:38	1.0	Surface	1	1	21.87	8.15	31.04	98.1	7.23	4.2	4.8	14.5	246.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS2	1	19:00:32	1.0	Surface	1	2	21.47	8.18	31.06	97.4	7.17	4.2	5.7	14.8	262.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS2	1	18:59:11	4.0	Middle	2	1	21.46	8.14	30.98	97.5	7.16	4.8	4.6	37.1	74.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS2	1	19:00:07	4.0	Middle	2	2	21.84	8.19	31	96.6	7.08	4.6	4.4	38.1	86.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS2	1	18:59:42	6.9	Bottom	3	1	22.01	8.16	32.75	98	7.08	4.8	6.3	44.8	27.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	CS2	1	18:58:41	6.9	Bottom	3	2	21.7	8.15	32.84	98.4	7.12	4.8	6.7	43.2	27.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	1	19:51:22	1.0	Surface	1	1	21.17	8.2	29.87	94.4	7.05	51.1	92.9	15.5	226.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	1	19:49:40	1.0	Surface	1	2	21.18	8.19	29.88	95.8	7.14	51.4	90.7	14.6	215.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	1	19:50:39	1.9	Middle	2	1	21.18	8.2	29.88	94.8	7.07	55.6	124.0	17.0	147.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	1	19:49:13	1.9	Middle	2	2	21.19	8.17	29.9	96.8	7.22	54.1	123.0	16.0	144.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	1	19:48:45	2.8	Bottom	3	1	21.19	8.14	29.94	99.9	7.45	53.4	115.0	30.6	69.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	1	19:50:12	2.8	Bottom	3	2	21.18	8.2	29.88	95	7.09	55.3	118.0	29.0	62.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	1	19:46:32	1.0	Surface	1	1	21.19	8.01	29.75	97.4	7.27	17.2	25.4	10.1	13.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	1	19:44:53	1.0	Surface	1	2	21.2	7.97	29.79	98.8	7.38	15.9	23.4	9.9	16.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	1	19:45:20	2.0	Middle	2	1	21.23	7.99	29.82	98.3	7.33	17.3	24.7	20.3	89.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	1	19:44:28	2.0	Middle	2	2	21.2	7.96	29.84	100	7.46	16.7	24.3	19.2	90.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	1	19:43:58	2.9	Bottom	3	1	21.22	7.92	29.87	103.3	7.7	16.6	30.3	18.0	16.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	1	19:45:05	2.9	Bottom	3	2	21.24	7.98	29.86	98.7	7.35	17.7	28.8	17.3	19.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	1	19:58:43	1.0	Surface	1	1	21.19	8.13	29.85	94.6	7.06	56	82.0	17.2	243.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	1	19:59:45	1.0	Surface	1	2	21.19	8.17	29.87	93.1	6.95	53.9	89.0	16.4	250.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	1	19:58:09	1.9	Middle	2	1	21.18	8.16	29.87	93.1	6.95	55.2	89.0	22.6	88.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	1	19:59:18	1.9	Middle	2	2	21.18	8.15	29.87	93.1	6.95	55.7	85.0	22.9	88.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	1	19:57:44	2.8	Bottom	3	1	21.23	8.12	29.84	97.4	7.26	56.9	92.0	25.0	64.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	1	19:59:16	2.8	Bottom	3	2	21.2	8.15	29.87	93.4	6.97	54.9	88.0	27.5	67.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	1	19:51:37	1.0	Surface	1	1	21.35	7.98	29.78	94.6	7.04	51.8	42.8	11.3	211.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	1	19:50:22	1.0	Surface	1	2	21.36	7.97	29.8	95.1	7.08	47.7	43.4	9.9	231.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	1	19:51:14	1.9	Middle	2	1	21.36	7.98	29.8	94.5	7.03	53.8	72.7	16.1	56.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	1	19:49:57	1.9	Middle	2	2	21.41	7.97	29.81	95.3	7.09	53.7	72.1	14.1	57.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	1	19:50:52	2.8	Bottom	3	1	21.41	7.98	29.8	94.5	7.02	49.2	87.3	15.1	75.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	1	19:49:36	2.8	Bottom	3	2	21.46	7.96	29.83	96.9	7.2	51.7	82.8	17.0	74.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	2	20:07:05	1.0	Surface	1	1	21.11	8.13	29.84	93.4	6.98	43.1	89.0	9.6	268.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	2	20:05:45	1.0	Surface	1	2	21.12	8.12	29.84	93.9	7.01	45.7	92.0	8.8	247.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	2	20:06:32	1.8	Middle	2	1	21.12	8.13	29.84	93.5	6.98	44.2	92.0	12.5	66.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	2	20:05:06	1.8	Middle	2	2	21.12	8.11	29.84	94.7	7.08	46.1	95.8	112.3	123.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	2	20:04:38	2.6	Bottom	3	1	21.15	8.1	29.85	96.7	7.22	45.7	96.0	21.0	58.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	2	20:06:07	2.6	Bottom	3	2	21.12	8.12	29.85	93.7	7	45.2	93.0	20.2	70.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	2	20:05:58	1.0	Surface	1	1	21.28	7.98	29.79	96.5	7.19	18.9	21.9	10.9	25.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	2	20:04:56	1.0	Surface	1	2	21.22	7.98	29.79	97.6	7.28	16.2	21.3	9.3	30.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	2	20:05:42	1.9	Middle	2	1	21.24	7.99	29.8	97.1	7.24	17.9	37.1	13.6	69.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	2	20:04:29	1.9	Middle	2	2	21.24	7.97	29.81	98.1	7.32	16.2	35.5	13.4	69.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	2	20:05:12	2.7	Bottom	3	1	21.26	7.98	29.83	97.4	7.26	17.1	42.5	22.9	53.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	2	20:03:36	2.7	Bottom	3	2	21.23	7.95	29.81	103.6	7.73	15.3	43.6	27.8	55.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	2	20:11:37	1.0	Surface	1	1	21.19	8.12	29.87	94.6	7.06	64.7	115.0	16.7	83.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	2	20:13:29	1.0	Surface	1	2	21.17	8.15	29.88	93.3	6.96	64.1	116.0	18.8	82.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	2	20:11:19	1.9	Middle	2	1	21.2	8.11	29.87	96.1	7.17	67	128.0	17.8	95.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	2	20:13:21	1.9	Middle	2	2	21.18	8.15	29.89	93.3	6.96	65.6	126.0	20.7	96.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	2	20:11:57	2.8	Bottom	3	1	21.19	8.12	29.88	93.9	7	64.5	123.0	13.3	99.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	2	20:11:00	2.8	Bottom	3	2	21.19	8.11	29.82	100.4	7.49	68.4	119.0	16.5	96.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	2	20:10:44	1.0	Surface	1	1	21.38	7.98	29.91	94.9	7.05	22.9	16.3	10.8	182.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	2	20:11:39	1.0	Surface	1	2	21.39	7.98	29.91	94.6	7.03	25.6	16.3	10.3	183.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	2	20:10:31	2.0	Middle	2	1	21.38	7.98	29.92	94.9	7.05	22.7	36.3	20.1	85.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	2	20:11:24	2.0	Middle	2	2	21.4	7.98	29.92	94.5	7.02	26.2	34.4	16.9	84.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	2	20:10:03	2.9	Bottom	3	1	21.4	7.97	29.93	94.9	7.05	25.5	37.9	25.0	70.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	2	20:11:11	2.9	Bottom	3	2	21.45	7.98	29.93	94.5	7.02	26.6	36.8	23.1	77.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	3	20:31:47	1.0	Surface	1	1	21.13	8.12	29.91	96.4	7.2	50.3	79.5	14.2	266.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	3	20:32:46	1.0	Surface	1	2	21.12	8.14	29.92	94.6	7.06	49.6	79.2	12.6	235.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	3	20:31:30	1.9	Middle	2	1	21.16	8.11	29.92	98.1	7.32	52.7	80.7	26.0	132.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	3	20:32:25	1.9	Middle	2	2	21.12	8.13	29.92	94.9	7.09	50.3	84.3	24.7	114.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	3	20:32:04	2.7	Bottom	3	1	21.13	8.12	29.93	95.6	7.14	55.9	92.4	29.3	22.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	3	20:31:22	2.7	Bottom	3	2	21.18	8.11	29.93	99.4	7.42	54.3	95.0	30.9	22.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	3	20:36:04	1.0	Surface	1	1	21.34	7.97	29.9	94.7	7.04	28.3	33.7	17.1	319.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	3	20:34:49	1.0	Surface	1	2	21.42	7.96	29.92	95.2	7.07	28.6	32.5	15.8	315.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	3	20:35:32	1.9	Middle	2	1	21.48	7.97	30.01	94.8	7.03	27.8	39.5	7.0	338.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	3	20:34:14	1.9	Middle	2	2	21.6	7.95	30.06	97.1	7.18	27.2	38.3	6.2	344.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	3	20:35:17	2.7	Bottom	3	1	21.39	7.97	29.95	94.9	7.05	29.1	41.7	7.3	64.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	3	20:33:48	2.7	Bottom	3	2	21.61	7.94	30.09	103.6	7.66	29.7	41.8	7.3	63.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	3	20:37:46	1.0	Surface	1	1	21.11	8.14	29.88	94.1	7.03	52.1	83.6	16.7	190.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	3	20:39:04	1.0	Surface	1	2	21.15	8.15	29.89	93.1	6.95	53.7	86.5	16.2	192.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	3	20:38:46	1.9	Middle	2	1	21.16	8.15	29.89	93.2	6.96	55.1	99.4	26.0	98.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	3	20:37:22	1.9	Middle	2	2	21.11	8.14	29.88	96	7.17	54.2	91.7	22.1	104.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	3	20:37:04	2.7	Bottom	3	1	21.11	8.14	29.86	98.9	7.39	53.2	99.1	28.3	93.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	3	20:38:07	2.7	Bottom	3	2	21.15	8.14	29.88	93.4	6.97	51.4	99.8	36.1	36.2	-

