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**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.10**

**(FEBRUARY 2011)**

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ENVIRON

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9<sup>th</sup> Mar 2011

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

By Post

Attention: Ms. Candy Wong

Dear Ms. Wong

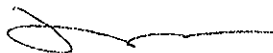
**Re: Contact No. 9/WSD/08  
Laying of Western Cross Harbour Main and Associated Land Mains from West  
Kowloon to Sai Ying Pun  
Monthly Environmental Monitoring and Audit Report No. 10**

Reference is made to Environment Team's submission of the Environmental Monitoring and Audit Report No. 10 by Email on 7<sup>th</sup> Mar 2011 (entitled "9/WSD/08 - Draft Monthly Report (Feb 11)") and the subsequent revision of the report by Email on 9<sup>th</sup> Mar 2011.

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

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	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(WS) 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.10 was prepared by ETS-Testconsult Ltd (ET) for the Project. This report documented the findings of EM&A Works conducted during the Project in February 2011.

### Site Activities

As informed by the Contractor, the site activities in this reporting month were as below:

- Drilling of pipe piles (Portion H1 & H2);
- Excavation inside the cofferdam (Portion J);
- Drill cutting of the existing precast concrete seawall blocks within "Seawall" of the cofferdam for later removal (Portion J); and
- Installation of the strutting system of the cofferdam (Portion J).

### 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 and 4 Occasions at. CGa, RWM and KY3
- Evening-time Noise Monitoring (1900-2300): 3 Occasions at KS6, CGa, RWM and KY3
- Night-time Noise Monitoring (2300-0700 of next day): 1 Occasions at KS6, CGa, RWM and KY3
- Holiday-time Noise Monitoring (0700-1900 on Holiday): 3 Occasions at KS6, CGa, RWM and KY3
- Marine Water Quality Monitoring: 10 Occasions at 9 monitoring stations and 4 control stations
- Weekly-site inspection: 3 Occasions

### Noise Monitoring

No exceedances of Action Level of noise monitoring were recorded in this reporting month since no complaint on noise issue was received.

Nine exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 12 February 2011 (2300-2400) at KY3, RWM and KY3. However, all of the exceedances were considered to be invalid (not project related) and no further actions were required. Interim notifications of exceedance (NOEs) for all exceedances were issued to EPD, ER, IEC and the Contractor by ET. The details of NOEs present in Appendix K.

### Water Quality Monitoring

No exceedances of Action and Limit levels were 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>
ET Weekly site inspection	12, 15 and 23 February 2011
Monthly Joint site inspection	23 February 2011

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 complaints, notification of summons and prosecutions with respect to environmental issues were 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(W5) 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 February 2011.

## 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

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

## 3.0 WORK PROGRESS IN THIS REPORTING MONTH

As informed by the Contractor, the activities in the reporting month include:

- Drilling of pipe piles (Portion H1 & H2);
- Excavation inside the cofferdam (Portion J);
- Drill cutting of the existing precast concrete seawall blocks within “Seawall” of the cofferdam for later removal (Portion J); and
- Installation of the strutting system of the cofferdam (Portion J).

Appendix J shows the details of works daily dredging of this 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/003/13	00593620	14/09/10	13/09/11
		ET/EN/003/10	00531142	09/06/10	08/06/11
Sound Level Calibrator	Castle GA607	ET/EN/002/07	038641	22/04/10	21/04/11
Anemometer	AZ Instrument AZ 8908	EN/001/04	9101231	10/11/10	09/11/11

##### 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 May 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, 3 occasions of evening-time noise monitoring, 1 occasion of night-time noise monitoring and 3 occasions of holiday-time noise monitoring at all four noise monitoring stations (KS6, CGa, RWM and KY3) were carried out in this reporting month.

No exceedances of Action Level of noise monitoring were recorded in this reporting month since no complaint on noise issue was received. Nine exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 12 February 2011 (2300-2400) at KY3, RWM and KY3. However, all of the exceedances were considered to be invalid (not project related) and no further actions were required. Interim notifications of exceedance (NOEs) for all exceedances were issued to EPD, ER, IEC and the Contractor by ET. The details of NOEs present in Appendix K.

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		
		Time	Result	Exceed*
Daytime	02/02/11	08:30	62.7	X
	11/02/11	11:00	62.9	X
	18/02/11	17:35	63.3	X
	23/02/11	15:30	61.2	X
Evening-time	12/02/11	21:20	62.4	X
	12/02/11	21:25	64.1	X
	12/02/11	21:30	65.4	X
	19/02/11	20:30	60.4	X
	19/02/11	20:35	60.3	X
	19/02/11	20:40	60.2	X
	26/02/11	22:05	60.1	X
	26/02/11	22:10	59.4	X
	26/02/11	22:15	59.3	X



Monitoring Parameter	Date	KS6		
		Time	Result	Exceed*
Night-time	13/02/11	00:40	55.0	X
	13/02/11	00:45	55.0	X
	13/02/11	00:50	54.9	X
Holiday-time	13/02/11	16:15	64.5	X
	13/02/11	16:20	65.1	X
	13/02/11	16:25	64.9	X
	20/02/11	09:00	58.5	X
	20/02/11	09:05	59.2	X
	20/02/11	09:10	60.8	X
	27/02/11	14:00	60.5	X
	27/02/11	14:05	60.1	X
	27/02/11	14:10	60.1	X
Monitoring Parameter	Date	CGa		
		Time	Result	Exceed*
Daytime	02/02/11	11:10	72.2	X
	09/02/11	14:45	72.8	X
	14/02/11	16:25	73.8	X
	23/02/11	14:05	73.8	X
Evening-time	12/02/11	22:35	70.0	X
	12/02/11	22:40	70.0	X
	12/02/11	22:45	69.9	X
	19/02/11	21:20	68.1	X
	19/02/11	21:25	67.8	X
	19/02/11	21:30	67.9	X
	26/02/11	21:05	69.7	X
	26/02/11	21:10	69.5	X
Night-time	12/02/11	23:35	65.1	L
	12/02/11	23:40	64.5	L
	12/02/11	23:45	64.1	L
Holiday-time	13/02/11	15:15	69.7	X
	13/02/11	15:20	70.0	X
	13/02/11	15:25	69.4	X
	20/02/11	15:00	67.7	X
	20/02/11	15:05	67.4	X
	20/02/11	15:10	68.1	X
	27/02/11	15:20	69.9	X
	27/02/11	15:25	70.0	X
27/02/11	15:30	69.9	X	
Monitoring Parameter	Date	RWM		
		Time	Result	Exceed*
Daytime	02/02/11	10:35	60.8	X
	09/02/11	14:10	62.8	X
	14/02/11	15:50	61.3	X
	23/02/11	14:40	63.1	X
Evening-time	12/02/11	22:20	69.9	X
	12/02/11	22:25	70.0	X
	12/02/11	22:30	69.7	X
	19/02/11	22:05	60.1	X
	19/02/11	22:10	59.4	X
	19/02/11	22:15	59.3	X
	26/02/11	20:45	69.2	X
	26/02/11	20:50	69.4	X
26/02/11	20:55	69.2	X	
Night-time	12/02/11	23:20	63.5	L
	12/02/11	23:25	63.9	L
	12/02/11	23:30	63.1	L

Monitoring Parameter	Date	RWM		
		Time	Result	Exceed*
Holiday-time	13/02/11	14:55	64.8	X
	13/02/11	15:00	65.1	X
	13/02/11	15:05	64.3	X
	20/02/11	15:20	60.2	X
	20/02/11	15:25	60.8	X
	20/02/11	15:30	60.7	X
	27/02/11	15:40	62.8	X
	27/02/11	15:45	62.5	X
27/02/11	15:50	62.3	X	
Monitoring Parameter	Date	KY3		
		Time	Result	Exceed*
Daytime	02/02/11	10:00	59.1	X
	09/02/11	13:35	61.5	X
	14/02/11	15:15	60.2	X
	23/02/11	15:15	61.8	X
Evening-time	12/02/11	22:00	67.8	X
	12/02/11	22:05	66.5	X
	12/02/11	22:10	67.0	X
	19/02/11	22:00	69.0	X
	19/02/11	22:05	68.7	X
	19/02/11	22:10	68.8	X
	26/02/11	20:30	66.4	X
	26/02/11	20:35	66.0	X
26/02/11	20:40	66.2	X	
Night-time	12/02/11	23:00	61.8	L
	12/02/11	23:05	61.2	L
	12/02/11	23:10	60.9	L
Holiday-time	13/02/11	14:35	62.5	X
	13/02/11	14:40	62.1	X
	13/02/11	14:45	61.5	X
	20/02/11	15:40	61.0	X
	20/02/11	15:45	60.9	X
	20/02/11	15:50	60.6	X
	27/02/11	16:00	60.3	X
	27/02/11	16:05	60.1	X
27/02/11	16:10	60.0	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	9	0
Cumulative	0	0	128	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

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

Table 5.3 Other relevant water quality parameters

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

### 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

Frequency	Monitoring Depth
3 days/week, 2 tides/day	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)

## 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)

Parameter	Model	Date of Calibration	Due Date	Equipment No.	Serial No.
Coordinate of Monitoring stations	Magellan GPS Navigator	----	----	ET/EW/005/03	211836B
Dissolved Oxygen (Saturation), Temperature and Salinity	YSI Dissolved Oxygen, Salinity & Temperature Meter, YSI 85	23/11/10 22/02/11	22/02/11 21/05/11	ET/EW/008/002*	06C1998AD
Turbidity	HACH Model 2100P Turbid Meter	15/01/11	14/04/11	ET/0505/007*	08060C030281
Water Depth	Speedtech Instrument SM-5A	----	----	ET/EW/002/04	56657

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 <sup>th</sup> 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 &amp; 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 &amp; 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

January 2011						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		▼		Holiday	Holiday	Holiday
6	7	8	9	10	11	12
		▼		▼		▼
13	14	15	16	17	18	19
		▼		▼		▼
20	21	22	23	24	25	26
		▼		▼		▼
27	28					

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	0	0

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 12, 15 and 23 February 2011 by ET. Monthly joint site inspection at 23 February 2011 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 findings

According to the summary of the ET weekly site inspections carried out in February 2011, it indicated that site practices of the Contractor were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was satisfactory. Summary of the site inspection findings in this reporting month is shown in Table 6.1.

Table 6.1 Summary of Site Inspection Findings

Item	Aspect	Finding	Action(s) taken by the Contractor	ET Verification	Status of the finding
1	Site Practice	A skip for C&D waste at Portion J was found without cover and labels during the weekly site inspection on 12/02/11 (Photo 110212_001)	<ul style="list-style-type: none"> <li>Provision of cover and label to the skip (Photo Ref. 01 of the Contractor Follow-up Action – 12/02/11)</li> </ul>	Cover and label were provided for a C&D waste skip at Portion J during the subsequent weekly site inspection on 15/02/11 (Photo 110215_001).	Closed

### 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; and
- 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
Water Discharge Licence (Sai Yung Pun)	WT00005800-2010	14/01/10	31/01/15	Effluent arising from the construction site through 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 (West Kowloon)	GW-RE0730-10	04/01/11	03/04/11	One Dredger, grab (CNP 063) One Derrick barge (CNP 061) Two Guard boat One Tug boat (CNP 221) One Generator, standard (CNP 101)
Construction Noise Permit (Sai Ying Pun)	GW-RS0078-11	14/01/11	03/04/11	<b>Group A</b> One dredger, grab (CNP 063) Three Guard boats Two Tug boats (CNP 221) One Hopper barge One Air compressor with Noise Emission Label showing a sound power level of $\leq 98$ dB(A) One Generator, silenced, 108dB(A) (CNP 101) One Derrick barge (CNP 061) <b>Group B</b> One dredger, grab (CNP 063) Two Guard boats One Tug boat (CNP 221) One Hopper barge One Crane, mobile (diesel) (CNP 048) One Air compressor with Noise Emission Label showing a sound power level of $\leq 98$ dB(A) One Generator, silenced, 108dB(A) (CNP 101) <b>Group C</b> Two Derrick barge (CNP 061) Three Guard boats Two Tug boat (CNP 221) One Air compressor with Noise Emission Label showing a sound power level of $\leq 98$ dB(A) One Generator, silenced, 108dB(A) (CNP 101) <b>Group D</b> One Derrick barge (CNP 061) Two Guard boats One Tug boat (CNP 221) One Crane, mobile (diesel) (CNP 048) One Air compressor with Noise Emission Label showing a sound power level of $\leq 98$ dB(A) <b>Group E</b> One Air compressor with Noise Emission Label showing a sound power level of $\leq 98$ dB(A) One Generator, silenced, 108dB(A) (CNP 101)
Dumping Licence	EP/MD/11-069	01/10/10	31/03/11	Bulk quantity of material approved for dumping at the South Cheung Chau Spoil Disposal Area denoted "LWCHMALM" within permit validity period: 130000 cu.m. (for Type 1 – Open Sea Disposal)
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 <sup>3</sup> )	1290.53		10723.43
	Broken Concrete (in m <sup>3</sup> )	0	---	0
	Reused in the Contract (in m <sup>3</sup> )	0	---	0
	Reused in other Projects (in m <sup>3</sup> )	0	---	0
	Disposal as Public Fill (in m <sup>3</sup> )	1290.53	SENT Landfill	10723.43
C&D Waste	Metals (in kg)	0	---	0
	Paper/Cardboard Packaging (in kg)	0	Collected by recycling company	91
	Plastics (in kg)	0	---	0
	Chemical Waste (in kg)	0	---	0
	Other, e.g. General Refuse (in m <sup>3</sup> )	1.65	SENT Landfill	60.65
Dredged Materials*	Type 1 (in m <sup>3</sup> )	0	East Ninpin Mud Disposal Ground	160500
	Type 2 (in m <sup>3</sup> )	0	The East Sha Chau	104990

Remark (\*): Daily Dredging Summary for this reporting month presents in Appendix J

### 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 exceedances of Action and Limit Level of marine water quality monitoring results were recorded during the reporting month.

No exceedances of Action Level of noise monitoring were recorded in this reporting month since no complaint on noise issue was received. Nine exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 12 February 2011 (2300-2400) at KY3, RWM and KY3. However, all of the exceedances were considered to be invalid (not project related) and no further actions were required. Interim notifications of exceedance (NOEs) for all exceedances were issued to EPD, ER, IEC and the Contractor by ET. The details of NOEs present in Appendix K.



## 9.2 Summary of Environmental Complaints

There was no complaint 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

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

Since no documented complaints on noise issue were received in this reporting month, no Action Level exceedances were recorded.

Nine exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 12 February 2011 (2300-2400) at KY3, RWM and KY3. However, all of the exceedances were considered to be invalid (not project related) and no further actions were required.

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

No complaints, notifications of summons and successful prosecutions 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

Complaints logged		Summons served		Successful prosecution received	
February 2011	Cumulative	February 2011	Cumulative	February 2011	Cumulative
0	0	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 exceedances of Action and Limit Level of water quality monitoring results were recorded during the reporting month.

Since no documented complaints on noise issue were received in this reporting month, no Action Level exceedances were recorded. Nine exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 12 February 2011 (2300-2400) at KY3, RWM and KY3.

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

No complaints, prosecutions or notifications of summons 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;
- 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, the activities to be conducted by them in the next month included:

- *Pipe piles installation at Land and Seawall Portion (Portion H1);*
- *Excavation inside the cofferdam (Portion J);*
- *Installation of the strutting system for the cofferdam (Portion J);*
- *Preparation for pipe pulling works (Portion J);*
- *Trimming of high spot of Type 1 marine sediment between CH0 and CH1960 (Portion I); and*
- *Placing granular material as bedding layer to the over dredged area (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;
- To identify the noise sources inside and outside of the site; 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.

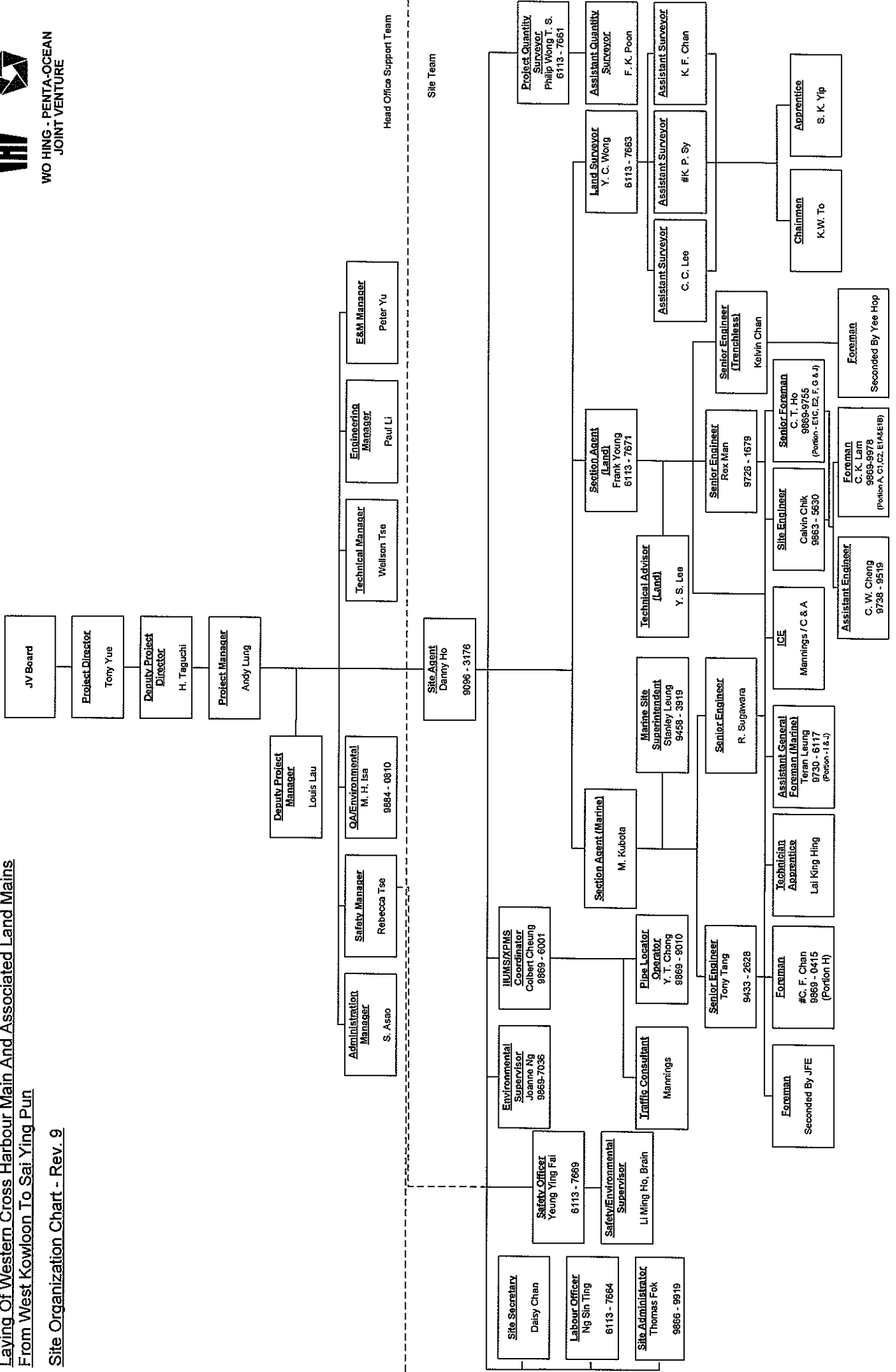
**12.3 Monitoring Schedule for the Coming Month**

The proposed EM&A program of the coming month is attached in Appendix I.

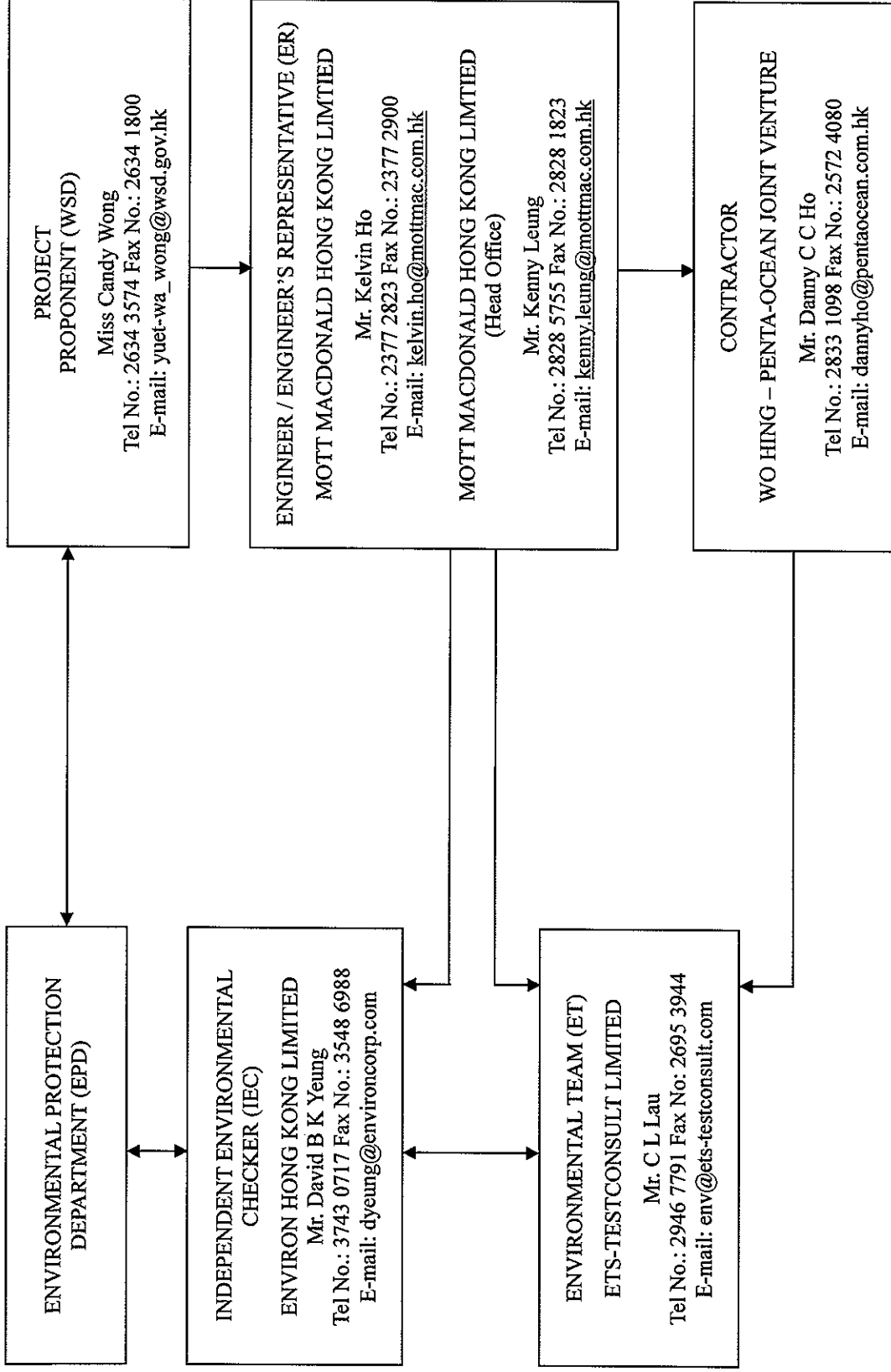


## **Appendix A**

### **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. 02909A

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. :** Q01152

**Date of receipt :** 31-May-10

## Item Tested

**Description :** Precision Integrating Sound Level Meter (ET/ EN/ 003/ 10)

**Manufacturer :** Rion

**Model :** NL-31

**Serial No. :** 00531142

## Test Conditions

**Date of Test :** 9-Jun-10

**Supply Voltage :** --

**Ambient Temperature :** (23 ± 3)°C

**Relative Humidity :** (50 ± 25) %

## Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

## Test Results

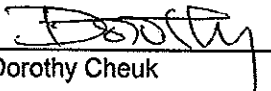
All results were within the IEC 651 Type 1 & IEC 804 Type 1 specification.  
The results are shown in the attached page(s).


Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Due Date</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C101623	25-Mar-11	SCL-HKSAR
S024	Sound Level Calibrator	93758	16-Jul-10	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 :   
Dorothy Cheuk

Approved by :   
Alan Chu

Date: 15-Jun-10

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. 02909A

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 <sub>A</sub>	Fast	94.03	93.7
		Slow		93.7
	L <sub>C</sub>	Fast		93.7
	L <sub>p</sub>	Fast		93.7
30 - 120	L <sub>A</sub>	Fast	94.03	93.7
		Slow		93.6
	L <sub>C</sub>	Fast		93.7
	L <sub>p</sub>	Fast		93.7
30 - 120	L <sub>A</sub>	Fast	113.97	113.6
		Slow		113.6
	L <sub>C</sub>	Fast		113.6
	L <sub>p</sub>	Fast		113.6

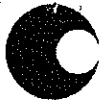
IEC Type 1 Spec. :  $\pm 0.7$  dB

Uncertainty :  $\pm 0.1$  dB

## 2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. :  $\pm 0.3$  dB

Uncertainty :  $\pm 0.1$  dB



# Calibration Certificate

Certificate No. **02909A**

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	113.9	+0.2	± 0.7 dB
130	104.0	103.9	+0.2	
120	94.0	93.7 (Ref.)	--	
110	84.0	84.1	+0.4	
100	74.0	73.7	0.0	
90	64.0	63.7	0.0	
80	54.0	53.7	0.0	

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	83.5	-0.2	± 0.4 dB
	94.0	93.7 (Ref.)	--	
	95.0	94.7	0.0	± 0.2 dB
	104.0	103.8	+0.1	± 0.3 dB
	105.0	104.8	0.0	± 1.0 dB

Uncertainty : ± 0.1 dB

## 4. Frequency Weighting

### A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-40.2	- 39.4 dB, ± 1.5 dB
63 Hz	-26.7	- 26.2 dB, ± 1.5 dB
125 Hz	-16.7	- 16.1 dB, ± 1 dB
250 Hz	-9.1	- 8.6 dB, ± 1 dB
500 Hz	-3.6	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.6	+ 1.2 dB, ± 1 dB
4 kHz	+1.6	+ 1.0 dB, ± 1 dB
8 kHz	-0.5	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.0	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB



# Calibration Certificate

Certificate No. 02909A

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## 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	39.9	± 0.5 dB
1/10 <sup>2</sup>	40.0	40.0	
1/10 <sup>3</sup>	40.0	40.0	± 1.0 dB
1/10 <sup>4</sup>	40.0	39.9	

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 : 1 002 hPa.  
4. This certificate is to supersede our former certificate no. 02909.

----- END -----



# Calibration Certificate

Certificate No. 05083

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. : Q02020

Date of receipt : 8-Sep-10

## Item Tested

Description : Precision Integrating Sound Level Meter (ET/EN/003/13)

Manufacturer : Rion

Model : NL-31

Serial No. : 00593620

## Test Conditions

Date of Test : 14-Sep-10

Supply Voltage : --

Ambient Temperature :  $(23 \pm 3)^{\circ}\text{C}$

Relative Humidity :  $(50 \pm 25) \%$

## 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).

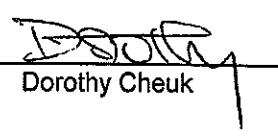
Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017A	Multi-Function Generator	00804	SCL-HKSAR
S024	Sound Level Calibrator	04062	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: 14-Sep-10

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. **05083**

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 <sub>A</sub>	Fast	94.0	93.7
		Slow		93.7
	L <sub>C</sub>	Fast		93.7
		L <sub>p</sub>		Fast
30 - 120	L <sub>A</sub>	Fast	94.0	93.7
		Slow		93.7
	L <sub>C</sub>	Fast		93.7
	L <sub>p</sub>	Fast		93.7
30 - 120	L <sub>A</sub>	Fast	114.0	113.5
		Slow		113.5
	L <sub>C</sub>	Fast		113.5
	L <sub>p</sub>	Fast		113.5

IEC 651 Type 1 Spec. :  $\pm 0.7$  dB

Uncertainty :  $\pm 0.1$  dB

## 2. Level Stability : 0.1 dB

IEC 651 Type 1 Spec. :  $\pm 0.3$  dB

Uncertainty :  $\pm 0.1$  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	113.9	+0.2	$\pm 0.7$ dB
130	104.0	103.9	+0.2	
120	94.0	93.7(Ref.)	--	
110	84.0	83.6	-0.1	
100	74.0	73.7	0.0	
90	64.0	63.7	0.0	
80	54.0	53.7	0.0	

Uncertainty :  $\pm 0.1$  dB





# Calibration Certificate

Certificate No. **05083**

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	83.6	-0.1	± 0.4 dB
	94.0	93.7 (Ref.)	--	
	95.0	94.7	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	-40.2	- 39.4 dB, ± 1.5 dB
63 Hz	-26.8	- 26.2 dB, ± 1.5 dB
125 Hz	-16.7	- 16.1 dB, ± 1 dB
250 Hz	-9.2	- 8.6 dB, ± 1 dB
500 Hz	-3.6	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.5	+ 1.2 dB, ± 1 dB
4 kHz	+1.5	+ 1.0 dB, ± 1 dB
8 kHz	-0.6	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-0.6	- 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 <sup>2</sup>	40.0	40.1	
1/10 <sup>3</sup>	40.0	40.2	± 1.0 dB
1/10 <sup>4</sup>	40.0	40.2	

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 : 1 004 hPa.

4. The internal calibration reference of UUT was drifted from 94.0 dB to 94.5 dB

----- END -----



Hong Kong Calibration Ltd.

香港校正有限公司

# Calibration Certificate

Certificate No. 01767

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. : Q00732

Date of receipt : 15-Apr-10

## Item Tested

Description : Acoustic Calibrator ( ET/ EN/ 002/ 07 )

Manufacturer : Castle

Model : GA607

Serial No. : 038641

## Test Conditions

Date of Test : 22-Apr-10

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

## Test Specifications

Calibration check.

Ref. Document/Procedure : F06, F20, Z02.

## Test Results

All results were within the IEC 942 Class 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>Due Date</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	93091	18-Jun-10	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	93758	16-Jul-10	NIM-PRC & SCL-HKSAR
S041	Universal Counter	94005	6-Aug-10	SCL-HKSAR
S206	Sound Level Meter	93966	5-Aug-10	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 :

Alan Chu

Date: 23-Apr-10

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. 01767

Page 2 of 2 Pages

Results :

## 1. Level Accuracy

UUT Setting (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	93.88	$\pm 0.3$ dB

Uncertainty :  $\pm 0.2$  dB

## 2. Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	IEC 942 Class 1 Spec.
1	1.000	$\pm 2$ %

Uncertainty :  $\pm 3.6 \times 10^{-6}$

## 3. Level Stability : 0.0 dB

IEC 942 Class 1 Spec.:  $\pm 1$  dB

Uncertainty :  $\pm 0.01$  dB

## 4. Total Harmonic Distortion : $< 2.5$ %

IEC 942 Class 1 Spec. :  $< 3$  %

Uncertainty :  $\pm 2.3$  % of rdg.

Remark : 1. UUT : Unit-Under-Test

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

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

4. Atmospheric Pressure : 1 003 hPa.

----- END -----



# Calibration Certificate

Certificate No. 06466

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. : Q02516

Date of receipt : 8-Nov-10

## Item Tested

Description : Anemometer (EN/001/04)

Manufacturer : AZ Instrument

Model : AZ 8908

Serial No. : 9101231

## Test Conditions

Date of Test : 10-Nov-10

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

## Test Specifications

Calibration check.

Ref. Document/Procedure: T03, Z04.

## 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>
S223	Std. Thermometer	01631	NIM-PRC
S155	Std. Anemometer	NSC20104025	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 :   
Alan Chu

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 8848

Date: 10-Nov-10



# Calibration Certificate

Certificate No. 06466

Page 2 of 2 Pages

Results :

## 1. Velocity

Applied Value (m/s)	UUT Reading (m/s)	Mfr's Spec.
2.50	2.5	± 3 % f.s. (f.s. = 35 m/s)
5.00	4.9	
10.00	9.5	
15.00	14.3	
20.00	19.1	

## 2. Temperature

Applied Value (°C)	UUT Reading (°C)	Mfr's Spec.
3.10	3.0	± 1 °C
23.98	24.0	
48.20	47.8	

Remark : 1. UUT: Unit-Under-Test

2. Uncertainty : ± 1.3 % or ± 0.05 m/s, whichever is greater for Velocity, ± 0.25 °C for Temperature, for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 011 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	
02/02/11	Fine	08:30	09:00	62.7	63.8	61.0	1.3
11/02/11	Cloudy	11:00	11:30	62.9	64.0	61.7	0.8
18/02/11	Cloudy	17:35	18:05	63.3	64.4	61.8	0.4
23/02/11	Cloudy	15:30	16:00	61.2	62.3	60.0	1.1

### 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	
02/02/11	Fine	11:10	11:40	72.2	74.6	66.1	0.1
09/02/11	Fine	14:45	15:15	72.8	75.4	66.7	0.2
14/02/11	Cloudy	16:25	16:55	73.8	75.2	65.9	0.2
23/02/11	Cloudy	14:05	14:35	73.8	76.0	68.1	0.1

### 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	
02/02/11	Fine	10:35	11:05	60.8	61.5	58.3	0.3
09/02/11	Fine	14:10	14:40	62.8	66.1	59.8	0.3
14/02/11	Cloudy	15:50	16:20	61.3	65.0	59.2	0.4
23/02/11	Cloudy	14:40	15:10	63.1	65.6	59.8	0.1

### 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	
02/02/11	Fine	10:00	10:30	59.1	60.7	57.3	0.3
09/02/11	Fine	13:35	14:05	61.5	63.8	58.6	0.5
14/02/11	Cloudy	15:15	15:45	60.2	63.1	57.4	0.6
23/02/11	Cloudy	15:15	15:45	61.8	64.1	58.6	0.3



## Evening-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 (5min)	L10	L90	
12/02/11	Cloudy	21:20	21:25	62.4	64.8	58.9	1.2
12/02/11	Cloudy	21:25	21:30	64.1	67.4	58.8	1.2
12/02/11	Cloudy	21:30	21:35	65.4	68.4	59.4	1.2
19/02/11	Drizzle	20:30	20:35	60.4	62.0	58.6	0.9
19/02/11	Drizzle	20:35	20:40	60.3	61.6	58.6	0.8
19/02/11	Drizzle	20:40	20:45	60.2	61.8	58.3	0.6
26/02/11	Fine	22:05	22:10	60.1	62.0	57.8	0.4
26/02/11	Fine	22:10	22:15	59.4	60.8	57.6	0.4
26/02/11	Fine	22:15	22:20	59.3	61.2	57.1	0.4

### 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 (5min)	L10	L90	
12/02/11	Cloudy	22:35	22:40	70.0	73.6	63.0	0.4
12/02/11	Cloudy	22:40	22:45	70.0	73.4	63.4	0.4
12/02/11	Cloudy	22:45	22:50	69.9	72.2	62.5	0.4
19/02/11	Drizzle	21:20	21:25	68.1	70.2	63.4	0.6
19/02/11	Drizzle	21:25	21:30	67.8	69.8	63.2	0.7
19/02/11	Drizzle	21:30	21:35	67.9	69.9	63.5	0.7
26/02/11	Fine	21:05	21:10	69.7	72.9	62.5	0.1
26/02/11	Fine	21:10	21:15	69.5	72.5	62.2	0.1
26/02/11	Fine	21:15	21:20	69.8	73.0	64.4	0.1

### 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 (5min)	L10	L90	
12/02/11	Cloudy	22:20	22:25	69.9	73.4	62.7	0.3
12/02/11	Cloudy	22:25	22:30	70.0	73.5	64.9	0.3
12/02/11	Cloudy	22:30	22:35	69.7	72.9	62.3	0.3
19/02/11	Drizzle	22:05	22:10	60.1	62.0	57.8	0.4
19/02/11	Drizzle	22:10	22:15	59.4	60.8	57.6	0.4
19/02/11	Drizzle	22:15	22:20	59.3	61.2	57.1	0.4
26/02/11	Fine	20:45	20:50	69.2	71.8	62.0	0.1
26/02/11	Fine	20:50	20:55	69.4	72.0	62.2	0.1
26/02/11	Fine	20:55	21:00	69.2	71.9	61.9	0.1

### 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 (5min)	L10	L90	
12/02/11	Cloudy	22:00	22:05	67.8	69.0	61.8	0.5
12/02/11	Cloudy	22:05	22:10	66.5	68.4	62.0	0.5
12/02/11	Cloudy	22:10	22:15	67.0	68.8	62.1	0.5
19/02/11	Drizzle	22:00	22:05	69.0	70.8	64.9	0.8
19/02/11	Drizzle	22:05	22:10	68.7	70.6	64.6	0.9
19/02/11	Drizzle	22:10	22:15	68.8	70.7	64.6	0.7
26/02/11	Fine	20:30	20:35	66.4	67.3	60.1	0.1
26/02/11	Fine	20:35	20:40	66.0	67.0	59.5	0.1
26/02/11	Fine	20:40	20:45	66.2	67.1	59.8	0.1





## Night-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 (5min)	L10	L90	
13/02/11	Cloudy	00:40	00:45	55.0	57.1	53.8	0.8
13/02/11	Cloudy	00:45	00:50	55.0	57.0	53.3	0.8
13/02/11	Cloudy	00:50	00:55	54.9	56.7	52.9	0.8

### 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 (5min)	L10	L90	
12/02/11	Cloudy	23:35	23:40	65.1	68.0	59.4	0.4
12/02/11	Cloudy	23:40	23:45	64.5	67.5	59.3	0.4
12/02/11	Cloudy	23:45	23:50	64.1	67.2	59.1	0.4

### 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 (5min)	L10	L90	
12/02/11	Cloudy	23:20	23:25	63.5	66.8	59.1	0.4
12/02/11	Cloudy	23:25	23:30	63.9	67.0	59.5	0.4
12/02/11	Cloudy	23:30	23:35	63.1	66.5	58.4	0.4

### 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 (5min)	L10	L90	
12/02/11	Cloudy	23:00	23:05	61.8	63.9	57.6	0.4
12/02/11	Cloudy	23:05	23:10	61.2	63.1	57.1	0.4
12/02/11	Cloudy	23:10	23:15	60.9	62.7	56.9	0.4



## Holiday-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 (5min)	L10	L90	
13/02/11	Cloudy	16:15	16:20	64.5	65.5	63.4	0.4
13/02/11	Cloudy	16:20	16:25	65.1	66.4	63.2	0.4
13/02/11	Cloudy	16:25	16:30	64.9	66.6	62.2	0.4
20/02/11	Drizzle	09:00	09:05	58.5	59.7	57.2	0.6
20/02/11	Drizzle	09:05	09:10	59.2	60.9	57.1	0.7
20/02/11	Drizzle	09:10	09:15	60.8	62.9	58.4	0.6
27/02/11	Fine	14:00	14:05	60.5	61.8	59.0	0.3
27/02/11	Fine	14:05	14:10	60.1	61.3	58.8	0.3
27/02/11	Fine	14:10	14:15	60.1	61.4	58.7	0.3

### 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 (5min)	L10	L90	
13/02/11	Cloudy	15:15	15:20	69.7	73.4	62.1	0.1
13/02/11	Cloudy	15:20	15:25	70.0	74.4	63.0	0.1
13/02/11	Cloudy	15:25	15:30	69.4	74.6	63.0	0.1
20/02/11	Drizzle	15:00	15:05	67.7	69.8	63.4	0.7
20/02/11	Drizzle	15:05	15:10	67.4	69.5	63.0	0.8
20/02/11	Drizzle	15:10	15:15	68.1	70.2	64.0	0.9
27/02/11	Fine	15:20	15:25	69.9	72.3	65.8	0.1
27/02/11	Fine	15:25	15:30	70.0	72.6	65.9	0.1
27/02/11	Fine	15:30	15:35	69.9	72.1	65.6	0.1

### 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 (5min)	L10	L90	
13/02/11	Cloudy	14:55	15:00	64.8	66.9	61.2	0.3
13/02/11	Cloudy	15:00	15:05	65.1	67.2	61.5	0.3
13/02/11	Cloudy	15:05	15:10	64.3	66.8	60.6	0.3
20/02/11	Drizzle	15:20	15:25	60.2	61.9	57.7	1.1
20/02/11	Drizzle	15:25	15:30	60.8	62.1	58.0	1.2
20/02/11	Drizzle	15:30	15:35	60.7	62.0	57.9	0.9
27/02/11	Fine	15:40	15:45	62.8	64.5	60.3	0.2
27/02/11	Fine	15:45	15:50	62.5	64.3	59.9	0.2
27/02/11	Fine	15:50	15:55	62.3	64.1	59.9	0.2

### 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 (5min)	L10	L90	
13/02/11	Cloudy	14:35	14:40	62.5	64.1	59.2	0.5
13/02/11	Cloudy	14:40	14:45	62.1	64.3	59.0	0.5
13/02/11	Cloudy	14:45	14:50	61.5	63.8	58.7	0.5
20/02/11	Drizzle	15:40	15:45	61.0	63.1	58.2	1.3
20/02/11	Drizzle	15:45	15:50	60.9	62.7	57.9	1.2
20/02/11	Drizzle	15:50	15:55	60.6	62.3	57.4	1.3
27/02/11	Fine	16:00	16:05	60.3	61.7	59.0	0.4
27/02/11	Fine	16:05	16:10	60.1	61.5	58.9	0.4
27/02/11	Fine	16:10	16:15	60.0	61.2	58.6	0.4



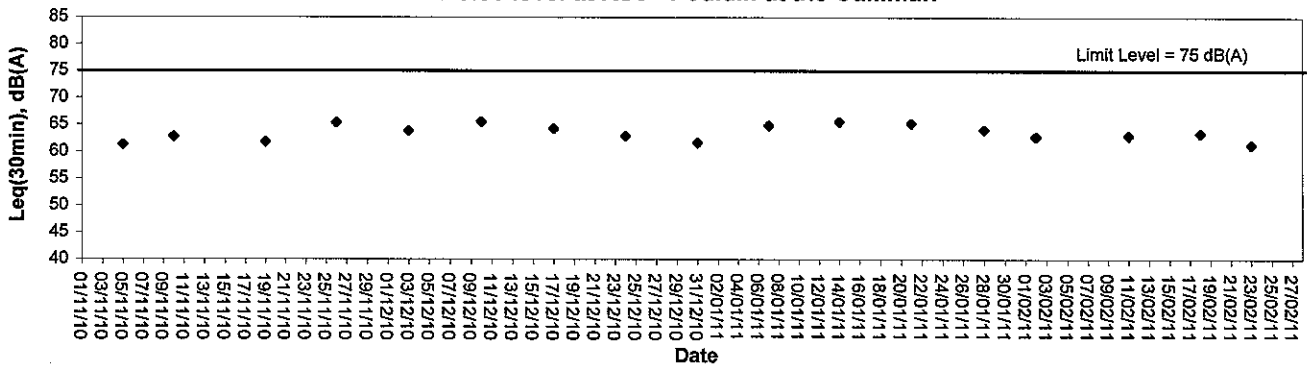
## **Appendix B3**

### **Graphical Plots of Impact Noise Monitoring Data**

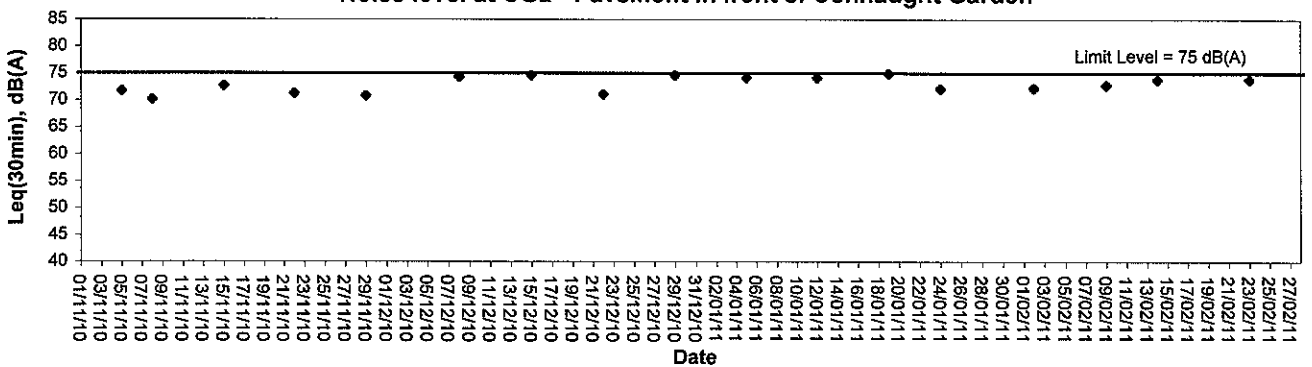


### Noise Monitoring (Day-time)

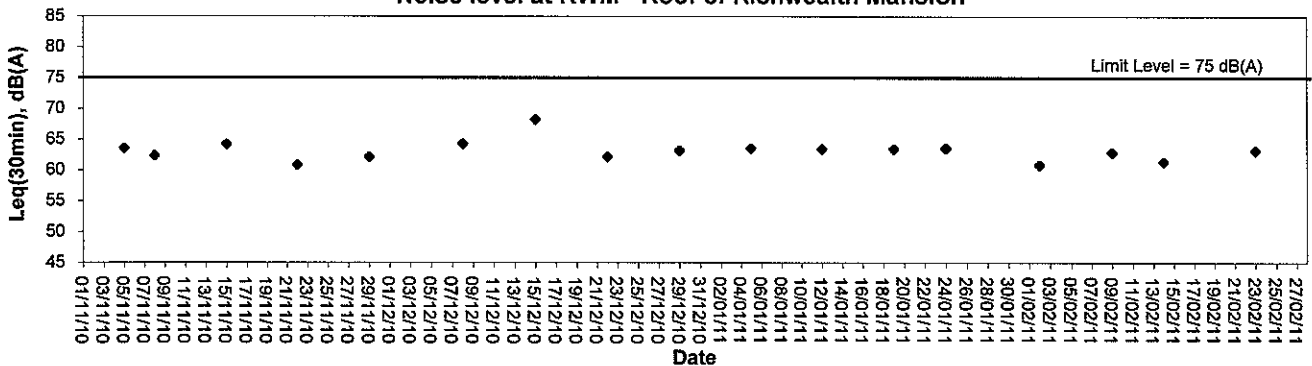
Noise level at KS6 - Podium at the Culliman



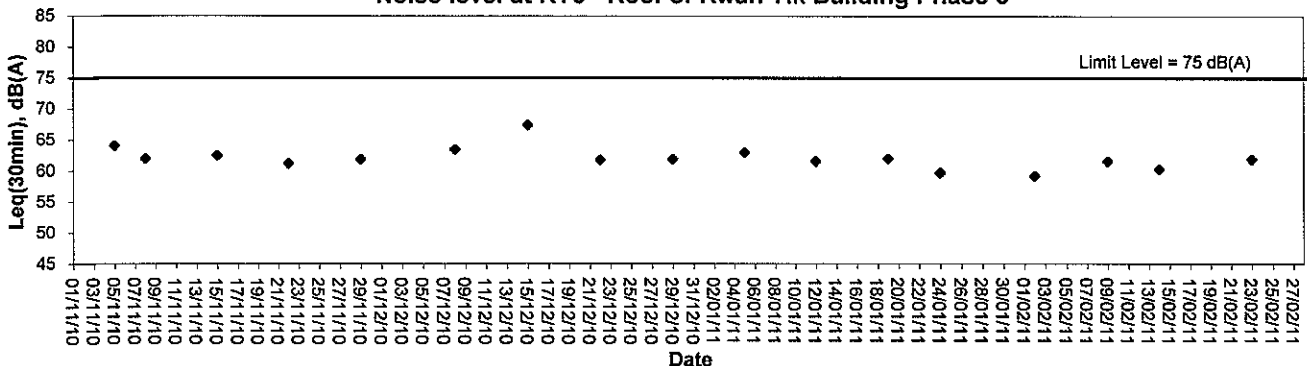
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



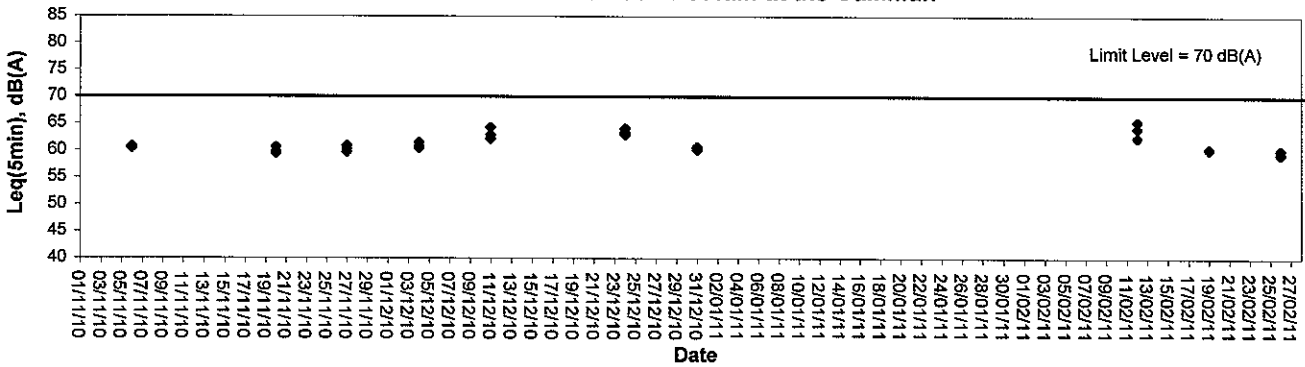
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



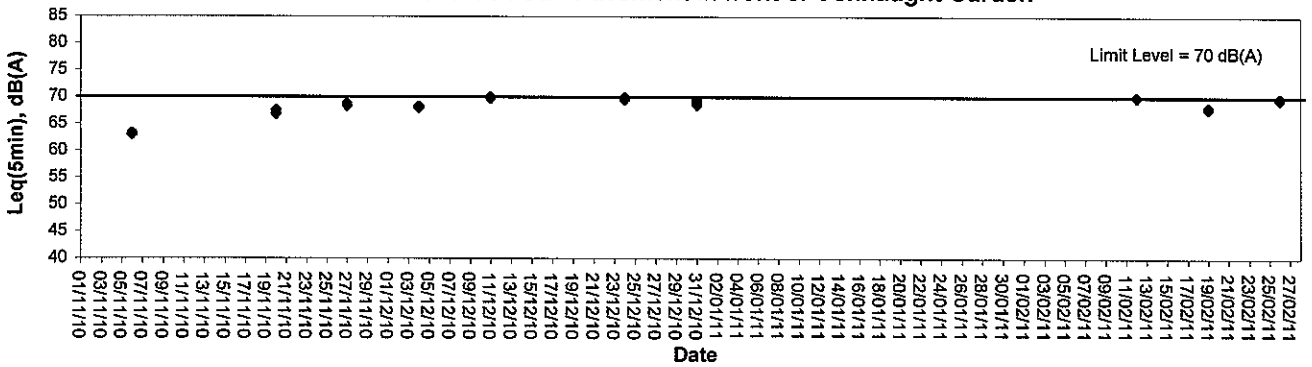


### Noise Monitoring (Evening-time)

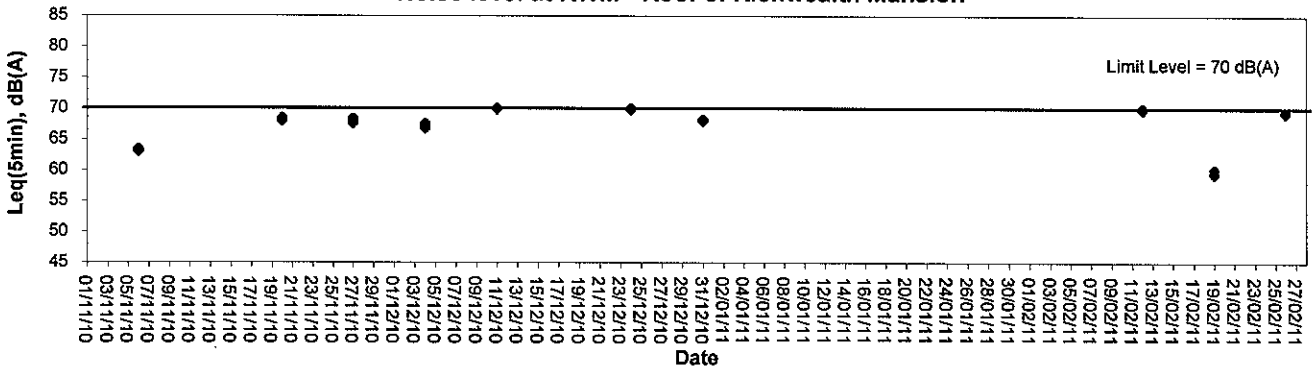
Noise level at KS6 - Podium at the Culliman



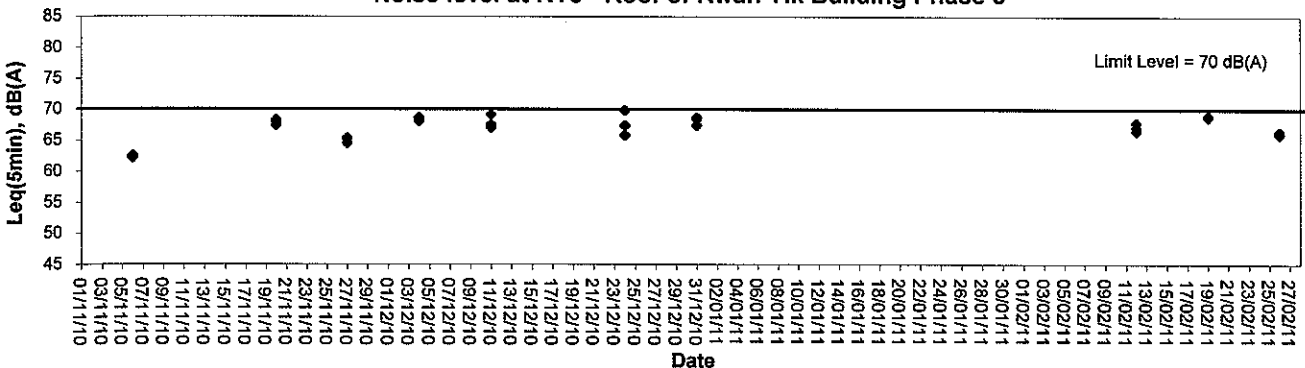
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



