

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fotan, Hong Kong
Tel : 2695 8318 E-mail : etl@ets-testconsult.com
Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

WO HING – PENTA-OCEAN JOINT VENTURE

**CONTRACT NO. 9/WSD/08
LAYING OF WESTERN CROSS
HARBOUR MAIN AND ASSOCIATED
LAND MAINS FROM WEST
KOWLOON TO SAI YING PUN
MONTHLY EM&A REPORT
NO.29
(SEPTEMBER 2012)**

Prepared by:

LAW, Sau Yee
Senior Environmental Officer

Checked by:

LAU, Chi Leung
Environmental Team Leader

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ENVIRON

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16th Oct 2012

Water Supplies Department
Sha Tin Office
6/F Sha Tin Government Offices
1 Sheung Wo Che Road
Sha Tin, NT

By Post

Attention: Mr. Johnny Ho

Dear Sir,

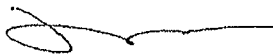
Re: Contact No. 9/WSD/08
Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Sai Ying Pun
Monthly Environmental Monitoring and Audit Report No. 29

Reference is made to Environment Team's submission of the Environmental Monitoring and Audit Report No. 29 by Email on 9th Oct 2012 (entitled "9/WSD/08 - Draft Monthly Report (Sept 12)") and subsequent submission of the revised report on 16th Oct 2012.

We are pleased to inform you that we have no comment on the captioned revised report.

Thank you very much for your kind attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,



David Yeung
Independent Environmental Checker

c.c.	Mott MacDonald Hong Kong Limited	Mr. Kelvin Ho	Fax: 2377 2900
	Wo Hing – Penta-Ocean Joint Venture	Mr. Danny Ho	Fax: 2572 4080
	ETS-TESTCONSULT LIMITED	Mr. C.L. Lau	Fax: 2695 3944

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EXECUTIVE SUMMARY

Under the requirements of "Environmental Monitoring & Audit Manual – Agreement No. CE42/2005(W/S) Laying of Western Cross Harbour Main and Associated Land Main from West Kowloon to Sai Ying Pun" (the EM&A Manual), impact noise monitoring and water quality monitoring is required to be implemented for the "Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Main from West Kowloon to Sai Ying Pun" (the Project).

This monthly Environmental Monitoring and Audit (EM&A) report No.29 was prepared by ETS-Testconsult Ltd (ET) for the Project. This report documented the findings of EM&A Works conducted during the Project in September 2012.

Site Activities

As informed by the Contractor, no site activity was carried out in this reporting month.

Environmental Monitoring Progress

The summary of the monitoring activities in this monitoring month is listed below:

- *Day-time Noise Monitoring (0700-1900 on normal weekday): 4 Occasions at KS6, 4 Occasions at KY3, CGa and RWM*
- *Evening-time Noise Monitoring (1900-2300): 0 Occasions at KS6, CGa, RWM and KY3*
- *Night-time Noise Monitoring (2300-0700 of next day): 0 Occasion at KS6, CGa, RWM and KY3*
- *Holiday-time Noise Monitoring (0700-1900 on Holiday): 0 Occasions at KS6, CGa, RWM and KY3*
- *Marine Water Quality Monitoring: 13 Occasions at 9 monitoring stations and 4 control stations*
- *Weekly-site inspection: 4 Occasions*

Noise Monitoring

No exceedance of Action and Limit Level of noise monitoring was recorded in this reporting month.

Water Quality Monitoring

No exceedance of Action and Limit levels was recorded for water quality monitoring in the reporting month.

Site Inspection

Environmental site inspections conducted in this reporting month are presented as follows:

<u>Concerned Parties</u>	<u>Dates of Audit / Inspection</u>
<i>ET Weekly site inspection</i>	<i>06, 11, 19 and 25 September 2012</i>
<i>Monthly Joint site inspection</i>	<i>19 September 2012</i>

In general, performance on environmental mitigation measures implemented was found to be satisfactory in this reporting month. The major findings observed during site inspections are presented in the Section 6.0.

Environmental Complaints, Notification of summons and successful prosecutions

No complaint, notification of summons and prosecution with respect to environmental issues was received in this reporting month.

Change in Environmental Aspect in this Reporting Month

No change on environmental aspect was reported in this reporting month.

Future Key Issues

Based on the forecast of engineering works in the coming month, key issues to be considered are as follows:

- *Noise and dust impact due to construction works;*
- *Use and maintain silt curtain and silt screen properly;*
- *Clean up the fill material along the barge frequently;*
- *Implement all necessary preventive measures to avoid oil leakage. In the event an oil leakage happens, the Contractor should properly remove the leaked oil and handle the contaminated soil and all materials using for this cleaning works as chemical waste; and*
- *Maintain good site practice to minimize environmental impacts at the site.*



1.0 INTRODUCTION

Wo Hing – Penta-Ocean Joint Venture (WHPOJV) appointed Environmental Team of ETS-Testconsult Limited (ETL) to undertake the Environmental Impact Monitoring for “Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Main from West Kowloon to Sai Ying Pun” (the Project) under the requirements of “Environmental Monitoring & Audit Manual – Agreement No. CE42/2005(W) Laying of Western Cross Harbour Main and Associated Land Main from West Kowloon to Sai Ying Pun” (the EM&A Manual).

This report documented the findings of EM&A Works conducted in September 2012.

2.0 PROJECT INFORMATION

2.1 Scope of the Project

The construction works of the Project are located in West Kowloon, across the Victoria Harbour and in Sai Ying Pun.

The construction works under this Project are briefly described, without limitation, as follow:

- Laying of about 1.5km of 1200mm diameter steel fresh water mains at West Kowloon;
- Laying of about 2.1km of 1200mm diameter steel submarine pipeline from West Kowloon to Sai Ying Pun including dredging, cathodic protection system and other associated works;
- Laying of about 0.4km of 1200mm diameter steel fresh water main at Sai Ying Pun;
- Laying of about 0.5km of 800mm diameter steel salt water main at West Kowloon;
- Construction of motorized butterfly valve (MBV) and the associated facilities in the vicinity of Sun Yat Sen Memorial Park at Sai Ying Pun;
- Construction of all chambers associated with pipeworks;
- Making service connections;
- Ancillary works including but not limited to reinstatement of roads, landscaping works.

Areas of the Project present in Appendix H. Locations of environmental monitoring stations and sensitive receivers are shown in Figures 1, 2, 3, 1.2a, 1.2b and 1.2c

2.2 Work Programme

Details of work programme are shown in Appendix E.

2.3 Project Organization and Management Structure

The organization chart and lines of communication with respect to the on-site environmental management and monitoring program are shown in Appendix A.

2.4 Contact Details of Key Personnel

The key personnel contact names and telephone numbers are shown in Table 2.1.

Table 2.1 Contact Details of Key Personnel

<i>Project Role</i>	<i>Organization</i>	<i>Name of Key Staff</i>	<i>Tel. No.</i>	<i>Fax No.</i>
<i>Engineer's Representative</i>	<i>Mott MacDonald</i>	<i>Mr. Kelvin Ho</i>	<i>2377 2823</i>	<i>2377 2900</i>
<i>IEC</i>	<i>ENVIRON</i>	<i>Mr David Yeung</i>	<i>3743 0788</i>	<i>3548 6988</i>
<i>Contractor's Agent</i>	<i>WHPOJV</i>	<i>Mr. Danny Ho</i>	<i>2695 8318</i>	<i>2957 8213</i>
<i>ET Leader</i>	<i>ET (ETL)</i>	<i>Mr C. L. Lau</i>	<i>2946 7791</i>	<i>2695 3944</i>

3.0 WORK PROGRESS IN THIS REPORTING MONTH

As informed by the Contractor, no site activity was carried out in the reporting month.



4.0 IMPACT NOISE MONITORING

4.1 Monitoring Requirements

As the requirement in the EM&A Manual, impact noise monitoring was conducted for a weekly basis at designated monitoring locations.

4.2 Monitoring Equipment

Integrating Sound Level Meters used for impact noise monitoring were Type 1 sound level meters capable of giving a continuous readout of the noise level reading including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_x). They complied with International Electro technical Commission Publications 651:1979 (Type1) and speed in m/s was used to monitor the wind speed. Table 4.1 summarized the noise monitoring equipment model used during the impact monitoring. Copies of calibration certificates and Calibration Summary for noise meters and calibrators used are attached in Appendix B1.

Table 4.1 Noise Monitoring Equipment

Equipment	Model	Equipment No.	Serial No.	Calibration Date.	Expired Date
Sound Level Meter	Rion NL-31 Sound Level Meter	ET/EN/003/06	00110024	16/04/12	15/04/13
		ET/EN/003/10	00531142	29/05/12	28/05/13
		ET/EN/003/12	00773032	06/12/11	05/12/12
Sound Level Calibrator	Rion NC-73 Sound Level Calibrator	ET/EN/002/01	10196943	07/11/11	06/11/12
Anemometer	AZ Instrument AZ 8908	ET/EN/001/03	9101259	10/11/11	09/11/12

4.3 Monitoring Parameters, Duration and Frequency

Impact noise monitoring for the A-weighted levels L_{eq} , L_{10} and L_{90} were recorded once per week. Data obtained from impact noise monitoring was processed and presented as below:

- Daytime: three sets of 30-minute noise level monitored between 0700-1900 hrs on normal weekdays;
- Evening-time*: three sets of 5-minute noise level monitored between 1900-2300 hrs ;
- Night-time*: three sets of 5-minute noise level monitored between 2300-0700 hrs of next day; and
- Holiday*: three sets of 5-minute noise level monitored between 0700-1900 hrs on holiday.

(*): Noise monitoring to be conducted only when there is construction work.

Duration, frequencies and parameters of noise measurement are presented in Table 4.2.

Table 4.2 Duration, Frequencies and Parameters of Noise Monitoring

Time period	Duration/min	No. of Set(s)	Parameters
Day-time: 0700-1900 hrs on normal weekday	30	1	L_{eq} , L_{10} , L_{90}
Evening-time: 1900-2300 hrs	5	3	L_{eq} , L_{10} , L_{90}
Night-time: 2300-0700 hrs of next day	5	3	L_{eq} , L_{10} , L_{90}
Holiday-time: 0700-1900 hrs on holiday	5	3	L_{eq} , L_{10} , L_{90}

4.4 Monitoring Locations

In accordance with the EM&A Manual, the proposed noise monitoring station at the Harbourside (KS4) was cancelled since the owner of the Harbourside and nearby NSRs rejected to perform baseline and impact noise monitoring at their property. As a result, there was one noise monitoring location KS6 (The Cullinan) selected at West Kowloon to conduct impact environmental monitoring. At Sai Yung Pun, the location at the noise station CG (Connaught Garden) was unavailable for impact noise measurement because the building repairing and maintenance works was carrying out in the Connaught Garden and will be finished in June 2011. Hence, noise monitoring at noise station



CG was moved to another noise station CGa (pavement in front of Connaught Garden) temporarily until the completion of repairing and maintenance works at Connaught Garden) since CGa locates close to the major site activities which are likely to have noise impacts and low disturbance to the occupants was observed during the noise monitoring. As a result, there were three noise monitoring locations, CGa (Pavement in front of Connaught Garden), RWM (Roof at Richwealth Mansion) and KY3 (Roof at Kwan Yik Building Phase 3) selected to conduct impact environmental monitoring.

Beside, the locations at the noise stations, RWM (Roof at Richwealth Mansion) and KY3 (Roof at Kwan Yik Building Phase 3), were unavailable for impact evening-time and night-time noise measurement because the building owners reject ET to carry out noise monitoring during such two periods due to security. Hence, evening-time and night-time noise monitoring at noise stations, RWM and KY3 were moved to pavement in front of Richwealth Mansion and Kwan Yik Building Phase 3. The details of noise monitoring stations are summarized in Table 4.3.

Table 4.3 Noise Monitoring Stations

<i>Daytime and Holiday-time Noise monitoring station</i>	<i>Description of location</i>	<i>Type of Measurement</i>
<i>KS6</i>	<i>Podium at the Culliman</i>	<i>Façade</i>
<i>CGa</i>	<i>Pavement in front of Connaught Garden</i>	<i>Façade</i>
<i>RWM</i>	<i>Roof at Richwealth Mansion</i>	<i>Free Field</i>
<i>KY3</i>	<i>Roof at Kwan Yik Building Phase 3</i>	<i>Free Field</i>
<i>Evening-time and Night-time Noise monitoring station</i>	<i>Description of location</i>	<i>Type of Measurement</i>
<i>KS6</i>	<i>Podium at the Culliman</i>	<i>Façade</i>
<i>CGa</i>	<i>Pavement in front of Connaught Garden</i>	<i>Façade</i>
<i>RWM</i>	<i>Pavement at Richwealth Mansion</i>	<i>Façade</i>
<i>KY3</i>	<i>Pavement at Kwan Yik Building Phase 3</i>	<i>Façade</i>

4.5 Monitoring Methodology

Instrumentation

Integrating Sound Level Meters were employed for noise monitoring.

Operation/Analysis Procedures

- Sound Level Meter was set on a tripod at a height of 1.2m above the ground;
- For free field measurement, the meter was positioned away from any nearby reflective surfaces.
- The battery condition was checked to ensure the correct functioning of the meter;
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - Frequency weighting : A
 - Time weighting : Fast
 - Time measurement : 30 mins
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1000HZ. If the difference in the calibration level before and after measurement was more than 1.0 dB(A), the measurement would be considered invalid and repeat measurement would be required after re-calibration or repair of the equipment;
- During the monitoring period, the L_{eq} , L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet;
- 3dB(A) correction had been added to the results if noise measurements were free-field;
- Noise measurement may be paused during periods of high intrusive noise (e.g. dog barking directly towards the receiver of noise level meter). If noise measurement was paused during high intrusive noise, the noise level meter would be resumed and continued the noise measurement and the observations would also be recorded. Any pause intervals were not included in the measurement time; and
- Noise monitoring would be cancelled in the presence of fog, rain, storm, wind with a steady speed exceeding 5m/s, or wind gusts exceeding 10m/s.



Maintenance and Calibration

- The microphone head of the sound level meter and calibrator are cleaned with soft cloth at quarterly intervals; and
- The meters are sent to supplier or HOKLAS laboratory to check and calibrated at yearly intervals.

4.6 Actions and Limit Levels

The Action and Limit Levels (AL Levels) were established in accordance to the Table 4.2 of the EM&A Manual. Table 4.4 presents the AL levels for noise monitoring.

Table 4.4 Action and Limit Levels for Noise Monitoring

Time Period	Action	Limit
0700 –1900 hrs on normal weekday (Day-time)	When one documented complaint is received	75 dB(A) *
1900-2300 hrs (Evening-time)		70 dB(A)
0700-1900 hrs on Holiday (Holiday-time)		70 dB(A)
Restricted hours (2300-0700 hrs of next day) (Night-time)		55 dB(A)

* reduce to 70dB(A) for school and 65dB(A) during school examination periods

4.7 Event-Action Plans

Should the results of the monitoring parameters at any designated monitoring stations indicate that the noise level criteria are exceeded, the actions in accordance with the Event and Action Plan that summarized in Appendix D should be carried out.

4.8 Results

Totally 4 occasions at KS6 and 4 occasions at CGa, RWM and KY3 of day-time noise monitoring, 0 occasion of evening-time noise monitoring at KS6, CGa, RWM and KY3, 0 occasion of night-time noise monitoring and 0 occasions of holiday-time noise monitoring at KS6, CGa, RWM and KY3 were carried out in this reporting month.

No exceedance in Limit Level was recorded in this reporting month. Besides, no exceedance of Action Level of noise monitoring was recorded since no complaint on noise issue was received in this reporting month.

Table 4.5 summaries the noise daytime monitoring results in the reporting period.

Table 4.5 Summary of Noise Daytime Monitoring Results

Monitoring Parameter	Date	KS6			
		Start Time	End Time	Result	Exceed*
Day-time	05/09/12	17:15	17:45	65.1	X
	12/09/12	16:05	16:35	63.1	X
	21/09/12	11:25	11:55	65.4	X
	27/09/12	13:45	14:15	62.5	X
Monitoring Parameter	Date	CGa			
		Start Time	End Time	Result	Exceed*
Day-time	03/09/12	08:45	09:15	73.2	X
	10/09/12	14:20	14:50	74.6	X
	17/09/12	10:05	10:35	73.4	X
	24/09/12	11:00	11:30	74..2	X
Monitoring Parameter	Date	RWM			
		Start Time	End Time	Result	Exceed*
Day-time	03/09/12	09:20	09:50	65.2	X
	10/09/12	14:55	15:25	65.2	X
	17/09/12	09:30	10:00	64.7	X
	24/09/12	11:07	11:37	65.1	X



Monitoring Parameter	Date	KY3			
		Start Time	End Time	Result	Exceed*
Day-time	03/09/12	09:55	10:25	64.1	X
	10/09/12	15:30	16:00	64.6	X
	17/09/12	09:35	10:05	65.2	X
	24/09/12	11:06	11:36	64.7	X

Remark (*): L = Limit Level exceedance, A = Action Level exceedance and X = not an Exceedance
(^): Since daytime and holiday-time noise measurements at monitoring stations RWM and KY3 were free-field, 3dB(A) correction had been added to the results

The summary of noise exceedances is shown in Table 4.6.

Table 4.6 Summary of Impact Noise Exceedances in this reporting month

Exceedance Level	Daytime	Evening-time	Night-time	Holiday-time
Action	0	0	0	0
Cumulative	0	0	0	0
Limit	0	0	0	0
Cumulative	0	0	227	0

5.0 WATER QUALITY MONITORING

5.1 Monitoring Requirements

In accordance with the EM&A Manual, impact water quality monitoring was conducted three days per week during the course of the marine construction works.

5.2 Monitoring Locations

In accordance with the EM&A Manual, the proposed water quality monitoring station R8 – Macau Ferry Terminal was cancelled since it is located inside the restricted area. Another monitoring location R8a was proposed to replace R8 for impact water quality monitoring. As a result, totally four control stations and nine impaction stations were selected to conduct impact water quality monitoring for the Project. Table 5.1 shows the water quality monitoring stations of the Project.

Table 5.1 Water Quality Monitoring Stations

ID	Station	Easting	Northing
R5	Green Island	830 175.979	816 179.217
R6	Prince Philip Dental Hospital	833 437.625	816 747.640
R7	Tsan Yuk Hospital	833 461.092	816 744.773
R8a	Macau Ferry Terminal	833 573	816 885
R15 *	Kowloon South Pumping Station	833 982.630	818 282.101
R16	Kowloon Government Offices Building	834 335.800	817 769.145
R17	Canton Road Government Offices Building	834 364.658	817 802.847
R28	WSD Kennedy Town Salt Water Pumping Station	830 707	815 983
R29	WSD Sheung Wan Salt Water Pumping Station	833 414	816 745
C1	Control Station	830 797.729	819 163.377
C2	Control Station	836 350.628	817 135.218
C3	Control Station	829 495.126	817 228.312
C4	Control Station	836 638.773	816 686.030

Remark (*): Station R15 = WSD Seawater Intake

Control stations, C2 and C4, should be the upstream control station for all impact monitoring stations at mid-flood and Control Stations, C1 and C3, should be the upstream control station for all monitoring stations at mid-ebb.



5.3 Monitoring Parameters

Monitoring parameters listed in Table 5.2 shall be monitored by the ET to ensure that any deteriorating water quality could be readily detected and timely action be taken to rectify the situation. Table 5.3 shows the other relevant water quality data recorded during the impact water quality monitoring.

Table 5.2 Water Quality Monitoring Parameters

<i>In-situ measurement</i>	<i>Laboratory analysis</i>
<i>Dissolved Oxygen (DO) (mg/L)</i>	<i>Suspended solids (SS) (mg/L)</i>
<i>Turbidity (NTU)</i>	

Table 5.3 Other relevant water quality parameters

<i>Water Quality Parameters</i>	
<i>Tidal stages</i>	<i>Water depth (m)</i>
<i>Dissolved Oxygen saturation (%)</i>	<i>Salinity (ppt)</i>
<i>Temperature (°C)</i>	<i>Weather Condition</i>

5.4 Monitoring Frequency

The frequency of impact water quality monitoring of water quality is summarized in Table 5.4.

Table 5.4 Monitoring Frequency of Impact Water Quality Monitoring

<i>Frequency</i>	<i>Monitoring Depth</i>
<i>3 days/week, 2 tides/day</i>	<i>For water depth greater than 6m: Three water depths (1m below Surface, mid-depth and 1m above bottom). For water depth less than 6m but greater than 3m: Two water depths: (1m below Surface and 1m above bottom). For water depth less than 3m: One water depth (Mid-depth)</i>

5.5 Monitoring Methodology and Equipment Used

Refer to the requirement in Appendix D2 "General Technical Requirements of Environmental Monitoring" (TM) in the Environmental Monitoring and Audit Guidelines for Development Projects in Hong Kong published by EPD, water samples for all monitoring parameter were collected, stored, preserved and analysed according to the Standard Method APHA 19ed.. In-situ measurements at monitoring locations including DO, turbidity, salinity and water depth were collected by equipment with the characteristic and functions listed as below:

Location of the monitoring stations

A hand-held digital Global Positioning System (GPS) was used to identify the designated monitoring stations prior to water sampling.

Water Depth measurement

A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

In-situ Water Quality Monitoring Equipment

All in-situ monitoring instruments shall be checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals or sometimes longer throughout all stages of the water quality monitoring. Responses of sensors and electrodes should be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring location.



Dissolved Oxygen, salinity and temperature measuring equipment

A portable, weatherproof dissolved oxygen & salinity measuring instrument, which complete with cable, sensor and DC power source (e.g. YSI 85 or equivalent) was used for measuring:

- a dissolved oxygen level in the range of 0-20 mg/L and 0-200 % saturation;
- a salinity in range 0-40 ppt; and
- a temperature of 0-45 degree Celsius

A membrane electrode with automatic temperature compensation complete with a cable was installed.

Turbidity Measurement Instrument

A portable, weatherproof turbidity-measuring instrument with DC power source was used. It has a photoelectric sensor capable of measuring turbidity between 0-1000 NTU and be complete with a cable (e.g. HACH model 2100P or equivalent)

Water Sampling and Sample Analysis

In-situ monitoring was carried out at three depths: 1 meter below water surface, at mid-depth and 1 meter above the seabed. If the water depth is less than 6 m, the mid-depth station shall be omitted and if the water depth is below 3 m, only the mid depth station shall be monitored.

A water sampler comprising a transparent PVC cylinder, with a capacity of not less than 2 litres, was lowered into the water body at the predetermined depth. The opening ends of the sampler were then closed accordingly and water samples were collected.

The sample container, made by high-density polythene, was rinsed with a portion of the water sample. The water sample was then transferred to the container, labelled with a unique sample ID and sealed with a screw cap. The water samples were stored in a cool box maintained at 4°C. The water samples were then delivered to Environmental Laboratory of ETS-Testconsult Ltd (HOKLAS Registration No. 022) on the same day for analysis.

5.6 Details of site Equipment used for In-situ Measurement

All in-situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals or sometimes longer throughout all stages of the water quality monitoring. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring location.

Table 5.5 shows the equipment used for in-situ monitoring of water quality. The calibration certificates are attached in Appendix C1.

Table 5.5 Details of Monitoring Equipment (In-site measurement)

<i>Parameter</i>	<i>Model</i>	<i>Date of Calibration</i>	<i>Due Date</i>	<i>Equipment No.</i>	<i>Serial No.</i>
<i>Coordinate of Monitoring stations</i>	<i>Garmin eTrex 10</i>	<i>----</i>	<i>----</i>	<i>ET/EW/005/04</i>	<i>2DR099626</i>
<i>Dissolved Oxygen (Saturation), Temperature and Salinity</i>	<i>YSI Dissolved Oxygen, Salinity & Temperature Meter, YSI Pro 2030</i>	<i>13/08/12</i>	<i>12/11/12</i>	<i>ET/EW/008/004*</i>	<i>10F 101978</i>
<i>Turbidity</i>	<i>HACH Model 2100Q Turbid Meter</i>	<i>02/08/12</i>	<i>01/11/12</i>	<i>ET/0505/008*</i>	<i>10030C001191</i>
<i>Water Depth</i>	<i>Speedtech Instrument SM-5A</i>	<i>----</i>	<i>----</i>	<i>ET/EW/002/04</i>	<i>56657</i>

Remark: (*) indicates the instrument should be calibrated on use.



5.7 Quality Assurance (QA) / Quality Control (QC) results and Determination Limits

At each measurement/sampling depth, two consecutive measurements of dissolved oxygen (DO), dissolved oxygen saturation (DOS), turbidity and salinity were taken. The probes were retrieved out of the water after the first measurement and then re-deployed for the second measurement. If the difference between the first and second measurement is greater than 25% the reading was discarded and the measurements were repeated.

At the laboratory analysis of water sample, test method of test parameter as required by the EM&A Manual, with the QA/QC results in accordance with the requirement of HOKLAS or international accredited scheme is shown in Table 5.6. For the QA/QC procedures, one QC sample, one duplicate sample and one sample spike of every batch of 20 samples were analysis. The QA/QC results are summarized in Appendix C4

Table 5.6 Summary of test method

Laboratory Analysis	Testing Procedure	Method Detection Limit
Total suspended solids	In house method based on APHA 19 th ed 2540D	1.0 mg/L

5.8 Action and Limit Level

The water quality criteria, namely Action and Limit (A/L) levels are presented in the table below.

Table 5.7 Water Quality Action and Limit Levels

Parameter	Action Level	Limit Level
DO (mg/L) (Surface, Middle & Bottom)	<u>Surface, Middle & Bottom</u> WSD Seawater Intakes 2 mg/L (For R15) Other Impact Monitoring Stations 5.65 mg/L (For R5, R6, R7, R8a, R16, R17, R28 and R29)	<u>Surface & Middle</u> WSD Seawater Intakes 2 mg/L (For R15) Other Impact Monitoring Stations 5.51 mg/L (For R5, R6, R7, R8a, R16, R17, R28 and R29) <u>Bottom</u> 5.11 mg/L (For R15, R5, R6, R7, R8a, R16, R17, R28 and R29)
SS (mg/L) (Depth-averaged)	WSD Seawater Intakes 10 mg/L (For R15) Other Impact Monitoring Stations 12.7 mg/L (For R5, R6, R7, R8a, R16, R17, R28 and R29)	WSD Seawater Intakes 10 mg/L (For R15) Other Impact Monitoring Stations 12.7 mg/L (For R5, R6, R7, R8a, R16, R17, R28 and R29)
Turbidity (NTU) (Depth-averaged)	WSD Seawater Intakes 10 NTU Other Impact Monitoring Stations 6.48 NTU (For R5, R6, R7, R8a, R16, R17, R28 and R29)	WSD Seawater Intakes 10 NTU Other Impact Monitoring Stations 6.82 NTU (For R5, R6, R7, R8a, R16, R17, R28 and R29)

- Notes: 1. "depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
3. For turbidity and SS, non-compliance of water quality limits occurs when monitoring result is higher than the limits.
4. All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.

5.9 Event and Action Plan

Please refer to the Appendix D for details.

5.10 Monitoring Duration and Period In this reporting month

Daily water quality monitoring duration are detailed in Appendix C2. Below is the time schedule for the water quality monitoring conducted in this reporting month.



Table 5.8 Schedule for Impact Water Quality Monitoring

September 2012						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23 / 30	24	25	26	27	28	29

Remarks: (▼) = Marine water quality monitoring carried out by ET.

5.11 Results

The impact water quality measurement results are detailed in Appendix C2. Appendix C3 presents the water quality monitoring data and graphical presentations of monitoring results respectively. The summary of marine water quality exceedances is shown in Table 5.9.

Table 5.9 Summary of Impact Marine Water Quality Exceedances in this reporting month

Exceedance Level	DO		Turbidity		SS		Cumulative	
	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb
Action	0	0	0	0	0	0	0	0
Limit	0	0	0	0	0	0	48	48

According to the summary of marine water monitoring results, no exceedances of Action and Limit levels were recorded for this reporting month.

6.0 ENVIRONMENTAL SITE INSPECTION

During this reporting month, weekly site inspections were undertaken on 06, 11, 19 and 25 September 2012 by ET. Monthly joint site inspection at 19 September 2012 was carried out by Engineer's Representative, IEC, WHPOJV and ET. A summary of implementation status of mitigation measures on site inspections is presented in Appendix G.

6.1 Summary of the ET weekly site inspection finding

According to the summary of the ET weekly site inspections carried out in September 2012, it indicated that site practices of the Contractor were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was satisfactory. No environmental deficiency was recorded during the weekly site inspection in this reporting month.

6.2 Recommendations on site inspection findings in Site Inspections of this month

Based on the site inspection findings, the recommendations are as below:

- Minimize noise and dust impact due to construction works;
- Use and maintain silt curtain and silt screen properly;
- Adequate environmental control measures shall be provided to prevent / avoid dropping of dredged materials into the sea during the transfer;
- Implement all necessary preventive measures to avoid oil leakage. In the event an oil leakage happens, the Contractor should properly remove the leaked oil and handle the contaminated soil and all materials using for this cleaning works as chemical waste;
- Checking and maintaining all the site machines to prevent black smoke emission;
- Providing briefing to the concerned site staff on remedial actions, such as handling method of chemicals and chemical waste;
- Remove all stagnant water;
- Apply proper treatment facilities to wastewater before discharge; and
- Maintain good waste management at the site.



7.0 STATUS OF ENVIRONMENTAL PERMITS

Permits/licenses valid in this reporting month are summarized in Table 7.1.

Table 7.1 Summary of Environmental Licensing and Permit valid in this reporting month

Description	Permit No.	Valid Period		Remarks
		From	To	
Environmental Permit	EP-273/2007	31/07/07	End of Project	Whole Project
Water Discharge Licence (West Kowloon)	WT00005347-2009	07/01/10	31/01/15	Effluent and all other wastewater arising from the construction site through Screen & Sedimentation Tank
Chemical Waste Producer	5213-217-W3086-01	13/10/09	End of Project	Spent oil, surplus flammable liquid, surplus paint, soil, rags & containers contaminated with lubricating oil, diesel, flammable liquid & paint, & used batteries
Construction Noise Permit (Sai Ying Pun)	GW-RS0463-12	03/05/12	29/10/12	Group A One Crane, mobile (diesel) (CNP 048) One Air compressor with Noise Emission Label showing a sound power level of $\leq 98\text{dB(A)}$ One Generator, silenced, $\leq 108\text{dB(A)}$ (CNP 101) Group B One Air compressor with Noise Emission Label showing a sound power level of $\leq 98\text{dB(A)}$ One Generator, silenced, $\leq 108\text{dB(A)}$ (CNP 101) Group C Two Generator, silenced, $\leq 108\text{dB(A)}$ (CNP 101) Two Derrick barge (CNP 061) One Guard boat One Tug boat (CNP 221) Group D One Generator, silenced, $\leq 108\text{dB(A)}$ (CNP 101) One Derrick barge (CNP 061)
Notification under APCO	Application had been submitted to EPD on 25/09/09 and approved from 29/09/09.			

8.0 WASTE MANAGEMENT

8.1 Monthly Waste Summary

The quantities of waste generated from the Project in this month are summarized in Table 8.1.

Table 8.1 Summary of Quantities of Waste for Disposal in this reporting month

Type of Waste		Quantity	Disposal Location	Cumulative Quantity
Inert C&D Materials	Total Quantity Generated (in m ³)	126.83		17508.11
	Broken Concrete (in m ³)	0	---	0
	Reused in the Contract (in m ³)	0	---	0
	Reused in other Projects (in m ³)	0	---	0
	Disposal as Public Fill (in m ³)	126.83	SENT Landfill	17508.11
C&D Waste	Metals (in kg)	0	---	0
	Paper/Cardboard Packaging (in kg)	0	Collected by recycling company	169
	Plastics (in kg)	0	---	0
	Chemical Waste (in kg)	0	---	3578
	Other, e.g. General Refuse (in m ³)	26	SENT Landfill	193.19
Dredged Materials	Type 1 (in m ³)	0	East Ninepin Mud Disposal Ground	160500
	Type 2 (in m ³)	0	The East Sha Chau	104990

8.2 Advice on the Solid and Liquid Waste Management Status

The Contractor should provide sufficient preventive measures during equipment maintenance works so as to avoid oil leakage on the ground. In the event of any oil leakage, the Contractor should clean up the polluted soil and handle all the materials used for this cleaning works as chemical waste.



Besides, pre-cast drip trays were provided for oil drums at several areas, such as barge and chemical storage area. The Contractor should collect and dispose of any stagnant water accumulated in the drip trays and handle them as chemical waste.

The Contractor should use suitable containers with proper labels to store chemical wastes in accordance with Code of Practice on the Packaging, Labeling and Storage of Chemical Waste. The Contractor should also advise their workers of the proper procedures in handling the chemical waste.

All the trip tickets for chemical waste disposal were properly kept in the site office. No chemical waste disposal was undertaken in the reporting month.

The Contractor was reminded to increase the frequency of inspection and cleaning of the site drainage system, including desilting facilities. Moreover, the Contractor should apply approved pesticides in the stagnant water.

9.0 ENVIRONMENTAL NON-CONFORMANCE

9.1 Summary of Noise and Water Quality

No exceedance of Action and Limit Level of marine water quality monitoring results was recorded during the reporting month.

No exceedance of Action and Limit Level of noise monitoring was recorded in this reporting month.

9.2 Summary of Environmental Complaints

No complaint was received in this reporting month.

9.3 Summary of Notification of Summons and Prosecution

There was no notification of summons respect to environmental issues registered in this reporting month.

10.0 IMPLEMENTATION STATUS

10.1 Implementation Status of Environmental Mitigation Measures

An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is presented in Appendix G. Most of the necessary mitigation measures were implemented properly. Any deficiencies were noted in the remarks of the schedule.

10.2 Implementation Status of Event and Action Plan

Since no exceedance of Action and Limit Level of water quality monitoring results was recorded in this reporting month, no further action was required to be taken.

No exceedance of Action and Limit Level of noise monitoring was recorded in this reporting month. Hence, no further action was required.

10.3 Implementation Status of Environmental Complaint, Notifications of Summons and Successful Prosecutions Handling

No complaint, notification of summons and successful prosecution were received in this reporting month. A summary of environmental complaints, notifications of summons and successful prosecutions was given in Table 10.1.

Table 10.1 Summary of Environmental Complaints and Prosecutions

<i>Complaints logged</i>		<i>Summons served</i>		<i>Successful prosecution received</i>	
<i>September 2012</i>	<i>Cumulative</i>	<i>September 2012</i>	<i>Cumulative</i>	<i>September 2012</i>	<i>Cumulative</i>
0	1	0	0	0	0



11.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Impact monitoring of noise and water quality were carried out at designated locations in accordance with the EM&A Manual in this reporting month.

No exceedance of Action and Limit Level of water quality monitoring results was recorded during the reporting month.

No exceedance of Action and Limit Level of noise monitoring was recorded in this reporting month.

According to the ET weekly site inspections carried out in this reporting month, the Contractor generally implemented sufficient environmental mitigation measures.

No complaint, prosecution or notification of summon were received in this reporting month.

Recommendations

According to the environmental site inspections performed in the reporting month, the following recommendations were provided:

Air Quality

- Ensure the frequency of water spraying on unloading areas and stockpiles to be sufficient to suppress the dust sources;
- Provide proper maintenance for the powered mechanical equipment and barges to avoid emission of dark smoke; and
- Implement the dust mitigation measures for the site activities.

Noise

- Conduct noisy activities at a farther location from the NSRs.

Water Quality

- Maintain the drainage system regularly;
- Operate and maintain the silt curtains and silt screen regularly;
- Operate the cleaning vessel regularly;
- Provide proper treatment for the wastewater discharge;
- Clean up the fill material on the barge frequently; and
- Remove the stagnant water or provide approved pesticides for the stagnant water, if any.

Chemical and Waste Management

- Remove waste materials from the site to avoid accumulation regularly;
- Handle and store chemical wastes properly;
- Remove unwanted material in the existing stockpiles and avoid further dumping of such material;
- Provide and maintain sufficient drip trays for diesel drums, chemical containers, chemical waste storage drums and diesel operated generator set;
- Maintain good housekeeping at the works area; and
- Avoid soil being polluted during oil filling and equipment maintenance; hence, properly remove and store the contaminated soil, if any.

12.0 FUTURE KEY ISSUES

12.1 Work Programme for the Coming Month

As informed by the Contractor, site activities to be conducted in the next month:

- Trimming high spot of rock Armour (Type 2) (Portion I).



12.2 Key Issues for the Coming Month

Key issues to be considered in the coming month include:

- Noise and dust impact due to construction works;
- Use and maintain silt curtain and silt screen properly;
- Adequate environmental control measures shall be provided to prevent / avoid dropping of dredged materials into the sea during the transfer;
- Implement all necessary preventive measures to avoid oil leakage. In the event an oil leakage happens, the Contractor should properly remove the leaked oil and handle the contaminated soil and all materials using for this cleaning works as chemical waste; and
- Maintain good site practice to minimize environmental impacts at the site.

Mitigation measures to be required in the coming month:

Air Quality Impact

- To ensure implementation of the dust mitigation measures for the site activities;
- To provide proper maintenance for vehicles and machines on site; and
- To investigate any other dust sources around the air sensitive receivers

Noise

- To switch off equipment if not in use;
- To operate silent equipment; and
- To re-schedule the work activities in the event of valid noise exceedance.

Water Quality Impact

- To maintain the drainage system;
- To repair, inspect and maintain the silt curtains and site screen regularly;
- To provide covers for the drip trays to avoid stagnant water due to rainfall;
- To provide proper treatment for wastewater from the area;
- To deploy a cleaning vessel to remove floating rubbish;
- To avoid dredged materials on the barge from being washed into the sea; and
- To avoid any stagnant water or provide insecticide to avoid mosquito breeding.

Chemical and Waste Management

- To remove waste from the site regularly;
- To properly store and handle chemical wastes on site;
- To implement trip ticket system for all the imported public fill and general refuse disposal;
- To provide and manage sufficiently sized drip trays for diesel drums or chemical containers;
- To maintain proper housekeeping;
- To remove the oil stains in the event of leakage and handle all materials using for this cleaning works as chemical waste; and
- To identify C&D material by packaging, labeling, storage, transportation and disposal in accordance with statutory regulations.

12.3 Monitoring Schedule for the Coming Month

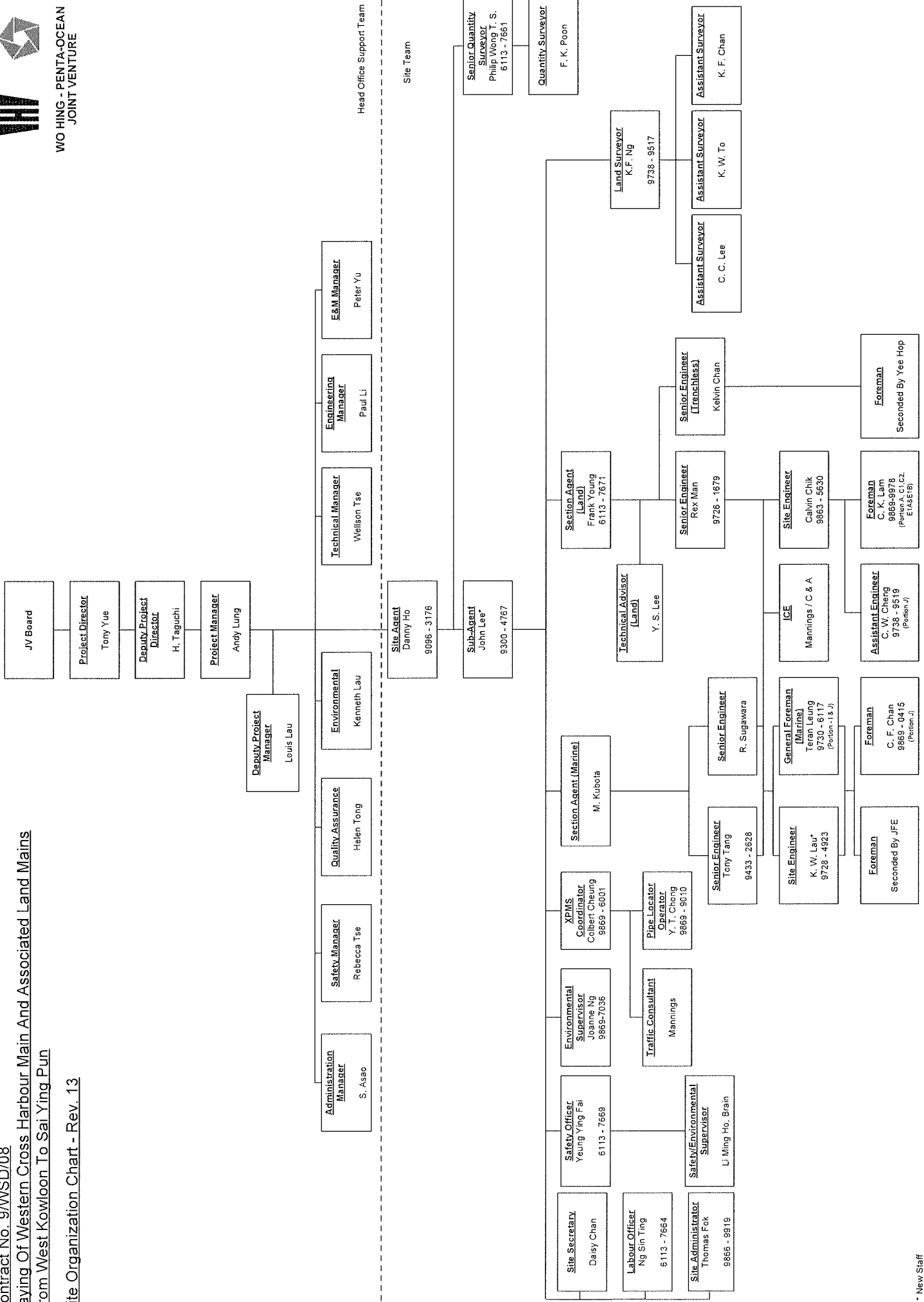
Since the construction works are scheduled in the coming month, the EM&A program for the coming month is required to be carried out. The proposed EM&A program of the coming month is attached in Appendix I.

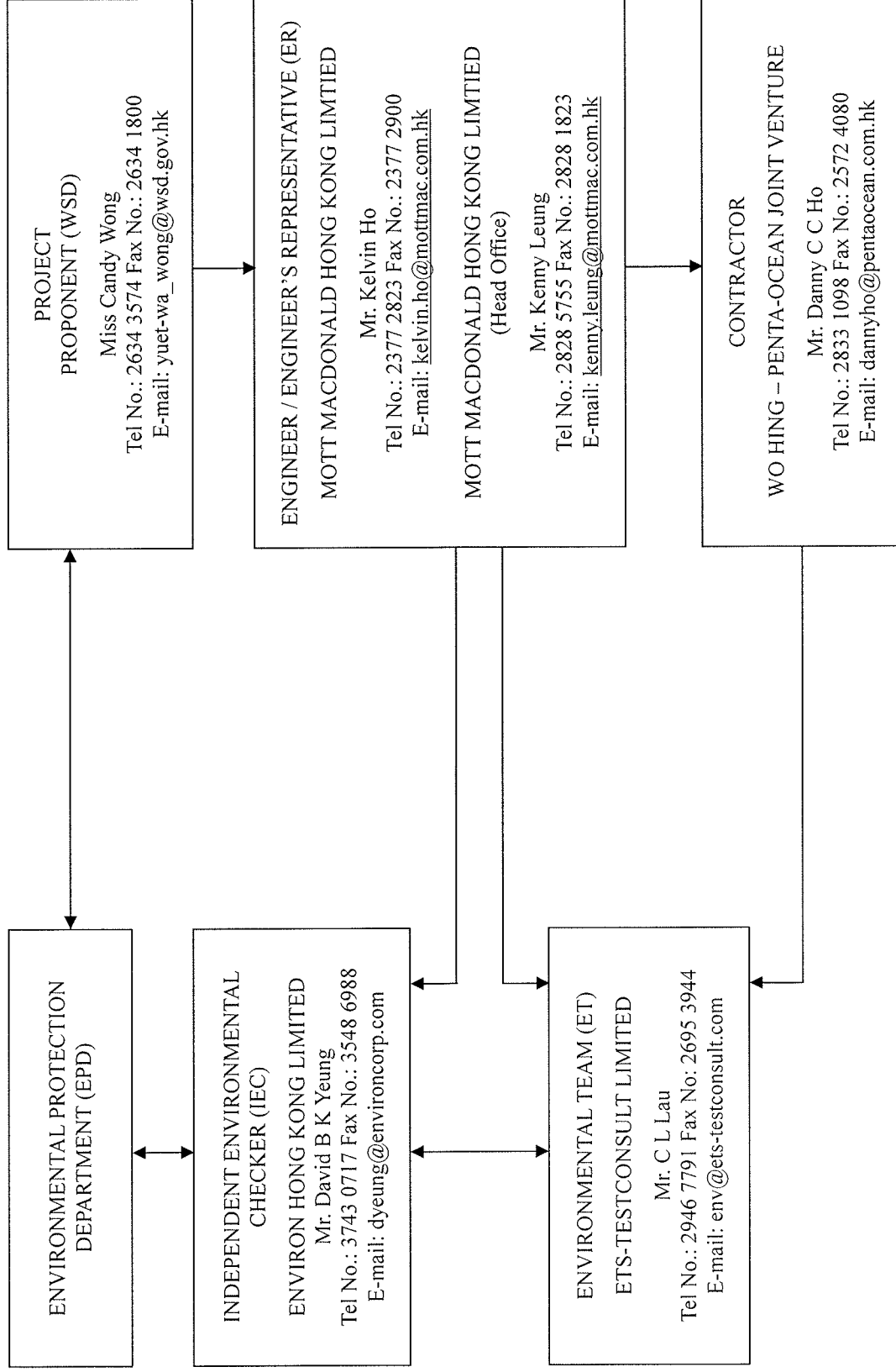
- END OF REPORT -



Appendix A

Organization Chart and Lines of Communication





Project Laying of Western Cross Harbour Main and Associated Land Mains From West Kowloon to Sai Ying Pun - Investigation

Title Project Organization and Line of Communication

Date Dec 2009

Figure 1.3a



Appendix B1

Calibration Certificates for Impact Noise Monitoring Equipment



Calibration Certificate

Certificate No. **16578**

Page 1 of 2 Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q12677

Date of receipt : 2-Nov-11

Item Tested

Description : Sound Level Calibrator

Manufacturer : Rion

Model : NC-73

Serial No. : 10196943

Test Conditions

Date of Test : 7-Nov-11

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02.

Test Results

All results were within the manufacturer's specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	13535	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR
S041	Universal Counter	15610	SCL-HKSAR
S206	Sound Level Meter	04462	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

Calibrated by : 

P. F. Wong

Approved by : 

Dorothy Cheuk

Date: 7-Nov-11

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8846

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Calibration Certificate

Certificate No. 16578

Page 2 of 2 Pages

Results :

1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value	Mfr's Spec.
94 dB	94.21 dB	± 1 dB

Uncertainty : ± 0.2 dB

2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.989 kHz	± 2 %

Uncertainty : ± 0.1 %

3. Level Stability : 0.0 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.4 %

Mfr's Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. The above measured values were the mean of 3 measurements.

4. Atmospheric Pressure : 1 005 hPa

----- END -----



Calibration Certificate

Certificate No. **22085**

Page 1 of 3 Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q20865

Date of receipt : 11-Apr-12

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : Rion

Model : NL-31

Serial No. : 00110024

Test Conditions

Date of Test : 16-Apr-12

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

All results were within the IEC 651 Type 1 & IEC 804 Type 1 specification.

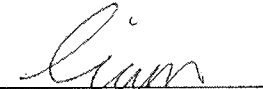
The results are shown in the attached page(s).


Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C101623	SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : 
P. F. Wong

Approved by : 
Dorothy Cheuk

Date: 16-Apr-12

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. 22085

Page 2 of 3 Pages

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L _A	Fast	94.0	94.0
		Slow		94.0
	L _C	Fast		94.0
	L _p	Fast		94.1
30 – 120	L _A	Fast	94.0	94.0
		Slow		94.0
	L _C	Fast		94.0
	L _p	Fast		94.0
30 – 120	L _A	Fast	114.0	114.1
		Slow		114.1
	L _C	Fast		114.1
	L _p	Fast		114.1

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.2 dB

2. Level Stability : 0.1 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.1 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	114.0	0.0	± 0.7 dB
130	104.0	104.0	0.0	
120	94.0	94.0 (Ref.)	--	
110	84.0	84.1	+0.1	
100	74.0	74.1	+0.1	
90	64.0	64.1	+0.1	
80	54.0	54.1	+0.1	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 22085

Page 3 of 3 Pages

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	84.1	+0.1	± 0.4 dB
	94.0	94.0 (Ref.)	--	
	95.0	95.0	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.6	- 39.4 dB, ± 1.5 dB
63 Hz	-26.0	- 26.2 dB, ± 1.5 dB
125 Hz	-16.1	- 16.1 dB, ± 1 dB
250 Hz	-8.6	- 8.6 dB, ± 1 dB
500 Hz	-3.1	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.4	+ 1.2 dB, ± 1 dB
4 kHz	+1.2	+ 1.0 dB, ± 1 dB
8 kHz	-1.0	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.6	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB

5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.9	± 0.5 dB
1/10 ²	40.0	39.9	
1/10 ³	40.0	40.0	± 1.0 dB
1/10 ⁴	40.0	40.3	

Uncertainty : ± 0.1 dB

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 005 hPa.

----- END -----



Calibration Certificate

Certificate No. **23144**

Page 1 of 4 Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q21311

Date of receipt : 23-May-12

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : Rion

Model : NL-31

Serial No. : 00531142

Test Conditions

Date of Test : 29-May-12

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

All results were within the IEC 651 Type 1 & IEC 804 Type 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C101623	SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

Calibrated by : 
P.F. Wong

Approved by : 
Dorothy Cheuk

Date: 29-May-12

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646



Calibration Certificate

Certificate No. 23144

Page 2 of 4 Pages

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L _A	Fast	94.0	94.1
		Slow		94.1
	L _C	Fast		94.1
	L _p	Fast		94.1
30 – 120	L _A	Fast	94.0	94.0
		Slow		94.0
	L _C	Fast		94.0
	L _p	Fast		94.0
30 – 120	L _A	Fast	114.0	114.2
		Slow		114.2
	L _C	Fast		114.2
	L _p	Fast		114.2

IEC Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 23144

Page 3 of 4 Pages

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	114.0	0.0	± 0.7 dB
130	104.0	104.0	0.0	
120	94.0	94.0 (Ref.)	--	
110	84.0	84.0	0.0	
100	74.0	74.0	0.0	
90	64.0	64.1	+0.1	
80	54.0	54.1	+0.1	

Uncertainty : ± 0.1 dB

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	84.0	0.0	± 0.4 dB
	94.0	94.0 (Ref.)	--	
	95.0	95.0	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	- 39.6	- 39.4 dB, ± 1.5 dB
63 Hz	- 26.2	- 26.2 dB, ± 1.5 dB
125 Hz	- 16.2	- 16.1 dB, ± 1 dB
250 Hz	- 8.7	- 8.6 dB, ± 1 dB
500 Hz	- 3.2	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+ 1.3	+ 1.2 dB, ± 1 dB
4 kHz	+ 1.1	+ 1.0 dB, ± 1 dB
8 kHz	- 1.1	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	- 6.7	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 23144

Page 4 of 4 Pages

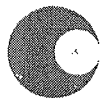
4. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	40.0	± 0.5 dB
1/10 ²	40.0	40.0	
1/10 ³	40.0	39.9	± 1.0 dB
1/10 ⁴	40.0	39.8	

Uncertainty : ± 0.1 dB

- Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1 000 hPa.

----- END -----



Calibration Certificate

Certificate No. 17299

Page 1 of 3 Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q12949

Date of receipt : 5-Dec-11

Item Tested

Description : Precision Integrating Sound Level Meter (ET/EN/003/12)

Manufacturer : Rion

Model : NL-31

Serial No. : 00773032

Test Conditions

Date of Test : 6-Dec-11

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

All results were within the IEC 651 Type1 and IEC 804 Type 1 specification.

The results are shown in the attached page(s).


Main Test equipment used:

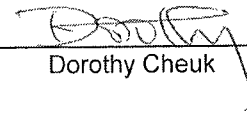
<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017A	Multi-Function Generator	07279	SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).

The test results apply to the above Unit-Under-Test only

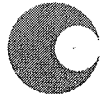
Calibrated by : 
P. F. Wong

Approved by : 
Dorothy Cheuk

Date: 7-Dec-11

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. 17299

Page 2 of 3 Pages

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L _A	Fast	94.0	94.3
		Slow		94.3
	L _C	Fast		94.3
		L _p		Fast
30 – 120	L _A	Fast	94.0	94.1
		Slow		94.1
	L _C	Fast		94.0
	L _p	Fast		94.0
30 – 120	L _A	Fast	114.0	114.0
		Slow		114.0
	L _C	Fast		114.1
	L _p	Fast		114.1

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

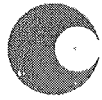
Uncertainty : ± 0.01 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	114.1	0.0	± 0.7 dB
130	104.0	104.1	0.0	
120	94.0	94.1 (Ref.)	--	
110	84.0	84.2	+0.1	
100	74.0	74.1	0.0	
90	64.0	64.1	0.0	
80	54.0	54.1	0.0	
		54.2	+0.1	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 17299

Page 3 of 3 Pages

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	84.1	0.0	± 0.4 dB
	94.0	94.1 (Ref.)	--	
	95.0	95.1	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.6	- 39.4 dB, ± 1.5 dB
63 Hz	-26.3	- 26.2 dB, ± 1.5 dB
125 Hz	-16.3	- 16.1 dB, ± 1 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.2	+ 1.2 dB, ± 1 dB
4 kHz	+1.0	+ 1.0 dB, ± 1 dB
8 kHz	-1.2	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.6	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB

5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	40.0	± 0.5 dB
1/10 ²	40.0	39.9	
1/10 ³	40.0	39.9	± 1.0 dB
1/10 ⁴	40.0	40.0	

Uncertainty : ± 0.1 dB

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 012 hPa.

----- END -----



Calibration Certificate

Certificate No. **16576**

Page 1 of 2 Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q12677

Date of receipt : 2-Nov-11

Item Tested

Description : Anemometer

Manufacturer : AZ Instrument

Model : AZ 8908

Serial No. : 9101259

Test Conditions

Date of Test : 10-Nov-11

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: T03, Z04.

Test Results

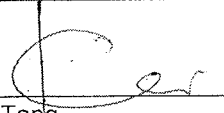
A correction factor of x 1.1 applied to velocity function is required to bring the meter reading to within the manufacturer's specification. The results are shown in the attached page(s).