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Round	Time	Depth, m	Level	Level_Code	Replicate	Temperature, ℃	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L	Current Velocity, cm/s	Current Direction	Site Observation
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	3	20:40:10	1.0	Surface	1	1	21.41	7.93	29.96	95.4	7.08	27.5	34.3	10.5	122.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	3	20:40:57	1.0	Surface	1	2	21.43	7.94	29.96	94.3	7	23.5	33.6	11.1	121.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	3	20:40:41	1.8	Middle	2	1	21.49	7.93	30.02	94.4	7	25.5	42.7	10.5	203.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	3	20:39:46	1.8	Middle	2	2	21.37	7.92	29.95	96.6	7.18	30.8	42.3	11.5	199.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	3	20:39:24	2.5	Bottom	3	1	21.43	7.93	29.97	100.8	7.48	32.4	44.2	16.6	3.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	3	20:40:26	2.5	Bottom	3	2	21.48	7.93	30.03	94.8	7.03	28.9	45.0	18.3	6.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	4	21:00:56	1.0	Surface	1	1	21.1	8.12	29.98	96	7.17	47.9	79.4	10.9	241.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	4	21:01:49	1.0	Surface	1	2	21.11	8.15	29.99	94.5	7.06	48	81.1	9.6	255.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	4	21:01:27	1.9	Middle	2	1	21.13	8.13	29.99	95	7.09	48.6	82.6	22.8	175.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	4	21:00:41	1.9	Middle	2	2	21.1	8.11	30	97.4	7.27	48.5	79.9	23.7	169.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	4	21:00:25	2.7	Bottom	3	1	21.12	8.1	30.02	99.9	7.46	49.7	88.2	33.6	174.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	4	21:01:14	2.7	Bottom	3	2	21.12	8.12	30.01	95.4	7.12	48.4	87.2	35.9	172.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	4	21:06:18	1.0	Surface	1	1	21.34	7.94	29.94	95.9	7.13	30.7	30.7	9.9	71.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	4	21:07:04	1.0	Surface	1	2	21.32	7.96	29.91	94.5	7.03	32.2	29.5	9.5	75.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	4	21:06:52	1.9	Middle	2	1	21.35	7.95	29.95	94.8	7.04	29.1	39.0	8.8	68.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	4	21:05:52	1.9	Middle	2	2	21.47	7.91	30.02	98.2	7.28	25.3	41.6	8.7	66.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	4	21:06:28	2.7	Bottom	3	1	21.38	7.94	30.03	95.6	7.1	25.1	59.2	15.6	19.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	4	21:05:39	2.7	Bottom	3	2	21.59	7.89	30.21	102.5	7.58	23.1	56.4	16.7	22.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	4	21:06:26	1.0	Surface	1	1	21.06	8.14	29.92	94.9	7.09	46.9	80.0	19.1	215.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	4	21:07:33	1.0	Surface	1	2	21.14	8.15	29.94	93.7	6.99	46.7	74.2	20.1	222.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	4	21:07:21	1.8	Middle	2	1	21.1	8.14	29.93	93.7	7	46.8	82.2	23.5	142.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	4	21:06:12	1.8	Middle	2	2	21.07	8.13	29.92	96	7.18	46.6	86.7	24.8	138.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	4	21:05:58	2.6	Bottom	3	1	21.07	8.13	29.89	98.1	7.33	48.7	95.2	24.9	150.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	4	21:07:03	2.6	Bottom	3	2	21.08	8.14	29.94	93.9	7.02	48.4	94.3	27.4	146.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	4	21:12:44	1.0	Surface	1	1	21.3	7.96	29.92	94.1	7.01	34.4	44.2	9.0	61.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	4	21:11:57	1.0	Surface	1	2	21.35	7.95	29.97	95.7	7.11	33.1	43.0	10.1	65.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	4	21:12:26	1.8	Middle	2	1	21.38	7.96	29.99	94.3	7	29.3	43.7	5.3	0.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	4	21:11:33	1.8	Middle	2	2	21.38	7.94	29.98	97.9	7.28	29.3	41.4	7.0	7.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	4	21:12:14	2.5	Bottom	3	1	21.51	7.96	30.11	94.7	7.01	24.8	50.9	8.0	36.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	4	21:11:19	2.5	Bottom	3	2	21.48	7.93	30.1	101.6	7.53	20.7	52.0	9.3	26.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	5	21:34:13	1.0	Surface	1	1	21.02	8.16	29.88	95.9	7.18	50.3	107.0	8.0	243.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	5	21:35:44	1.0	Surface	1	2	21.01	8.16	29.88	94.3	7.06	50.1	114.0	8.2	260.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	5	21:33:52	1.9	Middle	2	1	21.03	8.15	29.89	97.1	7.26	52.3	122.0	25.5	239.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	5	21:35:01	1.9	Middle	2	2	21.01	8.16	29.88	94.6	7.08	51.7	114.0	26.1	228.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	5	21:34:40	2.7	Bottom	3	1	21.02	8.16	29.89	95.1	7.12	55.8	113.0	30.5	216.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	5	21:33:15	2.7	Bottom	3	2	21.04	8.13	29.93	101.5	7.59	55.2	107.0	33.8	226.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	5	21:34:45	1.0	Surface	1	1	21.24	7.94	29.92	96	7.15	33.7	43.2	6.3	134.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	5	21:35:21	1.0	Surface	1	2	21.28	7.95	29.95	94.9	7.06	32.9	41.5	7.2	113.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	5	21:34:28	1.8	Middle	2	1	21.28	7.93	29.97	97.3	7.24	34.3	43.9	5.0	132.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	5	21:35:12	1.8	Middle	2	2	21.31	7.95	29.98	94.9	7.06	34.1	43.6	5.7	146.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	5	21:34:59	2.6	Bottom	3	1	21.32	7.95	30.02	95.4	7.09	33.4	56.0	16.1	44.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	5	21:34:08	2.6	Bottom	3	2	21.23	7.91	30.01	101.8	7.58	32.8	56.7	13.5	45.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	5	21:40:49	1.0	Surface	1	1	21.01	8.13	29.84	92.3	6.91	36.8	43.8	20.2	209.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	5	21:42:01	1.0	Surface	1	2	21.05	8.14	29.87	92	6.88	35.9	43.6	19.2	201.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	5	21:40:25	1.9	Middle	2	1	21.05	8.13	29.87	93.8	7.02	36.3	67.9	25.6	196.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	5	21:41:37	1.9	Middle	2	2	21.02	8.13	29.86	91.8	6.87	36.6	64.1	23.5	199.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	5	21:39:52	2.7	Bottom	3	1	21.05	8.14	29.83	93.6	7.01	35.8	68.9	23.2	207.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	5	21:41:14	2.7	Bottom	3	2	21.03	8.13	29.87	91.7	6.86	36.4	70.3	22.2	202.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	5	21:40:46	1.0	Surface	1	1	21.26	7.96	29.92	94.3	7.02	31.9	43.3	7.3	71.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	5	21:39:59	1.0	Surface	1	2	21.25	7.95	29.92	95.6	7.12	32.6	41.2	7.0	66.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	5	21:39:35	1.8	Middle	2	1	21.33	7.94	29.98	97.9	7.28	31.9	40.6	6.4	0.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	5	21:40:28	1.8	Middle	2	2	21.37	7.96	30.01	94.6	7.03	28.9	41.7	7.5	2.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	5	21:39:23	2.5	Bottom	3	1	21.36	7.94	30.03	100.6	7.47	30.1	41.8	6.2	126.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	5	21:40:11	2.5	Bottom	3	2	21.28	7.96	29.98	95.2	7.08	31.7	42.8	6.0	110.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	6	22:01:46	1.0	Surface	1	1	20.99	8.13	29.88	95.1	7.12	62.6	118.0	13.6	277.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	6	22:02:35	1.0	Surface	1	2	20.98	8.14	29.88	94	7.04	62.1	124.0	12.3	261.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	6	22:02:16	1.7	Middle	2	1	20.99	8.14	29.88	94.2	7.05	62.8	140.0	26.8	188.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	6	22:01:27	1.7	Middle	2	2	21.01	8.12	29.88	96.3	7.21	63.6	132.0	24.8	193.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	6	22:01:14	2.4	Bottom	3	1	21.02	8.12	29.9	97.5	7.29	63.2	138.0	16.2	167.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S1	6	22:02:01	2.4	Bottom	3	2	20.99	8.14	29.88	94.7	7.09	63.9	131.0	17.4	161.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	6	21:59:33	1.0	Surface	1	1	21.19	7.96	29.9	94.5	7.05	33.2	41.7	11.3	157.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	6	21:58:43	1.0	Surface	1	2	21.16	7.95	29.89	96.6	7.21	32.5	38.6	10.1	163.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	6	21:58:31	1.8	Middle	2	1	21.19	7.95	29.92	97.9	7.3	30.9	44.3	7.1	122.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	6	21:59:11	1.8	Middle	2	2	21.27	7.96	29.95	95	7.08	33.3	42.5	8.9	111.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	6	21:58:11	2.5	Bottom	3	1	21.38	7.95	30.04	103.4	7.68	30.9	45.4	9.9	180.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S2	6	21:59:03	2.5	Bottom	3	2	21.25	7.96	29.99	95.5	7.11	32.7	46.3	8.1	198.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	6	22:07:27	1.0	Surface	1	1	20.88	8.12	29.79	91.3	6.86	33.3	89.0	14.1	226.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	6	22:08:31	1.0	Surface	1	2	20.9	8.12	29.79	90.2	6.76	34.1	91.0	13.9	220.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	6	22:06:55	1.8	Middle	2	1	20.92	8.11	29.79	93.6	7.02	52.9	81.0	16.1	120.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	6	22:08:04	1.8	Middle	2	2	20.91	8.12	29.8	90.4	6.78	52.4	99.0	14.9	126.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	6	22:07:48	2.6	Bottom	3	1	20.9	8.12	29.8	90.9	6.82	53.6	90.0	23.3	110.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S3	6	22:06:39	2.6	Bottom	3	2	20.95	8.11	29.76	97.3	7.29	55.3	81.0	25.2	113.8	-