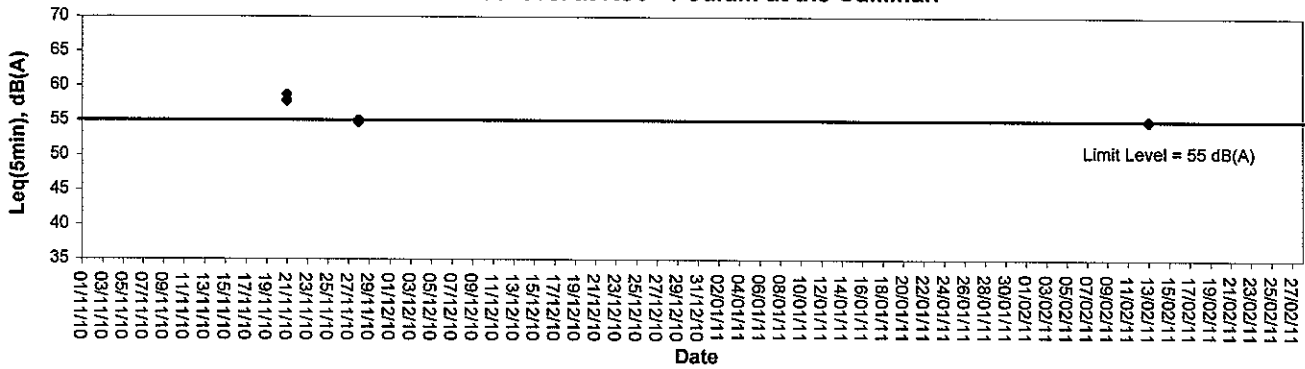
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



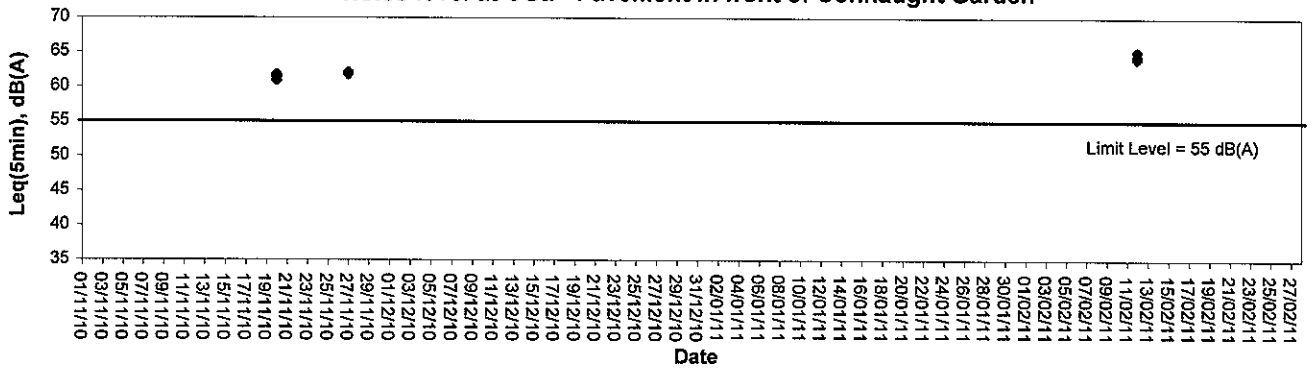


## Noise Monitoring (Night-time)

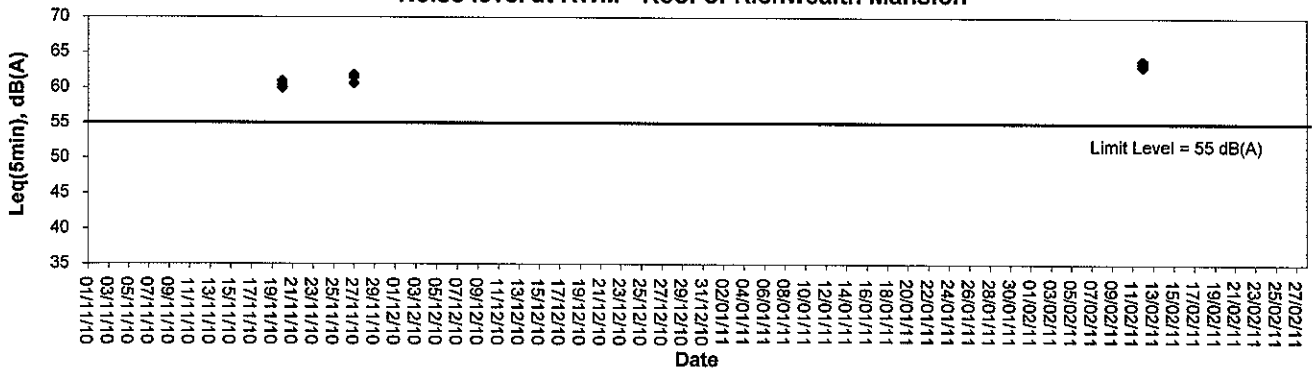
Noise level at KS6 - Podium at the Culliman



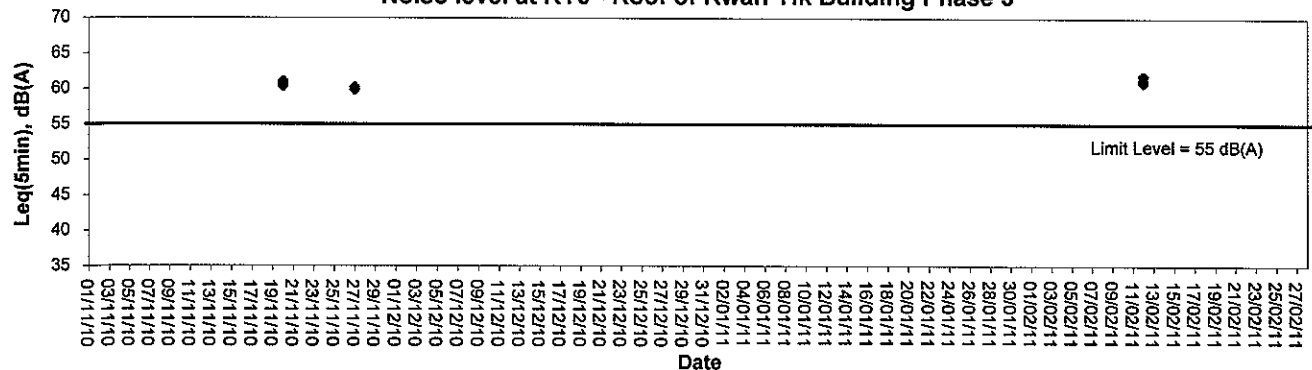
Noise level at CGA - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



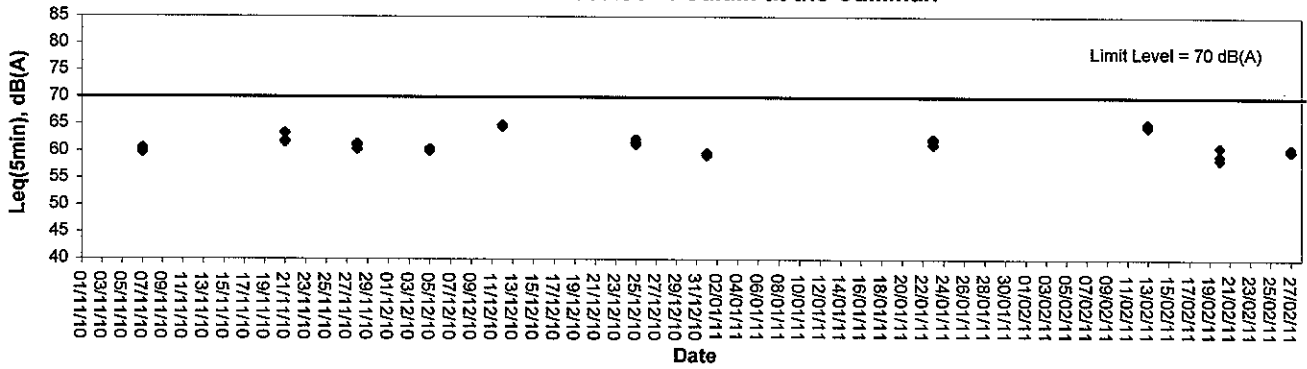
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



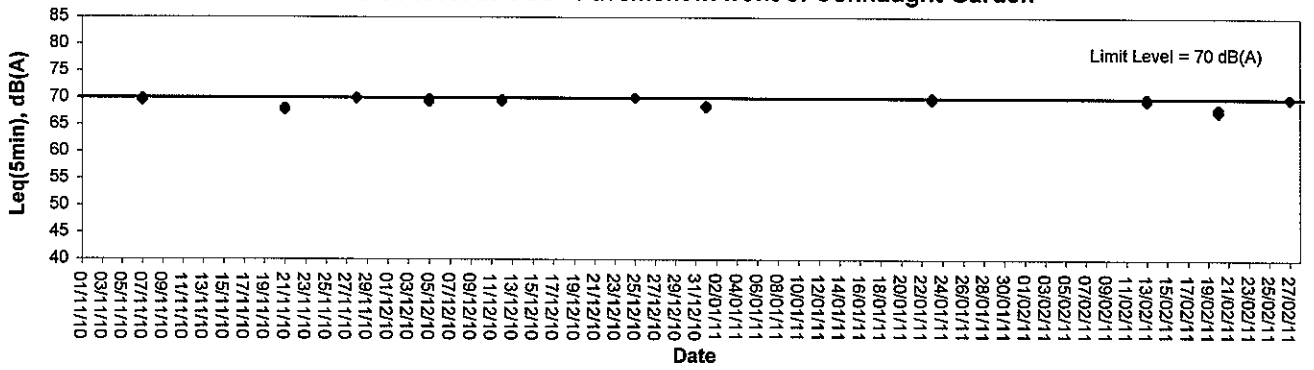


### Noise Monitoring (Holiday-time)

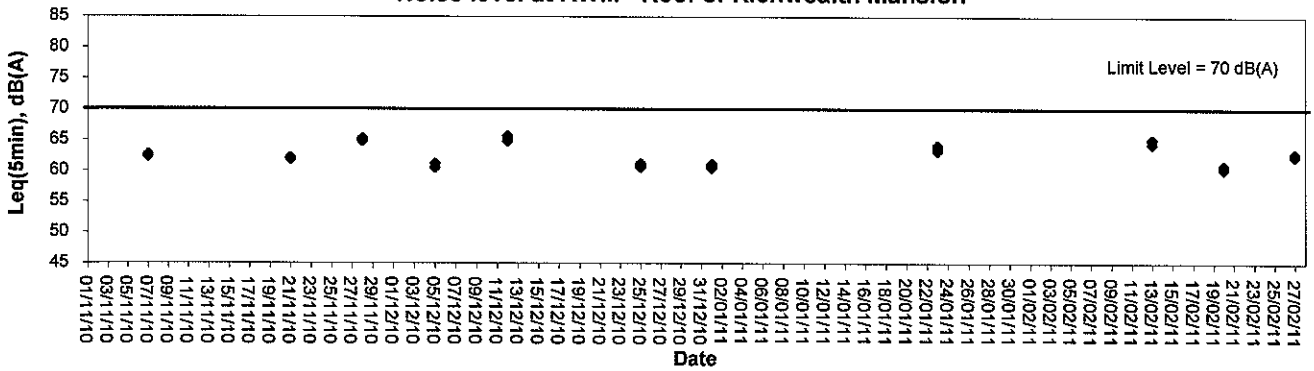
Noise level at KS6 - Podium at the Culliman



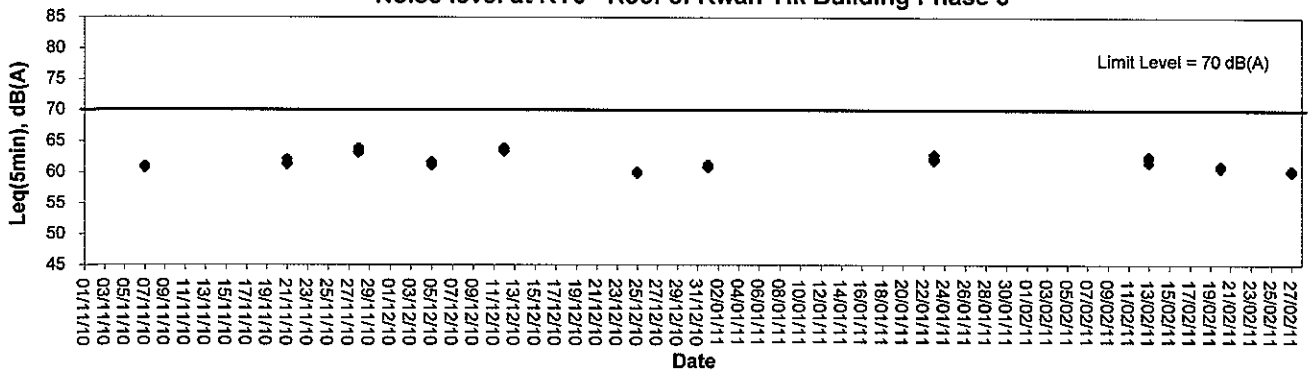
Noise level at CGa - Pavement in front of Connaught Garden



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**





## Performance Check of Turbidimeter



Equipment Ref. No. : ET10505/007      Manufacturer : HAACH  
Model No. : 2100P      Serial No. : 0806 000 30281  
Date of Calibration : 15/1/11      Due Date : 14/4/11

Gelex Vial Std	Theoretical Value (NTU)	Measured Value (NTU)	Difference %
0-10 NTU	5.34	5.40	1.12%
10-100 NTU	52.5	52.8	0.57%
100-1000 NTU	543	531	2.21%

### 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 : 



## Performance Check of Salinity Meter

Equipment Ref. No. : E71EW/0081002 Manufacturer : YSI  
Model No. : 85 Serial No. : 0601998 AD  
Date of Calibration : 23/1/10 Due Date : 22/2/11

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

J410

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30	29.9	0.33%

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 : 



### Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. :	ET/EW/008/002	Manufacturer :	FS7
Model No. :	85	Serial No. :	060 1998 AD
Date of Calibration :	23/11/10	Calibration Due Date :	22/2/11

**Temperature Verification**

Ref. No. of Reference Thermometer : ET/0521/001

Ref. No. of Water Bath : ET/0533/001

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

**Standardization of sodium thiosulphate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) solution**

Reagent No. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> titrant	Reagent No. of 0.025N K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>
	Trial 1                      Trial 2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0                              0
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	40.0                          40.5
Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	40.0                          40.5
Normality of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)	0.025                        0.02467
Average Normality (N) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)	0.02485
Acceptance criteria, Deviation	Less than + 0.001N

Calculation:                      Normality of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, N = l / ml Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> used

**Linearity Checking**

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

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Trial						
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0	11.80	0	9.75	0	6.50
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	11.80	23.80	9.75	19.45	6.50	13.00
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	11.80	11.80	9.75	9.70	6.50	6.50
Dissolved Oxygen (DO), mg/L	7.87	7.87	6.50	6.47	4.34	4.34
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	7.85	7.75	7.80	7.87	7.87	7.87	0.89
5	6.42	6.42	6.42	6.50	6.47	6.49	1.08
10	4.38	4.46	4.42	4.34	4.34	4.34	1.83
Linear regression coefficient				0.9996			



### Internal Calibration Report of Dissolved Oxygen Meter

**Zero Point Checking**

DO meter reading, mg/L	0.00
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**Salinity Checking**

Reagent No. of NaCl (10ppt)	Reagent No. of NaCl (30ppt)
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**Determination of dissolved oxygen content by Winkler Titration \*\***

Salinity (ppt)	10		30	
	1	2	1	2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0	11.60	0	11.00
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	11.60	23.15	11.00	22.00
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	11.60	11.55	11.00	11.00
Dissolved Oxygen (DO), mg/L	7.74	7.71	7.34	7.34
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation:  $DO (mg/L) = V \times N \times 8000/298$

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	8.00	7.60	<del>7.8</del> 7.74	7.74	7.71	7.73	0.90
30	7.40	7.40	7.40	7.34	7.34	7.34	0.81

**Acceptance Criteria**

- (1) Difference 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 <sup>#</sup> / does not comply <sup>#</sup> with the specified requirements and is deemed acceptable <sup>#</sup> / unacceptable <sup>#</sup> for use.

<sup>#</sup> Delete as appropriate

Calibrated by : \_\_\_\_\_ *Zu* \_\_\_\_\_

Approved by : \_\_\_\_\_ *[Signature]* \_\_\_\_\_



## Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/002      Manufacturer : YSI  
Model No. : 85      Serial No. : 060 1998 AD  
Date of Calibration : 22/2/11      Due Date : 21/2/11<sup>5</sup>

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

J410


Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30	30.2	0.67%

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 : 



### Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : ET1EW10081002      Manufacturer : YSI  
 Model No. : 85      Serial No. : 0601998AD  
 Date of Calibration : 22/2/11      Calibration Due Date : 21/5/11

#### Temperature Verification

Ref. No. of Reference Thermometer : ET105211001  
 Ref. No. of Water Bath : ET103331001

Reference Thermometer reading	Temperature (°C)			
	Measured	Corrected	Difference	
DO Meter reading	20.0	20.1	0.3	
	20.4			

#### Standardization of sodium thiosulphate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) solution

Reagent No. of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> titrant : J418      Reagent No. of 0.025N K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> : J419

	Trial 1	Trial 2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0	0
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	40.1	40.2
Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	40.1	40.2
Normality of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)	0.02494	0.02488
Average Normality (N) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> solution (N)	0.02491	
Acceptance criteria, Deviation	Less than ± 0.001N	

Calculation: Normality of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, N = 1 / ml Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> used

#### Linearity Checking

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

Purging Time (min)	2		5		10	
Trial	1	2	1	2	1	2
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0	11.75	0	9.80	0	6.55
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	11.75	23.55	9.80	19.50	6.55	13.05
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	11.75	11.80	9.80	9.70	6.55	6.50
Dissolved Oxygen (DO), mg/L	7.86	7.87	6.55	6.47	4.38	4.35
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	7.98	7.98	7.98	7.86	7.87	7.87	1.39
5	6.60	6.44	6.52	6.55	6.47	6.51	0.15
10	4.48	4.40	4.44	4.38	4.35	4.37	1.55
Linear regression coefficient				0.9993			



### Internal Calibration Report of Dissolved Oxygen Meter

**Zero Point Checking**

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

**Salinity Checking**

Reagent No. of NaCl (10ppt)	J417	Reagent No. of NaCl (30ppt)	J416
-----------------------------	------	-----------------------------	------

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

Salinity (ppt)	10		30	
	1	2	1	2
Trial				
Initial Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	0	11.60	0	11.05
Final Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (ml)	11.60	23.20	11.05	22.05
Vol. (V) of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used (ml)	11.60	11.60	11.05	11.00
Dissolved Oxygen (DO), mg/L	7.74	7.74	7.39	7.36
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation:  $DO (mg/L) = V \times N \times 8000/298$

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.83	7.77	7.80	7.74	7.74	7.74	0.77
30	7.30	7.28	7.29	7.39	7.36	7.38	1.23

**Acceptance Criteria**

- (1) Difference 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 <sup>#</sup> / does not comply <sup>#</sup> with the specified requirements and is deemed acceptable <sup>#</sup> / unacceptable <sup>#</sup> for use.

<sup>#</sup> Delete as appropriate

Calibrated by : \_\_\_\_\_

Approved by : \_\_\_\_\_



## **Appendix C2**

### **Impact Water Quality Monitoring Results**



Mid-Flood Tide

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		
01/02/11	1855-1911	13/Fine	Surface	1.0	17.1	30.0	30.2	6.04	6.04	83.4	83.3	5.40	5.39	5.55	8.8	8.7	8.7		
						30.3		6.03		83.2		5.37			8.6				
			Middle	8.3	17.6	31.7	31.8	5.90	5.91	81.4	81.6	5.56	5.57		5.57	5.71		8.3	8.4
						31.9		5.92		81.7		5.58			8.5				
			Bottom	15.6	17.9	31.9	32.1	5.84	5.82	80.6	80.3	5.71	5.71		5.71	5.71		9.0	8.9
						32.2		5.80		80.0		5.70			8.8				
08/02/11	1152-1205	18/Fine	Surface	1.0	17.5	30.3	30.3	6.11	6.10	82.5	82.4	5.37	5.40	5.53	8.5	8.8	9.1		
						30.2		6.09		82.2		5.42			9.0				
			Middle	8.3	18.0	30.8	30.9	6.01	5.99	81.1	80.9	5.51	5.55		5.55	5.55		9.0	9.1
						30.9		5.97		80.6		5.58			9.1				
			Bottom	15.6	18.3	32.1	32.2	5.93	5.95	80.1	80.3	5.61	5.64		5.64	5.64		9.5	9.4
						32.2		5.96		80.5		5.66			9.2				
10/02/11	1321-1334	19/Fine	Surface	1.0	18.1	30.5	30.6	5.95	5.96	80.3	80.5	5.08	5.10	5.24	8.0	8.1	8.4		
						30.6		5.97		80.6		5.11			8.1				
			Middle	8.3	18.5	31.5	31.6	5.80	5.81	78.3	78.5	5.17	5.20		5.20	5.20		8.3	8.2
						31.6		5.82		78.6		5.22			8.1				
			Bottom	15.6	18.8	31.9	32.0	5.74	5.76	77.5	77.8	5.40	5.42		5.42	5.42		8.7	8.9
						32.0		5.78		78.0		5.44			9.0				
12/02/11	1418-1431	15/Cloudy	Surface	1.0	15.7	30.5	30.5	5.98	5.96	80.9	80.6	5.24	5.27	5.52	8.0	8.1	8.9		
						30.4		5.94		80.2		5.30			8.2				
			Middle	8.2	16.6	31.3	31.3	5.83	5.82	78.7	78.5	5.51	5.50		5.50	5.50		9.0	9.1
						31.2		5.80		78.3		5.48			9.2				
			Bottom	15.4	17.7	32.2	32.2	5.76	5.78	77.8	78.0	5.77	5.78		5.78	5.78		9.3	9.4
						32.1		5.79		78.2		5.79			9.5				
15/02/11	1833-1843	12/Rainy	Surface	1.0	17.4	29.9	29.9	6.17	6.16	85.7	85.5	5.01	5.05	5.04	8.0	8.0	8.0		
						29.9		6.14		85.3		5.08			8.0				
			Middle	8.6	19.9	31.2	31.2	6.04	6.03	83.9	83.7	4.98	4.95		4.95	4.95		7.9	7.9
						31.2		6.01		83.5		4.91			7.8				
			Bottom	16.2	20.4	31.6	31.6	5.96	5.95	82.8	82.6	5.09	5.12		5.12	5.12		8.2	8.2
						31.6		5.93		82.4		5.14			8.1				
17/02/11	1921-1935	17/Cloudy	Surface	1.0	18.6	30.7	30.7	6.14	6.16	85.3	85.6	5.12	5.11	5.20	8.0	8.0	8.3		
						30.6		6.17		85.8		5.10			8.0				
			Middle	8.3	19.6	31.4	31.5	6.05	6.07	84.1	84.3	5.21	5.19		5.19	5.19		8.2	8.3
						31.5		6.08		84.5		5.17			8.4				
			Bottom	15.6	20.5	32.0	32.1	5.88	5.86	81.7	81.4	5.31	5.30		5.30	5.30		8.6	8.6
						32.1		5.83		81.0		5.28			8.5				
19/02/11	2010-2020	15/Drizzle	Surface	1.0	17.8	31.0	31.0	6.06	6.05	84.2	84.1	5.27	5.30	5.17	8.5	8.4	8.2		
						30.9		6.04		83.9		5.32			8.2				
			Middle	8.4	20.2	31.8	31.8	5.88	5.86	81.1	80.8	5.11	5.09		5.09	5.09		8.1	8.1
						31.7		5.84		80.5		5.07			8.0				
			Bottom	15.8	20.5	32.0	32.1	5.95	5.97	82.7	82.9	5.09	5.12		5.12	5.12		8.1	8.1
						32.1		5.98		83.1		5.14			8.0				
22/02/11	1146-1200	15/Cloudy	Surface	1.0	16.7	30.6	30.7	6.41	6.40	87.8	87.6	5.26	5.29	5.45	8.2	8.3	8.5		
						30.7		6.38		87.4		5.32			8.4				
			Middle	8.4	17.1	31.2	31.2	6.26	6.23	85.7	85.3	5.40	5.43		5.43	5.43		8.2	8.3
						31.1		6.20		84.9		5.46			8.3				
			Bottom	15.8	17.6	31.7	31.7	6.06	6.08	83.0	83.2	5.60	5.63		5.63	5.63		9.0	8.9
						31.7		6.09		83.4		5.66			8.7				
24/02/11	1256-1308	21/Fine	Surface	1.0	18.9	30.5	30.6	6.19	6.18	85.4	85.3	5.15	5.18	5.27	8.0	8.0	8.2		
						30.6		6.17		85.1		5.20			8.0				
			Middle	8.1	19.4	31.4	31.5	6.09	6.09	84.0	84.0	5.29	5.27		5.27	5.27		8.3	8.2
						31.5		6.08		83.9		5.24			8.1				
			Bottom	15.2	19.8	31.8	31.8	5.98	5.99	81.9	82.0	5.39	5.37		5.37	5.37		8.5	8.4
						31.8		5.99		82.1		5.35			8.3				
26/02/11	1532-1545	20/Fine	Surface	1.0	17.1	30.6	30.7	6.06	6.08	82.4	82.7	5.17	5.19	5.51	8.2	8.3	8.9		
						30.7		6.10		82.9		5.20			8.4				
			Middle	8.2	16.3	31.5	31.5	5.88	5.86	79.9	79.4	5.49	5.51		5.51	5.51		9.0	9.0
						31.4		5.84		78.8		5.53			9.0				
			Bottom	15.4	15.6	32.1	32.2	5.74	5.76	77.5	77.7	5.81	5.84		5.84	5.84		9.2	9.3
						32.2		5.77		77.9		5.86			9.4				

Mid-Flood Tide

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
01/02/11	1834-1850	13/Fine	Surface	1.0	16.9	30.4	30.5	6.01	5.99	82.9	82.7	5.36	5.37	5.51	8.6	8.6	9.0
						30.6		5.97		82.4		5.38			8.5		
			Middle	8.6	17.5	31.5	31.7	5.90	5.88	81.4	81.2	5.51	5.53		9.0	9.1	
						31.9		5.86		80.9		5.54			9.1		
			Bottom	16.2	17.8	32.1	32.2	5.78	5.77	79.8	79.7	5.63	5.65		9.3	9.3	
						32.3		5.76		79.5		5.66			9.3		
08/02/11	1129-1144	18/Fine	Surface	1.0	17.6	30.4	30.4	5.99	5.97	80.9	80.6	5.08	5.09	5.46	8.0	8.1	8.8
						30.3		5.94		80.2		5.10			8.2		
			Middle	8.5	18.0	30.7	30.7	5.88	5.89	79.4	79.5	5.56	5.56		9.0	9.1	
						30.6		5.89		79.5		5.55			9.2		
			Bottom	16.0	18.3	32.1	32.1	5.84	5.83	78.8	78.6	5.71	5.73		9.3	9.2	
						32.0		5.81		78.4		5.74			9.0		
10/02/11	1300-1313	19/Fine	Surface	1.0	18.0	30.6	30.6	6.06	6.05	81.8	81.7	5.12	5.16	5.39	8.1	8.2	8.5
						30.6		6.04		81.5		5.19			8.2		
			Middle	8.5	18.4	31.4	31.5	5.98	5.96	80.7	80.5	5.38	5.37		8.3	8.3	
						31.5		5.94		80.2		5.35			8.2		
			Bottom	16.0	18.6	32.0	32.0	5.79	5.79	78.2	78.1	5.66	5.65		8.9	9.0	
						31.9		5.78		78.0		5.63			9.0		
12/02/11	1357-1410	15/Cloudy	Surface	1.0	15.9	30.5	30.6	5.93	5.92	80.1	80.0	5.10	5.12	5.35	8.2	8.2	8.7
						30.6		5.91		79.8		5.14			8.2		
			Middle	8.4	16.8	31.3	31.4	5.78	5.79	78.0	78.1	5.32	5.35		8.4	8.6	
						31.4		5.79		78.2		5.37			8.8		
			Bottom	15.8	17.8	32.1	32.1	5.82	5.82	78.6	78.5	5.58	5.57		9.0	9.2	
						32.0		5.81		78.4		5.56			9.3		
15/02/11	1815-1825	12/Rainy	Surface	1.0	17.5	29.8	29.9	6.19	6.17	86.0	85.7	5.17	5.14	5.12	8.2	8.2	8.1
						29.9		6.14		85.3		5.11			8.1		
			Middle	8.5	20.0	31.1	31.1	6.02	6.04	83.6	83.8	5.01	5.04		8.0	8.0	
						31.0		6.05		84.0		5.07			7.9		
			Bottom	16.0	20.4	31.5	31.6	5.87	5.89	81.0	81.3	5.21	5.19		8.3	8.3	
						31.6		5.91		81.5		5.17			8.2		
17/02/11	1857-1911	17/Cloudy	Surface	1.0	18.6	30.6	30.6	6.18	6.20	85.9	86.1	5.05	5.07	5.15	8.1	8.0	8.1
						30.5		6.21		86.3		5.08			7.9		
			Middle	8.2	19.5	31.5	31.5	6.12	6.11	85.1	84.9	5.15	5.14		8.0	8.0	
						31.5		6.09		84.7		5.13			8.0		
			Bottom	15.4	20.4	31.9	32.0	5.90	5.88	82.0	81.7	5.22	5.24		8.3	8.4	
						32.0		5.85		81.3		5.25			8.5		
19/02/11	1951-2002	15/Drizzle	Surface	1.0	17.9	31.0	31.0	6.09	6.07	84.6	84.3	5.43	5.45	5.40	8.9	8.8	8.6
						31.0		6.05		84.0		5.47			8.7		
			Middle	8.4	20.3	31.8	31.8	5.83	5.82	80.4	80.2	5.23	5.21		8.2	8.1	
						31.8		5.80		80.0		5.19			8.0		
			Bottom	15.8	20.5	32.0	32.0	5.90	5.92	81.4	81.7	5.58	5.55		8.9	9.0	
						32.0		5.94		81.9		5.51			9.0		
22/02/11	1125-1140	15/Cloudy	Surface	1.0	16.7	30.7	30.7	6.44	6.42	88.2	87.9	5.23	5.26	5.43	8.4	8.3	8.7
						30.7		6.40		87.6		5.28			8.2		
			Middle	8.2	17.0	31.1	31.1	6.27	6.25	85.8	85.6	5.39	5.42		8.6	8.7	
						31.1		6.23		85.3		5.44			8.8		
			Bottom	15.4	17.4	31.6	31.7	6.04	6.08	82.7	83.2	5.63	5.61		9.2	9.1	
						31.7		6.11		83.7		5.59			9.0		
24/02/11	1238-1249	21/Fine	Surface	1.0	18.8	30.5	30.5	6.14	6.15	84.7	84.8	5.13	5.16	5.26	8.2	8.2	8.5
						30.5		6.15		84.9		5.19			8.2		
			Middle	8.4	19.3	31.4	31.4	6.05	6.06	82.9	83.4	5.27	5.25		8.4	8.4	
						31.3		6.07		83.8		5.23			8.3		
			Bottom	15.8	19.7	31.8	31.8	5.98	5.98	81.9	81.9	5.40	5.37		8.8	8.9	
						31.7		5.97		81.8		5.34			9.0		
26/02/11	1511-1524	20/Fine	Surface	1.0	17.2	30.6	30.6	6.09	6.07	82.8	82.6	5.36	5.38	5.61	8.6	8.5	8.9
						30.5		6.05		82.3		5.39			8.4		
			Middle	8.4	16.2	31.6	31.7	5.94	5.92	80.7	80.5	5.64	5.65		9.0	9.0	
						31.7		5.90		80.2		5.66			9.0		
			Bottom	15.8	15.4	32.2	32.2	5.82	5.84	79.2	79.4	5.79	5.82		9.3	9.3	
						32.2		5.85		79.6		5.84			9.3		

Mid-Flood 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
01/02/11	1632-1647	14/Fine	Surface	1.0	17.5	30.1	30.3	6.03	6.02	83.2	83.0	5.32	5.33	5.49	8.5	8.6	8.8
						30.4		6.00		82.8		5.34			8.6		
			Middle	8.9	18.0	31.4	31.4	5.93	5.93	81.8	81.8	5.44	5.45		9.0	8.9	
						31.3		5.92		81.7		5.46			8.8		
			Bottom	16.8	18.0	31.9	32.1	5.84	5.83	80.6	80.5	5.66	5.68		8.9	9.0	
						32.2		5.82		80.3		5.69			9.1		
08/02/11	0935-0948	18/Fine	Surface	1.0	17.3	30.6	30.6	5.97	5.94	80.6	80.2	5.27	5.28	5.49	8.5	8.4	8.6
						30.5		5.90		79.7		5.29			8.2		
			Middle	8.9	17.9	31.7	31.7	5.79	5.81	78.2	78.4	5.42	5.45		8.4	8.6	
						31.6		5.82		78.6		5.47			8.8		
			Bottom	16.8	18.2	32.1	32.1	5.72	5.74	77.2	77.5	5.76	5.75		8.6	8.8	
						32.0		5.76		77.8		5.73			8.9		
10/02/11	1103-1116	18/Fine	Surface	1.0	17.7	30.4	30.5	6.12	6.10	82.6	82.4	5.60	5.59	5.60	9.0	9.1	9.1
						30.5		6.08		82.1		5.57			9.2		
			Middle	8.9	18.1	31.4	31.4	5.91	5.93	79.8	80.0	5.43	5.46		8.8	8.9	
						31.3		5.94		80.2		5.48			9.0		
			Bottom	16.8	18.4	32.0	32.1	5.86	5.87	79.1	79.3	5.79	5.75		9.4	9.3	
						32.1		5.88		79.4		5.71			9.1		
12/02/11	1202-1215	15/Cloudy	Surface	1.0	15.7	30.3	30.4	5.98	5.97	80.7	80.5	5.36	5.38	5.53	8.2	8.2	8.7
						30.4		5.95		80.3		5.39			8.2		
			Middle	8.8	16.9	31.3	31.4	5.77	5.74	77.9	77.5	5.58	5.57		9.0	8.9	
						31.4		5.71		77.1		5.55			8.7		
			Bottom	16.6	17.7	31.9	32.0	5.89	5.90	79.5	79.6	5.64	5.66		9.2	9.2	
						32.0		5.90		79.7		5.68			9.1		
15/02/11	1622-1634	12/Rainy	Surface	1.0	17.7	29.8	29.8	6.09	6.08	84.6	84.4	5.27	5.30	5.16	8.5	8.5	8.1
						29.8		6.06		84.2		5.32			8.4		
			Middle	8.6	20.3	31.1	31.2	5.86	5.85	80.8	80.6	5.11	5.14		8.1	8.1	
						31.2		5.83		80.4		5.17			8.0		
			Bottom	16.2	20.8	31.7	31.8	5.91	5.89	81.5	81.3	5.09	5.05		8.0	7.9	
						31.8		5.87		81.0		5.01			7.8		
17/02/11	1659-1712	17/Cloudy	Surface	1.0	18.6	30.7	30.7	5.98	6.00	83.1	83.4	5.17	5.19	5.30	8.2	8.3	8.5
						30.7		6.02		83.7		5.21			8.3		
			Middle	8.8	19.4	31.5	31.5	5.92	5.90	82.3	82.0	5.33	5.32		8.5	8.5	
						31.5		5.88		81.7		5.30			8.4		
			Bottom	16.5	20.5	31.9	32.0	5.81	5.79	80.8	80.5	5.42	5.41		8.8	8.9	
						32.0		5.76		80.1		5.39			9.0		
19/02/11	1752-1804	15/Drizzle	Surface	1.0	18.2	30.7	30.7	6.15	6.17	85.4	85.7	5.34	5.31	5.19	8.5	8.4	8.1
						30.7		6.18		85.9		5.27			8.2		
			Middle	8.7	20.6	31.4	31.5	5.90	5.92	82.0	82.3	5.15	5.20		8.1	8.1	
						31.5		5.94		82.5		5.24			8.0		
			Bottom	16.4	20.8	31.9	31.9	5.81	5.80	80.1	79.9	5.03	5.06		7.8	7.9	
						31.8		5.78		79.7		5.09			7.9		
22/02/11	0931-0945	15/Cloudy	Surface	1.0	16.4	30.7	30.7	6.12	6.13	83.8	84.0	5.58	5.60	5.84	9.2	9.3	9.3
						30.7		6.14		84.1		5.62			9.3		
			Middle	8.8	16.8	31.1	31.2	6.02	6.04	82.4	82.6	5.78	5.81		9.4	9.5	
						31.2		6.05		82.8		5.84			9.5		
			Bottom	16.6	17.4	31.7	31.7	5.88	5.87	80.5	80.3	6.13	6.11		9.2	9.2	
						31.7		5.85		80.1		6.08			9.2		
24/02/11	1045-1057	16/Fine	Surface	1.0	18.9	30.7	30.7	5.96	5.96	82.2	82.2	5.26	5.24	5.36	8.5	8.4	8.7
						30.7		5.95		82.1		5.22			8.3		
			Middle	8.9	19.4	31.5	31.5	5.86	5.87	80.3	80.4	5.32	5.35		8.6	8.7	
						31.4		5.87		80.4		5.38			8.8		
			Bottom	16.8	19.8	31.8	31.9	5.78	5.78	79.2	79.1	5.51	5.49		9.0	9.1	
						31.9		5.77		79.0		5.46			9.1		
26/02/11	1304-1317	19/Fine	Surface	1.0	16.9	30.4	30.4	6.12	6.13	83.2	83.4	5.18	5.21	5.51	8.2	8.1	8.8
						30.3		6.14		83.5		5.23			8.0		
			Middle	8.8	16.2	31.5	31.6	6.03	6.00	82.0	81.6	5.49	5.51		9.0	9.1	
						31.6		5.97		81.2		5.53			9.2		
			Bottom	16.6	15.5	32.1	32.2	5.78	5.80	78.6	78.6	5.82	5.81		9.3	9.2	
						32.2		5.82		78.6		5.79			9.1		

**Mid-Flood Tide**

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	
01/02/11	1734-1749	14/Fine	Surface	1.0	17.2	30.4	30.6	5.98	5.96	82.5	82.3	5.43	5.42	5.57	8.8	8.8	9.0	
						30.7		5.94		82.0		5.41			8.7			
			Middle	8.4	17.5	31.2	31.3	5.86	5.85	80.9	80.8	5.56	5.58		5.58	9.1		9.1
						31.4		5.84		80.6		5.59			9.0			
			Bottom	15.8	17.8	32.1	32.2	5.77	5.77	79.6	79.6	5.68	5.70		5.70	9.3		9.2
						32.3		5.76		79.5		5.72			9.0			
08/02/11	1026-1039	18/Fine	Surface	1.0	17.4	30.6	30.6	5.80	5.81	78.3	78.5	5.39	5.38	5.53	8.5	8.4	8.8	
						30.6		5.82		78.6		5.36			8.2			
			Middle	8.5	17.8	31.8	31.8	5.81	5.80	78.4	78.4	5.43	5.42		5.42	8.8		8.8
						31.8		5.78		78.3		5.41			8.7			
			Bottom	16.0	18.1	32.0	32.1	5.88	5.86	79.4	79.1	5.80	5.79		5.79	9.4		9.3
						32.1		5.84		78.8		5.78			9.2			
10/02/11	1155-1209	18/Fine	Surface	1.0	17.7	30.3	30.4	5.98	6.00	80.7	81.0	5.20	5.23	5.46	8.4	8.3	8.9	
						30.4		6.02		81.3		5.25			8.2			
			Middle	8.4	18.2	31.4	31.4	5.76	5.77	77.8	77.9	5.48	5.47		5.47	9.0		9.1
						31.3		5.77		77.9		5.45			9.2			
			Bottom	15.8	18.5	32.0	32.0	5.69	5.70	76.8	77.0	5.72	5.70		5.70	9.4		9.4
						31.9		5.71		77.1		5.68			9.4			
12/02/11	1253-1306	15/Cloudy	Surface	1.0	15.6	30.4	30.5	5.87	5.89	79.2	79.5	5.15	5.13	5.31	8.1	8.1	8.4	
						30.5		5.91		79.8		5.11			8.1			
			Middle	8.3	16.9	31.4	31.4	5.74	5.76	77.5	77.8	5.39	5.35		5.35	8.4		8.3
						31.3		5.78		78.0		5.30			8.2			
			Bottom	15.6	17.8	32.0	32.1	5.70	5.71	76.9	77.1	5.47	5.46		5.46	9.0		8.8
						32.1		5.72		77.2		5.44			8.6			
15/02/11	1719-1730	12/Rainy	Surface	1.0	17.7	29.9	29.9	6.17	6.16	85.7	85.5	5.44	5.48	5.32	9.0	8.9	8.6	
						29.9		6.14		85.3		5.51			8.8			
			Middle	8.4	20.2	31.3	31.3	6.04	6.06	83.9	84.1	5.29	5.30		5.30	8.4		8.4
						31.2		6.07		84.3		5.30			8.3			
			Bottom	15.8	20.7	31.6	31.6	5.86	5.85	80.8	80.6	5.22	5.20		5.20	8.5		8.5
						31.6		5.83		80.4		5.18			8.5			
17/02/11	1754-1807	17/Cloudy	Surface	1.0	18.6	30.7	30.7	6.12	6.14	85.1	85.3	5.07	5.09	5.19	7.8	7.9	8.1	
						30.6		6.15		85.5		5.10			8.0			
			Middle	8.4	19.5	31.5	31.5	6.07	6.05	84.4	84.1	5.21	5.20		5.20	8.3		8.2
						31.4		6.03		83.8		5.18			8.1			
			Bottom	15.8	20.5	32.0	32.1	5.87	5.89	81.6	81.9	5.28	5.30		5.30	8.2		8.2
						32.1		5.91		82.1		5.32			8.2			
19/02/11	1850-1902	15/Drizzle	Surface	1.0	18.0	30.9	30.9	6.18	6.17	85.9	85.7	4.87	4.90	5.07	7.5	7.7	8.1	
						30.8		6.15		85.4		4.93			7.8			
			Middle	8.3	20.6	31.6	31.6	6.01	6.03	83.5	83.7	5.20	5.24		5.24	8.4		8.5
						31.5		6.04		83.9		5.27			8.5			
			Bottom	15.6	20.8	32.1	32.1	5.85	5.87	80.7	80.9	5.11	5.09		5.09	8.3		8.2
						32.0		5.88		81.1		5.06			8.1			
22/02/11	1024-1040	15/Cloudy	Surface	1.0	16.5	30.6	30.7	6.36	6.38	87.1	87.3	5.28	5.31	5.52	8.2	8.3	8.8	
						30.7		6.39		87.5		5.33			8.3			
			Middle	8.2	16.8	31.1	31.2	6.21	6.24	85.0	85.4	5.51	5.53		5.53	9.0		8.9
						31.2		6.26		85.7		5.55			8.8			
			Bottom	15.4	17.4	31.7	31.7	6.10	6.08	83.5	83.2	5.70	5.73		5.73	9.3		9.2
						31.7		6.05		82.8		5.75			9.1			
24/02/11	1140-1152	16/Fine	Surface	1.0	18.9	30.6	30.6	6.16	6.16	85.0	85.0	5.16	5.19	5.30	8.1	8.2	8.4	
						30.6		6.15		84.9		5.21			8.2			
			Middle	8.2	19.4	31.4	31.4	6.05	6.06	82.9	83.3	5.32	5.29		5.29	8.5		8.6
						31.3		6.06		83.6		5.26			8.7			
			Bottom	15.4	19.7	31.8	31.8	5.96	5.97	81.7	81.9	5.39	5.41		5.41	8.5		8.5
						31.7		5.97		82.1		5.43			8.5			
26/02/11	1408-1420	19/Fine	Surface	1.0	17.3	30.5	30.5	6.06	6.08	82.4	82.6	5.39	5.38	5.62	8.5	8.5	9.0	
						30.4		6.09		82.8		5.36			8.4			
			Middle	8.4	16.2	31.6	31.6	5.87	5.89	79.8	80.1	5.62	5.63		5.63	9.2		9.1
						31.6		5.91		80.4		5.64			9.0			
			Bottom	15.8	15.5	32.0	32.1	5.76	5.78	78.4	78.3	5.88	5.86		5.86	9.5		9.4
						32.1		5.79		78.2		5.84			9.2			

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	
01/02/11	1754-1808	14/Fine	Surface	1.0	17.0	30.2	30.3	6.01	6.00	82.9	82.7	5.36	5.35	5.50	8.6	8.5	8.8	
						30.3		5.98		82.5		5.33			8.3			
			Middle	9.1	17.3	30.9	30.9	5.87	5.86	81.0	80.8	5.50	5.52		5.53	9.0		8.9
						30.8		5.84		80.6		5.53			8.8			
			Bottom	17.2	17.7	30.9	31.1	5.77	5.78	79.6	79.8	5.64	5.65		5.66	9.2		9.2
						31.3		5.79		79.9		5.66			9.1			
08/02/11	1042-1056	18/Fine	Surface	1.0	17.4	30.5	30.6	5.87	5.89	79.2	79.5	5.35	5.34	5.52	8.3	8.3	8.9	
						30.6		5.90		79.7		5.32			8.3			
			Middle	9.2	17.9	31.7	31.8	5.76	5.80	77.8	78.3	5.45	5.47		5.49	9.0		9.0
						31.8		5.84		78.8		5.49			9.0			
			Bottom	17.4	18.2	32.2	32.2	5.73	5.73	77.4	77.3	5.78	5.76		5.74	9.3		9.3
						32.1		5.72		77.2		5.74			9.2			
10/02/11	1212-1225	18/Fine	Surface	1.0	17.9	30.4	30.5	6.03	6.05	81.4	81.7	5.07	5.09	5.28	8.0	7.9	8.5	
						30.5		6.07		81.9		5.10			7.8			
			Middle	9.0	18.1	31.3	31.3	5.75	5.77	77.6	77.9	5.33	5.32		5.31	8.5		8.5
						31.2		5.79		78.2		5.31			8.4			
			Bottom	17.0	18.3	32.1	32.1	5.81	5.82	78.4	78.6	5.47	5.45		5.42	9.0		9.1
						32.0		5.83		78.7		5.42			9.2			
12/02/11	1309-1322	15/Cloudy	Surface	1.0	15.5	30.5	30.5	5.98	5.96	80.7	80.5	5.30	5.32	5.58	8.4	8.5	8.9	
						30.4		5.94		80.2		5.33			8.5			
			Middle	8.9	16.6	31.5	31.6	5.85	5.83	79.0	78.7	5.58	5.60		5.62	9.0		9.0
						31.6		5.81		78.4		5.62			9.1			
			Bottom	16.8	17.5	32.1	32.1	5.88	5.88	78.3	78.8	5.80	5.81		5.82	9.3		9.2
						32.1		5.87		79.2		5.82			9.1			
15/02/11	1733-1744	12/Rainy	Surface	1.0	17.8	29.8	29.8	6.20	6.18	86.1	85.8	5.36	5.34	5.31	8.7	8.6	8.7	
						29.8		6.15		85.4		5.31			8.5			
			Middle	9.1	20.2	31.3	31.3	6.07	6.06	84.3	84.1	5.47	5.45		5.42	9.0		9.0
						31.3		6.04		83.9		5.42			8.9			
			Bottom	17.2	20.7	31.5	31.6	5.95	5.97	82.7	83.0	5.18	5.15		5.11	8.0		8.6
						31.6		5.99		83.2		5.11			8.0			
17/02/11	1814-1828	17/Cloudy	Surface	1.0	18.5	30.5	30.6	6.10	6.12	84.8	85.0	5.12	5.11	5.20	8.0	8.1	8.2	
						30.6		6.13		85.2		5.09			8.1			
			Middle	9.2	19.5	31.4	31.5	6.05	6.04	84.1	83.9	5.17	5.19		5.21	8.0		8.1
						31.5		6.02		83.7		5.21			8.0			
			Bottom	17.4	20.5	32.1	32.1	5.86	5.88	81.5	81.8	5.30	5.32		5.33	8.4		8.5
						32.0		5.90		82.0		5.33			8.6			
19/02/11	1905-1917	15/Drizzle	Surface	1.0	17.9	30.9	30.9	6.27	6.26	87.1	86.9	4.91	4.89	5.15	8.0	7.9	8.3	
						30.9		6.24		86.7		4.87			7.8			
			Middle	9.3	20.7	31.6	31.7	6.03	6.04	83.8	84.0	5.09	5.12		5.15	8.1		8.1
						31.7		6.05		84.1		5.15			8.0			
			Bottom	17.6	20.8	32.1	32.1	5.98	5.97	83.1	82.9	5.46	5.44		5.41	9.0		8.9
						32.1		5.95		82.7		5.41			8.8			
22/02/11	1045-1100	15/Cloudy	Surface	1.0	16.6	30.7	30.7	6.32	6.34	86.5	86.7	5.26	5.29	5.50	8.4	8.3	8.8	
						30.7		6.35		86.9		5.31			8.2			
			Middle	9.3	17.0	31.2	31.2	6.23	6.25	85.3	85.6	5.53	5.51		5.48	9.0		9.0
						31.2		6.27		85.8		5.48			9.0			
			Bottom	17.6	17.4	31.7	31.7	6.03	6.05	82.6	82.9	5.68	5.70		5.72	9.3		9.2
						31.7		6.07		83.1		5.72			9.1			
24/02/11	1155-1207	16/Fine	Surface	1.0	18.8	30.5	30.6	6.17	6.18	85.1	85.2	5.18	5.16	5.26	8.1	8.1	8.3	
						30.6		6.18		85.3		5.14			8.0			
			Middle	9.1	19.3	31.5	31.5	6.09	6.13	84.0	83.9	5.22	5.25		5.28	8.3		8.2
						31.5		6.17		83.8		5.28			8.1			
			Bottom	17.2	19.8	31.9	31.9	5.99	5.99	82.1	82.0	5.39	5.37		5.34	8.6		8.6
						31.8		5.98		81.9		5.34			8.5			
26/02/11	1423-1436	19/Fine	Surface	1.0	17.0	30.3	30.4	5.98	5.95	81.3	80.9	5.28	5.25	5.47	8.3	8.2	8.8	
						30.4		5.91		80.4		5.22			8.1			
			Middle	9.1	16.3	31.7	31.7	5.77	5.78	77.9	79.6	5.44	5.45		5.44	8.8		8.9
						31.6		5.79		81.2		5.46			9.0			
			Bottom	17.2	15.4	32.2	32.2	5.82	5.81	79.1	79.0	5.68	5.70		5.72	9.3		9.2
						32.1		5.80		78.9		5.72			9.1			