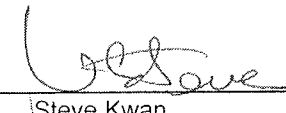
Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S223A	Std. Thermometer	13173	NIM-PRC
S155	Std. Anemometer	NSC20113098	NIM-PRC

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : 
S. K. Tang

Approved by : 
Steve Kwan

Date: 10-Nov-11

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong
Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. 16576

Page 2 of 2 Pages

Results :

1. Velocity

Applied Value (m/s)	UUT Reading (m/s)	Corrected Reading (UUT Reading x 1.1) (m/s)	Mfr's Spec.
2.50	2.3	2.5	± (3 % of reading + 1 dgt)
5.00	4.6	5.1	
10.00	9.4	10.3	
15.00	14.0	15.4	
20.00	18.8	20.7	

2. Temperature

Applied Value (°C)	UUT Reading (°C)	Mfr's Spec.
5.68	5.7	± 1 °C
25.98	25.7	
47.80	47.1	

Remark : 1. UUT: Unit-Under-Test

2. Uncertainty : ± (0.9% + 0.16 m/s) for Velocity, ± 0.25 °C for Temperature, for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 002 hPa

----- END -----



Appendix B2

Impact Noise Monitoring Results



Day-time Noise Monitoring

Monitoring Station: KS6 (Podium at the Culliman)

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
05/09/12	Fine	17:15	17:45	65.1	66.7	62.6	0.7
12/09/12	Fine	16:05	16:35	63.1	64.7	59.4	1.3
21/09/12	Cloudy	11:25	11:55	65.4	66.2	57.4	1.3
27/09/12	Sunny	13:45	14:15	62.5	63.8	58.7	1.2

Monitoring Station: CGa (Pavement in front of Connaught Garden)

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
03/09/12	Fine	08:45	09:15	73.2	76.3	66.2	1.1
10/09/12	Fine	14:20	14:50	74.6	77.3	67.4	0.3
17/09/12	Fine	10:05	10:35	73.4	76.9	69.5	0.8
24/09/12	Fine	11:00	11:30	74.2	77.0	67.6	0.5

Monitoring Station: RWM (Roof at Richwealth Mansion)

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
03/09/12	Fine	09:20	09:50	65.2	67.0	62.0	1.1
10/09/12	Fine	14:55	15:25	65.2	67.3	62.1	0.4
17/09/12	Fine	09:30	10:00	64.7	68.4	61.8	0.9
24/09/12	Fine	11:07	11:37	65.1	67.0	62.4	0.6

Monitoring Station: KY3 (Roof at Kwan Yik Building Phase 3)

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
03/09/12	Fine	09:55	10:25	64.1	66.8	61.3	1.1
10/09/12	Fine	15:30	16:00	64.6	65.9	62.0	0.4
17/09/12	Fine	09:35	10:05	65.2	67.7	62.1	0.9
24/09/12	Fine	11:06	11:36	64.7	66.1	62.2	0.5

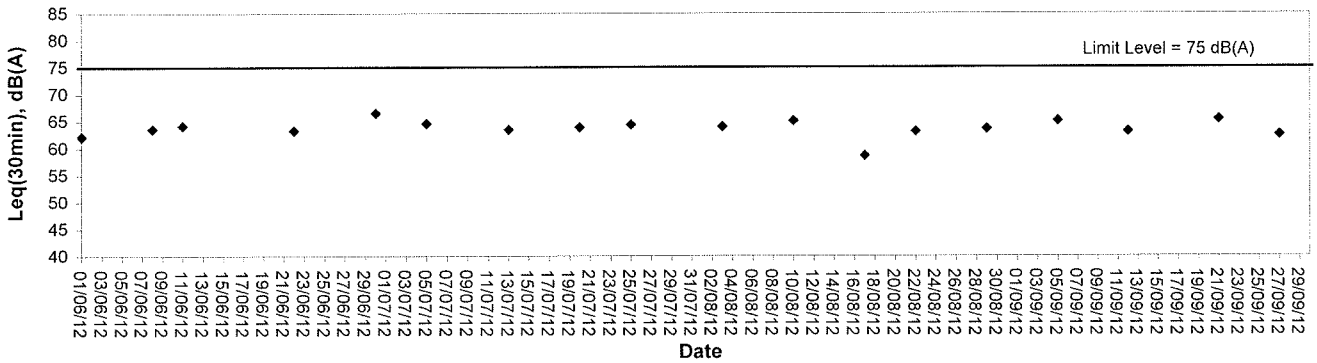
Appendix B3

Graphical Plots of Impact Noise Monitoring Data

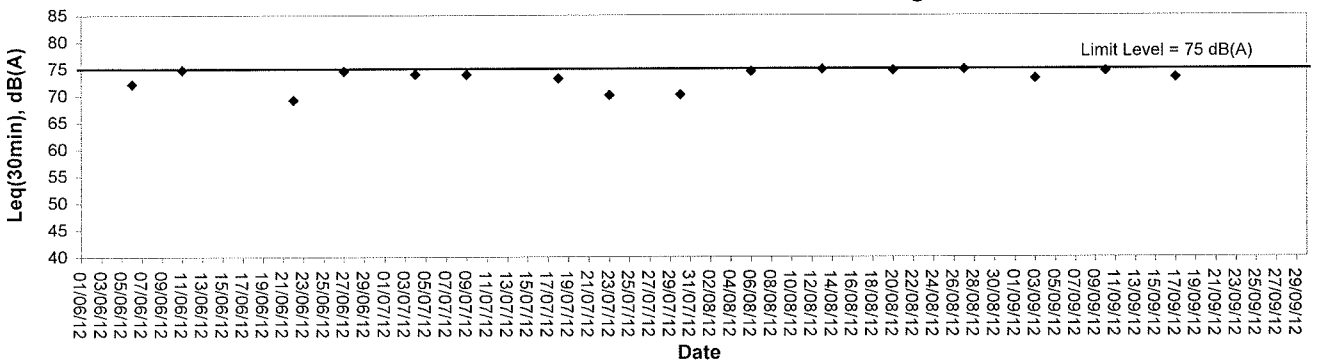


Noise Monitoring (Day-time)

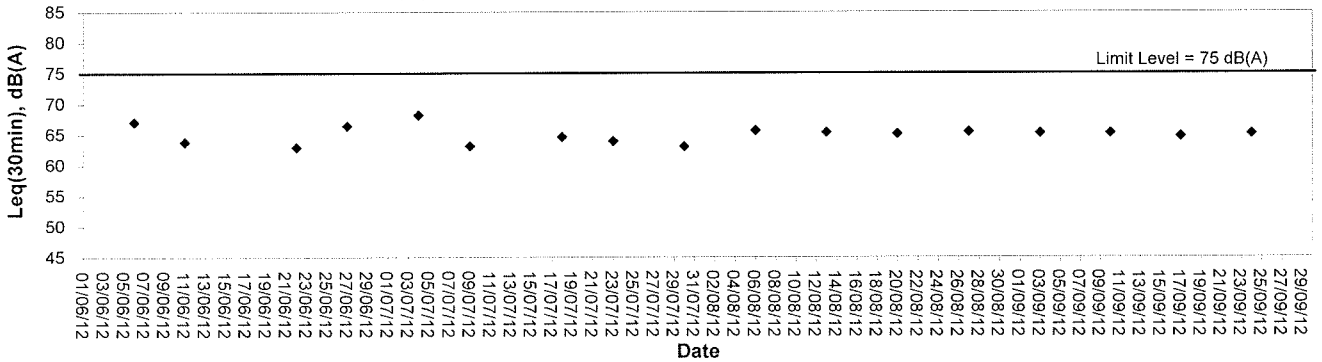
Noise level at KS6 - Podium at the Culliman



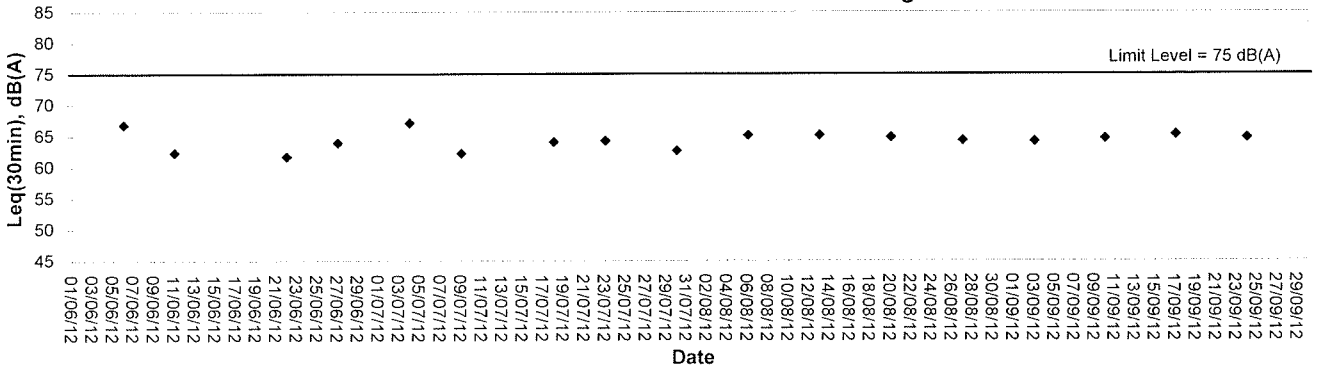
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



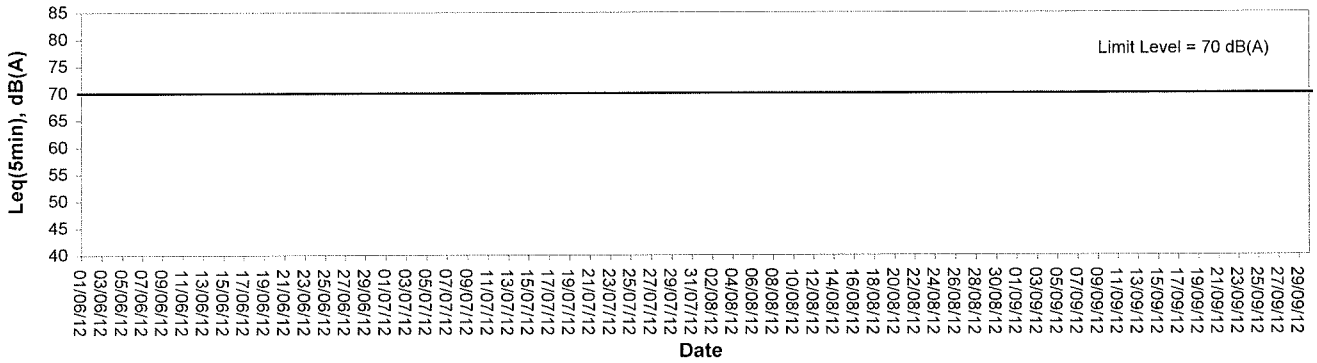
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



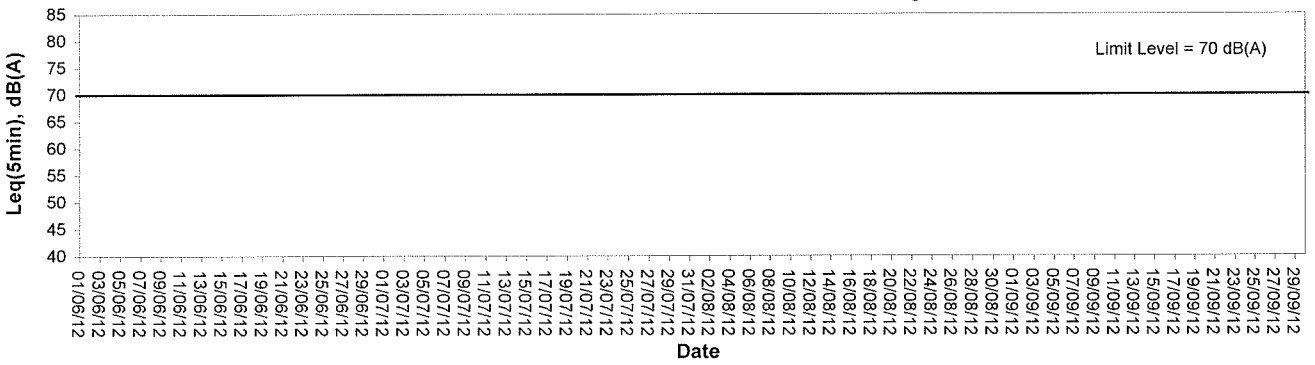


Noise Monitoring (Evening-time)

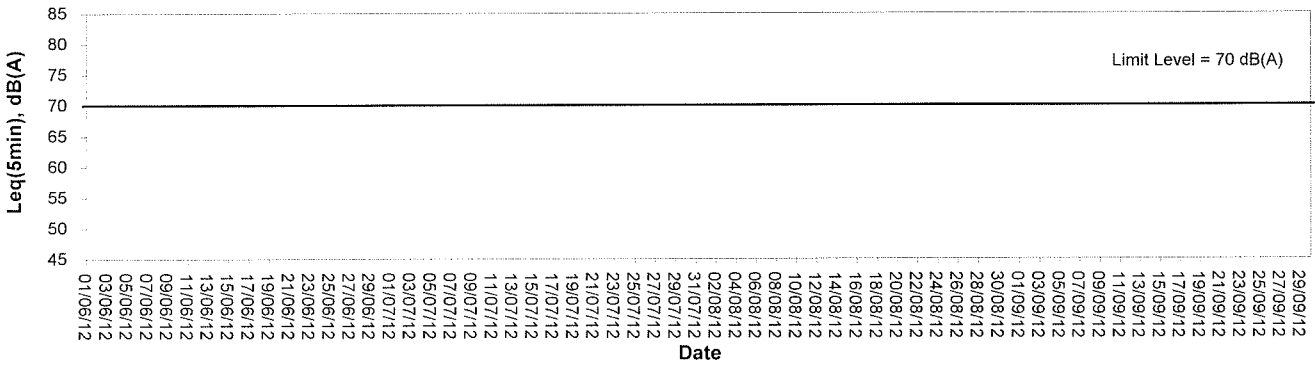
Noise level at KS6 - Podium at the Culliman



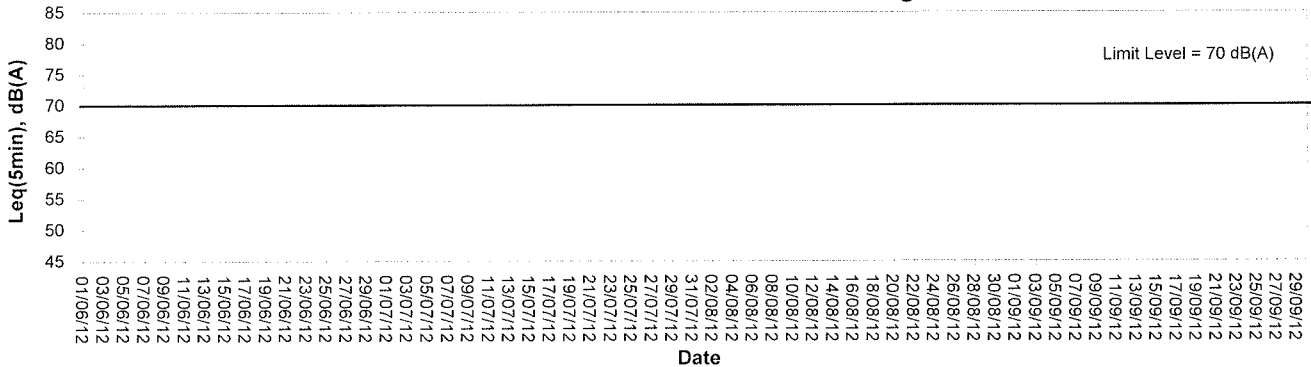
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



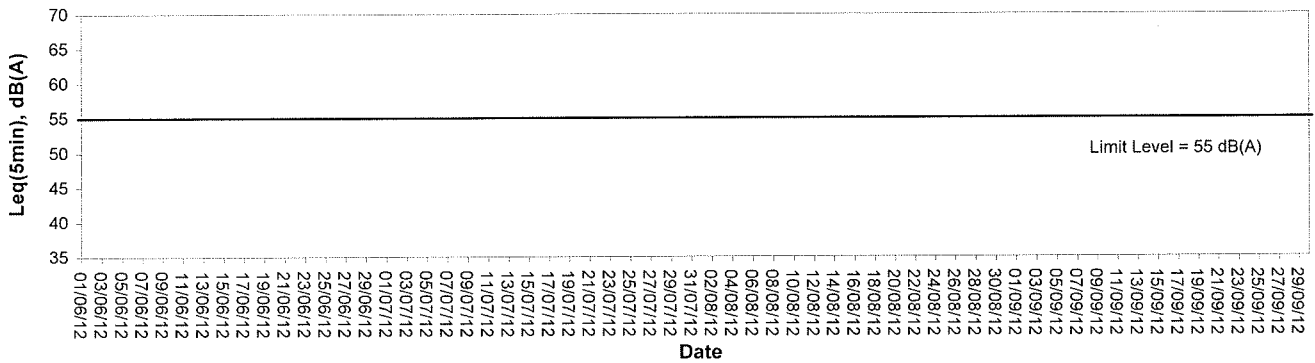
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



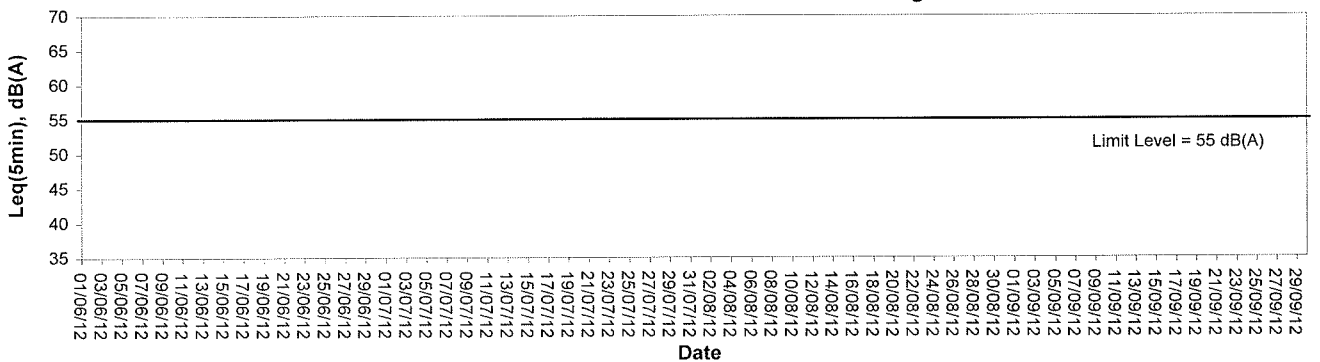


Noise Monitoring (Night-time)

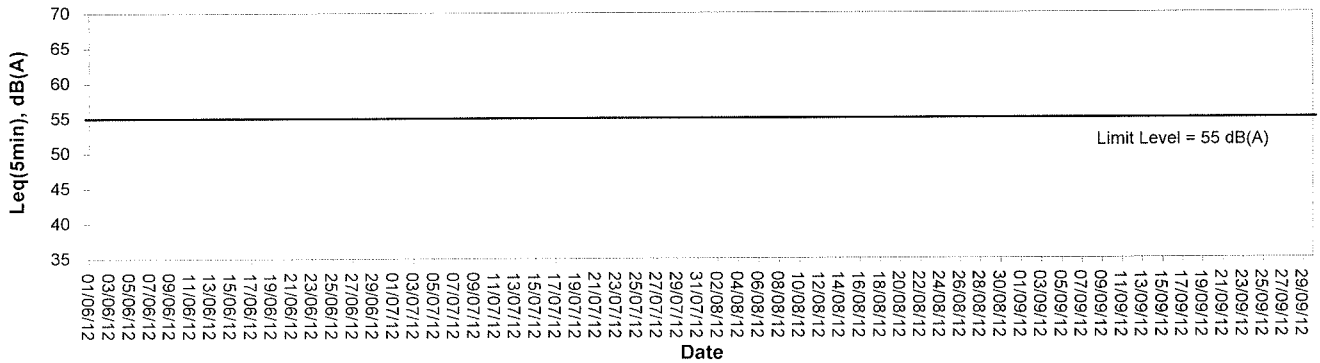
Noise level at KS6 - Podium at the Culliman



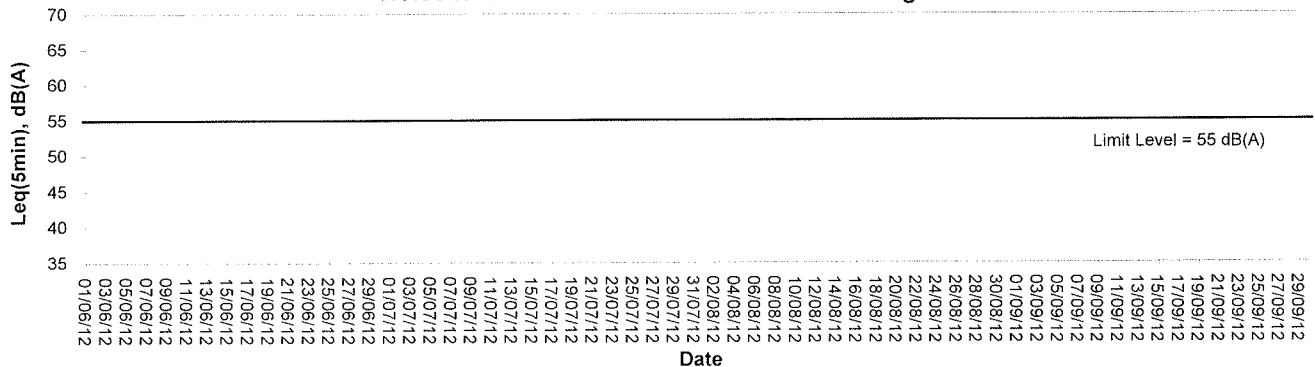
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



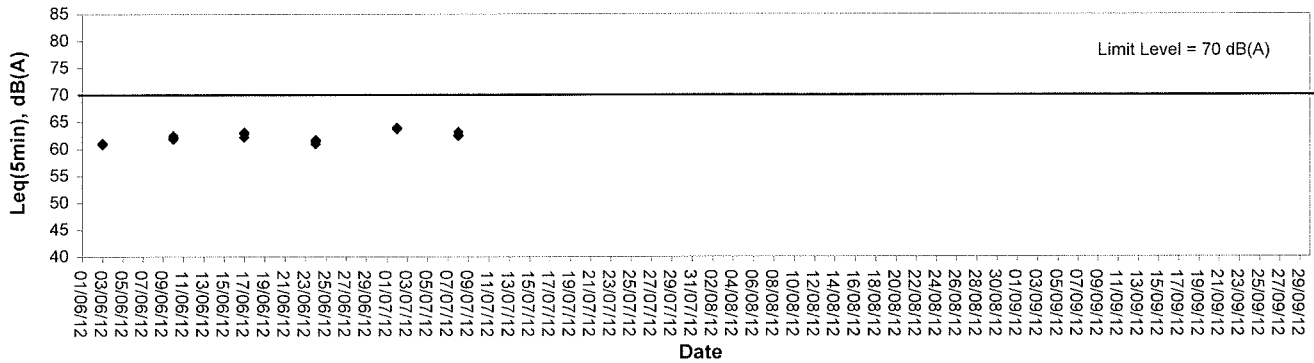
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



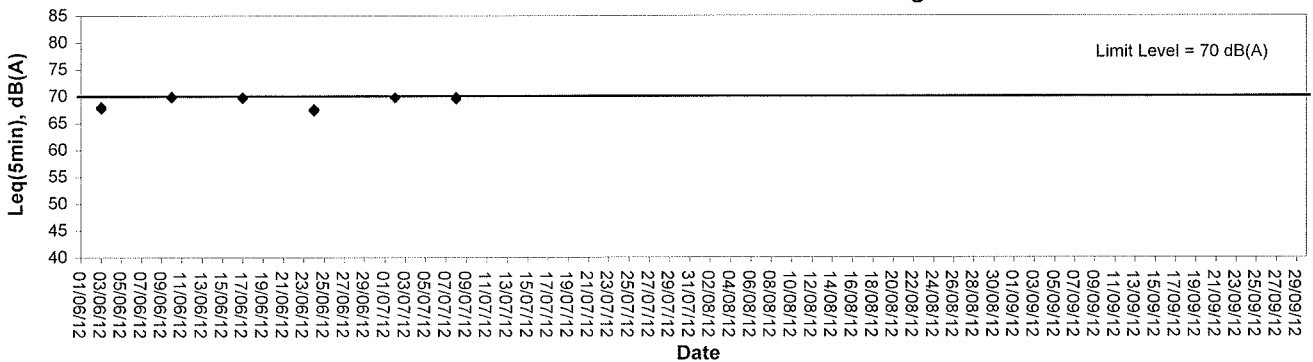


Noise Monitoring (Holiday-time)

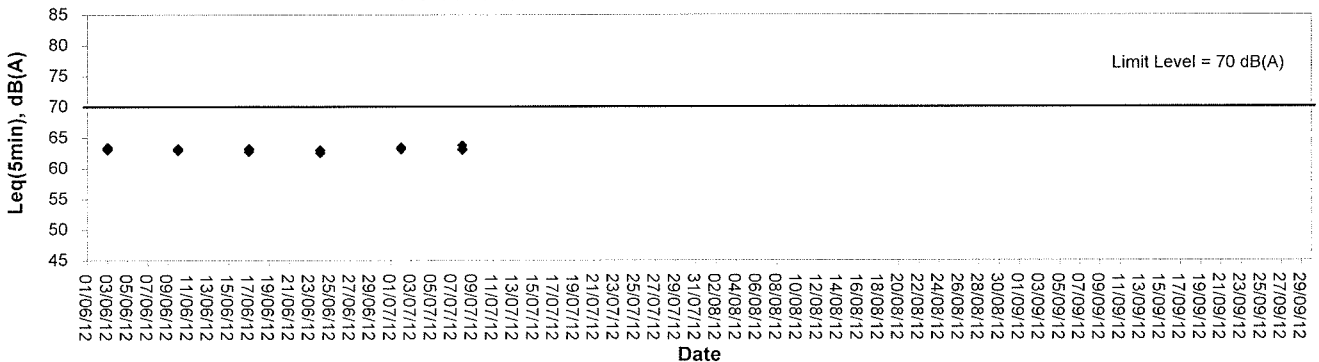
Noise level at KS6 - Podium at the Culliman



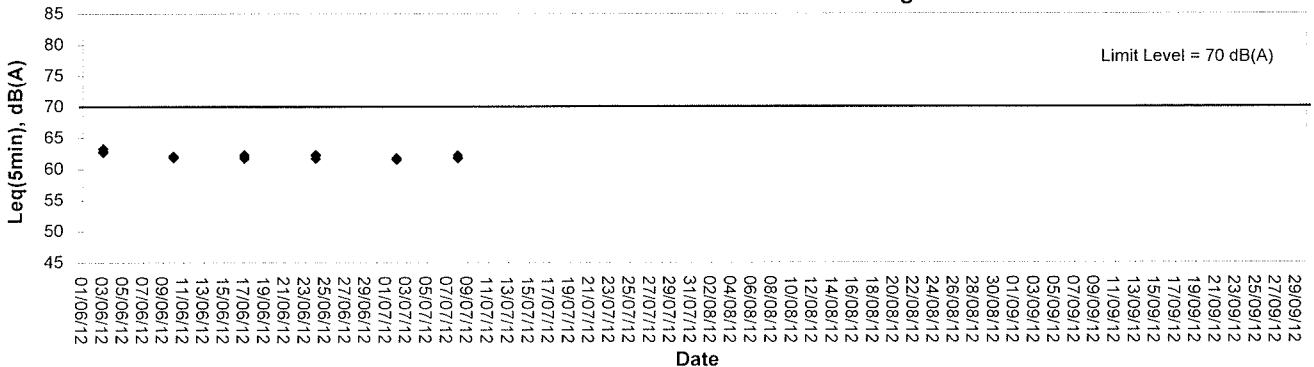
Noise level at CGA - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



Noise level at KY3 - Roof of Kwan Yik Building Phase 3





Appendix C1

Calibration Certificates for Impact Water Quality Monitoring Equipments



Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. :	<u>ET/EW/008/004</u>	Manufacturer :	<u>YSI</u>
Model No. :	<u>Pro 2030</u>	Serial No. :	<u>10F 101978</u>
Date of Calibration :	<u>13/08/2012</u>	Calibration Due Date :	<u>12/11/2012</u>

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/001
 Ref. No. of Water Bath : ---

		Temperature (°C)		
Reference Thermometer reading	Measured	20.3	Corrected	19.9
DO Meter reading	Measured	19.9	Difference	0.0

Standardization of sodium thiosulphate (Na₂S₂O₃) solution

Reagent No. of Na ₂ S ₂ O ₃ titrant	<u>CPE/012/4.5/001/5</u>	Reagent No. of 0.025N K ₂ Cr ₂ O ₇	<u>CPE/012/4.4/001/9</u>
		Trial 1	Trial 2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)		0.00	0.00
Final Vol. of Na ₂ S ₂ O ₃ (ml)		40.10	39.90
Vol. of Na ₂ S ₂ O ₃ used (ml)		40.10	39.90
Normality of Na ₂ S ₂ O ₃ solution (N)		0.02494	0.02506
Average Normality (N) of Na ₂ S ₂ O ₃ solution (N)		0.02500	
Acceptance criteria, Deviation		Less than ± 0.001N	

Calculation: Normality of Na₂S₂O₃, N = 1 / ml Na₂S₂O₃ used

Linearity Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	10.70	21.20	0.00	7.80	12.60
Final Vol. of Na ₂ S ₂ O ₃ (ml)	10.70	21.20	29.10	7.80	12.60	17.40
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	10.70	10.50	7.90	7.80	4.80	4.80
Dissolved Oxygen (DO), mg/L	7.18	7.05	5.30	5.23	3.22	3.22
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = V x N x 8000/298

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.21	7.16	7.19	7.18	7.05	7.12	0.98
5	5.35	5.28	5.32	5.30	5.23	5.27	0.94
10	3.17	3.21	3.19	3.22	3.22	3.22	0.94
Linear regression coefficient				0.99880			



Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00
------------------------	------

Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/4.7/001/27	Reagent No. of NaCl (30ppt)	CPE/012/4.8/001/27
-----------------------------	--------------------	-----------------------------	--------------------

*Determination of dissolved oxygen content by Winkler Titration ***

Salinity (ppt)	10		30	
	1	2	1	2
Trial				
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	11.60	23.40	34.10
Final Vol. of Na ₂ S ₂ O ₃ (ml)	11.60	23.40	34.10	44.60
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	11.60	11.80	10.70	10.50
Dissolved Oxygen (DO), mg/L	7.79	7.92	7.18	7.05
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = V x N x 8000/298

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.8	7.84	7.82	7.79	7.92	7.86	0.51
30	7.24	7.2	7.22	7.18	7.05	7.12	1.39

Acceptance Criteria

- (1) Differenc between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C
- (2) Linear regression coefficient : >0.99
- (3) Zero checking: 0.0mg/L
- (4) Difference (%) of DO content from the meter reading and by winkler titration : within ± 5%

The equipment complies # / ~~does not comply~~ # with the specified requirements and is deemed acceptable # / ~~unacceptable~~ # for use.

Delete as appropriate

Calibrated by

:

Approved by :



Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/004 Manufacturer : YSI
Model No. : Pro 2030 Serial No. : 10F 101978
Date of Calibration : 13/08/2012 Due Date : 12/11/2012

Ref. No. of Salinity Standard used (30ppt)

S/001/4

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30.1	30.4	0.99

Acceptance Criteria

Difference : <10 %

The salinity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Checked by :

Approved by :



Performance Check of Turbidimeter

Equipment Ref. No. : ET/0505/008 Manufacturer : HACH

Model No. : 2100Q Serial No. : 10030 C 001191

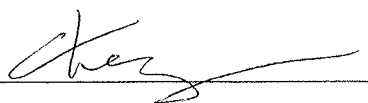
Date of Calibration : 02/08/2012 Due Date : 01/11/2012


Gelex Vial Std	Theoretical Value (NTU)	Measured Value (NTU)	Difference %
0-10 NTU	5.70	5.62	1.41
10-100 NTU	52.1	52.7	1.15
100-1000 NTU	547	539	1.47

Acceptance Criteria

Difference : <5 %

The salinity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Checked by : 

Approved by : 



Appendix C2

Impact Water Quality Monitoring Results

Monitoring Station : C2

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)					
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average			
01/09/12	1402-1415	30/Cloudy	Surface	1.0	28.3	29.2	29.3	6.14	6.12	90.4	90.1	3.40	3.43	3.62	5.5	5.6	5.6			
						29.3		6.09		89.7		3.45			5.6					
			Middle	9.0	27.7	29.7	29.7	5.93	5.95	87.3	87.5	3.78	3.80		5.8	5.7		5.6	5.5	5.5
						29.7		5.96		87.7		3.81			5.6					
			Bottom	17.0	27.4	30.1	30.1	5.84	5.86	85.9	86.2	3.63	3.65		5.6	5.5		5.4	5.4	5.4
						30.0		5.88		86.5		3.67			5.4					
04/09/12	1201-1215	29/Rainy	Surface	1.0	27.5	27.3	27.3	5.97	5.95	87.2	86.9	3.74	3.72	4.00	5.5	5.6	5.9			
						27.3		5.92		86.5		3.69			5.6					
			Middle	10.1	27.3	27.7	27.8	5.87	5.85	85.7	85.5	3.89	3.92		5.8	5.8		5.8	5.8	
						27.8		5.83		85.2		3.94			5.8					
			Bottom	19.2	27.2	28.0	28.1	5.70	5.68	83.3	83.0	4.33	4.36		6.2	6.3		6.4	6.4	
						28.1		5.66		82.6		4.39			6.4					
06/09/12	1231-1245	30/Cloudy	Surface	1.0	27.7	27.3	27.3	6.02	6.04	88.5	88.8	3.61	3.63	3.84	5.5	5.6	5.8			
						27.3		6.06		89.1		3.64			5.6					
			Middle	9.2	27.3	27.7	27.8	5.88	5.91	86.5	86.9	3.81	3.84		5.8	5.8		5.8	5.8	
						27.8		5.93		87.2		3.86			5.8					
			Bottom	17.4	27.1	28.0	28.0	5.77	5.79	84.8	85.0	4.03	4.05		6.0	6.0		6.0	6.0	
						28.0		5.80		85.2		4.06			6.0					
08/09/12	1828-1842	32/Fine	Surface	1.0	27.5	27.4	27.4	6.13	6.14	89.8	90.0	3.72	3.70	3.79	5.5	5.6	5.7			
						27.3		6.15		90.1		3.68			5.6					
			Middle	9.4	27.2	27.7	27.7	5.98	5.96	87.9	87.7	3.73	3.75		5.8	5.7		5.8	5.8	
						27.7		5.94		87.4		3.77			5.8					
			Bottom	17.8	27.0	28.0	28.1	5.80	5.78	85.5	85.2	3.88	3.91		5.8	5.8		5.8	5.8	
						28.1		5.75		84.8		3.93			5.8					
11/09/12	2020-2038	30/Fine	Surface	1.0	27.5	26.8	26.9	6.18	6.16	90.0	89.7	3.37	3.38	3.56	5.0	5.1	5.4			
						26.9		6.14		89.3		3.39			5.2					
			Middle	7.9	27.3	27.0	27.1	6.05	6.06	88.3	88.5	3.61	3.58		5.4	5.4		5.4	5.4	
						27.1		6.07		88.6		3.55			5.4					
			Bottom	24.8	27.1	27.2	27.3	5.84	5.86	85.5	85.7	3.74	3.72		5.6	5.6		5.6	5.6	
						27.3		5.87		85.9		3.69			5.6					
13/09/12	1757-1810	31/Fine	Surface	1.0	28.2	28.2	28.3	6.17	6.16	90.8	90.6	3.51	3.53	3.63	5.5	5.5	5.6			
						28.3		6.14		90.3		3.54			5.4					
			Middle	9.4	27.6	28.7	28.8	6.02	6.00	88.6	88.3	3.71	3.73		5.6	5.6		5.6	5.6	
						28.8		5.98		88.0		3.75			5.6					
			Bottom	17.8	27.4	29.2	29.2	5.86	5.84	86.2	86.0	3.61	3.64		5.6	5.7		5.8	5.8	
						29.2		5.82		85.7		3.66			5.8					
15/09/12	1815-1830	30/Cloudy	Surface	1.0	28.1	27.0	27.0	6.18	6.19	89.6	89.8	3.20	3.22	3.44	5.0	5.2	5.5			
						27.0		6.20		89.9		3.23			5.4					
			Middle	9.2	27.8	27.2	27.2	6.12	6.14	88.7	89.0	3.47	3.50		5.4	5.5		5.6	5.6	
						27.1		6.16		89.3		3.52			5.6					
			Bottom	17.4	27.5	27.4	27.4	5.84	5.85	84.7	84.8	3.63	3.62		5.6	5.7		5.8	5.8	
						27.4		5.86		84.9		3.61			5.8					
18/09/12	1956-2010	27/Cloudy	Surface	1.0	27.0	26.8	26.9	6.20	6.23	90.6	91.0	3.37	3.39	3.57	5.0	5.1	5.4			
						26.9		6.25		91.3		3.41			5.2					
			Middle	9.2	26.8	27.3	27.3	6.09	6.07	89.0	88.7	3.52	3.55		5.4	5.4		5.4	5.4	
						27.2		6.05		88.4		3.57			5.4					
			Bottom	17.4	26.4	27.6	27.6	5.82	5.81	85.0	84.8	3.74	3.76		5.6	5.6		5.6	5.6	
						27.5		5.79		84.6		3.78			5.6					
20/09/12	1230-1245	29/Cloudy	Surface	1.0	27.2	26.9	26.9	6.22	6.24	90.8	91.0	3.47	3.49	3.67	5.5	5.6	5.7			
						26.8		6.25		91.2		3.50			5.6					
			Middle	9.0	26.8	27.4	27.5	6.14	6.12	89.6	89.4	3.60	3.63		5.6	5.6		5.6	5.6	
						27.5		6.10		89.1		3.65			5.6					
			Bottom	17.0	26.4	27.8	27.8	5.97	5.99	87.1	87.3	3.87	3.89		5.8	5.8		5.8	5.8	
						27.8		6.00		87.5		3.90			5.8					
22/09/12	1307-1320	30/Cloudy	Surface	1.0	26.8	26.8	26.9	6.02	6.04	87.9	88.2	3.34	3.37	3.64	5.0	5.2	5.5			
						26.9		6.06		88.5		3.40			5.4					
			Middle	9.5	26.6	27.3	27.4	5.92	5.94	86.4	86.7	3.73	3.70		5.6	5.6		5.6	5.6	
						27.4		5.95		86.9		3.67			5.6					
			Bottom	18.0	26.5	27.7	27.7	5.86	5.83	85.6	85.2	3.82	3.85		5.8	5.8		5.8	5.8	
						27.7		5.80		84.7		3.88			5.8					
25/09/12	1740-1755	30/Cloudy	Surface	1.0	27.9	27.0	27.0	6.08	6.09	89.4	89.6	3.50	3.49	3.69	5.5	5.5	5.6			
						26.9		6.10		89.7		3.47			5.4					
			Middle	9.3	27.7	27.1	27.2	5.92	5.91	87.0	86.8	3.66	3.69		5.6	5.6		5.6	5.6	
						27.2		5.89		86.6		3.71			5.6					
			Bottom	17.6	27.5	27.2	27.3	5.73	5.74	84.2	84.4	3.87	3.91		5.8	5.8		5.8	5.8	
						27.3		5.75		84.5		3.94			5.8					
27/09/12	1830-1842	31/Fine	Surface	1.0	28.0	26.9	26.9	6.19	6.15	91.5	90.9	3.26	3.25	3.42	5.0	5.1	5.4			
						26.9		6.11		90.3		3.23			5.2					
			Middle	9.3	27.8	27.1	27.1	5.98	6.01	88.4	88.8	3.39	3.41		5.4	5.4		5.4	5.4	
						27.1		6.03		89.1		3.42			5.4					
			Bottom	17.6	27.5	27.2	27.2	5.75	5.76	84.9	85.1	3.63	3.62		5.6	5.6		5.6	5.6	
						27.1		5.77		85.3		3.61			5.6					
29/09/12	1834-1846	28/Fine	Surface	1.0	27.8	27.0	27.1	6.20	6.19	90.8	90.8	3.47	3.51	3.66	5.5	5.6	5.8			
						27.1		6.18		90.7		3.54			5.6					
			Middle	9.0	27.7	27.2	27.3	6.08	6.07	89.4	89.4	3.66	3.67		5.8	5.8		5.8	5.8	
						27.3		6.06		89.3		3.68			5.8					
			Bottom	16.9	27.4	27.4	27.4	5.99	5.98	87.9	87.9	3.81	3.80		6.0	6.0		6.0	6.0	
						27.4		5.96		87.8		3.78			6.0					

Monitoring Station : C4

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1344-1357	30/Cloudy	Surface	1.0	28.3	29.0	29.1	6.12	6.14	90.1	90.4	3.65	3.63	3.75	5.6	5.6	5.7
						29.1		6.16		90.7		3.60			5.6		
			Middle	9.1	27.8	29.4	29.5	5.94	5.92	87.5	87.2	3.73	3.72		5.8	5.7	
						29.5		5.90		86.8		3.70			5.6		
			Bottom	17.2	27.5	29.8	29.9	5.89	5.87	86.6	86.4	3.89	3.90		5.8	5.9	
						29.9		5.85		86.1		3.91			6.0		
04/09/12	1142-1156	29/Rainy	Surface	1.0	27.5	27.3	27.3	5.93	5.92	86.6	86.4	3.76	3.79	3.98	5.6	5.7	5.9
						27.2		5.90		86.1		3.81			5.8		
			Middle	7.8	27.5	27.4	27.4	5.86	5.84	85.5	85.3	3.90	3.93		5.8	5.8	
						27.4		5.82		85.0		3.96			5.8		
			Bottom	14.6	27.3	27.5	27.6	5.78	5.76	84.4	84.1	4.20	4.23		6.2	6.1	
						27.6		5.73		83.7		4.25			6.0		
06/09/12	1213-1227	30/Cloudy	Surface	1.0	27.7	27.2	27.3	6.10	6.12	89.7	90.0	3.45	3.50	3.77	5.4	5.4	5.7
						27.3		6.14		90.3		3.53			5.4		
			Middle	9.0	27.4	27.6	27.6	5.82	5.80	85.6	85.3	3.79	3.81		5.8	5.8	
						27.5		5.78		85.0		3.83			5.8		
			Bottom	17.0	27.2	27.8	27.9	5.91	5.89	86.8	86.5	3.96	3.99		6.0	6.0	
						27.9		5.86		86.1		4.01			6.0		
08/09/12	1805-1818	32/Fine	Surface	1.0	27.6	27.3	27.3	6.16	6.18	90.2	90.6	3.62	3.64	3.81	5.6	5.6	5.8
						27.3		6.20		90.9		3.66			5.6		
			Middle	9.1	27.2	27.7	27.8	6.10	6.08	89.7	89.4	3.78	3.81		5.8	5.8	
						27.8		6.05		89.0		3.83			5.8		
			Bottom	17.2	27.0	27.9	27.9	5.81	5.79	85.7	85.4	4.01	3.99		6.0	6.0	
						27.9		5.77		85.1		3.96			6.0		
11/09/12	2003-2015	30/Fine	Surface	1.0	27.6	26.7	26.8	6.21	6.22	90.4	90.5	3.42	3.45	3.61	5.4	5.4	5.5
						26.8		6.23		90.6		3.48			5.4		
			Middle	7.2	27.4	26.9	27.0	6.15	6.17	89.8	90.0	3.63	3.64		5.6	5.6	
						27.0		6.18		90.2		3.65			5.6		
			Bottom	15.4	27.3	27.2	27.3	5.89	5.91	86.2	86.5	3.71	3.73		5.6	5.6	
						27.3		5.93		86.8		3.74			5.5		
13/09/12	1737-1750	31/Fine	Surface	1.0	28.2	28.3	28.3	6.09	6.11	89.6	89.8	3.40	3.42	3.54	5.4	5.4	5.6
						28.3		6.12		90.0		3.43			5.4		
			Middle	8.8	27.6	28.7	28.7	5.97	5.95	87.9	87.6	3.50	3.53		5.6	5.6	
						28.7		5.93		87.3		3.56			5.6		
			Bottom	16.6	27.4	29.1	29.2	5.80	5.78	85.4	85.1	3.67	3.69		5.8	5.7	
						29.2		5.76		84.8		3.70			5.5		
15/09/12	1755-1808	30/Cloudy	Surface	1.0	28.0	27.0	27.0	6.18	6.19	89.6	89.7	3.14	3.16	3.39	5.6	5.5	5.4
						26.9		6.19		89.8		3.18			5.4		
			Middle	9.8	27.9	27.1	27.1	6.08	6.09	88.2	88.4	3.27	3.29		5.2	5.2	
						27.0		6.10		88.5		3.30			5.2		
			Bottom	18.6	27.5	27.4	27.4	5.90	5.92	85.6	85.9	3.71	3.73		5.6	5.6	
						27.4		5.94		86.1		3.75			5.5		
18/09/12	1935-1948	27/Cloudy	Surface	1.0	27.1	26.8	26.9	6.31	6.29	92.2	91.9	3.50	3.47	3.49	5.0	5.0	5.3
						26.9		6.27		91.6		3.44			5.0		
			Middle	9.7	26.7	27.3	27.3	6.14	6.12	89.7	89.4	3.26	3.28		5.2	5.2	
						27.3		6.10		89.1		3.30			5.2		
			Bottom	18.4	26.5	27.6	27.6	5.85	5.83	85.5	85.2	3.71	3.73		5.6	5.6	
						27.5		5.81		84.9		3.75			5.5		
20/09/12	1211-1225	29/Cloudy	Surface	1.0	27.2	26.8	26.9	6.20	6.19	90.5	90.3	3.44	3.46	3.63	5.4	5.4	5.6
						26.9		6.17		90.1		3.48			5.4		
			Middle	9.9	26.8	27.3	27.3	6.07	6.05	88.6	88.3	3.62	3.65		5.6	5.6	
						27.3		6.02		87.9		3.67			5.6		
			Bottom	18.8	26.4	27.8	27.9	5.93	5.95	86.5	86.8	3.74	3.77		5.8	5.9	
						27.9		5.96		87.0		3.80			6.0		
22/09/12	1246-1300	30/Cloudy	Surface	1.0	26.8	26.9	26.9	6.13	6.11	89.5	89.2	3.44	3.47	3.71	5.4	5.4	5.6
						26.9		6.09		88.9		3.50			5.4		
			Middle	9.3	26.7	27.4	27.4	6.01	5.99	87.7	87.5	3.71	3.74		5.6	5.6	
						27.4		5.97		87.2		3.76			5.6		
			Bottom	17.6	26.5	27.8	27.8	5.84	5.86	85.3	85.6	3.89	3.92		5.8	5.9	
						27.7		5.88		85.8		3.94			6.0		
25/09/12	1720-1734	30/Cloudy	Surface	1.0	27.9	26.9	27.0	6.06	6.05	89.1	88.9	3.38	3.40	3.63	5.2	5.3	5.6
						27.0		6.03		88.6		3.41			5.4		
			Middle	9.0	27.8	27.1	27.1	5.94	5.93	87.3	87.1	3.59	3.61		5.6	5.6	
						27.1		5.91		86.9		3.63			5.6		
			Bottom	17.0	27.6	27.2	27.3	5.78	5.80	85.0	85.3	3.85	3.89		5.8	5.9	
						27.3		5.82		85.6		3.92			6.0		
27/09/12	1810-1823	31/Fine	Surface	1.0	28.0	26.8	26.9	6.17	6.15	91.2	90.9	3.19	3.23	3.49	5.0	5.1	5.4
						26.9		6.13		90.6		3.26			5.2		
			Middle	9.1	27.7	27.0	27.1	5.98	5.95	83.4	84.0	3.53	3.55		5.4	5.4	
						27.1		5.92		84.5		3.57			5.4		
			Bottom	17.2	27.5	27.2	27.3	5.80	5.82	85.7	86.0	3.67	3.69		5.6	5.6	
						27.3		5.84		86.3		3.70			5.5		
29/09/12	1812-1825	28/Fine	Surface	1.0	27.9	27.1	27.1	6.16	6.15	90.4	90.3	3.39	3.40	3.62	5.4	5.4	5.7
						27.0		6.14		90.2		3.40			5.4		
			Middle	8.9	27.8	27.1	27.1	5.98	5.97	87.9	87.8	3.62	3.63		5.8	5.8	
						27.1		5.96		87.6		3.64			5.8		
			Bottom	16.8	27.5	27.5	27.5	5.88	5.88	86.4	86.4	3.84	3.83		6.0	6.0	
						27.4		5.87		86.3		3.82			6.0		

Monitoring Station : R5

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1140-1156	30/Drizzle	Surface	1.0	28.3	29.1	29.1	6.15	6.13	90.4	90.1	3.56	3.57	3.75	5.5	aa	5.6
						29.1		6.10		89.7		3.58			5.4		
			Middle	8.7	27.8	29.6	29.7	5.89	5.91	86.6	86.8	3.77	3.79		5.6	5.6	
						29.7		5.92		87.0		3.80			5.6		
			Bottom	16.4	27.6	29.9	29.9	5.81	5.83	85.5	85.8	3.90	3.88		5.8	5.8	
						29.9		5.85		86.1		3.86			5.8		
04/09/12	0939-0955	29/Drizzle	Surface	1.0	27.4	27.3	27.4	5.95	5.97	86.8	87.2	3.58	3.60	3.73	5.5	aa	5.6
						27.4		5.99		87.5		3.62			5.4		
			Middle	8.7	27.2	27.5	27.5	5.86	5.85	85.6	85.4	3.68	3.71		5.6	5.6	
						27.5		5.83		85.2		3.73			5.6		
			Bottom	16.4	27.0	27.7	27.8	5.77	5.75	84.2	84.0	3.85	3.87		5.8	5.8	
						27.8		5.73		83.7		3.89			5.8		
06/09/12	1012-1028	30/Cloudy	Surface	1.0	27.7	27.4	27.5	6.21	6.19	91.2	91.0	3.30	3.28	3.52	5.0	5.1	5.4
						27.5		6.17		90.7		3.25			5.2		
			Middle	9.0	27.4	27.7	27.7	6.12	6.10	89.9	89.6	3.44	3.47		5.4	5.4	
						27.7		6.07		89.3		3.49			5.4		
			Bottom	17.0	27.2	27.9	28.0	5.93	5.95	87.1	87.4	3.79	3.82		5.6	5.7	
						28.0		5.96		87.7		3.85			5.6		
08/09/12	1606-1618	32/Fine	Surface	1.0	27.7	27.3	27.3	6.02	6.04	88.2	88.5	3.41	3.40	3.52	5.5	aa	5.5
						27.3		6.06		88.8		3.38			5.2		
			Middle	8.8	27.4	27.6	27.6	5.91	5.89	86.9	86.6	3.63	3.67		5.6	5.6	
						27.6		5.87		86.3		3.70			5.6		
			Bottom	16.6	27.1	28.2	28.2	5.74	5.72	84.6	84.4	3.47	3.49		5.4	5.4	
						28.2		5.70		84.1		3.51			5.4		
11/09/12	1806-1819	30/Fine	Surface	1.0	27.6	26.7	26.8	5.97	5.96	86.9	86.7	3.55	3.58	3.83	5.5	5.6	5.8
						26.8		5.94		86.4		3.61			5.6		
			Middle	8.3	27.4	26.9	27.0	5.81	5.80	84.8	84.7	3.81	3.83		5.8	5.8	
						27.0		5.79		84.5		3.85			5.8		
			Bottom	15.6	27.3	27.1	27.1	5.71	5.73	83.4	83.7	4.07	4.09		6.0	6.0	
						27.1		5.74		84.0		4.11			6.0		
13/09/12	1542-1554	32/Fine	Surface	1.0	28.3	28.2	28.2	6.20	6.18	91.2	90.9	3.62	3.64	3.64	5.5	5.5	5.5
						28.2		6.16		90.6		3.65			5.4		
			Middle	8.6	27.7	28.7	28.7	6.04	6.02	88.9	88.5	3.54	3.56		5.4	5.5	
						28.7		5.99		88.1		3.58			5.6		
			Bottom	16.2	27.4	29.1	29.1	5.80	5.78	85.4	85.0	3.71	3.73		5.6	5.5	
						29.1		5.75		84.6		3.75			5.4		
15/09/12	1610-1623	30/Cloudy	Surface	1.0	27.9	26.9	27.0	6.21	6.23	90.0	90.3	3.37	3.39	3.52	5.5	5.5	5.5
						27.0		6.25		90.6		3.40			5.4		
			Middle	8.9	27.6	27.1	27.1	6.10	6.09	88.5	88.4	3.49	3.51		5.6	5.5	
						27.0		6.08		88.2		3.52			5.4		
			Bottom	16.8	27.5	27.2	27.2	5.77	5.75	83.7	83.4	3.66	3.67		5.6	5.6	
						27.1		5.73		83.1		3.67			5.6		
18/09/12	1737-1750	28/Cloudy	Surface	1.0	27.0	26.9	26.9	6.07	6.09	88.7	89.0	3.39	3.41	3.59	5.0	5.1	5.4
						26.8		6.11		89.2		3.42			5.2		
			Middle	8.9	26.8	27.2	27.3	5.88	5.86	85.9	85.6	3.56	3.58		5.4	5.4	
						27.3		5.84		85.3		3.60			5.4		
			Bottom	16.8	26.5	27.5	27.5	5.70	5.69	83.3	83.2	3.77	3.79		5.6	5.6	
						27.5		5.68		83.0		3.81			5.6		
20/09/12	1012-1029	28/Cloudy	Surface	1.0	27.1	27.0	27.0	6.15	6.17	89.8	90.1	3.42	3.41	3.53	5.5	5.5	5.5
						26.9		6.19		90.4		3.39			5.4		
			Middle	8.7	26.8	27.4	27.4	5.98	6.01	87.3	87.6	3.51	3.54		5.4	5.5	
						27.4		6.03		87.9		3.56			5.6		
			Bottom	16.4	26.4	27.8	27.9	5.94	5.92	86.7	86.4	3.67	3.65		5.6	5.6	
						27.9		5.90		86.1		3.63			5.6		
22/09/12	1045-1100	29/Cloudy	Surface	1.0	26.7	26.9	26.9	6.09	6.08	88.9	88.7	3.73	3.76	3.96	5.5	5.7	5.9
						26.9		6.06		88.5		3.79			5.8		
			Middle	8.8	26.5	27.2	27.2	5.80	5.83	84.7	85.1	3.96	3.98		5.8	5.9	
						27.2		5.85		85.4		4.00			6.0		
			Bottom	16.6	26.5	27.3	27.4	5.73	5.75	83.7	83.9	4.10	4.13		6.0	6.1	
						27.4		5.76		84.1		4.16			6.2		
25/09/12	1510-1524	30/Cloudy	Surface	1.0	28.0	26.8	26.9	5.93	5.92	87.2	87.0	3.66	3.68	3.89	5.5	5.6	5.8
						26.9		5.90		86.7		3.70			5.6		
			Middle	8.5	27.8	27.0	27.1	5.84	5.82	85.8	85.5	3.88	3.91		5.8	5.8	
						27.1		5.79		85.1		3.94			5.8		
			Bottom	16.0	27.8	27.2	27.3	5.70	5.72	83.8	84.0	4.05	4.07		6.0	6.0	
						27.3		5.73		84.2		4.08			6.0		
27/09/12	1608-1622	30/Fine	Surface	1.0	27.9	27.0	27.0	6.23	6.22	92.1	92.0	3.40	3.38	3.58	5.5	5.5	5.6
						27.0		6.21		91.8		3.36			5.4		
			Middle	8.5	27.7	27.3	27.3	5.97	5.95	88.2	87.9	3.62	3.65		5.6	5.6	
						27.3		5.93		87.6		3.68			5.6		
			Bottom	16.0	27.4	27.4	27.5	5.81	5.82	85.9	86.1	3.69	3.71		5.8	5.8	
						27.5		5.83		86.2		3.73			5.8		
29/09/12	1610-1625	28/Fine	Surface	1.0	27.9	27.2	27.2	6.07	6.09	89.1	89.4	3.43	3.41	3.57	5.0	aa	5.4
						27.1		6.11		89.7		3.39			5.2		
			Middle	8.5	27.6	27.4	27.4	5.93	5.91	87.1	86.8	3.71	3.71		5.4	5.4	
						27.3		5.89		86.5		3.70			5.4		
			Bottom	15.9	27.3	27.5	27.5	5.84	5.82	85.7	85.5	3.59	3.58		5.6	5.7	
						27.5		5.80		85.3		3.57			5.8		

Monitoring Station : R6

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1243-1258	30/Drizzle	Surface	1.0	28.3	29.1	29.1	6.09	6.07	89.6	89.3	3.63	3.65	3.81	5.6	5.6	5.7
						29.0		6.04		88.9		3.66			5.6		
			Middle	8.2	28.0	29.7	29.7	5.95	5.97	87.5	87.8	3.75	3.77		5.8	5.7	
						29.7		5.98		88.0		3.78			5.8		
			Bottom	15.4	27.7	29.9	29.9	5.82	5.85	85.7	86.0	3.99	4.02		5.8	5.9	
						29.9		5.87		86.3		4.05			6.0		
04/09/12	1041-1056	29/Drizzle	Surface	1.0	27.4	27.3	27.4	5.93	5.95	86.5	86.8	3.43	3.46	3.66	5.4	5.4	5.6
						27.4		5.96		87.0		3.48			5.4		
			Middle	8.5	27.2	27.6	27.6	5.88	5.86	85.9	85.5	3.66	3.64		5.6	5.6	
						27.5		5.83		85.1		3.61			5.6		
			Bottom	16.0	27.1	27.7	27.8	5.80	5.78	84.7	84.4	3.86	3.88		5.8	5.8	
						27.8		5.76		84.1		3.89			5.8		
06/09/12	1113-1128	30/Cloudy	Surface	1.0	27.7	27.3	27.4	6.05	6.03	89.0	88.7	3.34	3.33	3.57	5.2	5.2	5.5
						27.4		6.01		88.4		3.31			5.2		
			Middle	8.3	27.4	27.5	27.6	5.99	5.97	88.0	87.7	3.63	3.61		5.6	5.6	
						27.6		5.94		87.3		3.59			5.6		
			Bottom	15.6	27.2	27.9	27.9	5.91	5.89	86.8	86.5	3.76	3.78		5.8	5.8	
						27.8		5.87		86.2		3.80			5.8		
08/09/12	1705-1717	32/Fine	Surface	1.0	27.7	27.2	27.2	6.07	6.09	88.9	89.3	3.37	3.40	3.59	5.2	5.3	5.5
						27.2		6.11		89.6		3.42			5.4		
			Middle	8.4	27.4	27.5	27.5	5.80	5.78	85.3	85.0	3.61	3.64		5.6	5.6	
						27.4		5.75		84.6		3.66			5.6		
			Bottom	15.8	27.0	28.0	28.0	5.83	5.85	86.0	86.2	3.73	3.75		5.6	5.7	
						27.9		5.86		86.4		3.76			5.8		
11/09/12	1904-1916	30/Fine	Surface	1.0	27.7	26.9	27.0	6.15	6.14	89.5	89.3	3.30	3.33	3.55	5.2	5.3	5.5
						27.0		6.12		89.0		3.36			5.4		
			Middle	8.0	27.6	27.1	27.1	5.97	5.96	87.2	87.0	3.57	3.60		5.4	5.5	
						27.1		5.94		86.7		3.62			5.6		
			Bottom	15.0	27.3	27.2	27.3	5.82	5.83	85.2	85.4	3.71	3.73		5.6	5.6	
						27.3		5.84		85.5		3.75			5.6		
13/09/12	1639-1652	32/Fine	Surface	1.0	28.3	28.4	28.4	6.04	6.06	88.9	89.1	3.34	3.36	3.50	5.2	5.2	5.4
						28.3		6.07		89.3		3.38			5.2		
			Middle	8.4	27.7	28.8	28.8	5.96	5.95	87.7	87.5	3.45	3.47		5.4	5.4	
						28.7		5.93		87.3		3.48			5.4		
			Bottom	15.8	27.4	29.1	29.1	5.88	5.87	86.5	86.3	3.63	3.67		5.6	5.6	
						29.1		5.85		86.1		3.70			5.6		
15/09/12	1709-1721	30/Cloudy	Surface	1.0	27.8	26.9	26.9	6.20	6.17	89.9	89.5	3.29	3.33	3.57	5.4	5.4	5.6
						26.9		6.14		89.0		3.36			5.4		
			Middle	8.2	27.6	27.3	27.4	5.99	5.98	86.9	86.7	3.48	3.50		5.6	5.6	
						27.4		5.96		86.4		3.52			5.6		
			Bottom	15.4	27.3	27.4	27.4	5.90	5.92	85.6	85.9	3.89	3.90		5.8	5.8	
						27.3		5.94		86.2		3.90			5.8		
18/09/12	1836-1848	28/Cloudy	Surface	1.0	27.0	26.7	26.8	6.14	6.16	89.7	90.0	3.42	3.44	3.62	5.2	5.2	5.5
						26.8		6.18		90.3		3.46			5.2		
			Middle	8.2	26.8	27.2	27.2	6.01	5.99	87.8	87.5	3.58	3.60		5.4	5.4	
						27.2		5.97		87.2		3.62			5.4		
			Bottom	15.4	26.5	27.5	27.6	5.80	5.78	84.8	84.5	3.80	3.82		5.8	5.8	
						27.6		5.76		84.2		3.84			5.8		
20/09/12	1117-1132	28/Cloudy	Surface	1.0	27.1	26.9	26.9	6.03	6.06	88.0	88.4	3.35	3.38	3.48	5.2	5.2	5.3
						26.9		6.08		88.8		3.41			5.2		
			Middle	8.5	26.7	27.5	27.5	5.94	5.97	86.6	87.0	3.43	3.45		5.4	5.3	
						27.4		5.99		87.3		3.47			5.2		
			Bottom	16.0	26.4	27.8	27.8	5.83	5.85	85.1	85.4	3.59	3.62		5.4	5.5	
						27.8		5.87		85.7		3.64			5.6		
22/09/12	1144-1200	29/Cloudy	Surface	1.0	26.7	26.7	26.7	6.07	6.05	88.6	88.3	3.59	3.62	3.90	5.4	5.5	5.8
						26.7		6.02		87.9		3.64			5.6		
			Middle	8.3	26.6	26.9	27.0	5.90	5.92	86.1	86.3	3.88	3.91		5.8	5.8	
						27.0		5.93		86.5		3.93			5.8		
			Bottom	15.6	26.6	27.4	27.4	5.78	5.76	84.3	84.0	4.15	4.18		6.2	6.2	
						27.4		5.73		83.7		4.21			6.2		
25/09/12	1619-1634	30/Cloudy	Surface	1.0	28.0	26.8	26.9	5.97	5.98	87.8	88.0	3.39	3.42	3.62	5.2	5.3	5.5
						26.9		5.99		88.1		3.45			5.4		
			Middle	8.0	27.9	27.0	27.1	5.89	5.88	86.6	86.5	3.58	3.61		5.4	5.5	
						27.1		5.87		86.3		3.64			5.6		
			Bottom	15.0	27.8	27.2	27.3	5.73	5.75	84.2	84.5	3.79	3.82		5.8	5.8	
						27.3		5.77		84.8		3.85			5.8		
27/09/12	1709-1727	30/Fine	Surface	1.0	27.9	27.0	27.1	6.05	6.03	89.4	89.1	3.37	3.39	3.56	5.2	5.3	5.5
						27.1		6.01		88.8		3.40			5.4		
			Middle	8.4	27.6	27.2	27.2	5.93	5.92	87.6	87.5	3.51	3.53		5.4	5.5	
						27.1		5.91		87.3		3.55			5.6		
			Bottom	15.8	27.4	27.4	27.5	5.80	5.83	85.8	86.2	3.76	3.75		5.6	5.6	
						27.5		5.86		86.6		3.74			5.6		
29/09/12	1708-1722	28/Fine	Surface	1.0	27.9	27.1	27.2	6.13	6.11	90.0	89.8	3.53	3.54	3.63	5.2	5.2	5.5
						27.2		6.09		89.5		3.54			5.2		
			Middle	8.2	27.7	27.3	27.3	5.80	5.79	85.1	85.1	3.60	3.59		5.6	5.6	
						27.3		5.78		85.0		3.58			5.6		
			Bottom	15.4	27.4	27.4	27.5	5.71	5.72	83.9	84.0	3.74	3.76		5.8	5.8	
						27.5		5.73		84.1		3.77			5.8		