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Round	Time	Depth, m	Level	Level_Code	Replicate	Temperature, ℃	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L	Current Velocity, cm/s	Current Direction	Site Observation
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	6	22:04:03	1.0	Surface	1	1	21.24	7.97	29.96	94.3	7.03	30.8	40.4	3.8	17.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	6	22:03:07	1.0	Surface	1	2	21.25	7.96	29.96	95.6	7.12	32.4	39.1	4.0	16.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	6	22:02:50	1.8	Middle	2	1	21.25	7.96	29.98	97.6	7.27	33	47.7	7.2	245.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	6	22:03:42	1.8	Middle	2	2	21.24	7.97	29.97	94.5	7.04	31.3	49.8	8.7	228.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	6	22:03:29	2.5	Bottom	3	1	21.24	7.97	29.98	94.8	7.06	31.4	58.6	9.3	151.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Ebb	Cloudy	S4	6	22:02:37	2.5	Bottom	3	2	21.22	7.96	29.95	100.7	7.5	32.3	56.6	8.9	134.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS(Mf)5	1	12:43:24	1.0	Surface	1	1	22.2	8.02	32.76	92.4	6.66	1.8	3.3	25.9	268.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS(Mf)5	1	12:45:05	1.0	Surface	1	2	22.19	8.03	32.7	91.8	6.62	1.8	4.2	23.3	245.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS(Mf)5	1	12:44:30	6.7	Middle	2	1	22.39	8.03	33.18	89.8	6.43	2.3	4.6	19.0	15.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS(Mf)5	1	12:42:52	6.7	Middle	2	2	22.37	8.02	33.24	90.7	6.5	2	5.9	17.1	5.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS(Mf)5	1	12:42:09	12.3	Bottom	3	1	22.39	8.01	33.36	92	6.58	3.1	8.6	42.2	7.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS(Mf)5	1	12:44:00	12.3	Bottom	3	2	22.39	8.02	33.29	90.1	6.45	3.3	8.5	40.5	354.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS2	1	12:59:15	1.0	Surface	1	1	21.58	8.26	30.77	99	7.3	1.8	3.6	11.2	93.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS2	1	12:57:57	1.0	Surface	1	2	21.59	8.26	30.85	99.5	7.32	1.8	3.5	15.0	107.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS2	1	12:57:34	4.1	Middle	2	1	21.63	8.26	30.97	98.2	7.22	3.7	4.0	43.2	44.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS2	1	12:58:51	4.1	Middle	2	2	21.64	8.27	30.85	97.2	7.15	3.6	4.3	46.4	52.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS2	1	12:58:27	7.1	Bottom	3	1	21.68	8.26	32.11	99.2	7.24	4.6	4.5	47.0	23.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	CS2	1	12:57:10	7.1	Bottom	3	2	21.74	8.23	32.15	100.2	7.3	4.5	5.6	40.1	39.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	1	14:03:22	1.0	Surface	1	1	21.51	8.23	30.05	97.6	7.23	9.9	15.8	13.4	44.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	1	14:07:00	1.0	Surface	1	2	21.5	8.19	30.05	96.4	7.14	10.4	14.4	18.9	46.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	1	14:06:16	1.6	Middle	2	1	21.5	8.17	30.04	97.9	7.25	10.8	15.6	15.7	60.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	1	14:03:00	1.6	Middle	2	2	21.51	8.24	30.07	97.8	7.24	10.2	16.5	18.2	53.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	1	14:02:39	2.1	Bottom	3	1	21.53	8.24	30.12	98.8	7.31	11.2	19.6	16.6	64.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	1	14:05:49	2.1	Bottom	3	2	21.45	8.12	29.97	101.8	7.55	11.6	20.3	10.9	56.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	1	14:05:18	1.0	Surface	1	1	21.45	7.98	30.17	95.8	7.1	19.3	24.6	9.1	206.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	1	14:04:29	1.0	Surface	1	2	21.44	7.97	30.24	96.7	7.17	22.7	25.6	8.5	215.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	1	14:04:10	1.7	Middle	2	1	21.44	7.97	30.27	97	7.19	23.2	25.3	14.7	180.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	1	14:05:04	1.7	Middle	2	2	21.45	7.98	30.2	95.9	7.1	21	25.9	17.1	178.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	1	14:04:46	2.4	Bottom	3	1	21.44	7.98	30.26	96.1	7.12	25.1	28.1	23.4	48.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	1	14:03:45	2.4	Bottom	3	2	21.44	7.95	30.29	99.4	7.36	25.1	27.9	23.4	41.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	1	14:12:53	1.0	Surface	1	1	21.53	8.2	30.2	98.3	7.27	5.9	9.9	19.1	61.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	1	14:14:11	1.0	Surface	1	2	21.53	8.2	30.19	97.7	7.23	5.7	9.5	19.4	54.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	1	14:12:25	1.8	Middle	2	1	21.53	8.19	30.22	99.1	7.33	6.1	11.3	20.5	25.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	1	14:13:52	1.8	Middle	2	2	21.55	8.2	30.24	97.7	7.22	5.9	11.0	21.8	39.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	1	14:12:02	2.6	Bottom	3	1	21.52	8.2	30.21	101.1	7.48	5.8	14.7	18.7	49.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	1	14:13:24	2.6	Bottom	3	2	21.56	8.2	30.27	97.9	7.24	6.1	15.0	20.0	30.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	1	14:12:58	1.0	Surface	1	1	21.43	7.97	30.06	97.7	7.25	14	18.8	14.7	111.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	1	14:13:45	1.0	Surface	1	2	21.44	7.98	30.06	96.8	7.18	13.5	19.5	12.8	105.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	1	14:12:40	1.7	Middle	2	1	21.43	7.97	30.09	99.1	7.35	14.2	19.0	22.8	99.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	1	14:13:35	1.7	Middle	2	2	21.43	7.98	30.07	97	7.19	13.2	18.4	23.9	95.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	1	14:13:11	2.3	Bottom	3	1	21.43	7.97	30.09	97.3	7.22	14.1	19.5	30.1	82.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	1	14:12:23	2.3	Bottom	3	2	21.42	7.97	30.12	101.8	7.55	14.3	20.5	29.6	75.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	2	14:25:43	1.0	Surface	1	1	21.52	8.17	30.1	96.3	7.13	16	17.7	14.2	43.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	2	14:24:30	1.0	Surface	1	2	21.52	8.17	30.09	97.5	7.22	15.5	17.8	13.1	11.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	2	14:25:12	1.7	Middle	2	1	21.52	8.17	30.11	96.6	7.15	14.8	20.2	18.2	50.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	2	14:24:20	1.7	Middle	2	2	21.52	8.17	30.1	97.6	7.23	14.5	21.6	17.1	41.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	2	14:23:34	2.4	Bottom	3	1	21.5	8.18	30.07	102.3	7.58	13.9	22.1	20.8	37.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	2	14:24:48	2.4	Bottom	3	2	21.52	8.17	30.11	97	7.18	14	23.4	20.6	39.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	2	14:27:31	1.0	Surface	1	1	21.46	7.96	30.07	95.4	7.07	30.9	32.6	12.2	46.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	2	14:26:45	1.0	Surface	1	2	21.45	7.95	30.08	96.5	7.16	28.9	33.6	13.4	45.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	2	14:26:30	1.8	Middle	2	1	21.46	7.95	30.09	97.6	7.24	31	39.9	20.2	59.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	2	14:27:22	1.8	Middle	2	2	21.45	7.96	30.1	95.6	7.09	31.7	39.2	16.5	53.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	2	14:27:02	2.6	Bottom	3	1	21.45	7.96	30.12	95.8	7.1	34.5	43.0	27.9	45.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	2	14:26:01	2.6	Bottom	3	2	21.44	7.95	30.07	103.2	7.65	32.9	43.0	25.4	42.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	2	14:32:02	1.0	Surface	1	1	21.53	8.18	30.2	99.6	7.37	6.6	10.6	14.3	51.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	2	14:33:22	1.0	Surface	1	2	21.51	8.19	30.2	98.4	7.28	6.7	9.7	12.3	50.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	2	14:31:41	1.8	Middle	2	1	21.54	8.18	30.22	100.9	7.46	6.7	11.7	19.2	56.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	2	14:32:47	1.8	Middle	2	2	21.52	8.18	30.21	98.5	7.29	6.6	11.8	17.3	63.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	2	14:31:20	2.6	Bottom	3	1	21.5	8.19	30.16	104	7.7	6.9	11.9	14.7	69.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	2	14:32:18	2.6	Bottom	3	2	21.53	8.18	30.22	99	7.33	6.7	12.7	13.6	69.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	2	14:33:49	1.0	Surface	1	1	21.44	7.97	30	96.8	7.18	17	20.6	12.8	128.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	2	14:33:03	1.0	Surface	1	2	21.43	7.96	30.01	97.8	7.25	16.3	19.6	11.6	116.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	2	14:32:42	1.7	Middle	2	1	21.43	7.96	30.02	98.8	7.33	16.8	18.1	8.5	128.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	2	14:33:37	1.7	Middle	2	2	21.43	7.96	30.01	96.8	7.19	17.1	18.3	9.9	109.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	2	14:33:17	2.3	Bottom	3	1	21.43	7.96	30.02	97.2	7.21	17.8	22.4	26.3	17.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	2	14:32:28	2.3	Bottom	3	2	21.42	7.96	30.03	100.7	7.47	16.8	22.5	26.0	27.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	3	14:48:34	1.0	Surface	1	1	21.51	8.18	30.11	97	7.18	13.9	13.8	13.4	78.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	3	14:47:42	1.0	Surface	1	2	21.52	8.18	30.11	98.4	7.28	13.7	13.8	13.4	74.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	3	14:48:20	1.8	Middle	2	1	21.52	8.18	30.11	97	7.18	13.4	17.2	18.8	60.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	3	14:47:18	1.8	Middle	2	2	21.51	8.18	30.12	100.1	7.41	13.3	17.2	18.8	76.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	3	14:46:50	2.5	Bottom	3	1	21.49	8.19	30.11	103.8	7.69	13.7	25.8	17.2	43.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	3	14:47:56	2.5	Bottom	3	2	21.52	8.18	30.12	97.7	7.23	13.8	25.9	19.4	55.8	-

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Round	Time	Depth, m	Level	Level_Code	Replicate	Temperature, ℃	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L	Current Velocity, cm/s	Current Direction	Site Observation
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	3	14:48:01	1.0	Surface	1	1	21.49	7.96	30.07	95.5	7.08	24.9	23.7	14.3	134.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	3	14:47:18	1.0	Surface	1	2	21.48	7.95	30.04	96.6	7.16	23.3	22.9	13.7	148.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	3	14:47:48	1.7	Middle	2	1	21.49	7.96	30.09	95.8	7.1	25.2	30.1	15.9	102.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	3	14:47:00	1.7	Middle	2	2	21.48	7.95	30.07	97.4	7.22	21	30.9	12.1	89.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	3	14:46:44	2.3	Bottom	3	1	21.48	7.95	30.07	98.8	7.33	21.2	31.5	14.9	160.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	3	14:47:33	2.3	Bottom	3	2	21.48	7.96	30.08	96.1	7.12	24.2	32.0	18.0	163.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	3	14:52:48	1.0	Surface	1	1	21.52	8.19	30.24	100.9	7.46	5.3	6.8	16.4	81.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	3	14:53:50	1.0	Surface	1	2	21.53	8.19	30.23	99.6	7.37	5.2	5.2	18.1	72.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	3	14:52:31	1.8	Middle	2	1	21.51	8.19	30.24	101.4	7.5	5.1	6.9	16.4	76.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	3	14:53:33	1.8	Middle	2	2	21.53	8.19	30.25	99.9	7.39	5.2	6.9	18.2	75.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	3	14:53:02	2.6	Bottom	3	1	21.53	8.19	30.25	100.3	7.42	5.3	8.2	20.0	76.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	3	14:52:05	2.6	Bottom	3	2	21.51	8.19	30.26	103.6	7.67	5.3	8.3	20.6	72.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	3	14:53:34	1.0	Surface	1	1	21.47	7.97	29.96	96.4	7.15	15.9	15.3	20.7	137.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	3	14:52:41	1.0	Surface	1	2	21.48	7.96	29.96	96.8	7.18	15.7	16.6	21.0	145.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	3	14:52:27	1.7	Middle	2	1	21.46	7.96	29.98	97.4	7.22	16.2	16.0	13.8	128.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	3	14:53:13	1.7	Middle	2	2	21.47	7.97	29.98	96.4	7.15	15.7	15.5	10.1	114.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	3	14:52:03	2.3	Bottom	3	1	21.44	7.96	30	98.8	7.33	16.8	17.8	16.5	74.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	3	14:53:04	2.3	Bottom	3	2	21.47	7.96	29.97	96.4	7.15	15.6	17.8	16.1	87.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	4	15:17:54	1.0	Surface	1	1	21.49	8.19	30.18	99.3	7.35	10.4	15.2	21.1	77.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	4	15:16:43	1.0	Surface	1	2	21.5	8.19	30.16	99.2	7.35	10.4	15.0	20.0	81.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	4	15:16:25	1.7	Middle	2	1	21.5	8.19	30.16	100	7.4	11.3	15.8	23.7	84.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	4	15:17:29	1.7	Middle	2	2	21.49	8.19	30.19	99.4	7.36	10.9	15.9	21.4	80.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	4	15:16:03	2.3	Bottom	3	1	21.5	8.2	30.17	102.1	7.56	11.2	19.5	37.9	65.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	4	15:17:06	2.3	Bottom	3	2	21.5	8.19	30.18	99.1	7.34	11.1	19.2	32.2	63.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	4	15:16:50	1.0	Surface	1	1	21.46	7.96	30.02	96.6	7.17	18.5	23.8	4.3	189.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	4	15:17:40	1.0	Surface	1	2	21.45	7.97	30	96.3	7.14	17.8	23.0	4.8	192.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	4	15:16:30	1.9	Middle	2	1	21.45	7.96	30.02	96.8	7.18	18.8	26.7	5.7	167.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	4	15:17:21	1.9	Middle	2	2	21.44	7.97	30.02	96.5	7.16	17.2	26.4	5.6	155.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	4	15:17:09	2.7	Bottom	3	1	21.45	7.96	30.02	96.4	7.15	17.9	28.5	19.9	31.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	4	15:15:26	2.7	Bottom	3	2	21.45	7.95	30	102.7	7.62	18.8	29.4	18.2	38.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	4	15:22:15	1.0	Surface	1	1	21.5	8.18	30.21	100.6	7.45	5.4	11.4	9.9	70.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	4	15:23:02	1.0	Surface	1	2	21.48	8.19	30.22	100	7.4	5.5	10.8	10.1	69.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	4	15:22:48	1.8	Middle	2	1	21.48	8.19	30.23	100.3	7.42	5.3	10.3	8.1	64.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	4	15:21:58	1.8	Middle	2	2	21.48	8.19	30.22	101.4	7.51	5.4	10.0	7.1	69.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	4	15:21:42	2.6	Bottom	3	1	21.48	8.19	30.22	102.5	7.59	5.1	17.3	10.6	69.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	4	15:22:31	2.6	Bottom	3	2	21.49	8.19	30.23	100.3	7.43	5.2	19.1	13.2	75.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	4	15:21:44	1.0	Surface	1	1	21.46	7.97	29.97	98.8	7.33	13.6	14.6	21.1	67.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	4	15:22:34	1.0	Surface	1	2	21.46	7.97	29.96	97.6	7.24	13.8	15.2	21.1	68.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	4	15:22:25	1.7	Middle	2	1	21.45	7.97	29.98	97.8	7.25	14	13.2	25.9	2.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	4	15:21:34	1.7	Middle	2	2	21.45	7.97	30	99.7	7.4	13.7	15.0	23.8	3.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	4	15:21:20	2.3	Bottom	3	1	21.44	7.97	30.04	101.2	7.51	13.2	20.7	17.9	5.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	4	15:22:03	2.3	Bottom	3	2	21.45	7.97	30.02	97.9	7.27	13.2	20.6	20.8	4.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	5	15:46:31	1.0	Surface	1	1	21.5	8.19	30.21	99.4	7.36	8.2	12.4	14.7	60.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	5	15:45:40	1.0	Surface	1	2	21.48	8.2	30.21	101.1	7.48	7.8	13.8	14.3	54.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	5	15:45:27	1.9	Middle	2	1	21.49	8.2	30.23	101.7	7.53	8	14.9	13.2	64.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	5	15:46:16	1.9	Middle	2	2	21.5	8.2	30.21	99.7	7.38	8.4	13.0	15.5	65.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	5	15:45:20	2.8	Bottom	3	1	21.49	8.2	30.23	102.3	7.57	8	14.3	13.0	66.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	5	15:46:01	2.8	Bottom	3	2	21.49	8.2	30.21	100.2	7.42	8.3	13.8	14.0	67.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	5	15:45:45	1.0	Surface	1	1	21.43	7.97	29.99	97.5	7.23	17.1	17.0	11.9	273.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	5	15:45:03	1.0	Surface	1	2	21.44	7.96	30	98.4	7.3	16.7	16.4	13.6	282.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	5	15:44:40	1.9	Middle	2	1	21.43	7.96	30	99.9	7.41	16.4	18.3	10.7	269.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	5	15:45:27	1.9	Middle	2	2	21.45	7.97	30.02	97.7	7.25	18.6	18.6	8.4	293.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	5	15:44:17	2.7	Bottom	3	1	21.41	7.95	29.97	104.3	7.74	17.8	16.6	19.9	48.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	5	15:45:15	2.7	Bottom	3	2	21.44	7.97	30.02	97.8	7.26	18.3	17.2	17.1	54.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	5	15:51:29	1.0	Surface	1	1	21.53	8.2	30.24	103.5	7.66	3.1	5.6	25.5	74.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	5	15:52:14	1.0	Surface	1	2	21.48	8.2	30.21	101.7	7.53	3.2	6.4	20.7	79.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	5	15:51:58	2.0	Middle	2	1	21.49	8.2	30.23	102.1	7.56	3.4	4.1	22.5	70.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	5	15:51:18	2.0	Middle	2	2	21.52	8.19	30.24	104.1	7.7	3.4	5.2	25.6	68.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	5	15:51:44	2.9	Bottom	3	1	21.49	8.19	30.23	102.8	7.61	3.5	7.4	16.2	81.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	5	15:51:05	2.9	Bottom	3	2	21.5	8.2	30.22	105.5	7.81	3.7	8.2	20.0	78.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	5	15:49:13	1.0	Surface	1	1	21.44	7.97	29.98	99.1	7.36	12.9	11.4	14.8	77.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	5	15:50:07	1.0	Surface	1	2	21.44	7.98	29.95	98.3	7.29	11.8	11.8	13.9	76.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	5	15:49:04	1.9	Middle	2	1	21.44	7.97	29.99	99.3	7.37	13.1	13.1	10.4	111.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	5	15:49:49	1.9	Middle	2	2	21.44	7.98	30	98.5	7.31	12	12.0	10.6	93.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	5	15:49:31	2.7	Bottom	3	1	21.44	7.98	30	98.5	7.31	12.1	14.9	18.6	37.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	5	15:48:44	2.7	Bottom	3	2	21.42	7.98	29.98	101.3	7.52	12.7	15.2	17.3	33.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	6	16:17:16	1.0	Surface	1	1	21.46	8.2	30.22	101.2	7.5	7.2	11.0	27.9	68.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	6	16:18:20	1.0	Surface	1	2	21.47	8.19	30.2	99.3	7.35	6.8	12.0	25.7	68.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	6	16:17:57	1.9	Middle	2	1	21.48	8.2	30.21	99.8	7.39	6.5	11.2	19.6	73.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	6	16:17:03	1.9	Middle	2	2	21.47	8.21	30.23	102	7.55	6.7	12.3	149.2	72.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	6	16:16:54	2.8	Bottom	3	1	21.45	8.21	30.24	102.6	7.6	6.7	12.6	16.4	77.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S5	6	16:17:30	2.8	Bottom	3	2	21.46	8.2	30.22	100.6	7.45	7	12.6	17.0	73.2	-