**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
01/02/11	1813-1827	13/Fine	Surface	1.0	17.1	30.8	30.7	6.09	6.08	84.0	83.8	5.32	5.34	5.47	8.4	8.5	9.0
						30.6		6.06		83.6		5.35			8.5		
			Middle	6.8	17.6	31.1	31.2	5.94	5.95	82.0	81.9	5.47	5.47		9.0	9.3	
						31.3		5.95		81.7		5.46			9.5		
			Bottom	12.6	17.8	31.9	32.1	5.80	5.80	80.0	80.0	5.61	5.62		9.2	9.2	
						32.3		5.80		80.0		5.63			9.1		
08/02/11	1101-1114	18/Fine	Surface	1.0	17.7	30.6	30.6	6.04	6.03	81.5	81.3	5.24	5.26	5.46	8.2	8.3	8.8
						30.5		6.01		81.1		5.28			8.3		
			Middle	6.8	18.1	30.7	30.8	5.90	5.92	79.7	80.0	5.42	5.45		8.8	9.0	
						30.8		5.94		80.2		5.47			9.1		
			Bottom	12.6	18.4	32.2	32.2	5.86	5.84	79.1	78.9	5.67	5.68		9.0	9.1	
						32.1		5.82		78.6		5.69			9.2		
10/02/11	1232-1245	19/Fine	Surface	1.0	17.9	30.4	30.5	6.14	6.13	82.9	82.7	5.47	5.49	5.72	8.9	9.0	9.3
						30.5		6.11		82.5		5.50			9.0		
			Middle	6.8	18.3	31.4	31.4	6.09	6.05	82.2	81.7	5.74	5.73		9.5	9.4	
						31.3		6.01		81.1		5.71			9.2		
			Bottom	12.6	18.8	32.0	32.1	5.86	5.87	79.1	79.3	5.94	5.95		9.6	9.6	
						32.1		5.88		79.4		5.96			9.5		
12/02/11	1329-1342	15/Cloudy	Surface	1.0	15.8	30.4	30.5	5.95	5.93	80.3	80.0	5.49	5.45	5.62	8.7	8.8	9.1
						30.5		5.90		79.7		5.41			8.8		
			Middle	6.9	16.6	31.2	31.3	5.73	5.72	77.4	77.3	5.74	5.76		9.0	9.1	
						31.3		5.71		77.1		5.77			9.1		
			Bottom	12.8	17.9	31.8	31.9	5.70	5.72	76.9	77.2	5.68	5.67		9.4	9.4	
						31.9		5.74		77.5		5.65			9.4		
15/02/11	1751-1801	12/Rainy	Surface	1.0	17.5	29.7	29.8	6.15	6.13	85.4	85.2	5.04	5.06	4.97	8.0	7.9	7.8
						29.8		6.11		84.9		5.08			7.7		
			Middle	6.7	20.1	31.1	31.2	6.06	6.05	84.2	84.1	4.89	4.92		7.5	7.6	
						31.2		6.04		83.9		4.95			7.7		
			Bottom	12.4	20.4	31.4	31.5	5.92	5.94	82.2	82.5	4.97	4.94		8.0	8.0	
						31.5		5.95		82.7		4.91			8.0		
17/02/11	1837-1849	17/Cloudy	Surface	1.0	18.5	30.6	30.7	6.13	6.15	85.2	85.4	5.07	5.09	5.17	7.9	8.0	8.1
						30.7		6.16		85.6		5.11			8.0		
			Middle	6.9	19.4	31.3	31.4	6.07	6.05	84.4	84.1	5.15	5.16		8.2	8.2	
						31.4		6.03		83.8		5.17			8.2		
			Bottom	12.8	20.4	31.9	31.9	5.88	5.90	81.7	82.0	5.26	5.27		8.3	8.2	
						31.8		5.92		82.3		5.28			8.1		
19/02/11	1924-1936	15/Drizzle	Surface	1.0	18.0	30.9	31.0	6.15	6.13	85.4	85.2	5.60	5.64	5.33	9.2	9.3	8.7
						31.0		6.11		84.9		5.66			9.3		
			Middle	6.8	20.4	31.8	31.8	5.97	5.96	82.9	82.7	5.15	5.11		8.2	8.3	
						31.7		5.94		82.5		5.07			8.3		
			Bottom	12.6	20.6	31.9	32.0	5.81	5.83	80.1	80.3	5.29	5.25		8.4	8.5	
						32.0		5.84		80.5		5.20			8.5		
22/02/11	1106-1120	15/Cloudy	Surface	1.0	16.6	30.7	30.7	6.37	6.35	87.2	87.0	5.21	5.23	5.34	8.3	8.2	8.4
						30.6		6.33		86.7		5.25			8.0		
			Middle	6.7	16.9	30.9	30.9	6.24	6.22	85.4	85.2	5.29	5.31		8.5	8.4	
						30.9		6.20		84.9		5.33			8.2		
			Bottom	12.4	17.3	31.4	31.4	6.12	6.11	83.8	83.6	5.46	5.48		8.7	8.8	
						31.4		6.09		83.4		5.49			8.9		
24/02/11	1213-1225	21/Fine	Surface	1.0	18.9	30.7	30.7	6.23	6.22	86.0	85.9	5.22	5.20	5.30	8.4	8.3	8.6
						30.6		6.21		85.7		5.17			8.2		
			Middle	6.7	19.3	31.5	31.5	6.07	6.08	83.2	83.3	5.32	5.30		8.8	8.7	
						31.4		6.08		83.3		5.27			8.5		
			Bottom	12.4	19.8	31.9	31.9	5.96	5.97	81.7	81.8	5.42	5.40		9.0	8.9	
						31.8		5.98		81.9		5.38			8.8		
26/02/11	1443-1456	20/Fine	Surface	1.0	17.3	30.4	30.5	5.97	5.94	81.2	80.8	5.47	5.46	5.68	8.9	8.9	9.1
						30.5		5.91		80.4		5.44			8.8		
			Middle	6.7	16.3	31.7	31.7	5.86	5.87	79.1	79.5	5.71	5.73		9.3	9.2	
						31.6		5.88		79.9		5.75			9.1		
			Bottom	12.4	15.5	32.1	32.1	5.74	5.76	77.5	78.8	5.82	5.85		9.5	9.4	
						32.0		5.78		80.0		5.88			9.2		

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
01/02/11	1527-1542	15/Fine	Surface	1.0	18.3	30.5	30.5	6.06	6.04	83.6	83.4	5.31	5.32	5.44	8.4	8.6	8.8
						30.4		6.02		83.1		5.33			8.7		
			Middle	5.9	18.5	30.9	31.0	5.94	5.93	82.0	81.9	5.40	5.41		8.8	8.9	
						31.1		5.92		81.7		5.42			9.0		
			Bottom	10.8	18.9	31.6	31.7	5.80	5.82	80.0	80.3	5.61	5.60		9.1	9.1	
						31.7		5.84		80.6		5.59			9.0		
08/02/11	0810-0824	17/Fine	Surface	1.0	17.2	30.5	30.5	5.94	5.96	80.2	80.5	5.17	5.16	5.35	8.1	8.1	8.4
						30.4		5.98		80.7		5.14			8.1		
			Middle	5.8	17.8	31.8	31.8	5.87	5.85	79.2	78.9	5.31	5.33		8.3	8.2	
						31.7		5.82		78.6		5.34			8.1		
			Bottom	10.6	18.3	32.1	32.1	5.83	5.82	78.7	78.6	5.55	5.56		8.8	8.9	
						32.0		5.81		78.4		5.57			9.0		
10/02/11	0940-0953	17/Fine	Surface	1.0	17.9	30.3	30.4	5.90	5.94	79.7	80.2	5.03	5.05	5.20	8.0	8.1	8.3
						30.4		5.97		80.6		5.07			8.2		
			Middle	5.9	18.3	31.4	31.4	5.85	5.87	79.0	79.2	5.14	5.17		8.3	8.4	
						31.3		5.88		79.4		5.19			8.5		
			Bottom	10.8	18.7	32.0	32.1	5.78	5.79	78.0	78.2	5.38	5.40		8.4	8.3	
						32.1		5.80		78.3		5.41			8.2		
12/02/11	1039-1052	14/Cloudy	Surface	1.0	15.7	30.3	30.3	6.18	6.15	83.4	83.0	5.42	5.41	5.63	8.8	8.7	9.0
						30.3		6.11		82.5		5.40			8.6		
			Middle	6.0	16.6	31.6	31.6	5.86	5.88	79.1	79.4	5.68	5.67		9.2	9.1	
						31.5		5.90		79.7		5.65			9.0		
			Bottom	11.0	17.6	32.0	32.1	5.85	5.84	78.9	78.8	5.79	5.81		9.5	9.3	
						32.1		5.82		78.6		5.82			9.1		
15/02/11	1504-1515	12/Rainy	Surface	1.0	17.8	29.8	29.8	6.21	6.19	86.3	86.0	5.18	5.21	5.27	8.1	8.2	8.4
						29.8		6.17		85.7		5.24			8.3		
			Middle	5.9	30.3	31.2	31.3	6.02	6.04	83.6	83.8	5.07	5.11		8.0	8.0	
						31.3		6.05		84.0		5.15			8.0		
			Bottom	10.8	20.7	31.7	31.8	5.94	5.92	81.9	81.7	5.51	5.49		9.0	9.1	
						31.8		5.90		81.4		5.47			9.1		
17/02/11	1604-1616	17/Cloudy	Surface	1.0	18.6	30.7	30.7	6.06	6.04	84.2	83.9	5.19	5.20	5.29	8.4	8.3	8.5
						30.6		6.01		83.5		5.21			8.2		
			Middle	5.9	19.5	31.5	31.5	5.91	5.89	82.1	81.9	5.27	5.29		8.3	8.4	
						31.5		5.87		81.6		5.30			8.5		
			Bottom	10.8	20.3	32.0	32.0	5.80	5.79	80.6	80.4	5.36	5.37		8.7	8.7	
						31.9		5.77		80.2		5.38			8.6		
19/02/11	1634-1645	15/Drizzle	Surface	1.0	18.2	30.6	30.6	6.11	6.09	84.9	84.6	5.02	5.06	5.09	8.0	8.1	8.1
						30.5		6.07		84.3		5.10			8.1		
			Middle	5.9	20.7	31.4	31.5	5.95	5.96	82.7	82.8	5.15	5.11		8.3	8.2	
						31.5		5.97		82.9		5.06			8.1		
			Bottom	10.8	20.9	32.0	32.0	5.97	5.96	82.9	82.7	5.07	5.11		8.0	8.0	
						32.0		5.94		82.5		5.15			8.0		
22/02/11	0836-0850	14/Cloudy	Surface	1.0	16.4	30.6	30.6	6.15	6.17	84.2	84.5	5.56	5.58	5.83	9.0	9.0	9.3
						30.5		6.19		84.8		5.59			8.9		
			Middle	5.6	16.7	30.9	31.0	6.07	6.05	83.1	82.9	5.80	5.78		9.3	9.4	
						31.0		6.03		82.6		5.76			9.4		
			Bottom	10.2	17.2	31.4	31.5	5.86	5.84	80.2	80.0	6.10	6.13		9.8	9.7	
						31.5		5.82		79.7		6.15			9.5		
24/02/11	0933-0944	16/Fine	Surface	1.0	18.9	30.6	30.6	5.94	5.94	82.0	81.9	5.24	5.27	5.39	8.2	8.2	8.7
						30.5		5.93		81.8		5.29			8.2		
			Middle	5.7	19.4	31.3	31.4	5.86	5.85	80.3	80.2	5.41	5.38		8.7	8.9	
						31.4		5.84		80.0		5.35			9.0		
			Bottom	10.4	19.7	31.8	31.8	5.78	5.79	79.2	79.3	5.49	5.51		9.1	9.0	
						31.8		5.79		79.3		5.53			8.9		
26/02/11	1140-1153	18/Fine	Surface	1.0	16.8	30.4	30.4	6.11	6.14	83.1	83.5	5.41	5.43	5.57	8.7	8.8	9.0
						30.3		6.17		83.9		5.44			8.8		
			Middle	5.7	16.0	31.6	31.7	5.90	5.92	80.2	80.5	5.48	5.51		9.0	8.9	
						31.7		5.94		80.8		5.54			8.8		
			Bottom	10.4	15.6	32.0	32.1	5.87	5.84	79.8	79.4	5.74	5.77		9.3	9.3	
						32.1		5.80		78.9		5.79			9.2		

**Mid-Flood 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
01/02/11	1505-1520	15/Fine	Surface	1.0	18.5	30.2	30.3	6.08	6.07	83.9	83.8	5.23	5.25	5.39	8.4	8.3	8.6
						30.4		6.06		83.6		5.26			8.2		
			Middle	6.4	18.8	30.8	30.8	6.00	5.99	82.8	82.6	5.38	5.37		8.7	8.6	
						30.7		5.97		82.4		5.35			8.5		
			Bottom	11.8	19.1	31.2	31.3	5.87	5.86	81.0	80.9	5.56	5.57		9.0	8.9	
						31.4		5.85		80.7		5.58			8.8		
08/02/11	0747-0800	17/Fine	Surface	1.0	17.2	30.3	30.3	6.08	6.07	82.1	81.9	5.23	5.25	5.44	8.3	8.2	8.7
						30.2		6.05		81.7		5.26			8.1		
			Middle	6.4	17.7	31.6	31.6	5.94	5.93	80.2	80.0	5.47	5.45		8.7	8.8	
						31.5		5.91		79.8		5.42			8.9		
			Bottom	11.8	18.2	32.1	32.1	5.88	5.87	79.4	79.2	5.67	5.64		9.2	9.1	
						32.0		5.85		78.9		5.61			9.0		
10/02/11	0917-0930	17/Fine	Surface	1.0	17.7	30.2	30.3	6.07	6.06	81.9	81.7	5.21	5.23	5.39	8.4	8.4	8.8
						30.3		6.04		81.5		5.25			8.3		
			Middle	6.4	18.2	31.3	31.4	5.99	5.98	80.9	80.7	5.40	5.40		8.8	8.9	
						31.4		5.96		80.5		5.39			9.0		
			Bottom	11.8	18.7	31.9	32.0	5.74	5.73	77.5	77.3	5.55	5.54		9.1	9.1	
						32.0		5.71		77.1		5.52			9.0		
12/02/11	1016-1029	14/Cloudy	Surface	1.0	15.7	30.4	30.4	6.12	6.15	82.6	83.0	5.55	5.57	5.67	9.0	8.9	9.0
						30.3		6.17		83.3		5.58			8.8		
			Middle	6.5	16.4	31.5	31.6	5.99	5.97	80.9	80.6	5.65	5.64		8.9	9.0	
						31.6		5.94		80.2		5.62			9.0		
			Bottom	12.0	17.7	32.1	32.2	5.79	5.81	78.2	78.4	5.84	5.82		9.3	9.2	
						32.2		5.82		78.6		5.80			9.1		
15/02/11	1445-1456	12/Rainy	Surface	1.0	17.7	29.7	29.8	6.09	6.08	84.6	84.4	5.07	5.04	5.06	8.0	8.1	8.1
						29.8		6.06		84.2		5.01			8.2		
			Middle	6.4	20.2	31.1	31.2	5.93	5.94	82.4	82.6	4.98	4.95		7.9	8.0	
						31.2		5.95		82.7		4.92			8.0		
			Bottom	11.8	20.8	31.8	31.8	5.90	5.92	82.0	82.3	5.21	5.19		8.3	8.2	
						31.8		5.94		82.5		5.18			8.1		
17/02/11	1546-1557	17/Cloudy	Surface	1.0	18.6	30.5	30.5	6.18	6.16	85.9	85.6	5.05	5.07	5.15	8.0	8.1	8.2
						30.5		6.14		85.3		5.08			8.1		
			Middle	6.9	19.4	31.4	31.5	6.06	6.05	84.2	84.0	5.17	5.15		8.2	8.2	
						31.5		6.03		83.8		5.13			8.1		
			Bottom	12.8	20.4	31.9	31.9	5.89	5.91	81.9	82.1	5.24	5.25		8.4	8.4	
						31.8		5.92		82.3		5.25			8.3		
19/02/11	1615-1626	15/Drizzle	Surface	1.0	18.4	30.7	30.7	6.18	6.16	85.9	85.6	4.87	4.84	4.96	7.7	7.8	7.9
						30.6		6.14		85.3		4.81			7.9		
			Middle	6.6	20.7	31.3	31.4	6.04	6.06	83.9	84.2	4.99	4.95		8.0	7.9	
						31.4		6.08		84.5		4.91			7.8		
			Bottom	12.2	20.9	32.0	32.0	5.87	5.86	81.0	80.8	5.06	5.09		8.2	8.1	
						31.9		5.84		80.5		5.12			8.0		
22/02/11	0819-0832	14/Cloudy	Surface	1.0	16.3	30.6	30.6	6.31	6.33	86.4	86.6	5.46	5.50	5.75	8.8	8.9	9.1
						30.6		6.34		86.8		5.53			9.0		
			Middle	6.8	16.7	31.0	31.0	6.17	6.15	84.5	84.2	5.70	5.73		9.1	9.0	
						31.0		6.13		83.9		5.75			8.8		
			Bottom	12.2	17.2	31.6	31.7	6.01	6.03	82.3	82.5	6.01	6.04		9.6	9.5	
						31.7		6.04		82.7		6.06			9.4		
24/02/11	0915-0926	16/Fine	Surface	1.0	18.9	30.6	30.6	6.11	6.12	84.3	84.4	5.19	5.17	5.27	8.1	8.1	8.4
						30.6		6.12		84.5		5.15			8.0		
			Middle	6.8	19.3	31.4	31.5	6.03	6.03	83.2	83.2	5.28	5.26		8.3	8.2	
						31.5		6.02		83.1		5.24			8.1		
			Bottom	12.6	19.8	32.0	32.0	5.95	5.95	81.5	81.5	5.42	5.39		8.8	8.9	
						31.9		5.94		81.4		5.36			9.0		
26/02/11	1117-1130	18/Fine	Surface	1.0	16.8	30.2	30.3	6.02	6.03	81.9	82.0	5.18	5.16	5.42	8.0	8.1	8.6
						30.3		6.04		82.1		5.13			8.2		
			Middle	6.4	16.1	31.5	31.5	5.96	5.98	81.1	81.3	5.49	5.48		8.7	8.6	
						31.4		5.99		81.5		5.47			8.5		
			Bottom	11.8	15.8	32.2	32.2	5.78	5.78	78.0	78.0	5.61	5.64		9.0	9.1	
						32.1		5.77		77.9		5.66			9.2		



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		
01/02/11	1445-1500	15/Fine	Surface	1.0	18.2	30.4	30.5	6.11	6.11	84.3	84.3	5.30	5.31	5.47	8.3	8.3	8.7		
						30.6		6.10		84.2		5.32			8.3				
			Middle	6.4	18.7	30.8	30.9	6.04	6.03	83.4	83.3	5.46	5.48		5.46	5.48		8.9	9.0
						30.9		6.02		83.1		5.50			9.0				
			Bottom	11.8	19.1	31.4	31.5	5.91	5.93	81.6	81.8	5.59	5.61		5.59	5.61		8.8	8.9
						31.5		5.94		82.0		5.62			9.0				
08/02/11	0730-0744	17/Fine	Surface	1.0	17.3	30.4	30.5	6.03	6.05	81.4	81.7	5.16	5.18	5.38	8.1	8.2	8.5		
						30.5		6.07		81.9		5.19			8.2				
			Middle	6.3	17.8	31.6	31.6	6.01	5.99	81.1	80.9	5.36	5.34		5.36	5.34		8.5	8.4
						31.5		5.97		80.6		5.31			8.2				
			Bottom	11.6	18.1	32.0	32.1	5.80	5.82	78.3	78.5	5.62	5.64		5.62	5.64		9.0	8.9
						32.1		5.83		78.7		5.66			8.7				
10/02/11	0900-0914	17/Fine	Surface	1.0	17.8	30.4	30.4	6.13	6.12	82.8	82.6	5.50	5.51	5.65	9.0	9.1	9.3		
						30.3		6.10		82.3		5.51			9.1				
			Middle	6.3	18.3	31.2	31.3	5.97	5.94	80.6	80.2	5.69	5.67		5.69	5.67		9.3	9.3
						31.3		5.91		79.8		5.65			9.3				
			Bottom	11.6	18.6	32.0	32.1	5.82	5.83	78.6	78.7	5.77	5.78		5.77	5.78		9.5	9.4
						32.1		5.84		78.8		5.79			9.3				
12/02/11	1000-1013	14/Cloudy	Surface	1.0	15.8	30.2	30.3	6.08	6.06	82.1	81.8	5.35	5.36	5.63	8.2	8.2	8.9		
						30.3		6.03		81.4		5.36			8.2				
			Middle	6.4	16.5	31.4	31.5	5.93	5.92	80.1	79.9	5.59	5.60		5.59	5.60		9.1	9.1
						31.5		5.90		79.7		5.60			9.0				
			Bottom	11.8	17.8	32.0	32.1	5.74	5.72	77.5	77.2	5.94	5.93		5.94	5.93		9.5	9.5
						32.1		5.70		76.9		5.91			9.5				
15/02/11	1430-1442	12/Rainy	Surface	1.0	17.7	29.6	29.7	6.14	6.12	85.3	85.0	5.12	5.10	5.22	8.1	8.1	8.2		
						29.7		6.10		84.7		5.07			8.0				
			Middle	6.2	20.0	30.9	31.0	5.97	5.96	82.9	82.7	5.30	5.34		5.30	5.34		8.4	8.5
						31.0		5.94		82.5		5.37			8.5				
			Bottom	11.4	20.7	31.8	31.8	5.89	5.88	81.2	81.0	5.19	5.22		5.19	5.22		8.2	8.1
						31.7		5.86		80.8		5.25			8.0				
17/02/11	1530-1542	17/Cloudy	Surface	1.0	18.5	30.5	30.6	6.21	6.19	86.3	86.0	5.10	5.09	5.17	8.1	8.1	8.1		
						30.6		6.16		85.6		5.07			8.0				
			Middle	6.4	19.4	31.3	31.4	6.09	6.10	84.7	84.8	5.15	5.17		5.15	5.17		7.8	7.9
						31.5		6.11		84.9		5.18			8.0				
			Bottom	11.8	20.3	31.8	31.9	5.93	5.95	82.4	82.6	5.23	5.25		5.23	5.25		8.5	8.4
						31.9		5.96		82.8		5.27			8.2				
19/02/11	1600-1612	15/Drizzle	Surface	1.0	18.4	30.6	30.6	6.15	6.14	85.4	85.2	4.94	4.92	5.11	7.9	7.8	8.1		
						30.5		6.12		85.0		4.90			7.6				
			Middle	6.3	20.6	31.2	31.2	5.98	5.97	83.1	82.9	5.21	5.19		5.21	5.19		8.3	8.4
						31.1		5.95		82.7		5.17			8.5				
			Bottom	11.6	20.9	31.8	31.9	5.92	5.94	82.2	82.5	5.19	5.22		5.19	5.22		8.2	8.2
						31.9		5.96		82.8		5.25			8.1				
22/02/11	0800-0815	14/Cloudy	Surface	1.0	16.4	30.5	30.6	6.30	6.28	86.3	86.0	5.43	5.47	5.72	8.9	9.0	9.1		
						30.6		6.26		85.7		5.50			9.0				
			Middle	6.2	18.8	30.9	31.0	6.20	6.18	84.9	84.6	5.66	5.69		5.66	5.69		9.2	9.1
						31.0		6.15		84.2		5.71			9.0				
			Bottom	11.4	17.3	31.5	31.6	6.03	6.05	82.6	82.8	5.98	6.02		5.98	6.02		9.2	9.2
						31.6		6.06		83.0		6.05			9.1				
24/02/11	0900-0912	16/Fine	Surface	1.0	18.8	30.6	30.7	6.15	6.14	84.9	84.8	5.12	5.15	5.25	8.2	8.3	8.4		
						30.7		6.13		84.6		5.17			8.3				
			Middle	6.2	19.3	31.4	31.4	6.06	6.07	83.0	83.4	5.27	5.24		5.27	5.24		8.4	8.3
						31.3		6.07		83.8		5.21			8.2				
			Bottom	11.4	19.7	31.7	31.8	5.97	5.98	81.8	81.9	5.34	5.36		5.34	5.36		8.5	8.6
						31.8		5.98		81.9		5.38			8.6				
26/02/11	1100-1114	18/Fine	Surface	1.0	16.9	30.4	30.4	6.12	6.13	83.2	83.4	5.06	5.05	5.31	8.0	7.9	8.4		
						30.3		6.14		83.5		5.04			7.8				
			Middle	6.1	16.1	31.5	31.6	6.01	6.03	81.7	81.9	5.29	5.33		5.29	5.33		8.4	8.3
						31.6		6.04		82.1		5.36			8.2				
			Bottom	11.2	15.8	32.0	32.1	5.94	5.93	80.8	80.6	5.54	5.56		5.54	5.56		9.0	8.9
						32.1		5.91		80.4		5.57			8.8				

Mid-Flood Tide

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	
01/02/11	1652-1708	14/Fine	Surface	1.0	17.3	30.4	30.5	6.00	5.99	82.8	82.7	5.34	5.35	5.49	8.4	8.5	8.6	
						30.5		5.98		82.5		5.36			8.5			
			Middle	6.2	17.6	31.5	31.7	5.90	5.88	81.4	81.2	5.45	5.48		8.6			8.5
						31.8		5.86		80.9		5.51			8.3			
			Bottom	11.4	17.8	32.4	32.4	5.82	5.81	80.3	80.1	5.63	5.64		8.9			8.8
						32.3		5.79		79.9		5.65			8.7			
08/02/11	0954-1007	18/Fine	Surface	1.0	17.4	30.4	30.5	5.98	5.99	80.7	80.8	5.30	5.31	5.46	8.5	8.5	8.7	
						30.5		5.99		80.9		5.32			8.4			
			Middle	8.1	17.8	31.6	31.6	5.85	5.84	79.0	78.8	5.40	5.42		8.6			8.5
						31.6		5.82		78.6		5.43			8.4			
			Bottom	11.2	18.1	32.2	32.2	5.77	5.79	77.9	78.1	5.64	5.65		9.3			9.2
						32.1		5.80		78.3		5.66			9.1			
10/02/11	1123-1136	18/Fine	Surface	1.0	17.8	30.4	30.4	5.94	5.93	80.2	80.0	5.43	5.44	5.64	8.8	8.9	9.0	
						30.3		5.91		79.8		5.45			9.0			
			Middle	5.9	18.2	31.3	31.4	5.89	5.91	79.5	79.8	5.68	5.67		9.2			9.2
						31.4		5.93		80.1		5.66			9.1			
			Bottom	10.8	18.3	32.2	32.2	5.75	5.74	77.6	77.5	5.84	5.82		9.0			9.0
						32.1		5.73		77.4		5.80			9.0			
12/02/11	1222-1235	15/Cloudy	Surface	1.0	15.6	30.3	30.3	5.80	5.84	78.3	78.9	5.24	5.26	5.51	8.2	8.3	8.9	
						30.2		5.88		79.4		5.27			8.3			
			Middle	6.0	16.8	31.4	31.5	5.79	5.77	78.2	77.9	5.51	5.55		9.0			9.1
						31.5		5.74		77.5		5.59			9.1			
			Bottom	11.0	17.8	32.0	32.1	5.94	5.93	80.2	80.0	5.74	5.72		9.3			9.3
						32.1		5.91		79.8		5.70			9.3			
15/02/11	1641-1652	12/Rainy	Surface	1.0	17.6	29.9	29.9	6.05	6.03	84.0	83.8	5.36	5.33	5.19	8.5	8.4	8.3	
						29.8		6.01		83.5		5.29			8.3			
			Middle	5.9	20.2	31.1	31.1	5.93	5.92	82.4	82.2	5.07	5.05		8.0			8.1
						31.1		5.90		82.0		5.02			8.2			
			Bottom	10.8	20.8	31.7	31.7	5.88	5.86	81.1	80.8	5.18	5.21		8.3			8.3
						31.7		5.84		80.5		5.23			8.2			
17/02/11	1718-1730	17/Cloudy	Surface	1.0	18.4	30.5	30.6	6.17	6.16	85.8	85.6	5.06	5.08	5.17	8.3	8.2	8.2	
						30.6		6.14		85.3		5.09			8.1			
			Middle	5.8	19.3	31.5	31.5	6.05	6.07	84.1	84.3	5.18	5.17		8.0			8.0
						31.4		6.08		84.5		5.15			8.0			
			Bottom	10.6	20.4	31.8	31.9	5.92	5.93	82.3	82.5	5.25	5.26		8.4			8.3
						31.9		5.94		82.6		5.27			8.2			
19/02/11	1811-1822	15/Drizzle	Surface	1.0	18.1	30.8	30.8	6.20	6.18	86.1	85.8	5.15	5.12	5.37	8.3	8.3	8.8	
						30.8		6.15		85.4		5.08			8.2			
			Middle	5.9	20.5	31.5	31.6	5.97	5.96	82.9	82.7	5.47	5.44		8.9			9.0
						31.6		5.94		82.5		5.41			9.0			
			Bottom	10.8	20.7	31.9	32.0	5.89	5.87	81.2	80.9	5.59	5.55		9.2			9.2
						32.0		5.84		80.5		5.50			9.2			
22/02/11	0949-1002	15/Cloudy	Surface	1.0	16.5	30.6	30.7	6.33	6.31	86.7	86.4	5.31	5.33	5.52	8.5	8.6	8.9	
						30.7		6.29		86.1		5.35			8.6			
			Middle	5.8	16.5	30.9	31.0	6.22	6.24	85.2	85.4	5.44	5.48		8.7			8.9
						31.0		6.25		85.6		5.52			9.0			
			Bottom	10.6	17.0	31.4	31.5	6.08	6.10	83.2	83.5	5.72	5.75		9.3			9.2
						31.5		6.11		83.7		5.77			9.1			
24/02/11	1103-1114	16/Fine	Surface	1.0	18.8	30.6	30.6	6.13	6.13	84.6	84.6	5.15	5.18	5.27	8.2	8.3	8.4	
						30.5		6.12		84.5		5.21			8.3			
			Middle	5.7	19.3	31.4	31.4	6.05	6.05	83.5	83.5	5.29	5.27		8.4			8.3
						31.4		6.04		83.4		5.25			8.2			
			Bottom	10.4	19.7	31.7	31.8	5.97	5.98	81.8	81.9	5.35	5.37		8.6			8.5
						31.8		5.98		81.9		5.39			8.4			
26/02/11	1324-1348	19/Fine	Surface	1.0	17.0	30.3	30.3	6.27	6.26	85.3	76.2	5.40	5.42	5.65	8.7	8.8	8.7	
						30.2		6.24		87.0		5.44			8.9			
			Middle	6.2	16.2	31.6	31.7	5.94	5.95	80.8	80.6	5.67	5.66		9.2			9.1
						31.7		5.95		80.3		5.64			9.0			
			Bottom	11.4	15.6	32.0	32.1	5.70	5.73	77.5	77.9	5.86	5.87		8.4			8.3
						32.1		5.75		78.2		5.88			8.2			

Mid-Flood Tide

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		
01/02/11	1714-1729	14/Fine	Surface	1.0	17.4	30.5	30.4	6.04	6.03	83.4	83.3	5.30	5.29	5.42	8.6	8.5	8.8		
						30.2		6.02		83.1		5.28			8.3				
						30.8		5.92		81.7		5.41			9.0				
			Middle	8.7	17.8	30.9	30.9	5.93	5.93	81.8	81.8	5.39	5.40		5.39	5.40		8.7	8.9
						31.4		5.82		80.3		5.56			9.3				
						31.7		5.84		80.6		5.59			9.1				
			Bottom	16.4	18.1	31.4	31.6	5.82	5.83	80.3	80.5	5.56	5.58		5.56	5.58		9.2	
						31.7		5.84		80.6		5.59			9.1				
						30.6		5.94		80.2		5.34			8.5				
08/02/11	1010-1023	18/Fine	Surface	1.0	17.3	30.6	30.6	5.94	5.93	80.2	80.0	5.34	5.36	5.47	8.5	8.5	8.8		
						30.5		5.91		79.8		5.37			8.4				
						31.8		5.80		78.3		5.46			8.8				
			Middle	8.9	17.9	31.7	31.8	5.84	5.82	78.8	78.6	5.49	5.48		5.49	5.48		8.9	
						32.1		5.79		78.2		5.58			9.2				
						32.1		5.75		77.6		5.59			8.9				
			Bottom	16.8	18.2	32.1	32.1	5.79	5.77	78.2	77.9	5.58	5.59		5.58	5.59		9.1	
						32.1		5.75		77.6		5.59			9.2				
						30.3		5.89		79.5		5.39			8.4				
10/02/11	1139-1152	18/Fine	Surface	1.0	17.8	30.2	30.3	5.92	5.91	79.9	79.7	5.31	5.35	5.56	8.2	8.3	8.9		
						31.2		5.82		78.6		5.58			9.0				
						31.3		5.86		79.1		5.57			9.2				
			Middle	8.7	18.3	31.3	31.3	5.86	5.84	79.1	78.9	5.57	5.58		5.57	5.58		9.1	
						32.1		5.72		77.2		5.74			9.4				
						32.0		5.70		76.9		5.77			9.2				
			Bottom	16.4	18.4	32.0	32.1	5.70	5.71	76.9	77.1	5.77	5.76		5.77	5.76		9.3	
						30.3		5.95		80.3		5.08			8.0				
						30.4		5.93		80.1		5.04			8.2				
12/02/11	1238-1250	15/Cloudy	Surface	1.0	15.8	31.5	31.5	5.82	5.85	78.6	79.0	5.24	5.22	5.23	8.3	8.3	8.3		
						31.4		5.88		79.4		5.20			8.2				
						32.0		5.76		77.8		5.38			8.5				
			Middle	8.6	16.7	31.9	32.0	5.74	5.75	77.5	77.7	5.41	5.40		5.41	5.40		8.5	
						29.8		6.11		84.9		5.21			8.4				
						29.7		6.09		84.6		5.16			8.4				
			Bottom	16.2	17.9	31.9	32.0	5.74	5.75	77.5	77.7	5.41	5.40		5.41	5.40		8.5	
						29.8		6.11		84.9		5.21			8.4				
						29.7		6.09		84.6		5.16			8.4				
15/02/11	1705-1716	12/Rainy	Surface	1.0	17.7	29.8	29.8	6.11	6.10	84.9	84.8	5.21	5.19	5.32	8.4	8.4	8.6		
						31.2		6.01		83.5		5.43			8.7				
						31.2		6.04		83.9		5.37			8.9				
			Middle	8.7	20.1	31.6	31.2	5.90	6.03	82.0	83.7	5.36	5.40		5.36	5.40		8.5	
						31.7		5.93		82.4		5.40			8.4				
						31.7		5.93		82.4		5.40			8.4				
			Bottom	16.4	20.8	31.7	31.7	5.93	5.92	82.4	82.2	5.40	5.38		5.40	5.38		8.5	
						31.7		5.93		82.4		5.40			8.4				
						30.6		6.20		86.2		5.11			8.1				
17/02/11	1734-1748	17/Cloudy	Surface	1.0	18.6	30.5	30.6	6.16	6.18	85.6	85.9	5.13	5.12	5.22	8.0	8.1	8.3		
						31.4		6.10		84.8		5.20			8.4				
						31.4		6.11		84.9		5.22			8.2				
			Middle	8.9	19.5	31.9	31.4	5.98	6.11	83.1	84.9	5.31	5.21		5.31	5.21		8.6	
						31.8		5.95		82.7		5.34			8.6				
						31.8		5.95		82.7		5.34			8.6				
			Bottom	16.8	20.5	31.9	31.9	5.98	5.97	83.1	82.9	5.31	5.33		5.31	5.33		8.6	
						31.8		5.95		82.7		5.34			8.5				
						30.8		6.24		86.7		4.98			7.8				
19/02/11	1836-1847	15/Drizzle	Surface	1.0	18.1	30.9	30.9	6.20	6.22	86.1	86.4	4.95	4.97	5.26	8.0	7.9	8.3		
						31.6		6.02		83.6		5.27			8.3				
						31.8		6.06		84.2		5.21			8.1				
			Middle	8.8	20.6	31.6	31.6	6.02	6.04	83.6	83.9	5.27	5.24		5.27	5.24		8.2	
						31.8		6.06		84.2		5.21			8.1				
						32.0		5.92		81.6		5.60			8.8				
			Bottom	16.6	20.7	32.1	32.1	5.92	5.94	81.6	81.9	5.60	5.57		5.60	5.57		8.9	
						32.1		5.95		82.1		5.53			9.0				
						30.7		6.15		84.2		5.43			9.1				
22/02/11	1006-1020	15/Cloudy	Surface	1.0	16.5	30.7	30.7	6.10	6.13	83.5	83.9	5.48	5.46	5.70	9.2	9.2	9.3		
						31.1		6.01		82.3		5.62			9.4				
						31.1		6.04		82.7		5.66			9.2				
			Middle	8.9	16.9	31.1	31.1	6.04	6.03	82.7	82.5	5.66	5.64		5.66	5.64		9.3	
						31.7		5.89		80.6		5.96			9.5				
						31.6		5.86		80.2		6.02			9.5				
			Bottom	16.8	17.5	31.7	31.7	5.89	5.88	80.6	80.4	5.96	5.99		5.96	5.99		9.5	
						31.6		5.86		80.2		6.02			9.5				
						30.6		6.20		85.6		5.17			8.0				
24/02/11	1126-1137	16/Fine	Surface	1.0	18.8	30.7	30.7	6.21	6.21	85.7	85.7	5.13	5.15	5.25	8.2	8.1	8.4		
						31.4		6.07		83.2		5.23			8.4				
						31.5		6.08		83.3		5.27			8.2				
			Middle	8.8	19.4	31.5	31.5	6.08	6.08	83.3	83.3	5.27	5.25		5.27	5.25		8.3	
						31.8		5.99		82.1		5.38			8.8				
						31.8		5.97		81.8		5.33			8.5				
			Bottom	16.6	19.8	31.8	31.8	5.99	5.98	82.1	82.0	5.38	5.36		5.38	5.36		8.7	
						31.8		5.97		81.8		5.33			8.5				
						30.4		6.17		83.9		5.37			8.5				
26/02/11	1352-1405	19/Fine	Surface	1.0	17.2	30.3	30.4	6.13	6.15	85.2	84.6	5.31	5.34	5.56	8.5	8.5	8.8		
						31.5		5.82		78.6		5.55			8.8				
						31.6		5.89		79.5		5.57			8.6				
			Middle	8.9	16.1	31.6	31.6	5.89	5.86	78.6	79.1	5.55	5.56		5.55	5.56		8.7	
						32.2		5.80		78.3		5.74			9.2				
						32.3		5.84		78.8		5.79			9.3				
			Bottom	16.8	15.8	32.3	32.3	5.84	5.82	78.8	78.6	5.79	5.77		5.79	5.77		9.3	
						32.3		5.84		78.8		5.79			9.3				
						30.4		6.17		83.9		5.37			8.5				

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
01/02/11	1548-1603	15/Fine	Surface	1.0	18.3	30.2	30.3	6.00	5.98	82.8	82.5	5.31	5.30	5.40	8.6	8.4	8.6
				7.7	18.7	30.3		5.96		82.2		5.29			8.2		
			Middle	7.7	18.7	31.4	31.3	5.87	5.86	81.0	80.8	5.38	5.41		8.5	8.5	
				14.4	19.1	31.2		5.84		80.6		5.41			8.5		
			Bottom	14.4	19.1	31.6	31.7	5.74	5.74	79.5	79.3	5.52	5.55		9.0	8.9	
				7.7	17.7	31.8		5.73		79.1		5.50			8.8		
08/02/11	0841-0854	17/Fine	Surface	1.0	17.3	30.3	30.4	5.93	5.95	80.1	80.3	5.25	5.27	5.37	8.1	8.1	8.5
				7.7	17.7	30.4		5.96		80.5		5.29			8.0		
			Middle	7.7	17.7	31.6	31.7	5.84	5.82	78.8	78.6	5.35	5.38		8.5	8.4	
				14.4	18.1	31.7		5.80		78.3		5.38			8.3		
			Bottom	14.4	18.1	31.9	32.0	5.80	5.81	78.3	78.5	5.49	5.47		9.0	9.0	
				1.0	17.8	32.0		5.82		78.6		5.45			9.0		
10/02/11	1010-1023	17/Fine	Surface	1.0	17.8	30.2	30.3	5.99	6.01	80.9	81.1	5.29	5.27	5.44	8.2	8.2	8.5
				7.5	18.2	30.3		6.02		81.3		5.25			8.2		
			Middle	7.5	18.2	31.4	31.4	5.80	5.82	78.3	78.6	5.44	5.46		8.4	8.4	
				14.0	18.8	31.4		5.84		78.8		5.48			8.3		
			Bottom	14.0	18.8	32.1	32.1	5.74	5.76	77.5	77.8	5.57	5.59		9.0	9.0	
				1.0	15.6	30.4		30.5		6.07		6.04			81.9		
12/02/11	1109-1122	14/Cloudy	Surface	1.0	15.6	30.5	30.5		6.01	6.01	81.1		81.5	5.32	5.32	5.65	8.2
				7.4	16.5	31.5		5.97	80.6		5.74	9.0					
			Middle	7.4	16.5	31.4	31.5	5.94	5.96	80.2	80.4	5.70	5.72	9.2	9.1		
				13.8	17.6	31.4		5.94		80.2		5.70		9.2			
			Bottom	13.8	17.6	32.1	32.1	5.77	5.76	77.9	77.8	5.88	5.87	9.4	9.3		
				1.0	17.8	29.9		29.9		6.11		6.10		84.9			84.7
15/02/11	1530-1542	12/Rainy	Surface	1.0	17.8	29.9	29.9		6.08	6.10	84.5		84.7	5.48	5.51	5.34	
				7.1	20.2	31.3		5.99	83.2		5.18	8.3					
			Middle	7.1	20.2	31.4	31.4	5.95	5.97	82.7	83.0	5.23	5.21	8.1	8.2		
				13.2	20.8	31.7		5.92		82.2		5.27		8.4			
			Bottom	13.2	20.8	31.7	31.7	5.87	5.90	81.5	81.9	5.31	5.29	8.5	8.5		
				1.0	18.5	30.6		30.6		6.15		6.17		85.5			85.7
17/02/11	1623-1634	17/Cloudy	Surface	1.0	18.5	30.5	30.6		6.18	6.17	85.9		85.7	5.09	5.10	5.18	
				7.3	19.4	31.4		6.10	84.8		5.16	8.4					
			Middle	7.3	19.4	31.3	31.4	6.06	6.08	84.2	84.5	5.18	5.17	8.2	8.3		
				13.6	20.3	31.8		5.95		82.7		5.26		8.5			
			Bottom	13.6	20.3	31.8	31.8	5.92	5.94	82.3	82.5	5.29	5.28	8.5	8.5		
				1.0	18.2	30.5		30.5		6.04		6.03		83.9			83.7
19/02/11	1700-1712	15/Drizzle	Surface	1.0	18.2	30.4	30.5		6.01	6.03	83.5		83.7	5.29	5.32	5.38	
				7.4	20.8	31.5		5.88	81.1		5.49	9.0					
			Middle	7.4	20.8	31.6	31.6	5.93	5.91	81.8	81.5	5.52	5.51	9.2	9.1		
				13.8	20.9	32.0		5.94		82.5		5.30		8.7			
			Bottom	13.8	20.9	31.9	32.0	5.90	5.92	82.0	82.3	5.33	5.32	8.5	8.6		
				1.0	16.4	30.6		30.6		6.33		6.31		86.7			86.4
22/02/11	0855-0908	14/Cloudy	Surface	1.0	16.4	30.6	30.6		6.28	6.31	86.0		86.4	5.45	5.43	5.66	
				7.4	16.7	31.0		6.19	84.8		5.68	9.3					
			Middle	7.4	16.7	31.0	31.0	6.16	6.18	84.3	84.6	5.64	5.66	9.2	9.3		
				13.8	17.3	31.6		6.00		82.2		5.90		9.6			
			Bottom	13.8	17.3	31.6	31.6	6.04	6.02	82.7	82.5	5.86	5.88	9.5	9.6		
				1.0	18.8	30.7		30.7		6.24		6.24		86.1			86.1
24/02/11	0957-1009	16/Fine	Surface	1.0	18.8	30.6	30.7		6.23	6.24	86.0		86.1	5.18	5.16	5.26	
				7.1	19.4	31.4		6.05	82.9		5.26	8.3					
			Middle	7.1	19.4	31.4	31.4	6.06	6.06	83.6	83.3	5.22	5.24	8.1	8.2		
				13.2	19.8	31.8		5.99		82.1		5.40		8.8			
			Bottom	13.2	19.8	31.7	31.8	5.98	5.99	81.9	82.0	5.34	5.37	9.0	8.9		
				1.0	16.7	30.4		30.4		6.23		6.22		84.7			84.5
26/02/11	1210-1224	18/Fine	Surface	1.0	16.7	30.3	30.4		6.20	6.22	84.3		84.5	5.33	5.30	5.63	
				7.6	16.0	31.5		5.98	81.3		5.71	8.8					
			Middle	7.6	16.0	31.6	31.6	5.93	5.96	80.6	81.0	5.75	5.73	9.0	8.9		
				14.2	15.7	32.1		5.78		78.6		5.84		9.3			
			Bottom	14.2	15.7	32.0	32.1	5.74	5.76	78.6	78.6	5.88	5.86	9.0	9.2		

Mid-Flood Tide

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
01/02/11	1610-1625	15/Fine	Surface	1.0	18.1	30.1	30.2	6.01	5.99	82.9	82.7	5.40	5.39	5.52	8.8	8.7	9.0
						30.3		5.97		82.4		5.38			8.6		
			Middle	7.0	18.5	31.1	31.2	5.91	5.90	81.6	81.4	5.52	5.54		9.0	9.1	
						31.3		5.88		81.1		5.56			9.2		
			Bottom	13.0	18.8	32.0	31.9	5.80	5.79	80.0	79.9	5.64	5.63		9.4	9.3	
						31.8		5.78		79.8		5.62			9.2		
08/02/11	0906-0920	17/Fine	Surface	1.0	17.2	30.4	30.5	6.02	6.05	81.3	81.7	5.20	5.25	5.34	8.4	8.4	8.4
						30.5		6.08		82.1		5.29			8.3		
			Middle	6.9	17.8	31.5	31.6	5.89	5.88	79.5	79.4	5.42	5.41		8.7	8.6	
						31.6		5.87		79.2		5.40			8.5		
			Bottom	12.8	18.0	31.9	31.9	5.87	5.84	79.2	78.8	5.39	5.37		8.4	8.3	
						31.9		5.81		78.4		5.34			8.2		
10/02/11	1035-1048	17/Fine	Surface	1.0	17.7	30.3	30.4	6.11	6.14	82.5	82.9	5.38	5.40	5.56	8.4	8.6	8.9
						30.4		6.16		83.2		5.41			8.8		
			Middle	6.9	18.1	31.4	31.5	5.98	5.97	80.7	80.6	5.56	5.55		9.0	9.0	
						31.5		5.96		80.5		5.53			9.0		
			Bottom	12.8	18.7	32.1	32.2	5.79	5.81	78.2	78.5	5.77	5.75		9.2	9.2	
						32.2		5.83		78.7		5.72			9.1		
12/02/11	1134-1147	14/Cloudy	Surface	1.0	15.7	30.3	30.4	5.96	5.98	80.5	80.7	5.44	5.46	5.65	8.8	8.9	9.2
						30.4		5.99		80.9		5.48			9.0		
			Middle	7.0	16.3	31.6	31.7	5.88	5.87	79.4	79.2	5.82	5.82		9.4	9.4	
						31.7		5.85		78.9		5.81			9.4		
			Bottom	13.0	17.8	32.0	32.1	5.73	5.76	77.4	77.7	5.68	5.67		9.2	9.2	
						32.1		5.78		78.0		5.66			9.1		
15/02/11	1555-1607	12/Rainy	Surface	1.0	17.8	29.9	29.9	6.18	6.16	85.9	85.6	5.62	5.60	5.42	9.3	9.2	8.7
						29.8		6.14		85.3		5.57			9.1		
			Middle	6.7	20.2	31.3	31.3	6.03	6.05	83.8	84.0	5.27	5.24		8.4	8.3	
						31.3		6.06		84.2		5.21			8.2		
			Bottom	12.4	20.8	31.6	31.7	5.99	5.97	83.2	83.0	5.39	5.42		8.5	8.6	
						31.7		5.95		82.7		5.44			8.6		
17/02/11	1640-1652	17/Cloudy	Surface	1.0	18.5	30.6	30.6	6.12	6.14	85.1	85.3	5.03	5.05	5.16	8.0	8.0	8.2
						30.6		6.15		85.5		5.07			8.0		
			Middle	6.9	19.5	31.5	31.5	6.07	6.05	84.4	84.1	5.14	5.16		8.2	8.1	
						31.4		6.03		83.8		5.17			8.0		
			Bottom	12.8	20.2	31.9	31.9	5.93	5.91	82.4	82.1	5.26	5.27		8.4	8.5	
						31.8		5.88		81.7		5.28			8.5		
19/02/11	1725-1737	15/Drizzle	Surface	1.0	18.2	30.5	30.5	6.10	6.09	84.7	84.5	5.17	5.19	5.15	8.3	8.4	8.2
						30.5		6.07		84.3		5.21			8.4		
			Middle	6.8	20.8	31.6	31.7	5.82	5.81	80.3	80.1	5.07	5.09		8.0	8.1	
						31.7		5.79		79.9		5.10			8.1		
			Bottom	12.6	20.9	32.0	32.0	5.80	5.78	80.0	79.7	5.15	5.19		8.2	8.1	
						32.0		5.75		79.3		5.22			8.0		
22/02/11	0912-0925	14/Cloudy	Surface	1.0	18.4	30.6	30.7	6.35	6.33	86.9	86.6	5.36	5.38	5.61	8.5	8.6	9.1
						30.7		6.30		86.3		5.40			8.7		
			Middle	6.8	16.7	31.0	31.1	6.21	6.23	85.0	85.3	5.61	5.59		9.3	9.2	
						31.1		6.25		85.6		5.57			9.1		
			Bottom	12.6	17.3	31.6	31.7	6.02	6.05	82.4	82.8	5.82	5.85		9.5	9.5	
						31.7		6.07		83.1		5.87			9.4		
24/02/11	1020-1032	16/Fine	Surface	1.0	18.7	30.5	30.6	6.16	6.17	85.0	85.1	5.20	5.18	5.28	8.4	8.4	8.4
						30.6		6.17		85.1		5.16			8.3		
			Middle	6.8	19.3	31.4	31.4	6.09	6.09	84.0	84.0	5.29	5.27		8.2	8.3	
						31.3		6.08		83.9		5.24			8.4		
			Bottom	12.6	19.7	31.7	31.7	5.97	5.98	81.8	82.0	5.36	5.39		8.7	8.6	
						31.7		5.99		82.1		5.42			8.5		
26/02/11	1236-1249	18/Fine	Surface	1.0	16.9	30.4	30.5	6.07	6.08	82.5	82.7	5.46	5.44	5.62	8.7	8.9	9.2
						30.5		6.09		82.8		5.42			9.0		
			Middle	6.7	16.1	31.6	31.6	5.89	5.86	77.2	77.9	5.68	5.67		9.2	9.3	
						31.5		5.82		78.6		5.66			9.4		
			Bottom	12.4	15.7	32.2	32.2	5.77	5.79	77.8	78.4	5.78	5.75		9.5	9.4	
						32.2		5.80		78.9		5.71			9.2		

Mid-Ebb Tide



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						
01/02/11	1354-1410	14/Fine	Surface	1.0	16.8	30.7	30.7	6.12	6.14	84.4	84.7	5.36	5.38	5.58	8.5	8.8	9.0						
						30.6		6.16		85.0		5.40			9.0								
						31.1		6.03		83.2		5.57			9.2								
			Middle	7.4	17.2	31.1	31.1	6.07	6.05	83.7	83.5	5.60	5.59		9.3	9.3		5.58	9.3	9.3	9.0		
						31.7		5.92		81.6		5.75			9.1								
						31.6		5.87		81.0		5.79			9.0								
			Bottom	13.8	17.5	31.7	31.7	5.92	5.90	81.6	81.3	5.75	5.77		9.1	9.1			5.58	9.1		9.1	9.0
						31.6		5.87		81.0		5.79			9.0								
						31.7		5.92		81.6		5.75			9.1								
08/02/11	1700-1715	19/Fine	Surface	1.0	18.2	30.7	30.7	6.15	6.18	84.9	85.3	5.11	5.10	5.16	8.0	8.2	8.2						
						30.7		6.20		85.6		5.08			8.4								
						31.4		6.10		84.1		5.17			8.2								
			Middle	7.4	18.7	31.5	31.5	6.05	6.08	83.5	83.8	5.13	5.15		8.0	8.1		5.16		8.1	8.1	8.2	
						31.9		5.87		81.0		5.23			8.3								
						31.9		5.91		81.6		5.21			8.1								
			Bottom	13.8	19.4	31.9	31.9	5.87	5.89	81.0	81.3	5.23	5.22		8.3	8.2			5.16	8.2	8.2		8.2
						31.9		5.91		81.6		5.21			8.1								
						31.9		5.91		81.6		5.21			8.1								
10/02/11	1832-1845	21/Fine	Surface	1.0	19.7	30.6	30.7	6.00	5.98	82.2	81.9	5.40	5.43	5.57	8.8	8.9	9.1						
						30.7		5.96		81.6		5.46			9.0								
						31.0		5.91		80.9		5.56			9.2								
			Middle	7.4	19.9	31.0	31.0	5.86	5.89	80.2	80.6	5.60	5.58		9.0	9.1		5.57		9.1	9.1	9.1	
						31.0		5.86		80.2		5.60			9.2								
						31.0		5.86		80.2		5.60			9.0								
			Bottom	13.8	20.3	20.3	20.3	5.78	5.79	79.1	79.3	5.68	5.70		9.3	9.2			5.57	9.2	9.2		9.1
						20.2		5.80		79.4		5.72			9.1								
						20.2		5.80		79.4		5.72			9.1								
12/02/11	1928-1940	14/Cloudy	Surface	1.0	16.5	30.6	30.7	6.17	6.19	84.5	84.7	5.26	5.28	5.45	8.2	8.2	8.7						
						30.7		6.20		84.9		5.30			8.2								
						31.1		6.12		83.8		5.43			8.8								
			Middle	7.5	16.9	31.1	31.1	6.08	6.10	83.2	83.5	5.46	5.45		9.0	8.9		5.45		8.9	8.9	8.7	
						31.7		5.90		80.8		5.58			9.1								
						31.7		5.93		81.2		5.64			9.1								
			Bottom	14.0	17.2	31.7	31.7	5.93	5.92	81.2	81.0	5.64	5.61		9.1	9.1			5.45	9.1	9.1		8.7
						31.7		5.93		81.2		5.64			9.1								
						31.7		5.93		81.2		5.64			9.1								
15/02/11	1242-1257	11/Rainy	Surface	1.0	17.8	29.6	29.6	6.12	6.14	85.1	85.4	5.10	5.12	5.20	8.2	8.1	8.2						
						29.6		6.16		85.6		5.14			8.0								
						31.9		6.05		84.1		5.19			8.0								
			Middle	7.4	19.5	31.8	31.9	6.02	6.04	83.7	83.9	5.21	5.20		8.2	8.1		5.20		8.1	8.1	8.2	
						32.2		5.93		82.4		5.26			8.4								
						32.2		5.90		82.0		5.29			8.2								
			Bottom	13.8	20.5	32.2	32.2	5.90	5.92	82.0	82.2	5.29	5.28		8.5	8.5			5.20	8.5	8.5		8.2
						32.2		5.90		82.0		5.29			8.5								
						32.2		5.90		82.0		5.29			8.5								
17/02/11	1340-1352	16/Cloudy	Surface	1.0	18.5	30.4	30.5	6.13	6.13	84.6	84.6	5.22	5.19	5.30	8.2	8.3	8.5						
						30.6		6.12		84.5		5.16			8.4								
						31.5		6.03		82.6		5.33			8.8								
			Middle	8.1	19.3	31.5	31.5	6.05	6.04	83.5	83.1	5.29	5.31		8.7	8.8		5.30		8.8	8.8	8.5	
						31.5		6.05		83.5		5.29			8.7								
						32.0		5.95		81.5		5.38			8.5								
			Bottom	15.2	20.4	31.9	32.0	5.97	5.96	81.8	81.7	5.42	5.40		8.5	8.5			5.30	8.5	8.5		8.5
						31.9		5.97		81.8		5.42			8.5								
						31.9		5.97		81.8		5.42			8.5								
19/02/11	1456-1508	13/Cloudy	Surface	1.0	17.7	30.9	30.9	6.14	6.15	84.7	84.9	5.12	5.15	5.27	8.2	8.1	8.5						
						30.8		6.16		85.0		5.17			8.0								
						31.3		6.05		83.5		5.29			8.4								
			Middle	8.2	20.5	31.3	31.3	6.02	6.04	82.5	83.0	5.23	5.26		8.3	8.4		5.27		8.4	8.4	8.5	
						31.3		6.02		82.5		5.23			8.3								
						31.6		5.97		81.8		5.41			8.8								
			Bottom	15.4	20.8	31.7	31.7	5.96	5.97	81.7	81.8	5.37	5.39		9.0	8.9			5.27	8.9	8.9		8.5
						31.7		5.96		81.7		5.37			9.0								
						31.7		5.96		81.7		5.37			9.0								
22/02/11	1713-1727	17/Cloudy	Surface	1.0	16.9	30.8	30.8	6.14	6.15	84.1	84.3	5.08	5.09	5.19	8.0	8.1	8.2						
						30.8		6.16		84.4		5.10			8.2								
						31.7		6.03		82.6		5.17			8.1								
			Middle	7.4	17.7	31.6	31.7	6.06	6.05	83.0	82.8	5.20	5.19		8.0	8.1		5.19		8.1	8.1	8.2	
						31.6		6.06		83.0		5.20			8.0								
						31.7		6.06		83.0		5.20			8.0								
			Bottom	13.8	18.4	31.8	31.9	5.91	5.93	81.0	81.3	5.29	5.31		8.4	8.5			5.19	8.4	8.5		8.2
						31.9		5.95		81.5		5.32			8.5								
						31.9		5.95		81.5		5.32			8.5								
24/02/11	1819-1833	19/Fine	Surface	1.0	18.7	30.7	30.8	6.18	6.17	85.3	85.2	5.18	5.16	5.26	8.2	8.1	8.4						
						30.8		6.16		85.0		5.14			8.0								
						31.5		6.06		84.2		5.27			8.4								
			Middle	8.2	19.3	31.4	31.5	6.03	6.05	83.8	84.0	5.26	5.27		8.3	8.4		5.26		8.4	8.4	8.4	
						31.4		6.03		83.8		5.26			8.3								
						31.4		6.03		83.8		5.26			8.3								
			Bottom	15.4	20.0	31.9	32.0	5.80	5.82	80.6	80.9	5.34	5.36		8.7	8.6			5.26	8.6	8.6		8.4
						32.0		5.84		81.2		5.38			8.5								
						32.0		5.84		81.2		5.38			8.5								
26/02/11	2000-2015	19/Fine	Surface	1.0	17.7	30.7	30.7	6.21	6.19	85.0	84.8	5.34	5.37	5.54	8.5	8.5	8.8						
						30.7		6.17		84.5		5.39			8.4								
						31.0		6.05		82.8		5.50			8.6								
			Middle	7.4	17.9	31.0	31.0	6.01	6.03	82.3	82.6	5.55	5.53		8.8	8.7		5.54		8.7	8.7	8.8	
						31.0		6.01		82.3		5.55			8.8								
						31.0		6.01		82.3		5.55			8.8								
			Bottom	13.8	18.1	31.5	31.5	5.90	5.92	80.8	81.0	5.71	5.74		9.2	9.2			5.54	9.2	9.2		8.8
						31.5		5.93		81.2		5.76			9.1								
						31.5		5.93		81.2		5.76			9.1								