Mid-Flood Tide

Monitoring Station : R7

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1303-1319	30/Drizzle	Surface	1.0	28.3	29.1	29.1	6.18	6.17	90.9	90.7	3.76	3.74	3.83	5.6	5.6	5.7
						29.0		6.15		90.5		3.71			5.6		
			Middle	8.9	27.9	29.7	29.7	6.03	6.05	88.8	89.0	3.89	3.91		5.8	5.8	
						29.7		6.06		89.2		3.93			5.8		
			Bottom	16.8	27.6	30.0	30.0	5.91	5.89	86.9	86.6	3.81	3.83		5.6	5.6	
						29.9		5.86		86.2		3.85			5.8		
04/09/12	1102-1117	29/Drizzle	Surface	1.0	27.5	27.4	27.4	6.04	6.03	88.2	88.0	3.55	3.58	3.80	5.4	5.4	5.7
						27.4		6.01		87.7		3.60			5.4		
			Middle	8.9	27.3	27.6	27.6	5.98	5.96	87.4	87.1	3.85	3.87		5.6	5.6	
						27.5		5.94		86.8		3.88			5.8		
			Bottom	16.8	27.1	27.8	27.8	5.87	5.86	85.8	85.6	3.97	3.95		6.0	5.9	
						27.7		5.84		85.3		3.92			5.8		
06/09/12	1134-1150	30/Cloudy	Surface	1.0	27.7	27.4	27.4	6.03	6.05	88.6	88.9	3.39	3.41	3.55	5.4	5.4	5.5
						27.3		6.07		89.2		3.43			5.4		
			Middle	9.4	27.4	27.6	27.6	5.96	5.94	87.6	87.4	3.52	3.54		5.6	5.6	
						27.5		5.92		87.1		3.56			5.4		
			Bottom	17.8	27.1	27.9	28.0	5.86	5.88	86.2	86.5	3.69	3.71		5.6	5.6	
						28.0		5.90		86.7		3.73			5.6		
08/09/12	1723-1736	32/Fine	Surface	1.0	27.7	27.3	27.3	6.20	6.22	90.8	91.2	3.25	3.28	3.55	5.2	5.2	5.5
						27.2		6.24		91.5		3.30			5.2		
			Middle	9.4	27.3	27.5	27.5	6.09	6.07	89.6	89.3	3.55	3.57		5.4	5.4	
						27.5		6.05		89.0		3.59			5.6		
			Bottom	17.8	27.0	27.8	27.9	5.84	5.87	86.1	86.6	3.79	3.81		5.8	5.8	
						27.9		5.90		87.0		3.82			5.8		
11/09/12	1923-1936	30/Fine	Surface	1.0	27.6	26.7	26.8	6.18	6.19	89.9	90.1	3.42	3.44	3.69	5.4	5.4	5.6
						26.8		6.20		90.2		3.46			5.4		
			Middle	8.7	27.4	26.9	27.0	6.02	6.02	87.9	87.8	3.64	3.66		5.6	5.6	
						27.0		6.01		87.7		3.68			5.6		
			Bottom	16.4	27.2	27.2	27.3	5.87	5.88	85.9	86.1	3.95	3.97		6.0	5.9	
						27.3		5.89		86.2		3.99			6.0		
13/09/12	1659-1712	32/Fine	Surface	1.0	28.3	28.3	28.3	6.10	6.12	89.8	90.1	3.43	3.41	3.48	5.4	5.3	5.4
						28.2		6.14		90.3		3.39			5.2		
			Middle	9.2	27.7	28.7	28.8	5.93	5.91	87.3	87.0	3.46	3.48		5.4	5.4	
						28.8		5.89		86.7		3.50			5.4		
			Bottom	17.4	27.3	29.2	29.2	5.76	5.74	84.8	84.5	3.53	3.54		5.6	5.6	
						29.2		5.72		84.2		3.55			5.6		
15/09/12	1725-1737	30/Cloudy	Surface	1.0	27.9	27.0	27.1	6.15	6.13	89.2	88.9	3.22	3.23	3.40	5.4	5.3	5.6
						27.1		6.11		89.6		3.24			5.2		
			Middle	9.1	27.6	27.3	27.4	6.07	6.04	88.0	87.6	3.36	3.38		5.6	5.6	
						27.4		6.01		87.1		3.40			5.6		
			Bottom	17.2	27.4	27.5	27.5	5.82	5.81	84.4	84.3	3.56	3.58		5.8	5.8	
						27.4		5.80		84.1		3.60			5.8		
18/09/12	1855-1908	28/Cloudy	Surface	1.0	27.1	26.7	26.8	6.23	6.24	91.0	91.1	3.40	3.38	3.60	5.2	5.2	5.4
						26.8		6.24		91.2		3.35			5.2		
			Middle	9.1	26.7	27.2	27.3	6.11	6.08	89.3	88.9	3.64	3.66		5.4	5.4	
						27.3		6.05		88.4		3.67			5.4		
			Bottom	17.2	26.5	27.6	27.6	5.83	5.81	85.2	84.9	3.74	3.77		5.4	5.5	
						27.6		5.78		84.5		3.80			5.6		
20/09/12	1136-1150	28/Cloudy	Surface	1.0	27.1	26.9	27.0	6.15	6.14	89.7	89.5	3.34	3.36	3.47	5.2	5.3	5.4
						27.0		6.12		89.3		3.38			5.4		
			Middle	9.1	26.6	27.4	27.5	6.01	5.99	87.7	87.3	3.44	3.47		5.4	5.3	
						27.5		5.96		86.9		3.49			5.2		
			Bottom	17.2	26.3	27.8	27.9	5.80	5.79	84.6	84.4	3.57	3.59		5.6	5.6	
						27.9		5.77		84.2		3.60			5.6		
22/09/12	1205-1220	29/Cloudy	Surface	1.0	26.7	26.8	26.8	6.15	6.17	89.8	90.0	3.44	3.47	3.74	5.4	5.5	5.7
						26.8		6.18		90.2		3.50			5.6		
			Middle	9.2	26.6	27.1	27.1	6.00	5.99	87.6	87.4	3.74	3.76		5.8	5.7	
						27.0		5.97		87.2		3.77			5.6		
			Bottom	17.4	26.5	27.4	27.5	5.88	5.86	85.8	85.6	3.96	4.00		5.8	5.9	
						27.5		5.84		85.3		4.03			6.0		
25/09/12	1640-1653	30/Cloudy	Surface	1.0	28.1	26.8	26.9	6.06	6.07	89.1	89.3	3.34	3.36	3.64	5.2	5.2	5.5
						26.9		6.08		89.4		3.37			5.2		
			Middle	8.7	27.9	27.0	27.1	5.92	5.90	87.0	86.7	3.65	3.67		5.6	5.6	
						27.1		5.88		86.4		3.69			5.6		
			Bottom	16.4	27.7	27.2	27.2	5.80	5.79	85.3	85.2	3.87	3.88		5.8	5.8	
						27.2		5.78		85.0		3.89			5.8		
27/09/12	1732-1745	30/Fine	Surface	1.0	27.9	27.1	27.1	5.89	5.90	87.1	87.2	3.58	3.59	3.74	5.6	5.6	5.7
						27.1		5.90		87.2		3.60			5.6		
			Middle	9.0	27.5	27.1	27.2	5.79	5.81	85.6	85.8	3.74	3.77		5.6	5.7	
						27.2		5.82		86.0		3.79			5.8		
			Bottom	17.0	27.3	27.4	27.4	5.82	5.84	86.1	86.4	3.83	3.85		5.8	5.8	
						27.3		5.86		86.7		3.87			5.8		
29/09/12	1730-1743	28/Fine	Surface	1.0	27.9	27.1	27.2	6.00	5.99	88.1	88.0	3.42	3.41	3.58	5.4	5.4	5.5
						27.2		5.98		87.8		3.39			5.4		
			Middle	8.8	27.7	27.4	27.4	5.83	5.81	85.6	85.3	3.72	3.73		5.6	5.5	
						27.4		5.79		85.0		3.73			5.4		
			Bottom	16.6	27.3	27.5	27.5	5.73	5.72	84.1	84.0	3.61	3.62		5.6	5.6	
						27.5		5.71		83.8		3.63			5.6		

Mid-Flood Tide

Monitoring Station : R8a

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1327-1339	30/Cloudy	Surface	1.0	28.3	29.1	29.1	6.17	6.19	90.7	91.0	3.59	3.61	3.84	5.4	5.5	5.6
						29.1		6.20		91.3		3.62			5.5		
			Middle	6.5	28.0	29.6	29.7	6.06	6.04	89.2	88.9	3.87	3.85		5.5	5.6	
						29.7		6.01		88.5		3.83			5.6		
			Bottom	12.0	27.7	29.9	30.0	5.95	5.93	87.6	87.3	4.08	4.05		5.8	5.8	
						30.0		5.91		86.9		4.02			5.8		
04/09/12	1124-1136	29/Rainy	Surface	1.0	27.5	27.2	27.3	5.77	5.80	84.2	84.6	3.67	3.69	3.80	5.6	5.6	5.7
						27.3		5.82		85.0		3.71			5.5		
			Middle	6.5	27.4	27.4	27.5	5.71	5.69	83.4	83.1	3.76	3.78		6.0	5.8	
						27.5		5.66		82.7		3.79			5.6		
			Bottom	12.0	27.3	27.8	27.8	5.68	5.70	82.9	83.3	3.92	3.94		5.8	5.8	
						27.7		5.72		83.6		3.95			5.8		
06/09/12	1157-1209	30/Cloudy	Surface	1.0	27.7	27.6	27.6	6.17	6.15	90.6	90.4	3.02	3.04	3.33	5.0	5.0	5.2
						27.5		6.13		90.1		3.05			5.0		
			Middle	6.7	27.5	27.6	27.7	6.06	6.08	89.2	89.4	3.33	3.36		5.0	5.2	
						27.7		6.10		89.6		3.38			5.4		
			Bottom	12.4	27.3	27.9	27.9	5.86	5.84	86.1	85.8	3.58	3.60		5.4	5.5	
						27.9		5.81		85.4		3.62			5.6		
08/09/12	1744-1757	32/Fine	Surface	1.0	27.7	27.3	27.3	6.04	6.06	88.5	88.8	3.47	3.49	3.68	5.4	5.5	5.6
						27.3		6.08		89.1		3.51			5.5		
			Middle	6.6	27.3	27.7	27.7	5.97	5.94	87.8	87.4	3.66	3.68		5.5	5.6	
						27.7		5.91		86.9		3.70			5.6		
			Bottom	12.2	27.1	27.9	28.0	5.82	5.80	85.8	85.5	3.85	3.87		5.8	5.8	
						28.0		5.78		85.2		3.88			5.8		
11/09/12	1943-1956	30/Fine	Surface	1.0	27.5	26.5	26.6	6.17	6.20	89.8	90.2	3.57	3.58	3.66	5.4	5.5	5.6
						26.6		6.22		90.5		3.59			5.5		
			Middle	6.3	27.4	26.8	26.8	6.14	6.12	89.6	89.4	3.53	3.56		5.5	5.6	
						26.8		6.10		89.1		3.58			5.6		
			Bottom	11.6	27.3	26.9	27.0	5.95	5.96	87.1	87.3	3.84	3.86		5.8	5.8	
						27.0		5.97		87.4		3.87			5.8		
13/09/12	1718-1731	31/Fine	Surface	1.0	28.2	28.2	28.3	6.13	6.14	90.2	90.4	3.27	3.29	3.42	5.2	5.1	5.4
						28.3		6.15		90.5		3.30			5.0		
			Middle	6.9	27.7	28.7	28.7	6.02	6.00	88.6	88.3	3.41	3.43		5.5	5.5	
						28.7		5.97		87.9		3.45			5.4		
			Bottom	12.8	27.4	29.1	29.1	5.88	5.86	86.5	86.2	3.53	3.54		5.6	5.6	
						29.1		5.84		85.9		3.54			5.6		
15/09/12	1740-1752	30/Cloudy	Surface	1.0	28.0	27.0	27.0	6.07	6.04	88.0	87.6	3.34	3.35	3.61	5.2	5.1	5.4
						26.9		6.01		87.1		3.36			5.0		
			Middle	7.0	27.8	27.0	27.0	6.03	6.02	87.2	87.3	3.56	3.58		5.5	5.5	
						27.0		6.03		87.4		3.60			5.4		
			Bottom	13.0	27.4	27.3	27.3	5.87	5.88	85.1	85.3	3.87	3.89		5.4	5.5	
						27.2		5.89		85.4		3.90			5.6		
18/09/12	1916-1928	27/Cloudy	Surface	1.0	27.0	26.9	26.9	6.25	6.27	91.3	91.6	3.24	3.26	3.45	5.2	5.1	5.5
						26.9		6.29		91.9		3.27			5.0		
			Middle	7.0	26.8	27.2	27.3	6.10	6.08	89.1	88.9	3.42	3.44		5.5	5.6	
						27.3		6.06		88.6		3.46			5.6		
			Bottom	13.0	26.5	27.5	27.5	5.91	5.90	86.4	86.2	3.63	3.66		5.8	5.8	
						27.5		5.88		85.9		3.68			5.8		
20/09/12	1155-1207	29/Cloudy	Surface	1.0	27.1	26.8	26.9	6.11	6.14	89.2	89.6	3.35	3.33	3.45	5.2	5.1	5.2
						26.9		6.16		89.9		3.31			5.0		
			Middle	6.8	26.8	27.4	27.4	6.03	6.01	88.0	87.7	3.39	3.42		5.0	5.1	
						27.3		5.99		87.4		3.45			5.2		
			Bottom	12.6	26.5	27.8	27.8	5.92	5.91	86.4	86.2	3.57	3.60		5.4	5.5	
						27.7		5.89		85.9		3.62			5.6		
22/09/12	1227-1241	30/Cloudy	Surface	1.0	26.8	26.8	26.9	6.16	6.18	89.9	90.2	3.37	3.40	3.60	5.2	5.4	5.6
						26.9		6.19		90.4		3.42			5.5		
			Middle	6.7	26.7	26.9	26.9	6.08	6.07	88.8	88.6	3.56	3.58		5.5	5.6	
						26.9		6.05		88.3		3.60			5.6		
			Bottom	12.4	26.6	27.1	27.1	5.92	5.91	86.4	86.2	3.81	3.84		5.8	5.8	
						27.1		5.89		86.0		3.86			5.8		
25/09/12	1659-1714	30/Cloudy	Surface	1.0	27.9	26.8	26.9	6.02	6.04	88.5	88.8	3.44	3.48	3.61	5.4	5.5	5.6
						26.9		6.06		89.1		3.51			5.5		
			Middle	6.4	27.8	26.9	27.0	5.97	5.96	87.8	87.7	3.57	3.59		5.5	5.6	
						27.0		5.95		87.5		3.60			5.6		
			Bottom	11.8	27.7	27.1	27.2	5.85	5.87	86.0	86.2	3.77	3.78		5.6	5.7	
						27.2		5.88		86.4		3.79			5.8		
27/09/12	1751-1804	31/Fine	Surface	1.0	27.9	26.8	26.9	6.09	6.10	90.0	90.1	3.29	3.33	3.57	5.2	5.1	5.5
						26.9		6.10		90.2		3.36			5.0		
			Middle	6.6	27.7	27.0	27.1	5.93	5.92	87.6	87.5	3.51	3.54		5.5	5.5	
						27.1		5.91		87.3		3.57			5.4		
			Bottom	12.4	27.4	27.3	27.4	5.78	5.79	85.4	85.6	3.83	3.84		5.8	5.8	
						27.4		5.80		85.7		3.85			5.8		
29/09/12	1753-1806	28/Fine	Surface	1.0	27.9	27.2	27.2	6.09	6.07	89.5	89.1	3.32	3.33	3.52	5.0	5.0	5.1
						27.1		6.04		88.7		3.34			5.0		
			Middle	6.5	27.7	27.3	27.3	5.90	5.91	86.6	86.8	3.56	3.54		5.0	5.2	
						27.3		5.92		87.0		3.52			5.4		
			Bottom	12.0	27.5	27.5	27.5	5.84	5.82	85.7	85.5	3.70	3.70		5.4	5.2	
						27.5		5.80		85.2		3.69			5.0		

Mid-Flood Tide

Monitoring Station : R15

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)					
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average			
01/09/12	1038-1051	29/Cloudy	Surface	1.0	28.2	29.1	29.1	6.04	6.02	88.9	88.5	3.79	3.81	3.79	5.6	5.7	5.7			
						29.1		5.99		88.1		3.82			5.8					
			Middle	6.0	28.0	29.6	29.6	5.96	5.94	87.8	87.4	86.6	86.4		3.85	3.87		5.8	5.9	5.8
						29.5		5.91		87.0		3.73			5.6					
			Bottom	11.0	27.8	29.9	29.9	5.83	5.82	85.8	85.6	86.1	86.4		3.80	3.87		5.8	5.8	5.8
						29.8		5.80		85.3		3.88			5.8					
04/09/12	0837-0850	28/Fine	Surface	1.0	27.3	27.3	27.4	5.93	5.92	86.6	86.4	3.85	3.83	3.93	5.8	5.7	5.8			
						27.3		5.90		86.1		3.80			5.6					
			Middle	6.0	27.2	27.5	27.6	5.81	5.83	84.8	85.1	84.8	85.1		3.91	3.94		5.8	5.9	5.8
						27.6		5.85		85.4		3.96			6.0					
			Bottom	11.0	27.1	27.7	27.7	5.74	5.77	83.9	84.2	83.9	84.2		4.05	4.03		6.0	5.9	5.9
						27.6		5.79		84.5		4.01			5.8					
06/09/12	0907-0923	29/Cloudy	Surface	1.0	27.6	27.4	27.4	6.13	6.12	90.1	89.9	3.31	3.30	3.47	5.2	5.2	5.4			
						27.3		6.10		89.7		3.28			5.2					
			Middle	7.6	27.4	27.7	27.7	6.05	6.04	88.9	88.7	88.9	88.7		3.42	3.44		5.4	5.4	5.4
						27.6		6.02		88.5		3.46			5.4					
			Bottom	14.2	27.2	27.9	28.0	5.97	5.95	87.7	87.5	87.7	87.5		3.71	3.68		5.6	5.6	5.6
						28.0		5.93		87.2		3.65			5.6					
08/09/12	1507-1519	32/Fine	Surface	1.0	27.7	27.2	27.2	6.12	6.14	89.7	90.0	3.32	3.34	3.54	5.2	5.2	5.5			
						27.2		6.16		90.3		3.36			5.2					
			Middle	7.1	27.3	27.7	27.7	6.05	6.03	89.0	88.7	89.0	88.7		3.50	3.53		5.4	5.5	5.5
						27.7		6.01		88.4		3.56			5.6					
			Bottom	13.2	27.0	28.0	28.1	5.83	5.81	86.0	85.7	86.0	85.7		3.74	3.76		5.6	5.7	5.7
						28.1		5.79		85.4		3.77			5.8					
11/09/12	1709-1722	30/Fine	Surface	1.0	27.7	26.6	26.7	5.95	5.97	86.6	86.8	3.68	3.67	3.73	5.6	5.6	5.6			
						26.7		5.98		87.0		3.65			5.6					
			Middle	5.4	27.5	26.8	26.9	5.83	5.81	85.1	84.8	85.1	84.8		3.61	3.65		5.4	5.5	5.5
						26.9		5.79		84.5		3.68			5.6					
			Bottom	9.8	27.4	27.1	27.2	5.68	5.70	83.2	83.4	83.2	83.4		3.87	3.88		5.8	5.8	5.8
						27.2		5.71		83.6		3.89			5.8					
13/09/12	1440-1453	32/Fine	Surface	1.0	28.3	28.4	28.4	6.20	6.19	91.2	91.0	3.41	3.44	3.57	5.4	5.4	5.6			
						28.3		6.17		90.8		3.46			5.4					
			Middle	6.0	27.6	28.7	28.7	6.08	6.05	89.5	89.1	89.5	89.1		3.56	3.58		5.6	5.6	5.6
						28.7		6.02		88.6		3.59			5.6					
			Bottom	11.0	27.4	29.1	29.1	5.92	5.91	87.1	86.9	87.1	86.9		3.67	3.69		5.6	5.7	5.7
						29.1		5.89		86.7		3.71			5.8					
15/09/12	1510-1523	30/Cloudy	Surface	1.0	27.9	26.9	27.0	6.27	6.29	90.9	91.2	3.56	3.53	3.75	5.2	5.3	5.5			
						27.0		6.30		91.4		3.50			5.4					
			Middle	7.3	27.5	27.1	27.2	6.14	6.15	69.0	79.2	69.0	79.2		3.74	3.75		5.4	5.5	5.5
						27.2		6.16		89.3		3.76			5.6					
			Bottom	13.6	27.4	27.2	27.3	5.96	5.93	86.4	86.0	86.4	86.0		3.96	3.96		5.6	5.6	5.6
						27.3		5.90		85.6		3.95			5.6					
18/09/12	1639-1652	30/Cloudy	Surface	1.0	27.2	26.8	26.8	6.24	6.26	91.1	91.4	3.35	3.38	3.54	5.4	5.4	5.6			
						26.8		6.28		91.7		3.40			5.4					
			Middle	7.3	26.8	27.3	27.3	6.10	6.09	89.1	88.9	89.1	88.9		3.52	3.54		5.6	5.6	5.6
						27.2		6.07		88.7		3.55			5.6					
			Bottom	13.6	26.5	27.5	27.6	5.84	5.87	85.3	85.7	85.3	85.7		3.70	3.72		5.8	5.8	5.8
						27.6		5.89		86.1		3.73			5.8					
20/09/12	0908-0921	28/Cloudy	Surface	1.0	27.1	26.9	26.9	6.16	6.18	89.8	90.1	3.39	3.38	3.51	5.2	5.2	5.4			
						26.8		6.20		90.4		3.36			5.2					
			Middle	6.3	26.9	27.4	27.4	6.03	6.05	87.9	88.2	87.9	88.2		3.52	3.50		5.4	5.4	5.4
						27.4		6.06		88.4		3.48			5.4					
			Bottom	11.6	26.6	27.7	27.8	5.91	5.89	86.3	86.0	86.3	86.0		3.62	3.64		5.6	5.6	5.6
						27.8		5.87		85.6		3.66			5.6					
22/09/12	0941-0955	27/Cloudy	Surface	1.0	26.7	26.8	26.8	6.04	6.06	88.2	88.5	3.81	3.79	3.89	5.8	5.7	5.8			
						26.8		6.08		88.8		3.77			5.6					
			Middle	5.7	26.7	26.9	26.9	6.00	5.94	87.6	87.4	87.6	87.4		3.92	3.90		5.8	5.8	5.8
						26.9		5.87		87.2		3.88			5.8					
			Bottom	10.4	26.7	27.1	27.1	5.83	5.85	85.1	85.4	85.1	85.4		4.00	3.98		6.0	6.0	6.0
						27.1		5.87		85.7		3.95			6.0					
25/09/12	1407-1420	30/Cloudy	Surface	1.0	28.0	26.7	26.8	5.98	5.99	87.9	88.0	3.70	3.68	3.76	5.6	5.6	5.7			
						26.8		5.99		88.1		3.66			5.6					
			Middle	5.6	27.9	26.8	26.9	5.90	5.90	86.7	86.7	86.7	86.7		3.63	3.66		5.6	5.6	5.6
						26.9		5.89		86.6		3.68			5.6					
			Bottom	10.2	27.8	27.0	27.1	5.83	5.81	85.7	85.4	85.7	85.4		3.91	3.94		5.8	5.8	5.8
						27.1		5.79		85.1		3.97			5.8					
27/09/12	1510-1524	31/Fine	Surface	1.0	27.9	27.1	27.1	5.96	5.94	88.1	87.8	3.62	3.63	3.75	5.6	5.6	5.8			
						27.0		5.92		87.5		3.64			5.6					
			Middle	5.9	27.6	27.1	27.1	5.83	5.85	86.2	86.5	86.2	86.5		3.74	3.77		5.8	5.8	5.8
						27.1		5.87		86.8		3.79			5.8					
			Bottom	10.8	27.4	27.5	27.5	5.85	5.83	86.5	86.2	86.5	86.2		3.84	3.86		6.0	5.9	5.9
						27.4		5.81		85.9		3.88			5.8					
29/09/12	1507-1521	28/Fine	Surface	1.0	27.9	27.1	27.1	6.20	6.18	91.0	90.7	3.45	3.42	3.60	5.2	5.2	5.4			
						27.1		6.16		90.4		3.38			5.2					
			Middle	5.9	27.6	27.1	27.2	5.94	5.97	87.2	87.6	87.2	87.6		3.59	3.60		5.4	5.4	5.4
						27.2		5.99		88.0		3.61			5.4					
			Bottom	10.8	27.4	27.5	27.5	5.84	5.85	85.7	85.8	85.7	85.8		3.77	3.79		5.6	5.6	5.6
						27.4		5.85		85.9		3.80			5.6					

Monitoring Station : R16

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1019-1032	29/Cloudy	Surface	1.0	28.2	29.1	29.1	6.16	6.18	90.6	90.9	3.68	3.67	3.82	5.4	5.5	5.7
						29.0		6.20		91.2		3.65			5.6		
			Middle	6.7	27.9	29.5	29.6	6.02	6.05	88.6	89.0	3.82	3.80		5.8	5.7	
						29.6		6.07		89.3		3.77			5.6		
			Bottom	12.4	27.7	29.9	29.9	5.98	5.96	88.1	87.8	4.01	3.99		6.0	5.9	
						29.9		5.94		87.4		3.96			5.8		
04/09/12	0819-0832	28/Fine	Surface	1.0	27.3	27.3	27.3	5.86	5.88	85.6	85.9	3.75	3.73	3.86	5.4	5.5	5.7
						27.3		5.90		86.2		3.71			5.6		
			Middle	6.7	27.2	27.4	27.5	5.89	5.86	86.0	85.6	3.85	3.84		5.8	5.7	
						27.5		5.83		85.1		3.82			5.6		
			Bottom	12.4	27.1	27.6	27.7	5.71	5.69	83.4	83.1	3.98	4.00		5.8	5.9	
						27.7		5.66		82.7		4.02			6.0		
06/09/12	0848-0902	29/Cloudy	Surface	1.0	27.6	27.3	27.4	6.22	6.20	91.4	91.1	3.26	3.23	3.48	5.2	5.1	5.4
						27.4		6.18		90.8		3.20			5.0		
			Middle	6.9	27.4	27.6	27.6	6.09	6.11	89.5	89.8	3.47	3.50		5.4	5.4	
						27.5		6.12		90.0		3.52			5.4		
			Bottom	12.8	27.2	27.9	27.9	5.89	5.87	86.6	86.2	3.68	3.70		5.6	5.6	
						27.9		5.84		85.8		3.72			5.6		
08/09/12	1449-1501	32/Fine	Surface	1.0	27.7	27.4	27.4	5.96	5.98	87.3	87.6	3.45	3.47	3.61	5.4	5.4	5.6
						27.3		6.00		87.9		3.49			5.4		
			Middle	6.9	27.4	27.6	27.7	5.80	5.83	85.3	85.7	3.54	3.56		5.6	5.6	
						27.7		5.85		86.0		3.57			5.6		
			Bottom	12.8	27.1	28.0	28.0	5.91	5.93	87.2	87.4	3.80	3.82		5.8	5.8	
						28.0		5.94		87.6		3.83			5.8		
11/09/12	1650-1702	30/Fine	Surface	1.0	27.8	26.7	26.8	5.99	6.01	87.2	87.5	3.30	3.32	3.50	5.2	5.2	5.4
						26.8		6.03		87.7		3.34			5.2		
			Middle	6.5	27.6	27.0	27.1	5.94	5.95	86.7	86.9	3.47	3.49		5.4	5.4	
						27.1		5.96		87.0		3.51			5.4		
			Bottom	12.0	27.5	27.2	27.3	5.86	5.84	85.8	85.5	3.66	3.69		5.6	5.6	
						27.3		5.81		85.1		3.72			5.6		
13/09/12	1420-1432	32/Fine	Surface	1.0	28.3	28.3	28.4	6.23	6.25	91.7	91.9	3.23	3.22	3.33	5.2	5.1	5.2
						28.4		6.26		92.1		3.20			5.0		
			Middle	6.6	27.7	28.7	28.8	6.14	6.12	90.4	90.1	3.31	3.33		5.2	5.2	
						28.8		6.10		89.8		3.34			5.2		
			Bottom	12.2	27.4	29.1	29.1	6.00	5.98	88.3	88.0	3.42	3.45		5.4	5.4	
						29.1		5.96		87.7		3.48			5.4		
15/09/12	1450-1503	30/Cloudy	Surface	1.0	27.9	26.8	26.9	6.10	6.12	88.4	88.7	3.43	3.42	3.49	5.4	5.4	5.6
						26.9		6.13		88.9		3.41			5.4		
			Middle	6.6	27.4	27.0	27.1	6.04	6.05	87.6	87.7	3.60	3.63		5.6	5.6	
						27.1		6.05		87.8		3.66			5.6		
			Bottom	12.2	27.5	27.2	27.3	5.83	5.82	84.5	84.4	3.40	3.42		5.8	5.8	
						27.3		5.81		84.2		3.44			5.8		
18/09/12	1619-1632	30/Cloudy	Surface	1.0	27.1	26.8	26.9	6.09	6.10	89.0	89.1	3.41	3.43	3.59	5.4	5.4	5.5
						26.9		6.11		89.2		3.44			5.4		
			Middle	6.6	26.9	27.2	27.3	5.99	5.97	87.5	87.2	3.57	3.59		5.6	5.6	
						27.3		5.94		86.8		3.61			5.6		
			Bottom	12.2	26.6	27.5	27.6	5.83	5.81	85.2	84.9	3.72	3.74		5.4	5.4	
						27.6		5.79		84.6		3.76			5.4		
20/09/12	0849-0902	28/Cloudy	Surface	1.0	27.1	26.9	26.9	6.21	6.20	90.6	90.4	3.28	3.26	3.36	5.2	5.2	5.3
						26.9		6.18		90.1		3.24			5.2		
			Middle	6.8	26.9	27.2	27.3	6.11	6.09	89.1	88.8	3.32	3.35		5.4	5.3	
						27.3		6.07		88.5		3.38			5.2		
			Bottom	12.6	26.6	27.7	27.7	6.02	6.00	87.8	87.5	3.45	3.48		5.4	5.4	
						27.7		5.98		87.2		3.50			5.4		
22/09/12	0919-0935	27/Cloudy	Surface	1.0	26.7	26.9	26.9	6.11	6.10	89.2	89.1	3.56	3.59	3.81	5.4	5.5	5.7
						26.8		6.09		88.9		3.61			5.6		
			Middle	6.6	26.7	27.0	27.0	6.01	6.02	87.7	87.9	3.77	3.80		5.6	5.7	
						27.0		6.03		88.0		3.83			5.8		
			Bottom	12.2	26.6	27.2	27.3	5.93	5.92	86.6	86.4	4.01	4.04		6.0	6.0	
						27.3		5.90		86.1		4.07			6.0		
25/09/12	1350-1403	30/Cloudy	Surface	1.0	27.9	26.6	26.7	6.08	6.05	89.4	88.9	3.49	3.52	3.66	5.4	5.4	5.6
						26.7		6.01		88.3		3.55			5.4		
			Middle	6.4	27.9	26.8	26.9	5.96	5.98	87.6	87.9	3.59	3.62		5.6	5.6	
						26.9		5.99		88.1		3.64			5.6		
			Bottom	11.8	27.7	26.9	26.9	5.89	5.87	86.6	86.3	3.81	3.84		5.8	5.8	
						26.9		5.85		86.0		3.87			5.8		
27/09/12	1450-1503	31/Fine	Surface	1.0	27.9	26.9	27.0	5.87	5.84	86.8	86.4	3.26	3.25	3.61	5.2	5.2	5.5
						27.0		5.81		85.9		3.23			5.2		
			Middle	6.4	27.5	27.2	27.2	5.75	5.73	84.9	84.7	3.50	3.52		5.4	5.4	
						27.1		5.71		84.4		3.54			5.4		
			Bottom	11.8	27.3	27.2	27.3	5.86	5.88	86.6	86.9	4.02	4.05		6.0	6.0	
						27.3		5.90		87.2		4.08			6.0		
29/09/12	1450-1503	28/Fine	Surface	1.0	27.9	27.2	27.2	6.07	6.09	89.2	89.4	3.47	3.49	3.65	5.2	5.1	5.4
						27.1		6.10		89.5		3.50			5.0		
			Middle	6.3	27.6	27.2	27.2	5.93	5.95	87.1	87.4	3.62	3.60		5.4	5.4	
						27.2		5.97		87.6		3.57			5.4		
			Bottom	11.6	27.5	27.5	27.6	5.82	5.84	85.6	85.9	3.84	3.86		5.6	5.6	
						27.6		5.86		86.1		3.87			5.6		

Mid-Flood Tide

Monitoring Station : R17

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
01/09/12	1000-1013	29/Cloudy	Surface	1.0	28.2	29.1	29.2	6.04	6.06	89.0	89.3	3.58	3.61	3.72	5.4	5.5	5.7		
						29.2		6.08		89.5		3.63			5.6				
			Middle	6.4	28.0	29.6	29.6	5.97	5.95	87.8	87.6	3.69	3.70		3.70	3.70		5.6	5.8
						29.5		5.93		87.3		3.71			6.0				
			Bottom	11.8	27.7	29.9	29.9	5.86	5.84	86.3	86.0	3.87	3.85		3.85	3.85		5.8	5.9
						29.8		5.82		85.7		3.83			5.8				
04/09/12	0800-0813	28/Fine	Surface	1.0	27.3	27.2	27.3	5.74	5.76	83.8	84.1	3.62	3.64	3.75	5.4	5.5	5.6		
						27.3		5.77		84.3		3.66			5.6				
			Middle	6.4	27.2	27.4	27.4	5.70	5.68	83.2	82.9	3.73	3.76		3.76	3.76		5.6	5.6
						27.4		5.66		82.6		3.79			5.5				
			Bottom	11.8	27.2	27.6	27.6	5.65	5.67	82.5	82.8	3.84	3.86		3.86	3.86		5.5	5.7
						27.5		5.69		83.1		3.88			5.8				
06/09/12	0830-0843	29/Cloudy	Surface	1.0	27.6	27.4	27.4	6.14	6.11	90.2	89.8	3.11	3.13	3.24	5.0	5.1	5.1		
						27.3		6.08		89.4		3.15			5.2				
			Middle	6.3	27.5	27.5	27.6	6.03	6.06	88.6	89.0	3.19	3.20		3.20	3.20		5.2	5.1
						27.6		6.08		89.3		3.21			5.0				
			Bottom	11.6	27.2	27.9	27.9	5.96	5.94	87.6	87.3	3.36	3.38		3.38	3.38		5.0	5.2
						27.8		5.91		86.9		3.40			5.4				
08/09/12	1430-1442	32/Fine	Surface	1.0	27.7	27.2	27.2	6.07	6.06	88.9	88.7	3.54	3.57	3.80	5.4	5.5	5.8		
						27.2		6.04		88.5		3.60			5.6				
			Middle	6.6	27.4	27.6	27.6	5.93	5.95	87.2	87.4	3.83	3.84		3.84	3.84		5.8	5.9
						27.6		5.96		87.6		3.85			6.0				
			Bottom	12.2	27.1	27.9	27.9	5.80	5.79	85.5	85.3	3.96	3.98		3.98	3.98		6.0	6.0
						27.9		5.77		85.1		4.00			6.0				
11/09/12	1630-1643	30/Fine	Surface	1.0	27.7	26.7	26.8	6.06	6.08	88.2	88.4	3.38	3.41	3.61	5.2	5.3	5.4		
						26.8		6.09		88.6		3.43			5.4				
			Middle	5.8	27.6	26.9	27.0	5.95	5.96	86.9	87.1	3.59	3.62		3.62	3.62		5.4	5.5
						27.0		5.97		87.2		3.64			5.5				
			Bottom	10.6	27.4	27.1	27.1	5.83	5.85	85.4	85.6	3.77	3.80		3.80	3.80		5.5	5.6
						27.1		5.86		85.8		3.82			5.6				
13/09/12	1400-1413	32/Fine	Surface	1.0	28.2	28.3	28.3	6.14	6.16	90.4	90.6	3.44	3.46	3.58	5.4	5.4	5.5		
						28.3		6.17		90.8		3.47			5.4				
			Middle	6.3	27.7	28.7	28.7	6.06	6.03	89.2	88.8	3.54	3.56		3.56	3.56		5.6	5.6
						28.7		6.00		88.3		3.58			5.5				
			Bottom	11.6	27.4	29.1	29.2	5.91	5.89	87.0	86.7	3.70	3.72		3.72	3.72		5.5	5.7
						29.2		5.87		86.4		3.73			5.8				
15/09/12	1430-1443	30/Cloudy	Surface	1.0	27.9	26.9	27.0	6.19	6.20	89.8	89.9	3.27	3.26	3.52	5.2	5.2	5.4		
						27.0		6.20		89.9		3.24			5.2				
			Middle	6.4	27.5	27.2	27.2	6.03	6.06	87.4	87.8	3.51	3.52		3.52	3.52		5.2	5.4
						27.1		6.08		88.2		3.53			5.5				
			Bottom	11.8	27.4	27.1	27.2	5.98	5.99	86.7	86.8	3.77	3.78		3.78	3.78		5.5	5.6
						27.2		5.99		86.9		3.79			5.6				
18/09/12	1600-1613	30/Cloudy	Surface	1.0	27.1	26.9	26.9	6.16	6.18	90.0	90.3	3.29	3.30	3.44	5.2	5.2	5.4		
						26.9		6.20		90.6		3.31			5.2				
			Middle	6.4	26.8	27.2	27.2	6.02	6.00	88.0	87.7	3.38	3.40		3.40	3.40		5.4	5.5
						27.2		5.98		87.4		3.42			5.5				
			Bottom	11.8	26.6	27.5	27.5	5.76	5.78	84.2	84.5	3.60	3.63		3.63	3.63		5.5	5.7
						27.5		5.80		84.8		3.65			5.8				
20/09/12	0830-0843	28/Cloudy	Surface	1.0	27.0	26.9	26.9	6.12	6.14	89.2	89.6	3.40	3.39	3.53	5.4	5.3	5.4		
						26.8		6.16		89.9		3.37			5.2				
			Middle	6.4	26.9	27.4	27.4	6.01	6.03	87.6	88.0	3.49	3.52		3.52	3.52		5.4	5.5
						27.3		6.05		88.3		3.54			5.5				
			Bottom	11.8	26.6	27.8	27.8	5.92	5.90	86.3	86.1	3.67	3.69		3.69	3.69		5.5	5.6
						27.8		5.88		85.8		3.70			5.6				
22/09/12	0900-0915	27/Cloudy	Surface	1.0	26.8	26.9	26.9	6.14	6.17	89.6	90.0	3.72	3.70	3.82	5.6	5.6	5.7		
						26.9		6.19		90.3		3.67			5.6				
			Middle	6.3	26.7	26.9	27.0	6.10	6.08	89.1	88.7	3.73	3.77		3.77	3.77		5.8	5.7
						27.0		6.05		88.3		3.80			5.5				
			Bottom	11.6	26.7	27.2	27.2	6.00	5.98	87.6	87.3	3.97	4.01		4.01	4.01		6.0	5.9
						27.1		5.96		87.0		4.04			5.8				
25/09/12	1330-1343	30/Cloudy	Surface	1.0	28.0	26.8	26.9	5.98	6.01	87.9	88.4	3.42	3.44	3.61	5.4	5.4	5.6		
						26.9		6.04		88.8		3.45			5.4				
			Middle	5.9	27.9	26.9	27.0	5.94	5.93	87.3	87.1	3.59	3.61		3.61	3.61		5.6	5.6
						27.0		5.91		86.9		3.63			5.5				
			Bottom	10.8	27.8	27.0	27.0	5.87	5.88	86.3	86.4	3.77	3.79		3.79	3.79		6.0	5.9
						26.9		5.88		86.4		3.81			5.8				
27/09/12	1430-1444	31/Fine	Surface	1.0	27.8	27.0	27.0	6.10	6.09	90.2	90.1	3.47	3.49	3.65	5.4	5.4	5.6		
						27.0		6.08		89.9		3.50			5.4				
			Middle	6.1	27.7	27.1	27.1	6.06	6.08	89.6	89.9	3.62	3.64		3.64	3.64		5.6	5.6
						27.1		6.10		90.2		3.66			5.6				
			Bottom	11.2	27.4	27.3	27.4	5.82	5.81	86.0	85.9	3.80	3.83		3.83	3.83		6.0	5.9
						27.4		5.80		85.7		3.85			5.8				
29/09/12	1430-1444	28/Fine	Surface	1.0	27.9	27.2	27.2	6.18	6.20	90.7	91.0	3.28	3.31	3.48	5.0	5.1	5.1		
						27.1		6.21		91.2		3.33			5.2				
			Middle	5.8	27.7	27.3	27.3	6.08	6.09	89.4	89.5	3.44	3.46		3.46	3.46		5.0	5.1
						27.2		6.10		89.5		3.47			5.0				
			Bottom	10.5	27.4	27.5	27.5	5.78	5.80	84.9	85.3	3.64	3.67		3.67	3.67		5.0	5.2
						27.5		5.82		85.6		3.69			5.4				

Monitoring Station : R28

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1202-1215	30/Drizzle	Surface	1.0	28.3	29.1	29.2	6.05	6.07	89.0	89.2	3.55	3.53	3.69	5.4	5.4	5.6
						29.2		6.08		89.4		3.51			5.4		
			Middle	6.1	28.1	29.6	29.6	5.96	5.94	87.7	87.4	3.66	3.68		5.6	5.6	
						29.6		5.92		87.1		3.70			5.6		
			Bottom	11.2	27.8	29.9	29.9	5.78	5.80	85.0	85.3	3.88	3.86		5.8	5.8	
						29.8		5.82		85.6		3.83			5.8		
04/09/12	1002-1014	29/Drizzle	Surface	1.0	27.4	27.4	27.4	6.03	6.00	88.1	87.7	3.52	3.50	3.63	5.4	5.4	5.5
						27.4		5.97		87.2		3.47			5.4		
			Middle	6.1	27.3	27.5	27.5	5.92	5.90	86.4	86.1	3.59	3.61		5.4	5.5	
						27.4		5.88		85.8		3.62			5.6		
			Bottom	11.2	27.1	27.6	27.6	5.84	5.82	85.2	84.9	3.80	3.78		5.8	5.7	
						27.6		5.79		84.6		3.75			5.6		
06/09/12	1033-1046	30/Cloudy	Surface	1.0	27.6	27.4	27.4	6.15	6.17	90.5	90.7	3.24	3.27	3.53	5.2	5.2	5.5
						27.4		6.18		90.8		3.29			5.2		
			Middle	6.1	27.4	27.6	27.7	6.02	6.00	88.4	88.2	3.55	3.58		5.4	5.5	
						27.7		5.98		87.9		3.60			5.6		
			Bottom	11.2	27.2	27.9	27.9	5.92	5.90	87.0	86.7	3.74	3.76		5.6	5.7	
						27.8		5.88		86.4		3.77			5.8		
08/09/12	1625-1638	32/Fine	Surface	1.0	27.7	27.2	27.2	6.14	6.16	90.0	90.2	3.43	3.45	3.60	5.2	5.3	5.5
						27.2		6.17		90.4		3.46			5.4		
			Middle	6.0	27.5	27.5	27.6	6.03	6.00	88.7	88.3	3.61	3.63		5.4	5.5	
						27.6		5.97		87.8		3.65			5.6		
			Bottom	11.0	27.2	27.8	27.8	5.84	5.83	86.1	85.9	3.71	3.73		5.6	5.6	
						27.7		5.81		85.7		3.75			5.6		
11/09/12	1825-1838	30/Fine	Surface	1.0	27.6	26.6	26.7	6.05	6.06	88.0	88.1	3.38	3.40	3.52	5.2	5.3	5.4
						26.7		6.06		88.2		3.42			5.4		
			Middle	5.5	27.5	26.8	26.9	5.99	5.99	87.5	87.4	3.46	3.48		5.4	5.4	
						26.9		5.98		87.3		3.49			5.4		
			Bottom	10.0	27.3	27.1	27.2	5.91	5.90	86.5	86.3	3.68	3.70		5.6	5.6	
						27.2		5.88		86.1		3.71			5.6		
13/09/12	1600-1613	32/Fine	Surface	1.0	28.3	28.2	28.2	6.07	6.09	89.3	89.6	3.43	3.45	3.56	5.4	5.4	5.6
						28.2		6.11		89.9		3.46			5.4		
			Middle	6.0	27.7	28.7	28.8	6.18	6.19	90.9	91.1	3.54	3.56		5.6	5.6	
						28.8		6.20		91.2		3.58			5.6		
			Bottom	11.0	27.3	29.2	29.2	6.05	6.03	89.0	88.7	3.66	3.68		5.6	5.7	
						29.1		6.00		88.3		3.69			5.8		
15/09/12	1630-1644	30/Cloudy	Surface	1.0	27.9	26.9	26.9	6.11	6.12	88.6	88.8	3.14	3.16	3.35	5.4	5.4	5.4
						26.8		6.13		88.9		3.17			5.4		
			Middle	6.2	27.6	27.2	27.2	5.98	5.97	86.7	86.6	3.36	3.38		5.2	5.2	
						27.1		5.96		86.4		3.40			5.2		
			Bottom	11.4	27.4	27.3	27.3	5.82	5.81	84.4	84.3	3.49	3.51		5.6	5.6	
						27.3		5.80		84.1		3.52			5.6		
18/09/12	1756-1809	28/Cloudy	Surface	1.0	27.2	26.8	26.8	6.24	6.26	91.1	91.4	3.53	3.50	3.52	5.0	5.0	5.3
						26.8		6.27		91.6		3.47			5.0		
			Middle	6.3	26.8	27.2	27.2	6.11	6.09	89.3	89.0	3.34	3.36		5.2	5.3	
						27.1		6.07		88.7		3.37			5.4		
			Bottom	11.6	26.6	27.4	27.4	5.92	5.90	86.5	86.2	3.68	3.70		5.4	5.5	
						27.4		5.88		85.9		3.72			5.6		
20/09/12	1035-1048	28/Cloudy	Surface	1.0	27.1	26.8	26.9	6.17	6.19	90.0	90.3	3.28	3.26	3.37	5.2	5.2	5.4
						26.9		6.20		90.5		3.23			5.2		
			Middle	6.1	26.8	27.3	27.4	6.12	6.10	89.3	89.0	3.37	3.39		5.4	5.4	
						27.4		6.08		88.7		3.40			5.4		
			Bottom	11.2	26.4	27.8	27.8	5.97	5.95	87.0	86.7	3.45	3.48		5.4	5.5	
						27.7		5.92		86.4		3.51			5.6		
22/09/12	1106-1120	29/Cloudy	Surface	1.0	26.7	26.8	26.9	6.11	6.13	89.2	89.4	3.47	3.50	3.67	5.4	5.4	5.6
						26.9		6.14		89.6		3.53			5.4		
			Middle	6.0	26.7	26.9	26.9	6.07	6.05	88.6	88.2	3.66	3.68		5.6	5.6	
						26.9		6.02		87.8		3.70			5.6		
			Bottom	11.0	26.6	27.0	27.0	5.91	5.90	86.2	86.1	3.81	3.84		5.8	5.8	
						27.0		5.89		85.9		3.87			5.8		
25/09/12	1529-1542	30/Cloudy	Surface	1.0	28.0	26.9	27.0	6.00	6.03	88.2	88.6	3.38	3.40	3.54	5.2	5.3	5.5
						27.0		6.05		88.9		3.41			5.4		
			Middle	5.4	27.9	27.1	27.1	6.03	6.01	88.6	88.3	3.45	3.47		5.4	5.4	
						27.1		5.98		87.9		3.49			5.4		
			Bottom	9.8	27.7	27.2	27.2	5.86	5.88	86.1	86.4	3.72	3.74		5.6	5.7	
						27.2		5.89		86.6		3.76			5.8		
27/09/12	1630-1643	30/Fine	Surface	1.0	28.0	27.0	27.1	6.10	6.08	90.2	89.9	3.24	3.26	3.41	5.2	5.2	5.4
						27.1		6.06		89.6		3.28			5.2		
			Middle	5.9	27.7	27.1	27.2	5.88	5.89	86.9	87.1	3.44	3.43		5.4	5.4	
						27.2		5.90		87.2		3.41			5.4		
			Bottom	10.8	27.4	27.3	27.4	5.75	5.78	84.9	85.3	3.59	3.55		5.6	5.5	
						27.4		5.80		85.7		3.51			5.4		
29/09/12	1630-1642	28/Fine	Surface	1.0	27.8	27.2	27.2	6.24	6.23	91.7	91.5	3.37	3.34	3.55	5.2	5.2	5.5
						27.2		6.22		91.3		3.30			5.2		
			Middle	5.4	27.7	27.3	27.3	6.04	6.05	88.7	88.9	3.56	3.56		5.4	5.5	
						27.2		6.06		89.0		3.55			5.6		
			Bottom	9.8	27.3	27.5	27.5	5.88	5.90	86.3	86.7	3.74	3.75		5.6	5.7	
						27.5		5.92		87.1		3.76			5.8		

Monitoring Station : R29

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1221-1238	30/Drizzle	Surface	1.0	28.3	29.1	29.2	6.17	6.16	90.8	90.6	3.54	3.78	5.4	5.5	5.6	
						29.2		6.14		90.3		3.60		5.6			
			Middle	8.5	28.0	29.7	29.7	6.08	6.06	89.5	89.1	3.79		3.77			5.6
						29.6		6.03		88.7		3.74					5.6
			Bottom	16.0	27.7	29.9	30.0	5.90	5.88	86.8	86.4	4.03		4.01			5.8
						30.0		5.85		86.0		3.98					5.8
04/09/12	1020-1035	29/Drizzle	Surface	1.0	27.4	27.4	27.4	5.97	5.95	87.1	86.9	3.46	3.69	5.4	5.4	5.6	
						27.3		5.93		86.6		3.50		5.4			
			Middle	8.4	27.2	27.5	27.6	5.90	5.88	86.2	85.9	3.67		3.66			5.6
						27.6		5.85		85.5		3.64					5.6
			Bottom	15.8	27.1	27.7	27.7	5.77	5.75	84.3	83.9	3.94		3.92			5.8
						27.7		5.72		83.5		3.90					5.8
06/09/12	1051-1108	30/Cloudy	Surface	1.0	27.7	27.4	27.5	6.09	6.11	89.6	89.9	3.37	3.69	5.2	5.3	5.7	
						27.5		6.13		90.2		3.40		5.4			
			Middle	9.2	27.3	27.6	27.6	6.06	6.05	89.1	88.9	3.78		3.80			5.8
						27.6		6.03		88.7		3.82					5.8
			Bottom	17.4	27.1	28.0	28.0	5.85	5.87	86.0	86.3	3.89		3.88			5.8
						27.9		5.89		86.5		3.86					6.0
08/09/12	1645-1658	32/Fine	Surface	1.0	27.7	27.3	27.3	5.96	5.98	87.3	87.6	3.30	3.46	5.2	5.2	5.4	
						27.2		5.99		87.8		3.34		5.2			
			Middle	8.7	27.4	27.6	27.6	5.80	5.78	85.3	85.0	3.42		3.45			5.4
						27.6		5.76		84.7		3.47					5.4
			Bottom	16.4	27.1	27.9	27.9	5.67	5.69	83.6	83.9	3.60		3.62			5.6
						27.9		5.70		84.1		3.63					5.6
11/09/12	1845-1858	30/Fine	Surface	1.0	27.7	26.8	26.9	6.14	6.16	89.3	89.6	3.31	3.56	5.2	5.2	5.4	
						26.9		6.18		89.9		3.34		5.2			
			Middle	8.4	27.5	27.0	27.0	5.98	6.01	87.3	87.8	3.53		3.56			5.4
						27.0		6.04		88.2		3.59					5.4
			Bottom	15.8	27.4	27.1	27.2	5.78	5.79	84.6	84.7	3.79		3.78			5.8
						27.2		5.79		84.8		3.77					5.6
13/09/12	1620-1633	32/Fine	Surface	1.0	28.2	28.3	28.3	6.12	6.13	90.1	90.2	3.55	3.61	5.4	5.5	5.5	
						28.2		6.14		90.3		3.61		5.6			
			Middle	8.9	27.7	28.8	28.8	6.01	5.99	88.4	88.2	3.43		3.46			5.4
						28.7		5.97		87.9		3.48					5.4
			Bottom	16.8	27.4	29.2	29.2	5.89	5.86	86.7	86.3	3.82		3.80			5.6
						29.2		5.83		85.8		3.78					5.6
15/09/12	1651-1703	30/Cloudy	Surface	1.0	27.9	27.0	27.0	6.06	6.06	87.9	87.8	3.09	3.34	5.2	5.2	5.4	
						27.0		6.05		87.7		3.12		5.2			
			Middle	9.0	27.7	27.2	27.2	6.01	6.02	87.1	87.3	3.27		3.29			5.4
						27.1		6.03		87.4		3.30					5.4
			Bottom	17.0	27.4	27.3	27.3	5.93	5.93	86.0	85.9	3.62		3.64			5.6
						27.2		5.92		85.8		3.66					5.6
18/09/12	1816-1829	28/Cloudy	Surface	1.0	27.1	26.8	26.9	6.19	6.20	90.4	90.6	3.25	3.44	5.0	5.0	5.3	
						26.9		6.21		90.7		3.28		5.0			
			Middle	9.1	26.8	27.2	27.3	6.05	6.03	88.4	88.1	3.40		3.43			5.2
						27.3		6.01		87.8		3.45					5.2
			Bottom	17.2	26.6	27.6	27.6	5.73	5.75	83.7	84.0	3.61		3.64			5.6
						27.6		5.77		84.3		3.66					5.6
20/09/12	1054-1111	28/Cloudy	Surface	1.0	27.1	26.9	27.0	6.13	6.16	89.5	89.9	3.53	3.67	5.4	5.5	5.6	
						27.0		6.18		90.2		3.58		5.6			
			Middle	9.0	26.7	27.4	27.5	6.04	6.02	88.2	87.9	3.61		3.64			5.6
						27.5		6.00		87.5		3.66					5.6
			Bottom	17.0	26.3	27.8	27.9	5.91	5.89	86.2	85.9	3.84		3.82			5.8
						27.9		5.86		85.5		3.80					5.8
22/09/12	1124-1139	29/Cloudy	Surface	1.0	26.8	26.8	26.8	6.13	6.11	89.4	89.1	3.54	3.86	5.4	5.5	5.8	
						26.8		6.08		88.7		3.60		5.6			
			Middle	8.9	26.7	27.1	27.1	5.91	5.90	86.2	86.0	3.82		3.85			5.8
						27.1		5.88		85.8		3.87					5.8
			Bottom	16.8	26.6	27.5	27.5	5.80	5.79	84.7	84.5	4.14		4.17			6.0
						27.5		5.77		84.2		4.20					6.2
25/09/12	1558-1611	30/Cloudy	Surface	1.0	28.1	26.8	26.8	6.04	6.06	88.8	89.0	3.48	3.74	5.4	5.4	5.6	
						26.8		6.07		89.2		3.52		5.4			
			Middle	8.4	27.9	26.9	27.0	5.92	5.94	87.0	87.3	3.77		3.76			5.6
						27.0		5.95		87.5		3.74					5.6
			Bottom	15.8	27.7	27.1	27.2	5.78	5.81	85.0	85.4	3.96		3.98			5.8
						27.2		5.83		85.7		3.99					6.0
27/09/12	1649-1703	30/Fine	Surface	1.0	27.9	27.0	27.1	6.07	6.05	89.2	89.2	3.43	3.64	5.4	5.4	5.6	
						27.1		6.03		89.1		3.41		5.4			
			Middle	8.8	27.6	27.2	27.2	5.90	5.93	87.2	87.7	3.56		3.58			5.6
						27.1		5.96		88.1		3.60					5.6
			Bottom	16.6	27.3	27.5	27.6	5.84	5.86	86.3	86.6	3.93		3.92			5.8
						27.6		5.88		86.9		3.91					5.8
29/09/12	1647-1700	28/Fine	Surface	1.0	27.9	27.1	27.1	6.17	6.20	90.7	91.1	3.47	3.64	5.2	5.3	5.7	
						27.1		6.23		91.5		3.45		5.4			
			Middle	8.6	27.7	27.2	27.3	6.05	6.03	88.8	88.5	3.68		3.67			5.8
						27.3		6.01		88.2		3.66					5.8
			Bottom	16.1	27.4	27.6	27.5	5.74	5.75	84.3	84.5	3.80		3.79			5.8
						27.4		5.76		84.6		3.77					6.0