Project	Works	Date (yyyy-mm-dd)	Tide	Weather Condition	Station	Round	Time	Depth, m	Level	Level_Code	Replicate	Temperature, ℃	pH	Salinity, ppt	DO, %	DO, mg/L	Turbidity, NTU	SS, mg/L	Current Velocity, cm/s	Current Direction	Site Observation
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	6	16:16:29	1.0	Surface	1	1	21.42	7.96	30	98.8	7.34	15.9	18.0	11.7	234.5	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	6	16:17:29	1.0	Surface	1	2	21.43	7.97	29.97	97.8	7.26	14.4	16.9	10.4	204.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	6	16:17:00	1.9	Middle	2	1	21.43	7.97	29.99	98.1	7.28	15	16.8	4.0	70.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	6	16:16:00	1.9	Middle	2	2	21.42	7.95	30.01	100.5	7.46	16.2	16.6	6.6	72.0	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	6	16:15:36	2.7	Bottom	3	1	21.41	7.95	30.01	104.8	7.78	16.6	17.6	19.2	76.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S6	6	16:16:51	2.7	Bottom	3	2	21.43	7.97	30.01	98.3	7.29	15.1	16.4	19.9	71.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	6	16:22:47	1.0	Surface	1	1	21.53	8.19	30.25	103.1	7.62	4.5	7.2	20.9	77.7	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	6	16:23:35	1.0	Surface	1	2	21.52	8.2	30.25	102.5	7.58	4.6	7.4	22.6	78.9	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	6	16:23:23	1.9	Middle	2	1	21.51	8.2	30.26	102.5	7.59	5.4	7.4	22.4	67.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	6	16:22:35	1.9	Middle	2	2	21.53	8.19	30.25	103.4	7.65	5.3	6.8	20.6	61.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	6	16:23:07	2.8	Bottom	3	1	21.53	8.2	30.25	102.7	7.6	5.3	7.9	17.6	64.4	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S7	6	16:22:21	2.8	Bottom	3	2	21.52	8.19	30.25	104.2	7.71	5.5	7.0	20.8	67.8	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	6	16:20:41	1.0	Surface	1	1	21.43	7.98	30.02	100.3	7.45	11.2	12.3	11.8	87.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	6	16:21:27	1.0	Surface	1	2	21.42	7.99	30.01	99.8	7.41	10.8	13.2	14.6	80.1	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	6	16:20:29	1.9	Middle	2	1	21.43	7.98	30.06	100.9	7.49	11.4	14.5	11.4	22.2	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	6	16:21:13	1.9	Middle	2	2	21.43	7.99	30.06	99.7	7.4	11.9	14.0	11.4	21.6	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	6	16:20:59	2.7	Bottom	3	1	21.43	7.99	30.05	99.7	7.4	10.8	13.1	12.9	23.3	-
HKLR	HY/2011/03	2013-11-28	Mid-Flood	Sunny	S8	6	16:20:02	2.7	Bottom	3	2	21.42	7.99	30.1	102.6	7.61	11.1	14.0	12.4	23.7	-

APPENDIX B – WATER QUALITY TEST RESULTS AND CHAIN OF CUSTODY DOCUMENTATION

ALS Environmental

11/F, Chung Shun Knitting Centre
1-3 Wing Yip St, Kwai Chung
Tel : (852) 2610 1044
Fax : (852) 2610 2021
Email: HongKong@alsenviro.com

SAMPLE SUBMISSION FORM

Please Note : The following information is required to expedite sample analysis. Please complete all the necessary details and return this form with your samples.

CLIENT DETAILS:

Company Name: China State Construction International

Client Contact Name: MR FEDERICK WONG Date: 28-Nov-13

Postal Address:

Email:

Phone: Fax:

CLIENT ORDER No: - ALS Quotation No: -

PROJECT NAME/No: Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

SECONDARY CONTACTS: (if required)

Name:

Address: same as above

Phone: Fax:

ALS Technichem HK Pty Ltd
29/11 Work Order
HK1332682

Telephone : +852 2610 1044

Sample Receipt Information (Office Use Only)

Received Date / Time: 28 NOV 2013 17:00 Date / Time Sorting: 29 NOV 2013 19:55

Sample Picked up by: Driver Ice Bricks: (Yes) / No

Bottles Received: 312 x 1L Plastic bottles with no preservative

Received Condition: Chilled Signature :

SAMPLE ANALYTICAL REQUIREMENTS:

Lab ID (office use only)	Sample ID.	Matrix	Sampling Date/Time	Analysis Required
1-312	Sample # 1-312	Sea Water	28/11/2013	SS
	(Details information please refer to attached COC)			

China State Construction International

CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: EBB	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	1	CS(MF)5/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	2	CS(MF)5/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	3	CS(MF)5/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	4	CS(MF)5/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	5	CS(MF)5/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	6	CS(MF)5/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	7	CS2/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	8	CS2/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	9	CS2/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	10	CS2/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	11	CS2/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	12	CS2/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	13	S1/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	14	S1/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	15	S1/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	16	S1/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	17	S1/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	18	S1/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	19	S3/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	20	S3/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	21	S3/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	22	S3/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	23	S3/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	24	S3/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	25	S2/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	26	S2/1	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	27	S2/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	28	S2/1	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	29	S2/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	30	S2/1	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L

China State Construction International

CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: EBB	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	31	S4/1	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	32	S4/1	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	33	S4/1	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	34	S4/1	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	35	S4/1	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	36	S4/1	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	37	S1/2	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	38	S1/2	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	39	S1/2	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	40	S1/2	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	41	S1/2	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	42	S1/2	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	43	S3/2	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	44	S3/2	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	45	S3/2	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	46	S3/2	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	47	S3/2	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	48	S3/2	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	49	S2/2	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	50	S2/2	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	51	S2/2	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	52	S2/2	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	53	S2/2	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	54	S2/2	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	55	S4/2	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	56	S4/2	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	57	S4/2	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	58	S4/2	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	59	S4/2	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	60	S4/2	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L

China State Construction International

CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: EBB	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	61	S1/3	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	62	S1/3	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	63	S1/3	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	64	S1/3	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	65	S1/3	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	66	S1/3	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	67	S3/3	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	68	S3/3	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	69	S3/3	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	70	S3/3	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	71	S3/3	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	72	S3/3	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	73	S2/3	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	74	S2/3	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	75	S2/3	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	76	S2/3	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	77	S2/3	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	78	S2/3	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	79	S4/3	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	80	S4/3	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	81	S4/3	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	82	S4/3	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	83	S4/3	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	84	S4/3	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	85	S1/4	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	86	S1/4	Surface	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	87	S1/4	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	88	S1/4	Middle	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	89	S1/4	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L
HK1332682	90	S1/4	Bottom	Mid-Ebb	Y / N	LOR: 0.5mg/L

China State Construction International

CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: EBB	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	91	S3/4	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	92	S3/4	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	93	S3/4	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	94	S3/4	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	95	S3/4	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	96	S3/4	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	97	S2/4	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	98	S2/4	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	99	S2/4	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	100	S2/4	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	101	S2/4	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	102	S2/4	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	103	S4/4	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	104	S4/4	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	105	S4/4	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	106	S4/4	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	107	S4/4	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	108	S4/4	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	109	S1/5	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	110	S1/5	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	111	S1/5	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	112	S1/5	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	113	S1/5	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	114	S1/5	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	115	S3/5	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	116	S3/5	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	117	S3/5	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	118	S3/5	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	119	S3/5	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	120	S3/5	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L

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CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: EBB	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	121	S2/5	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	122	S2/5	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	123	S2/5	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	124	S2/5	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	125	S2/5	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	126	S2/5	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	127	S4/5	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	128	S4/5	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	129	S4/5	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	130	S4/5	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	131	S4/5	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	132	S4/5	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	133	S1/6	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	134	S1/6	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	135	S1/6	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	136	S1/6	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	137	S1/6	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	138	S1/6	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	139	S3/6	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	140	S3/6	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	141	S3/6	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	142	S3/6	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	143	S3/6	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	144	S3/6	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	145	S2/6	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	146	S2/6	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	147	S2/6	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	148	S2/6	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	149	S2/6	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	150	S2/6	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L

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CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: EBB	ALS Staff Name :
Name of sampling Staff : LJS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	151	S4/6	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	152	S4/6	Surface	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	153	S4/6	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	154	S4/6	Middle	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	155	S4/6	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L
HK1332682	156	S4/6	Bottom	Mid-Ebb	(Y) / N	LOR: 0.5mg/L