**Mid-Ebb Tide**

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
01/02/11	1334-1350	14/Fine	Surface	1.0	16.8	30.6	30.6	6.14	6.12	84.7	84.4	5.33	5.36	5.53	8.5	8.4	8.8
						30.6		6.09		84.0		5.38			8.2		
			Middle	8.1	17.2	31.1	31.1	6.00	5.98	82.8	82.5	5.50	5.56		9.0	8.9	
						31.0		5.98		82.2		5.56			8.7		
			Bottom	15.2	17.6	31.7	31.7	5.86	5.88	80.8	81.0	5.68	5.71		8.9	9.1	
						31.7		5.89		81.2		5.71			9.3		
08/02/11	1636-1650	19/Fine	Surface	1.0	18.2	30.8	30.7	6.17	6.15	85.1	84.8	5.05	5.07	5.17	7.9	8.0	8.1
						30.7		6.12		84.5		5.09			8.0		
			Middle	7.9	18.6	31.3	31.4	6.06	6.07	83.6	83.7	5.15	5.20		8.2	8.1	
						31.4		6.07		83.8		5.20			8.0		
			Bottom	14.8	19.3	31.7	31.8	5.89	5.91	81.3	81.5	5.25	5.29		8.4	8.3	
						31.8		5.92		81.7		5.29			8.2		
10/02/11	1817-1829	21/Fine	Surface	1.0	19.6	30.6	30.6	6.01	6.03	82.3	82.5	5.39	5.42	5.53	8.5	8.6	8.9
						30.6		6.04		82.7		5.45			8.6		
			Middle	8.0	19.9	30.9	31.0	5.95	5.93	81.5	81.2	5.50	5.54		8.8	8.9	
						31.0		5.90		80.8		5.54			9.0		
			Bottom	15.0	20.4	31.6	31.6	5.82	5.83	79.7	79.9	5.61	5.66		9.2	9.1	
						31.6		5.84		80.0		5.66			9.0		
12/02/11	1912-1925	14/Cloudy	Surface	1.0	16.5	30.7	30.7	6.28	6.26	86.0	85.7	5.28	5.31	5.47	8.3	8.3	8.8
						30.7		6.24		85.4		5.33			8.2		
			Middle	8.0	16.8	31.1	31.1	6.20	6.18	84.9	84.6	5.46	5.49		8.8	8.9	
						31.0		6.15		84.2		5.49			9.0		
			Bottom	15.0	17.2	31.7	31.8	5.94	5.96	81.3	81.6	5.60	5.63		9.2	9.1	
						31.8		5.98		81.9		5.63			9.0		
15/02/11	1217-1232	11/Rainy	Surface	1.0	17.8	29.5	29.6	6.14	6.16	85.3	85.6	5.17	5.15	5.24	8.1	8.1	8.2
						29.6		6.17		85.8		5.12			8.1		
			Middle	7.8	19.5	31.7	31.7	6.04	6.06	84.0	84.3	5.25	5.26		7.9	8.1	
						31.7		6.08		84.5		5.26			8.2		
			Bottom	14.6	20.5	32.0	32.1	5.95	5.93	82.7	82.4	5.30	5.34		8.6	8.6	
						32.1		5.91		82.1		5.34			8.5		
17/02/11	1321-1332	16/Cloudy	Surface	1.0	18.4	30.3	30.3	6.15	6.16	84.9	85.0	5.18	5.16	5.26	8.2	8.2	8.5
						30.3		6.17		85.1		5.13			8.1		
			Middle	7.7	19.5	31.3	31.3	6.07	6.07	83.8	83.5	5.23	5.27		8.4	8.3	
						31.2		6.07		83.2		5.27			8.2		
			Bottom	14.4	20.5	31.7	31.6	6.02	6.01	82.5	82.3	5.40	5.35		9.0	9.0	
						31.5		5.99		82.1		5.35			9.0		
19/02/11	1438-1449	13/Cloudy	Surface	1.0	17.5	30.7	30.7	6.21	6.20	86.3	85.9	5.22	5.19	5.28	8.4	8.3	8.5
						30.6		6.19		85.4		5.16			8.2		
			Middle	7.9	20.4	31.2	31.3	6.06	6.07	83.6	83.8	5.31	5.35		8.5	8.5	
						31.4		6.08		83.9		5.35			8.5		
			Bottom	14.8	20.8	31.7	31.7	5.96	5.98	81.7	81.9	5.33	5.28		8.6	8.6	
						31.7		5.99		82.1		5.28			8.5		
22/02/11	1649-1703	17/Cloudy	Surface	1.0	17.0	30.7	30.7	6.20	6.19	84.9	84.7	5.11	5.12	5.20	8.2	8.2	8.3
						30.7		6.17		84.5		5.13			8.2		
			Middle	7.8	17.7	31.5	31.6	6.05	6.06	82.9	83.1	5.22	5.18		8.4	8.3	
						31.6		6.07		83.2		5.18			8.2		
			Bottom	14.6	18.4	32.0	32.0	5.95	5.94	81.5	81.4	5.28	5.30		8.5	8.4	
						32.0		5.93		81.2		5.30			8.3		
24/02/11	1756-1810	19/Fine	Surface	1.0	18.7	30.7	30.7	6.17	6.16	85.1	85.0	5.15	5.14	5.25	8.2	8.1	8.4
						30.6		6.15		84.9		5.13			8.0		
			Middle	7.9	19.3	31.4	31.4	6.11	6.10	83.7	83.6	5.23	5.25		8.4	8.5	
						31.4		6.09		83.4		5.25			8.6		
			Bottom	14.2	19.9	31.9	31.9	5.83	5.85	81.0	81.3	5.37	5.36		8.8	8.7	
						31.9		5.86		81.5		5.37			8.5		
26/02/11	1943-1957	19/Fine	Surface	1.0	17.6	30.6	30.7	6.24	6.22	85.4	85.2	5.31	5.34	5.51	8.4	8.5	8.8
						30.7		6.20		84.9		5.36			8.6		
			Middle	7.9	18.0	31.0	31.0	6.13	6.10	83.9	83.5	5.48	5.52		8.7	8.8	
						31.0		6.07		83.1		5.52			8.9		
			Bottom	14.8	18.2	31.5	31.6	5.98	5.96	81.9	81.6	5.66	5.70		9.2	9.1	
						31.6		5.94		81.3		5.70			9.0		

**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
01/02/11	1127-1142	13/Fine	Surface	1.0	16.8	30.6	30.6	6.08	6.06	83.9	83.6	5.40	5.43	5.61	8.8	9.1	9.2
						30.6		6.03		83.2		5.46			9.3		
			Middle	8.4	17.3	31.0	31.0	5.93	5.95	81.8	82.0	5.61	5.64		9.3	9.2	
						31.0		5.96		82.2		5.66			9.0		
			Bottom	15.8	17.7	31.8	31.8	5.80	5.79	80.0	79.8	5.75	5.77		9.3	9.3	
						31.8		5.77		79.6		5.79			9.2		
08/02/11	1450-1501	19/Fine	Surface	1.0	18.2	30.5	30.6	5.87	5.90	81.0	81.4	5.21	5.23	5.33	8.2	8.1	8.5
						30.6		5.92		81.7		5.24			8.0		
			Middle	8.2	18.5	31.3	31.3	5.86	5.87	80.9	81.0	5.32	5.33		8.5	8.5	
						31.2		5.88		81.1		5.34			8.4		
			Bottom	15.4	19.3	31.7	31.7	5.82	5.83	80.3	80.5	5.41	5.44		8.8	8.9	
						31.6		5.84		80.6		5.46			9.0		
10/02/11	1616-1630	21/Fine	Surface	1.0	19.8	30.6	30.6	6.03	6.00	82.6	82.1	5.39	5.37	5.51	8.5	8.4	8.8
						30.6		5.96		81.6		5.35			8.2		
			Middle	8.3	20.1	31.0	31.1	5.81	5.83	79.5	79.8	5.48	5.51		9.0	9.1	
						31.1		5.84		80.0		5.53			9.1		
			Bottom	15.6	20.5	31.7	31.7	5.73	5.75	78.5	78.7	5.65	5.66		9.0	9.0	
						31.6		5.76		78.9		5.66			9.0		
12/02/11	1715-1730	15/Cloudy	Surface	1.0	16.5	30.6	30.7	6.01	6.03	82.3	82.5	5.33	5.35	5.49	8.5	8.5	8.9
						30.7		6.04		82.7		5.37			8.4		
			Middle	7.7	16.8	31.0	31.0	5.92	5.94	81.1	81.3	5.42	5.45		8.8	8.9	
						31.0		5.95		81.5		5.48			9.0		
			Bottom	15.4	17.2	31.7	31.8	5.82	5.81	79.7	79.6	5.62	5.66		9.3	9.2	
						31.8		5.80		79.4		5.69			9.1		
15/02/11	1026-1037	11/Rainy	Surface	1.0	17.9	29.5	29.5	6.02	6.00	83.7	83.4	5.23	5.25	5.33	8.2	8.2	8.5
						29.4		5.98		83.1		5.26			8.2		
			Middle	8.3	19.5	31.8	31.8	5.88	5.90	81.7	82.0	5.33	5.32		8.5	8.5	
						31.7		5.92		82.3		5.31			8.4		
			Bottom	15.6	20.5	32.2	32.2	5.83	5.85	81.0	81.3	5.42	5.43		8.8	8.9	
						32.1		5.86		81.5		5.44			9.0		
17/02/11	1122-1134	16/Cloudy	Surface	1.0	18.4	30.6	30.5	5.97	5.98	82.4	82.6	5.25	5.27	5.39	8.2	8.4	8.8
						30.4		5.99		82.7		5.29			8.5		
			Middle	8.1	19.2	31.3	31.3	5.85	5.85	80.1	80.1	5.41	5.38		8.7	8.9	
						31.3		5.84		80.0		5.35			9.0		
			Bottom	15.2	20.4	31.8	31.7	5.75	5.76	78.8	78.9	5.54	5.52		9.2	9.1	
						31.6		5.76		78.9		5.49			9.0		
19/02/11	1245-1257	13/Cloudy	Surface	1.0	17.6	30.7	30.8	5.96	5.95	82.2	82.1	5.28	5.25	5.37	8.5	8.5	8.7
						30.9		5.94		82.0		5.22			8.4		
			Middle	8.3	20.4	31.3	31.3	5.85	5.86	80.7	80.9	5.35	5.38		8.6	8.7	
						31.3		5.87		81.0		5.41			8.8		
			Bottom	15.6	20.7	31.7	31.7	5.76	5.76	78.9	78.9	5.46	5.48		9.0	8.9	
						31.6		5.75		78.8		5.50			8.8		
22/02/11	1501-1513	17/Cloudy	Surface	1.0	17.0	30.7	30.7	6.04	6.05	82.7	82.9	5.22	5.24	5.34	8.5	8.5	8.7
						30.7		6.06		83.0		5.26			8.4		
			Middle	8.2	17.7	31.4	31.4	5.88	5.87	80.6	80.4	5.34	5.35		8.6	8.6	
						31.4		5.85		80.1		5.36			8.6		
			Bottom	15.4	18.4	31.7	31.8	5.73	5.74	78.5	78.7	5.43	5.44		8.8	8.9	
						31.8		5.75		78.8		5.45			9.0		
24/02/11	1558-1611	19/Fine	Surface	1.0	18.6	30.6	30.6	6.07	6.06	83.2	83.1	5.19	5.21	5.30	8.3	8.2	8.4
						30.6		6.05		82.9		5.22			8.0		
			Middle	8.2	19.1	31.4	31.4	5.94	5.93	82.0	81.9	5.28	5.30		8.3	8.2	
						31.4		5.92		81.7		5.31			8.1		
			Bottom	15.4	19.7	31.8	31.8	5.80	5.82	79.5	79.7	5.41	5.40		8.7	8.8	
						31.7		5.83		79.9		5.39			8.9		
26/02/11	1742-1757	20/Fine	Surface	1.0	17.5	30.7	30.7	6.14	6.12	84.1	83.8	5.48	5.51	5.70	9.0	9.0	9.2
						30.7		6.10		83.5		5.53			9.0		
			Middle	8.2	17.9	31.0	31.1	6.01	5.99	82.3	82.0	5.66	5.68		9.3	9.2	
						31.1		5.97		81.7		5.70			9.1		
			Bottom	15.4	18.2	31.6	31.7	5.82	5.84	79.7	80.0	5.89	5.92		9.5	9.5	
						31.7		5.86		80.2		5.94			9.5		



Mid-Ebb Tide

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
01/02/11	1228-1244	13/Fine	Surface	1.0	16.8	30.7	30.7	6.12	6.14	84.4	84.7	5.16	5.18	5.34	8.2	8.1	8.4
						30.6		6.16		85.0		5.19			8.0		
			Middle	7.8	17.1	31.0	31.0	6.03	6.05	83.2	83.5	5.32	5.34		8.4	8.3	
						31.0		6.07		83.7		5.36			8.2		
			Bottom	14.6	17.6	31.7	31.7	5.91	5.90	81.5	81.3	5.48	5.50		8.8	8.9	
						31.6		5.88		81.1		5.51			9.0		
08/02/11	1537-1550	19/Fine	Surface	1.0	18.3	30.7	30.7	6.18	6.20	85.3	85.5	5.12	5.14	5.20	8.2	8.2	8.3
						30.6		6.21		85.7		5.16			8.1		
			Middle	7.7	18.6	31.2	31.3	6.10	6.09	84.2	84.1	5.22	5.21		8.4	8.3	
						31.3		6.08		83.9		5.19			8.2		
			Bottom	14.4	19.4	31.7	31.8	5.90	5.93	81.4	81.8	5.24	5.26		8.5	8.5	
						31.8		5.86		82.2		5.28			8.5		
10/02/11	1715-1730	21/Fine	Surface	1.0	19.7	30.6	30.7	6.13	6.15	83.9	84.1	5.17	5.19	5.34	8.2	8.1	8.5
						30.7		6.16		84.3		5.21			8.0		
			Middle	7.8	19.9	31.0	31.0	6.04	6.02	82.7	82.5	5.33	5.35		8.4	8.5	
						31.0		6.00		82.2		5.36			8.5		
			Bottom	14.6	20.5	31.6	31.6	5.90	5.89	80.8	80.6	5.46	5.48		9.0	9.1	
						31.6		5.87		80.4		5.50			9.1		
12/02/11	1817-1830	15/Cloudy	Surface	1.0	16.4	30.6	30.6	6.13	6.15	83.9	84.1	5.18	5.21	5.42	8.1	8.1	8.6
						30.5		6.16		84.3		5.24			8.1		
			Middle	7.8	16.7	30.9	31.0	6.05	6.07	82.8	83.1	5.37	5.41		8.5	8.4	
						31.0		6.09		83.4		5.44			8.2		
			Bottom	14.6	17.0	31.7	31.8	5.88	5.87	80.5	80.3	5.61	5.64		9.2	9.2	
						31.8		5.85		80.1		5.66			9.2		
15/02/11	1114-1128	11/Rainy	Surface	1.0	17.9	29.6	29.7	6.16	6.18	85.6	85.9	5.14	5.15	5.24	8.3	8.2	8.4
						29.7		6.20		86.2		5.16			8.1		
			Middle	7.8	19.4	31.8	31.9	6.11	6.10	84.9	84.7	5.25	5.24		8.5	8.4	
						31.9		6.08		84.5		5.23			8.3		
			Bottom	14.6	20.5	32.3	32.3	5.95	5.93	82.7	82.4	5.31	5.34		8.6	8.6	
						32.3		5.91		82.1		5.36			8.5		
17/02/11	1220-1232	16/Cloudy	Surface	1.0	18.4	30.3	30.4	6.15	6.14	84.9	84.7	5.15	5.18	5.28	8.2	8.2	8.4
						30.4		6.12		84.5		5.20			8.2		
			Middle	7.8	19.5	31.3	31.3	6.03	6.04	82.6	82.7	5.31	5.29		8.4	8.3	
						31.2		6.04		82.7		5.26			8.2		
			Bottom	14.6	20.3	31.7	31.7	5.94	5.95	81.4	81.6	5.37	5.39		8.5	8.6	
						31.6		5.96		81.7		5.41			8.7		
19/02/11	1340-1352	13/Cloudy	Surface	1.0	17.5	30.7	30.7	6.14	6.13	84.7	84.5	5.11	5.14	5.26	8.2	8.1	8.3
						30.7		6.11		84.3		5.17			8.0		
			Middle	7.9	20.4	31.2	31.3	6.04	6.03	83.4	83.3	5.27	5.25		8.4	8.4	
						31.3		6.02		83.1		5.23			8.3		
			Bottom	14.8	20.7	31.7	31.7	5.94	5.95	81.4	81.5	5.35	5.38		8.5	8.5	
						31.6		5.95		81.5		5.40			8.5		
22/02/11	1550-1603	17/Cloudy	Surface	1.0	16.8	30.8	30.9	6.21	6.22	85.1	85.3	5.11	5.13	5.21	8.2	8.2	8.4
						30.9		6.23		85.4		5.14			8.2		
			Middle	7.8	17.6	3.6	17.6	6.10	6.12	83.6	83.9	5.20	5.21		8.4	8.5	
						31.5		6.14		84.1		5.22			8.5		
			Bottom	14.6	18.4	31.8	31.9	5.95	5.96	81.5	81.7	5.29	5.30		8.7	8.6	
						31.9		5.97		81.8		5.31			8.5		
24/02/11	1653-1705	19/Fine	Surface	1.0	18.7	30.8	30.8	6.21	6.20	86.3	86.2	5.16	5.17	5.26	8.0	8.0	8.3
						30.7		6.19		86.0		5.18			8.0		
			Middle	7.7	19.3	31.5	31.5	6.05	6.07	82.9	83.2	5.27	5.26		8.4	8.3	
						31.4		6.09		83.4		5.25			8.2		
			Bottom	14.4	19.9	32.0	32.0	5.84	5.86	80.0	80.2	5.35	5.34		8.5	8.6	
						31.9		5.87		80.4		5.33			8.6		
26/02/11	1839-1855	20/Fine	Surface	1.0	17.5	30.7	30.8	6.29	6.27	86.1	85.9	5.22	5.24	5.39	8.4	8.3	8.7
						30.8		6.25		85.6		5.26			8.2		
			Middle	7.7	17.9	31.1	31.1	6.17	6.15	84.5	84.2	5.33	5.35		8.5	8.6	
						31.0		6.13		83.9		5.37			8.6		
			Bottom	14.4	18.1	31.6	31.7	5.98	6.01	81.9	82.3	5.56	5.58		9.0	9.1	
						31.7		6.04		82.7		5.60			9.2		

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	
01/02/11	1250-1305	13/Fine	Surface	1.0	16.8	30.7	30.7	6.24	6.22	86.1	85.8	5.18	5.21	5.38	8.0	8.2	8.5	
						30.7		6.20		85.5		5.23			8.3			
			Middle	8.9	17.2	31.1	31.1	6.11	6.13	84.3	84.6	5.38	5.42		5.40	8.4		8.4
						31.1		6.15		84.8		5.42			8.3			
			Bottom	16.8	17.5	31.8	31.8	6.02	5.98	83.0	82.4	5.49	5.55		5.52	8.9		8.9
						31.8		5.93		81.8		5.55			8.8			
08/02/11	1556-1609	19/Fine	Surface	1.0	18.1	30.6	30.6	6.15	6.18	84.8	85.2	5.17	5.20	5.27	8.1	8.1	8.3	
						30.5		6.20		85.6		5.22			8.0			
			Middle	8.6	18.5	31.4	31.4	6.03	6.06	83.2	83.6	5.28	5.26		5.27	8.4		8.4
						31.3		6.09		84.0		5.26			8.3			
			Bottom	16.2	19.5	31.8	31.8	5.91	5.90	81.6	81.4	5.33	5.37		5.35	8.6		8.6
						31.8		5.88		81.1		5.37			8.5			
10/02/11	1735-1750	21/Fine	Surface	1.0	19.8	30.6	30.6	6.10	6.12	83.5	83.8	5.23	5.26	5.40	8.2	8.2	8.5	
						30.6		6.14		84.1		5.28			8.2			
			Middle	8.9	20.0	31.0	31.0	6.02	6.01	82.4	82.2	5.39	5.43		5.41	8.4		8.4
						31.0		5.99		82.0		5.43			8.3			
			Bottom	16.8	20.4	31.7	31.7	5.84	5.86	80.0	80.3	5.52	5.57		5.55	8.8		8.8
						31.7		5.88		80.5		5.57			8.8			
12/02/11	1835-1850	15/Cloudy	Surface	1.0	16.4	30.6	30.6	6.20	6.18	84.9	84.6	5.28	5.31	5.46	8.3	8.2	8.8	
						30.6		6.15		84.2		5.33			8.1			
			Middle	8.9	16.6	31.0	31.0	6.07	6.09	83.1	83.4	5.42	5.48		5.45	8.8		8.9
						31.0		6.11		83.7		5.48			9.0			
			Bottom	16.8	17.0	31.8	31.8	5.89	5.91	80.6	80.9	5.59	5.63		5.61	9.1		9.2
						31.8		5.93		81.2		5.63			9.2			
15/02/11	1136-1149	11/Rainy	Surface	1.0	17.8	29.7	29.7	6.12	6.14	85.1	85.3	5.20	5.19	5.26	8.3	8.3	8.3	
						29.7		6.15		85.5		5.17			8.2			
			Middle	8.6	19.4	31.7	31.7	6.02	6.04	83.7	83.9	5.27	5.24		5.26	8.4		8.3
						31.7		6.05		84.1		5.24			8.2			
			Bottom	16.2	20.4	32.2	32.3	5.89	5.91	81.9	82.1	5.37	5.33		5.35	8.5		8.4
						32.3		5.92		82.3		5.33			8.2			
17/02/11	1235-1247	16/Cloudy	Surface	1.0	18.6	30.5	30.6	6.16	6.17	85.0	85.2	5.18	5.15	5.26	8.2	8.2	8.4	
						30.6		6.18		85.3		5.12			8.1			
			Middle	8.6	19.4	31.4	31.5	6.07	6.08	83.8	83.9	5.27	5.23		5.25	8.4		8.3
						31.5		6.08		83.9		5.23			8.2			
			Bottom	16.2	20.4	31.8	31.8	6.01	6.00	82.3	82.1	5.34	5.39		5.37	8.6		8.6
						31.8		5.98		81.9		5.39			8.6			
19/02/11	1355-1407	13/Cloudy	Surface	1.0	17.6	30.8	30.8	6.24	6.23	86.7	86.6	5.19	5.17	5.27	8.2	8.1	8.5	
						30.7		6.22		86.5		5.14			8.0			
			Middle	8.8	20.5	31.3	31.4	6.05	6.07	83.5	83.7	5.24	5.29		5.27	8.3		8.4
						31.5		6.08		83.9		5.29			8.4			
			Bottom	16.6	20.9	31.8	31.9	5.97	5.96	82.4	82.0	5.42	5.36		5.39	8.9		9.0
						32.0		5.95		81.5		5.36			9.0			
22/02/11	1609-1621	17/Cloudy	Surface	1.0	16.9	30.8	30.8	6.16	6.17	84.4	84.6	5.20	5.19	5.28	8.1	8.2	8.4	
						30.7		6.18		84.7		5.17			8.2			
			Middle	8.5	17.7	31.4	31.5	6.07	6.06	83.2	83.1	5.26	5.29		5.28	8.4		8.4
						31.5		6.05		82.9		5.29			8.4			
			Bottom	16.0	18.3	31.7	31.7	5.86	5.88	80.3	80.6	5.36	5.39		5.38	8.6		8.6
						31.7		5.90		80.8		5.39			8.5			
24/02/11	1712-1726	19/Fine	Surface	1.0	18.7	30.6	30.7	6.13	6.15	85.2	85.5	5.12	5.14	5.23	8.1	8.3	8.4	
						30.7		6.17		85.8		5.15			8.4			
			Middle	8.6	19.3	31.3	31.4	6.06	6.07	83.0	83.1	5.20	5.23		5.22	8.5		8.4
						31.4		6.07		83.2		5.23			8.2			
			Bottom	16.2	20.0	31.9	31.9	5.91	5.90	81.0	80.8	5.34	5.32		5.33	8.6		8.5
						31.9		5.88		80.6		5.32			8.4			
26/02/11	1902-1917	20/Fine	Surface	1.0	17.5	30.7	30.7	6.24	6.23	85.4	85.2	5.28	5.31	5.45	8.3	8.4	8.8	
						30.7		6.21		85.0		5.33			8.5			
			Middle	8.8	17.9	31.1	31.2	6.15	6.13	84.2	84.0	5.41	5.46		5.44	9.0		8.9
						31.2		6.11		83.7		5.46			8.7			
			Bottom	16.6	18.2	31.7	31.7	5.93	5.95	81.2	81.4	5.58	5.64		5.61	9.0		9.0
						31.7		5.96		81.6		5.64			9.0			

**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	
01/02/11	1313-1328	14/Fine	Surface	1.0	16.8	30.6	30.7	6.17	6.15	85.1	84.8	5.28	5.32	5.44	8.3	8.2	8.5	
						30.7		6.12		84.4		5.36			8.0			
						30.9		6.03		83.2		5.34			8.5			
			Middle	6.2	17.0	30.9	30.9	6.01	6.02	82.9	83.1	5.33	5.37		8.3	8.4		8.5
						31.6		5.93		81.8		5.61			8.8			
						31.6		5.90		81.4		5.66			9.0			
			Bottom	11.4	17.3	31.6	31.6	5.94	5.92	81.6	81.6	5.61	5.64		8.8	8.9		8.8
						31.6		5.90		81.4		5.66			9.0			
						31.6		5.94		81.6		5.61			8.8			
08/02/11	1617-1628	19/Fine	Surface	1.0	18.2	30.5	30.6	6.14	6.16	84.7	84.9	5.12	5.10	5.17	8.0	8.0	8.2	
						30.6		6.17		85.1		5.08			8.0			
						31.4		6.02		83.1		5.18			8.2			
			Middle	6.2	18.7	31.2	31.3	6.08	6.05	83.9	83.5	5.16	5.17		8.5	8.4		8.5
						31.9		5.94		82.0		5.27			8.3			
						31.9		5.93		81.8		5.22			8.3			
			Bottom	11.4	19.5	31.8	31.9	5.94	5.94	82.0	81.9	5.27	5.25		8.3	8.3		8.3
						31.9		5.93		81.8		5.22			8.3			
						31.9		5.93		81.8		5.22			8.3			
10/02/11	1758-1813	21/Fine	Surface	1.0	19.7	30.5	30.6	6.06	6.04	83.0	82.7	5.36	5.35	5.44	8.3	8.3	8.8	
						30.6		6.02		82.4		5.33			8.2			
						30.9		5.93		81.2		5.39			9.0			
			Middle	6.2	19.8	30.9	30.9	5.97	5.95	81.7	81.5	5.43	5.41		9.0	9.0		9.0
						31.4		5.90		80.8		5.52			9.1			
						31.3		5.86		80.2		5.58			9.2			
			Bottom	11.4	20.2	31.4	31.4	5.90	5.88	80.8	80.5	5.52	5.55		9.1	9.2		9.2
						31.3		5.86		80.2		5.58			9.2			
						31.3		5.86		80.2		5.58			9.2			
12/02/11	1855-1908	14/Cloudy	Surface	1.0	16.4	30.7	30.7	6.26	6.24	85.7	85.4	5.20	5.23	5.35	8.3	8.2	8.5	
						30.7		6.21		85.0		5.25			8.0			
						31.0		6.13		83.9		5.30			8.5			
			Middle	6.3	16.8	31.1	31.1	6.16	6.15	84.3	84.1	5.36	5.33		8.2	8.4		8.2
						31.6		6.01		82.3		5.48			8.8			
						31.6		6.05		82.8		5.51			9.0			
			Bottom	11.6	17.1	31.6	31.6	6.01	6.03	82.3	82.6	5.48	5.50		8.8	8.9		8.8
						31.6		6.05		82.8		5.51			9.0			
						31.6		6.05		82.8		5.51			9.0			
15/02/11	1157-1209	11/Rainy	Surface	1.0	17.8	29.6	29.7	6.18	6.20	85.9	86.1	5.13	5.15	5.24	8.1	8.1	8.3	
						29.7		6.21		86.3		5.16			8.0			
						31.7		6.11		84.9		5.26			8.3			
			Middle	6.2	19.4	31.8	31.8	6.07	6.09	84.4	84.7	5.22	5.24		8.2	8.3		8.2
						32.2		5.93		82.4		5.33			8.6			
						32.1		5.96		82.8		5.36			8.5			
			Bottom	11.4	20.3	32.1	32.2	5.96	5.95	82.8	82.6	5.36	5.35		8.5	8.6		8.5
						32.1		5.96		82.8		5.36			8.5			
						32.1		5.96		82.8		5.36			8.5			
17/02/11	1254-1306	16/Cloudy	Surface	1.0	18.4	30.5	30.4	6.14	6.13	85.3	85.2	5.17	5.19	5.27	8.2	8.4	8.4	
						30.3		6.12		85.1		5.21			8.5			
						31.1		6.06		83.6		5.35			8.2			
			Middle	6.6	19.3	31.3	31.2	6.05	6.06	83.5	83.6	5.29	5.32		8.2	8.2		8.2
						31.6		5.96		81.7		5.27			8.6			
						31.8		5.97		81.8		5.32			8.5			
			Bottom	12.2	20.3	31.8	31.7	5.97	5.97	81.8	81.8	5.32	5.30		8.5	8.6		8.5
						31.8		5.97		81.8		5.32			8.5			
						31.8		5.97		81.8		5.32			8.5			
19/02/11	1413-1425	13/Cloudy	Surface	1.0	17.6	30.8	30.8	6.15	6.17	84.9	85.1	5.12	5.15	5.25	8.3	8.2	8.3	
						30.8		6.18		85.3		5.18			8.0			
						31.4		6.06		83.0		5.27			8.2			
			Middle	6.3	20.4	31.3	31.4	6.07	6.07	83.8	83.4	5.23	5.25		8.3	8.3		8.3
						31.6		5.98		81.9		5.34			8.6			
						31.8		5.97		81.8		5.38			8.5			
			Bottom	11.6	20.7	31.6	31.7	5.98	5.98	81.9	81.9	5.34	5.36		8.6	8.6		8.6
						31.8		5.97		81.8		5.38			8.5			
						31.8		5.97		81.8		5.38			8.5			
22/02/11	1629-1641	17/Cloudy	Surface	1.0	16.9	30.8	30.8	6.15	6.17	84.3	84.5	5.16	5.14	5.23	8.0	8.1	8.3	
						30.7		6.18		84.7		5.12			8.2			
						31.6		6.08		83.3		5.19			8.0			
			Middle	6.3	17.6	31.5	31.6	6.04	6.06	82.7	83.0	5.21	5.20		8.2	8.1		8.2
						31.9		5.92		81.1		5.36			8.5			
						31.8		5.94		81.4		5.33			8.7			
			Bottom	11.6	18.3	31.9	31.9	5.92	5.93	81.1	81.3	5.36	5.35		8.5	8.6		8.5
						31.8		5.94		81.4		5.33			8.7			
						31.8		5.94		81.4		5.33			8.7			
24/02/11	1735-1747	19/Fine	Surface	1.0	18.6	30.8	30.8	6.12	6.14	84.5	84.7	5.08	5.10	5.19	7.9	8.0	8.2	
						30.7		6.15		84.9		5.11			8.0			
						31.3		6.08		83.3		5.18			8.2			
			Middle	6.5	19.2	31.4	31.4	6.05	6.07	82.9	83.1	5.20	5.19		8.3	8.3		8.3
						31.8		5.95		82.7		5.28			8.5			
						31.9		5.92		82.3		5.31			8.3			
			Bottom	12.0	19.8	31.8	31.9	5.95	5.94	82.7	82.5	5.28	5.30		8.5	8.4		8.5
						31.9		5.92		82.3		5.31			8.3			
						31.9		5.92		82.3		5.31			8.3			
26/02/11	1923-1938	19/Fine	Surface	1.0	17.6	30.7	30.7	6.18	6.17	84.6	84.4	5.26	5.28	5.43	8.3	8.3	8.6	
						30.7		6.15		84.2		5.30			8.2			
						30.9		6.10		83.5		5.38			8.5			
			Middle	6.2	17.9	31.0	31.0	6.05	6.08	82.8	83.2	5.42	5.40		8.5	8.5		8.5
						31.4		6.02		82.4		5.58			9.0			
						31.5		5.97		81.7		5.61			9.1			
			Bottom	11.4	18.1	31.4	31.5	6.02	6.00	82.4	82.1	5.58	5.60		9.0	9.1		9.0
						31.5		5.97		81.7		5.61			9.1			
						31.5		5.97		81.7		5.61			9.1			

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		
01/02/11	1022-1037	13/Fine	Surface	1.0	16.8	30.6	30.6	5.98	5.96	82.5	82.2	5.44	5.42	5.52	9.0	8.9	8.9		
						30.6		5.94		81.9		5.39			8.7				
						30.9		5.90		81.4		5.48			8.5				
			Middle	5.3	17.0	30.8	30.9	5.86	5.88	80.8	81.1	5.43	5.46		5.43	5.46		8.8	8.7
						31.4		5.78		79.7		5.66			9.1				
						31.4		5.74		79.2		5.69			9.0				
			Bottom	9.6	17.4	30.5	30.6	6.02	6.03	83.1	83.3	5.20	5.19		5.20	5.19		8.3	8.2
						30.6		6.04		83.4		5.17			8.1				
						31.3		5.87		81.0		5.23			8.4				
Middle	5.2	18.6	31.3	31.3	5.90	5.89	81.4	81.2	5.27	5.25	5.27	5.25	8.5	8.5					
			31.7		5.84		80.6		5.33		8.8								
			31.8		5.81		80.2		5.36		8.6								
Bottom	9.4	19.3	31.8	31.8	5.84	5.83	80.6	80.4	5.33	5.35	5.33	5.35	8.7	8.7					
			31.7		5.81		80.2		5.36		8.6								
			31.7		5.81		80.2		5.36		8.6								
10/02/11	1513-1527	22/Fine	Surface	1.0	19.7	30.6	30.6	6.02	6.00	82.4	82.2	5.38	5.35	5.47	8.4	8.4	8.8		
						30.5		5.98		81.9		5.32			8.3				
						30.8		5.90		80.8		5.43			8.8				
			Middle	5.2	19.7	30.9	30.9	5.93	5.92	81.2	81.0	5.42	5.43		5.42	5.43		9.0	8.9
						31.5		5.70		78.1		5.58			9.2				
						31.5		5.74		78.6		5.70			9.1				
			Bottom	9.4	20.3	30.5	30.5	6.02	6.04	82.4	82.6	5.31	5.33		5.31	5.33		8.5	8.5
						30.5		6.05		82.8		5.35			8.4				
						30.9		6.01		82.3		5.48			9.0				
Middle	5.3	16.7	31.0	31.0	5.96	5.99	81.6	82.0	5.52	5.50	5.52	5.50	9.1	9.1					
			31.6		5.87		80.4		5.80		9.3								
			31.7		5.83		79.8		5.76		9.3								
Bottom	9.6	17.0	31.7	31.7	5.83	5.85	80.4	80.1	5.80	5.78	5.80	5.78	9.3	9.3					
			31.7		5.83		79.8		5.76		9.3								
			31.7		5.83		79.8		5.76		9.3								
15/02/11	0933-0945	11/Rainy	Surface	1.0	17.9	29.6	29.6	6.08	6.06	84.5	84.3	5.21	5.19	5.27	8.4	8.3	8.3		
						29.5		6.04		84.0		5.17			8.2				
						31.8		5.93		82.4		5.24			8.3				
			Middle	5.3	19.4	31.9	31.9	5.89	5.91	81.9	82.2	5.28	5.26		5.28	5.26		8.1	8.2
						32.2		5.85		81.3		5.34			8.6				
						32.1		5.82		80.9		5.37			8.4				
			Bottom	9.6	20.4	32.1	32.2	5.82	5.84	80.9	81.1	5.37	5.36		5.37	5.36		8.4	8.5
						32.1		5.82		80.9		5.37			8.4				
						32.1		5.82		80.9		5.37			8.4				
17/02/11	1004-1015	16/Cloudy	Surface	1.0	18.3	30.4	30.4	5.93	5.95	82.4	82.6	5.22	5.25	5.37	8.4	8.3	8.3		
						30.4		5.96		82.8		5.27			8.2				
						31.3		5.85		81.3		5.39			8.3				
			Middle	5.8	19.2	31.2	31.3	5.87	5.86	81.6	81.5	5.33	5.36		5.33	5.36		8.1	8.2
						31.7		5.78		79.8		5.47			8.6				
						31.8		5.76		79.5		5.51			8.4				
			Bottom	10.2	20.3	31.8	31.8	5.76	5.77	79.5	79.7	5.51	5.49		5.51	5.49		8.5	8.5
						30.8		5.98		83.1		5.29			8.4				
						30.9		5.97		83.0		5.24			8.2				
19/02/11	1133-1144	13/Cloudy	Surface	1.0	17.5	30.9	30.9	5.97	5.98	83.0	83.1	5.24	5.27	5.38	8.2	8.3	8.7		
						31.2		5.85		80.7		5.39			8.5				
						31.4		5.87		81.6		5.35			8.8				
			Middle	5.8	20.5	31.4	31.3	5.87	5.86	81.6	81.2	5.35	5.37		5.35	5.37		9.1	9.1
						32.0		5.76		79.5		5.46			9.0				
						31.8		5.74		78.6		5.52			9.0				
			Bottom	10.6	20.9	31.8	31.9	5.87	5.75	79.5	79.1	5.46	5.49		5.46	5.49		8.4	8.7
						32.0		5.76		79.5		5.46			8.4				
						31.8		5.74		78.6		5.52			8.4				
22/02/11	1409-1420	17/Cloudy	Surface	1.0	16.8	30.7	30.7	6.03	6.05	82.6	82.8	5.24	5.25	5.34	8.3	8.4	8.7		
						30.7		6.06		83.0		5.25			8.5				
						31.4		5.92		81.1		5.33			8.7				
			Middle	5.1	17.5	31.3	31.4	5.89	5.91	80.7	80.9	5.35	5.34		5.35	5.34		8.6	8.7
						31.7		5.75		78.8		5.42			8.9				
						31.7		5.78		79.2		5.44			9.0				
			Bottom	9.2	18.3	31.7	31.7	5.78	5.77	79.2	79.0	5.44	5.43		5.44	5.43		8.9	9.0
						30.7		6.02		83.1		5.20			8.4				
						30.6		6.05		83.5		5.17			8.6				
24/02/11	1505-1516	19/Fine	Surface	1.0	18.6	31.4	30.7	5.93	6.04	82.4	83.3	5.28	5.19	5.27	8.3	8.5	8.4		
						31.3		5.96		82.8		5.25			8.5				
						31.8		5.83		79.9		5.37			8.2				
			Middle	5.7	19.2	31.3	31.4	5.96	5.95	82.8	82.6	5.25	5.27		5.25	5.27		8.4	8.4
						31.8		5.83		79.9		5.37			8.2				
						31.9		5.85		80.1		5.35			8.4				
			Bottom	10.4	19.8	31.9	31.9	5.83	5.84	79.9	80.0	5.37	5.36		5.37	5.36		8.3	8.3
						30.7		6.05		82.8		5.51			9.0				
						30.6		6.09		83.4		5.55			9.1				
26/02/11	1640-1655	20/Fine	Surface	1.0	17.4	30.7	30.7	6.05	6.07	82.8	83.1	5.51	5.53	5.71	9.0	9.1	9.3		
						30.6		6.09		83.4		5.55			9.1				
						30.9		6.00		82.2		5.68			9.3				
			Middle	5.2	17.7	31.0	31.0	5.97	5.99	81.7	82.0	5.72	5.70		5.72	5.70		9.2	9.2
						31.4		5.83		79.8		5.88			9.5				
						31.4		5.88		80.5		5.94			9.5				
			Bottom	9.4	18.0	31.4	31.4	5.88	5.86	80.5	80.2	5.94	5.91		5.94	5.91		9.5	9.5
						31.4		5.88		80.5		5.94			9.5				
						31.4		5.88		80.5		5.94			9.5				

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	
01/02/11	1000-1015	13/Fine	Surface	1.0	16.7	30.7	30.7	6.10	6.12	84.1	84.4	5.28	5.31	5.41	8.2	8.2	8.5	
						30.7		6.14		84.7		5.33			8.2			
			Middle	6.2	17.0	31.0	31.0	6.00	6.03	82.8	83.1	5.37	5.42		5.40			8.4
						31.0		6.05		83.4		5.42			8.2			
			Bottom	11.4	17.7	31.6	31.6	5.93	5.92	81.2	81.3	5.51	5.55		5.53			9.0
						31.6		5.90		81.4		5.55			9.1			
08/02/11	1344-1354	19/Fine	Surface	1.0	18.2	30.7	30.7	6.18	6.19	85.3	85.5	5.08	5.10	5.17	8.0	8.1	8.3	
						30.7		6.20		85.6		5.11			8.2			
			Middle	6.2	18.6	31.2	31.3	6.06	6.05	83.6	83.4	5.15	5.18		5.17			8.2
						31.3		6.03		83.2		5.18			8.4			
			Bottom	11.4	19.4	31.7	31.7	5.98	5.94	82.2	82.0	5.25	5.24		5.25			8.5
						31.6		5.92		81.7		5.24			8.5			
10/02/11	1450-1505	22/Fine	Surface	1.0	19.7	30.5	30.5	6.15	6.14	84.2	84.1	5.22	5.25	5.36	8.3	8.3	8.5	
						30.5		6.13		83.9		5.27			8.2			
			Middle	6.2	19.9	30.9	31.0	6.08	6.06	83.2	82.9	5.33	5.37		5.35			8.4
						31.0		6.03		82.6		5.37			8.2			
			Bottom	11.4	20.3	31.6	31.6	5.90	5.92	80.8	81.1	5.48	5.51		5.50			9.0
						31.6		5.94		81.3		5.51			9.1			
12/02/11	1557-1610	15/Cloudy	Surface	1.0	16.5	30.5	30.5	6.19	6.17	84.8	84.5	5.20	5.23	5.35	8.4	8.3	8.6	
						30.4		6.15		84.2		5.25			8.2			
			Middle	6.2	16.8	31.0	31.0	6.09	6.07	83.4	82.7	5.33	5.38		5.36			8.5
						31.0		6.05		82.0		5.38			8.5			
			Bottom	11.4	17.1	31.7	31.7	5.90	5.93	80.8	81.2	5.50	5.46		5.48			8.9
						31.7		5.96		81.6		5.46			9.0			
15/02/11	0915-0926	11/Rainy	Surface	1.0	17.7	29.6	29.7	6.16	6.18	85.6	85.9	5.08	5.10	5.17	8.0	8.1	8.2	
						29.7		6.20		86.2		5.12			8.1			
			Middle	6.1	19.5	31.8	31.8	6.08	6.07	84.5	84.3	5.16	5.18		5.17			8.2
						31.8		6.05		84.1		5.18			8.2			
			Bottom	11.2	20.5	32.2	32.2	5.95	5.94	82.7	82.6	5.22	5.26		5.24			8.4
						32.2		5.93		82.4		5.26			8.3			
17/02/11	0945-0956	16/Cloudy	Surface	1.0	18.6	30.6	30.6	6.15	6.16	84.9	85.0	5.20	5.18	5.26	8.0	8.1	8.2	
						30.5		6.16		85.0		5.16			8.1			
			Middle	6.2	19.4	31.4	31.4	6.08	6.07	83.9	83.4	5.28	5.33		5.31			8.2
						31.4		6.05		82.9		5.33			8.2			
			Bottom	11.4	20.3	31.9	31.9	5.97	5.98	81.8	82.0	5.31	5.25		5.28			8.4
						31.8		5.99		82.1		5.25			8.3			
19/02/11	1115-1126	13/Cloudy	Surface	1.0	17.5	30.7	30.8	6.16	6.15	85.0	84.8	5.09	5.12	5.23	8.0	8.1	8.4	
						30.8		6.13		84.6		5.15			8.2			
			Middle	6.4	20.2	31.1	31.1	6.03	6.03	83.2	83.2	5.25	5.20		5.23			8.4
						31.0		6.02		83.1		5.20			8.2			
			Bottom	11.8	20.8	31.5	31.6	5.98	5.95	81.7	81.6	5.39	5.32		5.36			8.6
						31.7		5.94		81.4		5.32			8.8			
22/02/11	1350-1401	17/Cloudy	Surface	1.0	16.9	30.6	30.7	6.15	6.17	84.3	84.6	5.07	5.09	5.19	8.0	8.1	8.3	
						30.7		6.19		84.8		5.11			8.2			
			Middle	6.2	17.7	31.5	31.5	6.03	6.05	82.6	82.8	5.18	5.21		5.20			8.1
						31.4		6.06		83.0		5.21			8.3			
			Bottom	11.4	18.4	31.8	31.9	5.91	5.93	81.0	81.2	5.28	5.31		5.30			8.4
						31.9		5.94		81.4		5.31			8.6			
24/02/11	1446-1458	19/Fine	Surface	1.0	18.6	30.8	30.8	6.16	6.18	85.0	85.2	5.13	5.14	5.23	8.1	8.1	8.3	
						30.7		6.19		85.4		5.15			8.0			
			Middle	6.2	19.2	31.5	31.5	6.07	6.06	84.4	84.5	5.21	5.24		5.23			7.8
						31.4		6.04		84.6		5.24			8.0			
			Bottom	11.4	19.8	31.9	31.9	5.88	5.89	80.6	80.7	5.30	5.34		5.32			8.9
						31.9		5.90		80.8		5.34			9.0			
26/02/11	1620-1634	20/Fine	Surface	1.0	17.4	30.6	30.6	6.21	6.19	85.0	84.7	5.38	5.36	5.56	8.5	8.4	8.9	
						30.6		6.16		84.3		5.34			8.3			
			Middle	6.2	17.8	31.0	31.0	6.10	6.09	83.5	83.3	5.51	5.56		5.54			8.9
						31.0		6.07		83.1		5.56			9.0			
			Bottom	11.4	18.1	31.5	31.5	6.01	5.99	82.3	82.0	5.75	5.79		5.77			9.2
						31.5		5.97		81.7		5.79			9.3			

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		
01/02/11	0940-0955	13/Fine	Surface	1.0	16.8	30.6	30.7	6.08	6.10	83.9	84.1	5.36	5.38	5.41	8.4	8.3	8.6		
						30.7		6.11		84.3		5.40			8.2				
			Middle	5.8	17.1	31.0	31.0	6.03	6.02	83.2	83.1	5.30	5.34		5.38	5.34		8.6	8.6
						30.9		6.01		82.9		5.38			8.5				
			Bottom	10.6	17.7	31.5	31.6	5.92	5.94	81.6	81.9	5.49	5.51		5.49	5.51		9.0	9.0
						31.6		5.96		82.2		5.52			9.0				
08/02/11	1330-1340	19/Fine	Surface	1.0	18.1	30.7	30.7	6.12	6.15	84.5	84.8	5.10	5.11	5.19	8.2	8.2	8.2		
						30.6		6.17		85.1		5.12			8.2				
			Middle	5.6	18.7	31.3	31.4	6.08	6.07	83.9	83.7	5.17	5.19		5.17	5.19		8.4	8.2
						31.4		6.05		83.5		5.20			8.0				
			Bottom	10.2	19.5	31.7	31.8	5.93	5.92	81.8	81.6	5.28	5.27		5.28	5.27		8.0	8.1
						31.8		5.90		81.4		5.26			8.1				
10/02/11	1430-1445	22/Fine	Surface	1.0	19.7	30.6	30.6	6.11	6.09	83.7	83.4	5.26	5.29	5.33	8.2	8.4	8.5		
						30.5		6.07		83.1		5.31			8.5				
			Middle	5.7	19.9	30.9	30.9	6.09	6.07	83.4	83.1	5.23	5.26		5.23	5.26		8.3	8.3
						30.9		6.04		82.7		5.28			8.3				
			Bottom	10.4	20.4	31.5	31.6	5.98	5.96	81.9	81.6	5.41	5.44		5.41	5.44		8.8	8.7
						31.6		5.93		81.2		5.46			8.6				
12/02/11	1540-1553	15/Cloudy	Surface	1.0	16.6	30.4	30.4	6.18	6.16	84.6	84.3	5.23	5.26	5.32	8.3	8.2	8.5		
						30.4		6.13		83.9		5.28			8.1				
			Middle	5.7	16.7	30.9	31.0	6.07	6.06	83.1	82.9	5.24	5.28		5.24	5.28		8.4	8.5
						31.0		6.04		82.7		5.31			8.5				
			Bottom	10.4	17.0	31.7	31.7	5.93	5.94	81.2	81.4	5.40	5.42		5.40	5.42		9.0	9.0
						31.7		5.95		81.5		5.44			8.9				
15/02/11	0900-0910	11/Rainy	Surface	1.0	17.8	29.7	29.7	6.17	6.16	85.8	85.6	5.14	5.13	5.18	8.0	8.1	8.2		
						29.6		6.14		85.3		5.11			8.2				
			Middle	5.7	19.5	31.7	31.8	6.02	6.04	83.7	84.0	5.19	5.18		5.19	5.18		8.3	8.2
						31.8		6.06		84.2		5.17			8.0				
			Bottom	10.3	20.4	32.1	32.2	5.89	5.91	81.9	82.1	5.23	5.24		5.23	5.24		8.5	8.4
						32.2		5.92		82.3		5.25			8.3				
17/02/11	0930-0942	16/Cloudy	Surface	1.0	18.4	30.2	30.3	6.13	6.12	84.6	84.5	5.19	5.16	5.26	8.0	8.1	8.2		
						30.4		6.11		84.3		5.13			8.2				
			Middle	5.9	19.3	31.2	31.2	6.06	6.07	83.6	83.7	5.24	5.26		5.24	5.26		8.3	8.2
						31.1		6.07		83.8		5.28			8.0				
			Bottom	10.8	20.3	31.6	31.7	5.98	5.97	81.9	81.7	5.39	5.37		5.39	5.37		8.5	8.5
						31.7		5.95		81.5		5.35			8.4				
19/02/11	1100-1112	13/Cloudy	Surface	1.0	17.8	30.9	30.8	6.22	6.21	86.5	86.4	5.12	5.15	5.27	8.3	8.2	8.5		
						30.7		6.20		86.2		5.17			8.1				
			Middle	6.1	20.3	31.2	31.3	6.05	6.06	83.5	83.7	5.30	5.27		5.30	5.27		8.6	8.6
						31.3		6.07		83.8		5.23			8.5				
			Bottom	11.2	20.7	31.6	31.7	5.95	5.97	82.1	82.3	5.38	5.41		5.38	5.41		8.8	8.9
						31.8		5.98		82.5		5.44			8.9				
22/02/11	1335-1345	17/Cloudy	Surface	1.0	16.9	30.7	30.8	6.18	6.16	84.7	84.4	5.12	5.14	5.23	8.1	8.1	8.3		
						30.8		6.13		84.0		5.16			8.0				
			Middle	5.7	17.6	31.4	31.4	6.07	6.09	83.2	83.4	5.23	5.24		5.23	5.24		8.4	8.3
						31.3		6.10		83.6		5.25			8.2				
			Bottom	10.4	18.3	31.8	31.8	5.88	5.91	80.6	80.9	5.32	5.31		5.32	5.31		8.5	8.6
						31.7		5.93		81.2		5.30			8.6				
24/02/11	1430-1442	19/Fine	Surface	1.0	18.7	30.7	30.8	6.20	6.21	85.6	85.7	5.12	5.10	5.20	8.2	8.2	8.4		
						30.8		6.22		85.8		5.08			8.2				
			Middle	5.8	19.2	31.4	31.4	6.13	6.12	85.2	85.0	5.19	5.20		5.19	5.20		8.4	8.5
						31.3		6.10		84.8		5.21			8.5				
			Bottom	10.6	19.9	31.9	31.9	5.92	5.90	81.1	80.9	5.28	5.30		5.28	5.30		8.5	8.6
						31.8		5.88		80.6		5.32			8.6				
26/02/11	1600-1615	20/Fine	Surface	1.0	17.4	30.6	30.7	6.19	6.21	84.8	85.1	5.36	5.38	5.53	8.4	8.6	9.0		
						30.7		6.23		85.3		5.40			8.8				
			Middle	5.6	17.8	30.9	31.0	6.12	6.14	83.8	84.0	5.48	5.51		5.48	5.51		9.0	9.2
						31.0		6.15		84.2		5.53			9.3				
			Bottom	10.2	18.0	31.4	31.5	6.03	6.04	82.6	82.7	5.68	5.70		5.68	5.70		9.3	9.3
						31.5		6.05		82.8		5.72			9.2				