Mid-Flood Tide

Monitoring Station : C1

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1057-1113	29/Cloudy	Surface	1.0	28.2	29.1	29.2	6.12	6.10	90.0	89.7	3.55	3.58	3.79	5.4	5.5	5.7
						29.2		6.08		89.4		3.60			5.6		
			Middle	7.8	27.9	29.6	29.6	5.93	5.91	87.4	87.1	3.80	3.82		5.8	5.8	
						29.6		5.89		86.7		3.84			5.8		
			Bottom	14.6	27.6	29.9	30.0	5.76	5.74	84.7	84.4	3.99	3.97		5.8	5.9	
						30.0		5.71		84.0		3.95			6.0		
04/09/12	0857-0912	28/Fine	Surface	1.0	27.4	27.4	27.4	6.03	6.01	88.0	87.7	3.65	3.64	3.73	5.6	5.6	5.8
						27.4		5.98		87.3		3.62			5.6		
			Middle	7.9	27.2	27.6	27.7	5.95	5.94	86.9	86.7	3.69	3.71		5.8	5.8	
						27.7		5.92		86.5		3.72			5.8		
			Bottom	14.8	27.1	27.8	27.8	5.86	5.83	85.5	85.1	3.87	3.85		5.8	5.9	
						27.7		5.80		84.7		3.83			6.0		
06/09/12	0930-0944	29/Cloudy	Surface	1.0	27.6	27.4	27.4	6.15	6.13	90.4	90.1	3.41	3.43	3.60	5.4	5.4	5.6
						27.3		6.11		89.8		3.45			5.4		
			Middle	6.8	27.5	27.6	27.7	6.07	6.06	89.2	89.0	3.63	3.65		5.6	5.6	
						27.7		6.04		88.8		3.66			5.6		
			Bottom	12.6	27.3	27.9	28.0	5.88	5.86	86.4	86.1	3.70	3.73		5.6	5.8	
						28.0		5.83		85.7		3.75			6.0		
08/09/12	1526-1539	32/Fine	Surface	1.0	27.7	27.3	27.4	6.24	6.23	91.4	91.2	3.57	3.60	3.75	5.4	5.4	5.6
						27.4		6.21		91.0		3.62			5.4		
			Middle	7.4	27.4	27.9	27.9	6.12	6.10	90.0	89.7	3.71	3.73		5.6	5.6	
						27.9		6.07		89.3		3.75			5.6		
			Bottom	13.8	27.1	28.2	28.2	5.92	5.90	87.3	87.0	3.92	3.94		5.8	5.9	
						28.2		5.87		86.6		3.95			6.0		
11/09/12	1729-1741	30/Fine	Surface	1.0	27.6	26.5	26.6	6.06	6.07	88.2	88.4	3.67	3.70	3.72	5.6	5.6	5.7
						26.6		6.08		88.5		3.72			5.6		
			Middle	7.0	27.4	26.7	26.8	6.01	6.02	87.7	87.9	3.59	3.61		5.4	5.5	
						26.8		6.03		88.0		3.62			5.6		
			Bottom	13.0	27.3	26.9	27.0	5.82	5.83	85.2	85.4	3.85	3.86		5.8	5.9	
						27.0		5.84		85.5		3.87			6.0		
13/09/12	1459-1512	32/Fine	Surface	1.0	28.2	28.3	28.3	6.24	6.26	91.8	92.1	3.50	3.52	3.73	5.4	5.4	5.6
						28.3		6.28		92.4		3.53			5.4		
			Middle	7.4	27.7	28.7	28.8	6.12	6.10	90.1	89.7	3.71	3.73		5.6	5.6	
						28.8		6.07		89.3		3.74			5.6		
			Bottom	13.8	27.3	29.2	29.2	5.94	5.92	87.4	87.1	3.93	3.94		5.8	5.9	
						29.1		5.90		86.8		3.95			6.0		
15/09/12	1531-1544	30/Cloudy	Surface	1.0	28.0	26.9	27.0	6.03	6.02	87.4	87.3	3.28	3.31	3.48	5.6	5.6	5.6
						27.0		6.01		87.1		3.34			5.6		
			Middle	6.9	27.5	27.0	27.1	5.87	5.89	85.1	85.4	3.31	3.33		5.8	5.8	
						27.1		5.90		85.6		3.35			5.8		
			Bottom	12.8	27.4	27.1	27.1	5.91	5.94	85.7	86.1	3.78	3.79		5.4	5.5	
						27.0		5.96		86.4		3.79			5.5		
18/09/12	1658-1711	30/Cloudy	Surface	1.0	27.2	26.7	26.8	6.13	6.15	89.5	89.8	3.64	3.62	3.67	5.2	5.3	5.4
						26.8		6.17		90.1		3.60			5.4		
			Middle	6.9	26.8	27.2	27.2	6.04	6.03	88.3	88.1	3.85	3.87		5.2	5.3	
						27.2		6.01		87.8		3.89			5.4		
			Bottom	12.8	26.6	27.5	27.5	5.90	5.89	86.2	86.0	3.51	3.53		5.6	5.6	
						27.5		5.87		85.8		3.54			5.5		
20/09/12	0928-0944	28/Cloudy	Surface	1.0	27.1	26.9	27.0	6.25	6.24	91.1	90.9	3.49	3.52	3.70	5.4	5.4	5.6
						27.0		6.22		90.7		3.55			5.4		
			Middle	7.5	26.9	27.4	27.4	6.15	6.13	89.7	89.4	3.64	3.67		5.6	5.6	
						27.3		6.10		89.0		3.70			5.6		
			Bottom	14.0	26.5	27.8	27.8	5.95	5.93	86.8	86.4	3.89	3.91		5.8	5.9	
						27.8		5.90		86.0		3.93			6.0		
22/09/12	1000-1015	27/Cloudy	Surface	1.0	26.7	26.9	26.9	6.15	6.18	89.8	90.3	3.48	3.51	3.71	5.4	5.4	5.6
						26.9		6.21		90.7		3.53			5.4		
			Middle	7.4	26.7	27.1	27.1	6.02	5.99	87.8	87.4	3.70	3.73		5.6	5.6	
						27.0		5.96		87.0		3.75			5.6		
			Bottom	13.8	26.6	27.2	27.2	5.81	5.83	84.8	85.1	3.86	3.89		5.8	5.9	
						27.2		5.84		85.3		3.91			6.0		
25/09/12	1428-1442	30/Cloudy	Surface	1.0	27.9	26.8	26.9	6.07	6.08	89.2	89.4	3.60	3.58	3.78	5.6	5.5	5.7
						26.9		6.09		89.5		3.56			5.4		
			Middle	7.2	27.8	26.9	27.0	5.95	5.96	87.5	87.7	3.74	3.79		5.6	5.7	
						27.0		5.97		87.8		3.83			5.8		
			Bottom	13.4	27.8	27.1	27.2	5.76	5.79	84.7	85.1	3.98	3.97		6.0	6.0	
						27.2		5.81		85.4		3.95			6.0		
27/09/12	1530-1542	31/Fine	Surface	1.0	27.9	27.0	27.1	5.99	5.95	88.5	87.9	3.38	3.40	3.60	5.2	5.3	5.5
						27.1		5.91		87.3		3.42			5.4		
			Middle	7.3	27.6	27.2	27.2	5.79	5.78	85.6	85.4	3.66	3.68		5.6	5.6	
						27.1		5.76		85.1		3.69			5.6		
			Bottom	13.6	27.4	27.4	27.4	5.72	5.76	84.5	85.1	3.72	3.74		5.8	5.7	
						27.4		5.80		85.7		3.75			5.5		
29/09/12	1527-1542	28/Fine	Surface	1.0	27.8	27.2	27.2	6.13	6.12	90.0	89.8	3.23	3.20	3.48	5.4	5.4	5.6
						27.2		6.11		89.5		3.17			5.4		
			Middle	7.1	27.5	27.2	27.3	5.97	5.98	87.6	87.8	3.48	3.49		5.6	5.6	
						27.3		5.99		88.0		3.50			5.6		
			Bottom	13.2	27.4	27.5	27.6	2.77	4.25	84.7	84.5	3.76	3.74		5.6	5.8	
						27.6		5.73		84.2		3.72			6.0		

Monitoring Station : C3

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)	Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average			
01/09/12	1120-1134	29/Cloudy	Surface	1.0	28.3	29.1	29.1	6.06	6.04	89.3	88.9	3.74	3.77	3.91	5.6	5.7	5.8		
						29.1		6.01		88.4		3.79			5.8				
			Middle	7.0	28.0	29.6	29.6	5.90	5.88	86.9	86.6	3.93	3.92		3.90	3.92		5.8	5.9
						29.5		5.86		86.2		3.90			6.0				
			Bottom	13.0	27.7	29.9	30.0	5.72	5.74	84.2	84.4	4.04	4.06		4.07	4.06		5.8	5.9
						30.0		5.75		84.6		4.07			6.0				
04/09/12	0918-0933	28/Fine	Surface	1.0	27.4	27.4	27.4	6.01	6.03	87.8	88.1	3.72	3.70	3.83	5.6	5.6	5.8		
						27.3		6.05		88.4		3.68			5.6				
			Middle	7.4	27.3	27.6	27.6	5.94	5.93	86.7	86.5	3.81	3.79		3.76	3.79		5.8	5.7
						27.6		5.91		86.3		3.76			5.6				
			Bottom	13.8	27.1	27.7	27.8	5.84	5.86	85.3	85.6	3.99	4.01		4.03	4.01		6.0	6.0
						27.8		5.88		85.9		4.03			6.0				
06/09/12	0950-1006	29/Cloudy	Surface	1.0	27.7	27.4	27.4	6.16	6.18	90.6	90.8	3.51	3.54	3.64	5.4	5.4	5.6		
						27.4		6.19		91.0		3.56			5.4				
			Middle	8.9	27.5	27.7	27.8	6.04	6.03	88.7	88.5	3.62	3.65		3.68	3.65		5.6	5.6
						27.8		6.01		88.3		3.68			5.6				
			Bottom	16.8	27.3	28.0	28.0	5.84	5.86	85.9	86.1	3.77	3.75		3.72	3.75		5.8	5.7
						27.9		5.87		86.3		3.72			5.6				
08/09/12	1546-1559	32/Fine	Surface	1.0	27.7	27.4	27.4	5.93	5.95	86.9	87.2	3.57	3.54	3.77	5.4	5.4	5.6		
						27.3		5.97		87.5		3.51			5.4				
			Middle	7.8	27.3	27.6	27.7	5.84	5.82	85.9	85.6	3.74	3.76		3.77	3.76		5.6	5.6
						27.7		5.80		85.3		3.77			5.6				
			Bottom	14.6	27.0	27.8	27.9	5.75	5.73	84.8	84.5	3.98	4.00		4.02	4.00		5.8	5.9
						27.9		5.70		84.1		4.02			6.0				
11/09/12	1747-1800	30/Fine	Surface	1.0	27.6	26.6	26.7	6.14	6.13	89.3	89.1	3.62	3.66	3.80	5.4	5.5	5.7		
						26.7		6.11		88.9		3.69			5.6				
			Middle	6.4	27.5	26.9	26.9	6.05	6.06	88.3	88.4	3.75	3.78		3.81	3.78		5.6	5.7
						26.9		6.06		88.5		3.81			5.8				
			Bottom	11.8	27.3	27.0	27.1	5.85	5.86	85.6	85.8	3.94	3.95		3.96	3.95		5.8	5.9
						27.1		5.87		85.9		3.96			6.0				
13/09/12	1518-1535	32/Fine	Surface	1.0	28.3	28.3	28.4	6.07	6.10	89.3	89.7	3.47	3.50	3.70	5.4	5.4	5.6		
						28.4		6.12		90.0		3.52			5.4				
			Middle	6.8	27.7	28.7	28.7	6.00	5.97	88.3	87.9	3.68	3.71		3.73	3.71		5.6	5.6
						28.7		5.94		87.4		3.73			5.6				
			Bottom	12.6	27.4	29.2	29.2	5.85	5.82	86.1	85.7	3.90	3.89		3.87	3.89		5.8	5.8
						29.2		5.79		85.2		3.87			5.8				
15/09/12	1550-1602	30/Cloudy	Surface	1.0	28.0	27.0	27.1	6.14	6.16	89.0	89.3	3.30	3.32	3.57	5.2	5.2	5.4		
						27.1		6.18		89.6		3.34			5.2				
			Middle	8.8	27.7	27.1	27.1	5.96	5.94	86.4	86.1	3.54	3.55		3.56	3.55		5.4	5.4
						27.0		5.92		85.8		3.56			5.4				
			Bottom	16.6	27.3	27.2	27.2	5.80	5.82	84.1	84.4	3.82	3.83		3.84	3.83		5.6	5.6
						27.2		5.84		84.7		3.84			5.6				
18/09/12	1717-1730	30/Cloudy	Surface	1.0	27.1	26.8	26.8	6.04	6.06	88.2	88.5	3.37	3.36	3.49	5.2	5.2	5.5		
						26.8		6.08		88.8		3.34			5.2				
			Middle	8.9	26.8	27.2	27.3	5.89	5.87	86.1	85.8	3.50	3.49		3.47	3.49		5.4	5.4
						27.3		5.85		85.5		3.47			5.4				
			Bottom	16.8	26.5	27.6	27.6	5.70	5.72	83.3	83.6	3.62	3.64		3.66	3.64		5.8	5.8
						27.6		5.74		83.9		3.66			5.8				
20/09/12	0950-1005	28/Cloudy	Surface	1.0	27.1	26.9	27.0	6.13	6.11	89.4	89.2	3.50	3.48	3.70	5.4	5.4	5.6		
						27.0		6.09		88.9		3.46			5.4				
			Middle	6.9	26.9	27.4	27.4	6.04	6.02	88.1	87.7	3.71	3.73		3.75	3.73		5.6	5.6
						27.3		5.99		87.3		3.75			5.6				
			Bottom	12.8	26.5	27.8	27.8	5.86	5.85	85.4	85.2	3.92	3.90		3.87	3.90		5.8	5.8
						27.7		5.83		85.0		3.87			5.8				
22/09/12	1022-1038	27/Cloudy	Surface	1.0	26.7	26.8	26.8	6.17	6.15	90.1	89.8	3.57	3.61	3.78	5.4	5.5	5.7		
						26.8		6.13		89.5		3.64			5.6				
			Middle	6.7	26.7	26.9	27.0	6.08	6.06	88.8	88.5	3.77	3.80		3.82	3.80		5.6	5.7
						27.0		6.04		88.2		3.82			5.8				
			Bottom	12.4	26.6	27.1	27.1	5.92	5.91	86.4	86.2	3.90	3.93		3.96	3.93		5.8	5.8
						27.1		5.89		86.0		3.96			5.8				
25/09/12	1451-1505	30/Cloudy	Surface	1.0	27.9	26.9	27.0	6.02	6.04	88.5	88.7	3.46	3.48	3.61	5.4	5.4	5.6		
						27.0		6.05		88.9		3.49			5.4				
			Middle	6.6	27.8	27.0	27.1	6.00	6.00	88.2	88.2	3.51	3.55		3.58	3.55		5.4	5.5
						27.1		5.99		88.1		3.58			5.6				
			Bottom	12.2	27.7	27.1	27.2	5.78	5.81	85.0	85.4	3.79	3.81		3.83	3.81		5.8	5.8
						27.2		5.84		85.8		3.83			5.8				
27/09/12	1547-1600	31/Fine	Surface	1.0	28.0	27.0	27.0	6.14	6.14	90.7	90.6	3.56	3.58	3.67	5.4	5.5	5.6		
						27.0		6.13		90.5		3.60			5.6				
			Middle	6.7	27.5	27.1	27.2	6.01	6.03	88.8	89.1	3.74	3.76		3.78	3.76		5.6	5.7
						27.2		6.05		89.4		3.78			5.8				
			Bottom	12.4	27.4	27.3	27.4	5.91	5.92	87.3	87.5	3.66	3.68		3.70	3.68		5.6	5.6
						27.4		5.93		87.6		3.70			5.6				
29/09/12	1552-1606	28/Fine	Surface	1.0	27.8	27.1	27.1	6.22	6.20	91.3	91.0	3.35	3.32	3.58	5.4	5.4	5.6		
						27.1		6.18		90.7		3.29			5.4				
			Middle	6.9	27.6	27.2	27.2	5.90	5.89	86.6	86.5	3.60	3.62		3.63	3.62		5.6	5.6
						27.1		5.88		86.3		3.63			5.6				
			Bottom	12.8	27.4	27.5	27.5	5.81	5.80	85.4	85.2	3.79	3.81		3.83	3.81		5.8	5.8
						27.5		5.78		84.9		3.83			5.8				

Monitoring Station : C2

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	
01/09/12	1920-1932	30/Cloudy	Surface	1.0	28.3	29.2	29.2	6.10	6.09	89.6	89.5	3.63	3.63	3.72	5.5	5.6	5.7	
						29.2		6.08		89.3		3.62			5.6			
			Middle	8.7	27.8	29.5	29.6	5.89	5.91	86.5	86.8	3.81	3.84		3.83	5.8		5.8
						29.6		5.92		87.0		3.84						
			Bottom	16.4	27.5	30.1	30.1	5.71	5.72	83.9	84.1	3.71	3.69		3.70	5.6		5.6
						30.1		5.73		84.2		3.69						
04/09/12	1729-1743	31/Fine	Surface	1.0	27.5	27.4	27.4	5.96	5.98	87.1	87.4	3.81	3.80	3.99	5.5	5.6	5.8	
						27.3		6.00		87.7		3.78			5.6			
			Middle	9.8	27.4	27.9	28.0	5.89	5.91	85.9	86.2	3.99	3.90		3.95	5.8		5.8
						28.0		5.92		86.4		3.90						
			Bottom	18.6	27.3	28.2	28.2	5.72	5.74	83.4	83.7	4.25	4.18		4.22	6.2		6.1
						28.2		5.76		84.0		4.18						
06/09/12	1759-1811	30/Cloudy	Surface	1.0	27.6	27.3	27.4	6.04	6.05	88.8	86.4	3.69	3.71	3.88	5.5	5.6	5.8	
						27.4		6.06		83.9		3.72			5.6			
			Middle	9.1	27.3	27.7	27.7	5.80	5.82	85.3	85.6	3.85	3.90		3.88	5.8		5.8
						27.6		5.84		85.8		3.90						
			Bottom	17.2	27.1	28.0	28.1	5.73	5.72	83.7	83.6	4.09	4.01		4.05	6.0		6.0
						28.1		5.71		83.4		4.01						
08/09/12	1304-1321	29/Fine	Surface	1.0	27.5	27.4	27.4	6.14	6.11	90.5	90.0	3.62	3.65	3.59	5.5	5.6	5.5	
						27.3		6.07		89.5		3.67			5.6			
			Middle	9.2	27.1	28.0	28.0	5.89	5.85	86.8	86.2	3.39	3.45		3.42	5.2		5.3
						28.0		5.80		85.5		3.45						
			Bottom	17.4	27.0	28.1	28.2	5.64	5.67	82.7	83.1	3.73	3.68		3.71	5.6		5.6
						28.2		5.69		83.4		3.68						
11/09/12	1230-1245	31/Fine	Surface	1.0	27.7	26.8	26.8	6.15	6.13	89.8	89.5	3.42	3.45	3.59	5.5	5.5	5.5	
						26.8		6.11		89.2		3.48			5.4			
			Middle	7.8	27.6	26.9	27.0	6.01	6.02	87.7	87.9	3.63	3.58		3.61	5.6		5.5
						27.0		6.03		88.0		3.58						
			Bottom	14.6	27.4	27.2	27.2	5.80	5.82	84.6	84.9	3.76	3.67		3.72	5.6		5.6
						27.2		5.83		85.1		3.67						
13/09/12	1220-1233	30/Fine	Surface	1.0	27.9	28.5	28.5	6.17	6.16	90.9	90.7	3.60	3.64	3.79	5.5	5.6	5.7	
						28.5		6.14		90.5		3.68			5.6			
			Middle	8.7	27.5	28.9	28.9	5.81	5.80	85.5	85.3	3.74	3.69		3.72	5.6		5.5
						28.9		5.78		85.0		3.69						
			Bottom	16.2	27.3	29.4	29.4	5.84	5.82	85.9	85.6	4.01	4.04		4.03	5.8		5.9
						29.4		5.80		85.3		4.04						
15/09/12	1250-1303	28/Cloudy	Surface	1.0	27.7	26.8	26.8	6.27	6.25	91.3	91.0	3.47	3.50	3.64	5.0	5.1	5.5	
						26.8		6.23		90.7		3.52			5.2			
			Middle	7.2	27.5	27.0	27.0	6.14	6.12	89.3	89.0	3.62	3.67		3.65	5.4		5.5
						26.9		6.10		88.7		3.67						
			Bottom	13.4	27.3	27.0	27.0	5.81	5.79	84.6	84.3	3.80	3.76		3.78	6.0		5.9
						27.0		5.77		84.0		3.76						
18/09/12	1405-1420	27/Cloudy	Surface	1.0	26.7	26.7	26.7	6.11	6.20	89.4	90.7	3.38	3.41	3.70	5.5	5.6	5.7	
						26.7		6.28		91.9		3.44			5.6			
			Middle	7.9	26.5	26.8	26.9	6.01	5.99	87.8	87.6	3.68	3.72		3.70	5.6		5.6
						26.9		5.97		87.3		3.72						
			Bottom	14.7	26.4	27.1	27.1	5.68	5.74	83.7	84.2	4.03	3.95		3.99	5.8		5.8
						27.0		5.79		84.7		3.95						
20/09/12	1757-1810	27/Cloudy	Surface	1.0	27.2	26.8	26.8	6.34	6.36	92.3	92.6	3.14	3.12	3.40	5.0	5.0	5.3	
						26.8		6.38		92.9		3.10			5.0			
			Middle	8.1	26.9	27.4	27.4	6.18	6.16	90.1	89.8	3.35	3.40		3.38	5.2		5.3
						27.3		6.14		89.5		3.40						
			Bottom	15.2	26.6	27.7	27.8	5.98	5.97	87.1	86.9	3.68	3.74		3.71	5.6		5.6
						27.8		5.95		86.6		3.74						
22/09/12	1758-1815	30/Cloudy	Surface	1.0	26.9	26.9	26.9	6.04	6.06	88.6	88.9	3.28	3.29	3.57	5.0	5.0	5.3	
						26.8		6.08		89.1		3.30			5.0			
			Middle	9.3	26.7	27.4	27.5	5.96	5.94	87.3	87.0	3.65	3.69		3.67	5.2		5.3
						27.5		5.92		86.7		3.69						
			Bottom	17.6	26.6	27.8	27.9	5.89	5.85	86.3	85.7	3.77	3.71		3.74	5.6		5.6
						27.9		5.81		85.1		3.71						
25/09/12	1147-1200	29/Cloudy	Surface	1.0	27.9	27.0	27.0	6.02	6.04	88.5	88.8	3.53	3.51	3.72	5.5	5.5	5.7	
						26.9		6.06		89.1		3.48			5.4			
			Middle	9.2	27.7	27.2	27.2	5.89	5.88	86.5	86.3	3.68	3.74		3.71	5.6		5.6
						27.2		5.86		86.1		3.74						
			Bottom	17.4	27.6	27.3	27.3	5.70	5.72	83.8	84.0	3.90	3.97		3.94	5.8		5.9
						27.3		5.73		84.2		3.97						
27/09/12	1247-1301	29/Fine	Surface	1.0	27.8	27.0	27.0	6.06	6.08	89.7	90.0	3.35	3.37	3.52	5.0	5.2	5.5	
						27.0		6.09		90.2		3.39			5.4			
			Middle	7.2	27.6	27.2	27.2	5.95	5.93	88.1	87.7	3.47	3.52		3.50	5.4		5.5
						27.2		5.90		87.3		3.52						
			Bottom	13.4	27.2	27.5	27.5	5.79	5.77	85.7	85.4	3.71	3.68		3.70	5.8		5.7
						27.4		5.75		85.1		3.68						
29/09/12	1301-1314	26/Fine	Surface	1.0	27.7	27.0	27.0	6.14	6.15	90.3	90.5	3.52	3.56	3.71	5.5	5.6	5.8	
						27.0		6.16		90.6		3.60			5.6			
			Middle	8.8	27.5	27.2	27.2	6.03	6.02	88.6	88.5	3.71	3.73		3.72	5.8		5.8
						27.2		6.01		88.3		3.73						
			Bottom	16.6	27.3	27.4	27.4	5.91	5.92	86.9	87.1	3.84	3.87		3.86	6.0		6.0
						27.3		5.93		87.2		3.87						

Monitoring Station : C4

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1902-1914	30/Cloudy	Surface	1.0	28.3	29.2	29.2	6.05	6.14	88.9	90.2	3.61	3.62	3.78	5.6	5.6	5.7
						29.2		6.22		91.4		3.62			5.6		
			Middle	8.8	27.8	29.6	29.7	5.89	5.84	86.5	85.8	3.77	3.76		5.8	5.7	
						29.7		5.79		85.1		3.74			5.6		
			Bottom	16.6	27.3	29.8	29.8	5.81	5.82	85.4	85.5	3.99	3.97		5.8	5.9	
						29.8		5.82		85.5		3.94			6.0		
04/09/12	1708-1721	31/Fine	Surface	1.0	27.6	27.3	27.3	6.14	6.10	89.6	89.0	3.70	3.72	3.97	5.6	5.6	5.9
						27.2		6.05		88.3		3.74			5.6		
			Middle	7.6	27.5	27.4	27.4	5.76	5.79	84.0	84.4	4.06	4.04		6.0	6.0	
						27.4		5.81		84.7		4.01			6.0		
			Bottom	14.2	27.2	27.6	27.6	5.85	5.88	85.6	85.9	4.16	4.14		6.2	6.1	
						27.6		5.90		86.2		4.12			6.0		
06/09/12	1739-1752	30/Cloudy	Surface	1.0	27.6	27.4	27.5	6.12	6.13	89.9	90.1	3.41	3.44	3.70	5.4	5.4	5.6
						27.5		6.13		90.2		3.47			5.4		
			Middle	8.9	27.4	27.6	27.7	5.93	5.94	87.2	87.4	3.76	3.73		5.6	5.6	
						27.7		5.95		87.5		3.70			5.6		
			Bottom	16.8	27.1	27.9	28.0	5.89	5.90	86.0	86.4	3.93	3.92		5.8	5.9	
						28.0		5.90		86.7		3.90			6.0		
08/09/12	1240-1256	29/Fine	Surface	1.0	27.5	27.4	27.4	5.96	5.99	87.3	87.8	3.60	3.64	3.78	5.6	5.6	5.7
						27.4		6.02		88.2		3.68			5.6		
			Middle	8.5	27.3	27.7	27.7	6.05	6.03	89.2	88.8	3.79	3.75		5.8	5.7	
						27.7		6.00		88.4		3.71			5.6		
			Bottom	16.0	27.0	28.1	28.1	5.67	5.69	83.4	83.8	3.99	3.96		5.8	5.9	
						28.0		5.71		84.1		3.93			6.0		
11/09/12	1210-1224	31/Fine	Surface	1.0	27.7	26.7	26.7	6.17	6.19	90.0	90.3	3.44	3.48	3.62	5.4	5.4	5.5
						26.7		6.21		90.6		3.51			5.4		
			Middle	8.1	27.6	26.9	26.9	6.12	6.10	89.3	89.0	3.66	3.63		5.6	5.5	
						26.9		6.08		88.7		3.59			5.4		
			Bottom	15.2	27.5	27.1	27.2	5.86	5.88	85.5	85.8	3.74	3.76		5.6	5.6	
						27.2		5.89		86.0		3.77			5.5		
13/09/12	1201-1213	30/Fine	Surface	1.0	27.9	28.5	28.5	6.09	6.08	89.7	89.5	3.57	3.55	3.84	5.4	5.5	5.8
						28.5		6.06		89.3		3.52			5.6		
			Middle	8.8	27.5	28.9	28.9	5.86	5.85	86.2	86.0	3.98	3.95		5.8	5.8	
						28.9		5.83		85.8		3.91			5.8		
			Bottom	16.6	27.3	29.4	29.4	5.71	5.73	83.9	84.2	4.06	4.04		6.0	6.0	
						29.4		5.75		84.5		4.02			6.0		
15/09/12	1231-1243	28/Cloudy	Surface	1.0	27.6	26.9	26.9	6.23	6.21	90.7	90.4	3.60	3.58	3.69	5.4	5.5	5.6
						26.8		6.19		90.1		3.55			5.6		
			Middle	8.7	27.5	27.0	27.0	6.09	6.10	88.6	88.8	3.60	3.62		5.4	5.5	
						27.0		6.11		88.9		3.64			5.6		
			Bottom	16.4	27.3	27.2	27.2	5.96	5.93	86.8	86.4	3.85	3.88		5.8	5.9	
						27.1		5.90		85.9		3.90			6.0		
18/09/12	1345-1400	27/Cloudy	Surface	1.0	26.7	26.6	26.6	6.23	6.17	91.1	90.4	3.44	3.53	3.69	5.6	5.5	5.7
						26.6		6.10		89.7		3.62			5.4		
			Middle	8.1	26.5	26.9	26.9	5.92	5.95	86.6	87.1	3.58	3.60		5.6	5.6	
						26.9		5.88		87.5		3.61			5.6		
			Bottom	15.2	26.4	27.1	27.1	5.66	5.69	82.8	83.2	3.89	3.95		5.8	5.9	
						27.0		5.71		83.5		4.01			6.0		
20/09/12	1735-1748	27/Cloudy	Surface	1.0	27.2	26.9	26.9	6.41	6.40	93.3	93.1	3.05	3.07	3.33	5.0	5.0	5.3
						26.8		6.38		92.9		3.09			5.0		
			Middle	8.7	26.9	27.3	27.4	6.16	6.14	89.8	89.5	3.26	3.28		5.2	5.2	
						27.4		6.11		89.1		3.30			5.2		
			Bottom	16.4	26.6	27.8	27.8	5.97	5.94	87.0	86.6	3.62	3.64		5.6	5.6	
						27.8		5.91		86.1		3.66			5.5		
22/09/12	1728-1743	30/Cloudy	Surface	1.0	27.0	26.8	26.9	6.10	6.10	89.4	89.3	3.30	3.32	3.61	5.0	5.0	5.3
						26.9		6.09		89.2		3.34			5.0		
			Middle	9.2	26.8	27.3	27.4	6.07	6.08	89.0	89.2	3.59	3.61		5.2	5.2	
						27.4		6.09		89.3		3.62			5.2		
			Bottom	17.4	26.4	27.9	27.9	5.82	5.82	85.3	85.2	3.93	3.92		5.6	5.6	
						27.8		5.81		85.1		3.90			5.5		
25/09/12	1128-1142	29/Cloudy	Surface	1.0	27.9	26.9	27.0	6.04	6.02	88.8	88.5	3.41	3.43	3.66	5.4	5.4	5.6
						27.0		6.00		88.2		3.45			5.4		
			Middle	8.9	27.8	27.2	27.2	5.92	5.90	87.0	86.7	3.62	3.65		5.6	5.6	
						27.1		5.87		86.3		3.67			5.6		
			Bottom	16.8	27.7	27.3	27.3	5.76	5.78	84.7	84.9	3.88	3.91		5.8	5.9	
						27.2		5.79		85.1		3.94			6.0		
27/09/12	1226-1239	29/Fine	Surface	1.0	27.8	26.9	27.0	6.10	6.12	90.3	90.6	3.43	3.41	3.60	5.4	5.3	5.6
						27.0		6.14		90.9		3.38			5.2		
			Middle	8.7	27.5	27.2	27.3	5.97	5.95	88.4	88.1	3.60	3.62		5.6	5.6	
						27.3		5.93		87.8		3.64			5.6		
			Bottom	16.4	27.3	27.5	27.5	5.76	5.74	85.2	84.9	3.75	3.77		5.8	5.9	
						27.5		5.72		84.6		3.79			6.0		
29/09/12	1242-1255	26/Fine	Surface	1.0	27.8	27.0	27.1	6.10	6.09	89.7	89.6	3.41	3.43	3.66	5.4	5.4	5.6
						27.1		6.08		89.4		3.45			5.4		
			Middle	8.7	27.6	27.1	27.1	5.93	5.92	87.2	87.1	3.68	3.67		5.6	5.6	
						27.1		5.91		86.9		3.66			5.6		
			Bottom	16.4	27.4	27.4	27.5	5.80	5.82	85.3	85.6	3.89	3.88		5.8	5.9	
						27.5		5.84		85.8		3.86			6.0		

Mid-Ebb Tide

Monitoring Station : R5

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1709-1718	30/Cloudy	Surface	1.0	28.0	29.1	29.1	6.11	6.12	89.8	89.9	3.56	3.57	3.72	5.5	5.6	5.7
						29.1		6.12		89.9		3.58			5.6		
			Middle	8.4	27.6	29.4	29.4	6.02	6.03	88.4	88.6	3.71	3.72		5.8	5.7	
						29.4		6.04		88.7		3.72			5.6		
			Bottom	15.8	27.3	29.8	29.8	5.73	5.75	84.2	84.4	3.86	3.88		5.8	5.8	
						29.7		5.76		84.6		3.89			5.8		
04/09/12	1510-1523	31/Fine	Surface	1.0	27.5	27.3	27.3	5.92	5.95	86.4	86.8	3.36	3.34	3.64	5.0	5.1	5.5
						27.3		5.97		87.1		3.31			5.2		
			Middle	8.5	27.2	27.6	27.6	5.84	5.82	85.1	84.8	3.85	3.83		5.8	5.8	
						27.5		5.79		84.4		3.80			5.8		
			Bottom	16.0	27.1	27.8	27.8	5.68	5.71	83.0	83.4	3.72	3.75		5.6	5.6	
						27.8		5.73		83.7		3.77			5.6		
06/09/12	1539-1552	30/Cloudy	Surface	1.0	27.6	27.5	27.5	6.13	6.14	90.1	90.3	3.39	3.40	3.63	5.5	5.5	5.7
						27.5		6.15		90.4		3.41			5.4		
			Middle	8.7	27.4	27.8	27.8	6.03	6.04	88.6	88.8	3.59	3.57		5.6	5.6	
						27.7		6.05		88.9		3.54			5.6		
			Bottom	16.4	27.3	28.0	28.1	5.86	5.88	86.1	86.4	3.93	3.92		5.8	5.9	
						28.1		5.90		86.7		3.91			6.0		
08/09/12	1039-1052	29/Fine	Surface	1.0	27.5	27.2	27.3	5.99	5.95	87.8	87.2	3.33	3.36	3.59	5.5	5.5	5.6
						27.3		5.91		86.6		3.39			5.4		
			Middle	8.6	27.3	27.6	27.7	5.88	5.84	86.5	85.9	3.77	3.75		5.8	5.7	
						27.7		5.80		85.3		3.72			5.6		
			Bottom	16.2	26.9	28.2	28.2	5.69	5.72	83.8	84.2	3.64	3.66		5.6	5.5	
						28.2		5.74		84.6		3.67			5.4		
11/09/12	1012-1025	30/Fine	Surface	1.0	27.7	26.8	26.8	5.94	5.92	86.7	86.4	3.57	3.60	3.87	5.5	5.6	5.8
						26.8		5.90		86.1		3.63			5.6		
			Middle	8.2	27.5	26.9	27.0	5.78	5.77	84.3	84.2	3.85	3.88		5.8	5.8	
						27.0		5.76		84.0		3.91			5.8		
			Bottom	15.4	27.5	27.1	27.2	5.67	5.69	82.7	83.0	4.10	4.14		6.0	6.1	
						27.2		5.70		83.2		4.17			6.2		
13/09/12	1006-1019	30/Fine	Surface	1.0	27.9	28.4	28.4	6.11	6.09	90.0	89.7	3.74	3.72	3.82	5.5	5.6	5.7
						28.4		6.07		89.4		3.70			5.6		
			Middle	8.4	27.5	28.7	28.7	5.95	5.97	87.6	87.8	3.81	3.78		5.8	5.7	
						28.7		5.98		88.0		3.74			5.6		
			Bottom	15.8	27.2	29.1	29.1	5.91	5.89	87.0	86.7	3.98	3.95		6.0	5.9	
						29.1		5.87		86.4		3.92			5.8		
15/09/12	1035-1047	26/Cloudy	Surface	1.0	27.7	26.8	26.8	6.20	6.23	90.1	90.5	3.41	3.44	3.61	5.5	5.7	5.8
						26.8		6.25		90.9		3.46			5.8		
			Middle	8.2	27.5	27.0	27.1	6.06	6.04	88.2	87.9	3.60	3.62		5.8	5.8	
						27.1		6.02		87.6		3.63			5.8		
			Bottom	15.4	27.2	27.3	27.4	5.85	5.83	85.1	84.8	3.77	3.79		6.0	6.0	
						27.4		5.81		84.5		3.81			6.0		
18/09/12	1141-1156	27/Cloudy	Surface	1.0	26.7	26.7	26.7	6.21	6.16	90.7	90.0	3.67	3.77	3.92	5.5	5.5	5.6
						26.7		6.10		89.2		3.87			5.4		
			Middle	8.2	26.6	26.8	26.8	6.03	6.00	88.2	88.8	3.88	3.90		5.6	5.6	
						26.8		5.97		89.3		3.92			5.6		
			Bottom	15.4	26.5	26.9	27.0	5.87	5.80	85.9	84.8	4.03	4.08		5.8	5.8	
						27.0		5.72		83.7		4.13			5.8		
20/09/12	1538-1551	28/Cloudy	Surface	1.0	27.1	26.9	26.9	6.06	6.09	88.2	88.6	3.27	3.30	3.52	5.0	5.1	5.4
						26.9		6.11		89.0		3.33			5.2		
			Middle	8.3	26.9	27.4	27.4	5.91	5.89	86.1	85.9	3.50	3.52		5.4	5.4	
						27.4		5.87		85.6		3.54			5.4		
			Bottom	15.6	26.7	27.7	27.8	5.70	5.69	83.0	82.8	3.76	3.74		5.6	5.6	
						27.8		5.67		82.6		3.72			5.6		
22/09/12	1610-1624	30/Cloudy	Surface	1.0	26.8	26.8	26.8	6.12	6.11	89.7	89.6	3.61	3.63	3.86	5.4	5.3	5.4
						26.8		6.10		89.4		3.64			5.2		
			Middle	8.6	26.7	27.1	27.1	5.95	5.97	87.2	87.5	3.88	3.86		5.4	5.5	
						27.1		5.99		87.8		3.83			5.5		
			Bottom	16.2	26.5	27.4	27.4	5.80	5.82	84.9	85.3	4.07	4.09		5.5	5.6	
						27.3		5.84		85.6		4.10			5.6		
25/09/12	0937-0950	28/Cloudy	Surface	1.0	27.9	26.9	27.0	5.92	5.90	87.0	86.7	3.68	3.70	3.91	5.5	5.3	5.7
						27.0		5.88		86.4		3.72			5.0		
			Middle	8.4	27.7	27.2	27.2	5.80	5.79	85.3	85.1	3.90	3.93		5.8	5.8	
						27.1		5.77		84.8		3.96			5.8		
			Bottom	15.8	27.7	27.3	27.3	5.68	5.70	83.5	83.7	4.07	4.09		6.0	6.0	
						27.3		5.71		83.9		4.11			6.0		
27/09/12	1037-1043	28/Fine	Surface	1.0	27.8	27.0	27.0	6.00	6.03	88.8	89.3	3.54	3.52	3.56	5.5	5.6	5.5
						27.0		6.06		89.8		3.50			5.6		
			Middle	8.2	27.5	27.2	27.3	5.88	5.87	87.1	86.9	3.42	3.44		5.4	5.4	
						27.3		5.85		86.6		3.45			5.4		
			Bottom	15.4	27.3	27.5	27.5	5.70	5.69	84.3	84.1	3.71	3.73		5.6	5.6	
						27.5		5.67		83.9		3.74			5.6		
29/09/12	1040-1054	27/Fine	Surface	1.0	27.8	27.1	27.2	6.07	6.05	89.2	88.9	3.37	3.40	3.54	5.5	5.5	5.7
						27.2		6.03		88.6		3.42			5.4		
			Middle	8.3	27.5	27.3	27.4	5.84	5.85	85.8	86.0	3.67	3.64		5.6	5.6	
						27.4		5.86		86.1		3.61			5.6		
			Bottom	15.6	27.2	27.5	27.5	5.79	5.80	85.1	85.2	3.56	3.58		5.8	5.9	
						27.4		5.80		85.3		3.59			6.0		

Monitoring Station : R6

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
01/09/12	1803-1815	30/Cloudy	Surface	1.0	28.2	29.2	29.2	6.09	6.08	89.5	88.9	3.60	3.59	3.80	5.4	5.4	5.7		
						29.1		6.07		88.3		3.58			5.4				
			Middle	8.0	27.6	29.6	29.6	5.79	5.81	85.1	85.4	3.88	3.86		3.86	3.86		5.8	5.8
						29.6		5.83		85.6		3.83			5.8				
			Bottom	14.9	27.2	29.9	29.9	5.65	5.67	83.0	82.7	3.97	3.96		3.96	3.96		6.0	6.0
						29.9		5.69		82.3		3.95			6.0				
04/09/12	1605-1618	31/Fine	Surface	1.0	27.5	27.4	27.4	6.02	6.00	87.8	87.5	3.30	3.33	3.60	5.2	5.2	5.5		
						27.4		5.98		87.1		3.36			5.2				
			Middle	8.2	27.3	27.7	27.7	5.80	5.79	84.7	84.5	3.59	3.62		3.62	3.62		5.4	5.5
						27.7		5.77		84.2		3.64			5.6				
			Bottom	15.4	27.1	27.7	27.8	5.87	5.85	85.7	85.4	3.88	3.85		3.85	3.85		5.8	5.8
						27.8		5.82		85.0		3.82			5.8				
06/09/12	1640-1654	30/Cloudy	Surface	1.0	27.7	27.3	27.4	5.98	5.97	87.9	87.8	3.47	3.49	3.72	5.4	5.4	5.6		
						27.4		5.96		87.6		3.50			5.4				
			Middle	8.0	27.3	27.5	27.5	5.86	5.87	86.1	86.3	3.71	3.73		3.73	3.73		5.6	5.6
						27.5		5.88		86.4		3.75			5.6				
			Bottom	15.0	27.2	27.9	27.9	5.81	5.83	85.4	85.7	3.94	3.95		3.95	3.95		5.8	5.8
						27.9		5.85		85.9		3.96			5.8				
08/09/12	1134-1149	29/Fine	Surface	1.0	27.5	27.2	27.2	6.03	6.01	88.4	88.1	3.33	3.36	3.54	5.2	5.2	5.4		
						27.1		5.99		87.8		3.38			5.2				
			Middle	8.1	27.4	27.4	27.5	5.68	5.72	83.7	84.3	3.51	3.48		3.48	3.48		5.4	5.4
						27.5		5.76		84.9		3.44			5.4				
			Bottom	15.2	27.2	27.9	27.9	5.74	5.77	84.4	84.8	3.74	3.79		3.79	3.79		5.6	5.7
						27.9		5.79		85.2		3.83			5.8				
11/09/12	1112-1225	30/Fine	Surface	1.0	27.7	28.8	26.8	6.11	6.10	89.2	89.0	3.35	3.38	3.59	5.2	5.3	5.5		
						26.8		6.08		88.7		3.40			5.4				
			Middle	7.9	27.6	26.9	27.0	5.96	5.94	87.0	86.7	3.60	3.63		3.63	3.63		5.6	5.6
						27.0		5.92		86.4		3.65			5.6				
			Bottom	14.8	27.6	27.1	27.1	5.81	5.82	84.8	85.0	3.74	3.76		3.76	3.76		5.6	5.7
						27.1		5.83		85.1		3.78			5.8				
13/09/12	1104-1117	30/Fine	Surface	1.0	27.9	28.4	28.4	6.19	6.17	91.2	90.9	3.59	3.61	3.76	5.4	5.5	5.6		
						28.4		6.15		90.6		3.63			5.6				
			Middle	8.1	27.4	28.8	28.8	5.92	5.90	87.1	86.8	3.77	3.74		3.74	3.74		5.6	5.6
						28.7		5.87		86.4		3.70			5.6				
			Bottom	15.2	27.3	29.2	29.2	5.85	5.87	86.1	86.3	3.95	3.93		3.93	3.93		5.8	5.8
						29.2		5.88		86.5		3.90			5.8				
15/09/12	1132-1145	26/Cloudy	Surface	1.0	27.7	26.8	26.8	6.08	6.10	88.5	88.8	3.27	3.29	3.47	5.4	5.4	5.6		
						26.7		6.12		89.1		3.31			5.4				
			Middle	8.1	27.5	26.9	27.0	5.94	5.93	86.4	86.2	3.50	3.49		3.49	3.49		5.6	5.6
						27.0		5.91		86.0		3.47			5.6				
			Bottom	15.2	27.2	27.2	27.2	5.75	5.73	83.7	83.4	3.62	3.64		3.64	3.64		5.8	5.8
						27.2		5.70		83.0		3.66			5.8				
18/09/12	1242-1300	27/Cloudy	Surface	1.0	26.7	26.6	26.6	6.21	6.18	90.9	90.4	3.42	3.50	3.70	5.2	5.2	5.4		
						26.6		6.14		89.8		3.58			5.2				
			Middle	8.0	26.5	26.7	26.8	6.03	6.05	88.2	88.5	3.67	3.69		3.69	3.69		5.4	5.4
						26.8		6.06		88.7		3.71			5.4				
			Bottom	14.9	26.4	26.9	27.0	5.88	5.87	86.0	85.9	3.89	3.92		3.92	3.92		5.6	5.6
						27.1		5.86		85.7		3.94			5.6				
20/09/12	1635-1648	28/Cloudy	Surface	1.0	27.2	26.8	26.8	6.20	6.18	90.2	89.9	3.50	3.49	3.65	5.4	5.4	5.6		
						26.8		6.15		89.6		3.48			5.4				
			Middle	8.1	26.8	27.4	27.4	6.04	6.02	88.0	87.7	3.61	3.63		3.63	3.63		5.6	5.6
						27.4		5.99		87.3		3.64			5.6				
			Bottom	15.2	26.6	27.8	27.8	5.83	5.81	84.9	84.6	3.80	3.83		3.83	3.83		5.8	5.8
						27.8		5.79		84.3		3.85			5.8				
22/09/12	1719-1734	30/Cloudy	Surface	1.0	26.9	26.7	26.7	6.04	6.05	88.5	88.7	3.47	3.49	3.71	5.4	5.4	5.6		
						26.7		6.06		88.8		3.50			5.4				
			Middle	8.0	26.7	27.0	27.1	5.93	5.92	86.9	86.8	3.55	3.59		3.59	3.59		5.6	5.6
						27.1		5.91		86.6		3.62			5.6				
			Bottom	15.0	26.4	27.3	27.3	5.77	5.74	84.6	84.2	4.03	4.05		4.05	4.05		5.8	5.8
						27.2		5.71		83.7		4.06			5.8				
25/09/12	1029-1044	28/Cloudy	Surface	1.0	27.9	26.8	26.9	5.95	5.97	87.5	87.7	3.43	3.46	3.64	5.4	5.4	5.6		
						26.9		5.98		87.9		3.48			5.4				
			Middle	7.9	27.8	27.1	27.1	5.88	5.86	86.4	86.1	3.60	3.63		3.63	3.63		5.6	5.6
						27.0		5.84		85.8		3.66			5.6				
			Bottom	14.8	27.8	27.1	27.2	5.70	5.72	83.8	84.1	3.82	3.85		3.85	3.85		5.8	5.8
						27.2		5.74		84.4		3.87			5.8				
27/09/12	1128-1141	28/Fine	Surface	1.0	27.8	26.9	26.9	6.01	6.03	88.9	89.3	3.29	3.32	3.50	5.2	5.2	5.4		
						26.9		6.05		89.6		3.35			5.2				
			Middle	8.1	27.5	27.2	27.2	5.81	5.79	86.1	85.8	3.43	3.46		3.46	3.46		5.4	5.4
						27.1		5.77		85.4		3.48			5.4				
			Bottom	15.2	27.3	27.5	27.5	5.88	5.89	87.0	87.2	3.69	3.71		3.71	3.71		5.6	5.6
						27.4		5.90		87.3		3.73			5.6				
29/09/12	1143-1155	27/Fine	Surface	1.0	27.8	27.1	27.1	6.06	6.08	89.1	89.3	3.51	3.53	3.61	5.4	5.4	5.6		
						27.1		6.09		89.5		3.54			5.4				
			Middle	8.0	27.6	27.3	27.3	5.74	5.75	84.4	84.6	3.59	3.57		3.57	3.57		5.6	5.6
						27.2		5.76		84.7		3.55			5.6				
			Bottom	15.0	27.4	27.5	27.5	5.69	5.69	83.6	83.6	3.70	3.72		3.72	3.72		5.8	5.8
						27.4		5.68		83.5		3.74			5.8				

Mid-Ebb Tide

Monitoring Station : R7

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
01/09/12	1822-1834	30/Cloudy	Surface	1.0	28.1	29.0	29.1	6.14	6.13	90.2	90.1	3.67	3.67	3.82	5.6	5.6	5.7		
						29.1		6.12		90.0		3.66			5.6				
			Middle	8.7	27.5	29.5	29.6	5.97	5.95	87.7	87.4	3.83	3.84		3.84	3.84		5.8	5.7
						29.6		5.93		87.1		3.84			5.6				
			Bottom	16.3	26.9	29.9	30.0	5.80	5.82	85.2	85.5	3.93	3.99		3.96	3.96		5.8	5.9
						30.1		5.84		85.8		3.99			6.0				
04/09/12	1624-1638	31/Fine	Surface	1.0	27.5	27.3	27.4	6.11	6.15	89.3	89.9	3.58	3.56	3.84	5.4	5.4	5.8		
						27.4		6.19		90.5		3.53			5.4				
			Middle	8.6	27.3	27.6	27.6	6.03	6.00	87.9	87.4	3.86	3.80		3.83	3.83		5.8	5.8
						27.6		5.96		86.9		3.80			5.8				
			Bottom	16.2	27.0	27.9	27.9	5.77	5.75	84.3	84.0	4.11	4.18		4.15	4.15		6.0	6.1
						27.8		5.73		83.7		4.18			6.2				
06/09/12	1700-1713	30/Cloudy	Surface	1.0	27.7	27.4	27.4	5.99	5.98	88.1	87.9	3.50	3.52	3.69	5.4	5.4	5.6		
						27.4		5.96		87.6		3.54			5.4				
			Middle	9.0	27.5	27.6	27.6	5.73	5.74	84.2	84.4	3.68	3.70		3.69	3.69		5.6	5.6
						27.6		5.75		84.5		3.70			5.6				
			Bottom	17.0	27.1	28.0	28.0	5.88	5.89	86.4	86.6	3.83	3.87		3.85	3.85		5.8	5.8
						28.0		5.90		86.7		3.87			5.8				
08/09/12	1155-1208	29/Fine	Surface	1.0	27.4	27.3	27.3	6.17	6.20	90.7	91.2	3.14	3.17	3.55	5.0	5.1	5.5		
						27.2		6.23		91.6		3.19			5.2				
			Middle	9.2	27.3	27.4	27.4	5.93	5.96	87.4	87.9	3.60	3.66		3.63	3.63		5.6	5.6
						27.4		5.99		88.3		3.66			5.6				
			Bottom	17.4	27.0	27.8	27.8	6.04	6.00	88.6	87.9	3.88	3.80		3.84	3.84		5.8	5.8
						27.8		5.95		87.2		3.80			5.8				
11/09/12	1131-1146	30/Fine	Surface	1.0	27.7	26.7	26.8	6.12	6.14	89.3	89.5	3.44	3.47	3.71	5.4	5.4	5.6		
						26.8		6.15		89.7		3.49			5.4				
			Middle	8.6	27.5	27.0	27.0	6.01	6.00	87.7	87.6	3.67	3.71		3.69	3.69		5.6	5.6
						27.0		5.99		87.4		3.71			5.6				
			Bottom	16.2	27.4	27.2	27.2	5.79	5.81	84.5	84.7	3.96	4.01		3.99	3.99		5.8	5.9
						27.2		5.82		84.9		4.01			6.0				
13/09/12	1123-1135	30/Fine	Surface	1.0	27.9	28.5	28.6	6.24	6.23	91.9	91.7	3.74	3.77	3.90	5.6	5.7	5.8		
						28.6		6.21		91.5		3.80			5.8				
			Middle	8.9	27.4	28.8	28.8	6.01	6.03	88.5	88.8	3.92	3.87		3.90	3.90		5.8	5.8
						28.7		6.04		89.0		3.87			5.8				
			Bottom	16.8	27.2	29.3	29.3	5.99	5.97	88.2	87.9	4.04	4.01		4.03	4.03		6.0	6.0
						29.2		5.95		87.6		4.01			6.0				
15/09/12	1151-1204	26/Cloudy	Surface	1.0	27.7	26.7	26.7	6.27	6.25	91.3	91.0	3.52	3.54	3.70	5.6	5.7	5.8		
						26.7		6.23		90.7		3.55			5.8				
			Middle	8.8	27.4	26.9	27.0	6.08	6.06	88.4	88.2	3.68	3.71		3.70	3.70		5.8	5.7
						27.0		6.04		87.9		3.71			5.6				
			Bottom	16.6	27.1	27.3	27.3	5.89	5.90	85.7	85.9	3.85	3.89		3.87	3.87		5.8	5.9
						27.3		5.91		86.1		3.89			6.0				
18/09/12	1305-1320	27/Cloudy	Surface	1.0	26.6	26.7	26.7	6.21	6.17	90.8	90.4	3.66	3.74	3.85	5.4	5.4	5.6		
						26.7		6.13		89.9		3.82			5.4				
			Middle	8.7	26.5	26.8	26.8	6.02	6.00	88.1	87.7	3.83	3.79		3.81	3.81		5.6	5.6
						26.8		5.97		87.3		3.79			5.6				
			Bottom	16.3	26.4	27.1	27.1	5.68	5.70	83.1	83.3	3.97	4.04		4.01	4.01		5.8	5.8
						27.0		5.71		83.5		4.04			5.8				
20/09/12	1654-1707	28/Cloudy	Surface	1.0	27.1	26.9	26.9	6.12	6.14	89.1	89.4	3.44	3.42	3.60	5.4	5.3	5.6		
						26.8		6.16		89.7		3.39			5.2				
			Middle	8.9	26.9	27.4	27.5	5.96	5.94	86.9	86.5	3.72	3.77		3.75	3.75		5.8	5.8
						27.5		5.91		86.1		3.77			5.8				
			Bottom	16.8	26.6	27.8	27.9	5.80	5.78	84.5	84.2	3.61	3.65		3.63	3.63		5.6	5.6
						27.9		5.76		83.9		3.65			5.6				
22/09/12	1740-1753	30/Cloudy	Surface	1.0	27.0	26.6	26.7	6.20	6.21	90.8	91.0	3.31	3.33	3.73	5.4	5.3	5.6		
						26.7		6.22		91.1		3.34			5.2				
			Middle	8.9	26.7	26.9	27.0	6.07	6.06	88.9	88.8	3.64	3.63		3.64	3.64		5.8	5.8
						27.0		6.05		88.6		3.63			5.8				
			Bottom	16.8	26.5	27.4	27.4	5.88	5.84	86.1	85.6	4.27	4.21		4.24	4.24		5.6	5.6
						27.4		5.80		85.0		4.21			5.6				
25/09/12	1049-1103	28/Cloudy	Surface	1.0	27.9	26.9	26.9	6.03	6.05	88.6	88.5	3.36	3.39	3.67	5.2	5.3	5.6		
						26.9		6.06		88.4		3.41			5.4				
			Middle	8.6	27.7	27.1	27.1	5.91	5.89	86.8	86.5	3.67	3.71		3.69	3.69		5.6	5.6
						27.1		5.87		86.2		3.71			5.6				
			Bottom	16.2	27.7	27.2	27.2	5.79	5.78	85.1	84.9	3.90	3.95		3.93	3.93		5.8	5.8
						27.2		5.76		84.7		3.95			5.8				
27/09/12	1147-1200	28/Fine	Surface	1.0	27.7	27.0	27.0	5.97	5.99	88.4	88.7	3.41	3.43	3.60	5.4	5.4	5.6		
						26.9		6.01		89.0		3.44			5.4				
			Middle	8.6	27.5	27.2	27.3	5.89	5.87	87.2	86.8	3.62	3.58		3.60	3.60		5.6	5.6
						27.3		5.84		86.4		3.58			5.6				
			Bottom	16.2	27.2	27.5	27.5	5.72	5.69	84.6	84.2	3.80	3.75		3.78	3.78		5.8	5.8
						27.5		5.66		83.7		3.75			5.8				
29/09/12	1204-1217	27/Fine	Surface	1.0	27.8	27.0	27.1	5.93	5.95	87.2	87.5	3.36	3.37	3.55	5.4	5.4	5.6		
						27.1		5.97		87.8		3.38			5.4				
			Middle	8.5	27.6	27.2	27.2	5.78	5.75	85.0	84.6	3.74	3.70		3.72	3.72		5.6	5.6
						27.2		5.72		84.1		3.70			5.6				
			Bottom	16.0	27.4	27.5	27.5	5.68	5.69	83.5	83.7	3.55	3.57		3.56	3.56		5.8	5.8
						27.4		5.70		83.8		3.57			5.8				