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CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: Flood	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	157	CS(Mf)5/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	158	CS(Mf)5/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	159	CS(Mf)5/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	160	CS(Mf)5/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	161	CS(Mf)5/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	162	CS(Mf)5/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	163	CS2/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	164	CS2/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	165	CS2/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	166	CS2/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	167	CS2/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	168	CS2/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	169	S5/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	170	S5/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	171	S5/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	172	S5/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	173	S5/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	174	S5/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	175	S7/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	176	S7/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	177	S7/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	178	S7/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	179	S7/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	180	S7/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	181	S6/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	182	S6/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	183	S6/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	184	S6/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	185	S6/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	186	S6/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L

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CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: Flood	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	187	S8/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	188	S8/1	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	189	S8/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	190	S8/1	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	191	S8/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	192	S8/1	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	193	S5/2	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	194	S5/2	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	195	S5/2	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	196	S5/2	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	197	S5/2	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	198	S5/2	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	199	S7/2	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	200	S7/2	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	201	S7/2	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	202	S7/2	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	203	S7/2	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	204	S7/2	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	205	S6/2	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	206	S6/2	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	207	S6/2	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	208	S6/2	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	209	S6/2	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	210	S6/2	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	211	S8/2	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	212	S8/2	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	213	S8/2	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	214	S8/2	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	215	S8/2	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	216	S8/2	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L

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CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: Flood	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	217	S5/3	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	218	S5/3	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	219	S5/3	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	220	S5/3	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	221	S5/3	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	222	S5/3	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	223	S7/3	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	224	S7/3	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	225	S7/3	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	226	S7/3	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	227	S7/3	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	228	S7/3	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	229	S6/3	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	230	S6/3	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	231	S6/3	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	232	S6/3	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	233	S6/3	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	234	S6/3	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	235	S8/3	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	236	S8/3	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	237	S8/3	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	238	S8/3	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	239	S8/3	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	240	S8/3	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	241	S5/4	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	242	S5/4	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	243	S5/4	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	244	S5/4	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	245	S5/4	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	246	S5/4	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L

China State Construction International

CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: Flood	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	247	S7/4	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	248	S7/4	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	249	S7/4	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	250	S7/4	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	251	S7/4	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	252	S7/4	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	253	S6/4	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	254	S6/4	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	255	S6/4	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	256	S6/4	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	257	S6/4	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	258	S6/4	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	259	S8/4	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	260	S8/4	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	261	S8/4	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	262	S8/4	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	263	S8/4	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	264	S8/4	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	265	S5/5	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	266	S5/5	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	267	S5/5	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	268	S5/5	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	269	S5/5	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	270	S5/5	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	271	S7/5	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	272	S7/5	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	273	S7/5	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	274	S7/5	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	275	S7/5	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	276	S7/5	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L

China State Construction International

CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: Flood	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	277	S6/5	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	278	S6/5	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	279	S6/5	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	280	S6/5	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	281	S6/5	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	282	S6/5	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	283	S8/5	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	284	S8/5	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	285	S8/5	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	286	S8/5	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	287	S8/5	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	288	S8/5	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	289	S5/6	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	290	S5/6	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	291	S5/6	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	292	S5/6	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	293	S5/6	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	294	S5/6	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	295	S7/6	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	296	S7/6	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	297	S7/6	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	298	S7/6	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	299	S7/6	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	300	S7/6	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	301	S6/6	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	302	S6/6	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	303	S6/6	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	304	S6/6	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	305	S6/6	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	306	S6/6	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L

China State Construction International

CHAIN OF CUSTODY (For SS)

Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section Between Scenic Hill and Hong Kong Boundary Crossing Facilities

FOR sampling Record:	*For ALS Record:*
Sampling Date: 28/11/2013	Date/Time Received :
Tide: Flood	ALS Staff Name :
Name of sampling Staff : WS	Total No of sample received :
	Condition: Chilled Y / N

ALS WO No	Lab ID	Sample ID			Sample Collected	Note / Remarks
		Station	Depth	Tide		
HK1332682	307	S8/6	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	308	S8/6	Surface	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	309	S8/6	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	310	S8/6	Middle	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	311	S8/6	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L
HK1332682	312	S8/6	Bottom	Mid-Flood	(Y) / N	LOR: 0.5mg/L

CERTIFICATE OF ANALYSIS

Client	:	**CHINA STATE CONSTRUCTION ENG (HONG KONG) LTD**	*Laboratory*	:	**ALS Technichem HK Pty Ltd**	*Page*	: **1 of 14**
Contact	:	**MR FEDERICK WONG**	*Contact*	:	**Fung Lim Chee, Richard**	*Work Order*	: **HK1332682**
Address	:	**P O BOX NO 133 AT TUNG CHUNG POST OFFICE**	*Address*	:	**11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong**		
E-mail	:	**Cheukwai_wong@cohl.com**	*E-mail*	:	**Richard.Fung@alsglobal.com**		
Telephone	:	**----**	*Telephone*	:	**+852 2610 1044**		
Facsimile	:	**----**	*Facsimile*	:	**+852 2610 2021**		
Project	:	**CONTRACT NO HY_2011_03 HONG KONG-ZHUHAI-MACAO BRIDGE HONG KONG LINK ROAD**	*Quote number*	:	**----**	*Date received*	: **28-NOV-2013**
Order number	:	**----**				*Date of issue*	: **10-DEC-2013**
C-O-C number	:	**----**				*No. of samples*	- *Received* : **312**
Site	:	**----**					- *Analysed* : **312**

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK1332682 supersedes any previous reports with this reference. The completion date of analysis is 03-DEC-2013. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK1332682 : Project Name:Contract No. HY/2011/03, Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road - Section Between Scenic Hill, and Hong Kong Boundary Crossing Facilities.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong, Chapter 553, Section 6.

Signatory	*Position*	*Authorised results for:-*
Fung Lim Chee, Richard	**General Manager**	**Inorganics**

Analytical Results

Sub-Matrix: **SEAWATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound: EA025: Suspended Solids (SS)
		LOR Unit	0.5 mg/L
			EA/ED: Physical and Aggregate Properties
CS(MF)5/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-001	**5.3**
CS(MF)5/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-002	**4.7**
CS(MF)5/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-003	**5.4**
CS(MF)5/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-004	**5.6**
CS(MF)5/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-005	**6.7**
CS(MF)5/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-006	**7.1**
CS2/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-007	**4.8**
CS2/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-008	**5.7**
CS2/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-009	**4.6**
CS2/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-010	**4.4**
CS2/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-011	**6.3**
CS2/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-012	**6.7**
S1/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-013	**92.9**
S1/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-014	**90.7**
S1/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-015	**124**
S1/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-016	**123**
S1/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-017	**115**
S1/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-018	**118**
S3/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-019	**82.0**
S3/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-020	**89.0**
S3/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-021	**89.0**
S3/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-022	**85.0**
S3/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-023	**92.0**
S3/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-024	**88.0**
S2/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-025	**25.4**
S2/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-026	**23.4**
S2/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-027	**24.7**
S2/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-028	**24.3**
S2/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-029	**30.3**
S2/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-030	**28.8**
S4/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-031	**42.8**
S4/1 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-032	**43.4**
S4/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-033	**72.7**

Sub-Matrix: **SEAWATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S4/1 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-034		**72.1**				
S4/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-035		**87.3**				
S4/1 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-036		**82.8**				
S1/2 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-037		**89.0**				
S1/2 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-038		**92.0**				
S1/2 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-039		**92.0**				
S1/2 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-040		**95.8**				
S1/2 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-041		**96.0**				
S1/2 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-042		**93.0**				
S3/2 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-043		**115**				
S3/2 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-044		**116**				
S3/2 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-045		**128**				
S3/2 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-046		**126**				
S3/2 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-047		**123**				
S3/2 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-048		**119**				
S2/2 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-049		**21.9**				
S2/2 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-050		**21.3**				
S2/2 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-051		**37.1**				
S2/2 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-052		**35.5**				
S2/2 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-053		**42.5**				
S2/2 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-054		**43.6**				
S4/2 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-055		**16.3**				
S4/2 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-056		**16.3**				
S4/2 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-057		**36.3**				
S4/2 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-058		**34.4**				
S4/2 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-059		**37.9**				
S4/2 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-060		**36.8**				
S1/3 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-061		**79.5**				
S1/3 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-062		**79.2**				
S1/3 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-063		**80.7**				
S1/3 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-064		**84.3**				
S1/3 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-065		**92.4**				
S1/3 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-066		**95.0**				
S3/3 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-067		**83.6**				
S3/3 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-068		**86.5**				

Sub-Matrix: **SEAWATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S3/3 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-069		**99.4**				
S3/3 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-070		**91.7**				
S3/3 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-071		**99.1**				
S3/3 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-072		**99.8**				
S2/3 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-073		**33.7**				
S2/3 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-074		**32.5**				
S2/3 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-075		**39.5**				
S2/3 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-076		**38.3**				
S2/3 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-077		**41.7**				
S2/3 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-078		**41.8**				
S4/3 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-079		**34.3**				
S4/3 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-080		**33.6**				
S4/3 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-081		**42.7**				
S4/3 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-082		**42.3**				
S4/3 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-083		**44.2**				
S4/3 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-084		**45.0**				
S1/4 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-085		**79.4**				
S1/4 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-086		**81.1**				
S1/4 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-087		**82.6**				
S1/4 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-088		**79.9**				
S1/4 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-089		**88.2**				
S1/4 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-090		**87.2**				
S3/4 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-091		**80.0**				
S3/4 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-092		**74.2**				
S3/4 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-093		**82.2**				
S3/4 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-094		**86.7**				
S3/4 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-095		**95.2**				
S3/4 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-096		**94.3**				
S2/4 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-097		**30.7**				
S2/4 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-098		**29.5**				
S2/4 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-099		**39.0**				
S2/4 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-100		**41.6**				
S2/4 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-101		**59.2**				
S2/4 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-102		**56.4**				
S4/4 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-103		**44.2**				

Sub-Matrix: **SEAWATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S4/4 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-104		**43.0**				
S4/4 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-105		**43.7**				
S4/4 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-106		**41.4**				
S4/4 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-107		**50.9**				
S4/4 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-108		**52.0**				
S1/5 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-109		**107**				
S1/5 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-110		**114**				
S1/5 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-111		**122**				
S1/5 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-112		**114**				
S1/5 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-113		**113**				
S1/5 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-114		**107**				
S3/5 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-115		**43.8**				
S3/5 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-116		**43.6**				
S3/5 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-117		**67.9**				
S3/5 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-118		**64.1**				
S3/5 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-119		**68.9**				
S3/5 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-120		**70.3**				
S2/5 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-121		**43.2**				
S2/5 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-122		**41.5**				
S2/5 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-123		**43.9**				
S2/5 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-124		**43.6**				
S2/5 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-125		**56.0**				
S2/5 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-126		**56.7**				
S4/5 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-127		**43.3**				
S4/5 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-128		**41.2**				
S4/5 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-129		**40.6**				
S4/5 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-130		**41.7**				
S4/5 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-131		**41.8**				
S4/5 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-132		**42.8**				
S1/6 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-133		**118**				
S1/6 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-134		**124**				
S1/6 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-135		**140**				
S1/6 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-136		**132**				
S1/6 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-137		**138**				
S1/6 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-138		**131**				