Mid-Ebb Tide

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
01/02/11	1148-1203	13/Fine	Surface	1.0	16.8	30.7	30.7	6.18	6.17	85.2	85.0	5.23	5.25	5.30	8.2	8.3	8.5
						30.6		6.15		84.8		5.27			8.3		
			Middle	5.4	16.9	30.9	30.9	6.10	6.08	84.1	83.9	5.20	5.23		8.4	8.3	
						30.8		6.06		83.6		5.25			8.2		
			Bottom	9.8	17.4	31.1	31.2	5.92	5.93	81.6	81.8	5.40	5.42		8.8	8.9	
						31.2		5.94		81.9		5.43			9.0		
08/02/11	1506-1517	19/Fine	Surface	1.0	18.3	30.7	30.7	6.14	6.16	84.7	84.9	5.14	5.16	5.25	8.1	8.2	8.3
						30.6		6.17		85.1		5.18			8.3		
			Middle	5.1	18.6	31.4	31.4	6.05	6.07	83.5	83.7	5.25	5.23		8.4	8.3	
						31.3		6.08		83.9		5.21			8.2		
			Bottom	9.2	19.4	31.8	31.8	5.93	5.95	81.8	82.1	5.34	5.35		8.6	8.5	
						31.7		5.97		82.4		5.38			8.4		
10/02/11	1636-1650	21/Fine	Surface	1.0	19.8	30.6	30.7	6.15	6.13	84.2	83.9	5.20	5.22	5.33	8.2	8.2	8.5
						30.7		6.10		83.5		5.24			8.2		
			Middle	5.3	19.7	30.7	30.7	6.05	6.07	82.8	83.0	5.29	5.32		8.6	8.5	
						30.7		6.08		83.2		5.34			8.4		
			Bottom	9.6	20.0	30.9	31.0	6.00	5.97	82.2	81.7	5.44	5.47		9.0	8.9	
						31.0		5.93		81.2		5.49			8.7		
12/02/11	1736-1755	15/Cloudy	Surface	1.0	16.4	30.6	30.6	6.19	6.18	84.8	84.6	5.20	5.23	5.35	8.4	8.4	8.8
						30.6		6.16		84.3		5.26			8.3		
			Middle	5.3	16.7	30.9	31.0	6.11	6.09	83.7	83.4	5.29	5.31		9.0	9.0	
						31.0		6.07		83.1		5.33			8.9		
			Bottom	9.6	17.0	31.5	31.6	5.97	5.94	81.7	81.3	5.48	5.50		9.0	9.1	
						31.6		5.91		80.9		5.51			9.2		
15/02/11	1042-1054	11/Rainy	Surface	1.0	17.8	29.6	29.6	6.21	6.20	86.3	86.2	5.10	5.12	5.23	8.1	8.1	8.3
						29.5		6.19		86.0		5.13			8.0		
			Middle	5.2	19.5	31.7	31.8	6.04	6.06	84.0	84.2	5.22	5.23		8.3	8.2	
						31.8		6.07		84.4		5.24			8.1		
			Bottom	9.4	20.4	32.1	32.2	5.95	5.94	82.7	82.5	5.37	5.36		8.6	8.5	
						32.2		5.92		82.3		5.34			8.4		
17/02/11	1141-1152	16/Cloudy	Surface	1.0	18.4	30.2	30.3	6.17	6.17	85.1	85.1	5.21	5.19	5.28	8.4	8.3	8.8
						30.3		6.16		85.0		5.16			8.2		
			Middle	5.4	19.3	31.2	31.3	6.09	6.08	84.0	83.8	5.36	5.36		9.0	8.9	
						31.4		6.06		83.6		5.35			8.7		
			Bottom	9.8	20.4	31.9	31.9	5.96	5.97	81.7	81.8	5.27	5.29		9.2	9.1	
						31.8		5.98		81.9		5.31			9.0		
19/02/11	1303-1314	13/Cloudy	Surface	1.0	17.4	30.9	30.9	6.13	6.14	85.2	85.4	5.17	5.19	5.26	8.2	8.3	8.4
						30.8		6.15		85.5		5.21			8.4		
			Middle	5.7	20.3	31.4	31.5	6.06	6.05	84.2	83.7	5.33	5.31		8.5	8.5	
						31.6		6.03		83.2		5.28			8.5		
			Bottom	10.4	20.7	31.8	31.9	5.93	5.94	81.2	81.4	5.27	5.29		8.3	8.4	
						31.9		5.95		81.5		5.31			8.4		
22/02/11	1518-1530	17/Cloudy	Surface	1.0	16.9	30.9	30.9	6.13	6.14	84.0	84.2	5.13	5.14	5.24	8.2	8.2	8.4
						30.8		6.15		84.3		5.15			8.2		
			Middle	5.2	17.6	31.6	31.6	6.07	6.09	83.2	83.4	5.21	5.23		8.3	8.4	
						31.5		6.10		83.6		5.24			8.5		
			Bottom	9.4	18.3	31.9	31.9	5.98	5.97	81.9	81.8	5.33	5.35		8.6	8.6	
						31.9		5.96		81.7		5.36			8.6		
24/02/11	1617-1629	19/Fine	Surface	1.0	18.7	30.7	30.8	6.20	6.19	86.2	86.0	5.09	5.10	5.19	8.3	8.3	8.3
						30.8		6.17		85.8		5.11			8.2		
			Middle	5.4	19.2	31.5	31.5	6.13	6.12	84.0	83.8	5.17	5.19		8.5	8.5	
						31.4		6.10		83.6		5.20			8.4		
			Bottom	9.8	19.8	31.8	31.8	5.97	5.99	81.8	82.0	5.28	5.30		8.4	8.3	
						31.8		6.00		82.2		5.31			8.2		
26/02/11	1803-1818	20/Fine	Surface	1.0	17.4	30.6	30.7	6.27	6.27	85.8	85.8	5.35	5.33	5.46	8.6	8.5	8.8
						30.7		6.26		85.7		5.30			8.4		
			Middle	5.3	17.6	30.9	30.9	6.20	6.18	84.9	84.6	5.39	5.42		8.5	8.7	
						30.9		6.15		84.2		5.44			8.8		
			Bottom	9.6	17.9	31.2	31.2	6.06	6.04	83.0	82.7	5.62	5.64		9.2	9.1	
						31.2		6.02		82.4		5.66			9.0		

Mid-Ebb Tide

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	
01/02/11	1208-1223	13/Fine	Surface	1.0	16.8	30.7	30.7	6.06	6.03	83.6	83.2	5.37	5.40	5.58	8.6	8.6	9.0	
						30.7		6.00		82.8		5.42			8.5			
			Middle	8.3	17.2	31.0	31.1	5.95	5.93	82.1	81.8	5.59	5.63		5.61	9.1		9.2
						31.1		5.90		81.4		5.63			9.2			
			Bottom	15.6	17.7	31.8	31.8	5.78	5.77	79.7	79.5	5.72	5.77		5.75	9.3		9.2
						31.8		5.75		79.3		5.77			9.0			
08/02/11	1520-1532	19/Fine	Surface	1.0	18.2	30.5	30.5	6.16	6.14	85.0	84.8	5.16	5.14	5.22	8.0	8.0	8.2	
						30.5		6.12		84.5		5.11			8.0			
			Middle	8.3	18.5	31.4	31.4	6.02	6.05	83.1	83.5	5.23	5.20		5.22	8.3		8.2
						31.4		6.07		83.8		5.20			8.0			
			Bottom	15.5	19.3	31.7	31.7	5.95	5.97	82.1	82.4	5.29	5.33		5.31	8.2		8.3
						31.6		5.99		82.7		5.33			8.4			
10/02/11	1654-1710	21/Fine	Surface	1.0	19.7	30.6	30.6	6.05	6.03	82.8	82.6	5.33	5.37	5.53	8.4	8.6	9.0	
						30.6		6.01		82.3		5.40			8.7			
			Middle	8.4	20.0	31.0	31.0	5.93	5.95	81.2	81.4	5.51	5.55		5.53	9.0		9.1
						31.0		5.96		81.6		5.55			9.2			
			Bottom	15.8	20.5	31.7	31.7	5.88	5.85	80.5	80.1	5.68	5.71		5.70	9.4		9.3
						31.7		5.82		79.7		5.71			9.1			
12/02/11	1800-1813	15/Cloudy	Surface	1.0	16.5	30.6	30.7	6.03	6.01	82.6	82.3	5.38	5.41	5.54	8.5	8.7	9.0	
						30.7		5.98		81.9		5.44			8.8			
			Middle	8.4	16.8	31.0	31.1	5.90	5.89	80.8	83.7	5.49	5.55		5.52	9.0		9.1
						31.1		5.88		86.5		5.55			9.2			
			Bottom	15.8	17.3	31.8	31.8	5.78	5.80	79.1	79.3	5.67	5.71		5.69	9.2		9.2
						31.8		5.81		79.5		5.71			9.2			
15/02/11	1057-1109	11/Rainy	Surface	1.0	17.8	29.7	29.7	6.18	6.17	85.9	85.7	5.17	5.16	5.26	8.2	8.1	8.4	
						29.6		6.15		85.5		5.15			8.0			
			Middle	8.2	19.4	31.9	31.9	6.09	6.08	84.7	84.5	5.26	5.22		5.24	8.3		8.4
						31.8		6.06		84.2		5.22			8.5			
			Bottom	15.4	20.4	32.0	32.1	5.90	5.92	82.0	82.3	5.35	5.38		5.37	8.8		8.7
						32.1		5.94		82.6		5.38			8.6			
17/02/11	1206-1217	16/Cloudy	Surface	1.0	18.5	30.5	30.5	6.21	6.20	86.3	86.2	5.08	5.11	5.22	8.0	8.1	8.3	
						30.5		6.19		86.0		5.14			8.1			
			Middle	8.2	19.3	31.4	31.4	6.05	6.06	83.5	83.7	5.23	5.19		5.21	8.2		8.2
						31.3		6.07		83.8		5.19			8.2			
			Bottom	15.4	20.4	31.7	31.8	5.99	5.99	82.7	82.6	5.31	5.36		5.34	8.6		8.6
						31.9		5.98		82.5		5.36			8.5			
19/02/11	1326-1337	13/Cloudy	Surface	1.0	17.7	30.6	30.7	6.22	6.23	85.8	86.2	5.13	5.10	5.21	8.2	8.1	8.3	
						30.8		6.23		86.6		5.07			8.0			
			Middle	8.7	20.5	31.5	31.5	6.07	6.08	83.2	83.6	5.24	5.18		5.21	8.3		8.3
						31.4		6.09		84.0		5.18			8.3			
			Bottom	16.4	20.8	31.8	31.8	5.98	5.97	81.9	81.8	5.31	5.35		5.33	8.6		8.5
						31.8		5.96		81.7		5.35			8.4			
22/02/11	1533-1545	17/Cloudy	Surface	1.0	16.9	30.9	30.9	6.17	6.19	84.5	84.7	5.19	5.18	5.27	8.1	8.2	8.4	
						30.9		6.20		84.9		5.16			8.2			
			Middle	8.2	17.7	31.5	31.6	6.09	6.10	83.4	83.6	5.23	5.27		5.25	8.4		8.4
						31.6		6.11		83.7		5.27			8.3			
			Bottom	15.4	18.4	32.0	32.0	5.90	5.92	80.8	81.0	5.39	5.38		5.39	8.7		8.8
						31.9		5.93		81.2		5.38			8.9			
24/02/11	1633-1647	19/Fine	Surface	1.0	18.6	30.8	30.8	6.14	6.15	85.3	85.4	5.13	5.12	5.22	8.1	8.2	8.3	
						30.7		6.15		85.5		5.10			8.2			
			Middle	8.1	19.3	31.4	31.4	6.07	6.06	83.2	83.0	5.21	5.23		5.22	8.3		8.4
						31.4		6.04		82.7		5.23			8.5			
			Bottom	15.2	19.8	31.9	31.9	5.93	5.94	81.2	81.4	5.30	5.32		5.31	8.4		8.3
						31.9		5.95		81.5		5.32			8.2			
26/02/11	1822-1835	20/Fine	Surface	1.0	17.5	30.7	30.7	6.12	6.10	83.8	83.5	5.51	5.54	5.72	9.0	9.1	9.2	
						30.6		6.08		83.2		5.56			9.1			
			Middle	8.3	17.9	31.0	31.0	6.04	6.00	82.7	82.2	5.67	5.73		5.70	9.3		9.2
						31.0		5.96		81.6		5.73			9.1			
			Bottom	15.6	18.2	31.7	31.7	5.80	5.82	79.4	79.7	5.87	5.95		5.91	9.4		9.3
						31.7		5.84		80.0		5.95			9.2			



Mid-Ebb 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	
01/02/11	1043-1059	13/Fine	Surface	1.0	16.7	30.6	30.7	6.15	6.14	84.8	84.6	5.26	5.28	5.42	8.4	8.5	8.8	
						30.7		6.12		84.4		5.30			8.6			
			Middle	6.9	17.1	31.0	31.0	6.08	6.06	83.0	83.1	5.39	5.44		8.8			8.6
						31.0		6.03		83.2		5.44			8.4			
			Bottom	12.8	17.7	31.6	31.7	5.91	5.93	81.5	81.7	5.53	5.56		9.0			9.2
						31.7		5.94		81.9		5.58			9.3			
08/02/11	1418-1428	19/Fine	Surface	1.0	18.1	30.6	30.6	6.15	6.17	84.9	85.2	5.05	5.07	5.15	7.8	7.9	8.1	
						30.6		6.19		85.4		5.08			8.0			
			Middle	6.8	18.5	31.1	31.2	6.04	6.06	83.4	83.6	5.13	5.17		8.2			8.2
						31.2		6.07		83.8		5.17			8.2			
			Bottom	12.6	19.4	31.6	31.6	5.92	5.94	81.7	82.0	5.22	5.25		8.4			8.3
						31.5		5.96		82.2		5.27			8.2			
10/02/11	1534-1550	22/Fine	Surface	1.0	19.6	30.6	30.6	6.11	6.09	83.7	83.4	5.21	5.20	5.32	8.2	8.2	8.5	
						30.6		6.07		83.1		5.18			8.2			
			Middle	6.9	19.9	31.0	31.0	5.99	6.01	82.0	82.2	5.26	5.28		8.4			8.4
						31.0		6.02		82.4		5.30			8.3			
			Bottom	12.8	20.4	31.6	31.7	5.90	5.89	80.8	80.6	5.48	5.49		9.0			8.9
						31.7		5.87		80.4		5.50			8.8			
12/02/11	1634-1649	15/Cloudy	Surface	1.0	16.6	30.5	30.6	6.21	6.19	85.0	84.8	5.18	5.20	5.37	8.0	8.1	8.6	
						30.6		6.17		84.5		5.22			8.2			
			Middle	6.9	16.8	31.0	31.0	6.10	6.08	83.5	83.3	5.30	5.33		8.6			8.5
						31.0		6.06		83.0		5.35			8.4			
			Bottom	12.8	17.1	31.7	31.7	5.91	5.94	80.9	81.3	5.56	5.58		9.0			9.3
						31.7		5.96		81.6		5.60			9.5			
15/02/11	0952-1003	11/Rainy	Surface	1.0	17.8	29.7	29.7	6.16	6.14	85.6	85.4	5.13	5.11	5.17	8.2	8.2	8.2	
						29.6		6.12		85.1		5.09			8.2			
			Middle	6.9	19.5	31.8	31.8	6.04	6.06	84.0	84.2	5.18	5.17		7.9			8.0
						31.7		6.07		84.4		5.15			8.0			
			Bottom	12.8	20.4	32.0	32.1	5.92	5.94	82.3	82.6	5.24	5.25		8.4			8.3
						32.1		5.96		82.8		5.25			8.2			
17/02/11	1030-1042	16/Cloudy	Surface	1.0	18.4	30.5	30.4	6.18	6.18	85.3	85.2	5.18	5.16	5.27	8.2	8.1	8.4	
						30.3		6.17		85.1		5.14			8.0			
			Middle	6.8	19.5	31.4	31.5	6.07	6.08	83.2	83.3	5.29	5.27		8.4			8.3
						31.5		6.09		83.4		5.24			8.2			
			Bottom	12.6	20.4	31.9	32.0	5.96	5.98	81.7	81.9	5.36	5.39		8.5			8.7
						32.0		5.99		82.1		5.41			8.8			
19/02/11	1157-1209	13/Cloudy	Surface	1.0	17.5	30.8	30.8	6.12	6.14	84.5	84.7	5.13	5.16	5.24	8.3	8.2	8.4	
						30.7		6.15		84.9		5.19			8.1			
			Middle	7.2	20.3	31.3	31.4	6.06	6.05	83.0	82.8	5.27	5.30		8.5			8.5
						31.4		6.03		82.6		5.32			8.5			
			Bottom	13.4	20.6	31.7	31.8	5.97	5.97	81.8	81.8	5.30	5.28		8.6			8.6
						31.8		5.96		81.7		5.25			8.5			
22/02/11	1427-1438	17/Cloudy	Surface	1.0	16.9	30.8	30.8	6.13	6.13	83.7	84.0	5.13	5.15	5.25	8.1	8.2	8.4	
						30.8		6.15		84.3		5.16			8.3			
			Middle	6.8	17.7	31.5	31.5	6.05	6.04	82.9	82.7	5.24	5.26		8.4			8.4
						31.4		6.02		82.5		5.27			8.4			
			Bottom	12.6	18.4	31.8	31.9	5.94	5.92	81.4	81.1	5.34	5.36		8.8			8.7
						31.9		5.90		80.8		5.37			8.5			
24/02/11	1523-1534	19/Fine	Surface	1.0	18.7	30.8	30.8	6.13	6.15	84.0	84.2	5.21	5.20	5.29	8.1	8.2	8.5	
						30.8		6.16		84.4		5.18			8.2			
			Middle	6.8	19.3	31.5	31.5	6.01	6.03	82.9	83.2	5.27	5.29		8.4			8.3
						31.4		6.05		83.5		5.30			8.2			
			Bottom	12.5	19.9	32.0	32.0	5.93	5.94	81.2	81.3	5.38	5.40		8.8			8.9
						31.9		5.94		81.4		5.41			9.0			
26/02/11	1700-1715	20/Fine	Surface	1.0	17.5	30.6	30.6	6.16	6.18	84.3	84.6	5.33	5.31	5.46	8.4	8.3	8.8	
						30.6		6.19		84.8		5.29			8.2			
			Middle	6.8	17.8	30.9	31.0	6.05	6.07	82.8	83.0	5.41	5.43		8.8			8.9
						31.0		6.08		83.2		5.44			9.0			
			Bottom	12.6	18.1	31.5	31.5	5.94	5.96	81.3	81.6	5.63	5.66		9.2			9.1
						31.5		5.98		81.9		5.68			9.0			

Mid-Ebb Tide

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		
01/02/11	1106-1120	13/Fine	Surface	1.0	16.8	30.7	30.7	6.16	6.15	85.0	84.8	5.19	5.22	5.35	8.0	8.1	8.5		
						30.7		6.13		84.5		5.24			8.2				
			Middle	6.3	17.1	31.0	31.1	6.05	6.06	83.4	83.6	5.36	5.34		5.32	5.34		8.4	8.3
						31.1		6.07		83.7		5.32			8.2				
			Bottom	11.6	17.7	31.8	31.8	5.90	5.93	81.4	81.8	5.48	5.50		5.48	5.50		9.0	9.1
						31.7		5.96		82.2		5.52			9.1				
08/02/11	1433-1444	19/Fine	Surface	1.0	18.2	30.6	30.7	6.16	6.14	85.0	84.8	5.07	5.09	5.17	8.0	8.0	8.2		
						30.7		6.12		84.5		5.11			8.0				
			Middle	6.4	18.7	31.3	31.3	6.06	6.08	83.6	83.8	5.14	5.16		5.14	5.16		8.2	8.1
						31.2		6.09		84.0		5.18			8.0				
			Bottom	11.8	19.5	31.6	31.7	5.93	5.95	81.8	82.1	5.25	5.27		5.28	5.27		8.4	8.4
						31.7		5.97		82.4		5.28			8.3				
10/02/11	1556-1610	22/Fine	Surface	1.0	19.8	30.6	30.6	6.09	6.08	83.4	83.2	5.23	5.26	5.34	8.2	8.2	8.3		
						30.6		6.06		83.0		5.28			8.2				
			Middle	6.3	20.0	30.9	31.0	5.98	5.96	81.9	81.6	5.25	5.28		5.31	5.28		8.2	8.2
						31.0		5.93		81.2		5.31			8.1				
			Bottom	11.6	20.4	31.6	31.6	5.89	5.87	80.6	80.4	5.52	5.49		5.46	5.49		8.5	8.6
						31.6		5.85		80.1		5.46			8.6				
12/02/11	1653-1707	15/Cloudy	Surface	1.0	16.5	30.6	30.6	6.19	6.17	84.8	84.5	5.24	5.27	5.39	8.4	8.3	8.6		
						30.6		6.14		84.1		5.30			8.1				
			Middle	6.3	16.8	30.9	31.0	6.12	6.10	83.8	83.5	5.37	5.40		5.42	5.40		8.6	8.6
						31.0		6.08		83.2		5.42			8.5				
			Bottom	11.6	17.2	31.6	31.7	5.94	5.92	81.3	81.0	5.52	5.50		5.48	5.50		9.0	9.1
						31.7		5.89		80.6		5.48			9.2				
15/02/11	1009-1020	11/Rainy	Surface	1.0	17.8	29.5	29.6	6.19	6.18	86.0	85.9	5.14	5.13	5.19	8.2	8.2	8.2		
						29.6		6.17		85.8		5.12			8.2				
			Middle	6.3	19.4	31.9	31.9	6.10	6.09	84.8	84.7	5.19	5.18		5.19	5.18		8.3	8.2
						31.8		6.08		84.5		5.16			8.0				
			Bottom	11.6	20.5	32.2	32.2	5.89	5.91	81.9	82.1	5.23	5.25		5.27	5.25		8.4	8.3
						32.2		5.92		82.3		5.27			8.1				
17/02/11	1055-1107	16/Cloudy	Surface	1.0	18.6	30.3	30.4	6.22	6.23	86.5	86.6	5.22	5.20	5.30	8.3	8.3	8.4		
						30.4		6.24		86.7		5.17			8.2				
			Middle	6.3	19.4	31.4	31.3	6.11	6.10	84.9	84.4	5.27	5.29		5.31	5.29		8.4	8.3
						31.2		6.08		83.9		5.31			8.2				
			Bottom	11.6	20.4	31.7	31.7	5.97	5.96	82.4	82.0	5.37	5.40		5.43	5.40		8.6	8.7
						31.7		5.95		81.5		5.43			8.7				
19/02/11	1220-1232	13/Cloudy	Surface	1.0	17.7	30.6	30.6	6.17	6.17	85.8	85.7	5.16	5.19	5.29	8.1	8.2	8.5		
						30.6		6.16		85.6		5.21			8.2				
			Middle	6.2	20.5	31.2	31.2	6.05	6.07	84.1	84.3	5.31	5.29		5.31	5.29		8.4	8.5
						31.1		6.08		84.5		5.26			8.5				
			Bottom	11.4	20.8	31.5	31.6	5.94	5.96	82.0	82.2	5.43	5.41		5.38	5.41		8.9	9.0
						31.6		5.97		82.3		5.38			9.1				
22/02/11	1443-1455	17/Cloudy	Surface	1.0	16.9	30.8	30.8	6.14	6.16	84.1	84.3	5.08	5.10	5.21	8.2	8.2	8.3		
						30.7		6.17		84.5		5.12			8.2				
			Middle	6.3	17.7	31.5	31.5	6.08	6.07	83.3	83.2	5.19	5.20		5.21	5.20		8.3	8.2
						31.5		6.06		83.0		5.21			8.1				
			Bottom	11.6	18.4	31.9	32.0	5.93	5.91	81.2	80.9	5.30	5.32		5.33	5.32		8.6	8.6
						32.0		5.88		80.6		5.33			8.5				
24/02/11	1540-1552	19/Fine	Surface	1.0	18.6	30.7	30.8	6.10	6.09	83.6	83.5	5.14	5.13	5.21	8.3	8.2	8.3		
						30.8		6.08		83.3		5.12			8.1				
			Middle	6.3	19.3	31.3	31.4	5.98	6.00	82.5	82.8	5.20	5.21		5.22	5.21		8.2	8.3
						31.4		6.02		83.1		5.22			8.4				
			Bottom	11.6	19.8	31.8	31.9	5.86	5.88	80.3	80.5	5.28	5.30		5.32	5.30		8.5	8.4
						31.9		5.89		80.7		5.32			8.3				
26/02/11	1721-1735	20/Fine	Surface	1.0	17.5	30.7	30.7	6.20	6.18	84.9	84.6	5.25	5.28	5.49	8.2	8.3	8.7		
						30.6		6.15		84.2		5.30			8.3				
			Middle	6.3	17.8	30.9	31.0	6.10	6.08	83.5	83.3	5.48	5.50		5.48	5.50		8.7	8.9
						31.0		6.06		83.0		5.52			9.0				
			Bottom	11.6	18.1	31.4	31.5	5.92	5.94	81.1	81.4	5.67	5.70		5.73	5.70		9.1	9.1
						31.5		5.96		81.6		5.73			9.0				

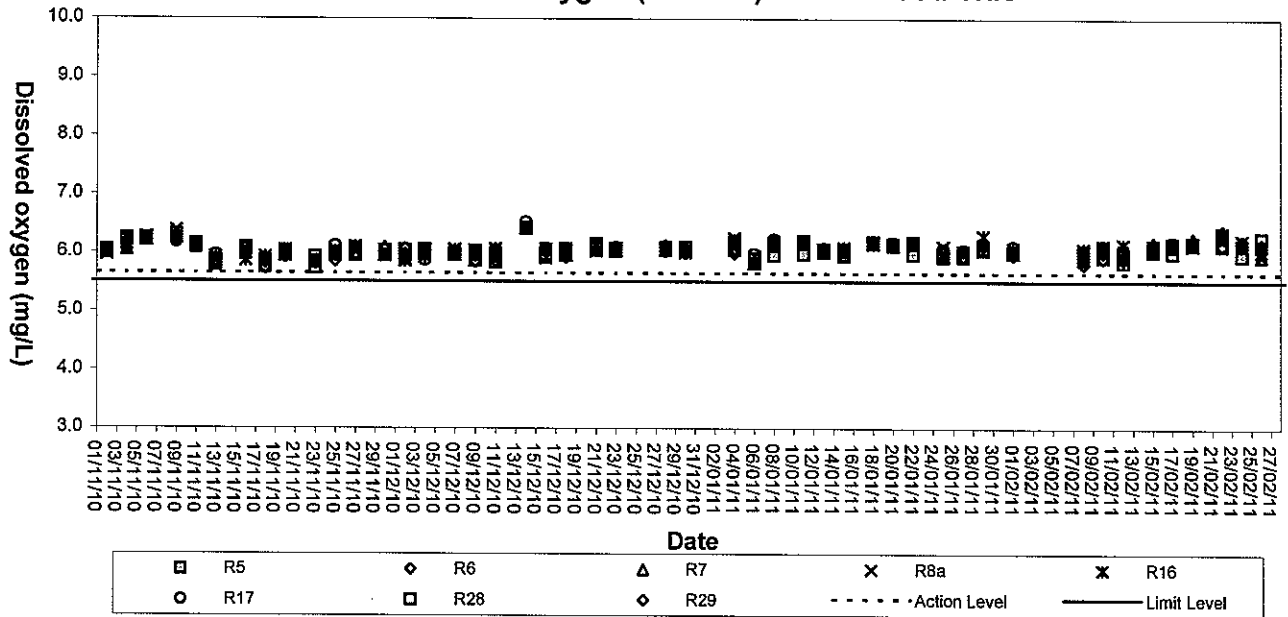


## Appendix C3

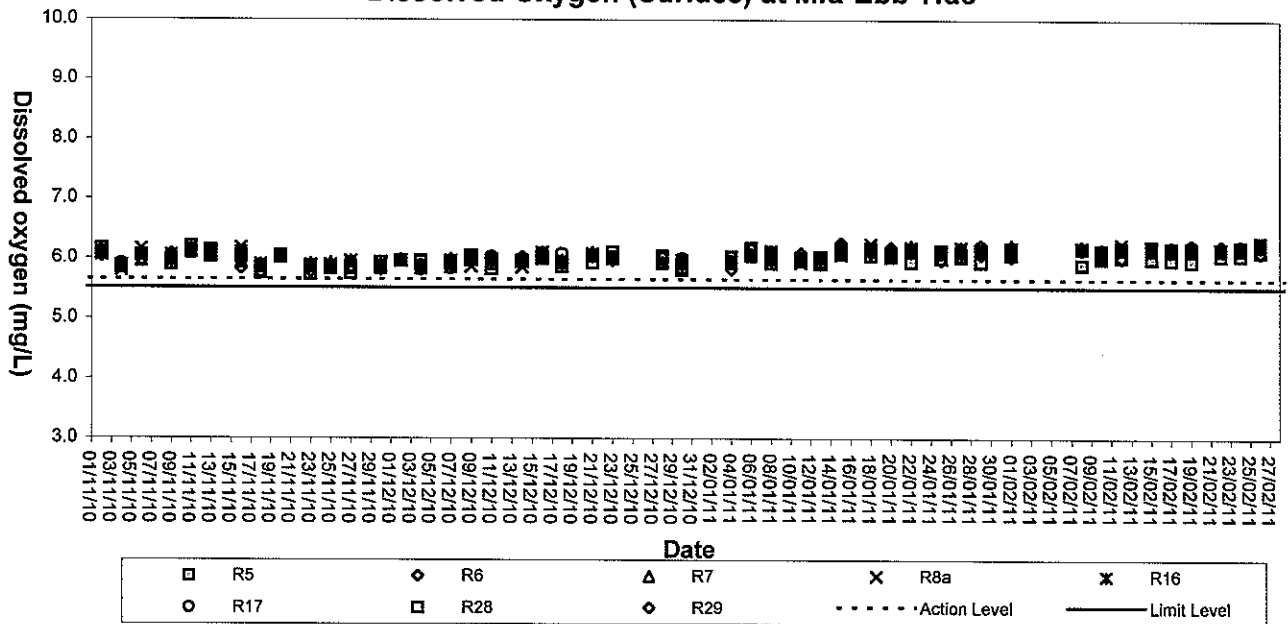
### Graphical Plots of Impact Water Quality Monitoring Data



### Dissolved Oxygen (Surface) at Mid-Flood Tide

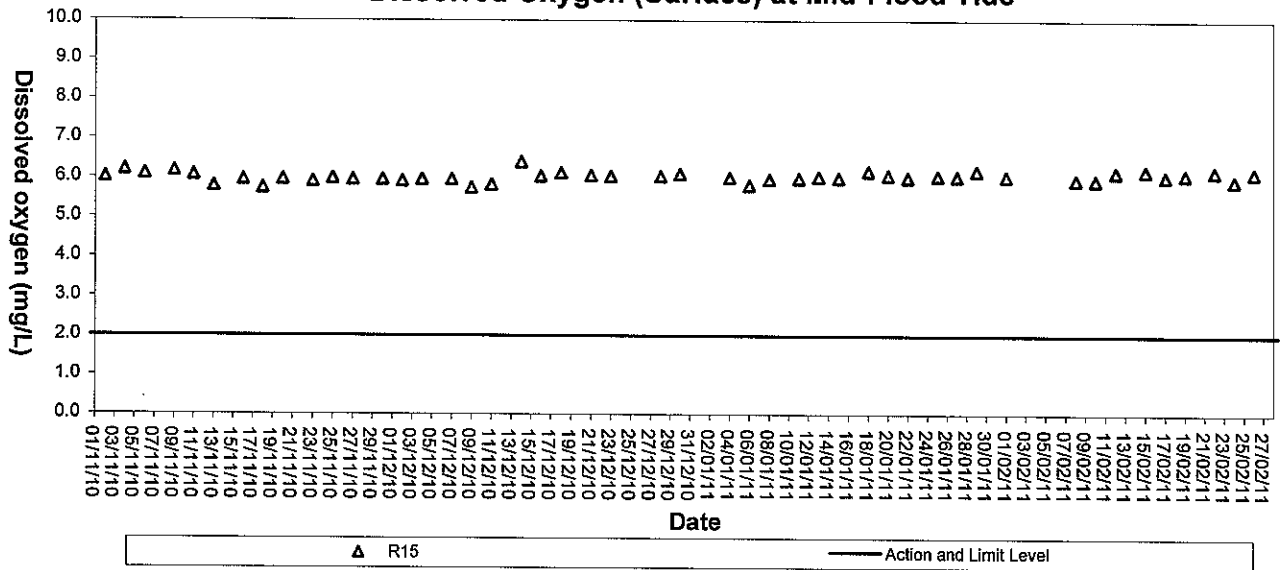


### Dissolved Oxygen (Surface) at Mid-Ebb Tide

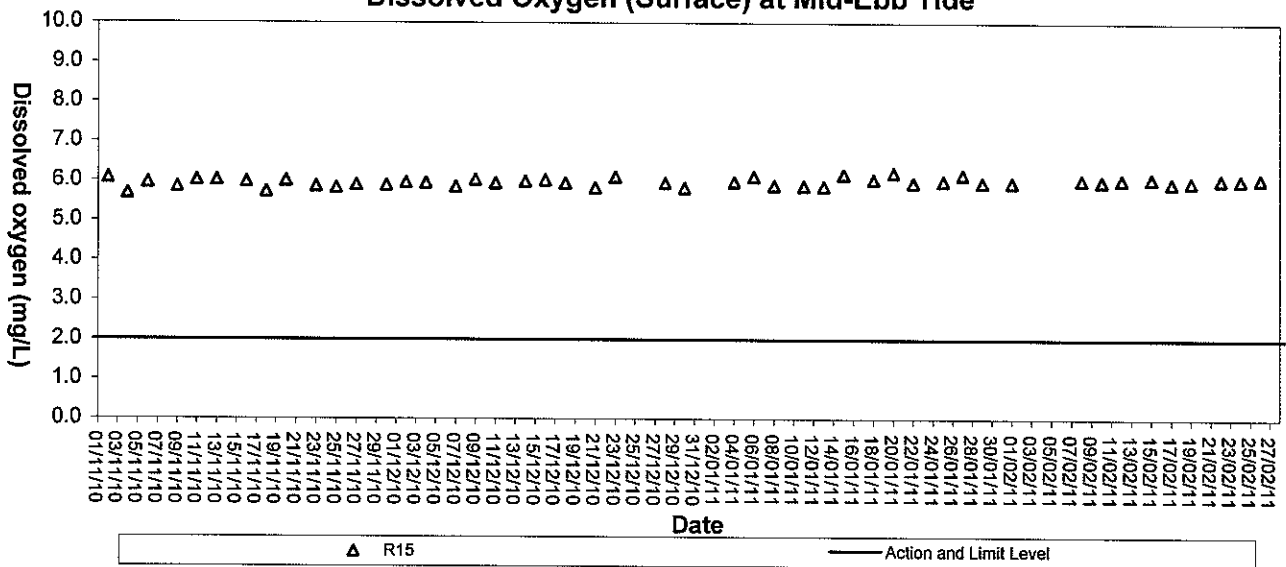




### Dissolved Oxygen (Surface) at Mid-Flood Tide



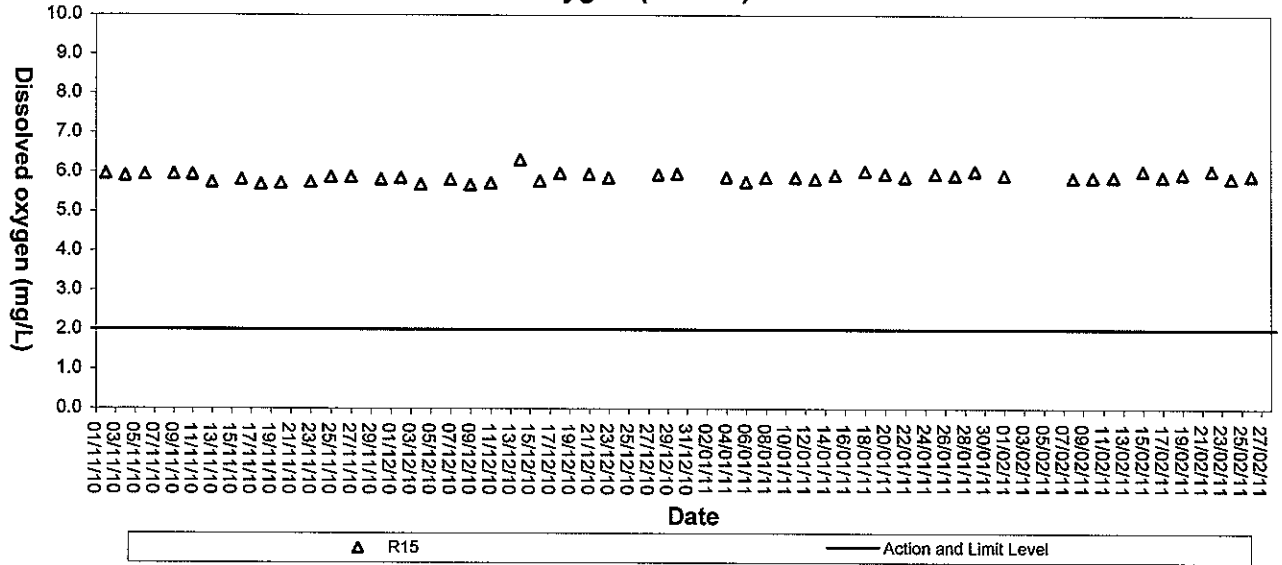
### Dissolved Oxygen (Surface) at Mid-Ebb Tide