Mid-Ebb Tide

Monitoring Station : R8a

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1843-1854	30/Cloudy	Surface	1.0	28.2	29.1	29.1	6.13	6.17	90.1	90.6	3.68	3.67	3.87	5.6	5.6	5.8
						29.0		6.20		91.1		3.66			5.5		
			Middle	6.4	27.8	29.5	29.5	5.90	5.89	87.6	84.1	3.94	3.93		6.0	5.9	
						29.4		5.88		80.5		3.92			5.8		
			Bottom	11.7	27.5	29.9	30.0	5.67	5.68	83.3	83.5	3.99	4.01		6.0	6.0	
						30.0		5.68		83.6		4.03			6.0		
04/09/12	1648-1701	31/Fine	Surface	1.0	27.6	27.2	27.2	5.87	5.85	85.8	85.4	3.76	3.73	3.89	5.6	5.6	5.9
						27.2		5.82		85.0		3.70			5.5		
			Middle	6.3	27.5	27.4	27.4	5.69	5.72	83.0	83.4	3.84	3.87		6.0	5.9	
						27.4		5.74		83.8		3.89			5.8		
			Bottom	11.6	27.3	27.7	27.7	5.78	5.81	84.3	84.7	4.11	4.08		6.2	6.1	
						27.7		5.83		85.0		4.04			6.0		
06/09/12	1720-1734	30/Cloudy	Surface	1.0	27.7	27.6	27.6	6.07	6.05	89.2	88.9	3.07	3.04	3.43	5.0	5.0	5.5
						27.5		6.03		88.6		3.01			5.0		
			Middle	6.5	27.4	27.7	27.7	6.01	6.02	88.3	88.5	3.49	3.51		5.5	5.6	
						27.7		6.03		88.6		3.52			5.6		
			Bottom	12.0	27.2	28.0	28.0	5.72	5.71	84.1	84.0	3.74	3.75		5.8	5.8	
						28.0		5.70		83.8		3.76			5.8		
08/09/12	1219-1233	29/Fine	Surface	1.0	27.5	27.4	27.4	6.08	6.06	89.2	88.8	3.53	3.51	3.51	5.4	5.5	5.4
						27.3		6.03		88.4		3.49			5.5		
			Middle	6.4	27.5	27.6	27.6	5.78	5.80	85.2	85.4	3.34	3.37		5.0	5.1	
						27.5		5.81		85.6		3.40			5.2		
			Bottom	11.8	27.3	27.8	27.8	5.92	5.90	87.2	86.8	3.61	3.65		5.4	5.5	
						27.8		5.87		86.3		3.68			5.6		
11/09/12	1153-1202	31/Fine	Surface	1.0	27.7	26.6	26.7	6.14	6.16	89.6	89.9	3.60	3.62	3.67	5.6	5.6	5.6
						26.7		6.18		90.2		3.64			5.5		
			Middle	6.2	27.6	26.8	26.8	6.10	6.08	89.1	88.8	3.52	3.55		5.5	5.6	
						26.8		6.06		88.4		3.57			5.6		
			Bottom	11.4	27.5	26.8	26.9	5.90	5.92	86.1	86.3	3.81	3.83		5.8	5.8	
						26.9		5.93		86.5		3.85			5.8		
13/09/12	1143-1155	30/Fine	Surface	1.0	27.9	28.5	28.5	6.04	6.03	89.0	88.8	3.41	3.44	3.73	5.4	5.5	5.8
						28.5		6.01		88.5		3.47			5.5		
			Middle	6.6	27.5	28.8	28.8	5.92	5.94	87.2	87.4	3.84	3.82		6.0	5.9	
						28.8		5.95		87.6		3.80			5.8		
			Bottom	12.2	27.3	29.3	29.3	5.75	5.73	84.5	84.2	3.91	3.93		5.8	5.9	
						29.3		5.71		83.9		3.94			6.0		
15/09/12	1211-1224	28/Cloudy	Surface	1.0	27.7	26.8	26.8	6.11	6.13	88.9	89.2	3.42	3.44	3.61	5.4	5.5	5.6
						26.7		6.14		89.4		3.45			5.5		
			Middle	6.4	27.6	26.9	27.0	6.00	5.97	87.3	86.9	3.60	3.62		5.5	5.6	
						27.0		5.94		86.4		3.63			5.6		
			Bottom	11.8	27.3	27.2	27.3	5.80	5.82	84.4	84.7	3.77	3.79		5.8	5.9	
						27.3		5.83		84.9		3.81			6.0		
18/09/12	1325-1340	27/Cloudy	Surface	1.0	26.7	26.6	26.7	6.03	6.08	88.2	88.9	3.58	3.55	3.74	5.4	5.5	5.6
						26.7		6.12		89.5		3.51			5.5		
			Middle	6.2	26.5	26.8	26.8	5.93	5.94	86.8	86.9	3.68	3.67		5.5	5.6	
						26.8		5.94		86.9		3.66			5.6		
			Bottom	11.3	26.4	26.9	27.0	5.78	5.79	84.6	84.7	3.89	4.00		5.6	5.7	
						27.0		5.79		84.7		4.11			5.8		
20/09/12	1714-1727	27/Cloudy	Surface	1.0	27.1	26.8	26.9	6.23	6.22	90.7	90.5	3.24	3.26	3.46	5.2	5.1	5.4
						26.9		6.20		90.3		3.28			5.0		
			Middle	6.6	26.9	27.3	27.3	6.05	6.07	88.2	88.5	3.40	3.43		5.5	5.5	
						27.3		6.09		88.8		3.45			5.4		
			Bottom	12.2	26.7	27.7	27.8	5.89	5.88	85.8	85.6	3.70	3.69		5.6	5.6	
						27.8		5.86		85.3		3.67			5.6		
22/09/12	1759-1714	30/Cloudy	Surface	1.0	26.9	26.9	26.9	6.24	6.22	91.1	90.8	3.29	3.28	3.48	5.2	5.1	5.4
						26.9		6.20		90.5		3.27			5.0		
			Middle	6.5	26.7	26.9	26.9	5.97	5.94	87.5	87.1	3.46	3.43		5.5	5.5	
						26.8		5.91		86.6		3.40			5.4		
			Bottom	12.0	26.5	27.2	27.2	5.91	5.92	85.5	86.2	3.75	3.73		5.6	5.6	
						27.1		5.93		86.9		3.70			5.6		
25/09/12	1110-1123	29/Cloudy	Surface	1.0	27.9	26.9	26.9	5.97	6.00	87.8	88.2	3.48	3.51	3.65	5.4	5.5	5.6
						26.9		6.02		88.5		3.54			5.5		
			Middle	6.3	27.8	27.0	27.0	5.94	5.92	87.3	86.8	3.59	3.61		5.5	5.6	
						26.9		5.90		86.3		3.63			5.6		
			Bottom	11.6	27.7	27.1	27.1	5.81	5.83	85.4	85.6	3.80	3.83		5.8	5.8	
						27.1		5.84		85.8		3.85			5.8		
27/09/12	1207-1219	29/Fine	Surface	1.0	27.7	26.9	26.9	6.12	6.10	90.6	90.3	3.32	3.30	3.46	5.2	5.1	5.4
						26.9		6.07		89.9		3.27			5.0		
			Middle	6.4	27.6	27.1	27.1	5.99	5.97	88.7	88.4	3.45	3.47		5.5	5.6	
						27.1		5.95		88.1		3.48			5.6		
			Bottom	11.8	27.3	27.3	27.3	5.86	5.84	86.7	86.4	3.59	3.61		5.6	5.6	
						27.3		5.82		86.1		3.62			5.6		
29/09/12	1224-1237	26/Fine	Surface	1.0	27.8	27.1	27.1	6.02	6.05	88.5	89.0	3.36	3.38	3.57	5.0	5.0	5.5
						27.1		6.08		89.4		3.40			5.0		
			Middle	6.4	27.6	27.3	27.3	5.84	5.86	85.8	86.1	3.56	3.58		5.5	5.6	
						27.2		5.88		86.4		3.60			5.6		
			Bottom	11.8	27.4	27.5	27.5	5.75	5.78	84.5	84.9	3.76	3.75		5.8	5.8	
						27.4		5.80		85.3		3.74			5.8		

Mid-Ebb Tide

Monitoring Station : R15

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1607-1621	30/Cloudy	Surface	1.0	28.1	29.1	29.1	6.10	6.12	89.6	89.8	3.41	3.42	3.67	5.4	5.4	5.6
						29.1		6.13		90.0		3.43			5.4		
			Middle	5.8	27.8	29.5	29.6	5.89	5.85	86.5	85.9	3.72	3.75		5.6	5.6	
						29.6		5.81		85.3		3.77			5.6		
			Bottom	10.5	27.2	29.8	29.9	5.67	5.68	83.3	83.5	3.88	3.86		5.8	5.8	
						29.9		5.69		83.6		3.83			5.8		
04/09/12	1403-1422	31/Fine	Surface	1.0	27.5	27.4	27.5	5.99	5.95	87.4	86.8	3.92	3.95	4.08	5.8	5.8	6.0
						27.5		5.91		86.2		3.97			5.8		
			Middle	5.6	27.1	27.6	27.7	6.01	6.05	87.6	88.2	4.23	4.20		6.2	6.1	
						27.7		6.08		88.7		4.17			6.0		
			Bottom	10.2	27.1	27.8	27.8	5.86	5.83	85.7	85.2	4.06	4.09		6.0	6.1	
						27.7		5.80		84.7		4.12			6.2		
06/09/12	1439-1452	30/Cloudy	Surface	1.0	27.6	24.4	24.4	6.23	6.24	91.6	91.4	3.46	3.48	3.62	5.4	5.4	5.6
						24.4		6.24		91.1		3.50			5.4		
			Middle	7.1	27.6	27.8	27.8	6.12	6.13	89.9	90.0	3.59	3.61		5.6	5.6	
						27.9		6.13		90.0		3.62			5.6		
			Bottom	13.2	27.2	28.0	28.0	5.84	5.86	85.3	85.9	3.79	3.78		5.8	5.8	
						28.0		5.88		86.4		3.77			5.8		
08/09/12	0939-0953	28/Fine	Surface	1.0	27.4	27.3	27.3	6.09	6.06	89.3	88.8	3.37	3.39	3.62	5.2	5.3	5.6
						27.2		6.02		88.3		3.41			5.4		
			Middle	6.5	27.3	27.8	27.8	5.91	5.94	87.0	87.5	3.66	3.63		5.6	5.6	
						27.7		5.97		88.0		3.59			5.6		
			Bottom	12.0	27.1	28.0	28.0	5.79	5.77	84.8	84.5	3.87	3.84		5.8	5.8	
						28.0		5.74		84.1		3.80			5.8		
11/09/12	0910-0924	29/Fine	Surface	1.0	27.7	26.8	26.8	5.91	5.90	86.2	86.0	3.70	3.68	3.76	5.6	5.6	5.6
						26.8		5.88		85.8		3.66			5.6		
			Middle	5.3	27.6	26.8	26.8	5.80	5.79	84.6	84.4	3.63	3.68		5.4	5.5	
						26.8		5.77		84.2		3.72			5.6		
			Bottom	9.6	27.6	27.0	27.0	5.65	5.67	82.4	82.7	3.90	3.92		5.8	5.8	
						26.9		5.68		82.9		3.94			5.8		
13/09/12	0906-0919	30/Fine	Surface	1.0	27.7	28.4	28.4	6.09	6.08	89.7	89.5	3.39	3.42	3.53	5.2	5.3	6.1
						28.3		6.06		89.3		3.44			5.4		
			Middle	5.6	27.4	28.6	28.6	5.88	5.86	86.4	86.2	3.44	3.42		6.4	6.3	
						28.5		5.84		85.9		3.40			6.2		
			Bottom	10.2	27.3	29.1	29.1	5.79	5.78	85.1	84.9	3.71	3.74		6.6	6.6	
						29.1		5.76		84.7		3.77			6.6		
15/09/12	0938-0951	24/Cloudy	Surface	1.0	27.7	26.7	26.7	6.04	6.06	87.9	88.2	3.66	3.68	3.70	5.4	5.3	5.4
						26.6		6.08		88.5		3.70			5.2		
			Middle	5.7	27.5	26.8	26.9	5.93	5.92	86.2	86.0	3.54	3.56		5.4	5.4	
						26.9		5.90		85.8		3.58			5.4		
			Bottom	10.4	27.4	27.2	27.2	5.84	5.82	85.0	84.8	3.85	3.87		5.6	5.6	
						27.1		5.80		84.5		3.88			5.6		
18/09/12	1040-1055	27/Cloudy	Surface	1.0	26.8	26.7	26.7	6.16	6.20	90.1	90.6	3.42	3.40	3.53	5.6	5.6	5.6
						26.7		6.23		91.1		3.38			5.6		
			Middle	5.4	26.8	26.9	26.9	6.07	6.09	88.8	89.1	3.49	3.50		5.4	5.4	
						26.9		6.11		89.4		3.51			5.4		
			Bottom	9.9	26.6	27.1	27.1	5.93	5.92	86.8	86.7	3.62	3.68		5.8	5.8	
						27.0		5.91		86.5		3.73			5.8		
20/09/12	1438-1451	28/Cloudy	Surface	1.0	27.2	26.8	26.9	6.07	6.09	88.4	88.6	3.33	3.35	3.48	5.2	5.2	5.4
						26.9		6.10		88.8		3.36			5.2		
			Middle	5.7	27.0	27.4	27.4	5.93	5.92	86.4	86.2	3.51	3.49		5.4	5.4	
						27.4		5.90		86.0		3.47			5.4		
			Bottom	10.4	26.7	27.7	27.8	5.80	5.78	84.5	84.2	3.60	3.62		5.6	5.6	
						27.8		5.76		83.9		3.63			5.6		
22/09/12	1507-1520	30/Cloudy	Surface	1.0	26.9	26.7	26.8	6.11	6.13	89.5	89.8	3.74	3.75	3.91	5.2	5.2	5.4
						26.8		6.15		90.1		3.76			5.2		
			Middle	5.5	26.7	26.9	27.0	5.93	5.92	86.9	86.8	3.92	3.94		5.4	5.4	
						27.0		5.91		86.6		3.96			5.4		
			Bottom	10.0	26.5	27.1	27.1	5.75	5.73	84.2	84.0	4.04	4.05		5.6	5.6	
						27.0		5.71		83.7		4.06			5.6		
25/09/12	0838-0853	28/Cloudy	Surface	1.0	27.8	26.8	26.8	5.95	5.93	87.4	87.1	3.72	3.70	3.78	5.6	5.6	5.7
						26.8		5.90		86.7		3.67			5.6		
			Middle	5.5	27.8	26.8	26.8	5.92	5.91	87.0	86.8	3.65	3.68		5.6	5.7	
						26.8		5.89		86.5		3.70			5.8		
			Bottom	10.0	27.7	26.8	26.9	5.81	5.79	85.4	85.1	3.94	3.97		5.8	5.9	
						26.9		5.77		84.8		3.99			6.0		
27/09/12	0937-0950	27/Fine	Surface	1.0	27.7	27.0	27.0	5.98	6.01	88.5	88.9	3.32	3.34	3.48	5.2	5.2	5.4
						26.9		6.03		89.3		3.36			5.2		
			Middle	5.7	27.5	27.1	27.2	5.91	5.89	87.5	87.2	3.45	3.47		5.4	5.4	
						27.2		5.87		86.9		3.49			5.4		
			Bottom	10.4	27.3	27.4	27.5	5.79	5.77	85.7	85.4	3.62	3.64		5.6	5.6	
						27.5		5.75		85.1		3.65			5.6		
29/09/12	0940-0953	25/Fine	Surface	1.0	27.8	27.0	27.1	6.15	6.15	90.4	90.4	3.41	3.42	3.93	5.4	5.4	5.6
						27.1		6.14		90.3		3.43			5.4		
			Middle	5.7	27.5	27.1	27.2	5.97	5.96	87.8	87.7	3.58	4.58		5.6	5.6	
						27.2		5.95		87.5		5.57			5.6		
			Bottom	10.4	27.3	27.4	27.5	5.79	5.78	87.8	86.3	3.76	3.78		5.8	5.8	
						27.5		5.77		84.8		3.80			5.8		

Mid-Ebb Tide

Monitoring Station : R16

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
01/09/12	1548-1601	30/Cloudy	Surface	1.0	28.1	29.2	29.2	6.09	6.09	88.9	89.1	3.52	3.54	3.71	5.4	5.4	5.6		
						29.1		6.08		89.3		3.55			5.4				
			Middle	6.5	27.7	29.5	29.5	5.92	5.92	86.9	86.9	3.69	3.71		3.71	3.71		5.6	5.6
						29.4		5.91		86.8		3.73			5.6				
			Bottom	11.9	27.4	29.7	29.8	5.88	5.88	86.4	86.3	3.88	3.90		3.90	3.90		5.8	5.8
						29.8		5.87		86.2		3.91			5.8				
04/09/12	1349-1403	31/Fine	Surface	1.0	27.4	27.3	27.3	6.21	6.19	90.8	90.5	3.64	3.67	3.82	5.6	5.6	5.7		
						27.3		6.17		90.2		3.69			5.6				
			Middle	6.6	27.2	27.6	27.6	5.72	5.76	83.3	83.9	3.96	3.93		3.93	3.93		5.8	5.8
						27.5		5.79		84.4		3.90			5.8				
			Bottom	12.2	27.1	27.8	27.8	5.88	5.86	85.8	85.5	3.84	3.86		3.86	3.86		5.6	5.7
						27.8		5.84		85.2		3.87			5.8				
06/09/12	1420-1434	30/Cloudy	Surface	1.0	27.7	27.3	27.3	6.19	6.20	90.4	90.9	3.30	3.32	3.63	5.4	5.3	5.6		
						27.3		6.21		91.3		3.34			5.2				
			Middle	6.5	27.4	27.7	27.8	6.05	6.04	88.9	88.8	3.69	3.70		3.70	3.70		5.6	5.6
						27.8		6.03		88.6		3.71			5.6				
			Bottom	12.0	27.2	27.9	27.9	5.75	5.73	83.9	83.9	3.83	3.87		3.87	3.87		5.8	5.8
						27.9		5.71		83.9		3.90			5.8				
08/09/12	0920-0933	28/Fine	Surface	1.0	27.4	27.3	27.4	5.84	5.87	86.0	86.5	3.47	3.51	3.63	5.4	5.4	5.6		
						27.4		5.90		86.9		3.54			5.4				
			Middle	6.7	27.2	27.6	27.6	5.71	5.74	83.7	84.1	3.68	3.65		3.65	3.65		5.6	5.6
						27.6		5.76		84.5		3.62			5.6				
			Bottom	12.4	27.0	28.0	28.0	5.86	5.84	86.2	85.8	3.77	3.75		3.75	3.75		5.8	5.7
						27.9		5.81		85.4		3.72			5.6				
11/09/12	0849-0905	29/Fine	Surface	1.0	27.6	26.8	26.8	5.97	5.99	87.2	87.5	3.34	3.36	3.53	5.2	5.2	5.4		
						26.8		6.01		87.7		3.37			5.2				
			Middle	6.4	27.6	26.8	26.9	5.90	5.92	86.1	86.3	3.50	3.52		3.52	3.52		5.4	5.4
						26.9		5.93		86.6		3.53			5.4				
			Bottom	11.8	27.5	27.0	27.1	5.82	5.81	84.9	84.7	3.70	3.73		3.73	3.73		5.6	5.6
						27.1		5.79		84.5		3.76			5.6				
13/09/12	0848-0900	30/Fine	Surface	1.0	27.8	28.3	28.3	6.11	6.09	90.0	89.7	3.43	3.41	3.67	5.4	5.3	5.6		
						28.3		6.07		89.4		3.38			5.2				
			Middle	6.2	27.5	28.6	28.6	5.90	5.92	86.8	87.1	3.82	3.79		3.79	3.79		5.8	5.7
						28.6		5.94		87.4		3.76			5.6				
			Bottom	11.4	27.2	29.0	29.1	5.82	5.80	85.6	85.3	3.79	3.82		3.82	3.82		5.6	5.7
						29.1		5.78		85.0		3.85			5.8				
15/09/12	0918-0931	24/Cloudy	Surface	1.0	27.6	26.8	26.8	6.20	6.23	90.2	90.6	3.42	3.46	3.58	5.2	5.2	5.4		
						26.7		6.25		91.0		3.50			5.2				
			Middle	6.2	27.5	26.9	27.0	6.12	6.11	89.0	88.8	3.59	3.58		3.58	3.58		5.4	5.4
						27.0		6.09		88.6		3.56			5.4				
			Bottom	11.4	27.3	27.3	27.3	5.99	5.97	87.2	86.9	3.69	3.71		3.71	3.71		5.6	5.5
						27.3		5.94		86.5		3.72			5.4				
18/09/12	1018-1034	27/Cloudy	Surface	1.0	26.8	26.7	26.7	6.22	6.25	91.0	91.5	3.34	3.36	3.42	5.4	5.4	5.5		
						26.7		6.28		92.0		3.37			5.4				
			Middle	6.5	26.6	26.8	26.9	6.10	6.09	89.2	89.0	3.41	3.44		3.44	3.44		5.6	5.5
						26.9		6.07		88.8		3.46			5.4				
			Bottom	11.9	26.6	27.1	27.1	6.02	6.00	87.9	87.6	3.48	3.47		3.47	3.47		5.6	5.6
						27.0		5.97		87.3		3.45			5.6				
20/09/12	1420-1432	28/Cloudy	Surface	1.0	27.2	26.9	26.9	6.25	6.23	91.0	90.7	3.24	3.26	3.41	5.2	5.2	5.4		
						26.9		6.21		90.4		3.27			5.2				
			Middle	6.2	26.9	27.3	27.4	6.12	6.09	89.2	88.7	3.40	3.42		3.42	3.42		5.4	5.4
						27.4		6.05		88.2		3.44			5.4				
			Bottom	11.4	26.6	27.8	27.8	5.96	5.94	86.8	86.5	3.53	3.55		3.55	3.55		5.4	5.5
						27.8		5.91		86.1		3.57			5.6				
22/09/12	1450-1503	30/Cloudy	Surface	1.0	26.9	26.8	26.8	6.19	6.18	90.7	90.6	3.62	3.64	3.78	5.2	5.2	5.4		
						26.8		6.17		90.4		3.65			5.2				
			Middle	6.4	26.8	27.0	27.0	6.05	6.03	88.6	88.3	3.82	3.84		3.84	3.84		5.4	5.4
						27.0		6.01		88.0		3.86			5.4				
			Bottom	11.8	26.6	27.1	27.2	5.92	5.91	86.7	86.6	3.85	3.86		3.86	3.86		5.4	5.5
						27.2		5.90		86.4		3.87			5.6				
25/09/12	0819-0833	28/Cloudy	Surface	1.0	27.9	26.7	26.7	6.02	6.01	88.5	88.3	3.52	3.55	3.69	5.4	5.4	5.6		
						26.7		5.99		88.0		3.57			5.4				
			Middle	6.3	27.8	26.7	26.8	5.92	5.94	87.0	87.3	3.62	3.65		3.65	3.65		5.6	5.6
						26.8		5.95		87.5		3.68			5.6				
			Bottom	11.6	27.8	26.9	26.9	5.87	5.85	86.3	86.0	3.84	3.87		3.87	3.87		5.8	5.8
						26.9		5.82		85.6		3.90			5.8				
27/09/12	0918-0930	27/Fine	Surface	1.0	27.7	26.9	26.9	6.10	6.09	90.3	90.1	3.47	3.49	3.72	5.4	5.4	5.6		
						26.9		6.07		89.9		3.51			5.4				
			Middle	6.2	27.5	27.1	27.1	5.97	5.95	88.4	88.1	3.71	3.74		3.74	3.74		5.6	5.6
						27.1		5.93		87.8		3.76			5.6				
			Bottom	11.4	27.2	27.3	27.4	5.82	5.80	86.1	85.8	3.90	3.92		3.92	3.92		5.8	5.9
						27.4		5.78		85.5		3.94			6.0				
29/09/12	0919-0933	25/Fine	Surface	1.0	27.8	27.1	27.1	6.03	6.05	88.6	88.9	3.45	3.48	3.64	5.4	5.3	5.6		
						27.0		6.07		89.2		3.50			5.2				
			Middle	6.2	27.5	27.2	27.2	5.89	5.91	86.6	86.8	3.56	3.58		3.58	3.58		5.6	5.6
						27.1		5.92		87.0		3.59			5.6				
			Bottom	11.4	27.4	27.5	27.6	5.80	5.82	85.3	85.6	3.83	3.86		3.86	3.86		5.8	5.8
						27.6		5.84		85.8		3.89			5.8				

Mid-Ebb Tide

Monitoring Station : R17

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
01/09/12	1530-1543	30/Cloudy	Surface	1.0	28.0	29.1	29.1	6.08	6.10	89.3	89.6	3.49	3.51	3.66	5.4	5.4	5.5		
						29.1		6.12		89.9		3.52			5.4				
			Middle	6.2	27.8	29.3	29.3	5.92	5.93	86.9	87.1	3.62	3.63		3.62	3.63		5.6	5.6
						29.3		5.94		87.3		3.63			5.5				
			Bottom	11.3	27.3	29.4	29.5	5.86	5.87	86.1	86.3	3.87	3.85		3.85	3.85		5.5	5.6
						29.5		5.88		86.4		3.82			5.6				
04/09/12	1330-1344	31/Fine	Surface	1.0	27.4	27.1	27.2	5.82	5.79	84.7	84.3	3.62	3.59	3.84	5.6	5.5	5.8		
						27.2		5.75		83.8		3.55			5.4				
			Middle	6.2	27.2	27.5	27.5	5.64	5.66	82.3	82.6	3.84	3.87		3.84	3.87		5.8	5.9
						27.8		5.68		82.9		3.90			6.0				
			Bottom	11.4	27.0	27.7	27.7	5.70	5.72	83.3	83.6	4.10	4.06		4.10	4.06		6.0	5.9
						27.7		5.73		83.8		4.02			5.8				
06/09/12	1400-1413	30/Cloudy	Surface	1.0	27.8	27.4	27.4	6.07	6.04	89.2	88.8	3.24	3.22	3.25	5.2	5.2	5.3		
						27.3		6.01		88.3		3.20			5.2				
			Middle	6.0	27.6	27.8	27.8	6.02	6.03	87.9	88.4	3.03	3.05		3.03	3.05		5.0	5.0
						27.8		6.04		88.8		3.07			5.0				
			Bottom	11.0	27.1	27.1	27.1	5.94	5.95	86.7	87.2	3.48	3.49		3.48	3.49		5.5	5.6
						27.0		5.96		87.6		3.50			5.6				
08/09/12	0900-0914	28/Fine	Surface	1.0	27.4	27.2	27.2	5.99	5.95	88.3	87.7	3.72	3.76	3.92	5.6	5.7	5.9		
						27.2		5.91		87.1		3.79			5.8				
			Middle	6.3	27.1	27.6	27.7	6.06	6.03	89.1	88.7	3.90	3.93		3.90	3.93		6.0	6.0
						27.7		6.00		88.2		3.96			6.0				
			Bottom	11.6	27.0	27.9	27.9	5.84	5.86	86.1	86.4	4.11	4.08		4.11	4.08		6.0	6.1
						27.9		5.88		86.6		4.04			6.2				
11/09/12	0830-0845	29/Fine	Surface	1.0	27.6	26.8	26.8	6.02	6.01	87.9	87.7	3.42	3.45	3.64	5.4	5.4	5.6		
						26.7		5.99		87.5		3.48			5.4				
			Middle	5.7	27.6	26.8	26.8	5.93	5.95	86.5	86.8	3.61	3.64		3.61	3.64		5.6	5.6
						26.8		5.96		87.0		3.66			5.5				
			Bottom	10.4	27.6	27.0	27.0	5.80	5.82	84.7	85.0	3.81	3.83		3.81	3.83		6.0	5.9
						26.9		5.84		85.3		3.85			5.8				
13/09/12	0830-0843	30/Fine	Surface	1.0	27.8	28.3	28.3	6.07	6.06	89.4	89.2	3.50	3.53	3.70	5.4	5.4	5.6		
						28.2		6.04		89.0		3.56			5.4				
			Middle	5.9	27.4	28.7	28.7	5.92	5.94	87.1	87.3	3.74	3.71		3.74	3.71		5.6	5.6
						28.6		5.95		87.5		3.67			5.5				
			Bottom	10.8	27.2	28.9	29.0	5.85	5.87	86.0	86.2	3.88	3.85		3.88	3.85		6.0	5.9
						29.0		5.88		86.4		3.82			5.8				
15/09/12	0900-0912	24/Cloudy	Surface	1.0	27.7	26.7	26.7	6.13	6.15	89.2	89.4	3.33	3.35	3.51	5.4	5.5	5.7		
						26.7		6.16		89.6		3.36			5.6				
			Middle	5.9	27.6	26.9	27.0	6.02	6.00	87.5	87.2	3.47	3.50		3.47	3.50		5.8	5.7
						27.0		5.97		86.8		3.52			5.5				
			Bottom	10.8	27.3	27.3	27.3	5.85	5.83	85.2	84.9	3.65	3.68		3.65	3.68		6.0	6.0
						27.2		5.81		84.6		3.71			6.0				
18/09/12	1000-1015	27/Cloudy	Surface	1.0	26.7	26.6	26.6	6.18	6.21	90.4	90.9	3.56	3.62	3.76	5.2	5.2	5.4		
						26.6		6.24		91.3		3.67			5.2				
			Middle	5.8	26.6	26.7	26.7	6.02	6.05	88.1	88.6	3.82	3.78		3.82	3.78		5.4	5.5
						26.7		6.08		89.0		3.73			5.5				
			Bottom	10.5	26.5	26.8	26.9	5.92	5.94	86.6	86.9	3.89	3.90		3.89	3.90		5.5	5.6
						26.9		5.96		87.2		3.91			5.6				
20/09/12	1400-1413	28/Cloudy	Surface	1.0	27.1	26.8	26.9	6.20	6.18	90.2	90.0	3.40	3.39	3.51	5.4	5.3	5.4		
						26.9		6.16		89.7		3.37			5.2				
			Middle	5.9	26.9	27.3	27.4	6.04	6.02	88.0	87.8	3.47	3.49		3.47	3.49		5.4	5.5
						27.4		6.00		87.5		3.51			5.5				
			Bottom	10.8	26.7	27.7	27.8	5.93	5.90	86.4	86.0	3.62	3.64		3.62	3.64		5.5	5.6
						27.8		5.87		85.5		3.66			5.6				
22/09/12	1430-1443	30/Cloudy	Surface	1.0	26.9	26.8	26.8	6.21	6.22	90.9	91.1	3.59	3.61	3.80	5.4	5.3	5.4		
						26.8		6.23		91.3		3.62			5.2				
			Middle	6.1	27.7	26.9	26.9	6.12	6.11	89.7	89.6	3.84	3.87		3.84	3.87		5.4	5.5
						26.9		6.10		89.4		3.90			5.5				
			Bottom	11.2	26.6	27.0	27.0	6.03	6.03	88.3	88.3	3.94	3.92		3.94	3.92		5.5	5.6
						27.0		6.02		88.2		3.90			5.6				
25/09/12	0800-0815	28/Cloudy	Surface	1.0	27.9	26.7	26.8	5.93	5.95	87.1	87.4	3.44	3.47	3.64	5.4	5.4	5.5		
						26.8		5.97		87.7		3.49			5.4				
			Middle	5.7	27.9	26.8	26.8	5.90	5.89	86.7	86.5	3.62	3.64		3.62	3.64		5.6	5.6
						26.8		5.87		86.2		3.66			5.5				
			Bottom	10.4	27.9	26.9	26.9	5.80	5.82	85.3	85.5	3.80	3.83		3.80	3.83		5.5	5.7
						26.8		5.83		85.7		3.85			5.8				
27/09/12	0900-0912	27/Fine	Surface	1.0	27.7	26.9	27.0	6.04	6.06	89.4	89.7	3.38	3.40	3.53	5.4	5.4	5.5		
						27.0		6.07		89.9		3.42			5.4				
			Middle	5.9	27.5	27.1	27.2	5.95	5.94	88.1	87.9	3.50	3.52		3.50	3.52		5.6	5.6
						27.2		5.92		87.6		3.54			5.5				
			Bottom	10.8	27.3	27.4	27.4	5.80	5.78	85.8	85.5	3.66	3.68		3.66	3.68		5.5	5.6
						27.4		5.75		85.1		3.69			5.6				
29/09/12	0900-0915	25/Fine	Surface	1.0	27.8	27.0	27.1	6.12	6.15	89.9	90.4	3.29	3.27	3.44	5.2	5.2	5.4		
						27.1		6.18		90.8		3.24			5.2				
			Middle	5.6	27.6	27.2	27.2	6.01	6.02	88.3	88.5	3.42	3.44		3.42	3.44		5.4	5.5
						27.1		6.03		88.6		3.46			5.5				
			Bottom	10.2	27.3	27.5	27.5	5.76	5.78	84.7	85.0	3.61	3.62		3.61	3.62		5.5	5.6
						27.5		5.80		85.3		3.63			5.6				

Monitoring Station : R28

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	
01/09/12	1724-1738	30/Cloudy	Surface	1.0	28.1	29.2	29.2	6.09	6.10	89.5	89.6	3.44	3.45	3.68	5.4	5.4	5.6	
						29.1		6.10		89.6		3.46			5.4			
			Middle	5.9	27.6	29.5	29.5	5.91	5.90	86.8	86.6	3.70	3.68		3.69	5.6		5.6
						29.4		5.88		86.4		3.68			5.6			
			Bottom	10.7	27.2	29.8	29.8	5.67	5.68	83.3	83.4	3.90	3.88		3.89	5.8		5.8
						29.8		5.68		83.4		3.88			5.8			
04/09/12	1528-1542	31/Fine	Surface	1.0	27.3	27.4	27.4	6.18	6.16	90.3	90.0	3.42	3.46	3.66	5.4	5.4	5.6	
						27.3		6.14		89.7		3.49			5.4			
			Middle	5.9	27.3	27.6	27.6	5.77	5.83	84.2	84.7	3.70	3.63		3.67	5.8		5.7
						27.5		5.83		85.1		3.63			5.6			
			Bottom	10.8	27.1	27.7	27.7	5.95	5.93	86.7	86.4	3.88	3.83		3.86	5.8		5.7
						27.7		5.90		86.0		3.83			5.6			
06/09/12	1600-1614	30/Cloudy	Surface	1.0	27.6	27.4	27.5	6.09	6.10	89.5	89.6	3.41	3.42	3.72	5.4	5.4	5.7	
						27.5		6.10		89.7		3.43			5.4			
			Middle	6.0	27.4	27.7	27.8	5.88	5.88	86.4	86.4	3.89	3.92		3.91	5.8		5.9
						27.8		5.87		86.3		3.92			6.0			
			Bottom	11.0	27.2	28.0	28.0	5.94	5.95	87.3	87.5	3.80	3.84		3.82	5.8		5.8
						27.9		5.96		87.6		3.84			5.8			
08/09/12	1058-1111	29/Fine	Surface	1.0	27.3	27.1	27.2	6.02	6.06	88.7	89.3	3.49	3.52	3.56	5.4	5.4	5.4	
						27.2		6.10		89.9		3.55			5.4			
			Middle	5.7	27.1	27.4	27.5	5.74	5.77	84.1	84.5	3.37	3.30		3.34	5.2		5.2
						27.5		5.79		84.9		3.30			5.2			
			Bottom	10.4	26.9	27.7	27.7	5.92	5.90	86.8	86.4	3.79	3.86		3.83	5.6		5.7
						27.7		5.87		86.0		3.86			5.8			
11/09/12	1030-1044	30/Fine	Surface	1.0	27.7	26.8	26.8	6.03	6.05	88.0	88.2	3.40	3.43	3.56	5.2	5.3	5.5	
						26.7		6.06		88.4		3.45			5.4			
			Middle	5.4	27.7	26.8	26.8	6.00	5.99	87.6	87.4	3.49	3.54		3.52	5.6		5.5
						26.8		5.97		87.1		3.54			5.6			
			Bottom	9.8	27.6	26.9	26.9	5.88	5.86	85.8	85.5	3.70	3.76		3.73	5.6		5.6
						26.9		5.84		85.2		3.76			5.6			
13/09/12	1025-1037	30/Fine	Surface	1.0	27.9	28.5	28.5	6.14	6.12	90.5	90.2	3.69	3.72	3.87	5.6	5.6	5.8	
						28.5		6.10		89.9		3.75			5.6			
			Middle	5.6	27.5	28.8	28.8	5.83	5.81	85.8	85.5	3.90	3.87		3.89	5.8		5.8
						28.8		5.79		85.2		3.87			5.8			
			Bottom	10.2	27.2	29.2	29.2	5.87	5.86	86.4	86.2	4.01	3.98		4.00	6.0		6.0
						29.2		5.84		85.9		3.98			6.0			
15/09/12	1054-1106	26/Cloudy	Surface	1.0	27.7	26.8	26.8	6.14	6.12	89.4	89.1	3.73	3.71	3.57	5.4	5.4	5.6	
						26.7		6.10		88.8		3.68			5.4			
			Middle	5.6	27.5	26.9	27.0	5.99	5.97	87.1	86.8	3.50	3.45		3.48	5.6		5.6
						27.0		5.94		86.4		3.45			5.6			
			Bottom	10.2	27.3	27.2	27.3	5.87	5.85	85.4	85.2	3.51	3.54		3.53	5.8		5.8
						27.3		5.83		84.9		3.54			5.8			
18/09/12	1200-1215	27/Cloudy	Surface	1.0	26.7	26.7	26.7	6.13	6.15	89.7	89.9	3.54	3.51	3.72	5.6	5.6	5.5	
						26.6		6.17		90.1		3.48			5.6			
			Middle	5.5	26.6	26.7	26.8	6.00	5.95	87.8	87.0	3.62	3.78		3.70	5.4		5.4
						26.8		5.89		86.2		3.78			5.4			
			Bottom	9.9	26.5	26.9	27.0	5.73	5.70	85.1	83.7	3.92	3.96		3.94	5.4		5.5
						27.1		5.67		82.2		3.96			5.5			
20/09/12	1557-1610	28/Cloudy	Surface	1.0	27.2	26.8	26.9	6.23	6.25	90.7	91.0	3.40	3.39	3.52	5.4	5.3	5.4	
						26.9		6.27		91.3		3.37			5.2			
			Middle	5.7	26.9	27.3	27.4	6.11	6.09	89.0	88.8	3.48	3.53		3.51	5.4		5.4
						27.4		6.07		88.5		3.53			5.4			
			Bottom	10.4	26.7	27.6	27.7	5.98	5.96	87.1	86.8	3.64	3.67		3.66	5.6		5.6
						27.7		5.94		86.5		3.67			5.6			
22/09/12	1629-1642	30/Cloudy	Surface	1.0	26.9	26.9	26.9	6.07	6.04	88.9	88.5	3.54	3.57	3.78	5.4	5.3	5.4	
						26.8		6.01		88.0		3.60			5.2			
			Middle	5.7	26.6	26.9	26.9	6.02	6.00	88.2	87.9	3.72	3.74		3.73	5.4		5.4
						26.9		5.98		87.6		3.74			5.4			
			Bottom	10.4	26.4	27.5	27.5	5.99	5.95	87.8	87.2	4.01	4.07		4.04	5.6		5.6
						27.4		5.91		86.6		4.07			5.6			
25/09/12	0954-1007	28/Cloudy	Surface	1.0	27.9	26.9	26.9	5.99	6.02	88.1	88.4	3.40	3.43	3.57	5.4	5.4	5.5	
						26.9		6.04		88.7		3.45			5.4			
			Middle	5.3	27.9	26.9	27.0	6.01	5.99	88.3	88.1	3.49	3.51		3.50	5.4		5.4
						27.0		5.97		87.8		3.51			5.4			
			Bottom	9.6	27.8	27.1	27.1	5.80	5.82	85.3	85.6	3.76	3.80		3.78	5.6		5.7
						27.1		5.84		85.8		3.80			5.8			
27/09/12	1055-1101	28/Fine	Surface	1.0	27.8	26.9	27.0	6.03	6.05	89.2	89.5	3.37	3.36	3.53	5.2	5.2	5.4	
						27.0		6.06		89.8		3.34			5.2			
			Middle	5.6	27.6	27.1	27.1	5.94	5.92	88.0	87.7	3.52	3.56		3.54	5.4		5.4
						27.1		5.90		87.3		3.56			5.4			
			Bottom	10.2	27.3	27.3	27.3	5.82	5.81	86.1	85.9	3.66	3.70		3.68	5.6		5.6
						27.2		5.79		85.7		3.70			5.6			
29/09/12	1059-1112	27/Fine	Surface	1.0	27.8	27.1	27.1	6.23	6.22	91.6	91.5	3.32	3.30	3.53	5.4	5.4	5.7	
						27.0		6.21		91.3		3.28			5.4			
			Middle	5.2	27.6	27.2	27.3	6.03	6.02	88.6	88.5	3.53	3.57		3.55	5.8		5.9
						27.3		6.01		88.3		3.57			6.0			
			Bottom	9.4	27.3	27.3	27.4	5.88	5.89	86.4	86.6	3.71	3.79		3.75	5.8		5.8
						27.4		5.90		86.7		3.79			5.8			

Monitoring Station : R29

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
01/09/12	1745-1757	30/Cloudy	Surface	1.0	28.2	29.2	29.2	6.11	6.10	89.8	89.7	3.62	3.64	3.81	5.6	5.6	5.7		
						29.1		6.09		89.5		3.66			5.6				
			Middle	8.3	27.6	29.6	29.6	5.87	5.86	86.5	86.2	3.79	3.78		5.8	5.7		5.8	5.7
						29.5		5.84		85.8		3.77			5.6				
			Bottom	15.5	27.1	29.9	29.9	5.71	5.71	83.9	83.8	3.99	4.01		5.8	5.9		6.0	6.0
						29.8		5.70		83.7		4.03			5.8				
04/09/12	1546-1600	31/Fine	Surface	1.0	27.5	27.2	27.2	6.02	6.06	87.9	88.4	3.44	3.41	3.75	5.4	5.3	5.7		
						27.2		6.09		88.9		3.37			5.2				
			Middle	8.2	27.2	27.5	27.5	5.99	5.95	87.5	87.0	3.78	3.81		5.6	5.7		5.8	5.7
						27.5		5.91		86.4		3.84			5.8				
			Bottom	15.4	26.9	27.8	27.9	5.73	5.76	83.5	83.9	4.02	4.05		6.0	6.0		6.0	6.0
						27.9		5.78		84.3		4.07			6.0				
06/09/12	1619-1633	30/Cloudy	Surface	1.0	27.6	27.4	27.5	6.05	6.06	88.9	89.0	3.64	3.65	3.85	5.6	5.6	5.8		
						27.5		6.06		89.0		3.66			5.6				
			Middle	8.9	27.3	27.6	27.6	5.99	5.98	88.1	88.0	3.93	3.95		5.8	5.8		5.8	5.8
						27.6		5.97		87.8		3.96			5.8				
			Bottom	16.8	27.2	27.9	27.9	5.76	5.75	84.8	84.6	3.95	3.96		6.0	6.0		6.0	6.0
						27.9		5.74		84.3		3.97			6.0				
08/09/12	1115-1128	29/Fine	Surface	1.0	27.5	27.3	27.3	5.94	5.92	87.4	87.1	3.28	3.26	3.52	5.2	5.2	5.4		
						27.3		5.90		86.8		3.24			5.2				
			Middle	8.5	27.3	27.6	27.6	5.87	5.84	86.5	86.0	3.64	3.61		5.6	5.5		5.6	5.5
						27.6		5.80		85.4		3.57			5.4				
			Bottom	16.0	27.0	27.9	27.9	5.68	5.71	83.5	84.0	3.66	3.68		5.6	5.6		5.6	5.6
						27.8		5.74		84.4		3.70			5.6				
11/09/12	1050-1105	30/Fine	Surface	1.0	27.7	26.7	26.7	6.10	6.12	89.1	89.3	3.33	3.35	3.58	5.2	5.2	5.5		
						26.7		6.13		89.5		3.37			5.2				
			Middle	8.3	27.6	26.9	26.9	5.97	6.00	87.1	87.5	3.56	3.59		5.4	5.5		5.6	5.5
						26.9		6.02		87.8		3.61			5.6				
			Bottom	15.6	27.5	27.2	27.2	5.73	5.75	83.6	83.8	3.82	3.81		5.8	5.7		5.8	5.7
						27.1		5.76		84.0		3.79			5.6				
13/09/12	1044-1056	30/Fine	Surface	1.0	27.8	28.5	28.5	6.20	6.22	91.3	91.6	3.82	3.80	3.78	5.8	5.7	5.7		
						28.5		6.24		91.9		3.77			5.6				
			Middle	8.6	27.4	28.8	28.8	5.97	5.96	87.9	87.8	3.63	3.61		5.6	5.5		5.6	5.5
						28.8		5.95		87.6		3.58			5.4				
			Bottom	16.2	27.3	29.2	29.2	5.90	5.88	86.9	86.6	3.92	3.95		5.8	5.9		6.0	6.0
						29.2		5.86		86.3		3.98			6.0				
15/09/12	1112-1125	26/Cloudy	Surface	1.0	27.7	26.8	26.8	6.17	6.19	89.8	90.1	3.44	3.46	3.59	5.6	5.5	5.6		
						26.8		6.21		90.4		3.48			5.4				
			Middle	8.5	27.4	27.0	27.0	6.06	6.04	88.1	87.8	3.55	3.58		5.6	5.6		5.6	5.6
						27.0		6.01		87.4		3.61			5.6				
			Bottom	16.0	27.1	27.3	27.3	5.82	5.80	84.7	84.5	3.70	3.72		5.8	5.8		5.8	5.8
						27.2		5.78		84.2		3.74			5.8				
18/09/12	1220-1237	27/Cloudy	Surface	1.0	26.7	26.6	26.7	6.21	6.17	90.9	90.3	3.62	3.58	3.73	5.4	5.4	5.5		
						26.7		6.13		89.7		3.53			5.4				
			Middle	8.4	26.6	26.8	26.8	5.98	5.96	87.5	87.2	3.71	3.70		5.6	5.5		5.6	5.5
						26.8		5.93		86.8		3.69			5.4				
			Bottom	15.7	26.4	27.1	27.2	5.77	5.74	84.3	83.9	3.89	3.91		5.6	5.6		5.6	5.6
						27.2		5.71		83.5		3.92			5.6				
20/09/12	1616-1629	28/Cloudy	Surface	1.0	27.1	26.9	26.9	6.15	6.17	89.5	89.8	3.32	3.34	3.54	5.2	5.2	5.4		
						26.8		6.19		90.1		3.36			5.2				
			Middle	8.6	26.8	27.4	27.5	6.00	5.98	87.4	87.1	3.55	3.57		5.4	5.4		5.4	5.4
						27.5		5.95		86.7		3.59			5.4				
			Bottom	16.2	26.6	27.8	27.9	5.72	5.74	83.3	83.6	3.69	3.70		5.6	5.6		5.6	5.6
						27.9		5.76		83.9		3.71			5.6				
22/09/12	1658-1711	30/Cloudy	Surface	1.0	27.0	26.8	26.9	6.17	6.17	90.4	90.3	3.61	3.62	3.88	5.2	5.2	5.4		
						26.9		6.16		90.2		3.63			5.2				
			Middle	8.6	26.8	27.0	27.0	6.08	6.07	89.1	89.0	3.87	3.89		5.4	5.4		5.4	5.4
						26.9		6.06		88.8		3.90			5.4				
			Bottom	16.2	26.3	27.4	27.4	5.84	5.82	85.6	85.3	4.11	4.14		5.6	5.6		5.6	5.6
						27.3		5.80		84.9		4.17			5.6				
25/09/12	1011-1025	28/Cloudy	Surface	1.0	28.0	26.8	26.8	6.01	6.03	88.2	88.6	3.50	3.53	3.77	5.4	5.4	5.7		
						26.8		6.05		88.9		3.56			5.4				
			Middle	8.3	27.8	27.0	27.0	5.90	5.92	86.7	87.0	3.80	3.78		5.8	5.7		5.8	5.7
						27.0		5.93		87.2		3.75			5.6				
			Bottom	15.6	27.7	27.1	27.2	5.77	5.79	84.8	85.1	3.98	4.00		5.8	5.9		5.8	5.9
						27.2		5.81		85.4		4.02			6.0				
27/09/12	1108-1120	28/Fine	Surface	1.0	27.7	26.9	27.0	6.10	6.09	90.3	90.1	3.50	3.49	3.62	5.4	5.4	5.6		
						27.0		6.07		89.9		3.47			5.4				
			Middle	8.5	27.5	27.2	27.2	5.96	5.94	88.3	88.0	3.62	3.64		5.6	5.6		5.6	5.6
						27.2		5.92		87.6		3.65			5.6				
			Bottom	16.0	27.2	27.4	27.5	5.80	5.78	85.8	85.5	3.71	3.73		5.8	5.8		5.8	5.8
						27.5		5.76		85.2		3.75			5.8				
29/09/12	1117-1130	27/Fine	Surface	1.0	27.8	27.0	27.0	6.17	6.19	90.7	90.9	3.43	3.42	3.59	5.6	5.6	5.8		
						27.0		6.20		91.1		3.41			5.6				
			Middle	8.4	27.6	27.2	27.3	6.02	6.01	88.5	88.3	3.61	3.62		5.8	5.8		5.8	5.8
						27.3		5.99		88.1		3.63			5.8				
			Bottom	15.8	27.4	27.4	27.5	5.70	5.73	83.8	84.3	3.77	3.74		6.0	6.0		6.0	6.0
						27.5		5.76		84.7		3.71			6.0				

Monitoring Station : C1

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
01/09/12	1628-1640	30/Cloudy	Surface	1.0	28.1	29.2	29.2	6.09	6.10	89.5	89.6	3.50	3.49	3.71	5.4	5.4	5.6		
						29.1		6.10		89.6		3.48			5.4				
			Middle	7.6	27.7	29.6	29.6	5.87	5.84	86.2	85.8	3.71	3.70		3.71	3.70		5.6	5.6
						29.6		5.81		85.3		3.69			5.6				
			Bottom	14.1	27.3	30.0	29.5	5.65	5.67	83.0	83.3	3.92	3.93		3.93	3.93		5.8	5.9
						29.0		5.69		83.6		3.93			6.0				
04/09/12	1429-1443	31/Fine	Surface	1.0	27.4	27.3	27.3	6.06	6.03	88.3	87.9	3.72	3.76	3.92	5.6	5.7	6.0		
						27.3		6.00		87.5		3.79			5.8				
			Middle	7.6	27.2	27.8	27.8	6.14	6.12	89.6	89.3	3.98	3.95		3.95	3.95		6.2	6.1
						27.7		6.09		88.9		3.91			6.0				
			Bottom	14.2	26.9	27.8	27.8	5.92	5.90	86.5	86.2	4.00	4.05		4.05	4.05		6.0	6.1
						27.8		5.87		85.9		4.09			6.2				
06/09/12	1459-1513	30/Cloudy	Surface	1.0	27.7	24.3	24.4	6.06	6.07	88.5	89.0	3.53	3.55	3.73	5.4	5.4	5.7		
						24.4		6.08		89.4		3.56			5.4				
			Middle	6.6	27.4	27.7	27.7	6.03	6.03	88.6	88.5	3.72	3.76		3.76	3.76		5.6	5.7
						27.7		6.02		88.4		3.80			5.8				
			Bottom	12.2	27.1	28.0	28.1	5.91	5.92	86.3	86.8	3.86	3.88		3.88	3.88		5.8	5.9
						28.1		5.93		87.2		3.90			6.0				
08/09/12	0958-1012	28/Fine	Surface	1.0	27.3	27.4	27.4	6.20	6.17	91.2	90.8	3.55	3.52	3.64	5.4	5.4	5.6		
						27.3		6.14		90.3		3.48			5.4				
			Middle	7.2	27.2	27.9	28.0	5.80	5.84	85.5	86.1	3.74	3.77		3.77	3.77		5.6	5.7
						28.0		5.87		86.6		3.79			5.8				
			Bottom	13.4	27.0	28.2	28.2	5.99	5.96	88.0	87.6	3.68	3.65		3.65	3.65		5.6	5.6
						28.1		5.92		87.1		3.61			5.5				
11/09/12	0930-0945	29/Fine	Surface	1.0	27.7	26.7	26.7	6.04	6.06	88.1	88.4	3.72	3.74	3.76	5.6	5.6	5.7		
						26.7		6.07		88.6		3.75			5.6				
			Middle	6.9	27.6	26.7	26.8	5.98	5.97	87.3	87.1	3.63	3.65		3.65	3.65		5.4	5.5
						26.8		5.95		86.8		3.67			5.6				
			Bottom	12.8	27.5	26.9	26.9	5.70	5.72	83.2	83.5	3.87	3.90		3.90	3.90		5.8	5.9
						26.9		5.74		83.8		3.92			6.0				
13/09/12	0926-0939	30/Fine	Surface	1.0	27.8	28.4	28.4	6.15	6.17	90.6	90.8	3.47	3.45	3.69	5.4	5.3	5.6		
						28.4		6.18		91.0		3.42			5.2				
			Middle	7.2	27.4	28.6	28.6	5.93	5.95	87.2	87.5	3.65	3.67		3.67	3.67		5.6	5.6
						28.6		5.96		87.7		3.69			5.6				
			Bottom	13.4	27.3	29.2	29.2	5.90	5.89	86.8	86.6	3.98	3.97		3.97	3.97		5.8	5.9
						29.1		5.87		86.4		3.95			6.0				
15/09/12	0957-1009	24/Cloudy	Surface	1.0	27.7	26.6	26.7	6.16	6.18	89.7	90.0	3.53	3.55	3.70	5.4	5.4	5.6		
						26.7		6.20		90.2		3.57			5.4				
			Middle	7.1	27.5	26.9	27.0	6.03	6.00	87.7	87.3	3.70	3.72		3.72	3.72		5.6	5.6
						27.0		5.97		86.8		3.74			5.6				
			Bottom	13.2	27.2	27.3	27.3	5.84	5.83	85.0	84.9	3.84	3.82		3.82	3.82		5.8	5.9
						27.3		5.82		84.8		3.80			6.0				
18/09/12	1100-1115	27/Cloudy	Surface	1.0	26.7	26.7	26.7	6.22	6.20	90.9	90.7	3.56	3.49	3.67	5.4	5.4	5.6		
						26.6		6.18		90.4		3.42			5.4				
			Middle	7.0	26.7	26.7	26.8	6.03	6.05	88.2	88.5	3.69	3.66		3.66	3.66		5.6	5.6
						26.8		6.07		88.8		3.62			5.6				
			Bottom	12.9	26.6	26.9	27.0	5.87	5.84	85.9	85.5	3.89	3.87		3.87	3.87		5.8	5.9
						27.0		5.81		85.0		3.85			6.0				
20/09/12	1458-1511	28/Cloudy	Surface	1.0	27.1	26.9	27.0	6.14	6.16	89.4	89.6	3.44	3.46	3.61	5.4	5.4	5.6		
						27.0		6.17		89.8		3.47			5.4				
			Middle	7.2	26.8	27.4	27.5	6.02	6.00	87.7	87.4	3.61	3.63		3.63	3.63		5.6	5.6
						27.5		5.97		87.0		3.64			5.6				
			Bottom	13.4	26.6	27.9	27.9	5.83	5.80	84.9	84.5	3.72	3.74		3.74	3.74		5.8	5.7
						27.8		5.77		84.0		3.75			5.5				
22/09/12	1528-1542	30/Cloudy	Surface	1.0	26.9	26.9	26.9	6.08	6.09	89.1	89.2	3.51	3.53	3.74	5.4	5.4	5.6		
						26.8		6.10		89.3		3.55			5.4				
			Middle	7.1	26.7	27.1	27.1	5.84	5.82	85.6	85.3	3.74	3.76		3.76	3.76		5.6	5.6
						27.0		5.80		84.9		3.78			5.6				
			Bottom	13.2	26.5	27.2	27.2	5.70	5.72	83.5	83.8	3.95	3.93		3.93	3.93		5.8	5.7
						27.2		5.74		84.1		3.91			5.5				
25/09/12	0900-0913	28/Cloudy	Surface	1.0	27.8	26.8	26.9	6.04	6.06	88.7	89.0	3.62	3.60	3.80	5.6	5.6	5.8		
						26.9		6.07		89.2		3.58			5.6				
			Middle	7.1	27.7	27.0	27.0	5.91	5.93	86.8	87.1	3.76	3.80		3.80	3.80		5.8	5.8
						27.0		5.94		87.3		3.84			5.8				
			Bottom	13.2	27.6	27.1	27.1	5.72	5.74	84.1	84.3	4.01	3.99		3.99	3.99		6.0	6.0
						27.1		5.75		84.5		3.96			6.0				
27/09/12	0958-1011	27/Fine	Surface	1.0	27.7	27.0	27.0	5.94	5.97	87.9	88.3	3.44	3.46	3.68	5.4	5.4	5.6		
						27.0		5.99		88.7		3.48			5.4				
			Middle	7.1	27.5	27.2	27.2	5.82	5.80	86.2	85.9	3.70	3.72		3.72	3.72		5.6	5.6
						27.2		5.78		85.5		3.74			5.6				
			Bottom	13.2	27.2	27.5	27.5	5.68	5.69	84.0	84.2	3.85	3.87		3.87	3.87		5.8	5.9
						27.5		5.70		84.3		3.89			6.0				
29/09/12	0959-1012	25/Fine	Surface	1.0	27.7	27.1	27.1	6.06	6.08	89.1	89.3	3.20	3.22	3.47	5.4	5.4	5.7		
						27.1		6.09		89.5		3.24			5.4				
			Middle	7.0	27.5	27.2	27.3	5.91	5.93	86.9	87.2	3.44	3.45		3.45	3.45		5.6	5.7
						27.3		5.95		87.5		3.46			5.8				
			Bottom	13.0	27.3	27.5	27.5	5.70	5.73	83.8	84.3	3.74	3.73		3.73	3.73		5.8	5.9
						27.5		5.76		84.7		3.72			6.0				