Sub-Matrix: **SEAWATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S3/6 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-139		**89.0**				
S3/6 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-140		**91.0**				
S3/6 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-141		**81.0**				
S3/6 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-142		**99.0**				
S3/6 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-143		**90.0**				
S3/6 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-144		**81.0**				
S2/6 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-145		**41.7**				
S2/6 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-146		**38.6**				
S2/6 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-147		**44.3**				
S2/6 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-148		**42.5**				
S2/6 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-149		**45.4**				
S2/6 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-150		**46.3**				
S4/6 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-151		**40.4**				
S4/6 SURFACE MID-EBB	[28-NOV-2013]	HK1332682-152		**39.1**				
S4/6 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-153		**47.7**				
S4/6 MIDDLE MID-EBB	[28-NOV-2013]	HK1332682-154		**49.8**				
S4/6 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-155		**58.6**				
S4/6 BOTTOM MID-EBB	[28-NOV-2013]	HK1332682-156		**56.6**				
CS(MF)5/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-157		**3.3**				
CS(MF)5/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-158		**4.2**				
CS(MF)5/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-159		**4.6**				
CS(MF)5/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-160		**5.9**				
CS(MF)5/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-161		**8.6**				
CS(MF)5/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-162		**8.5**				
CS2/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-163		**3.6**				
CS2/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-164		**3.5**				
CS2/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-165		**4.0**				
CS2/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-166		**4.3**				
CS2/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-167		**4.5**				
CS2/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-168		**5.6**				

Sub-Matrix: **SEAWATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S5/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-169		**15.8**				
S5/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-170		**14.4**				
S5/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-171		**15.6**				
S5/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-172		**16.5**				
S5/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-173		**19.6**				
S5/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-174		**20.3**				
S7/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-175		**9.9**				
S7/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-176		**9.5**				
S7/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-177		**11.3**				
S7/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-178		**11.0**				
S7/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-179		**14.7**				
S7/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-180		**15.0**				
S6/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-181		**24.6**				
S6/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-182		**25.6**				
S6/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-183		**25.3**				
S6/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-184		**25.9**				
S6/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-185		**28.1**				
S6/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-186		**27.9**				
S8/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-187		**18.8**				
S8/1 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-188		**19.5**				
S8/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-189		**19.0**				
S8/1 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-190		**18.4**				
S8/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-191		**19.5**				
S8/1 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-192		**20.5**				
S5/2 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-193		**17.7**				
S5/2 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-194		**17.8**				
S5/2 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-195		**20.2**				
S5/2 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-196		**21.6**				
S5/2 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-197		**22.1**				
S5/2 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-198		**23.4**				
S7/2 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-199		**10.6**				
S7/2 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-200		**9.7**				
S7/2 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-201		**11.7**				
S7/2 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-202		**11.8**				
S7/2 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-203		**11.9**				

Sub-Matrix: **SEAWATER**

Client sample ID	Client sampling date / time	Laboratory sample ID	Compound	EA025: Suspended Solids (SS)				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S7/2 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-204		**12.7**				
S6/2 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-205		**32.6**				
S6/2 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-206		**33.6**				
S6/2 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-207		**39.9**				
S6/2 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-208		**39.2**				
S6/2 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-209		**43.0**				
S6/2 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-210		**43.0**				
S8/2 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-211		**20.6**				
S8/2 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-212		**19.6**				
S8/2 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-213		**18.1**				
S8/2 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-214		**18.3**				
S8/2 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-215		**22.4**				
S8/2 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-216		**22.5**				
S5/3 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-217		**13.8**				
S5/3 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-218		**13.8**				
S5/3 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-219		**17.2**				
S5/3 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-220		**17.2**				
S5/3 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-221		**25.8**				
S5/3 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-222		**25.9**				
S7/3 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-223		**6.8**				
S7/3 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-224		**5.2**				
S7/3 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-225		**6.9**				
S7/3 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-226		**6.9**				
S7/3 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-227		**8.2**				
S7/3 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-228		**8.3**				
S6/3 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-229		**23.7**				
S6/3 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-230		**22.9**				
S6/3 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-231		**30.1**				
S6/3 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-232		**30.9**				
S6/3 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-233		**31.5**				
S6/3 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-234		**32.0**				
S8/3 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-235		**15.3**				
S8/3 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-236		**16.6**				
S8/3 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-237		**16.0**				
S8/3 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-238		**15.5**				

Sub-Matrix: **SEAWATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S8/3 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-239		**17.8**				
S8/3 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-240		**17.8**				
S5/4 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-241		**15.2**				
S5/4 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-242		**15.0**				
S5/4 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-243		**15.8**				
S5/4 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-244		**15.9**				
S5/4 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-245		**19.5**				
S5/4 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-246		**19.2**				
S7/4 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-247		**11.4**				
S7/4 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-248		**10.8**				
S7/4 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-249		**10.3**				
S7/4 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-250		**10.0**				
S7/4 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-251		**17.3**				
S7/4 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-252		**19.1**				
S6/4 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-253		**23.8**				
S6/4 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-254		**23.0**				
S6/4 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-255		**26.7**				
S6/4 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-256		**26.4**				
S6/4 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-257		**28.5**				
S6/4 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-258		**29.4**				
S8/4 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-259		**14.6**				
S8/4 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-260		**15.2**				
S8/4 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-261		**13.2**				
S8/4 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-262		**15.0**				
S8/4 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-263		**20.7**				
S8/4 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-264		**20.6**				
S5/5 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-265		**12.4**				
S5/5 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-266		**13.8**				
S5/5 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-267		**14.9**				
S5/5 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-268		**13.0**				
S5/5 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-269		**14.3**				
S5/5 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-270		**13.8**				
S7/5 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-271		**5.6**				
S7/5 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-272		**6.4**				
S7/5 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-273		**4.1**				

Sub-Matrix: **SEAWATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S7/5 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-274		**5.2**				
S7/5 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-275		**7.4**				
S7/5 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-276		**8.2**				
S6/5 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-277		**17.0**				
S6/5 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-278		**16.4**				
S6/5 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-279		**18.3**				
S6/5 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-280		**18.6**				
S6/5 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-281		**16.6**				
S6/5 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-282		**17.2**				
S8/5 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-283		**11.4**				
S8/5 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-284		**11.8**				
S8/5 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-285		**13.1**				
S8/5 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-286		**12.0**				
S8/5 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-287		**14.9**				
S8/5 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-288		**15.2**				
S5/6 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-289		**11.0**				
S5/6 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-290		**12.0**				
S5/6 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-291		**11.2**				
S5/6 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-292		**12.3**				
S5/6 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-293		**12.6**				
S5/6 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-294		**12.6**				
S7/6 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-295		**7.2**				
S7/6 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-296		**7.4**				
S7/6 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-297		**7.4**				
S7/6 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-298		**6.8**				
S7/6 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-299		**7.9**				
S7/6 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-300		**7.0**				
S6/6 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-301		**18.0**				
S6/6 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-302		**16.9**				
S6/6 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-303		**16.8**				
S6/6 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-304		**16.6**				
S6/6 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-305		**17.6**				
S6/6 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-306		**16.4**				
S8/6 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-307		**12.3**				
S8/6 SURFACE MID-FLOOD	[28-NOV-2013]	HK1332682-308		**13.2**				

Sub-Matrix: **SEAWATER**

Client sample ID	*Client sampling date / time*	*Laboratory sample ID*	*Compound*	**EA025: Suspended Solids (SS)**				
			LOR Unit	0.5 mg/L				
				EA/ED: Physical and Aggregate Properties				
S8/6 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-309		**14.5**				
S8/6 MIDDLE MID-FLOOD	[28-NOV-2013]	HK1332682-310		**14.0**				
S8/6 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-311		**13.1**				
S8/6 BOTTOM MID-FLOOD	[28-NOV-2013]	HK1332682-312		**14.0**				

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3191859)								
HK1332682-001	CS(MF)5/1 SURFACE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.3	5.6	5.5
HK1332682-011	CS2/1 BOTTOM MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.3	6.0	4.5
EA/ED: Physical and Aggregate Properties (QC Lot: 3191860)								
HK1332682-021	S3/1 MIDDLE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	74.2	73.2	1.4
HK1332682-031	S4/1 SURFACE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	42.8	42.9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 3191861)								
HK1332682-041	S1/2 BOTTOM MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	69.0	71.6	3.7
HK1332682-051	S2/2 MIDDLE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	37.1	38.4	3.2
EA/ED: Physical and Aggregate Properties (QC Lot: 3191862)								
HK1332682-061	S1/3 SURFACE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	79.5	84.8	6.4
HK1332682-071	S3/3 BOTTOM MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	99.1	95.7	3.5
EA/ED: Physical and Aggregate Properties (QC Lot: 3191863)								
HK1332682-081	S4/3 MIDDLE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	42.7	44.1	3.2
HK1332682-091	S3/4 SURFACE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	80.0	79.8	0.2
EA/ED: Physical and Aggregate Properties (QC Lot: 3191864)								
HK1332682-101	S2/4 BOTTOM MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	59.2	59.3	0.2
HK1332682-111	S1/5 MIDDLE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	76.8	73.5	4.5
EA/ED: Physical and Aggregate Properties (QC Lot: 3191865)								
HK1332682-121	S2/5 SURFACE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	43.2	43.4	0.7
HK1332682-131	S4/5 BOTTOM MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	41.8	44.8	6.9
EA/ED: Physical and Aggregate Properties (QC Lot: 3191866)								
HK1332682-141	S3/6 MIDDLE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	69.0	66.7	3.5
HK1332682-151	S4/6 SURFACE MID-EBB	EA025: Suspended Solids (SS)	----	0.5	mg/L	40.4	38.5	4.8
EA/ED: Physical and Aggregate Properties (QC Lot: 3191867)								
HK1332682-161	CS(MF)5/1 BOTTOM MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	8.6	8.4	2.6
HK1332682-171	S5/1 MIDDLE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	15.6	15.8	1.3
EA/ED: Physical and Aggregate Properties (QC Lot: 3191868)								
HK1332682-181	S6/1 SURFACE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	24.6	25.5	3.5
HK1332682-191	S8/1 BOTTOM MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	19.5	19.0	2.6
EA/ED: Physical and Aggregate Properties (QC Lot: 3191869)								
HK1332682-201	S7/2 MIDDLE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.7	11.6	1.3
HK1332682-211	S8/2 SURFACE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	20.6	20.3	1.5
EA/ED: Physical and Aggregate Properties (QC Lot: 3191870)								
HK1332682-221	S5/3 BOTTOM MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	25.8	25.0	3.3

Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 3191870) - continued								
HK1332682-231	S6/3 MIDDLE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	30.1	29.9	0.8
EA/ED: Physical and Aggregate Properties (QC Lot: 3191871)								
HK1332682-241	S5/4 SURFACE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	15.2	15.7	3.2
HK1332682-251	S7/4 BOTTOM MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	17.3	17.7	2.4
EA/ED: Physical and Aggregate Properties (QC Lot: 3191872)								
HK1332682-261	S8/4 MIDDLE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	13.2	14.3	7.6
HK1332682-271	S7/5 SURFACE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	5.6	5.9	4.8
EA/ED: Physical and Aggregate Properties (QC Lot: 3191874)								
HK1332682-281	S6/5 BOTTOM MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	16.6	17.3	3.8
HK1332682-291	S5/6 MIDDLE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	11.2	11.7	3.7
EA/ED: Physical and Aggregate Properties (QC Lot: 3191875)								
HK1332682-301	S6/6 SURFACE MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	18.0	18.0	0.0
HK1332682-311	S8/6 BOTTOM MID-FLOOD	EA025: Suspended Solids (SS)	----	0.5	mg/L	13.1	14.0	6.1

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 3191859)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191860)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191861)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191862)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191863)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191864)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191865)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191866)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191867)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	100	----	85	115	----	----

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 3191868)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191869)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191870)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191871)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191872)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191874)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 3191875)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20.0 mg/L	98.5	----	85	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

APPENDIX C – SILT CURTAIN DEPLOYED BY CSHK AT THE HKLR SITE

bontec

a bonar technical fabrics product

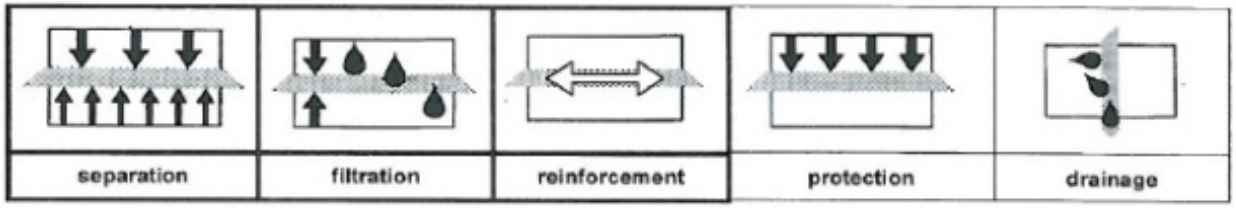
SG 110/110

Woven polypropylene geotextile made of slit film tapes

Technical data sheet according to internal specifications Bonar TF: version 06 dd. 05/01/10
Accompanying documents CE marking: version 04 dd. 05/01/10