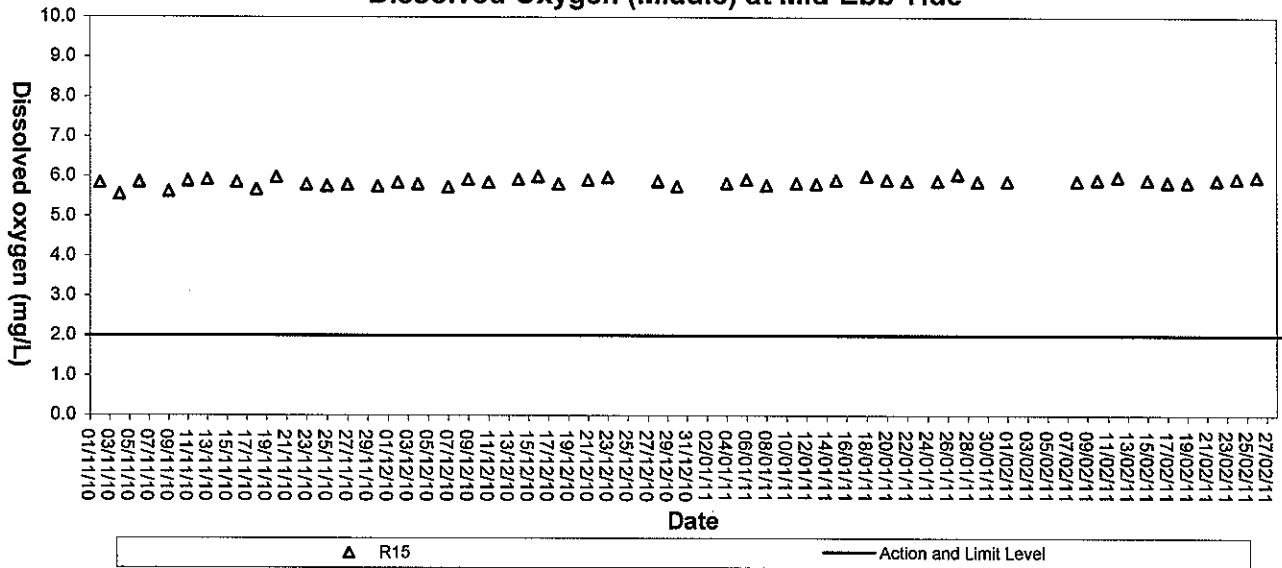




### Dissolved Oxygen (Middle) at Mid-Flood Tide



### Dissolved Oxygen (Middle) at Mid-Ebb Tide

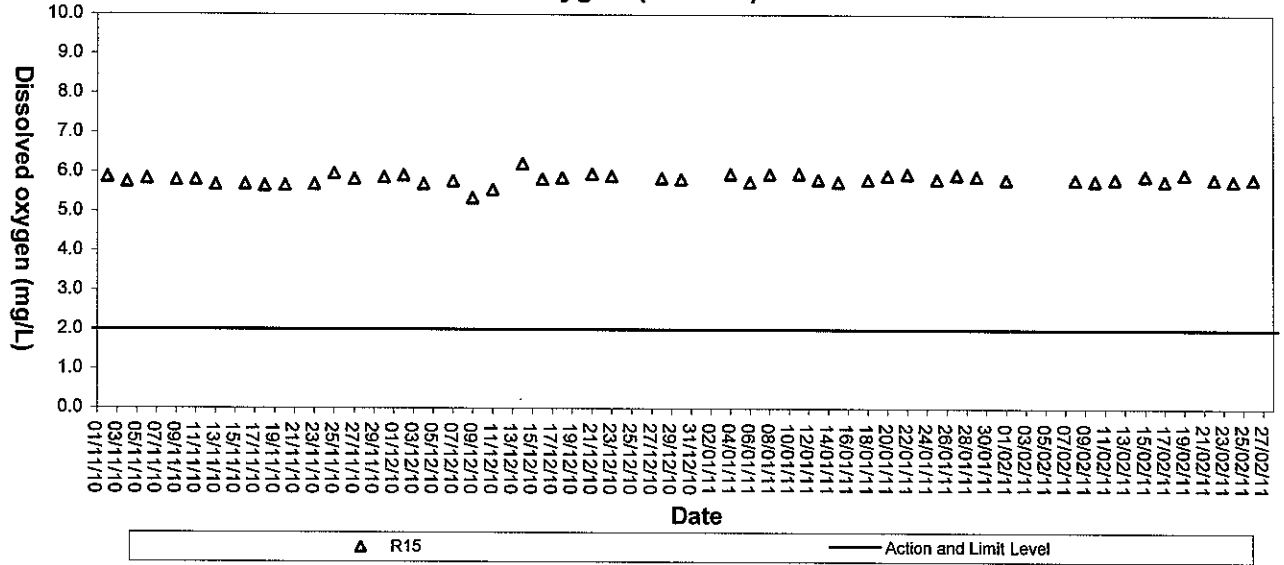




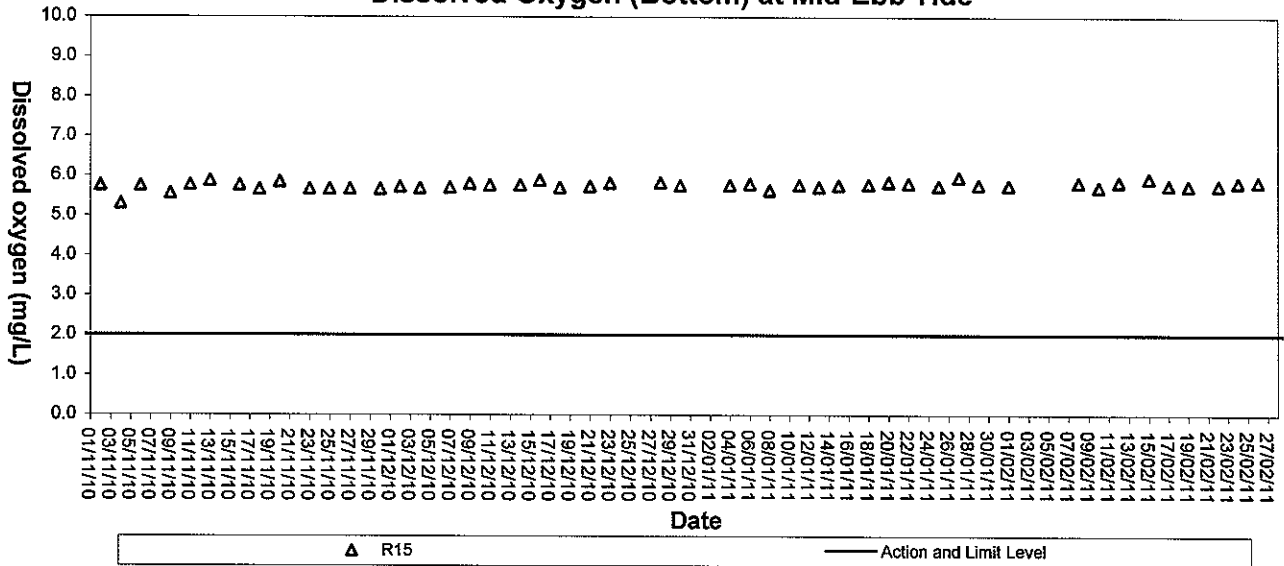




### Dissolved Oxygen (Bottom) at Mid-Flood Tide

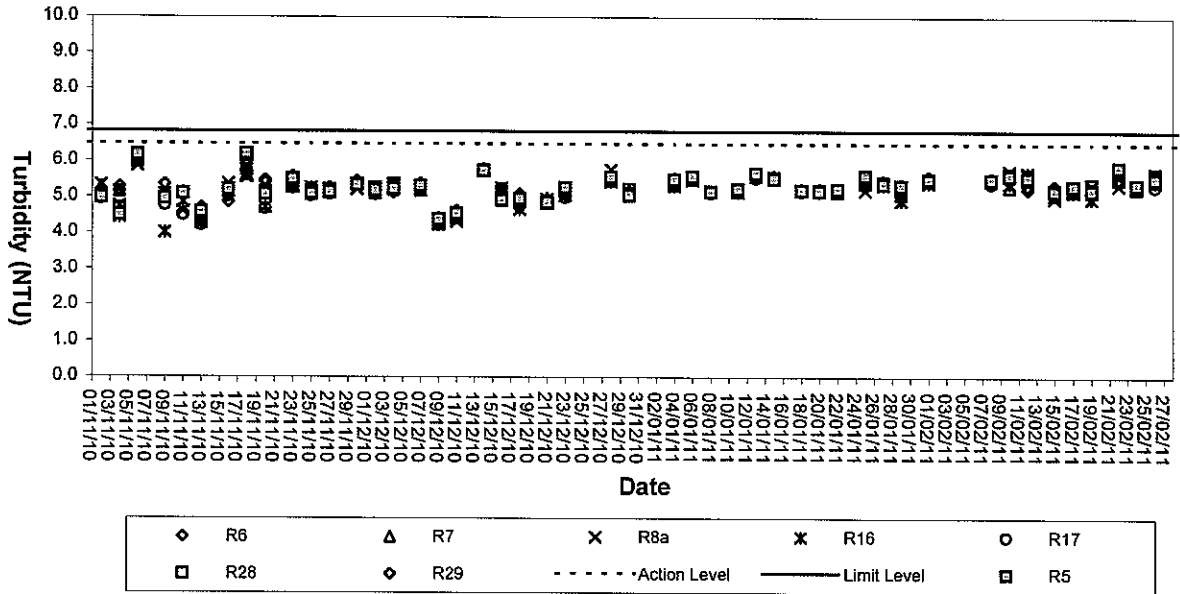


### Dissolved Oxygen (Bottom) at Mid-Ebb Tide

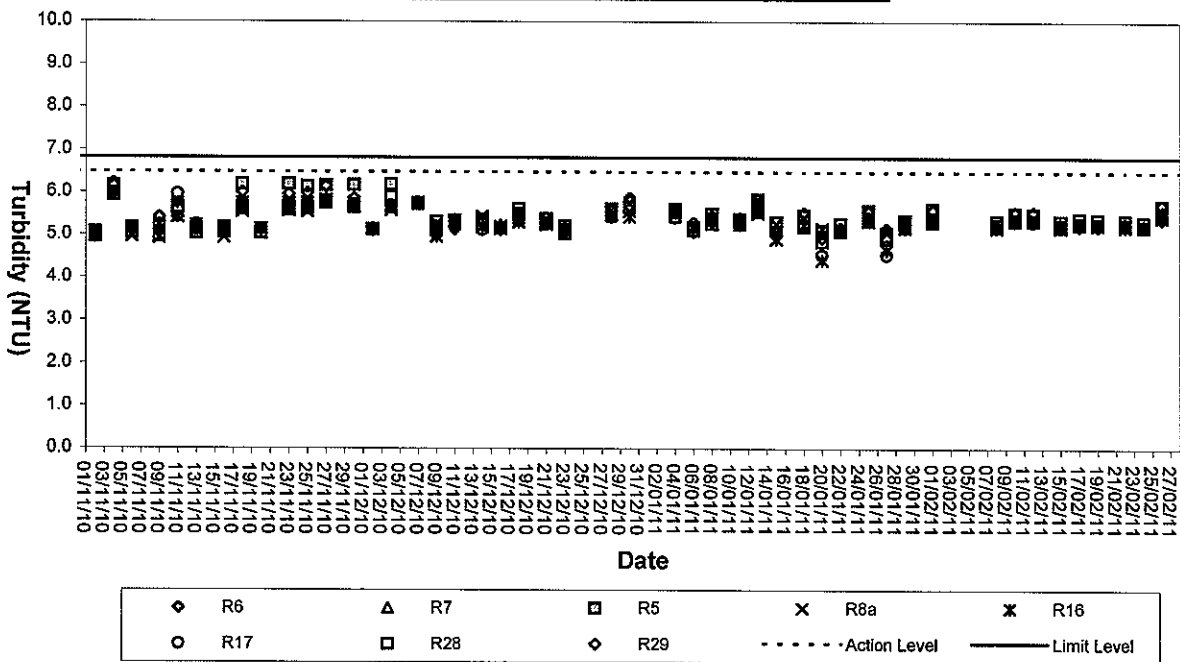




**Turbidity (Depth-average) at Mid-Flood Tide**

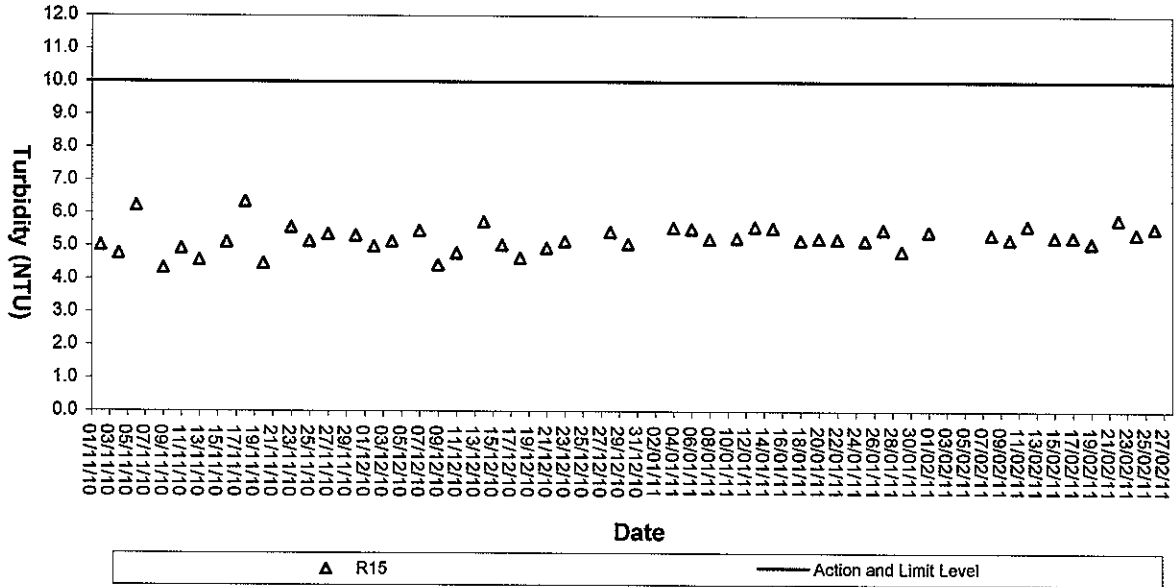


**Turbidity (Depth-average) at Mid-Ebb Tide**

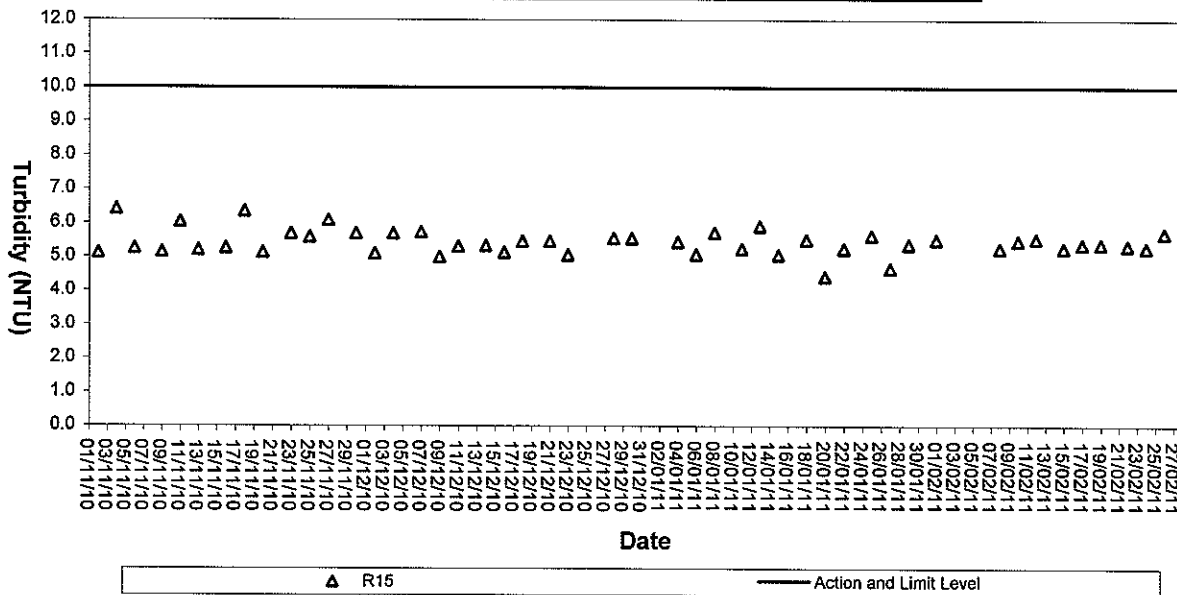




### Turbidity (Depth-average) of R15 at Mid-Flood Tide

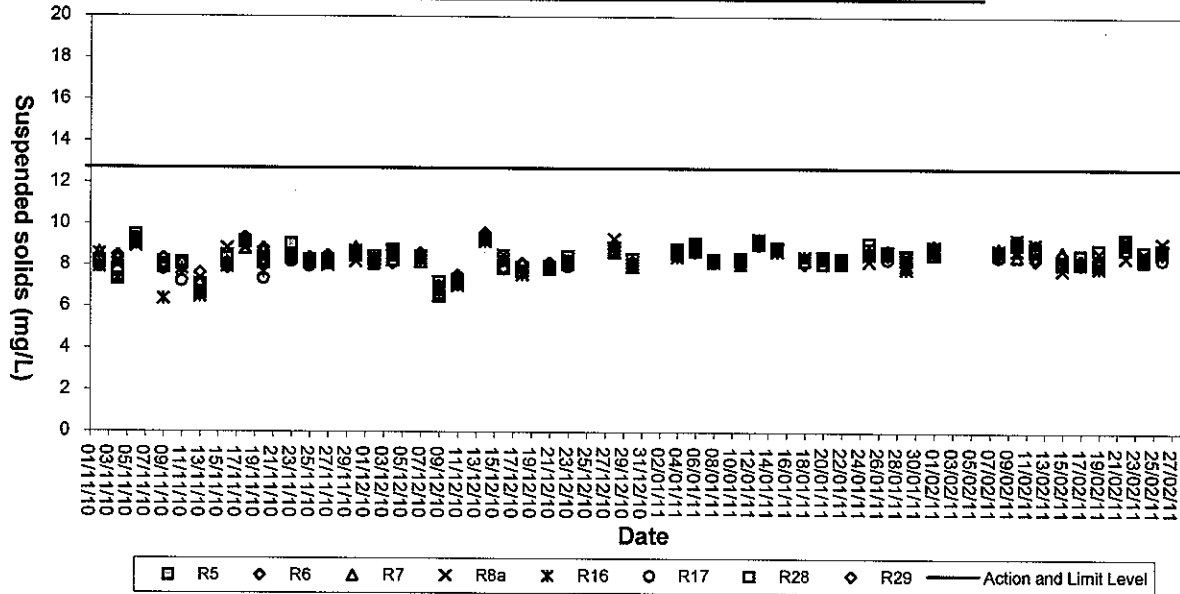


### Turbidity (Depth-average) of R15 at Mid-Ebb Tide

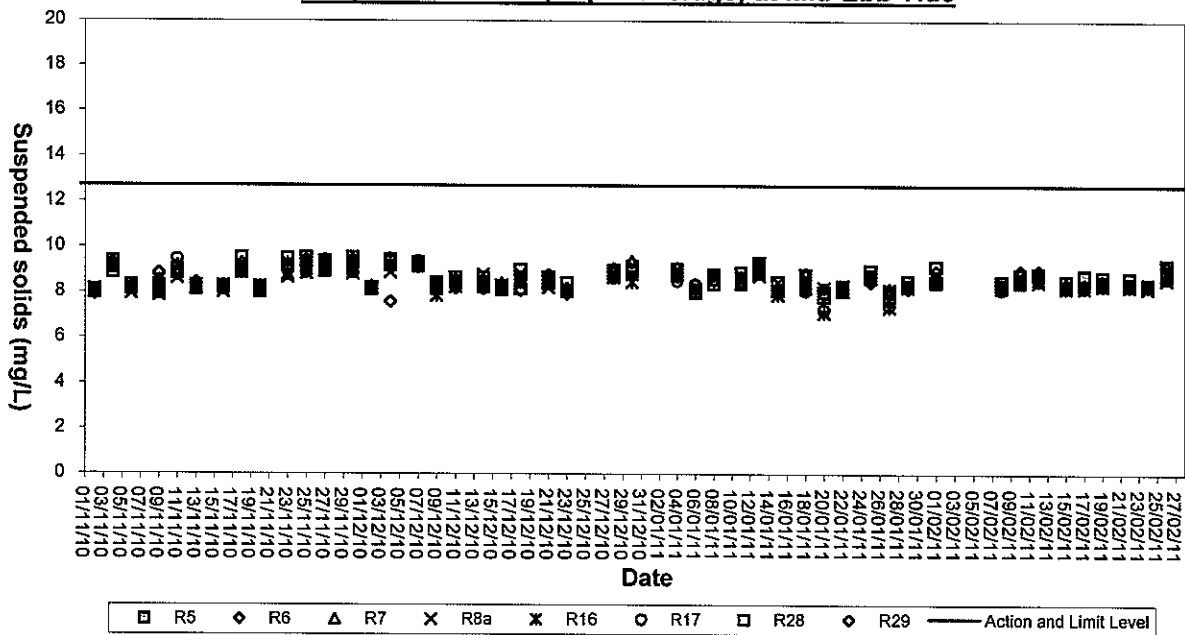




### Suspended solids (Depth-average) at Mid-Flood Tide

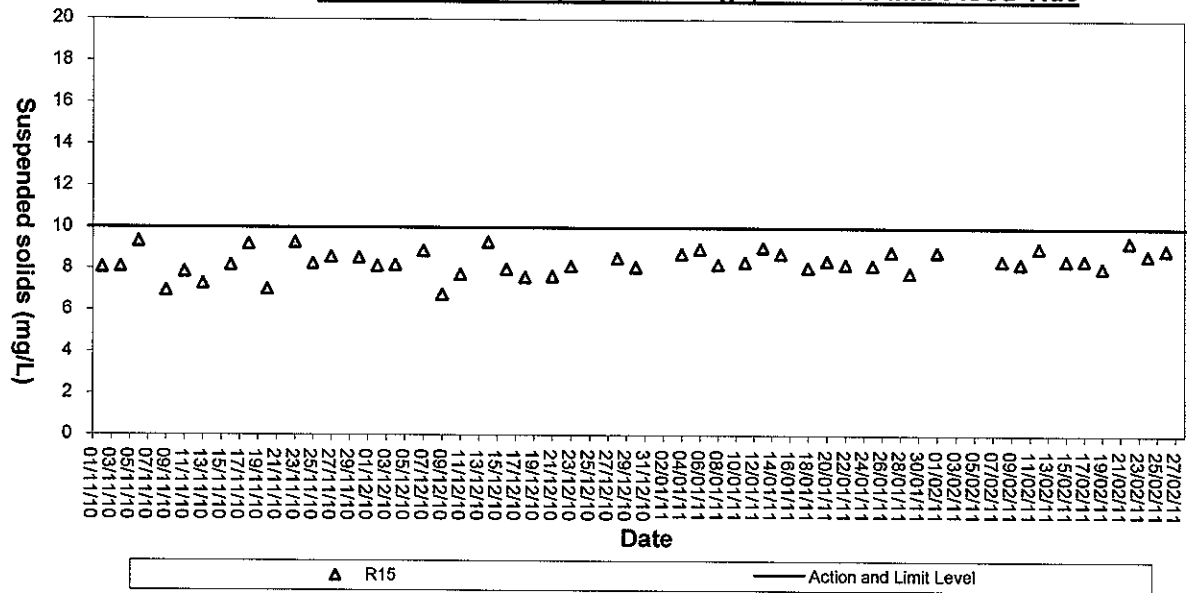


### Suspended Solids (Depth-average) at Mid-Ebb Tide

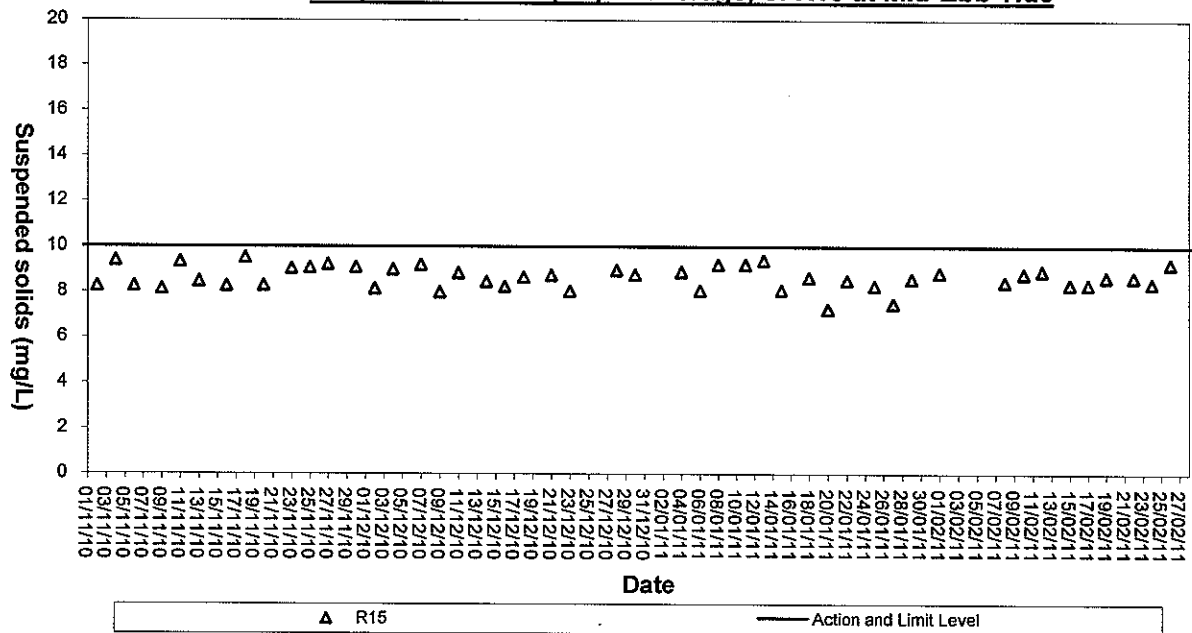




### Suspended solids (Depth-average) of R15 at Mid-Flood Tide



### 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 @
01/02/11	105.7	R5FS	3.6	R8FS	95.8
	96.7	R8FM	2.7	R17FM	98.1
	92.7	R17FB	2.9	C1FB	92.3
	104.8	C2FS	2.9	C4FB	105.8
	104.8	R5ES	2.8	R8ES	97.9
	94.2	R8EM	0.0	R17EM	95.8
	106.0	R17EB	2.8	C1EB	95.9
	95.3	C2ES	2.4	C4EB	108.2
08/02/11	106.0	R5FS	3.0	R8FS	97.9
	98.7	R8FM	2.8	R17FM	106.3
	96.6	R17FB	0.0	C1FB	96.1
	103.3	C2FS	2.9	C4FB	96.2
	105.2	R5ES	0.0	R8ES	119.1
	103.8	R8EM	0.0	R17EM	103.9
	95.6	R17EB	3.1	C1EB	107.5
	106.4	C2ES	6.1	C4EB	93.9
10/02/11	97.9	R5FS	2.7	R8FS	91.7
	93.3	R8FM	2.7	R17FM	101.9
	96.0	R17FB	0.0	C1FB	100.0
	101.2	C2FS	3.1	C4FB	94.0
	97.3	R5ES	2.9	R8ES	105.8
	95.7	R8EM	2.8	R17EM	103.8
	94.9	R17EB	0.0	C1EB	101.9
	98.1	C2ES	2.9	C4EB	104.1
12/02/11	103.5	R5FS	0.0	R8FS	90.0
	106.9	R8FM	2.7	R17FM	102.0
	95.2	R17FB	2.7	C1FB	102.0
	103.9	C2FS	3.1	C4FB	106.4
	104.8	R5ES	3.0	R8ES	98.0
	103.5	R8EM	0.0	R17EM	94.0
	102.0	R17EB	2.7	C1EB	94.1
	104.5	C2ES	3.1	C4EB	93.8
15/02/11	100.9	R5FS	3.0	R8FS	92.5
	93.8	R8FM	3.3	R17FM	94.0
	95.1	R17FB	0.0	C1FB	96.2
	104.1	C2FS	0.0	C4FB	106.3
	103.5	R5ES	3.1	R8ES	98.0
	106.5	R8EM	3.0	R17EM	98.1
	104.8	R17EB	0.0	C1EB	108.2
	99.4	C2ES	3.1	C4EB	104.0
17/02/11	102.6	R5FS	3.1	R8FS	98.0
	103.3	R8FM	3.0	R17FM	92.3
	97.1	R17FB	0.0	C1FB	102.0
	105.9	C2FS	3.2	C4FB	105.9
	102.1	R5ES	3.0	R8ES	86.8
	106.6	R8EM	3.0	R17EM	98.0
	99.8	R17EB	2.9	C1EB	93.8
	98.4	C2ES	3.0	C4EB	100.0

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 @
19/02/11	105.1	R5FS	3.0	R8FS	87.8
	103.1	R8FM	3.1	R17FM	97.9
	104.1	R17FB	0.0	C1FB	95.8
	101.7	C2FS	3.0	C4FB	96.2
	96.1	R5ES	3.0	R8ES	94.1
	102.4	R8EM	3.1	R17EM	104.0
	96.7	R17EB	2.9	C1EB	94.0
	100.7	C2ES	3.1	C4EB	93.8
22/02/11	92.2	R5FS	2.7	R8FS	100.0
	98.8	R8FM	3.0	R17FM	104.2
	98.9	R17FB	2.7	C1FB	102.1
	104.1	C2FS	3.1	C4FB	92.0
	98.6	R5ES	3.0	R8ES	95.9
	99.0	R8EM	0.0	R17EM	114.6
	95.6	R17EB	2.9	C1EB	105.9
	95.8	C2ES	2.7	C4EB	103.4
24/02/11	98.8	R5FS	3.0	R8FS	100.0
	94.1	R8FM	2.9	R17FM	103.8
	102.0	R17FB	0.0	C1FB	104.3
	98.6	C2FS	3.2	C4FB	97.9
	97.3	R5ES	3.1	R8ES	92.3
	96.3	R8EM	0.0	R17EM	103.8
	96.9	R17EB	2.9	C1EB	100.0
	97.5	C2ES	2.5	C4EB	102.0
26/02/11	99.0	R5FS	0.0	R8FS	86.5
	105.5	R8FM	2.7	R17FM	101.9
	96.7	R17FB	0.0	C1FB	94.0
	102.3	C2FS	3.0	C4FB	106.0
	97.4	R5ES	2.7	R8ES	95.9
	98.6	R8EM	2.9	R17EM	106.3
	100.4	R17EB	2.7	C1EB	104.0
	102.9	C2ES	3.0	C4EB	90.6

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



## Event and Action Plan for Water Quality for Construction Phase

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



## Event and Action Plan for Water Quality for Construction Phase

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



## **Appendix E**

### **Work Programme**

Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Free Float	2011												
								JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
General Information																				
Key Dates			1158	07SEP09 A	05NOV12	07SEP09 A	05NOV12	0	Commencement Date											
KD-1010	Contract Commencement Date	0	07SEP09 A	05NOV12	07SEP09 A	05NOV12	0													
KD-1020	Contract Completion	0	07SEP09 A	05NOV12	07SEP09 A	05NOV12	0													
KD-1030	Works Period of Section 1 Works (791Days)	830	07SEP09 A	15DEC11	07SEP09 A	15DEC11	0													
KD-1040	Works Period of Section 2 Works (426Days)	449	07SEP09 A	29NOV10	07SEP09 A	29NOV10	0	Works Period of Section 2 Works (426Days)												
KD-1050	Works Period of Section 4 Works (549Days)	576	07SEP09 A	05APR11	07SEP09 A	05APR11	0	Works Period of Section 4 Works (549Days)												
KD-1060	Works Period of Section 5 Works (1166Days)	1158	07SEP09 A	05NOV12	07SEP09 A	05NOV12	0													
+Remarks																				
Section 1																				
Land Works																				
General																				
S1-1010	Approval & Consent - XP, TTA, MS & Temp Works.	180	07SEP09 A	05MAR10	07SEP09 A	05MAR10	13d	11d												
S1-1020	Trial Pit & Utilities Detection (Except E2 & K)	120	01DEC09 A	16MAR10	01DEC09 A	17MAR10	1d	0												
S1-1030	Portion H2 Cycle Track & Footpath Proposal	40	07SEP09 A	08OCT09 A	07SEP09 A	08OCT09 A														
S1-1040	Portion H2 Diversion Route For Cycle Track	60	07OCT09 A	28NOV09 A	07OCT09 A	28NOV09 A														
S1-1050	Portion H2 Submission For Hearing Mural Design	90	07SEP09 A	17FEB10	07SEP09 A	06OCT12	982d	0												
S1-1060	Portion H2 Set Up For Hearing Approved Design	30	18FEB10	19MAR10	07OCT12	05NOV12	992d	892d												
S1-1080	Initial & Utilities Survey (Except E2 & K)	120	05OCT09 A	04MAR10	05OCT09 A	06MAR10	2d	0												
S1-2010	Final Pipe Testing & Reinstatement	45	21SEP11	04NOV11	23SEP11	05NOV11	2d	2d												
S1-2020	Completion of Section 1 Works	0	06NOV11	06NOV11	06NOV11	06NOV11	0	0												
Portion C1																				
S1-3010	MTRCL Consent For Works Commencement	180	07SEP09 A	05MAR10	07SEP09 A	05MAR10	1d	0												
S1-3020	MTRCL Structure Stability Monitoring	270	15MAY10	08FEB11	13DEC10	08SEP11	212d	0												
S1-3030	Portion C1 Pipe Works CH195.0-237.5 (C)	90	24JUN10	21SEP10	21FEB11	21MAY11	242d	70d												
S1-3030A10	Preparation & Submission of Risk Assessment	40	22FEB10	02APR10	07OCT10	15NOV10	227d	0												
S1-3030A20	Preparation & Submission of Method Statement	40	22FEB10	02APR10	07OCT10	15NOV10	227d	0												
S1-3030A30	Preparation & Submission of Temp. Design	80	28MAY10	15AUG10	16NOV10	03FEB11	172d	0												
S1-3030B20	Pipe Laying & Welding	50	17JUL10	04SEP10	05JAN11	23FEB11	172d	0												
S1-3030B30	Backfilling & Reinstatement	10	05SEP10	14SEP10	24FEB11	05MAR11	172d	0												
S1-3040	Portion C1 Trough Construction CH237.5-290.0	60	09MAR10	04MAY10	07MAR10	05MAY10	1d	0												
S1-3040A30	Preparation & Submission Of Risk Assessment	28	17JUL10	13AUG10	17FEB11	16MAR11	215d	0												
S1-3040A40	Preparation & Submission Of Method Statement	28	17JUL10	13AUG10	17FEB11	16MAR11	215d	0												
S1-3040B10	Installation Of Settlement Marker	3	31JUL10	02AUG10	03MAR11	20MAR11	172d	0												
S1-3040B20	Excavation & Shoring For Trough (Stage 1)	15	15SEP10	29SEP10	06MAR11	20MAR11	172d	0												
S1-3040B30	Formwork & Reinforcement For Trough	3	30SEP10	02OCT10	21MAR11	23MAR11	172d	0												
S1-3040B40	Formwork & Reinforcement For Trough	10	03OCT10	15OCT10	24MAR11	23MAR11	172d	0												
S1-3040B50	Concrete Surround For Installed Watermain	15	16OCT10	30OCT10	06APR11	20APR11	172d	0												
S1-3050	Portion C1 Pipe Works CH237.5-290 (PT)	50	05MAY10	23JUN10	13NOV10	01JAN11	192d	0												
S1-3050B10	Pipe Laying & Connection (Welding)	10	31OCT10	19NOV10	21APR11	30APR11	172d	0												
S1-3050B30	Concrete Surround for installed Watermain	6	10NOV10	16NOV10	01MAY11	17MAY11	172d	0												
S1-3050B40	Backfilling & Reinstatement	5	16NOV10	20NOV10	07MAY11	11MAY11	172d	0												
S1-3060	Portion C1 Pipe Works CH290.0-325.5 (C)	70	01DEC10	08FEB11	23MAY11	21MAY11	172d	0												
S1-3070	Area C1 Portional Pipe Testing	14	09FEB11	23FEB11	09SEP11	23SEP11	212d	210d												

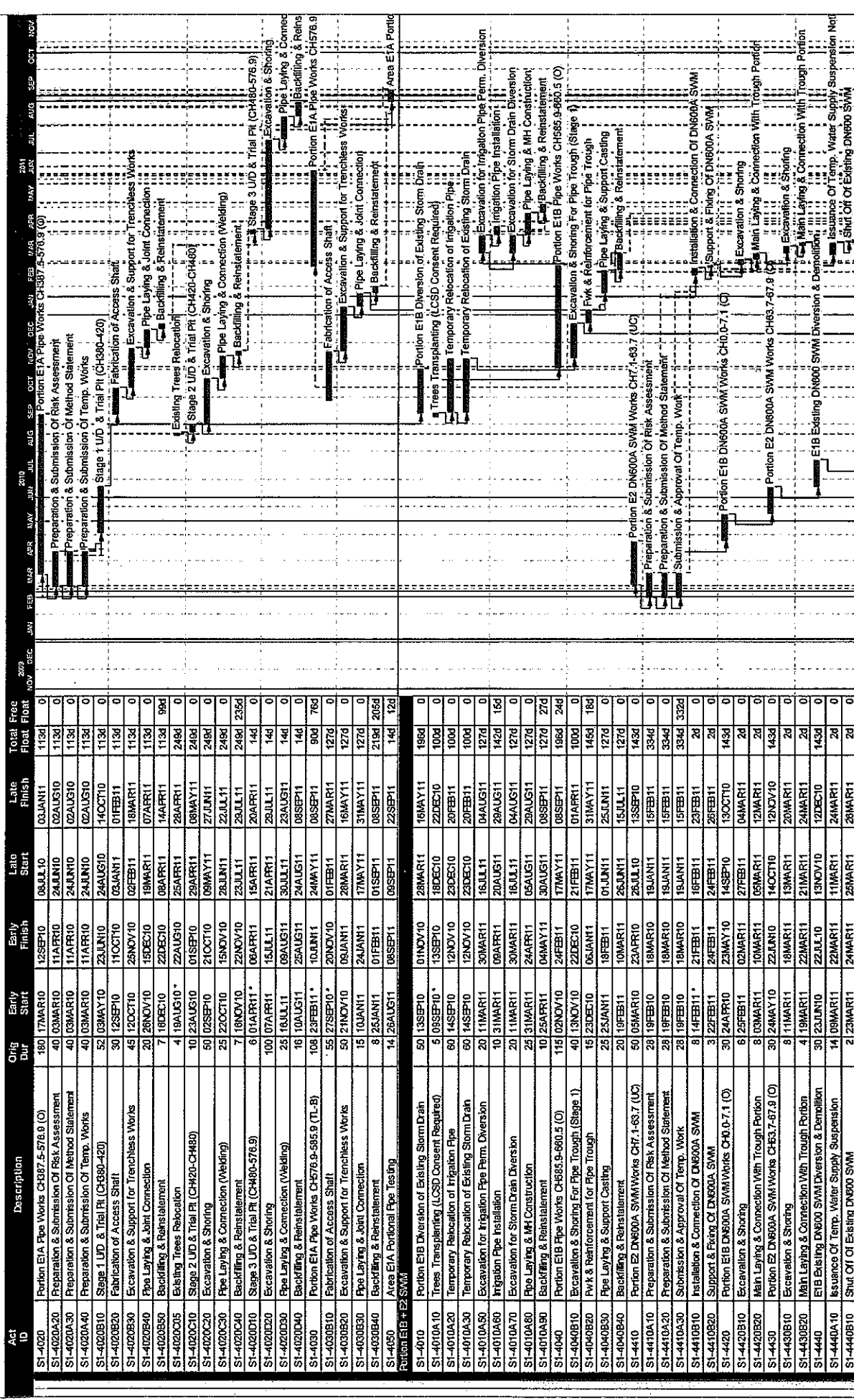
Start date: 07SEP09  
Finish date: 05NOV12  
Run date: 04JAN10  
Page number: 1A

3 Months Rolling Program (February 2011)

Wo Hing - Penta-Ocean Joint Venture

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

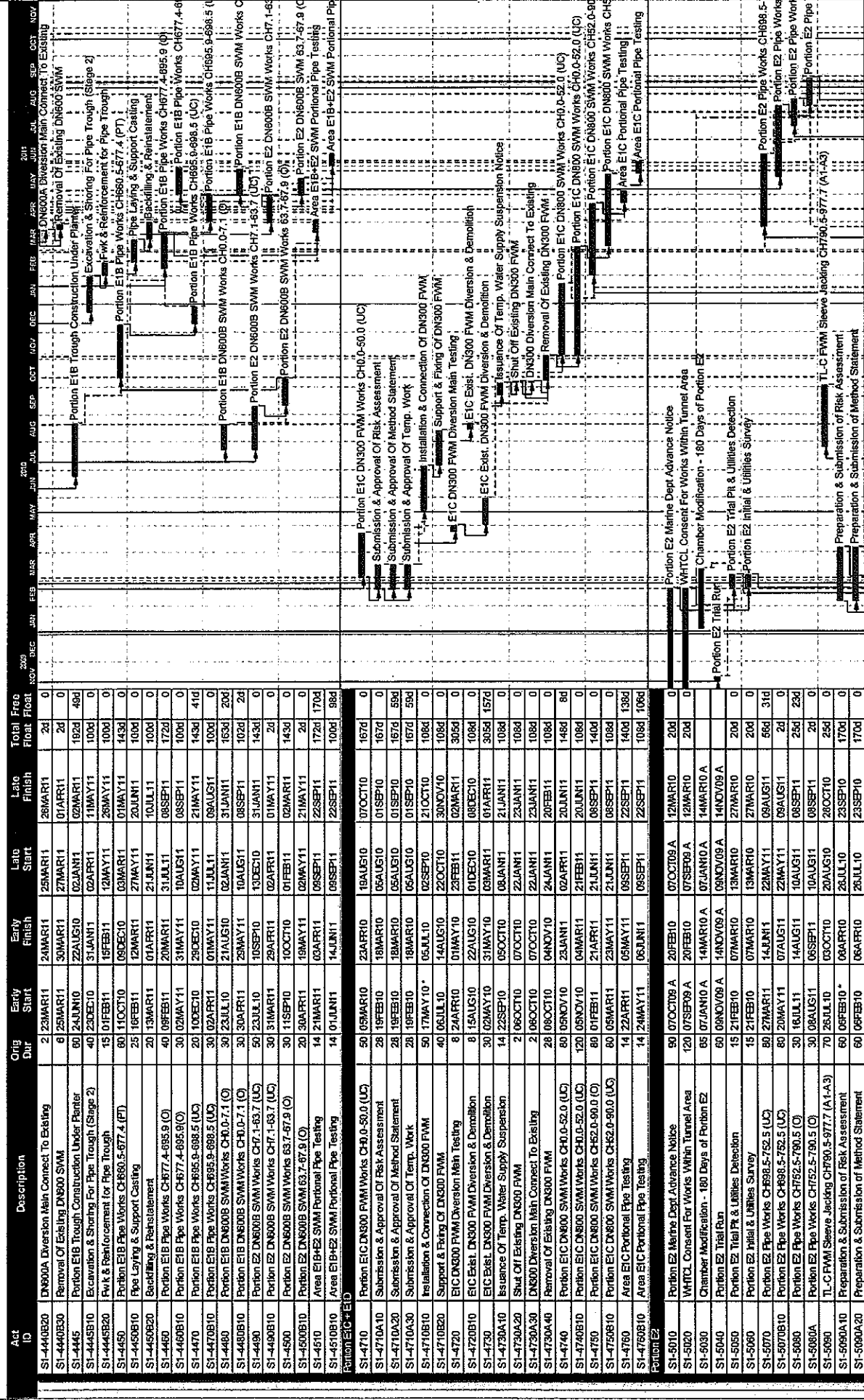


Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float	Float	Free Float
SI-4020	Portion E1A Pipe Works CH307-576.9 (O)	180	17MAR10	12SEP10	08JUL10	03JAN11	1132	0	0
SI-4020A20	Preparation & Submission Of Risk Assessment	40	03MAR10	11AFR10	24JUN10	02AUG10	1132	0	0
SI-4020A30	Preparation & Submission Of Method Statement	40	03MAR10	11AFR10	24JUN10	02AUG10	1132	0	0
SI-4020A40	Preparation & Submission Of Temp. Works	40	03MAR10	11AFR10	24JUN10	02AUG10	1132	0	0
SI-4020B10	Stage 1 UD & Trial Pit (CH360-420)	52	03MAY10	23JUN10	04AUG10	14OCT10	1132	0	0
SI-4020B20	Fabrication of Access Shaft	30	12SEP10	11OCT10	03JAN11	14OCT10	1132	0	0
SI-4020B30	Excavation & Support for Trenchless Works	45	12OCT10	25NOV10	02FEB11	18MAR11	1132	0	0
SI-4020B40	Pipe Laying & Joint Connection	20	26NOV10	15DEC10	18MAR11	07AFR11	1132	0	0
SI-4020B50	Backfilling & Reinstatement	7	18DEC10	22DEC10	08APR11	14APR11	1132	984	0
SI-4020C05	Existing Trees Relocation	4	18AUG10	22AUG10	25APR11	28APR11	2498	0	0
SI-4020C10	Stage 2 UD & Trial Pit (CH420-CH480)	10	23AUG10	01SEP10	29APR11	09MAY11	2498	0	0
SI-4020C20	Excavation & Shoring	50	02SEP10	21OCT10	09MAY11	27JUN11	2498	0	0
SI-4020C30	Pipe Laying & Connection (Welding)	25	22OCT10	15NOV10	28JUN11	22JUL11	2498	0	0
SI-4020C40	Backfilling & Reinstatement	7	18NOV10	23JUL11	28JUL11	2498	2356	0	0
SI-4020D10	Stage 3 UD & Trial Pit (CH480-576.9)	6	01AFR11	06APR11	15AFR11	20APR11	144	0	0
SI-4020D20	Excavation & Shoring	100	07AFR11	15JUL11	21APR11	29JUL11	144	0	0
SI-4020D30	Pipe Laying & Connection (Welding)	25	18JUL11	08AUG11	30JUL11	29AUG11	144	0	0
SI-4020D40	Backfilling & Reinstatement	16	10AUG11	25AUG11	24AUG11	08SEP11	144	0	0
SI-4030	Portion E1A Pipe Works CH576.9-865.9 (TL-B)	108	23FEB11	10JUN11	24MAY11	08SEP11	900	760	0
SI-4030B10	Fabrication of Access Shaft	55	27SEP10	20NOV10	01FEB11	27MAR11	1276	0	0
SI-4030B20	Excavation & Support for Trenchless Works	50	21NOV10	06JAN11	28MAR11	16MAY11	1276	0	0
SI-4030B30	Pipe Laying & Joint Connection	15	10JAN11	24JAN11	17MAY11	31MAY11	1276	0	0
SI-4030B40	Backfilling & Reinstatement	8	25JAN11	01FEB11	08SEP11	08SEP11	2198	2052	0
SI-4050	Area E1A Portion E1A Pipe Works	14	26AUG11	08SEP11	08SEP11	23SEP11	144	124	0
SI-4010	Portion E1B Diversion of Existing Storm Drain	50	13SEP10	01NOV10	28MAR11	19MAY11	1956	0	0
SI-4010A10	Trees Transplanting (LCSD Consent Required)	5	09SEP10	13SEP10	18DEC10	20DEC10	1004	0	0
SI-4010A20	Temporary Relocation of Irrigation Pipe	60	14SEP10	12NOV10	23DEC10	20FEB11	1000	0	0
SI-4010A30	Temporary Relocation of Existing Storm Drain	20	14SEP10	12NOV10	23DEC10	20FEB11	1000	0	0
SI-4010A40	Excavation for Irrigation Pipe Perm. Diversion	20	11MAR11	30MAR11	16JUL11	04AUG11	1276	0	0
SI-4010A50	Irrigation Pipe Installation	10	31MAR11	09APR11	20AUG11	29AUG11	1420	152	0
SI-4010A60	Excavation for Storm Drain Diversion	25	31MAR11	24APR11	05AUG11	28AUG11	1276	0	0
SI-4010A70	Pipe Laying & MH Construction	10	23APR11	04MAY11	30AUG11	08SEP11	1276	276	0
SI-4010A80	Backfilling & Reinstatement	115	02NOV10	24FEB11	17MAY11	08SEP11	1956	248	0
SI-4040	Portion E1B Pipe Works CH585.9-860.5 (O)	40	13NOV10	22DEC10	21FEB11	01APR11	1000	0	0
SI-4040B10	Excavation & Shoring for Pipe Trough (Stage 1)	15	23DEC10	06JAN11	17MAY11	31MAY11	1456	186	0
SI-4040B20	PWK & Reinforcement for Pipe Trough	25	25JAN11	18FEB11	01JUN11	25JUN11	1276	0	0
SI-4040B30	Pipe Laying & Support Casing	20	19FEB11	10MAR11	26JUN11	15JUL11	1276	0	0
SI-4040B40	Backfilling & Reinstatement	50	09MAR11	23APR10	18APR11	13SEP10	1432	0	0
SI-4410	Portion E2 DN600A SWM Works CH7-1-63.7 (UC)	28	19FEB10	18MAR10	18JAN11	19FEB11	3344	0	0
SI-4410A20	Preparation & Submission Of Risk Assessment	28	19FEB10	18MAR10	18JAN11	19FEB11	3344	0	0
SI-4410A30	Preparation & Submission Of Method Statement	28	19FEB10	18MAR10	18JAN11	19FEB11	3344	0	0
SI-4410B10	Installation & Connection Of DN600A SWM	8	14FEB11	21FEB11	16FEB11	23FEB11	28	0	0
SI-4410B20	Support & Fixing Of DN600A SWM	3	22FEB11	24FEB11	24FEB11	26FEB11	28	0	0
SI-4420	Portion E1B DN600A SWM Works CH0-D-7.1 (O)	30	24APR10	23MAY10	14SEP10	19OCT10	1432	0	0
SI-4420B10	Excavation & Shoring	6	25FEB11	02MAR11	27FEB11	04MAR11	28	0	0
SI-4420B20	Main Laying & Connection With Trough Portion	8	03MAR11	10MAR11	05MAR11	12MAR11	28	0	0
SI-4430	Portion E2 DN600A SWM Works CH63.7-67.9 (O)	30	24MAY10	22JUN10	14OCT10	12NOV10	1432	0	0
SI-4430B10	Excavation & Shoring	8	11MAR11	18MAR11	20MAR11	20MAR11	28	0	0
SI-4430B20	Main Laying & Connection With Trough Portion	4	19MAR11	22MAR11	21MAR11	24MAR11	28	0	0
SI-4440	E1B Existing DN600 SWM Diversion & Demolition	30	23JUN10	22JUL10	13NOV10	12DEC10	1432	0	0
SI-4440A10	Issuance Of Temp. Water Supply Suspension Not	14	09MAR11	23MAR11	11MAR11	24MAR11	28	0	0
SI-4440B10	Shut Off Of Existing DN600 SWM	2	23MAR11	24MAR11	24MAR11	26MAR11	28	0	0

Start date 07SEP09  
 Finish date 06NOV12  
 Data date 04JAN10  
 Run date 09FEB11  
 Page number 2A  
 P. Primavera Systems, Inc.

3 Months Rolling Program (February 2011)

Wo Hing - Penta-Ocean Joint Venture



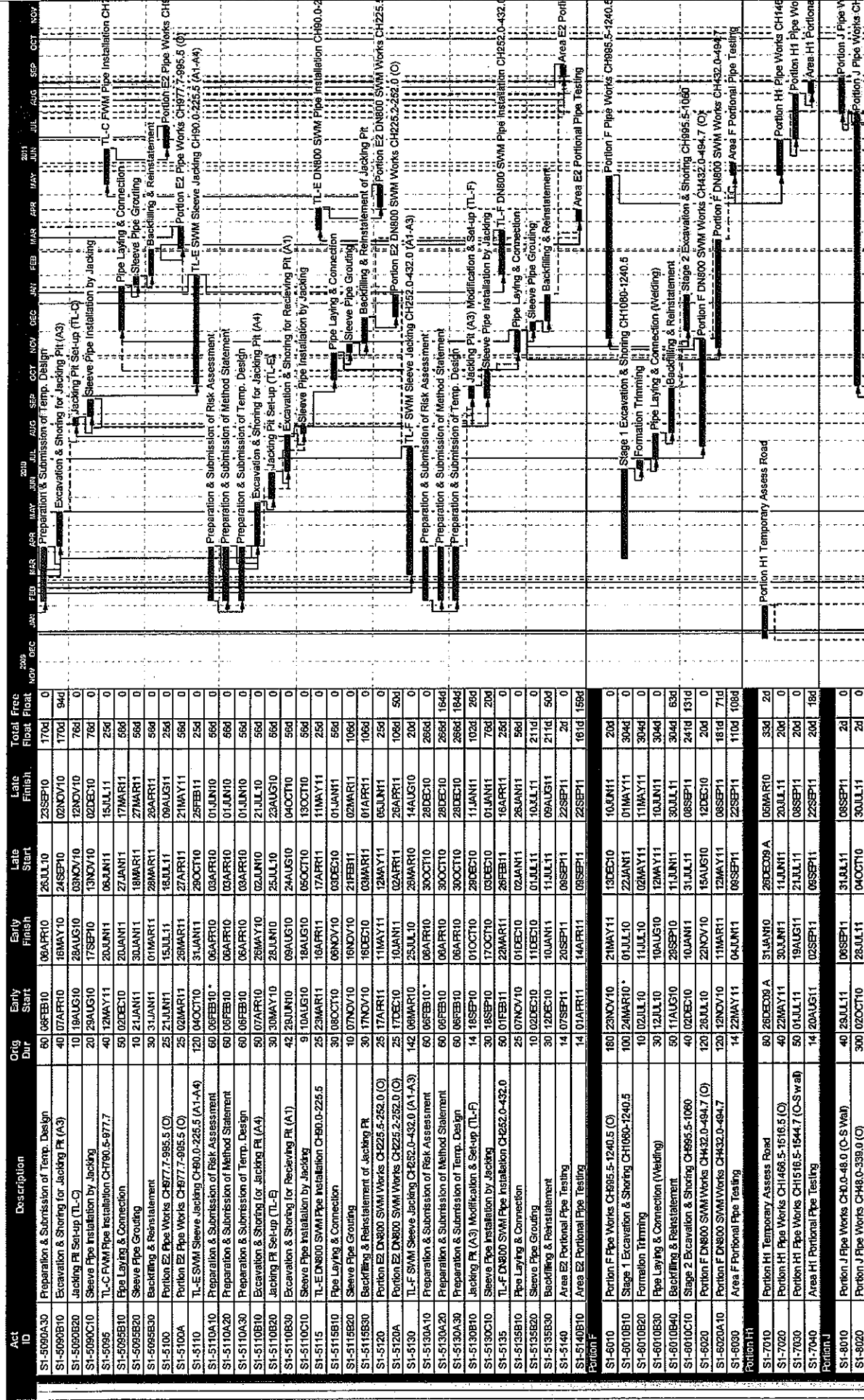
Legend:  
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 Progress bar  
 Critical bar  
 Summary bar  
 Start milestone point  
 Finish milestone point

**3 Months Rolling Program (February 2011)**

Start date: 07/SEP/09  
 Finish date: 05/NOV/12  
 Data date: 04/JAN/10  
 Run date: 09/FEB/11  
 Page number: 3A  
 C. Primavera Systems, Inc.



Contract No. GW5D08  
Laying of Western Cross Harbour Main & Associated Land Means from West Kowloon to Sai Ying Run



Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float	Float	Float
S1-5090A30	Preparation & Submission of Temp. Design	60	06FEB10	06APR10	26JUL10	23SEP10	170d	0	170d
S1-5090B10	Excavation & Shoring for Jacking Pit (A3)	40	07APR10	18MAY10	24SEP10	02NOV10	170d	94d	170d
S1-5090B20	Jacking Pit Set-up (TL-C)	10	19AUG10	28AUG10	03NOV10	12NOV10	76d	0	76d
S1-5090C10	Sleeve Pipe Installation by Jacking	20	29AUG10	17SEP10	13NOV10	02DEC10	76d	0	76d
S1-5095	TL-C FVM Pipe Installation CH790.5-977.7	40	12MAY11	20JUN11	06JUN11	15JUL11	25d	0	25d
S1-5095B10	Excavation & Shoring for Jacking Pit (A4)	50	02DEC10	20JAN11	27JAN11	17MAR11	96d	0	96d
S1-5095B20	Sleeve Pipe Grooving	10	21JAN11	30JAN11	18MAR11	27APR11	56d	0	56d
S1-5095B30	Backfilling & Reinstatement	30	31JAN11	01MAY11	18MAY11	27APR11	96d	0	96d
S1-5100	Portion E2 Pipe Works CH977.7-985.5 (O)	25	21JAN11	15JUL11	18JUL11	09AUG11	25d	0	25d
S1-5100A	Portion E2 Pipe Works CH977.7-985.5 (O)	25	02MAY11	28MAY11	27APR11	21MAY11	96d	0	96d
S1-5100B	TL-E Sleeve Jacking CH80.0-225.5 (A1-A4)	120	04OCT10	31JAN11	29OCT10	25FEB11	25d	0	25d
S1-5100C	Preparation & Submission of Risk Assessment	60	08FEB10	06APR10	03APR10	01JUN10	66d	0	66d
S1-5100A20	Preparation & Submission of Method Statement	60	08FEB10	06APR10	03APR10	01JUN10	66d	0	66d
S1-5100B10	Excavation & Shoring for Jacking Pit (A4)	60	06FEB10	06APR10	03APR10	01JUN10	66d	0	66d
S1-5100B20	Excavation & Shoring for Jacking Pit (A4)	60	07APR10	26MAY10	02JUN10	21JUL10	56d	0	56d
S1-5100B30	Jacking Pit Set-up (TL-E)	30	30MAY10	28JUN10	25JUL10	23AUG10	66d	0	66d
S1-5100B40	Excavation & Shoring for Receiving Pit (A1)	42	28JUN10	09AUG10	24AUG10	04OCT10	56d	0	56d
S1-5100C10	Sleeve Pipe Installation by Jacking	9	10AUG10	18AUG10	05OCT10	13OCT10	56d	0	56d
S1-5100C20	TL-E DN800 SWM Pipe Installation CH80.0-225.5	25	23MAY11	16APR11	17APR11	11MAY11	25d	0	25d
S1-5115B10	Pipe Laying & Connection	30	08OCT10	06NOV10	03DEC10	01JAN11	106d	0	106d
S1-5115B20	Sleeve Pipe Grooving	10	07NOV10	16NOV10	21FEB11	02MAR11	106d	0	106d
S1-5115B30	Backfilling & Reinstatement of Jacking Pit	30	17NOV10	16DEC10	03MAY11	01APR11	106d	0	106d
S1-5120A	Portion E2 DN800 SWM Works CH225.5-252.0 (O)	25	17APR11	11MAY11	12MAY11	05JUN11	25d	0	25d
S1-5120B	Portion E2 DN800 SWM Works CH225.5-252.0 (O)	25	17DEC10	10JAN11	02APR11	26APR11	106d	50d	106d
S1-5130A	TL-F SWM Sleeve Jacking CH252.0-432.0 (A1-A3)	142	08MAY10	25JUL10	28MAY10	14AUG10	20d	0	20d
S1-5130A10	Preparation & Submission of Risk Assessment	60	06FEB10	06APR10	30OCT10	28DEC10	266d	164d	266d
S1-5130A20	Preparation & Submission of Method Statement	60	06FEB10	06APR10	30OCT10	28DEC10	266d	164d	266d
S1-5130A30	Preparation & Submission of Temp. Design	60	08FEB10	06APR10	30OCT10	28DEC10	266d	164d	266d
S1-5130B10	Jacking Pit (A3) Modification & Set-up (TL-F)	14	18SEP10	17OCT10	09DEC10	11JAN11	102d	26d	102d
S1-5130C	TL-F DN800 SWM Pipe Installation CH252.0-432.0	50	01FEB11	22MAY11	28FEB11	16APR11	25d	0	25d
S1-5135B20	Pipe Laying & Connection	25	07NOV10	01DEC10	02JAN11	10JUL11	211d	0	211d
S1-5135B30	Sleeve Pipe Grooving	10	02DEC10	11DEC10	01JUL11	10JUL11	211d	0	211d
S1-5135B40	Backfilling & Reinstatement	30	12DEC10	10JAN11	11JUL11	09AUG11	211d	50d	211d
S1-5140	Area E2 Portional Pipe Testing	14	07SEP11	20SEP11	08SEP11	22SEP11	2d	0	2d
S1-5140B10	Area E2 Portional Pipe Testing	14	01APR11	14APR11	08SEP11	22SEP11	161d	158d	161d
Portion F									
S1-6010	Portion F Pipe Works CH895.5-1240.5 (O)	180	23NOV10	21MAY11	13DEC10	10JUN11	20d	0	20d
S1-6010B10	Stage 1 Excavation & Shoring CH1080-1240.5	100	24MAR10	01JUL10	22JAN11	01MAY11	304d	0	304d
S1-6010B20	Formation Trimming	10	02JUL10	11JUL10	02MAY11	11MAY11	304d	0	304d
S1-6010B30	Pipe Laying & Connection (Welding)	30	12JUL10	10AUG10	12MAY11	10JUN11	304d	0	304d
S1-6010B40	Backfilling & Reinstatement	50	11AUG10	28SEP10	11JUN11	30JUL11	304d	63d	304d
S1-6010C10	Stage 2 Excavation & Shoring CH965.5-1060	40	02DEC10	10JAN11	31JUL11	08SEP11	241d	131d	241d
S1-6020	Portion F DN800 SWM Works CH432.0-494.7 (O)	120	26JUL10	22NOV10	15AUG10	12DEC10	20d	0	20d
S1-6020A10	Portion F DN800 SWM Works CH432.0-494.7	120	12NOV10	11MAY11	12MAY11	08SEP11	161d	71d	161d
S1-6030	Area F Portional Pipe Testing	14	23MAY11	04JUN11	08SEP11	22SEP11	110d	108d	110d
Portion H1									
S1-7010	Portion H1 Temporary Access Road	80	26DEC09	31JAN10	26DEC09	06MAR10	35d	2d	35d
S1-7020	Portion H1 Pipe Works CH1468.5-1516.5 (O)	40	23MAY11	30JUN11	11JUN11	20JUL11	20d	0	20d
S1-7030	Portion H1 Pipe Works CH1516.5-1544.7 (O-Sw at)	50	01JUL11	19AUG11	21JUL11	08SEP11	20d	0	20d
S1-7040	Area H1 Portional Pipe Testing	14	20AUG11	02SEP11	08SEP11	22SEP11	24d	18d	24d
Portion J									
S1-8010	Portion J Pipe Works CH0.0-48.0 (O-S Wall)	40	23JUL11	06SEP11	31JUL11	08SEP11	2d	0	2d
S1-8020	Portion J Pipe Works CH48.0-339.0 (O)	300	02OCT10	28JUL11	04OCT10	30JUL11	2d	0	2d

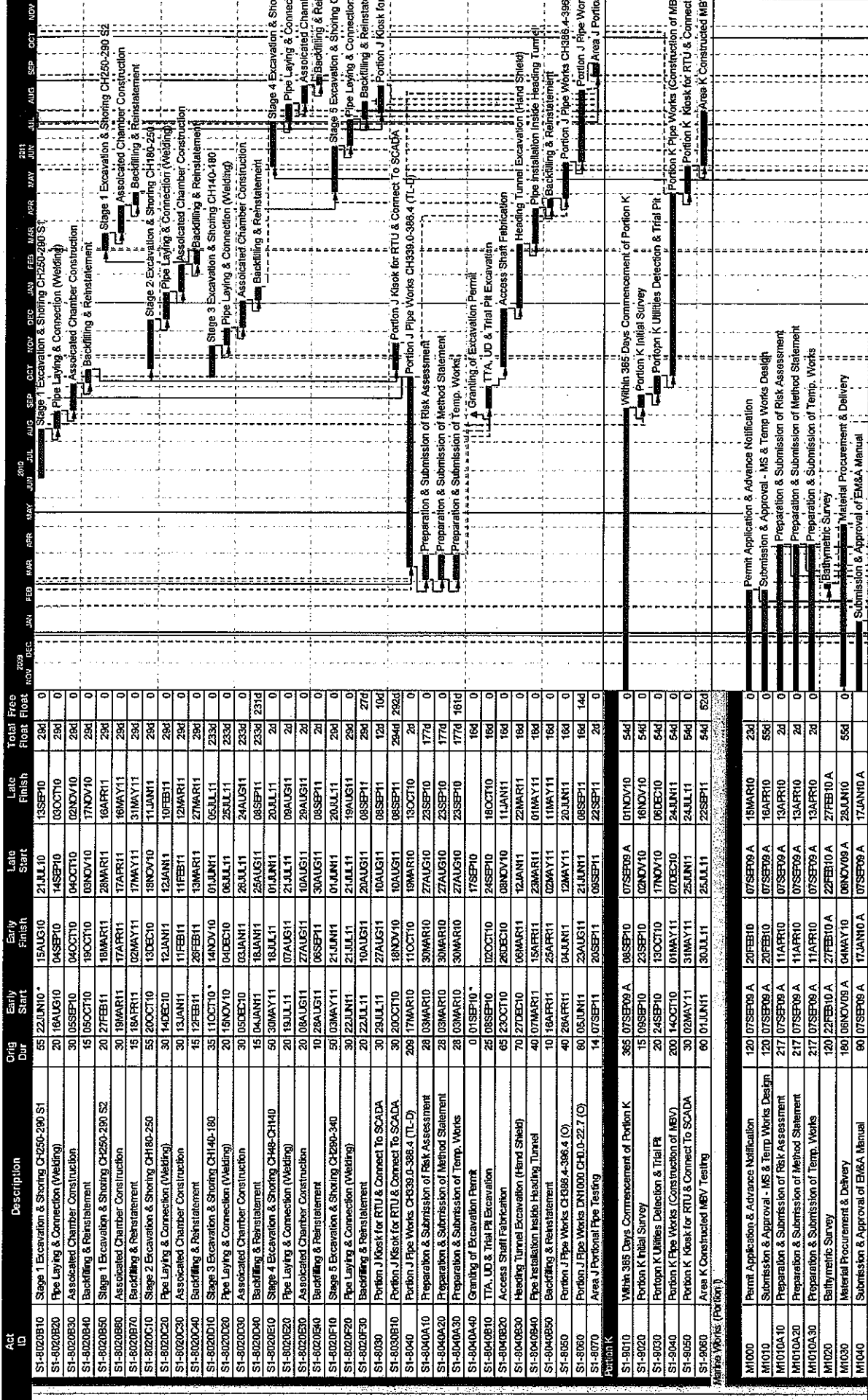
Start date	07SEP09
Finish date	05NOV12
Data date	04JAN10
Run date	09FEB11
Page number	4A
C-Pitavez Systems, Inc.	