Monitoring Station : C3

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/09/12	1646-1658	30/Cloudy	Surface	1.0	28.1	29.1	29.2	6.11	6.13	89.8	90.0	3.51	3.50	3.71	5.4	5.4	5.7
						29.2		6.14		90.2		3.48			5.4		
			Middle	6.8	27.6	29.6	29.6	5.72	5.77	84.0	84.7	3.77	3.73		5.8	5.7	
						29.5		5.81		85.3		3.69			5.6		
			Bottom	12.5	27.3	29.9	29.9	5.66	5.69	83.1	83.5	3.90	3.89		5.8	5.9	
						29.9		5.71		83.9		3.88			6.0		
04/09/12	1449-1502	31/Fine	Surface	1.0	27.5	27.4	27.4	6.20	6.17	90.5	90.1	3.58	3.56	3.61	5.6	5.5	5.6
						27.4		6.14		89.6		3.53			5.4		
			Middle	7.3	27.3	27.7	27.7	5.89	5.86	86.1	85.7	3.41	3.43		5.4	5.4	
						27.6		5.83		85.2		3.45			5.4		
			Bottom	13.6	27.1	27.9	28.0	5.72	5.74	83.4	83.7	3.88	3.85		5.8	5.8	
						28.0		5.76		84.0		3.81			5.8		
06/09/12	1520-1534	30/Cloudy	Surface	1.0	27.8	24.3	24.4	6.12	6.13	89.9	90.1	3.67	3.68	3.77	5.6	5.6	5.7
						24.4		6.14		90.3		3.69			5.6		
			Middle	8.4	27.4	27.8	27.9	5.96	5.97	87.0	87.5	3.78	3.79		5.6	5.7	
						27.9		5.98		87.9		3.80			5.8		
			Bottom	15.8	27.1	28.0	28.0	5.76	5.76	84.1	84.3	3.82	3.83		5.8	5.9	
						28.0		5.75		84.5		3.84			6.0		
08/09/12	1018-1032	28/Fine	Surface	1.0	27.4	27.4	27.4	5.87	5.85	86.4	86.1	3.62	3.64	3.82	5.6	5.6	5.8
						27.4		5.82		85.7		3.66			5.6		
			Middle	7.5	27.3	27.6	27.6	5.93	5.95	87.1	87.5	3.84	3.81		5.8	5.7	
						27.6		5.97		87.8		3.77			5.6		
			Bottom	14.0	27.0	27.8	27.9	5.77	5.79	84.6	84.9	4.00	4.02		6.0	6.0	
						27.9		5.81		85.1		4.04			6.0		
11/09/12	0950-1005	29/Fine	Surface	1.0	27.7	26.7	26.8	6.09	6.07	88.9	88.6	3.68	3.71	3.83	5.6	5.6	5.8
						26.8		6.05		88.3		3.73			5.6		
			Middle	6.3	27.6	26.8	26.9	5.99	6.01	87.4	87.6	3.79	3.82		5.8	5.8	
						26.9		6.02		87.8		3.84			5.8		
			Bottom	11.6	27.6	27.0	27.0	5.80	5.82	84.6	84.9	3.96	3.98		6.0	6.0	
						26.9		5.83		85.1		4.00			6.0		
13/09/12	0946-0958	30/Fine	Surface	1.0	27.9	28.4	28.4	6.17	6.16	90.9	90.7	3.60	3.58	3.70	5.6	5.5	5.6
						28.4		6.14		90.5		3.55			5.4		
			Middle	6.4	27.3	28.6	28.7	5.95	5.97	87.6	87.8	3.72	3.75		5.6	5.7	
						28.7		5.98		88.0		3.78			5.8		
			Bottom	11.8	27.3	29.2	29.2	5.87	5.88	86.4	86.6	3.81	3.79		5.8	5.7	
						29.2		5.89		86.7		3.76			5.6		
15/09/12	1016-1028	24/Cloudy	Surface	1.0	27.7	26.7	26.7	6.11	6.13	88.9	89.2	3.30	3.32	3.50	5.4	5.4	5.6
						26.7		6.14		89.4		3.34			5.4		
			Middle	6.3	27.5	27.0	27.0	5.97	5.96	86.8	86.6	3.51	3.53		5.6	5.6	
						26.9		5.94		86.4		3.55			5.6		
			Bottom	11.6	27.3	27.3	27.3	5.82	5.80	84.7	84.5	3.63	3.64		5.8	5.8	
						27.2		5.78		84.2		3.65			5.8		
18/09/12	1120-1136	27/Cloudy	Surface	1.0	26.7	26.6	26.6	6.11	6.17	89.4	90.3	3.48	3.45	3.64	5.2	5.2	5.4
						26.6		6.23		91.1		3.41			5.2		
			Middle	6.4	26.6	26.7	26.7	6.01	5.95	87.9	87.1	3.62	3.64		5.4	5.4	
						26.7		5.89		86.2		3.66			5.4		
			Bottom	11.8	26.5	26.9	26.9	5.62	5.72	82.2	83.7	3.79	3.85		5.6	5.6	
						26.8		5.82		85.1		3.90			5.6		
20/09/12	1518-1531	28/Cloudy	Surface	1.0	27.1	26.9	26.9	6.11	6.14	88.9	89.3	3.27	3.30	3.49	5.2	5.2	5.4
						26.8		6.16		89.7		3.33			5.2		
			Middle	6.4	26.9	27.4	27.4	6.02	6.00	87.7	87.5	3.50	3.52		5.4	5.4	
						27.4		5.98		87.2		3.53			5.4		
			Bottom	11.8	26.6	27.8	27.8	5.79	5.81	84.3	84.6	3.66	3.64		5.6	5.6	
						27.8		5.82		84.8		3.62			5.6		
22/09/12	1551-1605	30/Cloudy	Surface	1.0	27.0	26.8	26.9	6.04	6.03	88.5	88.4	3.65	3.68	3.88	5.2	5.2	5.4
						26.9		6.02		88.2		3.70			5.2		
			Middle	6.4	26.7	27.0	27.0	5.93	5.92	86.9	86.8	3.89	3.88		5.4	5.4	
						27.0		5.91		86.6		3.87			5.4		
			Bottom	11.8	26.6	27.1	27.1	5.83	5.82	85.4	85.3	4.08	4.09		5.6	5.6	
						27.0		5.81		85.1		4.10			5.6		
25/09/12	0918-0933	28/Cloudy	Surface	1.0	27.8	26.9	26.9	6.00	6.02	88.2	88.4	3.50	3.53	3.66	5.4	5.4	5.6
						26.9		6.03		88.6		3.55			5.4		
			Middle	6.5	27.8	26.9	27.0	5.97	5.95	87.7	87.5	3.58	3.61		5.6	5.6	
						27.0		5.93		87.2		3.63			5.6		
			Bottom	12.0	27.7	27.1	27.1	5.76	5.79	84.7	85.1	3.82	3.84		5.8	5.8	
						27.1		5.81		85.4		3.86			5.8		
27/09/12	1017-1030	27/Fine	Surface	1.0	27.7	26.9	27.0	6.08	6.10	90.0	90.3	3.40	3.39	3.53	5.4	5.3	5.4
						27.0		6.11		90.5		3.37			5.2		
			Middle	6.4	27.4	27.2	27.2	5.98	5.96	88.6	88.3	3.62	3.64		5.6	5.6	
						27.1		5.94		87.9		3.66			5.6		
			Bottom	11.8	27.3	27.4	27.5	5.85	5.84	86.6	86.4	3.54	3.57		5.4	5.4	
						27.5		5.82		86.1		3.59			5.4		
29/09/12	1018-1032	25/Fine	Surface	1.0	27.8	27.0	27.0	6.19	6.18	90.9	90.8	3.34	3.35	3.62	5.6	5.6	5.7
						27.0		6.17		90.7		3.36			5.6		
			Middle	6.7	27.6	27.1	27.2	5.83	5.85	85.7	86.0	3.63	3.66		5.6	5.7	
						27.2		5.87		86.3		3.69			5.8		
			Bottom	12.4	27.3	27.4	27.5	5.78	5.81	85.4	85.6	3.88	3.85		5.8	5.9	
						27.5		5.84		85.8		3.82			6.0		

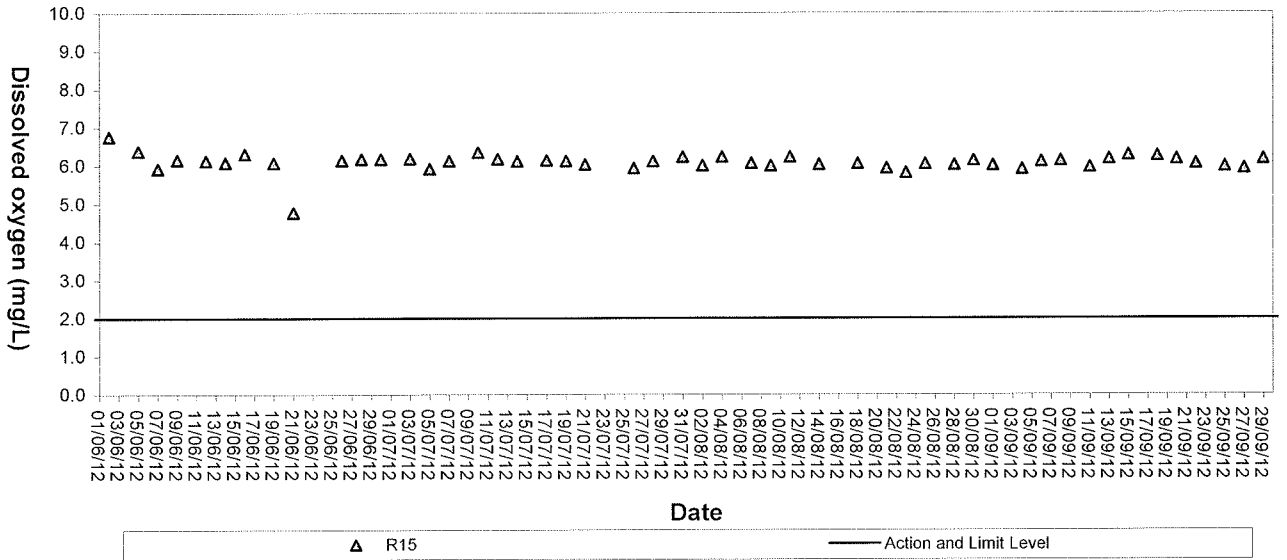


Appendix C3

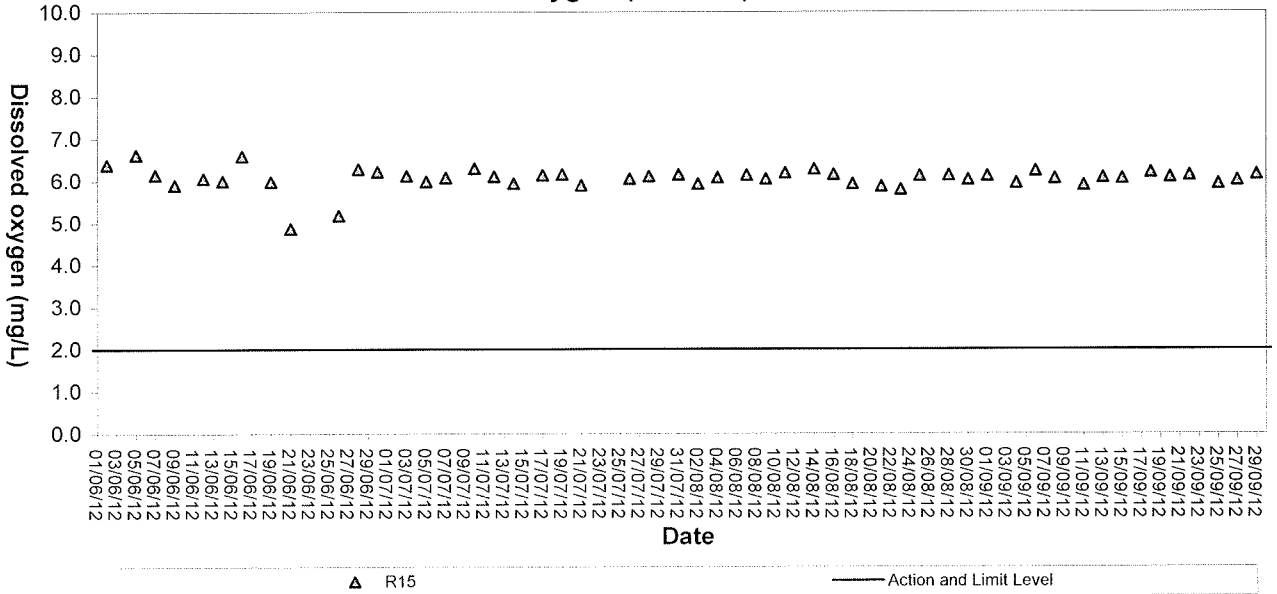
Graphical Plots of Impact Water Quality Monitoring Data



Dissolved Oxygen (Surface) at Mid-Flood Tide

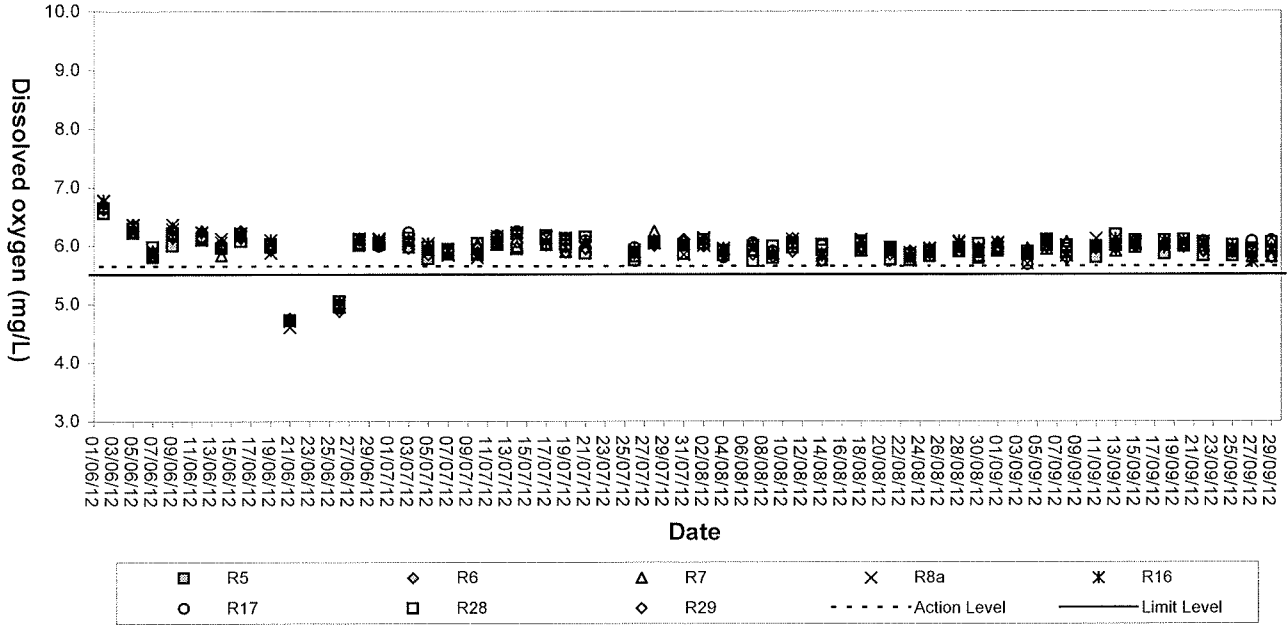


Dissolved Oxygen (Surface) at Mid-Ebb Tide

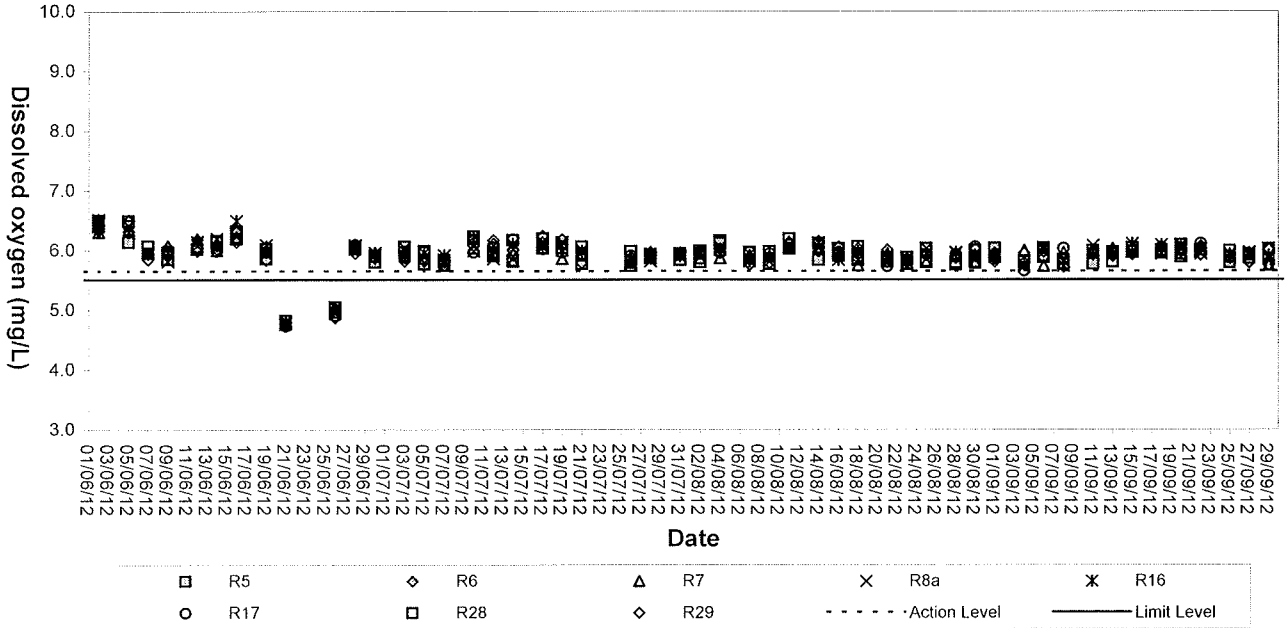




Dissolved Oxygen (Middle) at Mid-Flood Tide

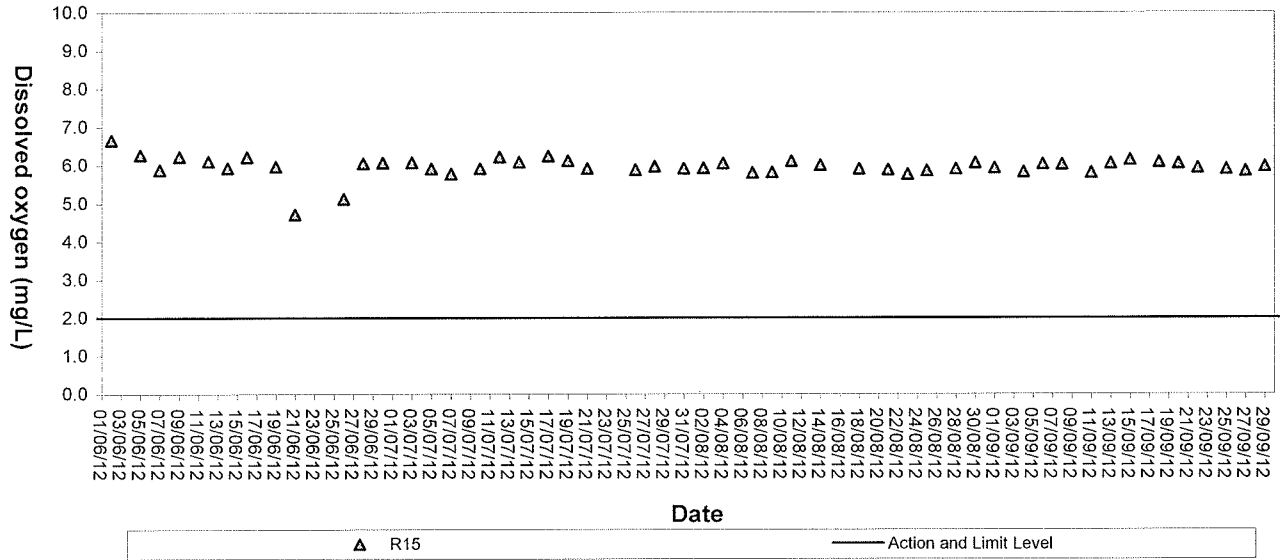


Dissolved Oxygen (Middle) at Mid-Ebb Tide

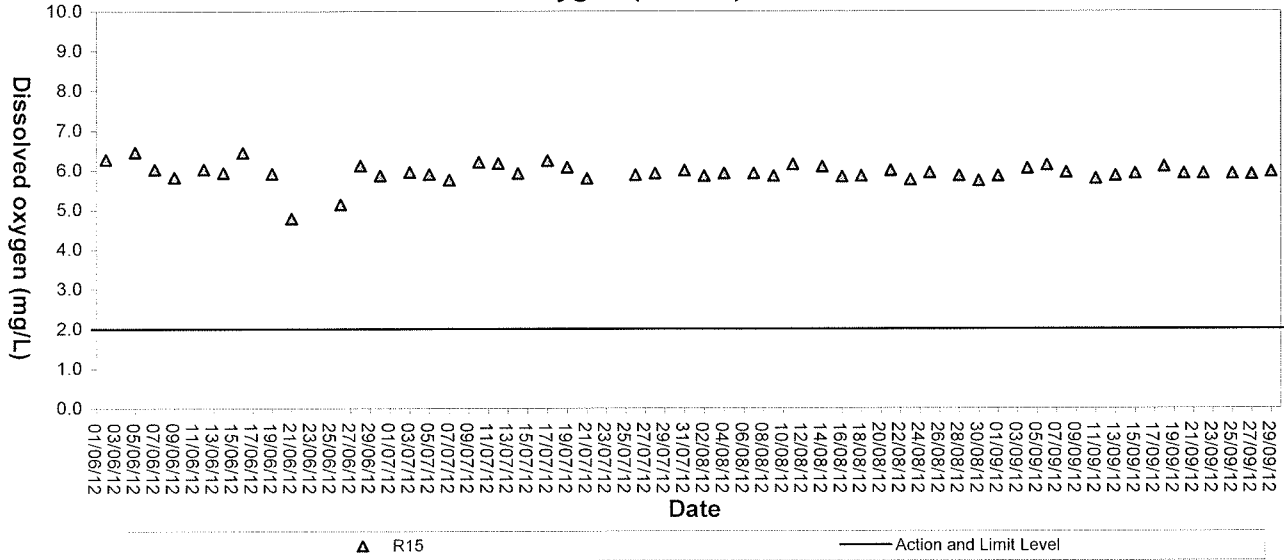




Dissolved Oxygen (Middle) at Mid-Flood Tide

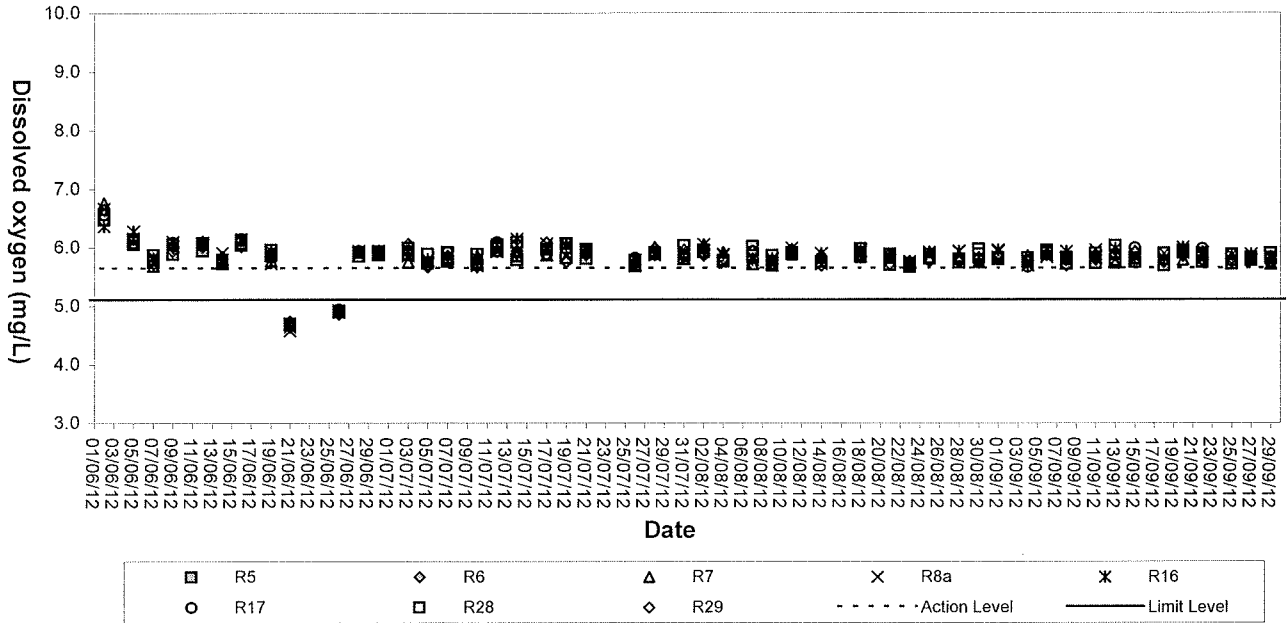


Dissolved Oxygen (Middle) at Mid-Ebb Tide

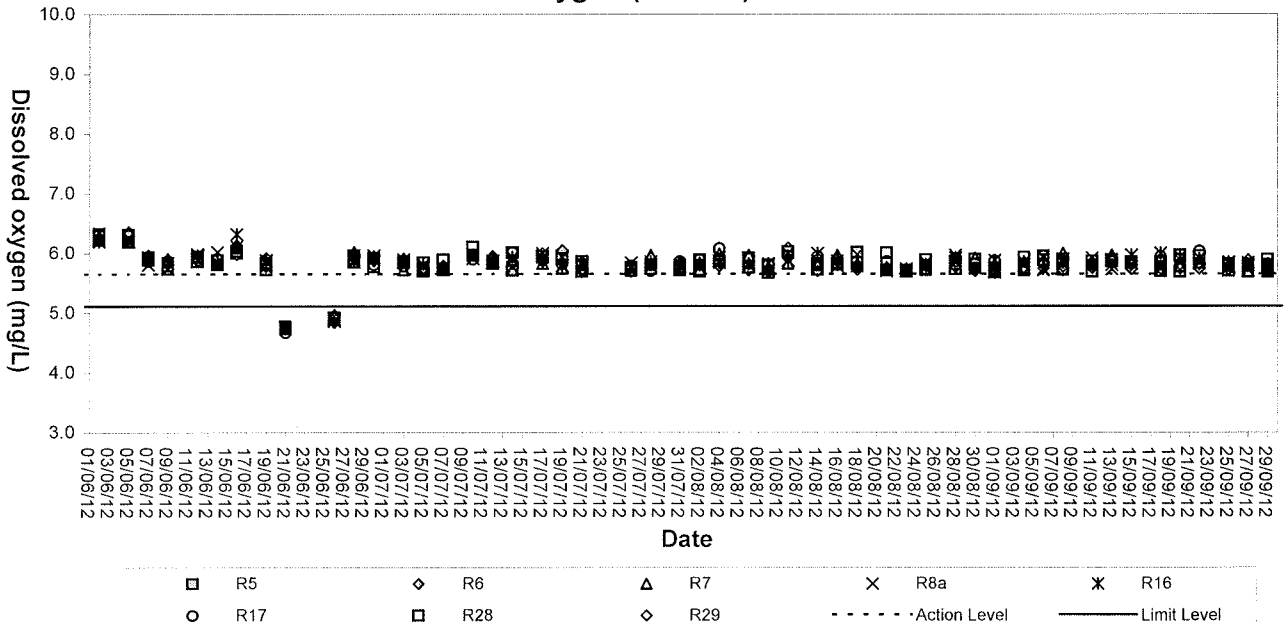




Dissolved Oxygen (Bottom) at Mid-Flood Tide

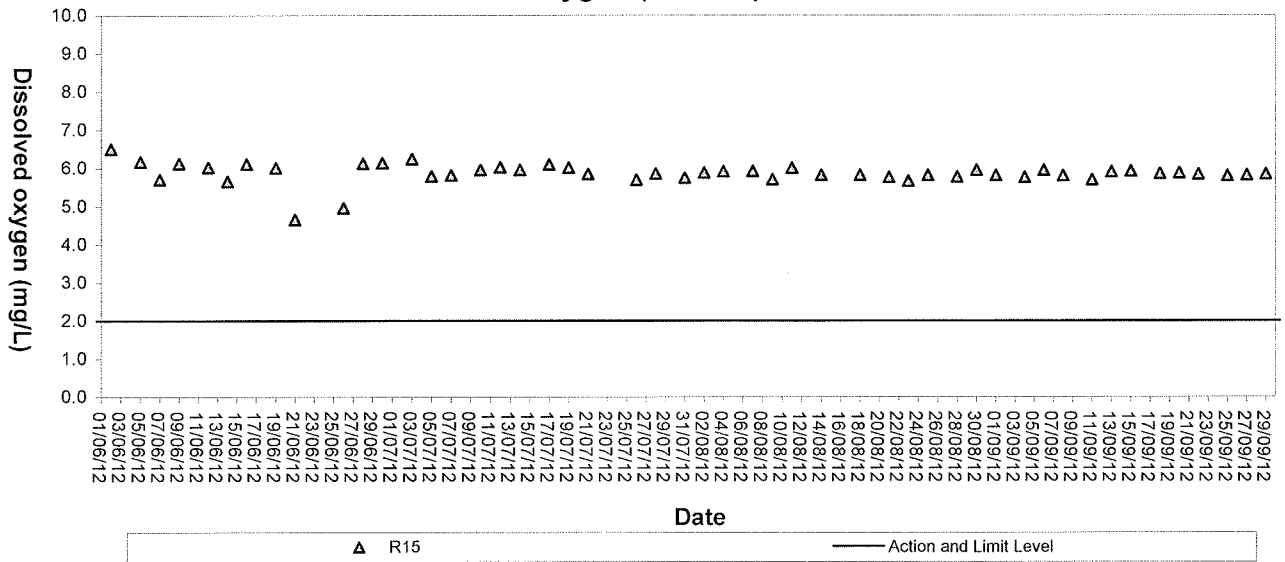


Dissolved Oxygen (Bottom) at Mid-Ebb Tide

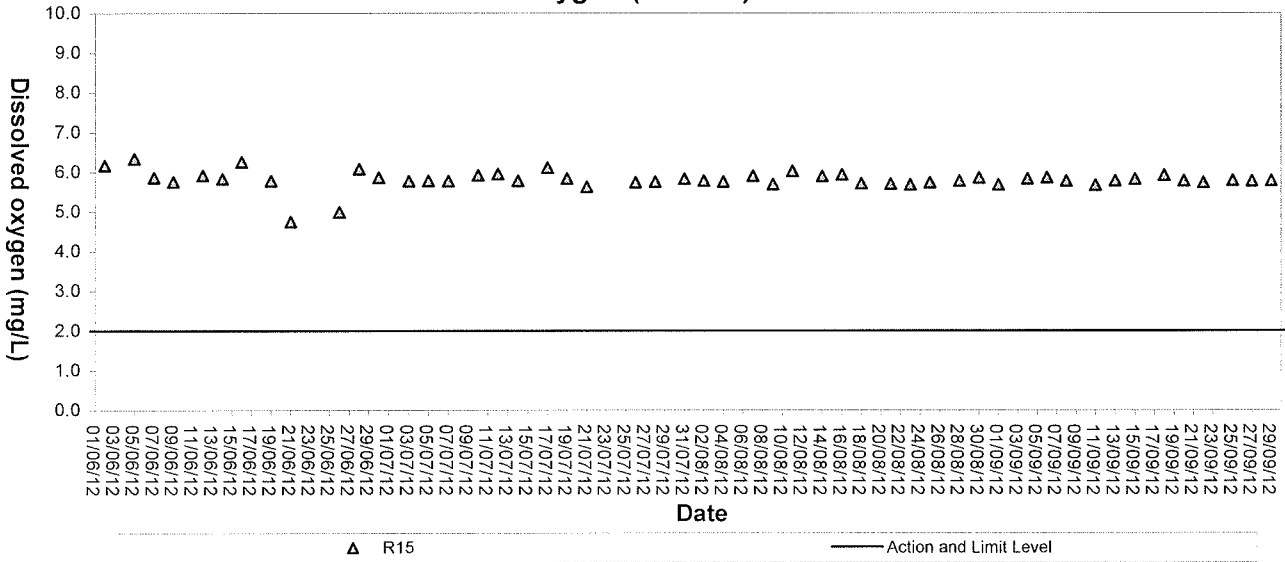




Dissolved Oxygen (Bottom) at Mid-Flood Tide

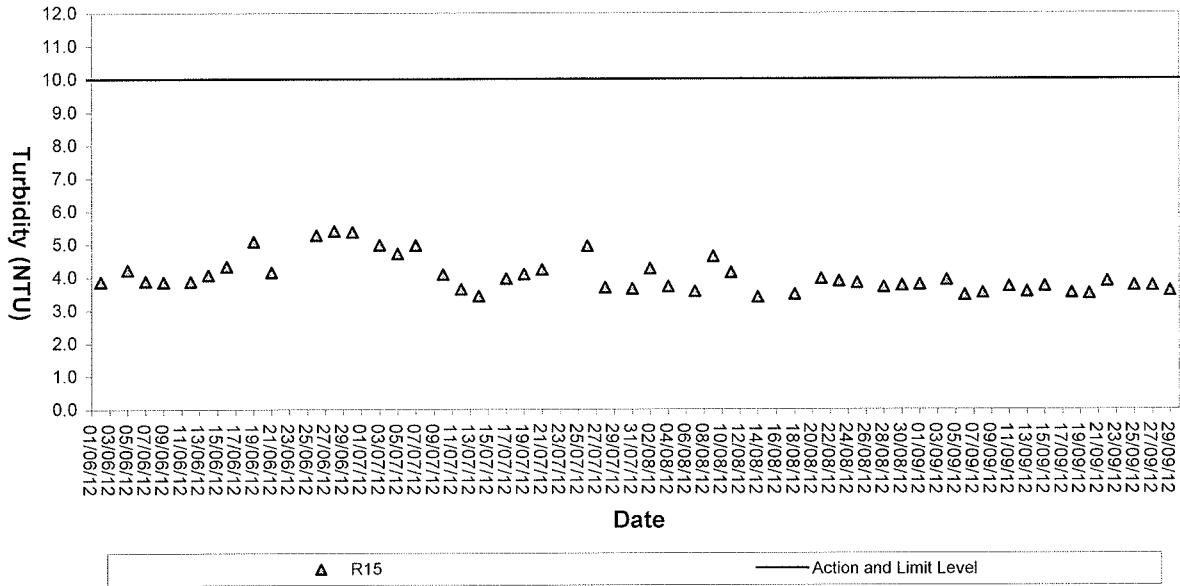


Dissolved Oxygen (Bottom) at Mid-Ebb Tide

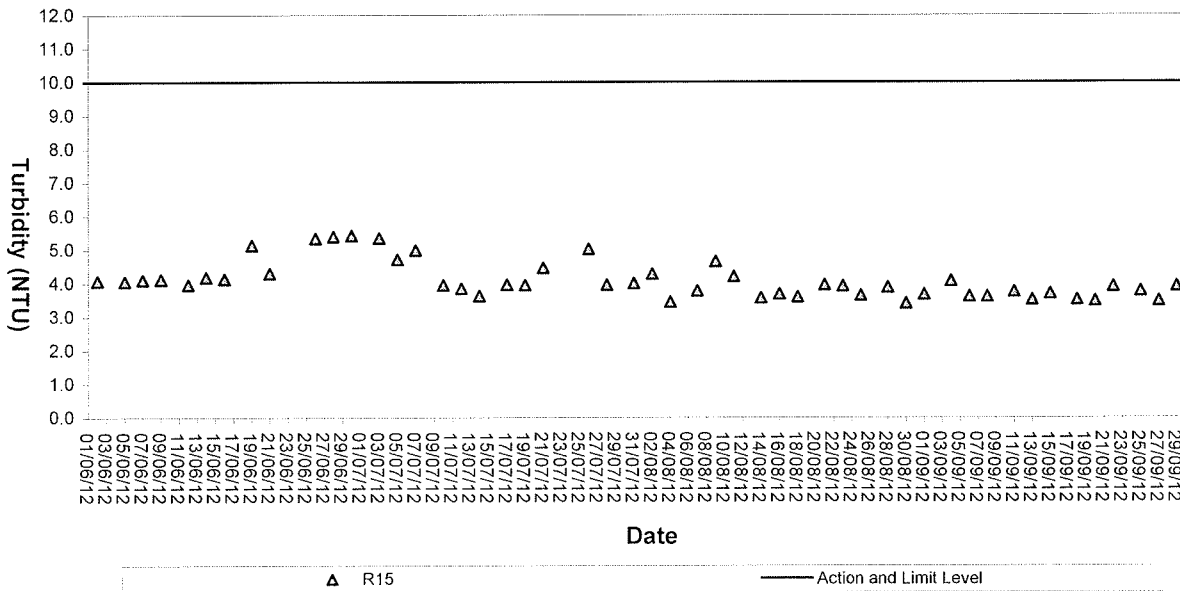




Turbidity (Depth-average) of R15 at Mid-Flood Tide

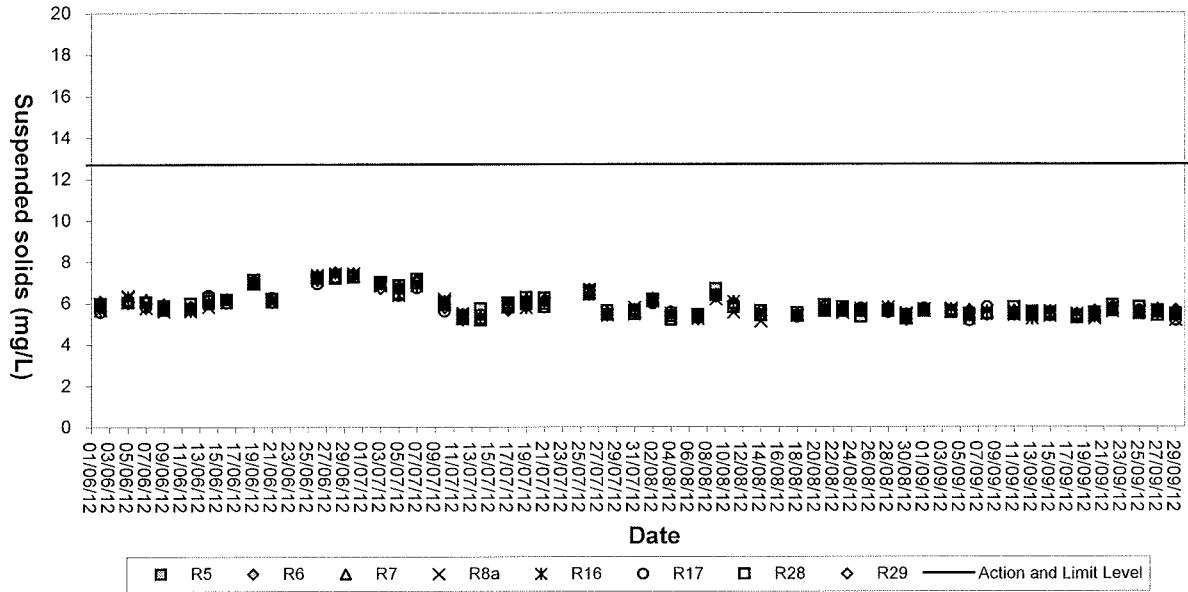


Turbidity (Depth-average) of R15 at Mid-Ebb Tide

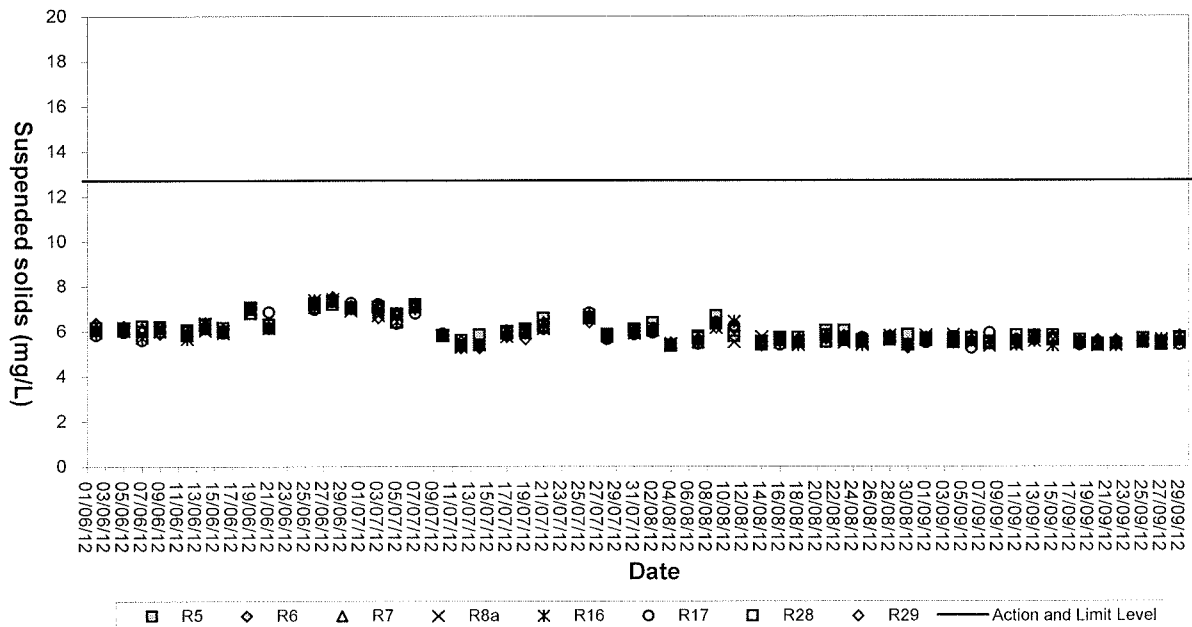




Suspended solids (Depth-average) at Mid-Flood Tide

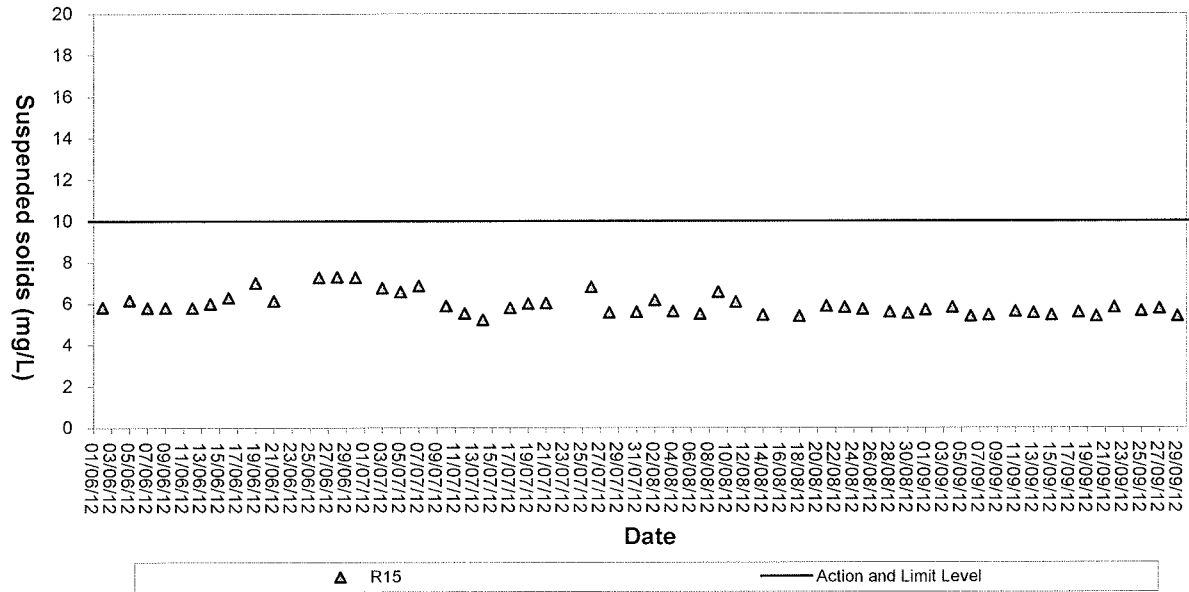


Suspended Solids (Depth-average) at Mid-Ebb Tide

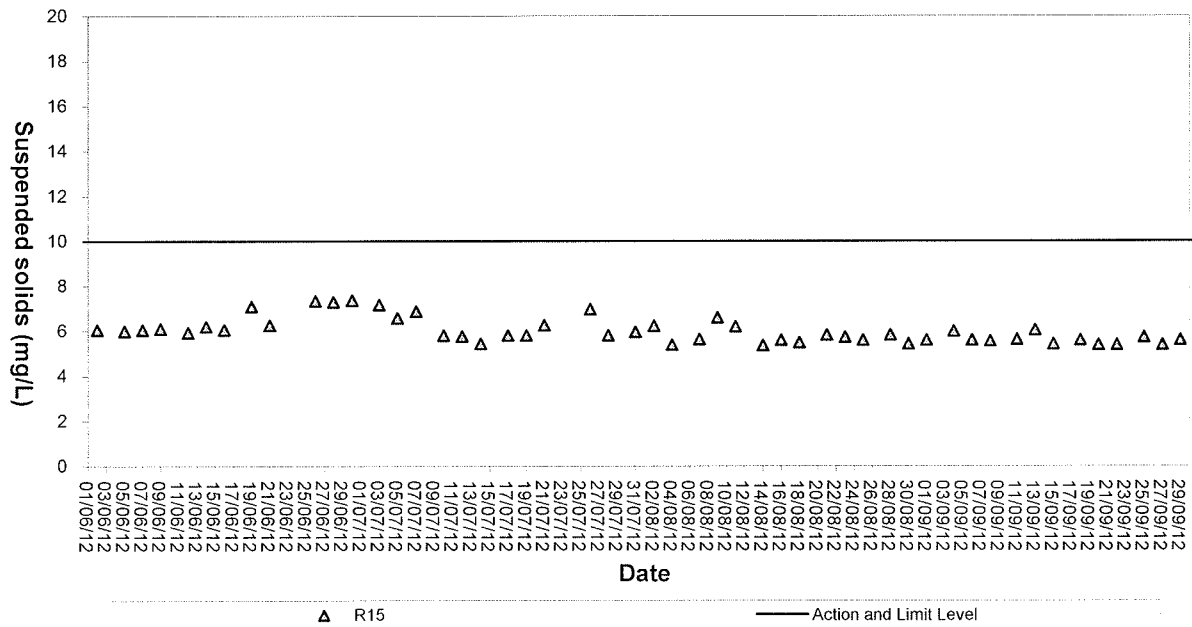




Suspended solids (Depth-average) of R15 at Mid-Flood Tide



Suspended Solids (Depth-average) of R15 at Mid-Ebb Tide





Appendix C4

QA/QC Results of Laboratory Analysis for Water Samples



QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
01/09/12	96.3	R5FS	0.0	R8FS	103.9
	95.4	R8FM	0.0	R17FM	94.0
	103.6	R17FB	8.7	C1FB	98.0
	100.2	C2FS	0.0	C4FB	103.9
	96.1	R5ES	0.0	R8ES	107.8
	104.3	R8EM	8.0	R17EM	104.3
	96.9	R17EB	0.0	C1EB	106.0
	96.2	C2ES	0.0	C4EB	104.3
04/09/12	104.8	R5FS	0.0	R8FS	98.0
	96.1	R8FM	8.7	R17FM	94.1
	92.8	R17FB	0.0	C1FB	93.8
	94.5	C2FS	8.7	C4FB	104.1
	105.7	R5ES	0.0	R8ES	102.0
	107.6	R8EM	0.0	R17EM	92.2
	107.4	R17EB	0.0	C1EB	95.7
	95.5	C2ES	0.0	C4EB	95.9
06/09/12	99.8	R5FS	0.0	R8FS	94.2
	101.0	R8FM	0.0	R17FM	95.9
	105.6	R17FB	0.0	C1FB	100.0
	93.8	C2FS	8.7	C4FB	94.0
	98.2	R5ES	0.0	R8ES	104.0
	105.4	R8EM	8.7	R17EM	95.7
	99.6	R17EB	0.0	C1EB	96.2
	98.8	C2ES	0.0	C4EB	95.9
08/09/12	101.6	R5FS	0.0	R8FS	94.1
	107.6	R8FM	0.0	R17FM	98.0
	102.5	R17FB	8.0	C1FB	95.9
	92.0	C2FS	0.0	C4FB	95.8
	94.7	R5ES	8.7	R8ES	93.9
	101.9	R8EM	0.0	R17EM	104.2
	108.0	R17EB	0.0	C1EB	101.9
	99.6	C2ES	0.0	C4EB	105.9
11/09/12	95.7	R5FS	0.0	R8FS	98.0
	99.2	R8FM	8.7	R17FM	100.0
	100.2	R17FB	0.0	C1FB	106.2
	92.2	C2FS	0.0	C4FB	92.0
	99.6	R5ES	8.7	R8ES	95.9
	96.5	R8EM	0.0	R17EM	106.3
	107.8	R17EB	8.7	C1EB	102.0
	94.5	C2ES	0.0	C4EB	106.0
13/09/12	94.1	R5FS	0.0	R8FS	90.6
	92.7	R8FM	0.0	R17FM	98.0
	96.3	R17FB	8.7	C1FB	94.3
	106.0	C2FS	0.0	C4FB	94.1
	96.0	R5ES	8.7	R8ES	101.9
	106.9	R8EM	0.0	R17EM	107.7
	98.4	R17EB	8.7	C1EB	101.9
	102.2	C2ES	0.0	C4EB	104.2

Note: (*)% Recovery of QC sample should be between 80% to 120%.
 (#) % Error of Sample Duplicate should be between -10% to 10%.
 (@) % Recovery of Sample Spike should be between 80% to 120%.



QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
15/09/12	106.2	R5FS	0.0	R8FS	102.1
	96.4	R8FM	0.0	R17FM	97.9
	101.0	R17FB	0.0	C1FB	93.6
	93.7	C2FS	0.0	C4FB	103.9
	96.8	R5ES	8.7	R8ES	98.0
	94.0	R8EM	0.0	R17EM	104.3
	94.0	R17EB	8.7	C1EB	100.0
	94.1	C2ES	0.0	C4EB	102.0
18/09/12	93.7	R5FS	0.0	R8FS	98.0
	94.7	R8FM	8.7	R17FM	93.9
	93.8	R17FB	8.7	C1FB	105.7
	106.5	C2FS	0.0	C4FB	92.2
	94.6	R5ES	0.0	R8ES	94.0
	107.3	R8EM	0.0	R17EM	103.9
	103.4	R17EB	8.7	C1EB	103.8
	92.9	C2ES	0.0	C4EB	93.9
20/09/12	106.9	R5FS	0.0	R8FS	100.0
	103.7	R8FM	0.0	R17FM	106.3
	102.5	R17FB	8.7	C1FB	96.0
	102.2	C2FS	0.0	C4FB	91.7
	96.9	R5ES	0.0	R8ES	107.8
	98.8	R8EM	9.5	R17EM	105.9
	102.6	R17EB	0.0	C1EB	93.9
	101.0	C2ES	0.0	C4EB	106.0
22/09/12	93.2	R5FS	8.7	R8FS	108.2
	107.7	R8FM	0.0	R17FM	100.0
	100.8	R17FB	0.0	C1FB	92.2
	95.8	C2FS	0.0	C4FB	102.0
	97.4	R5ES	0.0	R8ES	95.7
	94.7	R8EM	9.5	R17EM	94.1
	107.9	R17EB	0.0	C1EB	96.0
	93.1	C2ES	0.0	C4EB	96.2
25/09/12	97.0	R5FS	0.0	R8FS	104.2
	105.4	R8FM	0.0	R17FM	92.2
	98.6	R17FB	8.7	C1FB	94.0
	97.8	C2FS	0.0	C4FB	92.0
	94.4	R5ES	0.0	R8ES	105.8
	107.9	R8EM	0.0	R17EM	95.7
	107.9	R17EB	0.0	C1EB	106.2
	96.3	C2ES	0.0	C4EB	92.3
27/09/12	104.9	R5FS	0.0	R8FS	96.2
	99.4	R8FM	0.0	R17FM	102.0
	94.0	R17FB	8.7	C1FB	94.2
	102.3	C2FS	0.0	C4FB	101.9
	95.5	R5ES	0.0	R8ES	100.0
	95.8	R8EM	0.0	R17EM	96.1
	102.4	R17EB	8.7	C1EB	98.0
	97.3	C2ES	0.0	C4EB	98.1

Note: (*) % Recovery of QC sample should be between 80% to 120%.
 (#) % Error of Sample Duplicate should be between -10% to 10%.
 (@) % Recovery of Sample Spike should be between 80% to 120%.



QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
29/09/12	99.8	R5FS	0.0	R8FS	94.2
	101.0	R8FM	0.0	R17FM	95.9
	105.6	R17FB	0.0	C1FB	100.0
	93.8	C2FS	8.7	C4FB	94.0
	98.2	R5ES	0.0	R8ES	104.0
	105.4	R8EM	8.7	R17EM	93.6
	99.6	R17EB	0.0	C1EB	96.2
	98.8	C2ES	0.0	C4EB	95.9

Note: (*) % Recovery of QC sample should be between 80% to 120%.
(#) % Error of Sample Duplicate should be between -10% to 10%.
(@) % Recovery of Sample Spike should be between 80% to 120%.



Appendix D

Event-Action Plans



Event and Action Plan for Construction Noise

Event	Action			
	ET Leader	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify IEC and the Contractor. 2. Carry out investigation. 3. Report the results of investigation to IEC and the Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation measures. 	<ol style="list-style-type: none"> 1. Review with analysed results submitted by ET. 2. Review the proposed remedial measures by the Contractor and advise ER accordingly. 3. Supervise the implement of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Identify the source. 2. Notify IEC, ER, EPD and the Contractor. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform IEC, ER, and EPD the causes & actions taken for the exceedances. 7. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET Leader and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly. 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problem still not under control. 5. Stop the relevant activity of works as determined by the ER until the exceedance is abated.



Event and Action Plan for Water Quality for Construction Phase

Event	Action			
	ET Leader	IEC	ER	Contractor
Action Level				
Exceedance for one sample	<ol style="list-style-type: none"> 1. Repeat in-situ measurement to confirm finding; 2. Identify source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; and 6. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; and 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC on the proposed mitigation measures; and 2. Make agreement on the mitigation measures to be implemented. 	<ol style="list-style-type: none"> 1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER; and 6. Implement the agreed mitigation measures.
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Repeat in-situ measurement to confirm finding; 2. Identify source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; and 8. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; and 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; and 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days; and 6. Implement the agreed mitigation measures.



Event and Action Plan for Water Quality for Construction Phase

Event	Action			
	ET Leader	IEC	ER	Contractor
Limit Level				
Exceedance for one sample	<ol style="list-style-type: none"> 1. Repeat in-situ measurement to confirm finding; 2. Identify source(s) of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; and 7. Increase the monitoring frequency to daily until no exceedance of Limit level. 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; and 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; and 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; and 4. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and ER and propose mitigation measures to IEC and ER within 3 working days; and 6. Implement the agreed mitigation measures.
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Repeat in-situ measurement to confirm finding; 2. Identify source(s) of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; and 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; and 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; and 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; and 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit Level. 	<ol style="list-style-type: none"> 1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures; and 7. As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities.



Appendix E

Work Programme

Contract No. 9/WSD/08
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun

Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish
General Information						
		1156	07SEP09 A	05NOV12	07SEP09 A	07SEP09 A
Key Dates						
KD-1010	Contract Commencement Date	0	07SEP09 A	05NOV12 *	07SEP09 A	07SEP09 A
KD-1020	Contract Completion	0				
KD-1030	Works Period of Section 1 Works (791Days)	830	07SEP09 A	06NOV11	07SEP09 A	07SEP09 A
KD-1040	Works Period of Section 2 Works (426Days)	449	07SEP09 A	06NOV10	07SEP09 A	07SEP09 A
KD-1050	Works Period of Section 4 Works (549Days)	576	07SEP09 A	09MAR11	07SEP09 A	07SEP09 A
KD-1060	Works Period of Section 5 Works (1156Days)	1156	07SEP09 A	05NOV12	07SEP09 A	07SEP09 A
Preliminaries						
B1-1000	Mobilization	90	07SEP09 A	06DEC09 A	07SEP09 A	07SEP09 A
B1-1110	Site Office	60	16NOV09 A	16JAN10	16NOV09 A	16NOV09 A
B1-1120	Maintenance/Service of Preliminary Items	936	17JAN10	09AUG12	17JAN10	17JAN10
B1-1130	Clearance & Demobilisation	88	10AUG12	05NOV12	10AUG12	10AUG12
B1-1140	Environmental Monitoring	1026	28DEC09 A	18OCT12	28DEC09 A	28DEC09 A
B1-1150	Material Approval For Water Mains & Accessories	100	07SEP09 A	18FEB10	07SEP09 A	07SEP09 A
B1-1160	Material Procurement & Delivery Start	60	28DEC09 A	01FEB10	28DEC09 A	28DEC09 A
B1-1160B	Delivery of Valve, Actuators, Flow Meter & E&M	400	14JUN10	18JUL11 *	14JUN10	14JUN10
B1-1170	CCTV & Monitoring Of Existing DSD Drainage	610	18JAN10	19SEP11	15APR10	15APR10
B1-1180	Monitoring of HYD Structure	610	06MAR10	05NOV11	15APR10	15APR10
Section 1						
		937	07SEP09 A	31MAR12	07SEP09 A	07SEP09 A
Land Works						
General						
S1-1010	Approval & Consent - XP, TTA, MS & Temp	180	07SEP09 A	05MAR10	07SEP09 A	07SEP09 A
S1-1020	Trial Pit & Utilities Detection (Except E2 & K)	120	01DEC09 A	16MAR10	01DEC09 A	01DEC09 A
S1-1030	Portion H2 Cycle Track & Footpath Proposal	40	07SEP09 A	08OCT09 A	07SEP09 A	07SEP09 A
S1-1040	Portion H2 Diversion Route For Cycle Track	60	07OCT09 A	28NOV09 A	07OCT09 A	07OCT09 A
S1-1050	Portion H2 Submission For Hoarding Mural Design	90	07SEP09 A	17FEB10	07SEP09 A	07SEP09 A
S1-1060	Portion H2 Set Up For Hoarding Approved Design	30	18FEB10	19MAR10	07OCT12	07OCT12
S1-1080	Initial & Utilities Survey (Except E2 & K)	120	05OCT09 A	04MAR10	05OCT09 A	05OCT09 A

Start date	07SEP09
Finish date	05NOV12
Data date	04JAN10
Run date	01AUG12
Page number	1A
c Primavera Systems, Inc.	