CE

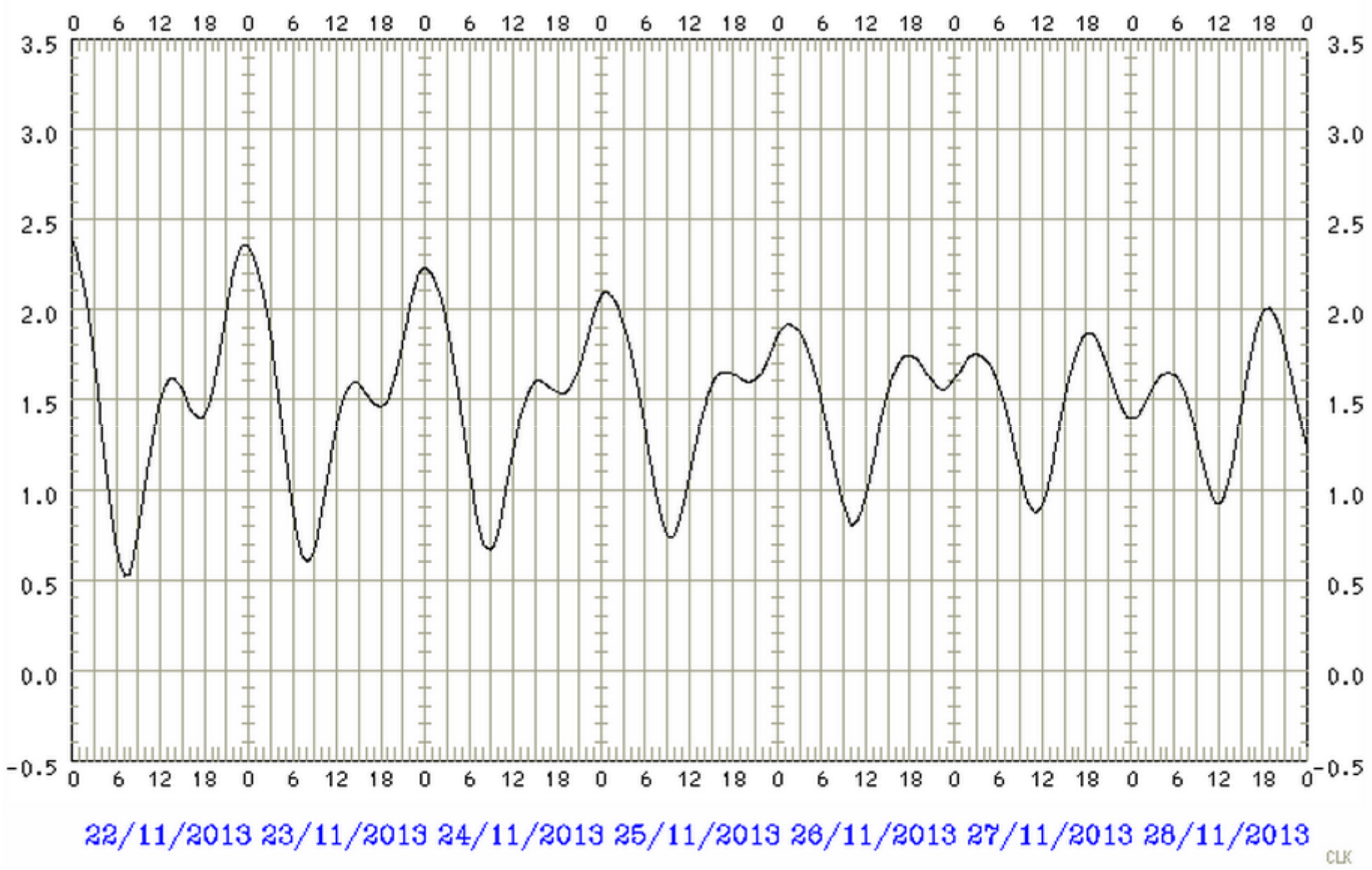
1137-CPD-615
10



	test method	value	tolerance
Mechanical properties			
Tensile strength MD	EN ISO 10319	**110,0 kN/m**	-9,9 kN/m
Tensile strength CD		**110,0 kN/m**	-9,9 kN/m
Elongation MD	EN ISO 10319	**12,0 %**	+/-2,8 %
Elongation CD		**8,0 %**	+/-1,8 %
Static puncture resistance – CBR	EN ISO 12236	**12,50 kN**	-2,50 kN
Dynamic perforation resistance – cone drop	EN ISO 13433	**10,0 mm**	+2,0 mm
Hydraulic properties			
Water permeability normal to the plane	EN ISO 11058	**25x10-3 m/s**	-8x10-3 m/s
Water flow normal to the plane (*)		**25 l/m².s**	-8 l/m².s
Characteristic opening size (AOS)	EN ISO 12956	**230,0 µm**	+/-69,0 µm
Physical properties			
Thickness under 2 kPa (*)	EN ISO 9863-1	**1,53 mm**	+/-0,31 mm
Weight (*)	EN ISO 9864	**464,0 g/m²**	+/-46,4 g/m²
Composition	100 % polypropylene woven geotextile		
Durability	predicted to be durable for a minimum of 25 years in natural soil with 4 < pH < 9 and soil temperatures < 25° C		

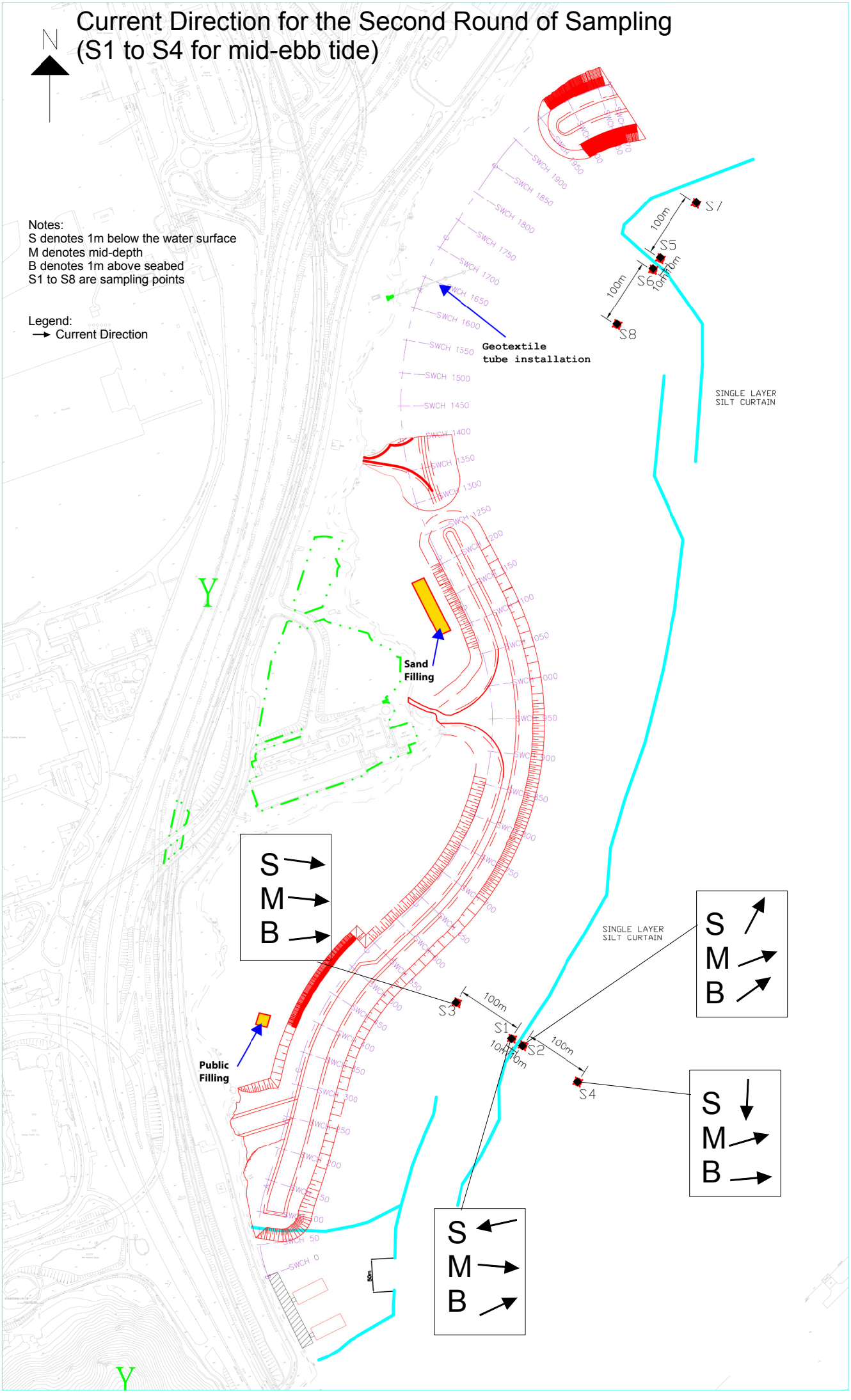
APPENDIX D – TIDE INFORMATION OF CHEK LOP KOK TIDE STATION (OBTAINED FROM HONG KONG OBSERVATORY)