3 Months Rolling Program (February 2011)

Wo Hing - Penta-Ocean Joint Venture

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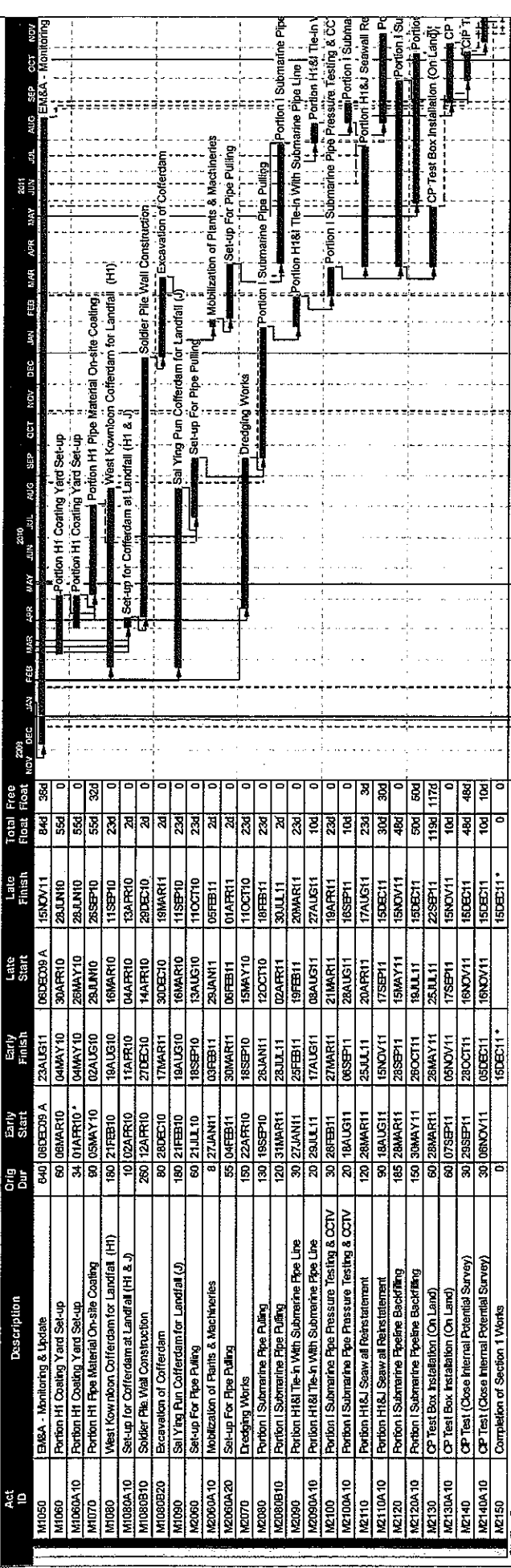
- Early bar
- Progress bar
- Critical bar
- Summary bar
- Start milestone point
- Finish milestone point



Act ID	Description	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Total Float	Free Float
S1-8020B10	Stage 1 Excavation & Shoring CH250-290 S1	55/12/2010	15/08/10	21/07/10	13/08/10	21/07/10	13/08/10	28d	0
S1-8020B20	Pipe Laying & Connection (Welding)	20/16/03/10	04/09/10	14/09/10	03/10/10	14/09/10	03/10/10	28d	0
S1-8020B30	Associated Chamber Construction	30/05/09/10	04/09/10	04/09/10	02/10/10	04/09/10	02/10/10	28d	0
S1-8020B40	Backfilling & Reinstatement	15/05/09/10	19/09/10	19/09/10	17/10/10	19/09/10	17/10/10	29d	0
S1-8020B50	Stage 1 Excavation & Shoring CH250-290 S2	20/27/09/10	18/03/11	28/02/11	16/03/11	28/02/11	16/03/11	29d	0
S1-8020B60	Associated Chamber Construction	30/19/09/10	17/03/11	17/03/11	15/04/11	17/03/11	15/04/11	29d	0
S1-8020B70	Backfilling & Reinstatement	15/18/09/10	31/05/11	17/04/11	05/06/11	15/05/11	05/06/11	29d	0
S1-8020C10	Stage 2 Excavation & Shoring CH180-250	55/20/09/10	13/03/10	18/02/10	11/03/10	18/02/10	11/03/10	28d	0
S1-8020C20	Pipe Laying & Connection (Welding)	30/14/09/10	12/01/11	12/01/11	10/02/11	12/01/11	10/02/11	28d	0
S1-8020C30	Associated Chamber Construction	30/13/09/10	11/01/11	11/01/11	09/02/11	11/01/11	09/02/11	29d	0
S1-8020C40	Backfilling & Reinstatement	15/12/09/10	26/02/11	26/02/11	27/03/11	15/02/11	27/03/11	28d	0
S1-8020D10	Stage 3 Excavation & Shoring CH140-180	35/11/09/10	14/02/10	14/02/10	05/03/11	14/02/10	05/03/11	23d	0
S1-8020D20	Pipe Laying & Connection (Welding)	20/15/09/10	04/07/11	04/07/11	26/08/11	15/07/11	26/08/11	23d	0
S1-8020D30	Associated Chamber Construction	30/05/09/10	03/01/11	03/01/11	24/01/11	05/01/11	24/01/11	23d	0
S1-8020D40	Backfilling & Reinstatement	15/04/09/10	18/01/11	18/01/11	08/02/11	15/01/11	08/02/11	23d	23d
S1-8020E10	Stage 4 Excavation & Shoring CH8-CH140	50/30/09/11	18/01/11	18/01/11	09/01/11	18/01/11	09/01/11	2d	0
S1-8020E20	Pipe Laying & Connection (Welding)	20/19/01/11	07/03/11	07/03/11	06/03/11	07/03/11	06/03/11	2d	0
S1-8020E30	Associated Chamber Construction	20/08/09/11	27/03/11	27/03/11	29/03/11	20/03/11	29/03/11	2d	0
S1-8020E40	Backfilling & Reinstatement	10/29/09/11	06/06/11	06/06/11	29/06/11	10/06/11	29/06/11	2d	0
S1-8020F10	Stage 5 Excavation & Shoring CH280-340	50/03/09/11	21/01/11	21/01/11	11/01/11	21/01/11	11/01/11	29d	0
S1-8020F20	Pipe Laying & Connection (Welding)	30/22/09/11	21/01/11	21/01/11	19/01/11	21/01/11	19/01/11	29d	0
S1-8020F30	Backfilling & Reinstatement	20/22/01/11	10/01/11	10/01/11	20/01/11	20/01/11	20/01/11	29d	27d
S1-8030	Portion J Kiosk for RTU & Connect To SCADA	30/28/01/11	27/01/11	27/01/11	10/01/11	27/01/11	10/01/11	12d	10d
S1-8040	Portion J Kiosk for RTU & Connect To SCADA	20/20/02/10	18/02/10	18/02/10	08/02/10	18/02/10	08/02/10	29d	29d
S1-8040A10	Portion J Pipe Works CH339.0-388.4 (TL-D)	20/03/09/10	11/02/10	11/02/10	19/02/10	11/02/10	19/02/10	177d	0
S1-8040A20	Preparation & Submission of Method Statement	28/03/09/10	30/04/10	30/04/10	27/04/10	28/04/10	27/04/10	177d	0
S1-8040A30	Preparation & Submission of Method Statement	28/03/09/10	30/04/10	30/04/10	27/04/10	28/04/10	27/04/10	177d	0
S1-8040A40	Granting of Excavation Permit	0/01/09/10	17/02/10	17/02/10	18/02/10	17/02/10	18/02/10	16d	0
S1-8040B10	TTA, UD & Trial Pit Excavation	25/08/09/10	02/02/10	02/02/10	28/02/10	02/02/10	28/02/10	16d	0
S1-8040B20	Access Shaft Fabrication	65/23/02/10	26/02/10	26/02/10	11/02/10	26/02/10	11/02/10	16d	0
S1-8040B30	Heading Tunnel Excavation (Hand Shovel)	70/27/02/10	03/03/11	12/02/11	23/02/11	03/03/11	23/02/11	16d	0
S1-8040B40	Pipe Installation Inside Heading Tunnel	40/07/09/11	15/09/11	23/09/11	01/10/11	15/09/11	01/10/11	16d	0
S1-8040B50	Backfilling & Reinstatement	10/16/09/11	25/09/11	25/09/11	11/10/11	10/09/11	11/10/11	16d	0
S1-8050	Portion J Pipe Works CH388.4-396.4 (O)	40/26/09/11	04/01/11	04/01/11	20/01/11	04/01/11	20/01/11	16d	0
S1-8060	Portion J Pipe Works DN1000 CH10-22.7 (O)	40/05/09/11	23/01/11	23/01/11	08/02/11	23/01/11	08/02/11	16d	14d
S1-8070	Area J Portional Pipe Testing	14/07/09/11	20/09/11	20/09/11	22/09/11	14/09/11	22/09/11	2d	0
S1-8010	Within 365 Days Commencement of Portion K	365/07/09/09	08/09/10	08/09/10	07/09/09	08/09/10	07/09/09	54d	0
S1-8020	Portion K Initial Survey	15/09/09/10	23/09/10	23/09/10	16/09/10	23/09/10	16/09/10	54d	0
S1-8030	Portion K Utilities Detection & Trial Pit	20/24/09/10	13/02/10	17/01/10	06/02/10	13/02/10	06/02/10	54d	0
S1-8050	Portion K Kiosk for RTU & Connect To SCADA	200/14/02/10	01/04/11	01/04/11	24/01/11	01/04/11	24/01/11	54d	0
S1-8060	Area K Constructed MBV Testing	60/01/09/11	30/01/11	30/01/11	22/01/11	30/01/11	22/01/11	54d	52d
M1000	Permit Application & Advance Notification	120/07/09/09	20/02/10	20/02/10	15/02/10	20/02/10	15/02/10	23d	0
M1010	Submission & Approval - MS & Temp Works Design	120/07/09/09	20/02/10	20/02/10	15/02/10	20/02/10	15/02/10	55d	0
M1010A10	Preparation & Submission of Risk Assessment	217/07/09/09	11/09/10	11/09/10	07/09/09	11/09/10	07/09/09	2d	0
M1010A20	Preparation & Submission of Method Statement	217/07/09/09	11/09/10	11/09/10	07/09/09	11/09/10	07/09/09	2d	0
M1010A30	Preparation & Submission of Temp. Works	217/07/09/09	11/09/10	11/09/10	07/09/09	11/09/10	07/09/09	2d	0
M1020	Bathymetric Survey	120/22/09/10	27/02/10	27/02/10	23/02/10	27/02/10	23/02/10	55d	0
M1030	Material Procurement & Delivery	180/06/09/09	04/04/10	04/04/10	06/09/09	04/04/10	06/09/09	55d	0
M1040	Submission & Approval of EIR&A Manual	90/07/09/09	17/01/10	17/01/10	07/09/09	17/01/10	07/09/09	55d	0

Start date	07/09/09
Finish date	05/NOV/12
Data date	04/JAN/10
Run date	09/FEB/11
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3 Months Rolling Program (February 2011)



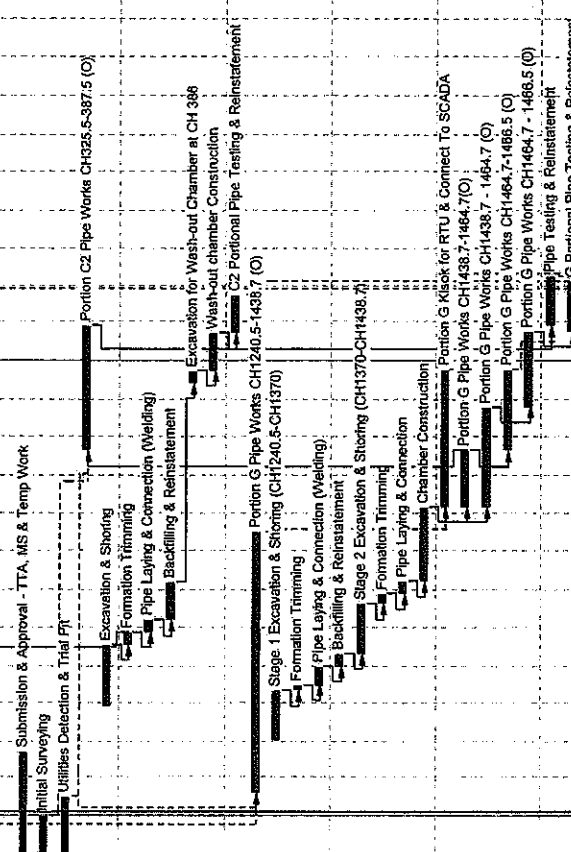
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M1050	EM&A - Monitoring & Update	640	08DEC09	23AUG11	16DEC09	15NOV11	841	360
M1060	Portion HI Coating Yard Set-up	60	08MAR10	04MAY10	30APR10	28JUN10	554	0
M1060A10	Portion HI Coating Yard Set-up	34	01APR10	04MAY10	28MAY10	28JUN10	554	0
M1070	Portion HI Pipe Material On-site Coating	90	03MAY10	02AUG10	29JUN10	28SEP10	554	320
M1080	West Kowloon Cofferdam for Landfall (H1)	180	21FEB10	18AUG10	16MAR10	11SEP10	230	0
M1080A10	Set-up for Cofferdam at Landfall (H1 & J)	10	02APR10	11APR10	04APR10	23APR10	20	0
M1080B10	Soldier Pile Wall Construction	260	12APR10	27DEC10	14APR10	29DEC10	20	0
M1080B20	Excavation of Cofferdam	80	28DEC10	17MAR11	30DEC10	19MAR11	24	0
M1090	Sai Ying Pun Cofferdam for Landfall (L)	180	21FEB10	18AUG10	16MAR10	11SEP10	230	0
M2060A10	Excavation of Cofferdam	60	21JUL10	18SEP10	13AUG10	11OCT10	230	0
M2060A20	Set-up for Pipe Pulling	55	04FEB11	30MAR11	29JAN11	05FEB11	25	0
M2070	Mobilization of Plants & Machinery	150	22APR10	18SEP10	15MAY10	11OCT10	230	0
M2080	Portion I Submarine Pipe Pulling	120	31MAR11	23JUL11	02APR11	30JUL11	26	0
M2090	Portion HI&J Tie-in With Submarine Pipe Line	30	27JAN11	25FEB11	19FEB11	20MAR11	230	0
M2100	Portion I Submarine Pipe Pressure Testing & CCTV	20	28FEB11	27MAR11	21MAR11	19APR11	230	0
M2100A10	Portion I Submarine Pipe Pressure Testing & CCTV	20	18AUG11	06SEP11	28AUG11	16SEP11	100	0
M2110	Portion HI&J Sewall Reinstatement	90	18AUG11	15NOV11	17SEP11	15DEC11	300	300
M2120	Portion I Submarine Pipeline Backfilling	185	28MAR11	28SEP11	15MAY11	15NOV11	480	0
M2120A10	CP Test Box Installation (On Land)	60	28MAR11	28MAY11	18JUL11	15DEC11	500	500
M2130A10	CP Test Box Installation (On Land)	60	07SEP11	05NOV11	25JUL11	22SEP11	1170	1170
M2140	CP Test (Close Internal Potential Survey)	30	29SEP11	16NOV11	17SEP11	15NOV11	100	0
M2140A10	CP Test (Close Internal Potential Survey)	30	08NOV11	05DEC11	16NOV11	15DEC11	100	100
M2150	Completion of Section 1 Works	0	0	15DEC11	15DEC11	15DEC11	0	0

Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float	Float
S2-1010	Submission & Approval - XP, MS & Temp Works	180	07SEP09	28FEB10	07SEP09	05MAR10	70	0
S2-1020	Initial & Utilities Survey	90	02JAN10	02JAN10	02JAN10	02JAN10	0	0
S2-1030	Utilities Detection & Trial Pit	30	08DEC09	17JAN10	08DEC09	03FEB10	170	0
S2-1040	Within 90 Days Commencement of Portion A	90	07SEP09	09DEC09	07SEP09	09DEC09	0	0
S2-2010B10	Portion A Pipe Works CH20.0-88.5 (O)	150	27FEB10	28JUL10	06MAR10	02AUG10	70	0
S2-2010B20	Excavation & Shoring	40	23FEB10	03APR10	09APR10	18MAY10	450	0
S2-2010B30	Pipe Laying & Connection (Welding)	15	14APR10	28APR10	19MAY10	28MAY10	450	0
S2-2010B40	Construction of Chamber	75	29APR10	12JUL10	27AUG10	26AUG10	450	0
S2-2010B50	Backfilling	5	13JUL10	17JUL10	27AUG10	31AUG10	450	0
S2-2020A10	Portion A Kiosk For RTU & Connect To SCADA	30	27JUL10	25AUG10	01SEP10	30SEP10	360	0
S2-2020A20	Portion A Kiosk For RTU & Connect To SCADA	30	18JUL10	16AUG10	01SEP10	30SEP10	450	0
S2-2030B10	Excavation & Shoring For Pipe Trough	40	20JAN10	16FEB10	04FEB10	05MAR10	170	0
S2-2030B20	Pipe Trough Concreting & Associated Works	10	01MAR10	10MAR10	07AUG10	16AUG10	150	0
S2-2040	Portion A Pipe Works CH88.5-102 (FT)	30	17FEB10	18MAR10	18MAR10	07JUL10	1360	0
S2-2040B10	Pipe Laying & Connection (Welding)	5	19APR10	23APR10	22AUG10	21AUG10	1250	0
S2-2040B20	Construction of Saddle	5	19APR10	23APR10	22AUG10	21AUG10	1250	0
S2-2040B30	Backfilling	5	19APR10	23APR10	22AUG10	21AUG10	1250	800
S2-2050	Portion A Pipe Works CH102.0-105.0 (O)	30	18APR10	17MAY10	01SEP10	30SEP10	1000	1000
S2-2060A10	Pipe Testing & Reinstatement	60	26AUG10	24OCT10	01OCT10	29NOV10	360	360
S2-2060A20	Pipe Testing & Reinstatement	60	17AUG10	15OCT10	01OCT10	29NOV10	450	450

3 Months Rolling Program (February 2011)

Start date	07SEP09
Finish date	05NOV10
Data date	04JAN10
Run date	09FEB11
Page number	6A
C. Pritaveva Systems, Inc.	

Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Free Float	2009	2010	2011											
Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Free Float	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	
SS-3010	Completion of Section 2 Works	0	20NOV10*	06AARR11	07SEF09 A	06AARR11	0														
Section 4																					
Land Works																					
SA-1010	Submission & Approval - TTA, MS & Temp Work	120	07SEF09 A	20FEB10	07SEF09 A	25JUN10	125d														
SA-1020	Initial Surveying	90	07SEF09 A	31DEC09 A	07SEF09 A	31DEC09 A															
SA-1030	Utilities Detection & Trial Pit	20	16NOV09 A	15JAN10	16NOV09 A	20MAY10	125d														
SA-2010	Portion C2 Pipe Works CH325.5-387.5 (O)	50	21OCT10	28JAN11	17NOV10	24FEB11	27d														
SA-2010B10	Excavation & Shoring	10	29MAR10*	17MAY10	11MAY10	29JUN10	43d														
SA-2010B20	Formation Trimming	10	18MAY10	27MAY10	30JUN10	09JUL10	43d														
SA-2010B30	Pipe Laying & Connection (Welding)	10	28MAY10	06JUN10	10JUL10	18AUG10	43d														
SA-2010B40	Backfilling & Reinstatement	30	07JUN10	08JUL10	20JUL10	18AUG10	43d														
SA-2010B50	Excavation for Wash-out Chamber at CH388	10	14DEC10	23DEC10	26JAN11	04FEB11	43d														
SA-2010B60	Wash-out chamber Construction	30	24DEC10	22JAN11	09FEB11	09MAR11	43d														
SA-2010B80	C2 Portional Pipe Testing & Reinstatement	30	23JAN11	21FEB11	07MAR11	06AARR11	43d														
SA-2020	Portion G Pipe Works CH1240.5-1438.7 (O)	210	19JAN10	16AUG10	29MAR10	21MAY10	122d														
SA-2020B10	Stage 1 Excavation & Shoring (CH1240.5-CH1370)	40	02MAR10*	10APR10	29MAR10	07MAY10	27d														
SA-2020B20	Formation Trimming	5	11APR10	15APR10	08MAY10	12MAY10	27d														
SA-2020B30	Pipe Laying & Connection (Welding)	15	16APR10	30APR10	13MAY10	27MAY10	27d														
SA-2020B40	Backfilling & Reinstatement	10	01MAY10	10MAY10	29MAR10	07MAY10	27d														
SA-2020B50	Stage 2 Excavation & Shoring (CH1370-CH1438.7)	40	11MAY10	19JUN10	07JUN10	16JUL10	27d														
SA-2020B60	Formation Trimming	8	20JUN10	27JUN10	17JUL10	24JUL10	27d														
SA-2020B70	Pipe Laying & Connection	10	28JUN10	07JUL10	25JUL10	09AUG10	27d														
SA-2020B80	Chamber Construction	60	08JUL10	05SEP10	04AUG10	02OCT10	27d														
SA-2030	Portion G Main for RTU & Connect to SCADA	110	06SEP10	24DEC10	17DEC10	06AARR11	102d														
SA-2040	Portion G Pipe Works CH1438.7-1464.7(O)	45	06SEP10	20OCT10	03OCT10	16NOV10	27d														
SA-2040B10	Portion G Pipe Works CH1438.7 - 1454.7 (O)	80	06SEP10	24NOV10	08OCT10	29DEC10	32d														
SA-2050	Portion G Pipe Works CH1464.7 - 1466.5 (O)	65	21OCT10	24DEC10	22DEC10	24FEB11	62d														
SA-2050B10	Portion G Pipe Works CH1464.7 - 1466.5 (O)	60	29NOV10	23JAN11	27DEC10	24FEB11	32d														
SA-3010	Pipe Testing & Reinstatement	40	29JAN11	09MAR11	25FEB11	06AARR11	27d														
SA-3010A10	G Portional Pipe Testing & Reinstatement	40	24JAN11	04MAR11	25FEB11	06AARR11	32d														
SA-3020	Completion of Section 4 Works	0	06AARR11*	06AARR11*	06AARR11*	06AARR11*	0														
Section 5																					
Landscape Softworks and Establishment Works																					
BS-9010	Landscape works	648	07SEF09 A	28APR12	07SEF09 A	09NOV12	191d														
BS-9020	Reinstatement of Portion H1 & H2	203	07NOV11	27MAY12	17APR12	05NOV12	162d														
BS-9030	Promenade of Portion H1 & H2 Handover to LCSD	0	0	27MAY12	27MAY12	05NOV12	162d														
BS-9300	Completion of Section 5 Works	0	05NOV12*	05NOV12*	05NOV12*	05NOV12*	0														



Start date	07SEF09
Finish date	05NOV12
Data date	04JAN10
Run date	06FEB11
Page number	7A
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**3 Months Rolling Program (February 2011)**

Legend:

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

3 Months Rolling Program (February 2011)



## Appendix F

### ET Weekly Site Inspection Records

Contract No. 9/M/SD/08

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



東榮 儀器 測試 顧問 有限公司  
ETS-TESTCONSULT LIMITED

**WEEKLY SITE INSPECTION CHECKLIST**

Inspection Date	12/02/2011	Inspected by	RE (Signature)	IEC	Contractor	ET
Time	9:30	Name	(Signature)		Site (Signature)	Under Low below

Weather : Sunny / Fine / ~~Cloudy~~ Drizzle / Rain / Storm / Hazy  
 Condition : Calm / ~~Light~~ Breeze / Strong  
 Wind : High / Moderate / Low  
 Temperature : 14°C  
 Humidity : High / Moderate / Low

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
<b>Fugitive Dust Emission</b>				
▪ 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.	✓			

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
<b>Noise Impact</b>				
▪ 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.	✓			
<b>Water Quality</b>				
<b>Mitigation Measures for Dredging</b>				
▪ Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m <sup>3</sup> 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	✓			
▪ 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	✓			
▪ 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	
<b>Water Quality</b>				
<b>Mitigation Measures for other Construction Activities</b>				
<ul style="list-style-type: none"> <li>Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m<sup>3</sup> 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</li> <li>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</li> <li>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.</li> <li>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.</li> <li>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</li> <li>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 W CZs</li> <li>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.</li> <li>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.</li> <li>Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.</li> </ul>	√			
<b>Waste Management</b>				
<b>C&amp;D Materials</b>				
<ul style="list-style-type: none"> <li>Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable.</li> <li>C&amp;D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses.</li> <li>A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed</li> <li>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.</li> </ul>	√		√	
<b>Chemical Waste</b>				
<ul style="list-style-type: none"> <li>Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.</li> <li>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.</li> <li>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.</li> </ul>	√			



Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
<b>Waste Management</b>				
<b>General Refuse</b>				
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.	√			Item 1
<b>Marine Dredged Sediment (During transportation and disposal)</b>				
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.	√			
<b>Site Practices</b>				
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	√			
<b>Waste Reduction Measures</b>				
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	
<b>Marine Ecology</b>				
▪ Use of one grab dredger only with a maximum production rate of 4,000m <sup>3</sup> 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.	√			
<b>Good Site Practices</b>				
• 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 bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system.		√		Item 1

**Summary of the Weekly Site Inspection:**

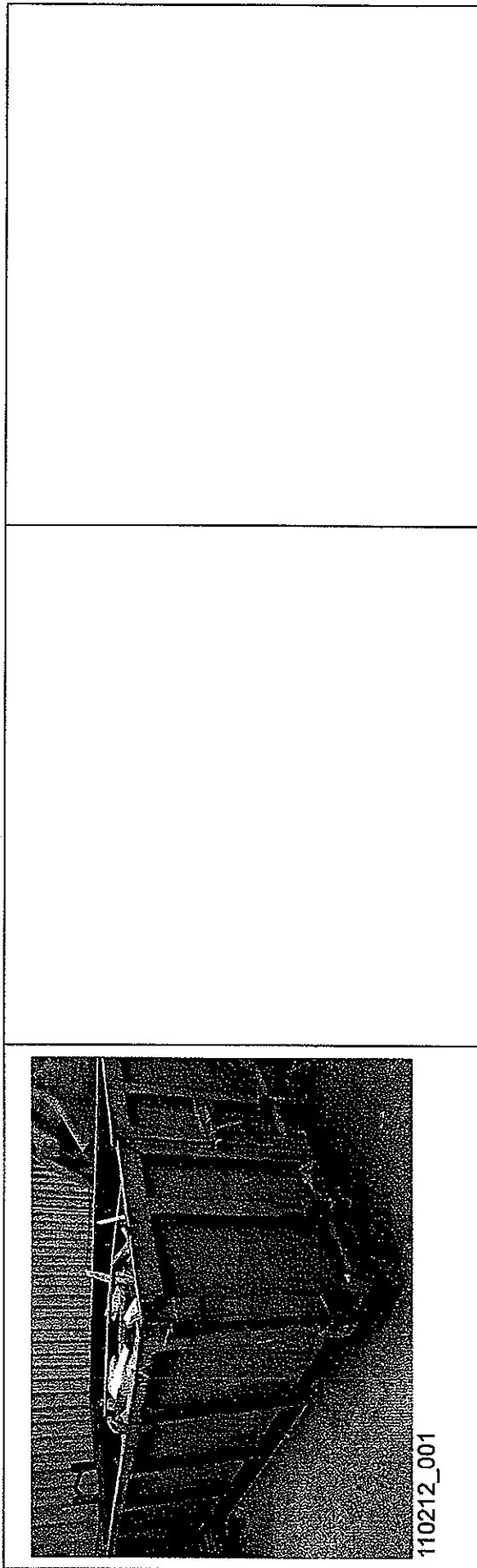
Item	Details of defective works or observations	Status of the Item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date
1	A skip for C&D waste at Portion J was found without cover and labels.	Follow-up	To provide cover and appropriate to the skip for C&D waste storage.	110212_001	15/02/11

Remark

--

Inspected by	Name	Signature	Date
	Linda Law		12 February 2011

Photos



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

**WEEKLY SITE INSPECTION CHECKLIST**

Inspection Date	15/02/2011	Inspected by	RE	IEC	Contractor	ET
Time	9:30	Name	Wai Kwan Rosa		Joaquim Lima	Linda Lima

Weather : Sunny / Fine / Cloudy / Drizzle / Rain Storm / Hazy  
 Condition : Calm / Light / Breeze / Strong  
 Wind :  
 Temperature : 9°C  
 Humidity : High / Moderate / Low

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
<b>Fugitive Dust Emission</b>				
▪ 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 hardcore.			✓	
▪ 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	
<b>Noise Impact</b>				
▪ 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.	✓			
<b>Water Quality</b>				
<b>Mitigation Measures for Dredging</b>				
▪ Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m <sup>3</sup> 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	✓			
▪ 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	✓			
▪ 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	
<b>Water Quality</b>				
<b>Mitigation Measures for other Construction Activities</b>				
<ul style="list-style-type: none"> <li>Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m<sup>3</sup> 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</li> <li>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</li> <li>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.</li> <li>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.</li> <li>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</li> <li>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 WQZs</li> <li>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.</li> <li>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 WQZ under the TM-DSS.</li> <li>Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.</li> </ul>	√			
<b>Waste Management</b>				
<b>C&amp;D Materials</b>				
<ul style="list-style-type: none"> <li>Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable.</li> <li>C&amp;D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses.</li> <li>A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed</li> <li>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.</li> </ul>	√		√	
<b>Chemical Waste</b>				
<ul style="list-style-type: none"> <li>Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.</li> <li>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.</li> <li>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.</li> </ul>	√			

Implementation Stages*	Remark		
	Yes	No	Not Obs N/A
<b>Environmental Checklist</b>			
<b>Waste Management</b>			
<b>General Refuse</b>			
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.	√		
<b>Marine Dredged Sediment (During transportation and disposal)</b>			
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.	√		
<b>Site Practices</b>			
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	√		
<b>Waste Reduction Measures</b>			
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	
<b>Marine Ecology</b>				
Use of one grab dredger only with a maximum production rate of 4,000m <sup>3</sup> 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.	√			
<b>Good Site Practices</b>				
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 bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system.	√			

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

**Summary of the Weekly Site Inspection:**

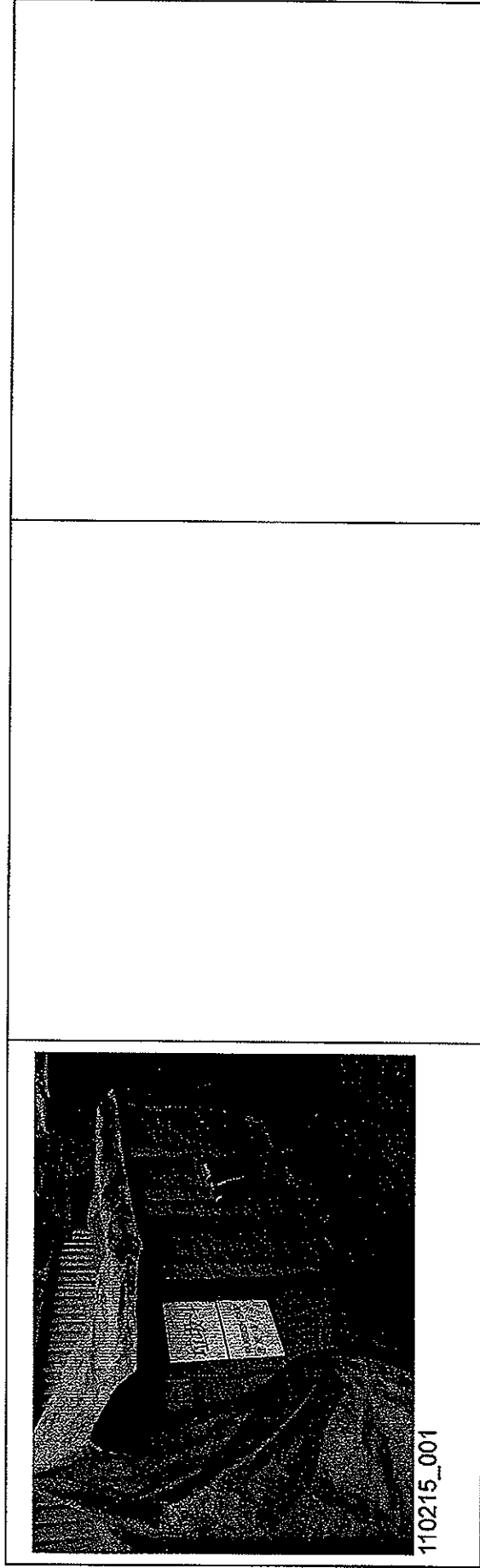
Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date
1	Follow up action to the item 1 on 12/02/11, cover and label were provided for a C&D waste skip at Portion J.	Closed	--	110215_001	--

**Remark**

No defective observation was noted during the weekly site inspection.

Inspected by	Name	Signature	Date
	Linda Law	<i>Linda Law</i>	15 February 2011

Photos



**WEEKLY SITE INSPECTION CHECKLIST**

Inspection Date	23/02/11	Inspected by	RE <i>[Signature]</i>	IEC	Inspector	ET
Time	14:00	Name	Justin Ye <i>[Signature]</i>		<i>[Signature]</i>	23.02.11 L. de Lora

Weather : Sunny (Fine) / Cloudy / Drizzle / Rain / Storm / Hazy  
 Condition : Calm (Light) / Breeze / Strong  
 Wind :  
 Temperature : 17°C  
 Humidity : High / Moderate (Low)

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs	
<b>Fugitive Dust Emission</b>				
▪ 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 hardcore.			✓	
▪ 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.	✓			



Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs	
<b>Noise Impact</b>					
▪	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.	√			
<b>Water Quality</b>					
<b>Mitigation Measures for Dredging</b>					
▪	Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m <sup>3</sup> 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	√			
▪	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	√			
▪	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	
<b>Water Quality</b>					
<b>Mitigation Measures for other Construction Activities</b>					
<ul style="list-style-type: none"> <li>Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m<sup>3</sup> 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</li> <li>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</li> <li>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.</li> <li>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.</li> <li>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</li> <li>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 W CZs</li> <li>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.</li> <li>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 W CZ under the TM-DSS.</li> <li>Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.</li> </ul>	√				
<b>Waste Management</b>					
<b>C&amp;D Materials</b>					
<ul style="list-style-type: none"> <li>Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable.</li> <li>C&amp;D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses.</li> <li>A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed</li> <li>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.</li> </ul>	√		√		
<b>Chemical Waste</b>					
<ul style="list-style-type: none"> <li>Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.</li> <li>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.</li> <li>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.</li> </ul>	√				

Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs N/A	
<b>Waste Management</b>					
<b>General Refuse</b>					
▪	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.	√			
<b>Marine Dredged Sediment (During transportation and disposal)</b>					
▪	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.			√	
<b>Site Practices</b>					
▪	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	√			
<b>Waste Reduction Measures</b>					
▪	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	
<b>Marine Ecology</b>				
Use of one grab dredger only with a maximum production rate of 4,000m <sup>3</sup> 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.	√			
<b>Good Site Practices</b>				
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 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 defective observation was noted during the weekly site inspection.

Inspected by	Name	Signature	Date
	Linda Law	<i>Linda Law</i>	23 February 2011



## **Appendix G**

### **Implementation Schedule of Mitigation Measures**





	Location	Implementation Status		
		Implemented	Partially implemented	Not implemented / Not Applicable
<b>Environmental Protection Measures</b>				
<b>Noise Impact</b>				
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	✓		
<b>Water Quality</b>				
<b>Mitigation Measures for Dredging</b>				
Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m <sup>3</sup> 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	✓		
<b>Mitigation Measures for other Construction Activities</b>				
Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m <sup>3</sup> 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	✓		



Environmental Protection Measures		Location	Implementation Status			
			Implemented	Partially implemented	Not implemented	Not Applicable
<b>Water Quality</b>						
<b>Mitigation Measures for other Construction Activities</b>						
<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.</li> </ul>		All areas	✓			
<b>Waste Management</b>						
<b>C&amp;D Materials</b>						
<ul style="list-style-type: none"> <li>Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable.</li> <li>C&amp;D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses.</li> <li>A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed</li> <li>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.</li> </ul>		All areas				✓
<b>Chemical Waste</b>						
<ul style="list-style-type: none"> <li>Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.</li> <li>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.</li> <li>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.</li> </ul>		All areas	✓			
<b>General Refuse</b>						
<ul style="list-style-type: none"> <li>General refuse should be stored in enclosed bins or compaction units separate from C&amp;D material.</li> <li>A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&amp;D material.</li> <li>An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</li> </ul>		All areas	✓			
		All areas	✓			
		All areas	✓			
<b>Marine Dredged Sediment (During transportation and disposal)</b>						
<ul style="list-style-type: none"> <li>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</li> <li>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</li> <li>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.</li> </ul>		Marine	✓			
		Marine	✓			
		Marine	✓			
<b>Good Site Practices</b>						
<ul style="list-style-type: none"> <li>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</li> <li>Training of site personnel in proper waste management and chemical handling procedures</li> <li>Provision of sufficient waste disposal points and regular collection of waste</li> </ul>		All areas	✓			
		All areas	✓			
		All areas	✓			





## Appendix H

### Site General Layout plan





NOTES  
 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 241235/6/0301 AND 241235/6/0302.  
 2. THE LEGEND SHALL REFER TO DRAWING NO. 241235/6/0301.

DATE	APR 09	TENDER APPROVAL NO. 4	241235/6/0301
BY	MA 00	PA TENDER APPROVAL NO. 3	AL BSC
DATE	DEC 08	PA TENDER APPROVAL NO. 3	AL BSC
DATE	FEB 09	PA TENDER APPROVAL NO. 3	AL BSC
DATE	FEB 09	PA TENDER APPROVAL NO. 3	AL BSC

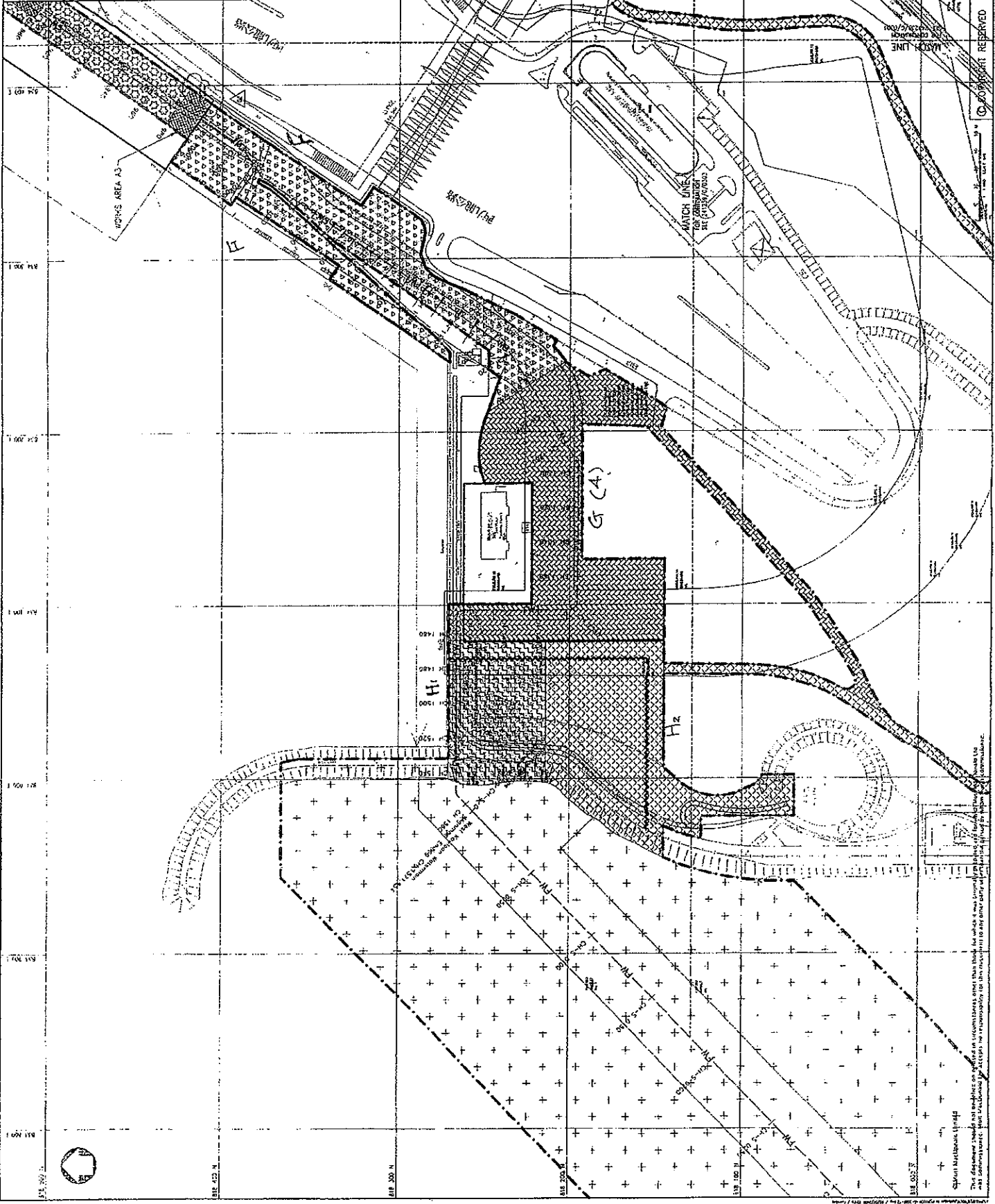
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 1101 Gough Street, Hong Kong  
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THE GOVERNMENT OF THE HONG KONG  
 SPECIAL ADMINISTRATIVE REGION  
 WATER SUPPLIES DEPARTMENT

PROJECT NO. 9/MSD/03  
 LAYING OF WESTERN CROSS HARBOUR MAIN AND ASSOCIATED LAND MAINS FROM WEST KOWLOON TO SAI YING PUN

POSSESSION OF SITE  
 (SHEET 2 OF 5)

SCALE	1:1000	DATE	241235/6/0301
PROJECT	9/MSD/03	DATE	241235/6/0301
DESIGNER	Mott MacDonald	DATE	241235/6/0301
CHECKER	AL BSC	DATE	241235/6/0301
APPROVER	AL BSC	DATE	241235/6/0301
DATE	241235/6/0301	DATE	241235/6/0301

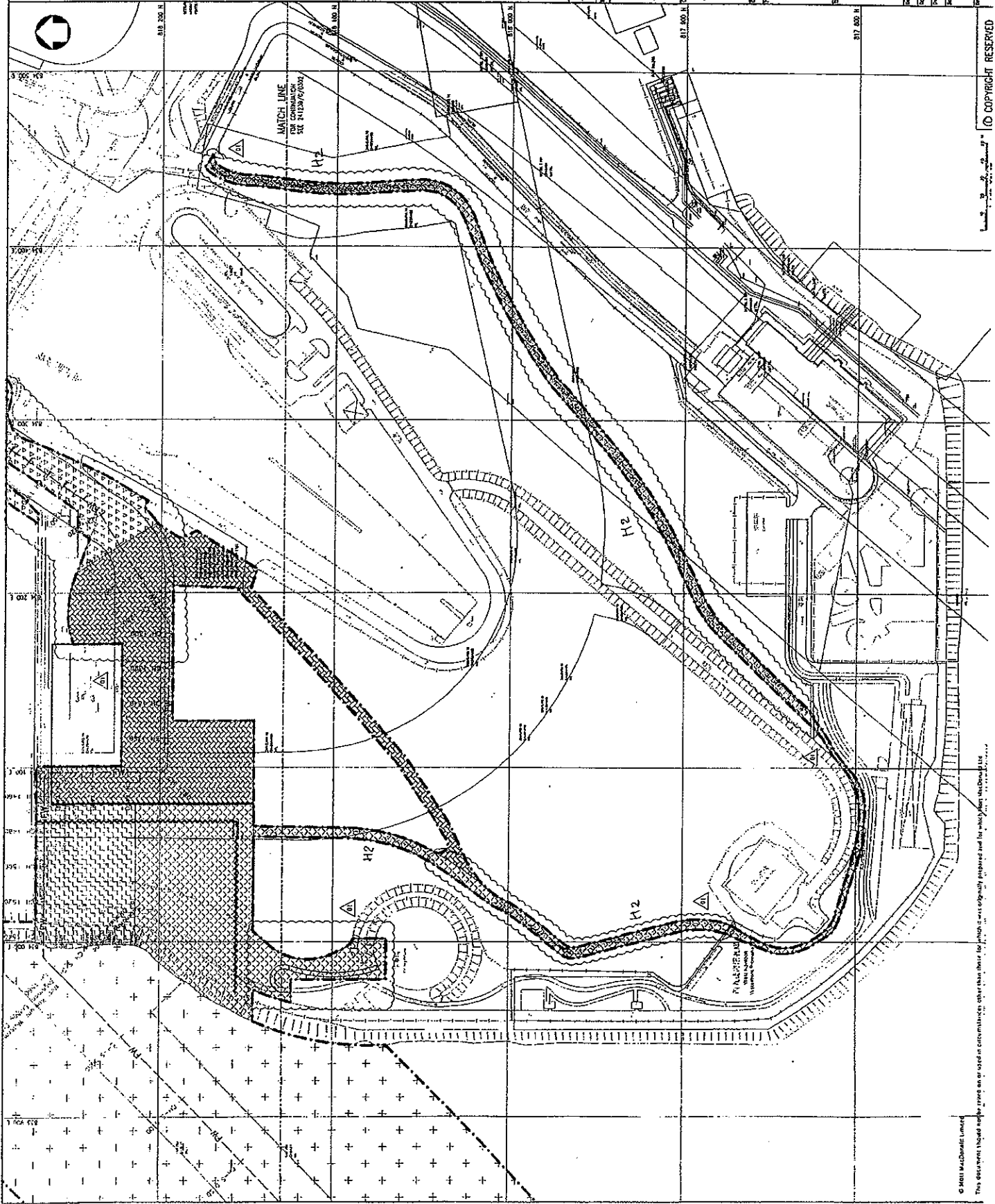


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DRAWING NO. 241235/6/0302  
 SHEET 2 OF 5

**NOTES :**

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. 241239/03/01 TO 032 AND 033 TO 035.
2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/03/01.



DI	DATE	BY	REVISION
01	10/09/03	W. CHAN	ISSUE FOR TENDER
02	08/08/03	P. CHAN	REVISED
03	08/08/03	P. CHAN	REVISED

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

9/MSD/03

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

POSSESSION OF SITE  
 (SHEET 3 OF 5)

DESIGNER	SCALE	DATE	PROJECT NO.
W. CHAN	1:1000 @A1	10/09/03	241239
CHECKER	DATE	PROJECT NO.	
P. CHAN	10/09/03	241239	
APPROVER	DATE	PROJECT NO.	
P. CHAN	10/09/03	241239	
DATE	PROJECT NO.		
10/09/03	241239		
DRAWN BY			TEN
CHECKED BY			
APPROVED BY			

241239/03/0303 01

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NOTES :

1. THIS DRAWING SHALL BE READ IN CONNECTION WITH DRAWING NOS. 241239/0301 TO 0303 AND 0305.
2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/0301.

CD	APR 09	24	TECHN. APPROVAL NO. 4	C-11122
DR	MAR 09	14	TECHN. APPROVAL NO. 3	CF 514
0	DEC 08	14	CASE FOR TENDER	CF 514
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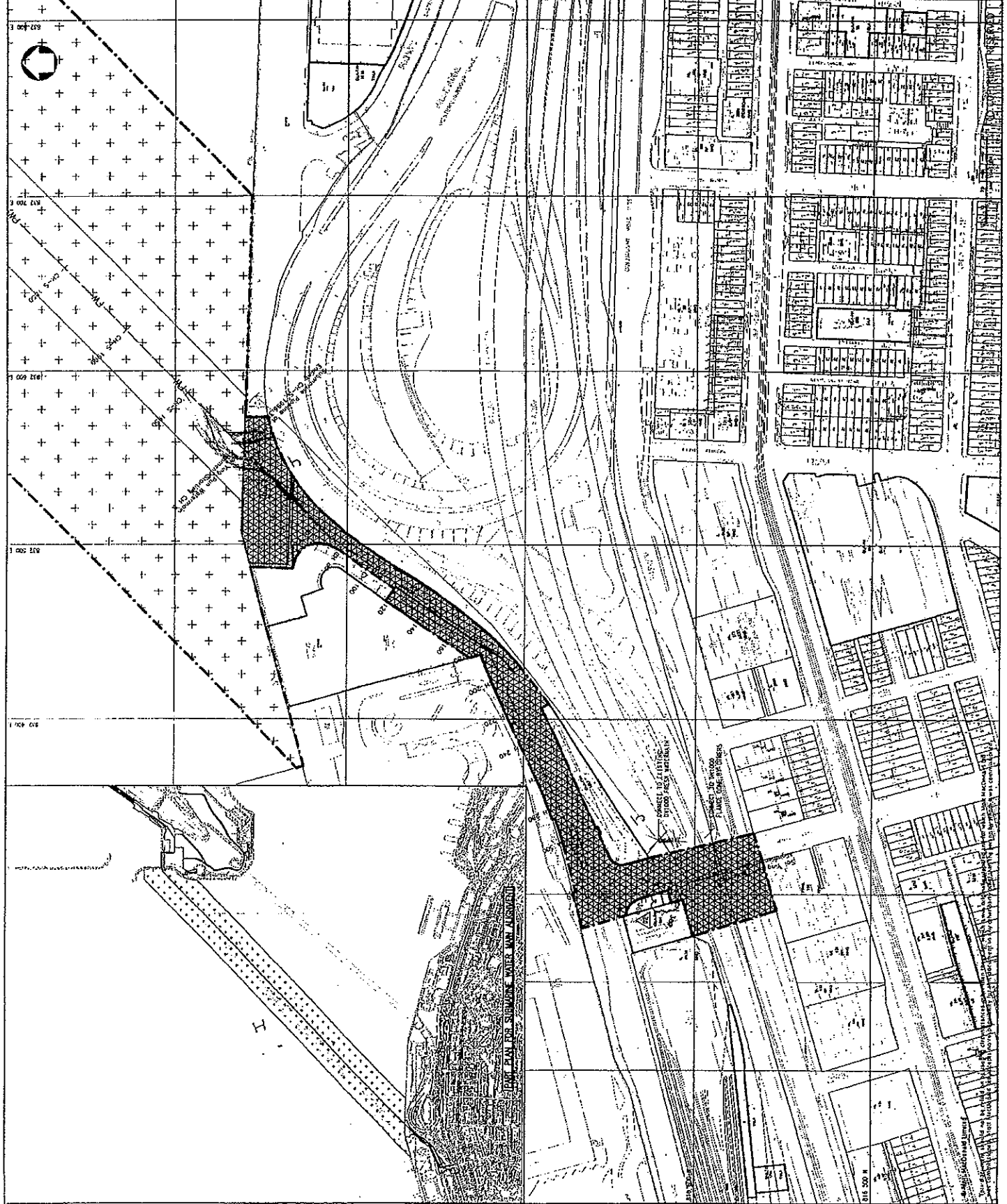
THE GOVERNMENT OF THE HONG KONG  
 SPECIAL ADMINISTRATIVE REGION  
 WATER SUPPLIES DEPARTMENT

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)

NO.	DATE	BY	CHK	APP	REV
1	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	1
2	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	2
3	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	3
4	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	4
5	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	5
6	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	6
7	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	7
8	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	8
9	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	9
10	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	10
11	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	11
12	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	12
13	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	13
14	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	14
15	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	15
16	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	16
17	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	17
18	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	18
19	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	19
20	24/03/09	Y. L. CHAN	Y. L. CHAN	Y. L. CHAN	20



NOTES  
 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 241239/6/0301 TO 0304.  
 2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/6/0301.