3 Months Rolling Program (July 2012)

Wo Hing - Penta-Ocean Joint Venture

Early bar
 Progress bar
 Critical bar
 Summary bar
 Start milestone point
 Finish milestone point

Contract No. 9/WSD/08
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun

Act ID Description Orig Dur Early Start Early Finish Late Start 2009 2010 2011 2012

Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	2009	2010	2011	2012
S1-2010	Final Pipe Testing & Reinstatement	45	16FEB12	31MAR12	01NOV11				
S1-2020	Completion of Section 1 Works	0		15DEC11*					Final Pipe 1 Completion of Section 1
Portion C1									
S1-3010	MTRCL Consent For Works Commencement	180	07SEP09 A	05MAR10	07SEP09 A				MTRCL Consent For Works Commencement
S1-3020	MTRCL Structure Stability Monitoring	270	28MAY10	21FEB11	05JAN11				MTRCL Structure Stability Monitoring
S1-3030	Portion C1 Pipe Works CH195.0-237.5 (O)	90	24JUN10	21SEP10	19MAR11				Portion C1 Pipe Works CH195.0-237.5 (O)
S1-3030A10	Preparation & Submission of Risk Assessment	40	22FEB10*	02APR10	02NOV10				Preparation & Submission of Risk Assessment
S1-3030A20	Preparation & Submission of Method Statement	40	22FEB10	02APR10	02NOV10				Preparation & Submission of Method Statement
S1-3030A30	Preparation & Submission of Temp. Design	40	22FEB10	02APR10	02NOV10				Preparation & Submission of Temp. Design
S1-3030B10	Excavation & Shoring	80	28MAY10	15AUG10	12DEC10				Excavation & Shoring
S1-3030B20	Pipe Laying & Welding	50	17JUL10	04SEP10	31JAN11				Pipe Laying & Welding
S1-3030B30	Backfilling & Reinstatement	10	05SEP10	14SEP10	22MAR11				Backfilling & Reinstatement
S1-3040	Portion C1 Trough Construction CH237.5-290.0	60	06MAR10	04MAY10	15APR10				Portion C1 Trough Construction CH237.5-290.0
S1-3040A20	Preparation & Submission of Risk Assessment	28	17JUL10	13AUG10	15MAR11				Preparation & Submission of Risk Assessment
S1-3040A30	Preparation & Submission of Method Statement	28	17JUL10	13AUG10	15MAR11				Preparation & Submission of Method Statement
S1-3040A40	Preparation & Submission of Temp. Works	28	17JUL10	13AUG10	15MAR11				Preparation & Submission of Temp. Works
S1-3040B10	Installation Of Settlement Marker	3	31JUL10	02AUG10	29MAR11				Installation Of Settlement Marker
S1-3040B20	Excavation & Shoring For Pipe Trough (Stage 1)	15	15SEP10	29SEP10	01APR11				Excavation & Shoring For Pipe Trough (Stage 1)
S1-3040B30	Formation & Blinding For Trough	3	30SEP10	02OCT10	16APR11				Formation & Blinding For Trough
S1-3040B40	Formwork & Reinforcement For Trough	10	03OCT10	12OCT10	19APR11				Formwork & Reinforcement For Trough
S1-3040B50	Concreting Of Pipe Trough	3	13OCT10	15OCT10	29APR11				Concreting Of Pipe Trough
S1-3040C10	Excavation & Shoring For Watermain	15	16OCT10	30OCT10	02MAY11				Excavation & Shoring For Watermain
S1-3050	Portion C1 Pipe Works CH237.5-290 (PT)	50	05MAY10	23JUN10	22DEC10				Portion C1 Pipe Works CH237.5-290 (PT)
S1-3050B10	Pipe Laying & Connection (Welding)	10	31OCT10	09NOV10	17MAY11				Pipe Laying & Connection (Welding)
S1-3050B20	Concrete Surround for Installed Watermain	6	10NOV10	15NOV10	27MAY11				Concrete Surround for Installed Watermain
S1-3050B30	Backfilling Of Pipe Trough	5	16NOV10	20NOV10	02JUN11				Backfilling Of Pipe Trough
S1-3050B40	Backfilling & Reinstatement	10	21NOV10	30NOV10	07JUN11				Backfilling & Reinstatement
S1-3060	Portion C1 Pipe Works CH290.0-325.5 (O)	83	01DEC10	21FEB11	17JUN11				Portion C1 Pipe Works CH290.0-325.5 (O)
S1-3070	Area C1 Portional Pipe Testing	30	22FEB11	23MAR11	02OCT11				Area C1 Portional Pipe Testing
Portion E1A									
S1-4020	Portion E1A Pipe Works CH387.5-576.9 (O)	180	17MAR10	12SEP10	24AUG10				Portion E1A Pipe Works CH387.5-576.9 (O)
S1-4020A20	Preparation & Submission of Risk Assessment	40	03MAR10	11APR10	10AUG10				Preparation & Submission of Risk Assessment
S1-4020A30	Preparation & Submission of Method Statement	40	03MAR10	11APR10	10AUG10				Preparation & Submission of Method Statement

Start date	07SEP09	Early bar
Finish date	05NOV12	Progress bar
Data date	04JAN10	Critical bar
Run date	01AUG12	Summary bar
Page number	2A	Start milestone point
c Primavera Systems, Inc.		Finish milestone point

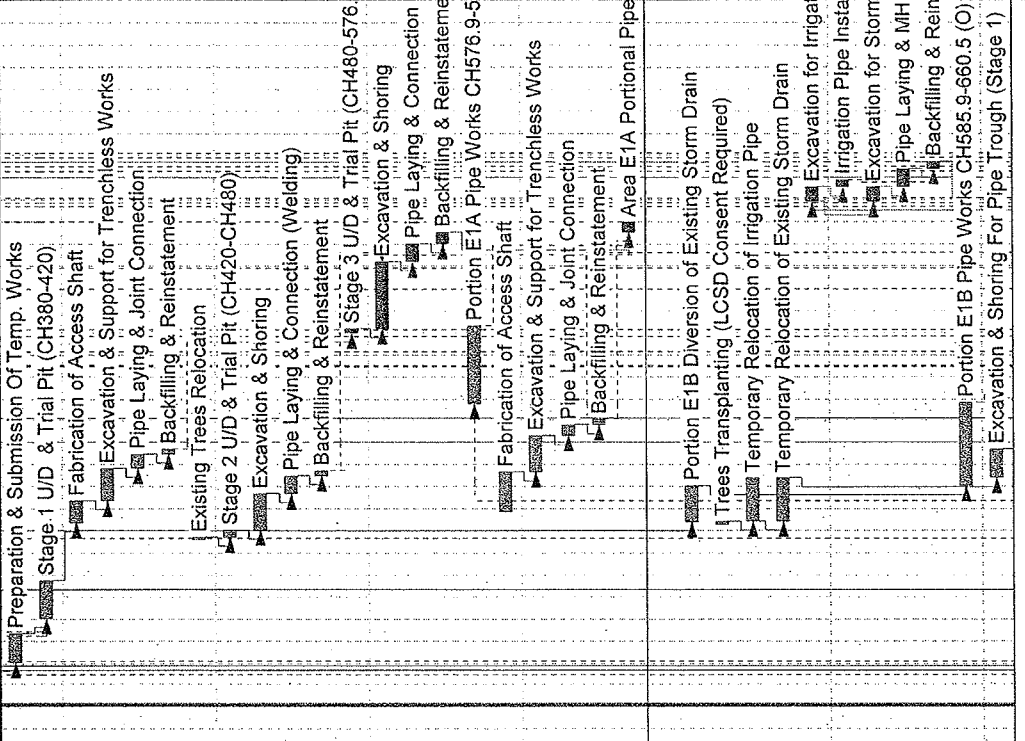
3 Months Rolling Program (July 2012)

Wo Hing - Penta-Ocean Joint Venture

Contract No. 9/WVSD/08
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun

Act ID Orig Dur Description Early Start Early Finish Late Start

Act ID	Orig Dur	Description	Early Start	Early Finish	Late Start
S1-4020A40	40	Preparation & Submission Of Temp. Works	03MAR10	11APR10	10AUG10
S1-4020B10	52	Stage 1 U/D & Trial Pit (CH380-420)	03MAY10	23JUN10	10OCT10
S1-4020B20	30	Fabrication of Access Shaft	12SEP10	11OCT10	19FEB11
S1-4020B30	45	Excavation & Support for Trenchless Works	12OCT10	25NOV10	21MAR11
S1-4020B40	20	Pipe Laying & Joint Connection	26NOV10	15DEC10	05MAY11
S1-4020B50	7	Backfilling & Reinstatement	16DEC10	22DEC10	25MAY11
S1-4020C05	4	Existing Trees Relocation	19AUG10 *	22AUG10	03JUN11
S1-4020C10	10	Stage 2 U/D & Trial Pit (CH420-CH480)	23AUG10	01SEP10	07JUN11
S1-4020C20	50	Excavation & Shoring	02SEP10	21OCT10	17JUN11
S1-4020C30	25	Pipe Laying & Connection (Welding)	22OCT10	15NOV10	06AUG11
S1-4020C40	7	Backfilling & Reinstatement	16NOV10	22NOV10	31AUG11
S1-4020D10	6	Stage 3 U/D & Trial Pit (CH480-576.9)	01JUN11 *	06JUN11	01JUN11
S1-4020D20	92	Excavation & Shoring	07JUN11	06SEP11	07JUN11
S1-4020D30	25	Pipe Laying & Connection (Welding)	07SEP11	01OCT11	07SEP11
S1-4020D40	16	Backfilling & Reinstatement	02OCT11	17OCT11	02OCT11
S1-4030	108	Portion E1A Pipe Works CH576.9-585.9 (TL-B)	23FEB11 *	10JUN11	02JUL11
S1-4030B10	55	Fabrication of Access Shaft	27SEP10 *	20NOV10	12MAR11
S1-4030B20	50	Excavation & Support for Trenchless Works	21NOV10	09JAN11	06MAY11
S1-4030B30	15	Pipe Laying & Joint Connection	10JAN11	24JAN11	25JUN11
S1-4030B40	8	Backfilling & Reinstatement	25JAN11	01FEB11	10OCT11
S1-4050	14	Area E1A Portional Pipe Testing	18OCT11	31OCT11	18OCT11
Portion E1B - E2 SMM					
S1-4010	50	Portion E1B Diversion of Existing Storm Drain	13SEP10	01NOV10	06MAY11
S1-4010A10	5	Trees Transplanting (LCSD Consent Required)	09SEP10 *	13SEP10	26JAN11
S1-4010A20	60	Temporary Relocation of Irrigation Pipe	14SEP10	12NOV10	31JAN11
S1-4010A30	60	Temporary Relocation of Existing Storm Drain	14SEP10	12NOV10	31JAN11
S1-4010A50	20	Excavation for Irrigation Pipe Perm. Diversion	29NOV11	18DEC11	24AUG11
S1-4010A60	10	Irrigation Pipe Installation	19DEC11	28DEC11	28SEP11
S1-4010A70	20	Excavation for Storm Drain Diversion	29NOV11	18DEC11	24AUG11
S1-4010A80	25	Pipe Laying & MH Construction	19DEC11	12JAN12	13SEP11
S1-4010A90	10	Backfilling & Reinstatement	13JAN12	22JAN12	08OCT11
S1-4040	115	Portion E1B Pipe Works CH585.9-660.5 (O)	02NOV10	24FEB11	25JUN11
S1-4040B10	40	Excavation & Shoring For Pipe Trough (Stage 1)	13NOV10	22DEC10	01APR11



2009 2010 2011 2012
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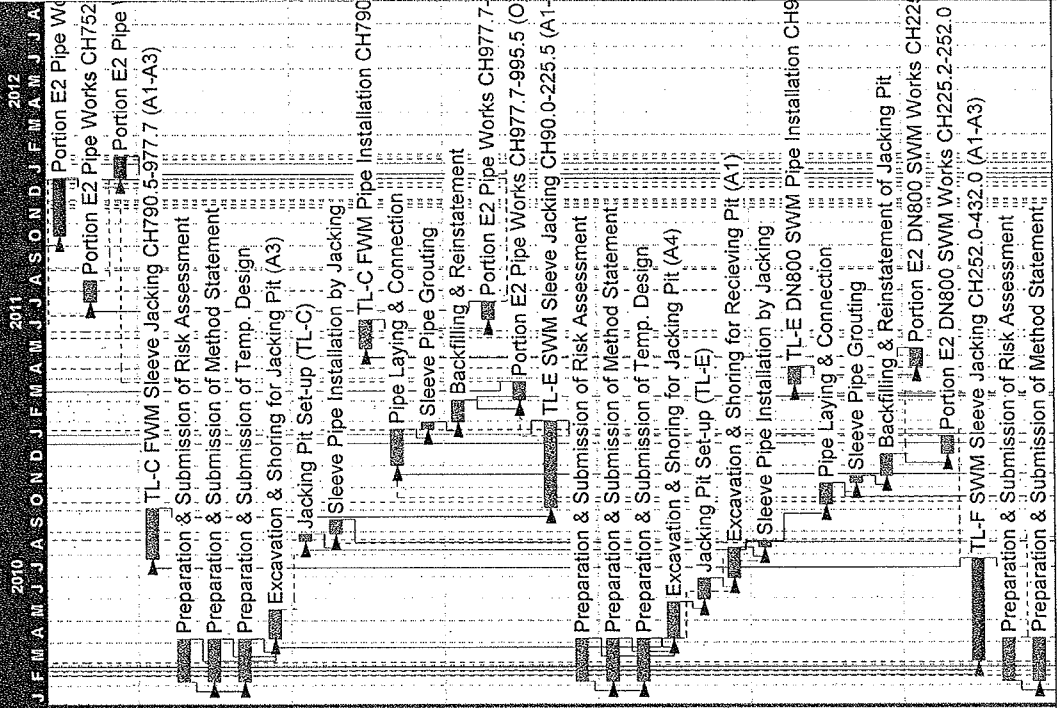
Start date 07SEP09
Finish date 05NOV12
Data date 04JAN10
Run date 01AUG12
Page number 3A
c Primavera Systems, Inc.

Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

3 Months Rolling Program (July2012)

Wo Hing - Penta-Ocean Joint Venture

Contract No. 9/WSD/08
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun



Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start
S1-5070B10	Portion E2 Pipe Works CH698.5-752.5 (UC)	80	15OCT11	02JAN12	30JUN11
S1-5080	Portion E2 Pipe Works CH752.5-790.5 (O)	30	16JUL11	14AUG11	18SEP11
S1-5080A	Portion E2 Pipe Works CH752.5-790.5 (O)	30	03JAN12	01FEB12	18SEP11
S1-5090	TL-C FWM Sleeve Jacking CH790.5-977.7	70	26JUL10	03OCT10	28SEP10
S1-5090A10	Preparation & Submission of Risk Assessment	60	06FEB10 *	06APR10	03SEP10
S1-5090A20	Preparation & Submission of Method Statement	60	06FEB10	06APR10	03SEP10
S1-5090A30	Preparation & Submission of Temp. Design	60	06FEB10	06APR10	03SEP10
S1-5090B10	Excavation & Shoring for Jacking Pit (A3)	40	07APR10	16MAY10	02NOV10
S1-5090B20	Jacking Pit Set-up (TL-C)	10	19AUG10	28AUG10	12DEC10
S1-5090C10	Sleeve Pipe Installation by Jacking	20	29AUG10	17SEP10	22DEC10
S1-5095	TL-C FWM Pipe Installation CH790.5-977.7	40	12MAY11	20JUN11	15JUL11
S1-5095B10	Pipe Laying & Connection	50	02DEC10	20JAN11	07MAR11
S1-5095B20	Sleeve Pipe Grouting	10	21JAN11	30JAN11	26APR11
S1-5095B30	Backfilling & Reinstatement	30	31JAN11	01MAR11	06MAY11
S1-5100	Portion E2 Pipe Works CH977.7-995.5 (O)	25	21JUN11	15JUL11	24AUG11
S1-5100A	Portion E2 Pipe Works CH977.7-995.5 (O)	25	02MAR11	26MAR11	05JUN11
S1-5110	TL-E SWM Sleeve Jacking CH90.0-225.5 (A1-A4)	120	04OCT10	31JAN11	07DEC10
S1-5110A10	Preparation & Submission of Risk Assessment	60	06FEB10 *	06APR10	12MAY10
S1-5110A20	Preparation & Submission of Method Statement	60	06FEB10	06APR10	12MAY10
S1-5110A30	Preparation & Submission of Temp. Design	60	06FEB10	06APR10	12MAY10
S1-5110B10	Excavation & Shoring for Jacking Pit (A4)	50	07APR10	26MAY10	11JUL10
S1-5110B20	Jacking Pit Set-up (TL-E)	30	30MAY10	28JUN10	02SEP10
S1-5110B30	Excavation & Shoring for Receiving Pit (A1)	42	29JUN10	09AUG10	02OCT10
S1-5110C10	Sleeve Pipe Installation by Jacking	9	10AUG10	18AUG10	13NOV10
S1-5115	TL-E DN800 SWM Pipe Installation CH90.0-225.5	25	23MAR11	16APR11	26MAY11
S1-5115B10	Pipe Laying & Connection	30	08OCT10	06NOV10	11JAN11
S1-5115B20	Sleeve Pipe Grouting	10	07NOV10	16NOV10	01APR11
S1-5115B30	Backfilling & Reinstatement of Jacking Pit	30	17NOV10	16DEC10	11APR11
S1-5120	Portion E2 DN800 SWM Works CH225.5-252.0	25	17APR11	11MAY11	20JUN11
S1-5120A	Portion E2 DN800 SWM Works CH225.2-252.0	25	17DEC10	10JAN11	11MAY11
S1-5130	TL-F SWM Sleeve Jacking CH252.0-432.0	142	06MAR10	25JUL10	06MAR10
S1-5130A10	Preparation & Submission of Risk Assessment	60	06FEB10 *	06APR10	08DEC10
S1-5130A20	Preparation & Submission of Method Statement	60	06FEB10	06APR10	08DEC10

Start date	07SEP09
Finish date	05NOV12
Data date	04JAN10
Run date	01AUG12
Page number	6A
c Primavera Systems, Inc.	

3 Months Rolling Program (July 2012)

Wo Hing - Penta-Ocean Joint Venture

Early bar
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Contract No. 9/WWSD/08
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun

Act ID: S1-5130A30, S1-5130B10, S1-5130C10, S1-5135, S1-5135B10, S1-5135B20, S1-5135B30, S1-5140, S1-5140B10, Portion F, S1-6010, S1-6010B10, S1-6010B20, S1-6010B30, S1-6010B40, S1-6010C10, S1-6020, S1-6020A10, S1-6030, Portion H1, S1-7010, S1-7020, S1-7030, S1-7040, Portion J, S1-8010, S1-8020, S1-8020B10, S1-8020B20, S1-8020B30, S1-8020B40, S1-8020B50, S1-8020B60

2009: J.F.M.A.M.J.J.A.S.O.N.D., 2010: J.F.M.A.M.J.J.A.S.O.N.D., 2011: J.F.M.A.M.J.J.A.S.O.N.D., 2012: J.F.M.A.M.J.J.A.S.O.N.D.

Orig Dur: 60, 14, 30, 50, 25, 10, 30, 14, 14, 180, 100, 10, 30, 50, 40, 120, 120, 14, 80, 40, 50, 14, 40, 300, 55, 20, 30, 15, 20, 30

Description: Preparation & Submission of Temp. Design, Jacking Pit (A3) Modification & Set-up (TL-F), Sleeve Pipe Installation by Jacking, TL-F DN800 SWM Pipe Installation, Pipe Laying & Connection, Sleeve Pipe Grouting, Backfilling & Reinstatement, Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction

Early Start: 06FEB10, 18SEP10, 18SEP10, 01FEB11, 07NOV10, 02DEC10, 12DEC10, 02FEB12, 01APR11, 23NOV10, 24MAR10, 02JUL10, 12JUL10, 11AUG10, 02DEC10, 26JUL10, 12NOV10, 22MAY11, 26DEC09, 20JUL11, 29AUG11, 18OCT11, 29JUL11, 02OCT10, 22JUN10, 16AUG10, 05SEP10, 05OCT10, 27FEB11, 19MAR11

Early Finish: 06APR10, 01OCT10, 17OCT10, 22MAR11, 01DEC10, 11DEC10, 10JAN11, 15FEB12, 14APR11, 21MAY11, 01JUL10, 11JUL10, 10AUG10, 29SEP10, 10JAN11, 22NOV10, 11MAR11, 04JUN11, 31JAN10, 28AUG11, 17OCT11, 31OCT11, 06SEP11, 28JUL11, 15AUG10, 04SEP10, 04OCT10, 19OCT10, 18MAR11, 17APR11

Late Start: 08DEC10, 06FEB11, 11JAN11, 05APR11, 10FEB11, 09AUG11, 19AUG11, 18OCT11, 18OCT11, 23NOV10, 02MAR11, 10JUN11, 20JUN11, 20JUL11, 08SEP11, 26JUL10, 20JUN11, 18OCT11, 26DEC09, 20JUL11, 29AUG11, 18OCT11, 08SEP11, 12NOV10, 29AUG10, 23OCT10, 12NOV10, 12DEC10, 06MAY11, 26MAY11

Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction

Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction

Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction

Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction

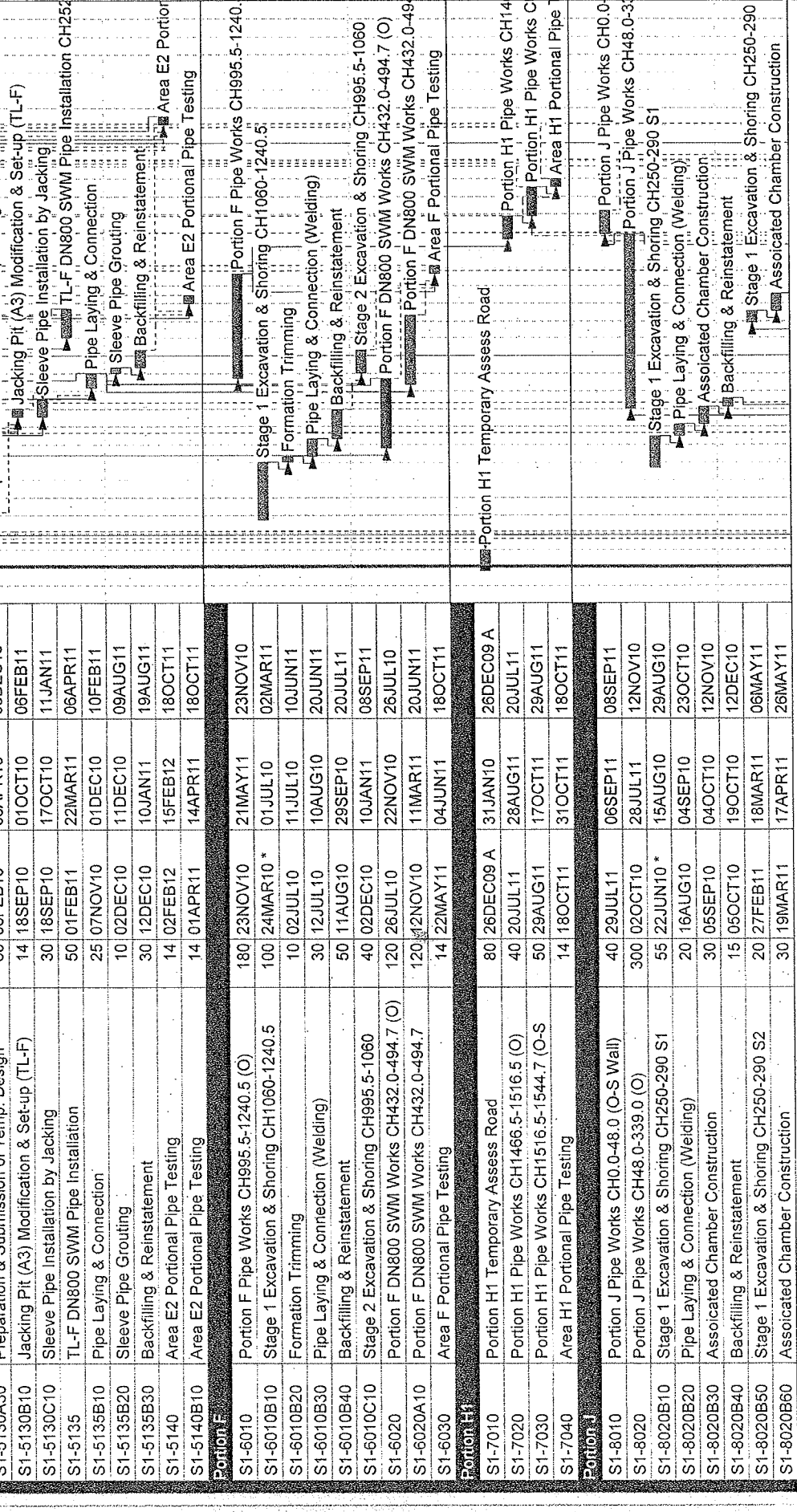
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Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction

Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction

Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction

Area E2 Portional Pipe Testing, Area E2 Portional Pipe Testing, Portion F Pipe Works CH995.5-1240.5, Stage 1 Excavation & Shoring CH1060-1240.5, Formation Trimming, Pipe Laying & Connection (Welding), Backfilling & Reinstatement, Stage 2 Excavation & Shoring CH995.5-1060, Portion F DN800 SWM Works CH432.0-494.7 (O), Portion F DN800 SWM Works CH432.0-494.7, Area F Portional Pipe Testing, Portion H1 Temporary Assess Road, Portion H1 Pipe Works CH1466.5-1516.5 (O), Portion H1 Pipe Works CH1516.5-1544.7 (O-S), Area H1 Portional Pipe Testing, Portion J Pipe Works CH0.0-48.0 (O-S Wall), Portion J Pipe Works CH48.0-339.0 (O), Stage 1 Excavation & Shoring CH250-290 S1, Pipe Laying & Connection (Welding), Associated Chamber Construction, Backfilling & Reinstatement, Stage 1 Excavation & Shoring CH250-290 S2, Associated Chamber Construction



Start date	07SEP09
Finish date	05NOV12
Data date	04JAN10
Run date	01AUG12
Page number	7A
c Primavera Systems, Inc.	

3 Months Rolling Program (July2012)

Wo Hing - Penta-Ocean Joint Venture

	Early bar
	Progress bar
	Critical bar
	Summary bar
	Start milestone point
	Finish milestone point



Appendix F

ET Weekly Site Inspection Records

	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Environmental Checklist				
Noise Impact				
▪ The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	√			
▪ The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	√			
▪ Noisy equipment and mobile plant shall always be site away from NSRs.	√			
▪ Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	√			
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	√			
▪ Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of PME whenever practicable.	√			
▪ Quality Powered mechanical equipment (Quality PME), which are construction plants and equipments that are notably quieter, more environmental friendly and efficiently, recognized by the Noise Control Authority for the purpose of CNP application should be used to reduce the noise generated from the construction plants effectively. The Contractor shall note the required procedures involved in application of the QPME.	√			
▪ Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	√			
▪ Air compressors and hand held breakers should have noise labels.	√			
▪ Compressors and generators should operate with door closed.	√			
▪ Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	√			
Water Quality				
Mitigation Measures for Dredging				
▪ Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m ³ per day.	√			No dredging work was observed.
▪ Deployment of frame type silt curtain should be fully enclosed the grab while dredging works are in progress.	√			No dredging work was observed.
▪ Deployment of silt screen should be at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress	√			
▪ Tight-closing grabs should be used to minimize the loss of sediment to suspension during dredging works. For dredging of any contaminated mud, closed watertight grabs must be used.	√			
▪ All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash	√			
▪ The decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard	√			
▪ Adequate free board shall be maintained on barges to ensure that decks are not washed by wave action.	√			
▪ All barges used for the transport of dredged materials should be fitted with tight bottom seals to prevent leakage of material during loading and transport	√			
▪ Dredging activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds	√			No dredging work was observed.
▪ Loading of barges should be controlled to prevent splashing of material into the surrounding waters. Barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation	√			
▪ The speed of vessels should be controlled within the works area to prevent propeller wash from stirring up the seabed sediments	√			

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Water Quality				
Mitigation Measures for other Construction Activities				
<ul style="list-style-type: none"> Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the storm runoff being directed into foul sewers Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour WCZs Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices. Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS. Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains 	√			
Waste Management				
C&D Materials				
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	√		√	
Chemical Waste				
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	√			

Implementation Stages*	Remark		
	Yes	No	Not Obs N/A
Environmental Checklist			
Waste Management			
General Refuse			
General refuse should be stored in enclosed bins or compaction units separate from C&D material.	√		
A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.	√		
An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	√		
Marine Dredged Sediment (During transportation and disposal)			
Bottom opening of barges shall be fitted with light fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and dredgers before the vessel is moved			√ No dredging work was observed.
Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the EPD			√ No dredging work was observed.
Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.			√ No dredging work was observed.
Site Practices			
Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	√		
Training of site personnel in proper waste management and chemical handling procedures	√		
Provision of sufficient waste disposal points and regular collection of waste	√		
Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.	√		
Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	√		
Waste Reduction Measures			
Sort C&D material from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals	√		
Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal	√		
Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force	√		
Proper storage and site practices to minimise the potential for damage or contamination of construction materials	√		
Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste	√		

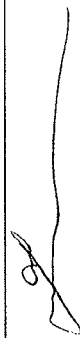
Implementation Stages*	Remark		
	Yes	No	Not Obs N/A
Environmental Checklist			
Marine Ecology			
Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.			√
Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress.			√
Deployment of silt screen at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.	√		
Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	√		
Good Site Practices			
The Environmental Permit should be displaced conspicuously on site.	√		
Construction noise permits should be posted at site entrance or available for site inspection.	√		
Chemical storage area provided with lock and located on sealed areas.	√		
All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank).	√		
Any unused chemicals or those with remaining functional capacity should be recycled.	√		
All generators, fuel and oil storage are within bundle areas.	√		
Oil leakage from machinery, vehicle and plant should be prevented.	√		
Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√		
A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system.	√		

Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date

Remark

No new item was noticed during the site audit on 06 September 2012.

Inspected by		Name	Signature	Date
		C. L. Lau		06 September 2012

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	11 September 2012	Inspected by	RE	IEC	Contractor	ET
Time	09:30	Name	Y. K. Wong 11/9/12		JNG	C.L. Lau

Weather Condition Wind : Sunny / Fine / Cloudy / Drizzle / Rain / Storm / Hazy
: Calm / Light / Breeze / Strong

Temperature : 29°C
Humidity : High (Moderate) / Low

Environmental Checklist

Fugitive Dust Emission	Implementation Stages*			Remark
	Yes	No	Not Obs	
Dust control / mitigation measures shall be provided to prevent dust nuisance.			N/A	
Any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading.				
The working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet.				
The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle				
Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.				
The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.				
Every main haul road should be sealed with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet.				
The portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials.				
All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet.				
Vehicle speed should be limited to 10 kph except on completed access roads.				
Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.				
The public road around the site entrance should be kept clean and free from dust.				
Vehicle and equipment should be switched off while not in use.				
All plant and equipment should be well maintained e.g. without black smoke emission.				
Open burning should be prohibited.				



	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Environmental Checklist				
Noise Impact				
▪ The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	✓			
▪ The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	✓			
▪ Noisy equipment and mobile plant shall always be site away from NSRs.	✓			
▪ Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	✓			
▪ Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of PME whenever practicable.	✓			
▪ Quality Powered mechanical equipment (Quality PME), which are construction plants and equipments that are notably quieter, more environmental friendly and efficiently, recognized by the Noise Control Authority for the purpose of CNP application should be used to reduce the noise generated from the construction plants effectively. The Contractor shall note the required procedures involved in application of the QPME.	✓			
▪ Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪ Air compressors and hand held breakers should have noise labels.	✓			
▪ Compressors and generators should operate with door closed.	✓			
▪ Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	✓			
Water Quality				
Mitigation Measures for Dredging				
▪ Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m ³ per day.			✓	No dredging work was observed.
▪ Deployment of frame type silt curtain should be fully enclosed the grab while dredging works are in progress.			✓	No dredging work was observed.
▪ Deployment of silt screen should be at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress	✓			
▪ Tight-closing grabs should be used to minimize the loss of sediment to suspension during dredging works. For dredging of any contaminated mud, closed watertight grabs must be used.	✓			
▪ All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash	✓			
▪ The decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard	✓			
▪ Adequate free board shall be maintained on barges to ensure that decks are not washed by wave action.	✓			
▪ All barges used for the transport of dredged materials should be fitted with tight bottom seals to prevent leakage of material during loading and transport	✓			
▪ Dredging activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds			✓	No dredging work was observed.
▪ Loading of barges should be controlled to prevent splashing of material into the surrounding waters. Barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation	✓			
▪ The speed of vessels should be controlled within the works area to prevent propeller wash from stirring up the seabed sediments	✓			

	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Environmental Checklist				
Water Quality				
Mitigation Measures for other Construction Activities				
<ul style="list-style-type: none"> Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the storm runoff being directed into foul sewers Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour WCZs Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices. Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS. Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silt water to public roads and drains 	√			
Waste Management				
C&D Materials				
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	√		√	
Chemical Waste				
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	√			



Implementation Stages*	Remark		
	Yes	No	Not Obs
Environmental Checklist			
Waste Management			
General Refuse			
General refuse should be stored in enclosed bins or compaction units separate from C&D material.	√		
A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.	√		
An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	√		
Marine Dredged Sediment (During transportation and disposal)			
Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and dredgers before the vessel is moved			√ No dredging work was observed.
Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the EPD			√ No dredging work was observed.
Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.			√ No dredging work was observed.
Site Practices			
Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	√		
Training of site personnel in proper waste management and chemical handling procedures	√		
Provision of sufficient waste disposal points and regular collection of waste	√		
Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.	√		
Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	√		
Waste Reduction Measures			
Sort C&D material from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals	√		
Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal	√		
Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force	√		
Proper storage and site practices to minimise the potential for damage or contamination of construction materials	√		
Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste	√		


Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Marine Ecology				
▪ Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.			√	No dredging work was observed.
▪ Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress.			√	No dredging work was observed.
▪ Deployment of silt screen at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.	√			
▪ Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	√			
Good Site Practices				
• The Environmental Permit should be displaced conspicuously on site.	√			
• Construction noise permits should be posted at site entrance or available for site inspection.	√			
▪ Chemical storage area provided with lock and located on sealed areas.	√			
▪ All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank).	√			
▪ Any unused chemicals or those with remaining functional capacity should be recycled.	√			
▪ All generators, fuel and oil storage are within bundle areas.	√			
▪ Oil leakage from machinery, vehicle and plant should be prevented.	√			
▪ Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√			
▪ A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system.	√			

Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date

Remark

No new item was noticed during the site audit on 11 September 2012.

Inspected by	Name	Signature	Date
	C. L. Lau		11 September 2012

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs	
Noise Impact				
▪ The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	√			
▪ The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	√			
▪ Noisy equipment and mobile plant shall always be site away from NSRs.	√			
▪ Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	√			
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	√			
▪ Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of PME whenever practicable.	√			
▪ Quality Powered mechanical equipment (Quality PME), which are construction plants and equipments that are notably quieter, more environmental friendly and efficiently, recognized by the Noise Control Authority for the purpose of CNP application should be used to reduce the noise generated from the construction plants effectively. The Contractor shall note the required procedures involved in application of the QPME.	√			
▪ Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	√			
▪ Air compressors and hand held breakers should have noise labels.	√			
▪ Compressors and generators should operate with door closed.	√			
▪ Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	√			
Water Quality				
Mitigation Measures for Dredging				
▪ Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m ³ per day.			√	No dredging work was observed.
▪ Deployment of frame type silt curtain should be fully enclosed the grab while dredging works are in progress.			√	No dredging work was observed.
▪ Deployment of silt screen should be at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.	√			
▪ Tight-closing grabs should be used to minimize the loss of sediment to suspension during dredging works. For dredging of any contaminated mud, closed watertight grabs must be used.	√			
▪ All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash	√			
▪ The decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard	√			
▪ Adequate free board shall be maintained on barges to ensure that decks are not washed by wave action.	√			
▪ All barges used for the transport of dredged materials should be fitted with tight bottom seals to prevent leakage of material during loading and transport	√			
▪ Dredging activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds			√	No dredging work was observed.
▪ Loading of barges should be controlled to prevent splashing of material into the surrounding waters. Barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation	√			
▪ The speed of vessels should be controlled within the works area to prevent propeller wash from stirring up the seabed sediments	√			



Contract No. 9/WSD/08
Laying of Western Cross Harbour Main and Associated Land Mains
From West Kowloon to Sai Ying Pun

Environmental Checklist

	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Water Quality				
<i>Mitigation Measures for other Construction Activities</i>				
<ul style="list-style-type: none"> Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the storm runoff being directed into foul sewers Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour WCZs Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices. Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS. Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains 	√			
Waste Management				
<i>C&D Materials</i>				
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	√		√	
Chemical Waste				
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	√			

Implementation Stages*	Remark		
	Yes	No	Not Obs N/A
Environmental Checklist			
Waste Management			
General Refuse			
General refuse should be stored in enclosed bins or compaction units separate from C&D material.	√		
A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.	√		
An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	√		
Marine Dredged Sediment (During transportation and disposal)			
Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and dredgers before the vessel is moved			√ No dredging work was observed.
Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the EPD			√ No dredging work was observed.
Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.			√ No dredging work was observed.
Site Practices			
Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	√		
Training of site personnel in proper waste management and chemical handling procedures	√		
Provision of sufficient waste disposal points and regular collection of waste	√		
Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.	√		
Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	√		
Waste Reduction Measures			
Sort C&D material from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals	√		
Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal	√		
Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force	√		
Proper storage and site practices to minimise the potential for damage or contamination of construction materials	√		
Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste	√		

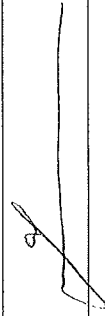
Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Marine Ecology				
Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.			√	No dredging work was observed.
Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress.			√	No dredging work was observed.
Deployment of silt screen at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.	√			
Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	√			
Good Site Practices				
The Environmental Permit should be displaced conspicuously on site.	√			
Construction noise permits should be posted at site entrance or available for site inspection.	√			
Chemical storage area provided with lock and located on sealed areas.	√			
All chemicals should be placed at the banded area with adequate band capacity (> 110% of largest tank).	√			
Any unused chemicals or those with remaining functional capacity should be recycled.	√			
All generators, fuel and oil storage are within bundle areas.	√			
Oil leakage from machinery, vehicle and plant should be prevented.	√			
Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√			
A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system.	√			

Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date

Remark

No new item was noticed during the site audit on 19 September 2012.
The Contractor was reminded to replace new sand bags instead of the broken sand bags near the sea wall in Portion J.

Name	Signature	Date
Inspected by C. L. Lau		19 September 2012

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	25 September 2012	Inspected by	RE	IEC	Contractor	ET
Time	09:30	Name	Wai Yung Wong		JING	C.L. Lau

Weather

Condition : Sunny / Fine / Cloudy / Drizzle / Rain / Storm / Hazy
Wind : Calm / Light / Breeze / Strong

Temperature : 27°C
Humidity : High / (Moderate) / Low

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
Fugitive Dust Emission				
• Dust control / mitigation measures shall be provided to prevent dust nuisance.	✓			
• Any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading.	✓			
• The working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet.	✓			
• The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle	✓			
• Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.	✓			
• The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.	✓			
• Every main haul road should be sealed with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet.	✓			
• The portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials.	✓			
• All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet.	✓			
• Vehicle speed should be limited to 10 kph except on completed access roads.	✓			
• Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	✓			
• The public road around the site entrance should be kept clean and free from dust.	✓			
• Vehicle and equipment should be switched off while not in use.	✓			
• All plant and equipment should be well maintained e.g. without black smoke emission.	✓			
• Open burning should be prohibited.	✓			

	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Environmental Checklist				
Noise Impact				
▪ The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	√			
▪ The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	√			
▪ Noisy equipment and mobile plant shall always be site away from NSRs.	√			
▪ Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	√			
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	√			
▪ Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of PME whenever practicable.	√			
▪ Quality Powered mechanical equipment (Quality PME), which are construction plants and equipments that are notably quieter, more environmental friendly and efficiently, recognized by the Noise Control Authority for the purpose of CNP application should be used to reduce the noise generated from the construction plants effectively. The Contractor shall note the required procedures involved in application of the QPME.	√			
▪ Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	√			
▪ Air compressors and hand held breakers should have noise labels.	√			
▪ Compressors and generators should operate with door closed.	√			
▪ Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	√			
Water Quality				
Mitigation Measures for Dredging				
▪ Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m ³ per day.			√	No dredging work was observed.
▪ Deployment of frame type silt curtain should be fully enclosed the grab while dredging works are in progress.			√	No dredging work was observed.
▪ Deployment of silt screen should be at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress	√			
▪ Tight-closing grabs should be used to minimize the loss of sediment to suspension during dredging works. For dredging of any contaminated mud, closed watertight grabs must be used.	√			
▪ All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash	√			
▪ The decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard	√			
▪ Adequate free board shall be maintained on barges to ensure that decks are not washed by wave action.	√			
▪ All barges used for the transport of dredged materials should be fitted with tight bottom seals to prevent leakage of material during loading and transport	√			
▪ Dredging activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds			√	No dredging work was observed.
▪ Loading of barges should be controlled to prevent splashing of material into the surrounding waters. Barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation	√			
▪ The speed of vessels should be controlled within the works area to prevent propeller wash from stirring up the seabed sediments	√			



Contract No. 9M/SD/08
Laying of Western Cross Harbour Main and Associated Land Mains
From West Kowloon to Sai Ying Pun

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Water Quality				
<i>Mitigation Measures for other Construction Activities</i>				
<ul style="list-style-type: none"> Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the storm runoff being directed into foul sewers Construction activities should not cause foam, oil, grease, solum, litter or other objectionable matter to be present in the water within the site or dumping grounds Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour WCZs Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices. Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS. Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silt water to public roads and drains 	√			
Waste Management				
C&D Materials				
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	√		√	
Chemical Waste				
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	√			



Implementation Stages*	Remark	
	Yes	No
Environmental Checklist		
Waste Management		
General Refuse		
General refuse should be stored in enclosed bins or compaction units separate from C&D material.	√	
A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.	√	
An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	√	
Marine Dredged Sediment (During transportation and disposal)		
Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and dredgers before the vessel is moved	√	No dredging work was observed.
Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the EPD	√	No dredging work was observed.
Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.	√	No dredging work was observed.
Site Practices		
Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	√	
Training of site personnel in proper waste management and chemical handling procedures	√	
Provision of sufficient waste disposal points and regular collection of waste	√	
Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.	√	
Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	√	
Waste Reduction Measures		
Sort C&D material from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals	√	
Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal	√	
Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force	√	
Proper storage and site practices to minimise the potential for damage or contamination of construction materials	√	
Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste	√	

	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Environmental Checklist				
Marine Ecology				
▪ Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.			√	No dredging work was observed.
▪ Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress.			√	No dredging work was observed.
▪ Deployment of silt screen at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.	√			
▪ Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	√			
Good Site Practices				
• The Environmental Permit should be displaced conspicuously on site.	√			
• Construction noise permits should be posted at site entrance or available for site inspection.	√			
▪ Chemical storage area provided with lock and located on sealed areas.	√			
▪ All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank).	√			
▪ Any unused chemicals or those with remaining functional capacity should be recycled.	√			
▪ All generators, fuel and oil storage are within bundle areas.	√			
▪ Oil leakage from machinery, vehicle and plant should be prevented.	√			
▪ Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√			
▪ A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system.	√			




Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date

Remark

No new item was noticed during the site audit on 25 September 2012.

New sand bags were replaced instead of the broken sand bags near the sea wall in Portion J.

Inspected by	Name C. L. Lau	Signature 	Date 25 September 2012
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Appendix G

Implementation Schedule of Mitigation Measures



Environmental Protection Measures	Location	Implementation Status		
		Implemented	Partially implemented	Not implemented
Noise Impact				
Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	All areas	✓		
Air compressors and hand held breakers should have noise labels.	All areas	✓		
Compressors and generators should operate with door closed.	All areas	✓		
Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	All areas	✓		
Water Quality				
Mitigation Measures for Dredging				
Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m ³ per day.	Marine			✓
Deployment of frame type silt curtain should be fully enclose the grab while dredging works are in progress.	Marine			✓
Deployment of silt screen should be at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress	Marine	✓		
Tight-closing grabs should be used to minimize the loss of sediment to suspension during dredging works. For dredging of any contaminated mud, closed watertight grabs must be used.	Marine			✓
All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash	Marine			✓
The decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard	Marine			✓
Adequate free board shall be maintained on barges to ensure that decks are not washed by wave action.	Marine			✓
All barges used for the transport of dredged materials should be fitted with tight bottom seals to prevent leakage of material during loading and transport	Marine			✓
Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds	Marine	✓		
Loading of barges should be controlled to prevent splashing of material into the surrounding waters. Barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation	Marine	✓		
The speed of vessels should be controlled within the works area to prevent propeller wash from stirring up the seabed sediments	Marine	✓		
Mitigation Measures for other Construction Activities				
Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m ³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped	All areas	✓		
Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the storm runoff being directed into foul sewers	All areas	✓		
All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads.	All areas	✓		
An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process.	All areas	✓		
The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains	All areas	✓		
Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour WCZs	All areas	✓		



	Location	Implementation Status		
		Implemented	Partially implemented	Not implemented
Environmental Protection Measures				
Water Quality				
Mitigation Measures for other Construction Activities				
<ul style="list-style-type: none"> Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices. Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS. Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. 	All areas	√		
Waste Management				
C&D Materials				
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	All areas			√
	All areas	√		√
	All areas	√		
	All areas	√		
Chemical Waste				
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	All areas	√		
	All areas	√		
	All areas	√		
General Refuse				
<ul style="list-style-type: none"> General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material. 	All areas	√		
	All areas	√		
	All areas	√		
Marine Dredged Sediment (During transportation and disposal)				
<ul style="list-style-type: none"> Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and dredgers before the vessel is moved Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the EPD Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation. 	Marine			√
	Marine			√
	Marine			√
Good Site Practices				
<ul style="list-style-type: none"> Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site Training of site personnel in proper waste management and chemical handling procedures Provision of sufficient waste disposal points and regular collection of waste 	All areas	√		
	All areas	√		
	All areas	√		



Environmental Protection Measures		Location	Implementation Status		
			Implemented	Partially implemented	Not implemented Not Applicable
Waste Management					
Good Site Practices					
<ul style="list-style-type: none"> Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment. Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers 	All areas	√			
Waste Reduction Measures					
<ul style="list-style-type: none"> Sort C&D material from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force Proper storage and site practices to minimise the potential for damage or contamination of construction materials Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste 	All areas All areas All areas All areas All areas	√ √ √ √ √			
Marine Ecology					
<ul style="list-style-type: none"> Use of one grab dredger only with a maximum production rate of 4,000m³ per day for dredging. Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress. Deployment of silt screen at the sea water intake at Kowloon South Silt Water Pumping Station while dredging works are in progress. Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain. 	Marine Marine Marine Marine			√ √	
Good Site Practices					
<ul style="list-style-type: none"> The Environmental Permit should be displaced conspicuously on site. Construction noise permits should be posted at site entrance or available for site inspection. Chemical storage area provided with lock and located on sealed areas. All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank). Any unused chemicals or those with remaining functional capacity should be recycled. All generators, fuel and oil storage are within bundle areas. Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors. A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be banded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system. 	All areas All areas All areas All areas All areas All areas All areas	√ √ √ √ √ √ √			



Appendix H

Site General Layout plan

NOTES :
 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 241239/02 TO 05.

LEGEND :

- PROPOSED FRESH WATERMAIN
- PROPOSED SAULT WATERMAIN
- PROPOSED WORKS LIFT
- SEA / SHT
- PARTION A (SECTION 2)
- PARTION B
- PORTION C (SECTION 3)
- PORTION D
- PORTION E
- PORTION E1B
- PORTION E1C
- PORTION E1D
- PORTION F
- PORTION G (SECTION 4)
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WORKS AREA WORK AREA (M TO BE PLACED WITHIN THE PROPOSED WORKS AREA AND TO BE FINISHED BY CONCRETE MASSCAST PART OF TENDERS. REFER TO TWO STANDARDS DRAWING NO. 12104)

SECTION 2

SECTION 3

SECTION 4

08	MAY 08	1. TENDER ADDENDUM NO. 8	KL	SLC	
04	APR 09	1. TENDER ADDENDUM NO. 5	KL	SLC	
03	APR 09	1. TENDER ADDENDUM NO. 4	KL	SLC	
03	MAR 08	1. TENDER ADDENDUM NO. 3	KL	SLC	
01	FEB 09	1. TENDER ADDENDUM NO. 2	KL	SLC	
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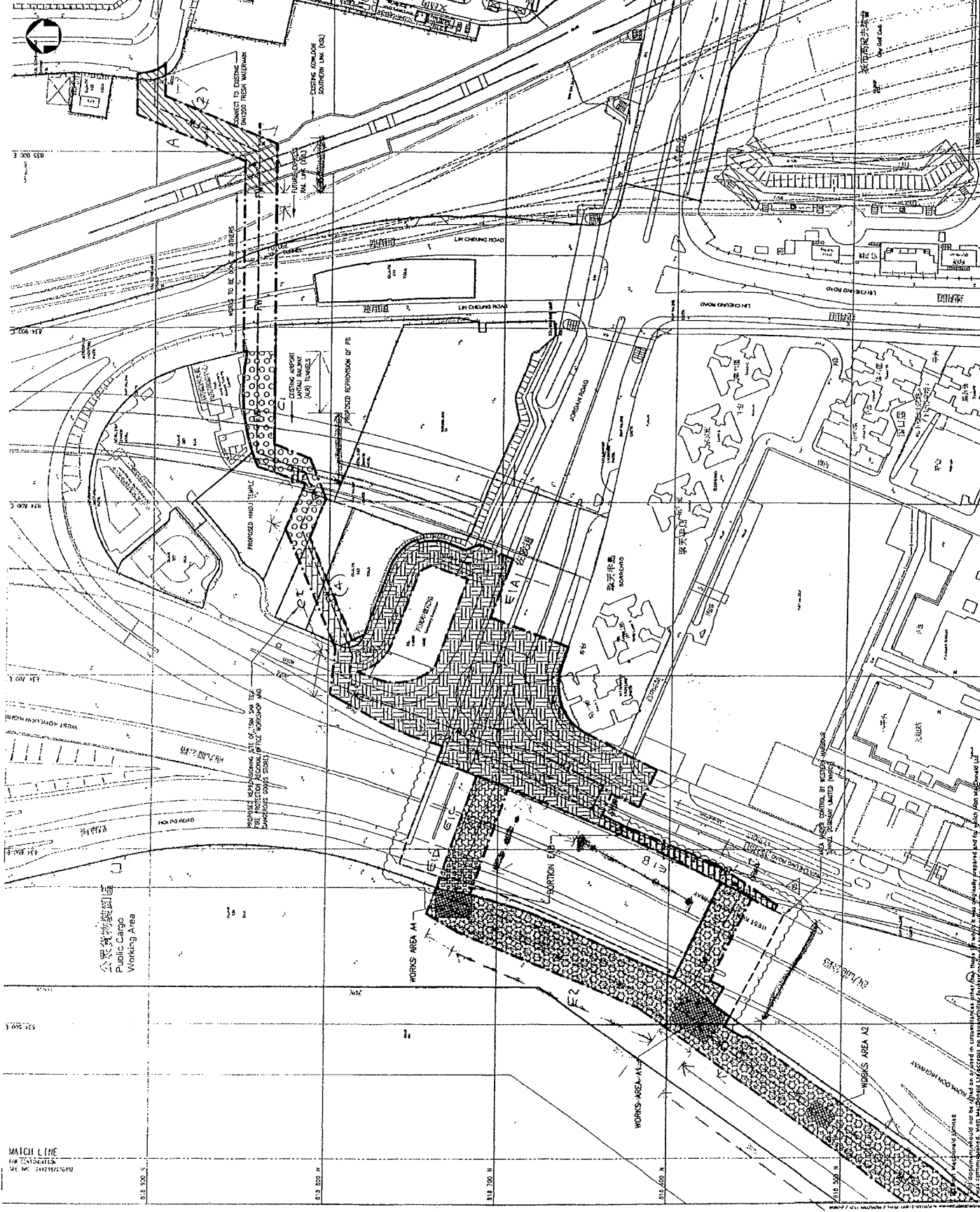
Mott MacDonald
 The Hong Kong Branch
 22, 24 & 26, Queen's Road Central
 Hong Kong
 Tel: 2882 1117
 Fax: 2882 1177
 www.mottmacdonald.com.hk

THE GOVERNMENT OF THE HONG KONG
 SPECIAL ADMINISTRATIVE REGION
 WATER SUPPLIES DEPARTMENT

Project: 9/WS/D/08
 LAYING OF WESTERN CROSS HARBOUR MAIN AND ASSOCIATED LAND MAINS FROM WEST KOMLOON TO SAI YING PUN

POSSESSION OF SITE
 (SHEET 1 OF 5)

Author	Drawn	Checked	Reviewed	Scale	Sheet No.	Scale
KL	SLC	SLC	SLC	1:1000	041	TEN
Date of Issue: 24/12/08 Drawing Code: 9/WS/D/08/041 Drawing Title: POSSESSION OF SITE (SHEET 1 OF 5) Project: LAYING OF WESTERN CROSS HARBOUR MAIN AND ASSOCIATED LAND MAINS FROM WEST KOMLOON TO SAI YING PUN						
Drawn	Checked	Reviewed	Scale	Sheet No.	Scale	
KL	SLC	SLC	1:1000	041	TEN	

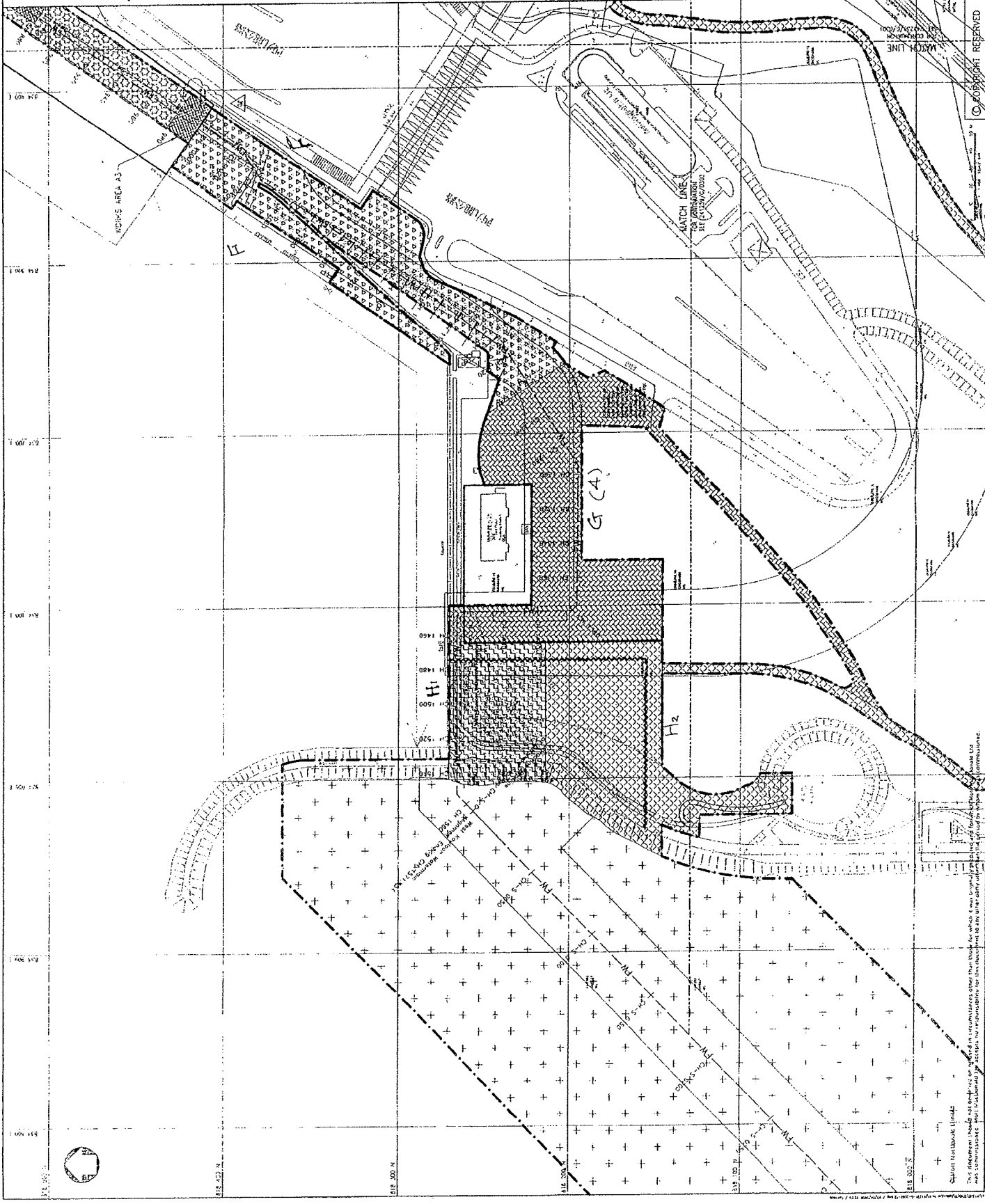


MATCH LINE
 FOR ESTIMATION
 DRAWING NO. 241239/02

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NOTES

- 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 241239/03001 AND 03002 TO 03005.
- 2. THE USUARY SHALL REFER TO DRAWING NO. 241239/03001.



DATE	DESCRIPTION	BY	CHECKED
02 APR 09	FOR TENDER APPROVAL NO. 4	KL	KL
01 MAR 09	FOR TENDER APPROVAL NO. 3	KL	KL
0 DEC 08	FOR LOCAL TENDER	KL	KL

Mott MacDonald
 Mott MacDonald Hong Kong Limited
 27th Floor, One Pacific Place
 275 Des Voeux Road
 Hong Kong
 Tel: (852) 2177 1171
 Fax: (852) 2177 1172
 Web: www.mottmac.com.hk

THE GOVERNMENT OF THE HONG KONG
 SPECIAL ADMINISTRATIVE REGION
 WATER SUPPLIES DEPARTMENT

DATE: 9/MSD/08

LAYING OF WESTERN CROSS HARBOUR MAIN
 AND ASSOCIATED LAND DRAINS FROM WEST
 KOWLOON TO SAI YING PUN

POSSESSION OF SITE
 (SHEET 2 OF 5)

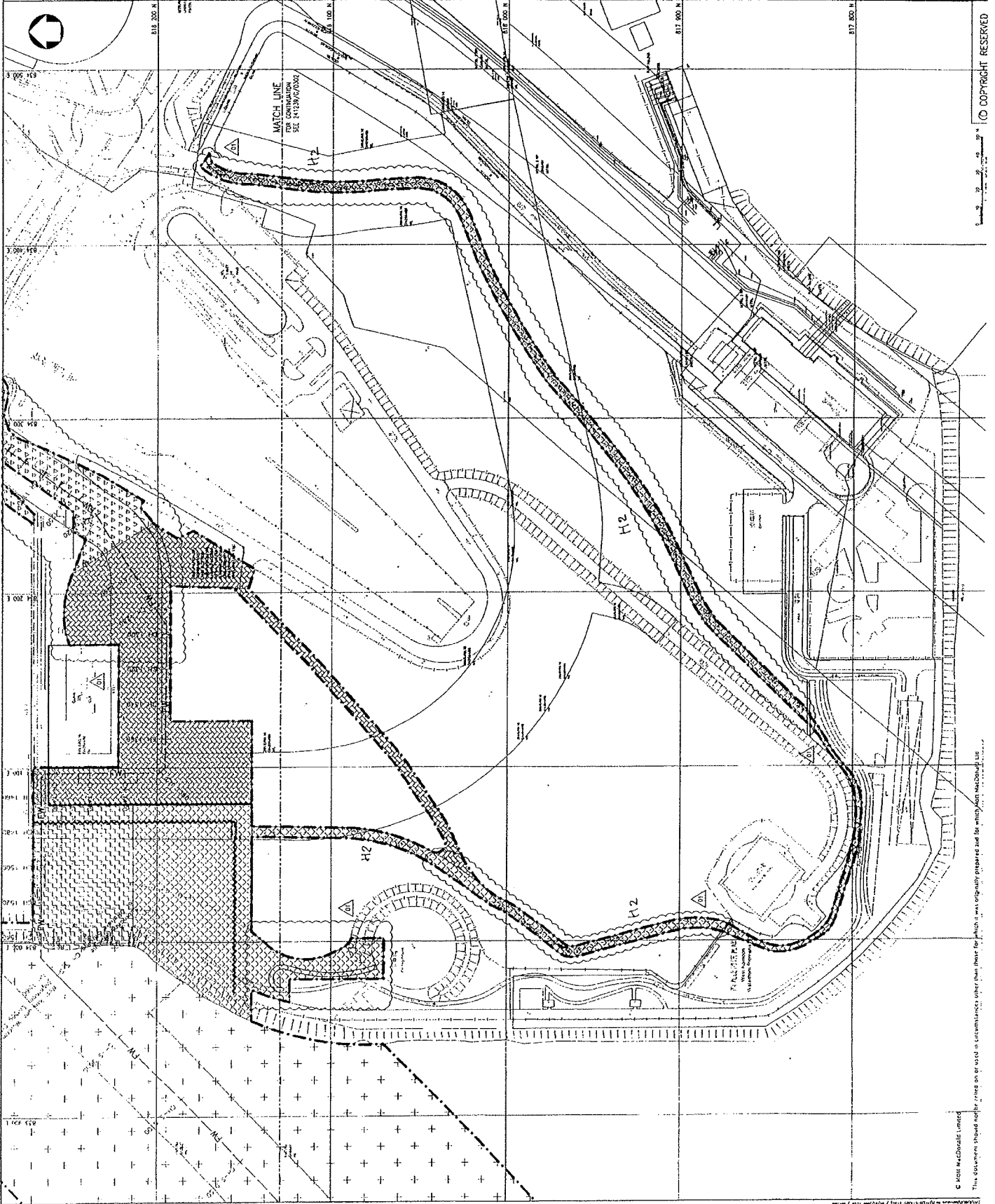
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WATER SUPPLIES DEPARTMENT	241239	24/12/08	1:1000
DESIGNER	DATE	SCALE	
KL	24/12/08	1:1000	
CHECKER	DATE	SCALE	
KL	24/12/08	1:1000	
APPROVED	DATE	SCALE	
KL	24/12/08	1:1000	

241239/G/03002 02

RESERVED

NOTES :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 241239/6/0301 TO 0303 AND 0304 TO 0305.
2. THE 03000 SHALL REFER TO DRAWING NO. 241239/6/0301.