Chek Lap Kok Tide station

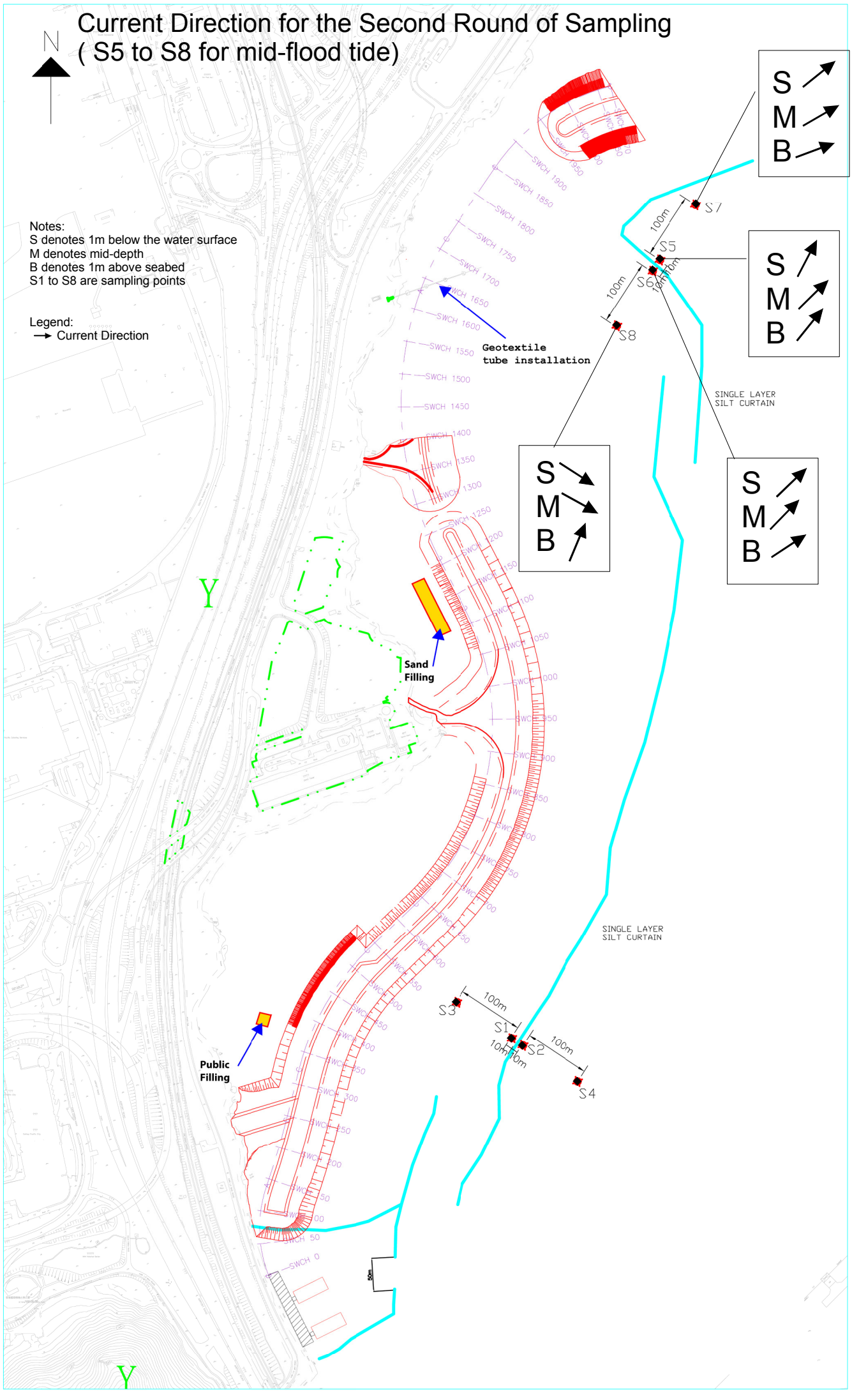


APPENDIX E – CURRENT DIRECTION DURING THE SECOND AND FIFTH ROUND OF SAMPLING

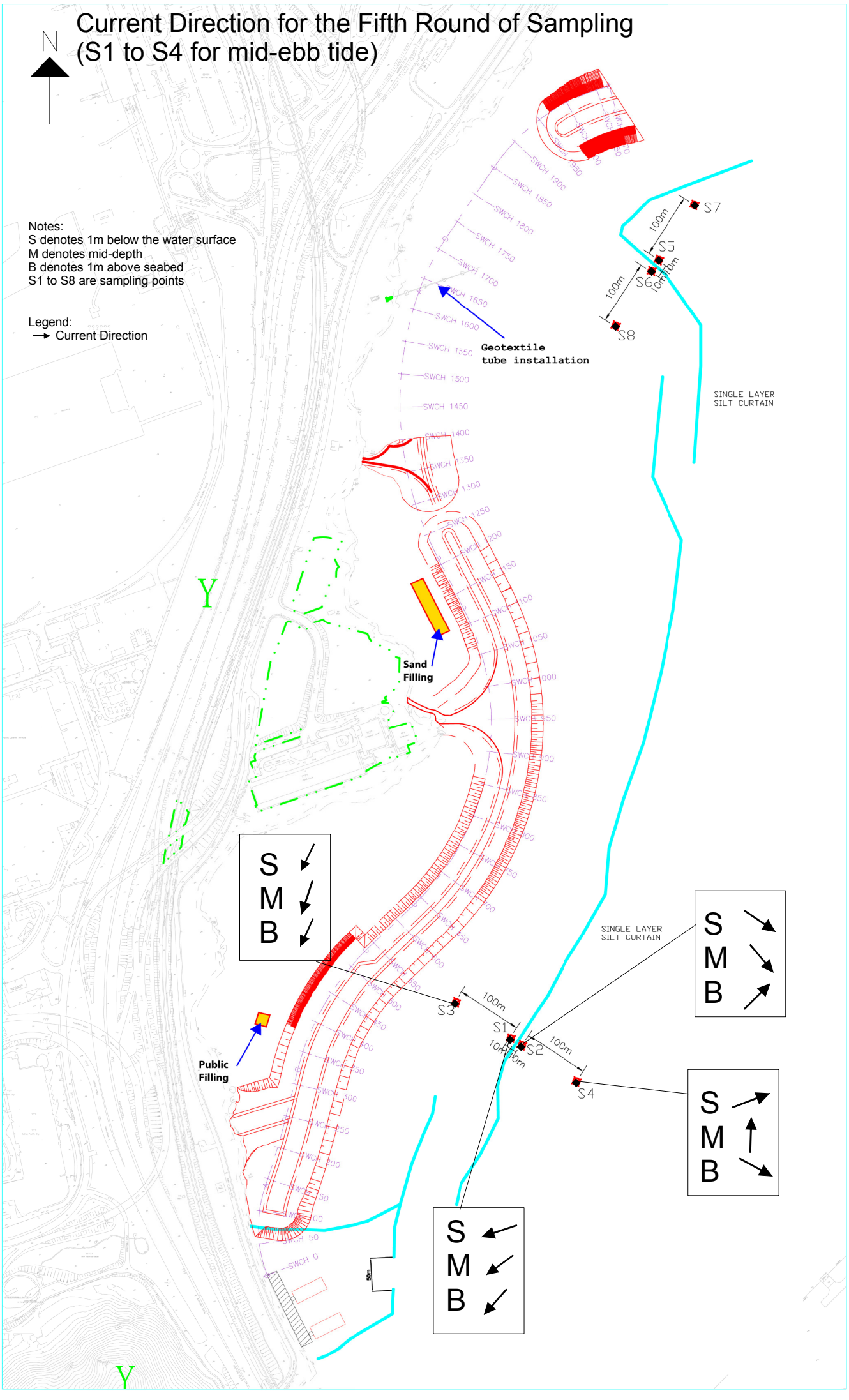
Current Direction for the Second Round of Sampling (S1 to S4 for mid-ebb tide)



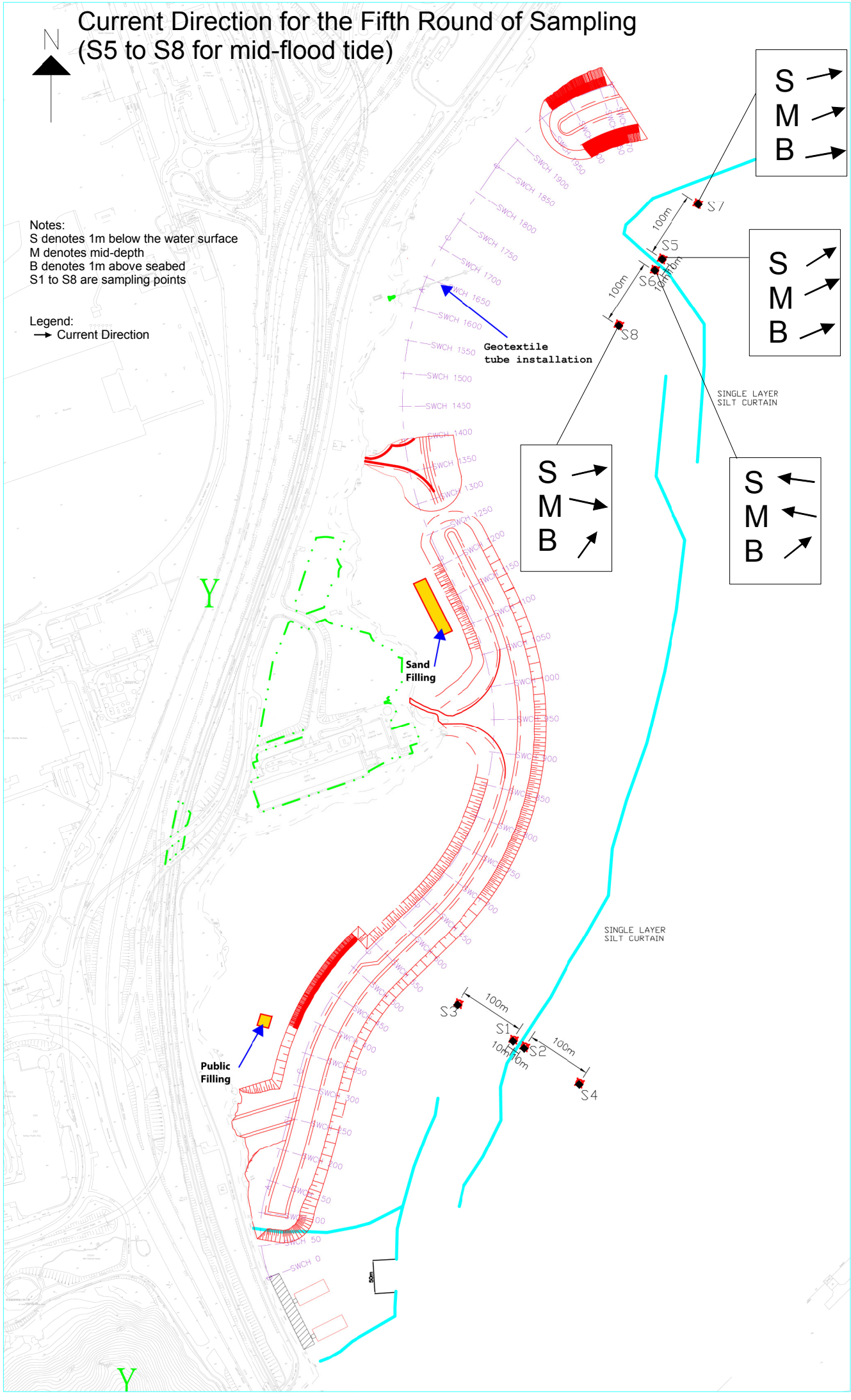
Current Direction for the Second Round of Sampling
(S5 to S8 for mid-flood tide)



Current Direction for the Fifth Round of Sampling (S1 to S4 for mid-ebb tide)



Current Direction for the Fifth Round of Sampling (S5 to S8 for mid-flood tide)



APPENDIX F–SILT CURTAIN INSPECTION CHECKLIST

環保網檢查表 Silt Curtain Inspection Checklist

日期 Date: 28 - 11 - 2013 天氣 Weather: _____

地點 Location (Chainage)	狀況 Condition	缺陷 Defect	預計改正日期 Tentative Rectification Date	改正日期 Rectification Date
區域 Portion: A1 至 To A13 號碼 Number:	☑ 滿意 Satisfactory			
	☐ 不滿意 Dissatisfactory	☐ 缺口 Gap/ ☐ 浮標損毀 Floater Damage/ ☐ 下沉 Sinking/ ☐ 鬆脫擺動 Flapping ☐ 錯位 Dislocation/ ☐ 泥水彌散 Muddy Water Dispersion/ ☐有垃圾 Refuse Found / ☐ 閃燈損壞 Flashing Light Damage/ ☐ 網索損壞 Steel Wire Damage/ ☐ 其它 Others		
區域 Portion: 1 至 To 33 號碼 Number:	☑ 滿意 Satisfactory			
	☐ 不滿意 Dissatisfactory	☐ 缺口 Gap/ ☐ 浮標損毀 Floater Damage/ ☐ 下沉 Sinking/ ☐ 鬆脫擺動 Flapping ☐ 錯位 Dislocation/ ☐ 泥水彌散 Muddy Water Dispersion/ ☐有垃圾 Refuse Found / ☐ 閃燈損壞 Flashing Light Damage/ ☐ 網索損壞 Steel Wire Damage/ ☐ 其它 Others		
區域 Portion: 34 至 To 66 號碼 Number:	☑ 滿意 Satisfactory			
	☐ 不滿意 Dissatisfactory	☐ 缺口 Gap/ ☐ 浮標損毀 Floater Damage/ ☐ 下沉 Sinking/ ☐ 鬆脫擺動 Flapping ☐ 錯位 Dislocation/ ☐ 泥水彌散 Muddy Water Dispersion/ ☐有垃圾 Refuse Found / ☐ 閃燈損壞 Flashing Light Damage/ ☐ 網索損壞 Steel Wire Damage/ ☐ 其它 Others		
區域 Portion: 67 至 To 94 號碼 Number:	☑ 滿意 Satisfactory			
	☐ 不滿意 Dissatisfactory	☐ 缺口 Gap/ ☐ 浮標損毀 Floater Damage/ ☐ 下沉 Sinking/ ☐ 鬆脫擺動 Flapping ☐ 錯位 Dislocation/ ☐ 泥水彌散 Muddy Water Dispersion/ ☐有垃圾 Refuse Found / ☐ 閃燈損壞 Flashing Light Damage/ ☐ 網索損壞 Steel Wire Damage/ ☐ 其它 Others		

檢查員 Checked By: 龍偉能 (簽署 Signed) 姓名 Name: 龍健