01	DATE	09/09/08	REVISION	1	DESCRIPTION
02	DATE	09/09/08	REVISION	2	FOR TENDER
03	DATE	09/09/08	REVISION	3	FOR TENDER

m Mott MacDonald
 The City Government Engineering Services
 27/F, 27/F
 New World Centre
 10 Salisbury Road
 Kowloon, Hong Kong
 Tel: 2412 1177
 Fax: 2412 1123
 Web: www.mottmac.com.hk

**THE GOVERNMENT OF THE HONG KONG
 SPECIAL ADMINISTRATIVE REGION
 WATER SUPPLIES DEPARTMENT**

Project No. 9/WSU/08
 LAYING OF WESTERN CROSS HARBOUR MAIN
 AND ASSOCIATED LAND MAINS FROM WEST
 KOWLOON TO SAN YING PUI

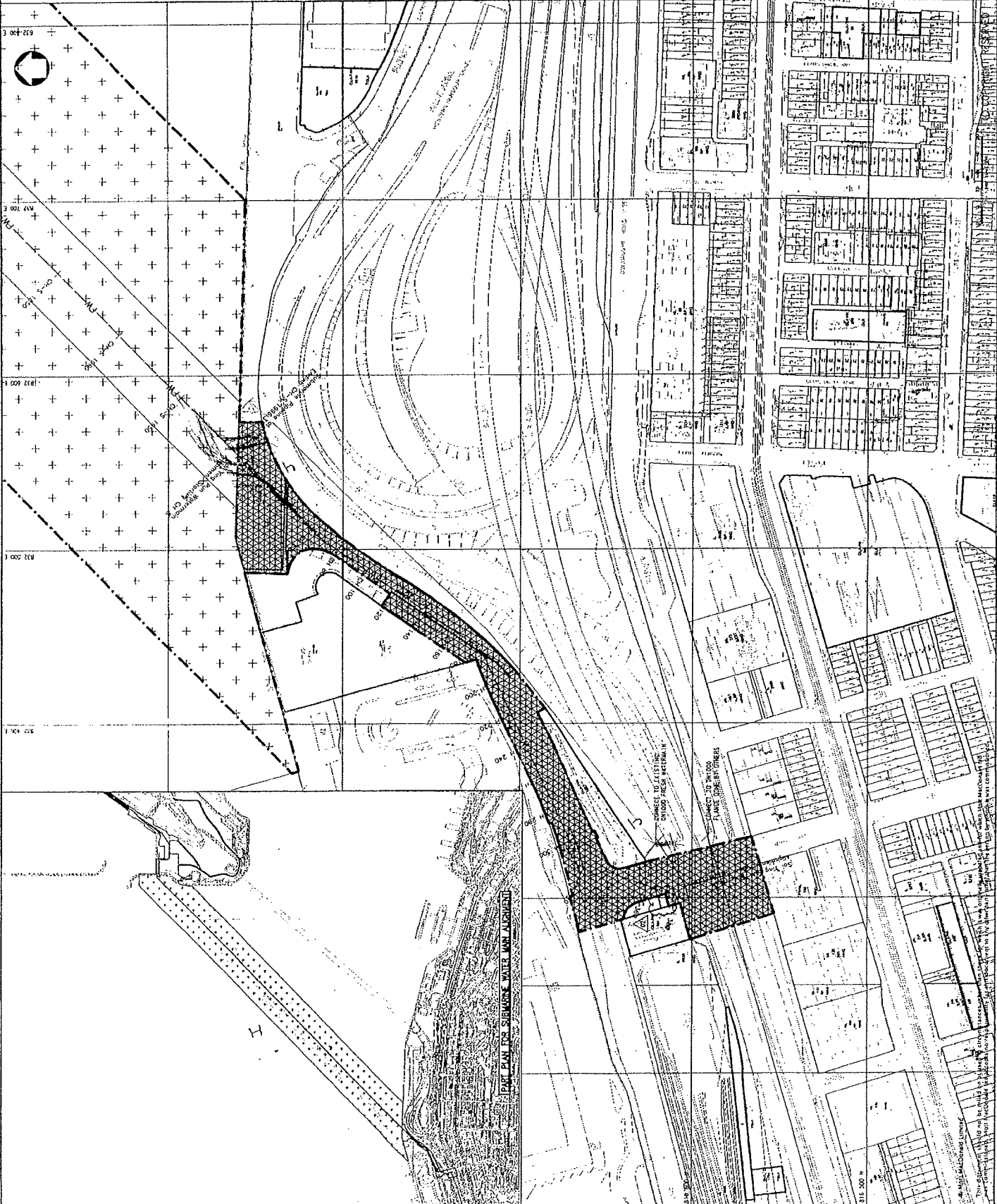
POSSESSION OF SITE
 (SHEET 3 OF 5)

DESIGNER	RSC	CHKD	RL	24
DRAWN	PL	CHKD	SKC	24
SCALE	1:1000	DATE	24/12/08	TEN

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 2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/6/0301.



NO.	DATE	DESCRIPTION	BY	CHECKED
01	20/04/09	ISSUE FOR TENDER	MM	MM
02	20/04/09	ISSUE FOR TENDER	MM	MM
03	20/04/09	ISSUE FOR TENDER	MM	MM
04	20/04/09	ISSUE FOR TENDER	MM	MM
05	20/04/09	ISSUE FOR TENDER	MM	MM
06	20/04/09	ISSUE FOR TENDER	MM	MM
07	20/04/09	ISSUE FOR TENDER	MM	MM
08	20/04/09	ISSUE FOR TENDER	MM	MM
09	20/04/09	ISSUE FOR TENDER	MM	MM
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THE GOVERNMENT OF THE HONG KONG
 SPECIAL ADMINISTRATIVE REGION
 WATER SUPPLIES DEPARTMENT

9/MSD/08
 LAYING OF WESTERN CROSS HARBOUR MAIN
 AND ASSOCIATED LAND MAINS FROM WEST
 KOWLOON TO SAI YING PUN

POSSESSION OF SITE
 (SHEET 4 OF 5)

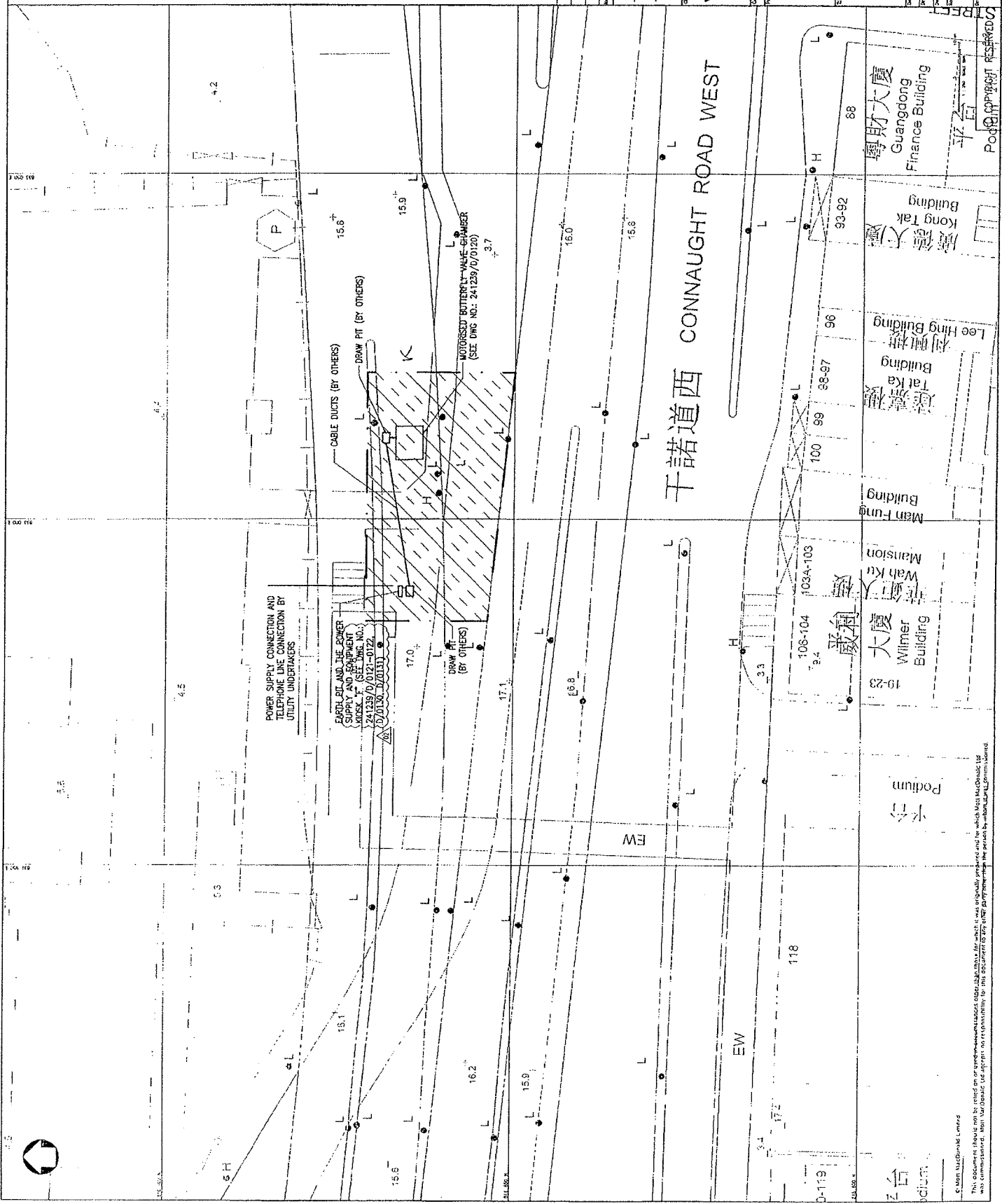
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04	20/04/09	ISSUE FOR TENDER	MM	MM
05	20/04/09	ISSUE FOR TENDER	MM	MM
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09	20/04/09	ISSUE FOR TENDER	MM	MM
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241239/6/0304

02

NOTES

1. THE DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 241239/G/030A TO 030D.
2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/G/030I.



02	FEB 09	2	TENDER ADDENDUM NO. 2	2/1/09
01	JAN 09	1	TENDER ADDENDUM NO. 1	1/1/09
00	DEC 08	1	ISSUE FOR TENDER	12/1/08
Rev	Date	Issue	Description	Date of Issue

Mott MacDonald
 100, Nathan Road, Suite 1201, Nathan Centre, Nathan Road, Kowloon, Hong Kong.
 Tel: +852 2412 1232
 Fax: +852 2412 1233
 Web: www.mottmac.com

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
 WATER SUPPLIES DEPARTMENT

9/MSD/08
 LAYING OF WESTERN CROSS HARBOUR MAIN AND ASSOCIATED LAND MAINS FROM WEST KOWLOON TO SHI YING PUN

POSSSESSION OF SITE (SHEET 5 OF 5)

Contract No.	241239	Rev.	01
Scale	1:250	Drawn by	TEN
Checked by		Approved by	
Issue Date	24/12/08	Project No.	241239
Sheet No.	02	Revision	

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Appendix I

Monitoring Schedule for this Month and Coming Month

Contract No. 9/WSD/08

**Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun
Time Schedule for Impact Marine Water Quality Monitoring (WQM), Noise Monitoring (NM) and Weekly Site Inspection (SI)
September 2012**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	01-Sep
						WQM Mid-Ebb 10:00 - 14:00 Mid-Flood 15:30 - 19:30
02-Sep	03-Sep	04-Sep	05-Sep	06-Sep	07-Sep	08-Sep
	NM (SYP-Daytime)	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30	NM (WK-Daytime)	WQM Mid-Flood 08:30 - 12:30 Mid-Ebb 14:00 - 18:00 SI		WQM Mid-Flood 09:00 - 13:00 Mid-Ebb 14:30 - 18:30
09-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep
	NM (SYP-Daytime)	WQM Mid-Ebb 08:30 - 12:30 Mid-Flood 16:30 - 20:30 SI	NM (WK-Daytime)	WQM Mid-Ebb 08:30 - 12:30 Mid-Flood 14:00 - 18:00		WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30
16-Sep	17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep
	NM (SYP-Daytime)	WQM Mid-Ebb 10:00 - 14:00 Mid-Flood 16:00 - 20:00 SI		WQM Mid-Flood 08:30 - 12:30 Mid-Ebb 14:00 - 18:00	NM (WK-Daytime)	WQM Mid-Flood 09:00 - 13:00 Mid-Ebb 14:30 - 18:30
23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep
	NM (SYP-Daytime)	WQM Mid-Ebb 08:00 - 12:00 Mid-Flood 13:30 - 17:30 SI		WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30 NM (WK-Daytime)		WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30
30-Sep	01-Oct	02-Oct	03-Oct	04-Oct	05-Oct	

Contract No. 9/WSD/08

**Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun
Time Schedule for Impact Marine Water Quality Monitoring (WQM), Noise Monitoring (NM) and Weekly Site Inspection (SI)
October 2012**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30-Sep	01-Oct	02-Oct	03-Oct	04-Oct	05-Oct	06-Oct
			NM (SYP-Daytime)	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30 SI	NM (WK-Daytime)	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30
07-Oct	08-Oct	09-Oct	10-Oct	11-Oct	12-Oct	13-Oct
		WQM Mid-Ebb 06:30 - 10:30 Mid-Flood 16:00 - 20:00 SI	NM (SYP-Daytime)	WQM Mid-Ebb 08:30 - 12:30 Mid-Flood 14:30 - 18:30	NM (WK-Daytime)	WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30
14-Oct	15-Oct	16-Oct	17-Oct	18-Oct	19-Oct	20-Oct
		WQM Mid-Ebb 11:00 - 15:00 Mid-Flood 16:30 - 20:30 SI	NM (SYP-Daytime)	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30	NM (WK-Daytime)	WQM Mid-Flood 08:30 - 12:30 Mid-Ebb 14:00 - 18:00
21-Oct	22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct
			NM (SYP-Daytime)	WQM Mid-Ebb 08:00 - 12:00 Mid-Flood 13:30 - 17:30 SI	NM (WK-Daytime)	WQM Mid-Ebb 08:30 - 12:30 Mid-Flood 14:30 - 18:30
28-Oct	29-Oct	30-Oct	31-Oct	01-Nov	02-Nov	03-Nov
	NM (SYP-Daytime)	WQM Mid-Ebb 11:00 - 15:00 Mid-Flood 16:30 - 20:30 SI	NM (WK-Daytime)			



Appendix J

Daily Dredging Summary

Wo Hing - Penta-Ocean Joint Venture							
Contract no. 9/WSD/08							
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun							
Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground)							
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Target Dumping qty (m ³)	Target Barge Load per day	Target Accumulated Dumping Qty.	Permit No.
			(bulk volume)			(bulk volume)	
6 June, 2010	0	0	0	0	0	0	EP/MD/10-085
7 June, 2010	0	0	0	0	0	0	EP/MD/10-085
8 June, 2010	0	0	0	0	0	0	EP/MD/10-085
9 June, 2010	0	0	0	0	0	0	EP/MD/10-085
10 June, 2010	0	0	0	0	0	0	EP/MD/10-085
11 June, 2010	0	0	0	0	0	0	EP/MD/10-085
12 June, 2010	0	0	0	0	0	0	EP/MD/10-085
13 June, 2010	0	0	0	0	0	0	EP/MD/10-085
14 June, 2010	1,400	2	1,400	2,100	3	2,100	EP/MD/10-085
15 June, 2010	1,400	2	2,800	2,100	3	4,200	EP/MD/10-085
16 June, 2010	2,100	3	4,900	2,100	3	6,300	EP/MD/10-085
17 June, 2010	2,800	4	7,700	2,100	3	8,400	EP/MD/10-085
18 June, 2010	2,100	3	9,800	2,100	3	10,500	EP/MD/10-085
19 June, 2010	2,700	4	12,500	2,100	3	12,600	EP/MD/10-085
20 June, 2010	2,800	4	15,300	2,100	3	14,700	EP/MD/10-085
21 June, 2010	2,100	3	17,400	2,100	3	16,800	EP/MD/10-085
22 June, 2010	2,800	4	20,200	2,100	3	18,900	EP/MD/10-085
23 June, 2010	2,100	3	22,300	2,100	3	21,000	EP/MD/10-085
24 June, 2010	2,100	3	24,400	2,100	3	23,100	EP/MD/10-085
25 June, 2010	2,100	3	26,500	2,100	3	25,200	EP/MD/10-085
26 June, 2010	2,100	3	28,600	2,100	3	27,300	EP/MD/10-085
27 June, 2010	700	1	29,300	2,100	3	29,400	EP/MD/10-085
28 June, 2010	2,100	3	31,400	2,100	3	31,500	EP/MD/10-085
29 June, 2010	1,400	2	32,800	2,100	3	33,600	EP/MD/10-085
30 June, 2010			32,800	2,100	3	35,700	EP/MD/10-085
1 July, 2010			32,800	2,100	3	37,800	EP/MD/10-085
2 July, 2010			32,800	2,100	3	39,900	EP/MD/10-085
3 July, 2010			32,800	2,100	3	42,000	EP/MD/10-085
4 July, 2010			32,800	2,100	3	44,100	EP/MD/10-085
5 July, 2010			32,800	2,100	3	46,200	EP/MD/10-085
6 July, 2010			32,800	2,100	3	48,300	EP/MD/10-085
7 July, 2010			32,800	2,100	3	50,400	EP/MD/10-085
8 July, 2010			32,800	2,100	3	52,500	EP/MD/10-085
9 July, 2010			32,800	2,100	3	54,600	EP/MD/10-085
10 July, 2010			32,800	2,100	3	56,700	EP/MD/10-085
11 July, 2010			32,800	2,100	3	58,800	EP/MD/10-085
12 July, 2010			32,800	2,100	3	60,900	EP/MD/10-085
13 July, 2010			32,800	2,100	3	63,000	EP/MD/10-085
14 July, 2010			32,800	2,100	3	65,100	EP/MD/10-085
15 July, 2010			32,800	2,100	3	67,200	EP/MD/10-085
16 July, 2010			32,800	2,100	3	69,300	EP/MD/10-085
17 July, 2010			32,800	2,100	3	71,400	EP/MD/10-085

Wo Hing - Penta-Ocean Joint Venture							
Contract no. 9/WSD/08							
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun							
Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground)							
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Target Dumping qty (m ³)	Target Barge Load per day	Target Accumulated Dumping Qty.	Permit No.
			(bulk volume)			(bulk volume)	
18 July, 2010			32,800	2,100	3	73,500	EP/MD/10-085
19 July, 2010			32,800	2,100	3	75,600	EP/MD/10-085
20 July, 2010			32,800	2,100	3	77,700	EP/MD/10-085
21 July, 2010			32,800	2,100	3	79,800	EP/MD/10-085
22 July, 2010			32,800	2,100	3	81,900	EP/MD/10-085
23 July, 2010			32,800	2,100	3	84,000	EP/MD/10-085
24 July, 2010			32,800	2,100	3	86,100	EP/MD/10-085
25 July, 2010			32,800	2,100	3	88,200	EP/MD/10-085
26 July, 2010			32,800	2,100	3	90,300	EP/MD/10-085
27 July, 2010			32,800	2,100	3	92,400	EP/MD/10-085
28 July, 2010			32,800	2,100	3	94,500	EP/MD/10-085
29 July, 2010			32,800	2,100	3	96,600	EP/MD/10-085
30 July, 2010			32,800	2,100	3	98,700	EP/MD/10-085
31 July, 2010			32,800	2,100	3	100,800	EP/MD/10-085
1 August, 2010			32,800	2,100	3	102,900	EP/MD/10-085
2 August, 2010			32,800	2,100	3	105,000	EP/MD/10-085
3 August, 2010			32,800	2,100	3	107,100	EP/MD/10-085
4 August, 2010			32,800	2,100	3	109,200	EP/MD/10-085
5 August, 2010			32,800	2,100	3	111,300	EP/MD/10-085
6 August, 2010			32,800	2,100	3	113,400	EP/MD/10-085
7 August, 2010			32,800	2,100	3	115,500	EP/MD/10-085
8 August, 2010			32,800	2,100	3	117,600	EP/MD/10-085
9 August, 2010			32,800	2,100	3	119,700	EP/MD/10-085
10 August, 2010			32,800	2,100	3	121,800	EP/MD/10-085
11 August, 2010			32,800	2,100	3	123,900	EP/MD/10-085
12 August, 2010			32,800	2,100	3	126,000	EP/MD/10-085
13 August, 2010			32,800	2,100	3	128,100	EP/MD/10-085
14 August, 2010			32,800	2,100	3	130,200	EP/MD/10-085
15 August, 2010			32,800	2,100	3	132,300	EP/MD/10-085
16 August, 2010			32,800	2,100	3	134,400	EP/MD/10-085
17 August, 2010			32,800	2,100	3	136,500	EP/MD/10-085
18 August, 2010			32,800	2,100	3	138,600	EP/MD/10-085
19 August, 2010			32,800	2,100	3	140,700	EP/MD/10-085
20 August, 2010			32,800	2,100	3	142,800	EP/MD/10-085
21 August, 2010			32,800	2,100	3	144,900	EP/MD/10-085

Wo Hing - Penta-Ocean Joint Venture							
Contract no. 9/WSD/08							
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun							
Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground)							
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Target Dumping qty (m ³)	Target Barge Load per day	Target Accumulated Dumping Qty.	Permit No.
			(bulk volume)			(bulk volume)	
22 August, 2010			32,800	2,100	3	147,000	EP/MD/10-085
23 August, 2010			32,800	2,100	3	149,100	EP/MD/10-085
24 August, 2010			32,800	2,100	3	151,200	EP/MD/10-085
25 August, 2010			32,800	2,100	3	153,300	EP/MD/10-085
26 August, 2010			32,800	2,100	3	155,400	EP/MD/10-085
27 August, 2010			32,800	2,100	3	157,500	EP/MD/10-085
28 August, 2010			32,800	2,100	3	159,600	EP/MD/10-085
29 August, 2010			32,800	2,100	3	161,700	EP/MD/10-085
30 August, 2010			32,800	2,100	3	163,800	EP/MD/10-085
31 August, 2010			32,800	2,100	3	165,900	EP/MD/10-085
1 September, 2010			32,800	2,100	3	168,000	EP/MD/10-085
2 September, 2010			32,800	2,100	3	170,100	EP/MD/10-085
3 September, 2010			32,800	2,100	3	172,200	EP/MD/10-085
4 September, 2010			32,800	2,100	3	174,300	EP/MD/10-085
5 September, 2010			32,800	2,100	3	176,400	EP/MD/10-085
6 September, 2010			32,800	2,100	3	178,500	EP/MD/10-085
7 September, 2010			32,800	2,100	3	180,600	EP/MD/10-085
8 September, 2010			32,800	2,100	3	182,700	EP/MD/10-085
9 September, 2010			32,800	2,100	3	184,800	EP/MD/10-085
10 September, 2010			32,800	2,100	3	186,900	EP/MD/10-085
11 September, 2010			32,800	2,100	3	189,000	EP/MD/10-085
12 September, 2010			32,800	2,100	3	191,100	EP/MD/10-085
13 September, 2010			32,800	2,100	3	193,200	EP/MD/10-085
14 September, 2010			32,800	2,100	3	195,300	EP/MD/10-085
15 September, 2010			32,800	2,100	3	197,400	EP/MD/10-085
16 September, 2010			32,800	2,100	3	199,500	EP/MD/10-085
17 September, 2010			32,800	2,100	3	201,600	EP/MD/10-085
18 September, 2010			32,800	2,100	3	203,700	EP/MD/10-085
	32,800	47		203,700	291		

Wo Hing - Penta-Ocean Joint Venture							
Contract no. 9/WSD/08							
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun							
Summary of Dumping Qty. of Type 2 Marine Sediment							
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Target Dumping qty (m ³)	Target Barge Load per day	Target Accumulated Dumping Qty.	Permit No.
			(bulk volume)			(bulk volume)	
5 May, 2010	440	1	440	1,260	2	1,260	EP/MD/10-086
6 May, 2010	1,280	3	1,720	1,260	2	2,520	EP/MD/10-086
7 May, 2010	0	0	1,720	1,260	2	3,780	EP/MD/10-086
8 May, 2010	0	0	1,720	1,260	2	5,040	EP/MD/10-086
9 May, 2010	1,400	2	3,120	1,260	2	6,300	EP/MD/10-086
10 May, 2010	1,400	2	4,520	1,260	2	7,560	EP/MD/10-086
11 May, 2010	1,300	2	5,820	1,260	2	8,820	EP/MD/10-086
12 May, 2010	1,800	3	7,620	1,260	2	10,080	EP/MD/10-086
13 May, 2010	1,200	2	8,820	1,260	2	11,340	EP/MD/10-086
14 May, 2010	0	0	8,820	1,260	2	12,600	EP/MD/10-086
15 May, 2010	0	0	8,820	1,260	2	13,860	EP/MD/10-086
16 May, 2010	600	1	9,420	1,260	2	15,120	EP/MD/10-086
17 May, 2010	1,200	2	10,620	1,260	2	16,380	EP/MD/10-086
18 May, 2010	700	1	11,320	1,260	2	17,640	EP/MD/10-086
19 May, 2010	2,000	3	13,320	1,260	2	18,900	EP/MD/10-086
20 May, 2010	1,400	2	14,720	1,260	2	20,160	EP/MD/10-086
21 May, 2010	1,400	2	16,120	1,260	2	21,420	EP/MD/10-086
22 May, 2010	2,100	3	18,220	1,260	2	22,680	EP/MD/10-086
23 May, 2010	1,400	2	19,620	1,260	2	23,940	EP/MD/10-086
24 May, 2010	1,400	2	21,020	1,260	2	25,200	EP/MD/10-086
25 May, 2010	1,300	2	22,320	1,260	2	26,460	EP/MD/10-086
26 May, 2010	1,400	2	23,720	1,260	2	27,720	EP/MD/10-086
27 May, 2010	1,300	2	25,020	1,260	2	28,980	EP/MD/10-086
28 May, 2010	1,400	2	26,420	1,260	2	30,240	EP/MD/10-086
29 May, 2010	600	1	27,020	1,260	2	31,500	EP/MD/10-086
30 May, 2010	2,100	3	29,120	1,260	2	32,760	EP/MD/11-012
31 May, 2010	700	1	29,820	1,260	2	34,020	EP/MD/11-012
1 June, 2010	1,900	3	31,720	1,260	2	35,280	EP/MD/11-012
2 June, 2010	1,220	2	32,940	1,260	2	36,540	EP/MD/11-012
3 June, 2010	1,300	2	34,240	1,260	2	37,800	EP/MD/11-012
4 June, 2010	1,200	2	35,440	1,260	2	39,060	EP/MD/11-012
5 June, 2010	1,400	2	36,840	1,260	2	40,320	EP/MD/11-012
6 June, 2010	600	1	37,440	1,260	2	41,580	EP/MD/11-012
7 June, 2010	0	0	37,440	1,260	2	42,840	EP/MD/11-012
8 June, 2010	500	1	37,940	1,260	2		EP/MD/11-012
9 June, 2010	0	0	37,940	1,260	2		EP/MD/11-012
10 June, 2010	600	1	38,540	1,260	2		EP/MD/11-012
11 June, 2010	1,200	2	39,740	1,260	2		EP/MD/11-012
12 June, 2010	1,400	2	41,140	1,260	2		EP/MD/11-012
13 June, 2010	1,400	2	42,540	1,260	2		EP/MD/11-012
14 June, 2010	0	0	42,540	0	0		EP/MD/11-012
15 June, 2010	0	0	42,540	0	0		EP/MD/11-012
16 June, 2010	0	0	42,540	0	0		EP/MD/11-012
17 June, 2010	0	0	42,540	0	0		EP/MD/11-012
18 June, 2010	0	0	42,540	0	0		EP/MD/11-012
19 June, 2010	0	0	42,540	0	0		EP/MD/11-012

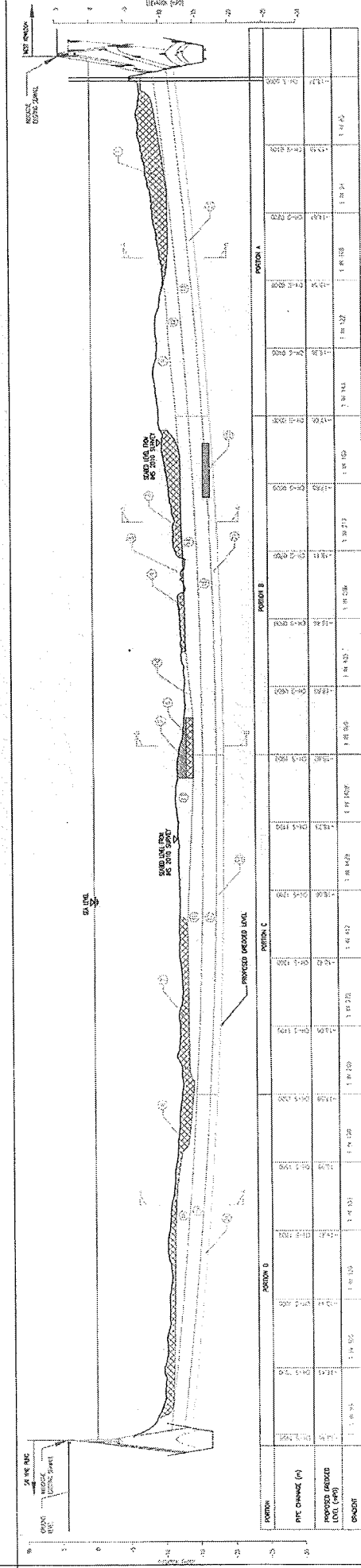
Wo Hing - Penta-Ocean Joint Venture							
Contract no. 9/WSD/08							
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun							
Summary of Dumping Qty. of Type 2 Marine Sediment							
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Target Dumping qty (m ³)	Target Barge Load per day	Target Accumulated Dumping Qty.	Permit No.
			(bulk volume)			(bulk volume)	
20 June, 2010	0	0	42,540	0	0		EP/MD/11-012
21 June, 2010	0	0	42,540	0	0		EP/MD/11-012
22 June, 2010	0	0	42,540	0	0		EP/MD/11-012
23 June, 2010	0	0	42,540	0	0		EP/MD/11-012
24 June, 2010	0	0	42,540	0	0		EP/MD/11-012
25 June, 2010	0	0	42,540	0	0		EP/MD/11-012
26 June, 2010	0	0	42,540	0	0		EP/MD/11-012
27 June, 2010	0	0	42,540	0	0		EP/MD/11-012
28 June, 2010	0	0	42,540	0	0		EP/MD/11-012
29 June, 2010	0	0	42,540	0	0		EP/MD/11-012
30 June, 2010	1,200	2	43,740				EP/MD/11-024
1 July, 2010	2,600	4	46,340				EP/MD/11-024
2 July, 2010	2,800	4	49,140				EP/MD/11-024
3 July, 2010	1,400	2	50,540				EP/MD/11-024
4 July, 2010	2,100	3					EP/MD/11-024
5 July, 2010	2,850	4					EP/MD/11-024
6 July, 2010	1,400	2					EP/MD/11-024
7 July, 2010	1,400	2					EP/MD/11-024
8 July, 2010	2,700	4					EP/MD/11-024
9 July, 2010	2,100	3					EP/MD/11-024
10 July, 2010	2,100	3					EP/MD/11-024
11 July, 2010	1,400	2					EP/MD/11-024
12 July, 2010							EP/MD/11-024
13 July, 2010							EP/MD/11-024
14 July, 2010							EP/MD/11-024
15 July, 2010							EP/MD/11-024
16 July, 2010							EP/MD/11-024
17 July, 2010							EP/MD/11-024
18 July, 2010							EP/MD/11-024
19 July, 2010							EP/MD/11-024
20 July, 2010							EP/MD/11-024
21 July, 2010							EP/MD/11-024
22 July, 2010							EP/MD/11-024
23 July, 2010							EP/MD/11-024
24 July, 2010							EP/MD/11-024
25 July, 2010							EP/MD/11-024
26 July, 2010							EP/MD/11-024
27 July, 2010							EP/MD/11-024
28 July, 2010							EP/MD/11-024
29 July, 2010							EP/MD/11-024
30 July, 2010							
31 July, 2010							
	66,590	101		50,400	70		

NOTE:

LOGISTIC OF DREDGING

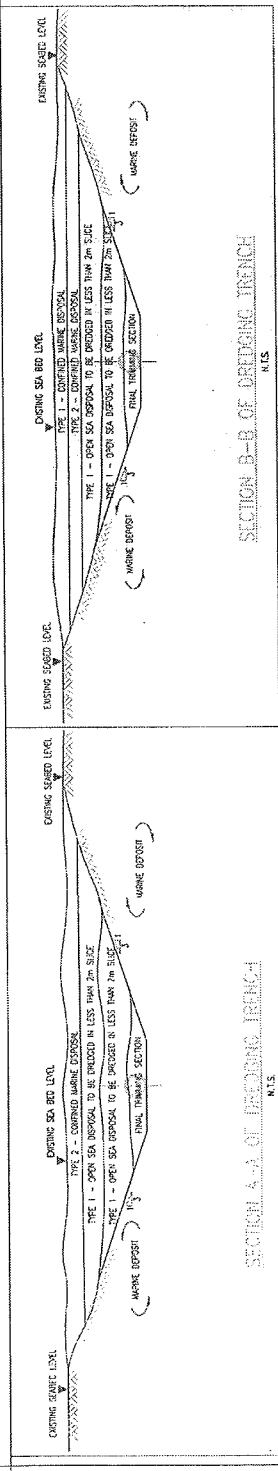
- STAGE 1 -- TYPE 2 MARINE SEDIMENT
- ① --> ② --> ③ --> ④ --> ⑤ --> ⑥ --> ⑦ --> ⑧
- STAGE 2 -- TYPE 1 MARINE SEDIMENT
- ⑨ --> ⑩ --> ⑪ --> ⑫ --> ⑬ --> ⑭ --> ⑮ --> ⑯ --> ⑰ --> ⑱
- STAGE 3 -- TYPE 1 MARINE SEDIMENT
- ⑲ --> ⑳ --> ㉑ --> ㉒ --> ㉓ --> ㉔ --> ㉕ --> ㉖ --> ㉗ --> ㉘
- STAGE 4 -- TYPE 10 MARINE SEDIMENT
- ㉙ --> ㉚ --> ㉛ --> ㉜ --> ㉝ --> ㉞ --> ㉟ --> ㊱ --> ㊲ --> ㊳ --> ㊴ --> ㊵ --> ㊶ --> ㊷ --> ㊸ --> ㊹ --> ㊺ --> ㊻ --> ㊼ --> ㊽ --> ㊾ --> ㊿
- STAGE 5 -- TYPE 1 MARINE SEDIMENT
- ① --> ② --> ③ --> ④ --> ⑤ --> ⑥ --> ⑦ --> ⑧ --> ⑨ --> ⑩ --> ⑪ --> ⑫ --> ⑬ --> ⑭ --> ⑮ --> ⑯ --> ⑰ --> ⑱ --> ⑲ --> ⑳ --> ㉑ --> ㉒ --> ㉓ --> ㉔ --> ㉕ --> ㉖ --> ㉗ --> ㉘ --> ㉙ --> ㉚ --> ㉛ --> ㉜ --> ㉝ --> ㉞ --> ㉟ --> ㊱ --> ㊲ --> ㊳ --> ㊴ --> ㊵ --> ㊶ --> ㊷ --> ㊸ --> ㊹ --> ㊺ --> ㊻ --> ㊼ --> ㊽ --> ㊾ --> ㊿

IF SIMILAR DISPOSAL SITE IS DEDICATED FOR TYPE 10 AND TYPE 1 MARINE SEDIMENT DREDGING LOGISTIC AT ① WILL BE DELETED AND INCLUDED IN ② AND ③



Sai Ying Pun West Kowloon

LONGITUDINAL SECTION OF DREDGING TRENCH



- LEGEND:
- TYPE 1 -- OPEN SEA DISPOSAL
 - TYPE 10 -- OPEN SEA DISPOSAL (DEDICATED SITES)
 - TYPE 2 -- CONFINED MARINE DISPOSAL
 - TYPE 1 -- CONFINED MARINE DISPOSAL

THE NUMBER INDICATE THE SEQUENCE OF DREDGING

CONTRACTOR WING-PENTAOCEAN JOINT VENTURE 和興洋行聯營	CONTRACT NO. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Sai Ying Pun		TONY TANG	SCALE	NTS
	DRAWING TITLE DREDGING LOGISTIC		STANLEY LEUNG	DWG No.	SK-D-002
DRAWING TITLE DREDGING LOGISTIC		DATE 08 Apr 2010	REVISION	D	



Appendix K

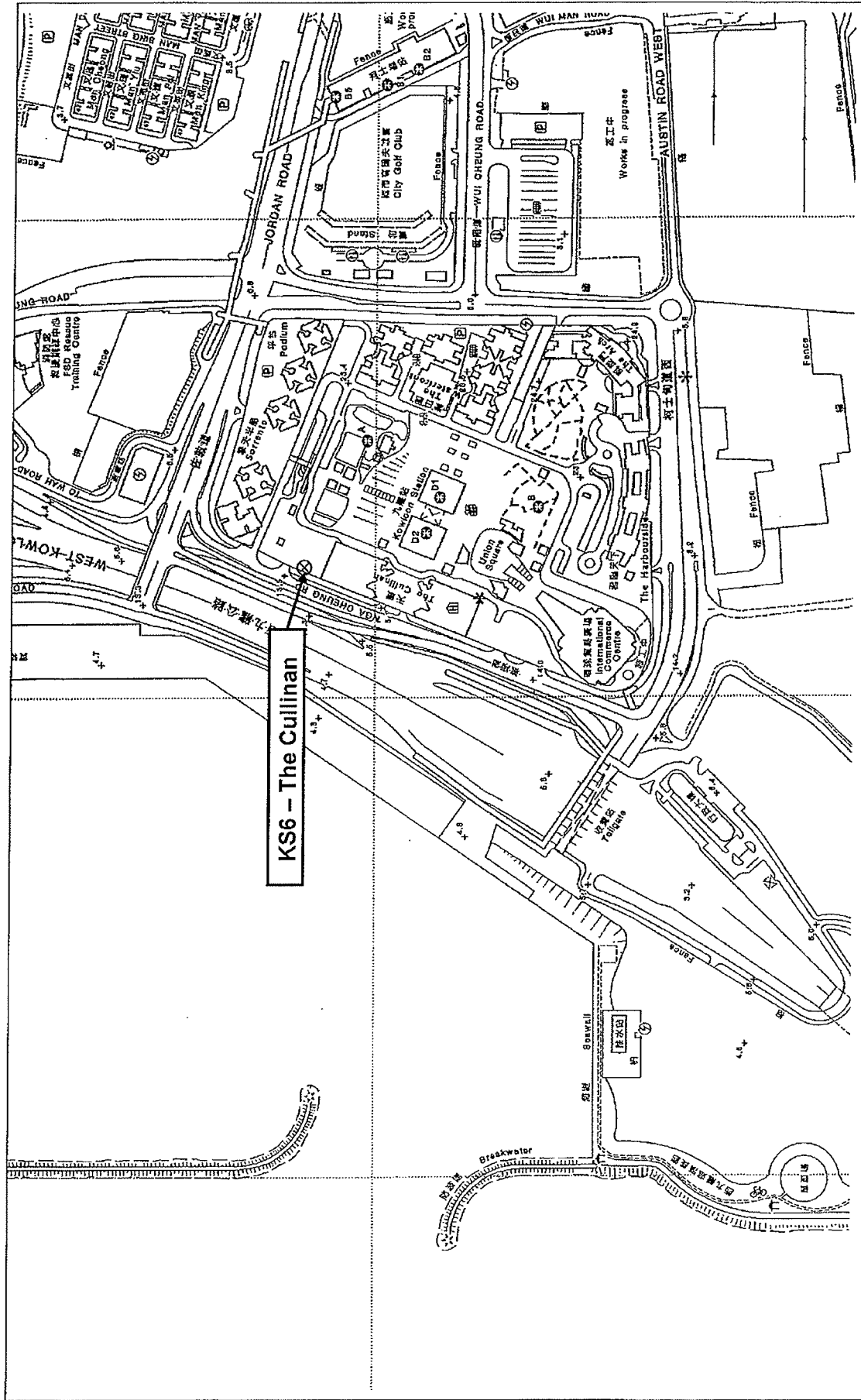
Complaint Log

Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation / Mitigation Action	Status
001	Portion I – Launch Barge	08/07/2011	One complaint received on 23 June 2011 was forwarded by the Engineer's Representatives on 08 July 2011 through internet from a citizen against urinating into the sea from the Launching Barge which caused by site workers. The complainant complained that that caused an environmental nuisance.	<p><u>Details of ET Follow up Action(s):</u> During the weekly site inspection on 08 July 2010, the Contractor has provided portable chemical toilet and warning notice on the barge. No urinating was observed during the weekly site inspection.</p> <p><u>Details of Action(s) Taken by the Contractor:</u></p> <ol style="list-style-type: none"> 1. Meeting has been arranged on 29 June 2011 to discuss the safety and environmental issues on launching barge. 2. New disciplinary system has been in place to prevent the same inappropriate act of workers from happening. 3. Additional sanitary facilities have been added on the barge and the nearby area to facilitate the workers need. 	Closed



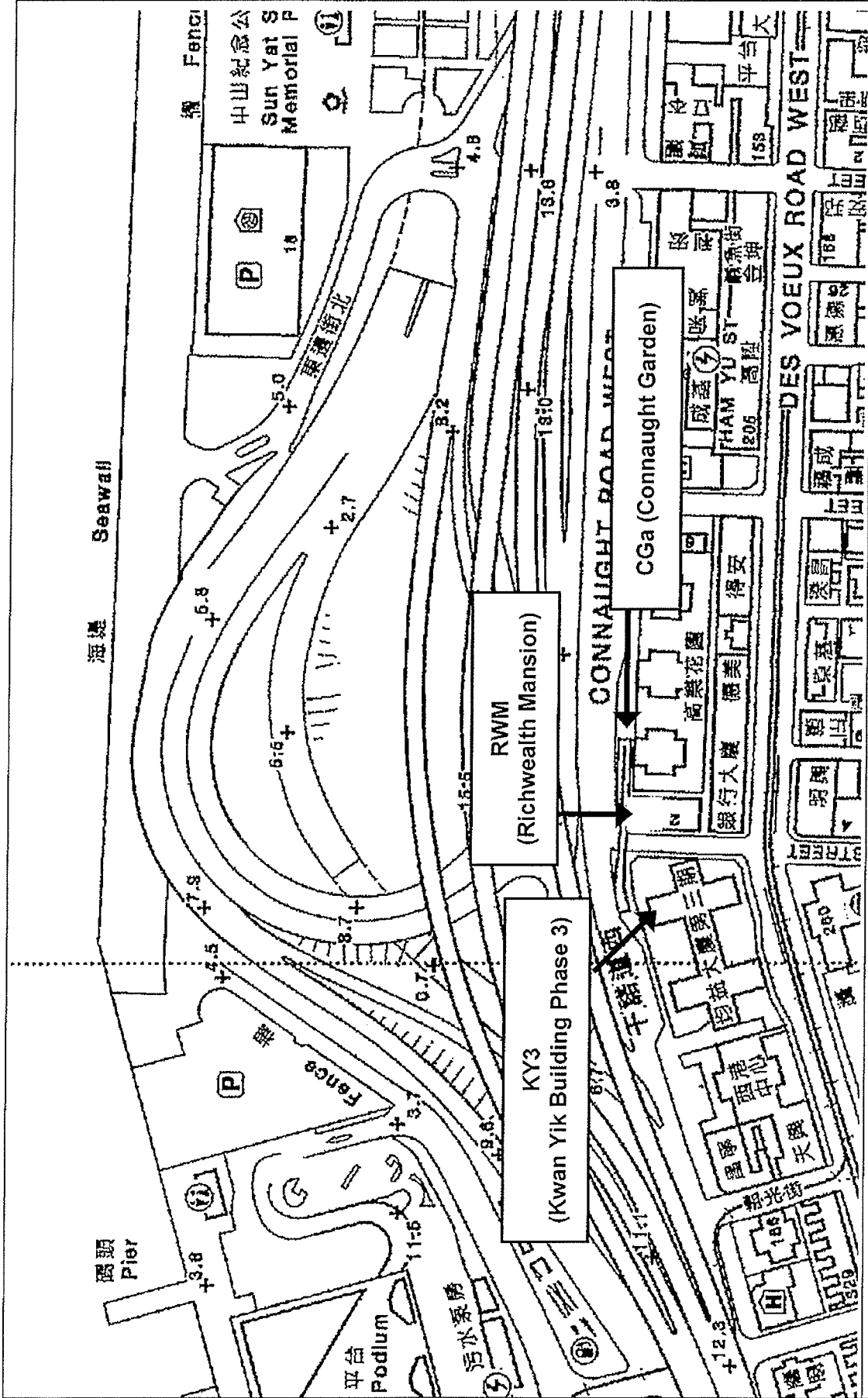
Figures



Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains for West Kowloon to Sai Ying Pun

Figure 1

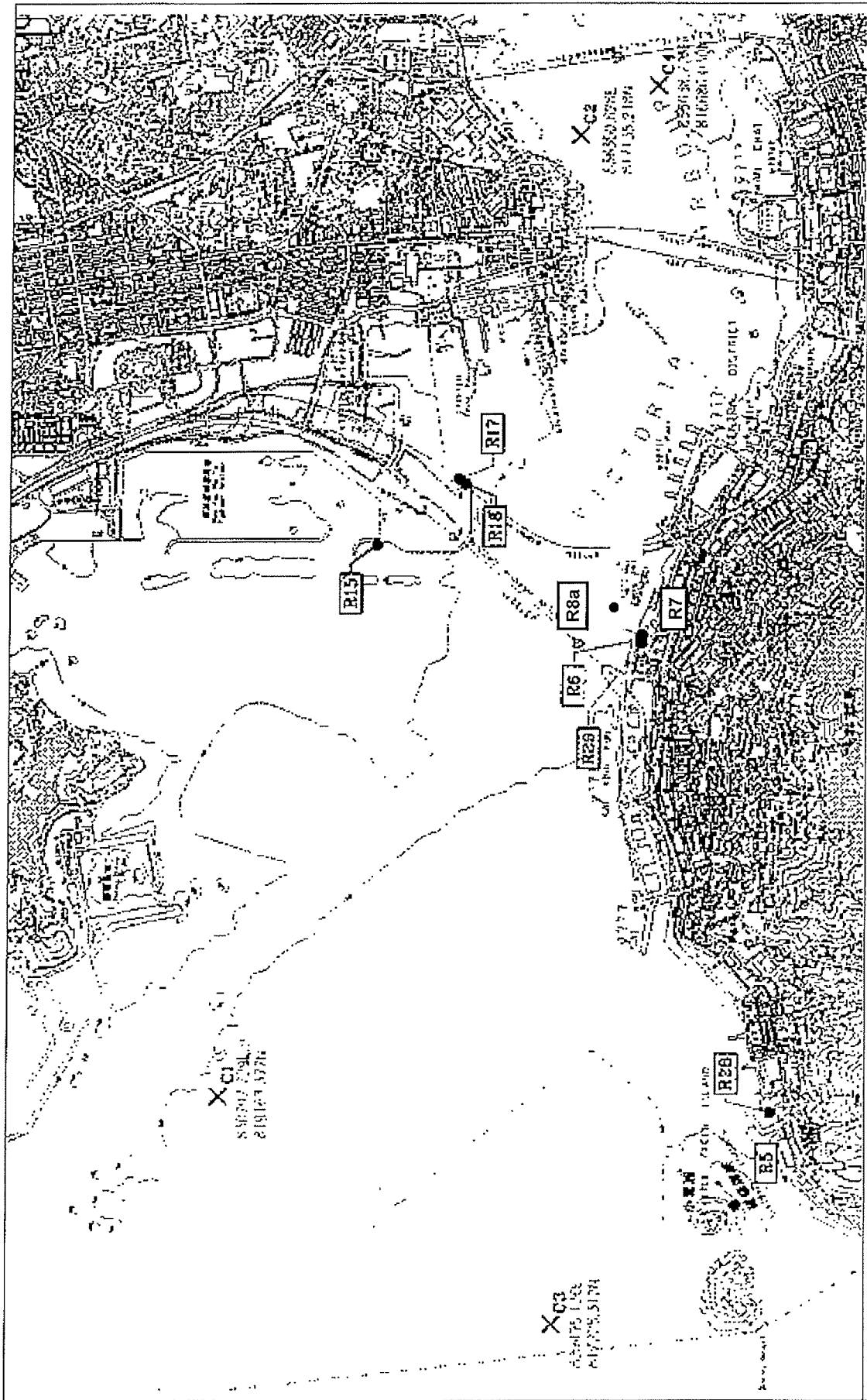
Location of Noise Monitoring Station at West Kowloon



Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains for West Kowloon to Sai Ying Pun

Figure 2

Locations of Noise Monitoring Stations at Sai Ying Pun



Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains for West Kowloon to Sai Ying Pun

Figure 3

Locations of Water Quality Monitoring Stations



RECEIVER POINT	TYPE	LOCATION
81	Upstream Station	WATER SUPPLY AT THE TYPHOON SHED
82	Sanitary Receiver of Sewerage	CHINA ROAD
83	Sanitary Receiver of Sewerage	CHINA ROAD
84	Sanitary Receiver of Sewerage	CHINA ROAD
85	Sanitary Receiver of Sewerage	CHINA ROAD
86	Sanitary Receiver of Sewerage	CHINA ROAD
87	Sanitary Receiver of Sewerage	CHINA ROAD
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127	Sanitary Receiver of Sewerage	CHINA ROAD
128	Sanitary Receiver of Sewerage	CHINA ROAD
129	Sanitary Receiver of Sewerage	CHINA ROAD
130	Sanitary Receiver of Sewerage	CHINA ROAD

A 10/06 UK PRELIMINARY
 Date Issue Description
 2006/06/06
 2006/06/06
 2006/06/06

Mott MacDonald
 4011 Gateway Drive
 Suite 200
 Irvine, CA 92618
 USA
 Tel: +1 949 261 4100
 Fax: +1 949 261 4101
 Email: info@mottmac.com

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
 WATER SUPPLIES DEPARTMENT

Project: CE42/2005(W5)
 LAYING OF WESTERN CROSS HARBOUR MAIN AND ASSOCIATED LAND MAINS FROM WEST KOWLOON TO SAI YING PUN - INVESTIGATION

Scale: 1 : 25000/0/1
 Date: 2005/12/13
 Drawing No.: WSP/05/001/01

FIGURE 1.2a
 A

This drawing should be read in conjunction with the project description and the project location map. It is the responsibility of the user to ensure that the drawing is used in accordance with the project description and the project location map.

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LEGEND:

- PROPOSED SCHEME OF 12009
FRESH WATER MAIN
- NOISE SENSITIVE RECEIVERS
- 50m NOISE ASSESSMENT
BOUNDARY
- WORKS AREA BOUNDARY

**Mott
McCormick**

Mott MacDonald Limited
407 Regency Centre
80 Regency Street
Hong Kong

Tel: 852 6757
Fax: 852 1825
www.mottmac.com

**THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION
WATER SUPPLIES DEPARTMENT**

Project No. DE42/2008 (WS)

LAYING OF WESTERN CROSS HARBOUR MAIN
AND ASSOCIATED LAND MAINS FROM WEST
KOWLOON TO SAU YING PUN - INVESTIGATION

LOCATIONS OF NOISE SENSITIVE
RECEIVERS IN SAU YING PUN

Author	Checked	Drawn	Scale
Design	Reviewed	Project	Sheet
Project	1 : 20000A1	Scale	1 : 20000A1
Project	Scale	Scale	Scale



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FIGURE 1.2b

A



- LEGEND:**
- PROPOSED ROUTE OF 1200P FRESH WATER MAIN
 - NOISE SENSITIVE RECEIVERS
 - TEMPORARY PLATFORM
 - NOISE ASSESSMENT BOUNDARY
 - WORKS AREA BOUNDARY

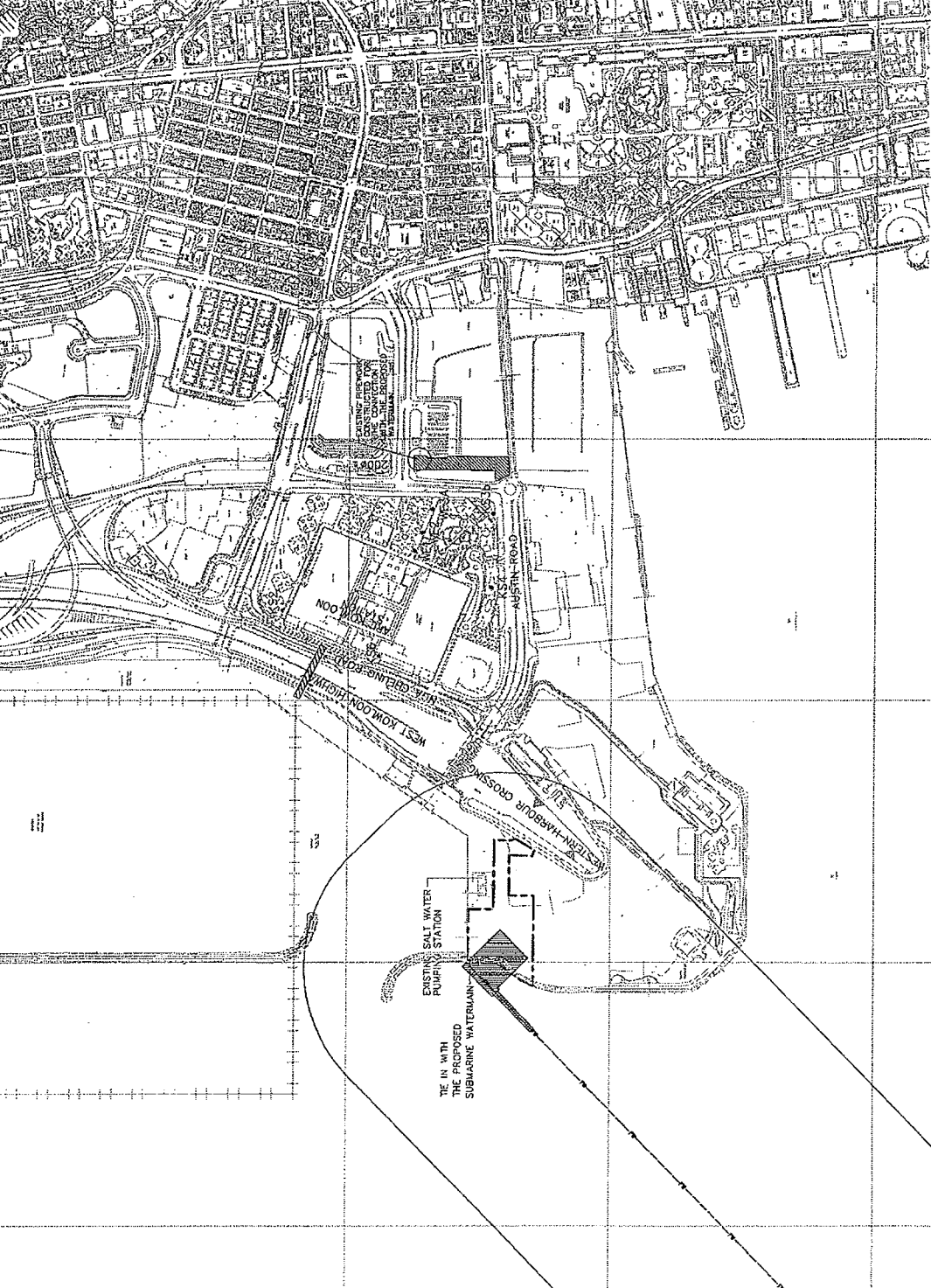
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**Mott
 Connell**
 Mott Connell Limited
 507 Robinson Drive
 5/F Robinson Centre
 Hong Kong
 Tel: 852 257 0737
 Fax: 852 257 1825
 www.mottconnell.com

THE GOVERNMENT OF THE HONG KONG
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LAYING OF WESTERN CROSS HARBOUR MAIN
 AND ASSOCIATED LAND MAINS FROM WEST
 KOWLOON TO SA YING PUN - INVESTIGATION
 LOCATION OF NOISE SENSITIVE
 RECEIVERS IN WEST KOWLOON

Project No.	DE42/2008 (WS)
Scale	1 : 40000A1
Sheet No.	A

Author	Y. C. Yip
Checker	Y. C. Yip
Designer	Y. C. Yip
Project	1 : 40000A1
Sheet No.	A



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