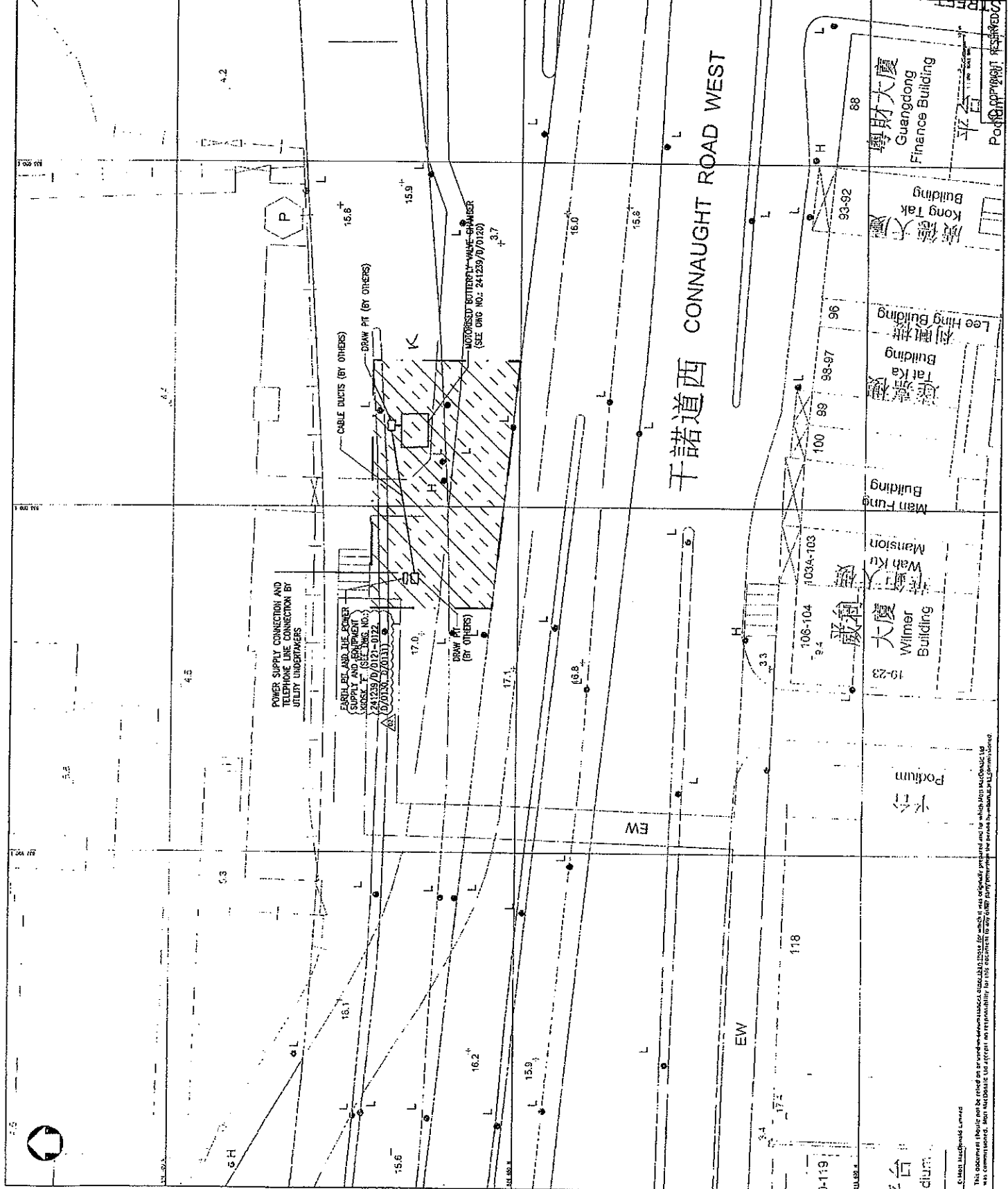
01	FEB 09	1	TENDER APPROVAL NO. 1	241239
02	JUN 09	1	TENDER APPROVAL NO. 1	241239
03	FEB 08	1	ISSUE FOR TENDER	241239
04			ISSUE FOR TENDER	241239

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

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

Project No.	1:250 0A1	Scale	1:250
Contract No.	241239/6/0305	Sheet No.	02
Revision		Date	
Author		Check	
Drawn		Approved	
Checked		Scale	
Reviewed		Scale	
Final		Scale	



## **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)  
 February 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb	12-Feb
		WQM Mid-Ebb 10:00 - 14:00 Mid-Flood 15:00 - 19:30 SI	NM (WK-Daytime) NM (SYP-Daytime)			
		WQM Mid-Flood 07:30 - 12:00 Mid-Ebb 13:30 - 17:30	NM (SYP-Daytime)	WQM Mid-Flood 09:00 - 13:00 Mid-Ebb 14:30 - 18:30	NM (WK-Daytime)	WQM Mid-Flood 11:00 - 15:00 Mid-Ebb 16:00 - 20:00 SI NM Evening-time (West Kowloon) (Sai Ying Pun) NM Night-time (Sai Ying Pun)
13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb
NM Holiday (West Kowloon) (Sai Ying Pun) NM Night-time (West Kowloon)	NM (SYP-Daytime)	WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30 SI		WQM Mid-Ebb 10:15 - 14:15 Mid-Flood 15:30 - 19:30	NM (WK-Daytime)	WQM Mid-Ebb 11:00 - 15:00 Mid-Flood 16:00 - 20:00 NM Evening-time (West Kowloon) (Sai Ying Pun)
20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb
NM Holiday (West Kowloon) (Sai Ying Pun)		WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30	NM (WK-Daytime) NM (SYP-Daytime) SI	WQM Mid-Flood 09:00 - 13:00 Mid-Ebb 14:30 - 18:30		WQM Mid-Flood 11:00 - 15:00 Mid-Ebb 16:15 - 20:15 NM Evening-time (West Kowloon) (Sai Ying Pun)
27-Feb	28-Feb					
NM Holiday (West Kowloon) (Sai Ying Pun)						

**Contract No. 9WSD/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)  
March 2011**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		01-Mar	02-Mar	03-Mar	04-Mar	05-Mar
		WQM Mid-Ebb 09:30 - 12:30 Mid-Flood 14:00 - 18:00 SI	NM (WK-Daytime) NM (SYP-Daytime)	WQM Mid-Ebb 10:00 - 14:00 Mid-Flood 15:30 - 19:30		WQM Mid-Ebb 10:30 - 14:30 Mid-Flood 16:00 - 20:00
06-Mar	07-Mar	08-Mar	09-Mar	10-Mar	11-Mar	12-Mar
		WQM Mid-Flood 07:15 - 11:15 Mid-Ebb 13:00 - 17:00 SI	NM (WK-Daytime) NM (SYP-Daytime)	WQM Mid-Flood 07:30 - 11:30 Mid-Ebb 13:00 - 17:00		WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30
13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
		WQM Mid-Flood 11:00 - 15:00 Mid-Ebb 17:30 - 21:30 SI	NM (WK-Daytime) NM (SYP-Daytime)	WQM Mid-Ebb 08:45 - 12:45 Mid-Flood 14:00 - 18:00		WQM Mid-Ebb 09:30 - 13:30 Mid-Flood 15:00 - 19:00
20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar
		WQM Mid-Flood 07:00 - 11:00 Mid-Ebb 12:30 - 16:30 SI	NM (WK-Daytime) NM (SYP-Daytime)	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30		WQM Mid-Flood 08:30 - 12:30 Mid-Ebb 14:00 - 18:00
27-Mar	28-Mar	29-Mar	30-Mar	31-Mar		
		WQM Mid-Ebb 08:15 - 11:00 Mid-Flood 12:30 - 16:30 SI	NM (WK-Daytime) NM (SYP-Daytime)	WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30		



## **Appendix J**

### **Daily Dredging Summary**



<b>Wo Hing - Penta-Ocean Joint Venture</b>					
Contract no. 9/WSD/08					
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun					
<b>Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)</b>					
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
30-Apr-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
01-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
02-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
03-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
04-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
05-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
06-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
07-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
08-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
09-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
10-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
11-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
12-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
13-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
14-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
15-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
16-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
17-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
18-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
19-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
20-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
21-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
22-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
23-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
24-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
25-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
26-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
27-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
28-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
29-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
30-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
31-May-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
01-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
02-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
03-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
04-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
05-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
06-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
07-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
08-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
09-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
10-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
11-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
12-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
13-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
14-Jun-2010	1,400	2	1,400	EP/MD/10-085	East Ninepin Mud Disposal Ground
15-Jun-2010	1,400	2	2,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
16-Jun-2010	2,100	3	4,900	EP/MD/10-085	East Ninepin Mud Disposal Ground
17-Jun-2010	2,800	4	7,700	EP/MD/10-085	East Ninepin Mud Disposal Ground
18-Jun-2010	2,100	3	9,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
19-Jun-2010	2,700	4	12,500	EP/MD/10-085	East Ninepin Mud Disposal Ground
20-Jun-2010	2,800	4	15,300	EP/MD/10-085	East Ninepin Mud Disposal Ground
21-Jun-2010	2,100	3	17,400	EP/MD/10-085	East Ninepin Mud Disposal Ground
22-Jun-2010	2,800	4	20,200	EP/MD/10-085	East Ninepin Mud Disposal Ground
23-Jun-2010	2,100	3	22,300	EP/MD/10-085	East Ninepin Mud Disposal Ground

<b>Wo Hing - Penta-Ocean Joint Venture</b>					
Contract no. 9/WSD/08					
Laying of Western Cross Harbour Main & Associated Land Mains from					
West Kowloon to Sai Ying Pun					
<b>Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)</b>					
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
24-Jun-2010	2,100	3	24,400	EP/MD/10-085	East Ninepin Mud Disposal Ground
25-Jun-2010	2,100	3	26,500	EP/MD/10-085	East Ninepin Mud Disposal Ground
26-Jun-2010	2,100	3	28,600	EP/MD/10-085	East Ninepin Mud Disposal Ground
27-Jun-2010	700	1	29,300	EP/MD/10-085	East Ninepin Mud Disposal Ground
28-Jun-2010	2,100	3	31,400	EP/MD/10-085	East Ninepin Mud Disposal Ground
29-Jun-2010	1,400	2	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
30-Jun-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
01-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
02-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
03-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
04-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
05-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
06-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
07-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
08-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
09-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
10-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
11-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
12-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
13-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
14-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
15-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
16-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
17-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
18-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
19-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
20-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
21-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
22-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
23-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
24-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
25-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
26-Jul-2010	0	0	32,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
27-Jul-2010	0	0	32,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
28-Jul-2010	0	0	32,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
29-Jul-2010	0	0	32,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
30-Jul-2010	700	1	33,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
31-Jul-2010	1,400	2	34,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
01-Aug-2010	2,100	3	37,000	EP/MD/11-039	East Ninepin Mud Disposal Ground
02-Aug-2010	1,400	2	38,400	EP/MD/11-039	East Ninepin Mud Disposal Ground
03-Aug-2010	700	1	39,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
04-Aug-2010	700	1	39,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
05-Aug-2010	700	1	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
06-Aug-2010	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
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10-Aug-2010	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
11-Aug-2010	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
12-Aug-2010	1,400	2	41,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
13-Aug-2010	1,400	2	43,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
14-Aug-2010	2,100	3	45,400	EP/MD/11-039	East Ninepin Mud Disposal Ground
15-Aug-2010	2,100	3	47,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
16-Aug-2010	2,100	3	49,600	EP/MD/11-039	East Ninepin Mud Disposal Ground
17-Aug-2010	700	1	50,300	EP/MD/11-039	East Ninepin Mud Disposal Ground

<b>Wo Hing - Penta-Ocean Joint Venture</b>					
Contract no. 9/WSD/08					
Laying of Western Cross Harbour Main & Associated Land Mains from					
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<b>Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)</b>					
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
18-Aug-2010	1,400	2	51,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
19-Aug-2010	1,400	2	53,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
20-Aug-2010	2,100	3	55,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
21-Aug-2010	1,400	2	56,600	EP/MD/11-039	East Ninepin Mud Disposal Ground
22-Aug-2010	700	1	57,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
23-Aug-2010	0	0	57,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
24-Aug-2010	1,400	2	58,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
25-Aug-2010	1,400	2	60,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
26-Aug-2010	2,100	3	62,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
27-Aug-2010	2,100	3	64,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
28-Aug-2010	0	0	64,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
29-Aug-2010	1,400	2	65,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
30-Aug-2010	1,400	2	67,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
31-Aug-2010	2,100	3	69,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
01-Sep-2010	1,400	2	70,600	EP/MD/11-039	East Ninepin Mud Disposal Ground
02-Sep-2010	2,100	3	72,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
03-Sep-2010	2,100	3	74,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
04-Sep-2010	2,800	4	77,600	EP/MD/11-039	East Ninepin Mud Disposal Ground
05-Sep-2010	2,100	3	79,700	EP/MD/11-069	East Ninepin Mud Disposal Ground
06-Sep-2010	1,400	2	81,100	EP/MD/11-069	East Ninepin Mud Disposal Ground
07-Sep-2010	0	0	81,100	EP/MD/11-069	East Ninepin Mud Disposal Ground
08-Sep-2010	700	1	81,800	EP/MD/11-069	East Ninepin Mud Disposal Ground
09-Sep-2010	1,400	2	83,200	EP/MD/11-069	East Ninepin Mud Disposal Ground
10-Sep-2010	0	0	83,200	EP/MD/11-069	East Ninepin Mud Disposal Ground
11-Sep-2010	0	0	83,200	EP/MD/11-069	East Ninepin Mud Disposal Ground
12-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
13-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
14-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
15-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
16-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
17-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
18-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
19-Sep-2010	0	0	83,200	EP/MD/11-069	East Ninepin Mud Disposal Ground
20-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
21-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
22-Sep-2010	700	1	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
23-Sep-2010	0	0	83,900	EP/MD/11-069	East Ninepin Mud Disposal Ground
24-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
25-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
26-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
27-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
28-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
29-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
30-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
01-Oct-2010	500	1	84,400	EP/MD/11-069	South Cheung Chau
02-Oct-2010	500	1	84,900	EP/MD/11-069	South Cheung Chau
03-Oct-2010	1,000	2	85,900	EP/MD/11-069	South Cheung Chau
04-Oct-2010	1,000	2	86,900	EP/MD/11-069	South Cheung Chau
05-Oct-2010	500	1	87,400	EP/MD/11-069	South Cheung Chau
06-Oct-2010	1,000	2	88,400	EP/MD/11-069	South Cheung Chau
07-Oct-2010	1,500	3	89,900	EP/MD/11-069	South Cheung Chau
08-Oct-2010	1,000	2	90,900	EP/MD/11-069	South Cheung Chau
09-Oct-2010	500	1	91,400	EP/MD/11-069	South Cheung Chau
10-Oct-2010	0	0	91,400	EP/MD/11-069	South Cheung Chau
11-Oct-2010	1,500	3	92,900	EP/MD/11-069	South Cheung Chau

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<b>Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)</b>					
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
12-Oct-2010	1,000	2	93,900	EP/MD/11-069	South Cheung Chau
13-Oct-2010	2,000	4	95,900	EP/MD/11-069	South Cheung Chau
14-Oct-2010	2,000	4	97,900	EP/MD/11-069	South Cheung Chau
15-Oct-2010	1,500	3	99,400	EP/MD/11-069	South Cheung Chau
16-Oct-2010	2,000	4	101,400	EP/MD/11-069	South Cheung Chau
17-Oct-2010	2,000	4	103,400	EP/MD/11-069	South Cheung Chau
18-Oct-2010	2,000	4	105,400	EP/MD/11-069	South Cheung Chau
19-Oct-2010	1,500	3	106,900	EP/MD/11-069	South Cheung Chau
20-Oct-2010	1,000	2	107,900	EP/MD/11-069	South Cheung Chau
21-Oct-2010	0	0	107,900	EP/MD/11-069	South Cheung Chau
22-Oct-2010	0	0	107,900	EP/MD/11-069	South Cheung Chau
23-Oct-2010	500	1	108,400	EP/MD/11-069	South Cheung Chau
24-Oct-2010	2,000	4	110,400	EP/MD/11-069	South Cheung Chau
25-Oct-2010	1,500	3	111,900	EP/MD/11-069	South Cheung Chau
26-Oct-2010	1,000	2	112,900	EP/MD/11-069	South Cheung Chau
27-Oct-2010	1,000	2	113,900	EP/MD/11-069	South Cheung Chau
28-Oct-2010	0	0	113,900	EP/MD/11-069	South Cheung Chau
29-Oct-2010	1,000	2	114,900	EP/MD/11-069	South Cheung Chau
30-Oct-2010	500	1	115,400	EP/MD/11-069	South Cheung Chau
31-Oct-2010	1,000	2	116,400	EP/MD/11-069	South Cheung Chau
01-Nov-2010	1,000	2	117,400	EP/MD/11-069	South Cheung Chau
02-Nov-2010	500	1	117,900	EP/MD/11-069	South Cheung Chau
03-Nov-2010	1,000	2	118,900	EP/MD/11-069	South Cheung Chau
04-Nov-2010	1,000	2	119,900	EP/MD/11-069	South Cheung Chau
05-Nov-2010	500	1	120,400	EP/MD/11-069	South Cheung Chau
06-Nov-2010	500	1	120,900	EP/MD/11-069	South Cheung Chau
07-Nov-2010	500	1	121,400	EP/MD/11-069	South Cheung Chau
08-Nov-2010	0	0	121,400	EP/MD/11-069	South Cheung Chau
09-Nov-2010	500	1	121,900	EP/MD/11-069	South Cheung Chau
10-Nov-2010	300	1	122,200	EP/MD/11-069	South Cheung Chau
11-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
12-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
13-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
14-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
15-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
16-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
17-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
18-Nov-2010	1,300	3	123,700	EP/MD/11-069	South Cheung Chau
19-Nov-2010	1,000	2	124,700	EP/MD/11-069	South Cheung Chau
20-Nov-2010	1,500	3	126,200	EP/MD/11-069	South Cheung Chau
21-Nov-2010	1,000	2	127,200	EP/MD/11-069	South Cheung Chau
22-Nov-2010	1,500	3	128,700	EP/MD/11-069	South Cheung Chau
23-Nov-2010	1,000	2	129,700	EP/MD/11-069	South Cheung Chau
24-Nov-2010	2,000	4	131,700	EP/MD/11-069	South Cheung Chau
25-Nov-2010	1,000	2	132,700	EP/MD/11-069	South Cheung Chau
26-Nov-2010	1,800	4	134,500	EP/MD/11-069	South Cheung Chau
27-Nov-2010	1,000	2	135,500	EP/MD/11-069	South Cheung Chau
28-Nov-2010	1,300	3	137,000	EP/MD/11-069	South Cheung Chau
29-Nov-2010	2,000	4	139,000	EP/MD/11-069	South Cheung Chau
30-Nov-2010	1,500	3	140,500	EP/MD/11-069	South Cheung Chau
01-Dec-2010	1,000	2	141,500	EP/MD/11-069	South Cheung Chau
02-Dec-2010	1,500	3	143,000	EP/MD/11-069	South Cheung Chau
03-Dec-2010	1,000	2	144,000	EP/MD/11-069	South Cheung Chau
04-Dec-2010	1,500	3	145,500	EP/MD/11-069	South Cheung Chau
05-Dec-2010	1,000	2	146,500	EP/MD/11-069	South Cheung Chau

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<b>Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)</b>					
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
06-Dec-2010	500	1	147,000	EP/MD/11-069	South Cheung Chau
07-Dec-2010	1,500	3	148,500	EP/MD/11-069	South Cheung Chau
08-Dec-2010	1,000	2	149,500	EP/MD/11-069	South Cheung Chau
09-Dec-2010	1,000	2	150,500	EP/MD/11-069	South Cheung Chau
10-Dec-2010	1,500	3	152,000	EP/MD/11-069	South Cheung Chau
11-Dec-2010	500	1	152,500	EP/MD/11-069	South Cheung Chau
12-Dec-2010	1,000	2	153,500	EP/MD/11-069	South Cheung Chau
13-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
14-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
15-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
16-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
17-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
18-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
19-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
20-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
21-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
22-Dec-2010	500	1	154,000	EP/MD/11-069	South Cheung Chau
23-Dec-2010	0	0	154,000	EP/MD/11-069	South Cheung Chau
24-Dec-2010	0	0	154,000	EP/MD/11-069	South Cheung Chau
25-Dec-2010	500	1	154,500	EP/MD/11-069	South Cheung Chau
26-Dec-2010	0	0	154,500	EP/MD/11-069	South Cheung Chau
27-Dec-2010	500	1	155,000	EP/MD/11-069	South Cheung Chau
28-Dec-2010	500	1	155,500	EP/MD/11-069	South Cheung Chau
29-Dec-2010	500	1	156,000	EP/MD/11-069	South Cheung Chau
30-Dec-2010	500	1	156,500	EP/MD/11-069	South Cheung Chau
31-Dec-2010	500	1	157,000	EP/MD/11-069	South Cheung Chau
01-Jan-2011	500	1	157,500	EP/MD/11-069	South Cheung Chau
02-Jan-2011	500	1	158,000	EP/MD/11-069	South Cheung Chau
03-Jan-2011	1,000	2	159,000	EP/MD/11-069	South Cheung Chau
04-Jan-2011	0	0	159,000	EP/MD/11-069	South Cheung Chau
05-Jan-2011	500	1	159,500	EP/MD/11-069	South Cheung Chau
06-Jan-2011	500	1	160,000	EP/MD/11-069	South Cheung Chau
07-Jan-2011	0	0	160,000	EP/MD/11-069	South Cheung Chau
08-Jan-2011	500	1	160,500	EP/MD/11-069	South Cheung Chau
09-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
10-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
11-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
12-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
13-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
14-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
15-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
16-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
17-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
18-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
19-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
20-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
21-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
22-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
23-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
24-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
25-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
26-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
27-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
28-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
29-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau

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<b>Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)</b>					
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
30-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
31-Jan-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
01-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
02-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
03-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
04-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
05-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
06-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
07-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
08-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
09-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
10-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
11-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
12-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
13-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
14-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
15-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
16-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
17-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
18-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
19-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
20-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
21-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
22-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
23-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
24-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
25-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
26-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
27-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
28-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
<b>TOTAL =</b>	<b>160,500</b>	<b>274</b>			

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<b>Summary of Dumping Qty. of Type 2 Marine Sediment</b>				
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.
	(bulk volume)		(bulk volume)	
05-May-2010	440	1	440	EP/MD/10-086
06-May-2010	1,280	3	1,720	EP/MD/10-086
07-May-2010	0	0	1,720	EP/MD/10-086
08-May-2010	0	0	1,720	EP/MD/10-086
09-May-2010	1,400	2	3,120	EP/MD/10-086
10-May-2010	1,400	2	4,520	EP/MD/10-086
11-May-2010	1,300	2	5,820	EP/MD/10-086
12-May-2010	1,300	3	7,120	EP/MD/10-086
13-May-2010	1,200	2	8,320	EP/MD/10-086
14-May-2010	0	0	8,320	EP/MD/10-086
15-May-2010	0	0	8,320	EP/MD/10-086
16-May-2010	600	1	9,420	EP/MD/10-086
17-May-2010	1,200	2	10,620	EP/MD/10-086
18-May-2010	700	1	11,320	EP/MD/10-086
19-May-2010	2,000	3	13,320	EP/MD/10-086
20-May-2010	1,400	2	14,720	EP/MD/10-086
21-May-2010	1,400	2	16,120	EP/MD/10-086
22-May-2010	2,100	3	18,220	EP/MD/10-086
23-May-2010	1,400	2	19,620	EP/MD/10-086
24-May-2010	1,400	2	21,020	EP/MD/10-086
25-May-2010	1,300	2	22,320	EP/MD/10-086
26-May-2010	1,400	2	23,720	EP/MD/10-086
27-May-2010	1,300	2	25,020	EP/MD/10-086
28-May-2010	1,400	2	26,420	EP/MD/10-086
29-May-2010	600	1	27,020	EP/MD/10-086
30-May-2010	2,100	3	29,120	EP/MD/11-012
31-May-2010	700	1	29,820	EP/MD/11-012
01-Jun-2010	1,900	3	31,720	EP/MD/11-012
02-Jun-2010	1,220	2	32,940	EP/MD/11-012
03-Jun-2010	1,300	2	34,240	EP/MD/11-012
04-Jun-2010	1,200	2	35,440	EP/MD/11-012
05-Jun-2010	1,400	2	36,840	EP/MD/11-012
06-Jun-2010	600	1	37,440	EP/MD/11-012
07-Jun-2010	0	0	37,440	EP/MD/11-012
08-Jun-2010	500	1	37,940	EP/MD/11-012
09-Jun-2010	0	0	37,940	EP/MD/11-012
10-Jun-2010	600	1	38,540	EP/MD/11-012
11-Jun-2010	1,200	2	39,740	EP/MD/11-012
12-Jun-2010	1,400	2	41,140	EP/MD/11-012
13-Jun-2010	1,400	2	42,540	EP/MD/11-012
14-Jun-2010	0	0	42,540	EP/MD/11-012
15-Jun-2010	0	0	42,540	EP/MD/11-012
16-Jun-2010	0	0	42,540	EP/MD/11-012
17-Jun-2010	0	0	42,540	EP/MD/11-012
18-Jun-2010	0	0	42,540	EP/MD/11-012
19-Jun-2010	0	0	42,540	EP/MD/11-012

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<b>Summary of Dumping Qty. of Type 2 Marine Sediment</b>				
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.
	(bulk volume)		(bulk volume)	
20-Jun-2010	0	0	42,540	EP/MD/11-012
21-Jun-2010	0	0	42,540	EP/MD/11-012
22-Jun-2010	0	0	42,540	EP/MD/11-012
23-Jun-2010	0	0	42,540	EP/MD/11-012
24-Jun-2010	0	0	42,540	EP/MD/11-012
25-Jun-2010	0	0	42,540	EP/MD/11-012
26-Jun-2010	0	0	42,540	EP/MD/11-012
27-Jun-2010	0	0	42,540	EP/MD/11-012
28-Jun-2010	0	0	42,540	EP/MD/11-012
29-Jun-2010	0	0	42,540	EP/MD/11-012
30-Jun-2010	1,200	2	43,740	EP/MD/11-024
01-Jul-2010	2,600	4	46,340	EP/MD/11-024
02-Jul-2010	2,800	4	49,140	EP/MD/11-024
03-Jul-2010	1,400	2	50,540	EP/MD/11-024
04-Jul-2010	2,100	3	52,640	EP/MD/11-024
05-Jul-2010	2,850	4	55,490	EP/MD/11-024
06-Jul-2010	1,400	2	56,890	EP/MD/11-024
07-Jul-2010	1,400	2	58,290	EP/MD/11-024
08-Jul-2010	2,700	4	60,990	EP/MD/11-024
09-Jul-2010	2,100	3	63,090	EP/MD/11-024
10-Jul-2010	2,100	3	65,190	EP/MD/11-024
11-Jul-2010	1,400	2	66,590	EP/MD/11-024
12-Jul-2010	2,150	3	68,740	EP/MD/11-024
13-Jul-2010	2,100	3	70,840	EP/MD/11-024
14-Jul-2010	700	1	71,540	EP/MD/11-024
15-Jul-2010	2,100	3	73,640	EP/MD/11-024
16-Jul-2010	2,100	3	75,740	EP/MD/11-024
17-Jul-2010	700	1	76,440	EP/MD/11-024
18-Jul-2010	700	1	77,140	EP/MD/11-024
19-Jul-2010	2,100	3	79,240	EP/MD/11-024
20-Jul-2010	2,100	3	81,340	EP/MD/11-024
(18 July 2010)				
21-Jul-2010	700	1	82,040	EP/MD/11-024
22-Jul-2010	600	1	82,640	EP/MD/11-024
23-Jul-2010	1,400	2	84,040	EP/MD/11-024
24-Jul-2010	1,400	2	85,440	EP/MD/11-024
25-Jul-2010	1,400	2	86,840	EP/MD/11-024
26-Jul-2010	1,450	2	88,290	EP/MD/11-024
27-Jul-2010	2,200	3	90,490	EP/MD/11-024
28-Jul-2010	1,450	2	91,940	EP/MD/11-024
29-Jul-2010	1,500	2	93,440	EP/MD/11-024
30-Jul-2010	0	0	93,440	--
31-Jul-2010	0	0	93,440	--
01-Aug-2010	0	0	93,440	--
02-Aug-2010	0	0	93,440	--



<b>Wo Hing - Penta-Ocean Joint Venture</b>				
Contract no. 9/WSD/08				
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun				
<b>Summary of Dumping Qty. of Type 2 Marine Sediment</b>				
Date	Dumping qty (m <sup>3</sup> )	Barge Load per day	Accumulated Dumping Qty.	Permit No.
	(bulk volume)		(bulk volume)	
03-Aug-2010	0	0	93,440	
04-Aug-2010	0	0	93,440	
05-Aug-2010	700	1	94,140	
(dump on 06-Aug-10)				
06-Aug-2010	1,500	2	95,640	EP/MD/11-053
07-Aug-2010	700	1	96,340	EP/MD/11-053
08-Aug-2010	2,100	3	98,440	EP/MD/11-053
09-Aug-2010	1,500	2	99,940	EP/MD/11-053
10-Aug-2010	1,500	2	101,440	EP/MD/11-053
11-Aug-2010	700	1	102,140	EP/MD/11-053
12-Aug-2010	0	0	102,140	EP/MD/11-053
13-Aug-2010	0	0	102,140	EP/MD/11-053
14-Aug-2010	0	0	102,140	EP/MD/11-053
15-Aug-2010	0	0	102,140	EP/MD/11-053
16-Aug-2010	0	0	102,140	EP/MD/11-053
17-Aug-2010	0	0	102,140	EP/MD/11-053
18-Aug-2010	0	0	102,140	EP/MD/11-053
19-Aug-2010	0	0	102,140	EP/MD/11-053
20-Aug-2010	0	0	102,140	EP/MD/11-053
21-Aug-2010	0	0	102,140	EP/MD/11-053
22-Aug-2010	0	0	102,140	EP/MD/11-053
23-Aug-2010	0	0	102,140	EP/MD/11-053
24-Aug-2010	0	0	102,140	EP/MD/11-053
25-Aug-2010	0	0	102,140	EP/MD/11-053
26-Aug-2010	0	0	102,140	EP/MD/11-053
27-Aug-2010	0	0	102,140	EP/MD/11-053
28-Aug-2010	1,400	2	103,540	EP/MD/11-053
29-Aug-2010	700	1	104,240	EP/MD/11-053
30-Aug-2010	0	0	104,240	EP/MD/11-053
31-Aug-2010	750	1	104,990	EP/MD/11-053
01-Sep-2010	0	0	104,990	EP/MD/11-053
02-Sep-2010	0	0	104,990	EP/MD/11-053
03-Sep-2010	0	0	104,990	EP/MD/11-053
04-Sep-2010	0	0	104,990	EP/MD/11-053
05-Sep-2010	0	0	104,990	EP/MD/11-053
<b>TOTAL =</b>	<b>104,990</b>	<b>155</b>		

**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

**Dredging Location of GD "Shun Tat 20" during Overtime Hours 19:00 – 07:00 (next day)**

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)							
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to		
03-05-2010	-	-					-	-						
04-05-2010	7:00	23:00	1238	1244	0	+17	22:00	23:00	1238	1244	0	+17		
05-05-2010	7:00	23:00	1244	1276	0	+17	19:00	23:00	1264	1276	0	+17		
06-05-2010	7:00	23:00	1276	1280	0	+17	19:00	23:00	1252	1264	0	-17		
			1238	1264	0	-17								
07-05-2010	7:00	19:00	1264	1264	0	-17	19:00	19:00						
08-05-2010	7:00	19:00	1264	1276	0	+17	19:00	19:00						
09-05-2010	7:00	23:00	1276	1304	0	-17	19:00	23:00	1264	1304	0	-17		
10-05-2010	7:00	23:00	1304	1316	0	-17	19:00	23:00	1304	1316	0	-17		
			1280	1316	0	+17								
11-05-2010	7:00	23:00	1316	1368	0	+17	19:00	23:00	1348	1368	0	+17		
12-05-2010	7:00	23:00	1320	1368	0	-17	19:00	23:00	1348	1368	0	-17		
13-05-2010	7:00	23:00	1368	1424	0	-17	19:00	23:00	1400	1424	0	-17		
14-05-2010	-	-					-	-						
15-05-2010	7:00	23:00	1368	1376	0	+17	19:00	23:00	1368	1376	0	+17		
16-05-2010	7:00	23:00	1376	1392	0	+17	19:00	23:00	1380	1392	0	+17		
17-05-2010	7:00	23:00	1392	1416	0	+15.5	19:00	23:00	1416	1432	0	-15.5		
			1416	1432	0	-15.5								
18-05-2010	7:00	23:00	1432	1468	0	+15	19:00	23:00	1452	1468	0	+15		
19-05-2010	7:00	23:00	1424	1484	0	-15	19:00	23:00	1476	1484	0	-15		
20-05-2010	7:00	23:00	1480	1500	0	+12.7	19:00	22:00	1480	1496	0	+14.1		
			1472	1496	0	+14.1								
21-05-2010	7:00	23:00	1496	1536	0	+12.9	19:00	23:00	1496	1516	0	-12.9		
			1496	1516	0	-12.9								
22-05-2010	7:00	23:00	1516	1572	0	-14.0	19:00	23:00	1564	1572	0	-14.0		
			1536	1540	0	+13.1			1536	1540	0	+13.1		
23-05-2010	7:00	23:00	1540	1592	0	+16.6	19:00	23:00	1580	1592	0	+16.6		
24-05-2010	7:00	23:00	1572	1620	0	-17	19:00	23:00	1592	1620	0	-17		
25-05-2010	7:00	23:00	1620	1656	0	+17	19:00	23:00	1608	1636	0	-17		
			1608	1636	0	-17								
26-05-2010	7:00	23:00	1636	1660	0	-17	19:00	23:00	1664	1680	0	+17		
			1656	1680	0	+17								
27-05-2010	7:00	23:00	1660	1708	0	-17	19:00	23:00	1680	1692	0	+16.8		
			1680	1692	0	+16.8								
28-05-2010	7:00	23:00	1692	1712	0	+17	19:00	23:00	1716	1736	0	-16		
			1708	1736	0	-16								
29-05-2010	7:00	23:00	1712	1752	0	+16	19:00	23:00	1748	1752	0	+16		
			1736	1756	0	-16			1736	1756	0	-16		
30-05-2010	7:00	23:00	1656	1800	0	-15	19:00	23:00	1752	1780	0	+16		
			1752	1780	0	+16								
31-05-2010	7:00	23:00	1780	1820	0	+15	19:00	23:00	1800	1824	0	-15		
			1800	1824	0	-15								
01-06-2010	7:00	23:00	1824	1848	0	+14	19:00	23:00	1820	1844	0	+14		
			1820	1844	0	+14								
02-06-2010	7:00	23:00	1844	1876	0	+14	19:00	23:00	1848	1864	0	-14		
			1848	1864	0	-14								
03-06-2010	7:00	23:00	1872	1908	0	+13	19:00	19:45	1864	1868	0	-13		
			1864	1876	0	-13								
04-06-2010	7:00	23:00	1868	1932	0	-13	19:00	23:00	1868	1932	0	-13		
05-06-2010	7:00	23:00	1908	1960	0	+12	19:00	23:00	1944	1960	0	+12		
06-06-2010	7:00	23:00	1932	1960	0	-12	19:00	21:00	1960	1970	0	+12		
			1960	1970	0	+12								
07-06-2010	7:00	23:00	1960	1970	0	-16	19:00	20:00	1974	1980	0	+12		
			1970	1980	0	+12								
08-06-2010	7:00	14:40	1250	1300	0	+19	-	-						
09-06-2010	7:00	23:00	-	-			-	-						
10-06-2010	7:00	23:00	1300	1390	+19	-19	19:00	23:00	1300	1390	+4	+19		
11-06-2010	7:00	23:00	1390	1530	+16	-16	19:00	23:00	1490	1530	+16	-16		
12-06-2010	7:00	23:00	1530	1665	+18	-18	19:00	23:00	1630	1665	+18	-18		
13-06-2010	7:00	23:00	1665	1780	+18	-18	19:00	23:00	1750	1780	+18	-18		
			23:00	7:00	1130	1142	-4	-21	23:00	7:00	1130	1142	-4	-21
14-06-2010	7:00	7:00	1142	1174	-4.7	-20.7	19:00	7:00	1162	1174	-4.7	-20.7		
15-06-2010	7:00	7:00	1130	1162	+4.7	+20.7	19:00	7:00	1142	1162	+4.7	+20.7		
16-06-2010	7:00	7:00	1162	1214	+4.7	+20.7	19:00	7:00	1182	1214	+4.7	+20.7		
17-06-2010	7:00	7:00	1214	1222	+4.7	+20.7								
			1174	1210	-4.7	-20.7	19:00	7:00	1186	1210	-4.7	-20.7		
18-06-2010	7:00	7:00	1130	1190	+8	-8	19:00	7:00	1158	1190	+8	-8		
19-06-2010	7:00	7:00	1190	1238	+8.5	-8.5	19:00	7:00	1214	1238	+8.5	-8.5		
20-06-2010	7:00	7:00	1266	1210	-4.5	-20.5	19:00	7:00	1222	1210	-4.5	-20.5		
			1226	1250	+4.5	+20.5			1226	1250	+4.5	+20.5		
21-06-2010	7:00	7:00	1250	1282	+5.5	+20.5								
			1238	1150	+8.5	-8.5	19:00	7:00	1262	1150	+8.5	-8.5		
22-06-2010	7:00	7:00	1266	1302	-5.5	-20.5	19:00	7:00	1266	1302	-5.5	-20.5		
			1262	1298	+8.5	-8.5			1262	1298	+8.5	-8.5		
			1150	1162	+8.5	-8.5			1150	1162	+8.5	-8.5		
23-06-2010	7:00	7:00	1282	1326	+5.5	+20.5								
			1298	1338	+8.5	-8.5	19:00	7:00	1324	1338	+8.5	-8.5		
			1162	1188	+8.5	-8.5			1162	1188	+8.5	-8.5		
24-06-2010	7:00	7:00	1346	1358	-5.5	-20.5								
			1336	1364	+7.5	-7.5	19:00	7:00	1350	1364	+7.5	-7.5		
			1188	1208	+8.5	-8.5			1188	1208	+8.5	-8.5		
25-06-2010	7:00	7:00	1364	1412	+7.5	-7.5	19:00	7:00	1392	1412	+7.5	-7.5		

**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

**Dredging Location of GD "Shun Tat 20" during Overtime Hours 19:00 - 07:00 (next day)**

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)							
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to		
26-06-2010	7:00	23:00	1206	1250	+8.5	-8.5	19:00	23:00	1206	1250	+8.5	-8.5		
			1306	1400	-7.5	-20.5			1380	1400	-7.5	-20.5		
			1412	1444	+7.5	-7.5			1412	1444	+7.5	-7.5		
			1362	1366	+5	+20			1362	1366	+5	+20		
27-06-2010	7:00	23:00	1326	1448	+7.5	+20.5	19:00	23:00	1400	1448	+7.5	+20.5		
			1400	1436	-7.5	-20.5			1400	1436	-7.5	-20.5		
			1448	1480	+7.5	+20			1448	1480	+7.5	+20		
28-06-2010	7:00	23:00	1444	1468	+7.5	-7.5	19:00	23:00	1448	1468	+7.5	-7.5		
			1436	1456	-7.5	-20			1436	1456	-7.5	-20		
			1456	1500	-7.5	-20			1456	1500	-7.5	-20		
29-06-2010	7:00	23:00	1468	1500	+7.5	-7.5	19:00	20:00	1496	1500	+7.5	-7.5		
			1076	1100	0	-16			23:00	7:00	1076	1100	0	-16
30-06-2010	7:00	7:00	1048	1076	0	-16	19:00	7:00	1064	1100	0	+16		
			1064	1100	0	+16			19:00	7:00	1064	1100	0	+16
01-07-2010	7:00	7:00	1020	1064	0	+16	19:00	7:00	1020	1048	0	+16		
			1032	1048	0	-16			1032	1036	0	-16		
02-07-2010	7:00	7:00	1000	1032	0	16	19:00	7:00	1000	1008	0	16		
			992	1020	0	+16			992	1020	0	+16		
03-07-2010	7:00	18:00	968	992	0	+16	-	-	968	992	0	+16		
			944	968	0	+16			944	968	0	+16		
04-07-2010	7:00	7:00	956	1000	0	-16	19:00	7:00	956	1000	0	-16		
			944	976	0	-16			944	976	0	-16		
			798	850	0	+17			19:00	7:00	798	832	0	+17
06-07-2010	7:00	7:00	838	850	0	-17	20:50	7:00	838	850	0	-17		
			782	838	0	-17			782	826	0	-17		
07-07-2010	7:00	7:00	758	782	0	-16	19:00	7:00	758	774	0	-16		
			774	798	0	+16			774	798	0	+16		
08-07-2010	7:00	7:00	728	774	0	+17	19:00	7:00	696	750	0	-17		
			696	750	0	-17			696	750	0	-17		
09-07-2010	7:00	7:00	666	710	0	+17	19:00	7:00	666	670	0	+17		
			682	710	0	-17			682	710	0	-17		
10-07-2010	7:00	7:00	654	682	0	-17	19:00	7:00	654	662	0	-17		
			634	666	0	+17			634	666	0	+17		
11-07-2010	7:00	7:00	622	654	0	-17	20:55	1:10	622	642	0	-17		
			602	622	0	-17			602	626	0	+17		
13-07-2010	7:00	7:00	570	602	0	+17	19:00	7:00	570	598	0	+17		
			574	602	0	-17			574	582	0	-17		
14-07-2010	7:00	7:00	558	570	0	+17	21:00	7:00	558	570	0	+17		
			562	574	0	-17			562	574	0	-17		
15-07-2010	7:00	7:00	546	562	0	-17	21:15	7:00	530	558	0	+17		
			530	558	0	+17			530	558	0	+17		
16-07-2010	7:00	7:00	526	546	0	-17	19:00	7:00	526	538	0	-17		
			526	536	0	+17			526	530	0	+17		
17-07-2010	7:00	19:00	-	-	0	-17	-	-	-	-	-	-		
18-07-2010	7:00	23:00	260	300	0	-17	19:00	23:00	260	276	0	-17		
19-07-2010	7:00	23:00	248	300	0	+17	19:00	21:15	248	256	0	+17		
20-07-2010	7:00	23:00	232	260	0	-15	19:00	23:00	224	236	0	+15		
			224	248	0	+15			224	236	0	+15		
21-07-2010	7:00	19:00	216	232	0	-15	-	-	-	-	-	-		
22-07-2010	7:00	19:00	-	-	0	-	-	-	-	-	-	-		
23-07-2010	07:00	23:00	200	216	0	-15	19:00	23:00	204	224	0	+15		
			208	224	0	+15			204	224	0	+15		
			176	200	0	-15			176	200	0	-15		
			176	184	0	-15			19:00	20:50	176	184	0	-15
24-07-2010	07:00	23:00	172	176	0	-15	21:00	23:00	172	176	0	-15		
			200	204	0	+15			21:00	23:00	200	204	0	+15
			172	200	0	+15			19:00	22:40	172	192	0	+15
25-07-2010	07:00	23:00	172	192	0	+15	19:00	22:40	172	192	0	+15		
			168	172	0	+15			168	172	0	+15		
26-07-2010	07:00	23:00	148	172	0	-15	19:20	23:00	152	168	0	+15		
			152	168	0	+15			152	168	0	+15		
			128	152	0	+15			19:00	21:00	128	136	0	+15
27-07-2010	07:00	23:00	128	136	0	+15	21:45	23:00	124	128	0	+15		
			124	128	0	-15			124	128	0	-15		
28-07-2010	07:00	23:00	124	148	0	-15	19:00	20:20	124	136	0	-15		
			124	136	0	-15			20:30	23:00	116	124	0	-15
29-07-2010	07:00	23:00	88	116	0	-15	19:00	20:45	88	100	0	-15		
			88	100	0	-15			88	100	0	-15		
30-07-2010	07:00	23:00	1480	1528	+5	+20.5	19:00	22:45	1480	1528	+5	+20.5		
			1480	1528	+5	+20.5			1480	1528	+5	+20.5		
			1500	1508	+7.5	-7.5			1500	1508	+7.5	-7.5		
			1500	1548	-5	-20.5			1500	1548	-5	-20.5		
31-07-2010	7:00	23:00	1508	1516	+7.5	-7.5	19:00	20:45	1516	1540	+7.5	-7.5		
			1516	1540	+7.5	-7.5			1516	1540	+7.5	-7.5		
			1516	1540	+7.5	-7.5			1516	1540	+7.5	-7.5		
			1540	1548	+7.5	-7.5			20:30	23:00	1540	1548	7.5	-7.5
			1528	1572	+5	+20.5			1528	1572	+5	+20.5		
01-08-2010	7:00	23:00	1548	1568	-5	-20.5	19:00	23:00	1548	1568	-5	-20.5		
			1548	1556	+7.5	-7.5			1548	1556	+7.5	-7.5		

**Wo Hing – Penta-Ocean Joint Venture**

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

**Dredging Location of GD "Shun Tat 20" during Overtime Hours 19:00 - 07:00 (next day)**

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)					
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to
02-08-2010	7:00	19:00	1556	1576	7.5	-7.5	19:00	23:00	1556	1576	7.5	-7.5
			1556	1576	7.5	-7.5						
			1572	1608	+5	+20.5						
03-08-2010	7:00	23:00	1576	1596	+7.5	-7.5						
			1568	1620	-5	-20.5						
			1596	1604	-7.5	+7.5	21:10	23:00	1596	1604	-7.5	+7.5
04-08-2010	7:00	23:00	1604	1612	-7.5	+7.5	19:00	21:40	1604	1612	-7.5	+7.5
05-08-2010	7:00	19:00	1608	1636	+7.5	+20.5						
06-08-2010	7:00	23:00	112	124	0	+15						
07-08-2010	7:00	23:00	84	112	0	+15	19:00	23:00	84	112	0	+15
			76	84	0	+15	19:00	23:00	76	84	0	+15
			68	76	0	+15			68	76	0	+15
08-08-2010	7:00	23:00	60	68	0	+15						
			72	88	0	-15						
			56	72	0	-15	19:00	23:00	56	72	0	-15
09-08-2010	7:00	23:00	52	56	0	-15			52	56	0	-15
			36	52	0	-15						
			20	36	0	-15	19:00	23:00	20	36	0	-15
10-08-2010	7:00	19:00	56	60	0	+15			56	60	0	+15
			54	56	0	+15						
			32	49	0	+15						
11-08-2010	7:00	7:00	0	32	0	+15	19:00	22:55	0	32	0	+15
			0	20	0	-15			0	20	0	-15
			1118	1130	-5	-20	1:30	7:00	1118	1130	-5	-20
12-08-2010	7:00	7:00	1110	1118	-5	-20						
			1122	1130	+7.5	-7.5						
			1110	1122	+7.5	-7.5	19:00	7:00	1110	1122	+7.5	-7.5
13-08-2010	7:00	7:00	1122	1130	+5	+20			1122	1130	+5	+20
			1114	1122	+5	+20						
			1086	1114	+5	+20	19:00	7:00	1086	1114	+5	+20
14-08-2010	7:00	7:00	1102	1110	+7.5	-7.5						
			1098	1110	-5	-20	19:00	21:30	1098	1110	-5	-20
			1078	1086	-5	-20			1078	1086	-5	-20
15-08-2010	7:00	7:00	1078	1102	+7.5	-7.5	23:30	7:00	1078	1102	+7.5	-7.5
			1070	1078	+7.5	-7.5						
			1070	1098	-5	-20	19:00	20:10	1070	1098	-5	-20
16-08-2010	7:00	7:00	1066	1078	+5	+20	20:20	2:30	1066	1078	+5	+20
			1066	1070	+7.5	-7.5			1066	1070	+7.5	-7.5
			1058	1066	+7.5	-7.5	3:25	7:00	1058	1066	+7.5	-7.5
17-08-2010	7:00	7:00	1026	1070	-5	-17.5						
			1046	1058	+7.5	-7.5	21:55	2:30	1046	1058	+7.5	-7.5
			1030	1046	-7.5	+7.5	2:30	7:00	1030	1046	-7.5	+7.5
18-08-2010	7:00	7:00	1026	1036	-7.5	+7.5						
19-08-2010	7:00	7:00	1038	1066	+5	+17.5	19:00	23:05	1038	1066	+5	+17.5
			1018	1038	+5	+17.5	2:35	7:00	1018	1038	+5	+17.5
			1018	1026	-7.5	+7.5						
20-08-2010	7:00	7:00	986	1018	+5	+17.5	19:00	20:50	986	1018	+5	+17.5
			1006	1026	-5	-17.5	20:55	2:50	1006	1026	-5	-17.5
			1010	1018	-7.5	+7.5			1010	1018	-7.5	+7.5
21-08-2010	7:00	7:00	1002	1010	-7.5	+7.5	3:25	6:00	1002	1010	-7.5	+7.5
			994	1002	+7.5	-7.5						
			978	994	+7.5	-7.5	19:00	7:00	978	994	+7.5	-7.5
22-08-2010	7:00	7:00	966	1006	-5	-17.5			966	1006	-5	-17.5
			958	986	+5	+17.5						
			970	978	+7.5	-7.5						
23-08-2010	7:00	7:00	950	970	+7.5	-7.5	19:00	7:00	950	970	+7.5	-7.5
			942	950	+7.5	-7.5			942	950	+7.5	-7.5
			938	942	+7.5	-7.5						
24-08-2010	7:00	19:00	942	966	-5	-17.5	19:00	1:35	942	966	-5	-17.5
			938	958	+5	+17.5			938	958	+5	+17.5
			-	-			-	-				
25-08-2010	7:00	7:00	628	640	+7.5	-7.5						
			612	628	+7.5	-7.5	21:10	2:15	612	628	+7.5	-7.5
			596	620	+7.5	-7.5						
26-08-2010	7:00	7:00	580	596	+7.5	-7.5	22:10	3:15	572	596	+7.5	-7.5
			572	580	+7.5	-7.5	3:35	7:00	572	580	+7.5	-7.5
			552	572	+7.5	-7.5						
27-08-2010	7:00	7:00	536	552	+7.5	-7.5	19:55	1:50	536	552	+7.5	-7.5
			528	536	+7.5	-7.5	2:30	7:00	528	536	+7.5	-7.5
			520	528	+7.5	-7.5						
28-08-2010	7:00	7:00	564	572	-20	-5						
			588	620	+7.5	-7.5	19:00	0:50	588	620	+7.5	-7.5
			564	588	+7.5	-7.5						
29-08-2010	7:00	7:00	540	564	+7.5	-7.5	0:00	7:00	540	564	+7.5	-7.5
			552	564	-5	-20			552	564	-5	-20
			520	552	-5	-20						
30-08-2010	7:00	7:00	564	580	+5	+20						
			520	564	+5	+20	19:00	22:20	520	564	+5	+20
			512	520	-7	+7	22:25	7:00	512	520	-7	+7
31-08-2010	7:00	7:00	508	512	-7	+7			508	512	-7	+7
			500	508	-7	-5						
			850	870	0	+17.5	19:00	0:50	850	870	0	+17.5

**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

**Dredging Location of GD "Shun Tat 20" during Overtime Hours 19:00 - 07:00 (next day)**

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)					
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to
31-08-2010	7:00	7:00	850	870	0	-17.5			850	870	0	-17.5
			914	922	+7.5	-7.5	1:00	6:00	914	922	+7.5	-7.5
			914	938	+5	+17.5	19:00	7:00	914	938	+5	+17.5
			910	914	+5	+17.5			910	914	+5	+17.5
			918	938	+7.5	-7.5			918	938	+7.5	-7.5
01-09-2010	7:00	7:00	926	938	-5	-17.5			926	938	-5	-17.5
			910	926	-5	-17.5	19:00	21:15	910	926	-5	-17.5
			902	918	+7.5	-7.5	22:35	3:45	902	918	+7.5	-7.5
			902	914	+5	-17.5	5:05	7:00	902	914	+5	-17.5
02-09-2010	7:00	7:00	878	902	+5	+17.5						
			902	910	-5	-17.5						
			882	902	-5	-17.5	19:35	1:15	882	902	-5	-17.5
			894	902	+7.5	-7.5	4:25	7:00	894	902	+7.5	-7.5
03-09-2010	7:00	7:00	870	894	+7.5	-7.5						
			850	878	+5	+17.5	19:35	7:00	850	878	+5	+17.5
			858	882	-5	-17.5			858	882	-5	-17.5
04-09-2010	7:00	7:00	846	858	-5	-17.5						
			854	870	+7.5	-7.5	19:00	7:00	854	870	+7.5	-7.5
			822	846	-5	-17.5			822	846	-5	-17.5
			834	850	+5	+17.5			834	850	+5	+17.5
05-09-2010	7:00	6:00	822	834	+5	+17.5						
			834	854	+7.5	-7.5	19:00	6:00	834	854	+7.5	-7.5
			814	834	+7.5	-7.5			814	834	+7.5	-7.5
06-09-2010	7:00	7:00	798	822	-5	-17.5			798	822	-5	-17.5
			810	822	+5	+17.5						
			810	814	+5	+17.5	19:00	7:00	810	814	+5	+17.5
			794	814	+7.5	-7.5			794	814	+7.5	-7.5
			778	794	+7.5	-7.5			778	794	+7.5	-7.5
07-09-2010	7:00	23:00	778	798	-5	-17.5			778	798	-5	-17.5
			766	778	+7.5	-7.5						
			778	798	+5	+17.5	19:00	20:55	778	798	+5	+17.5
08-09-2010	7:00	19:00	-	-			-	-				
09-09-2010	7:00	19:00	-	-			-	-				
10-09-2010	7:00	19:00	-	-			-	-				
11-09-2010	7:00	19:00	-	-			-	-				
12-09-2010	7:00	19:00	-	-			-	-				
13-09-2010	7:00	19:00	-	-			-	-				
14-09-2010	7:00	19:00	-	-			-	-				
15-09-2010	7:00	19:00	-	-			-	-				
16-09-2010	7:00	19:00	-	-			-	-				
17-09-2010	7:00	19:00	-	-			-	-				
18-09-2010	7:00	19:00	-	-			-	-				
19-09-2010	7:00	19:00	-	-			-	-				
20-09-2010	7:00	19:00	-	-			-	-				
21-09-2010	7:00	7:00	444	452	+7.5	-7.5	20:30	4:30	444	452	+7.5	-7.5
22-09-2010	7:00	19:00	-	-			-	-				
23-09-2010	7:00	19:00	-	-			-	-				
24-09-2010	7:00	19:00	-	-			-	-				
25-09-2010	7:00	19:00	-	-			-	-				
26-09-2010	7:00	19:00	-	-			-	-				
27-09-2010	7:00	23:00	440	444	+7.5	-7.5	20:35	21:00	440	444	+7.5	-7.5
28-09-2010	7:00	19:00	-	-			-	-				
29-09-2010	7:00	23:00	432	444	+7.5	-7.5	19:00	23:00	432	444	+7.5	-7.5
30-09-2010	7:00	19:00	-	-			-	-				
01-10-2010	7:00	23:00	429	432	+7.5	-7.5	19:00	23:00	429	432	+7.5	-7.5
02-10-2010	7:00	7:00	440	452	+7.5	-7.5						
			764	778	+17.5	+5	19:00	23:30	764	778	+17.5	+5
			770	778	-17.5	-5	4:35	7:00	770	778	-17.5	-5
03-10-2010	7:00	7:00	746	770	-5	-17.5						
			734	754	+7.5	-7.5	19:00	22:55	734	754	+7.5	-7.5
			742	754	+5	+17.5	4:25	7:00	742	754	+5	+17.5
			726	742	+5	+17.5						
04-10-2010	7:00	7:00	722	734	+7.5	-7.5	0:15	7:00	722	734	+7.5	-7.5
			718	722	+7.5	-7.5						
			710	746	-5	-17.5	19:00	7:00	710	746	-5	-17.5
05-10-2010	7:00	7:00	702	726	+5	+17.5			702	726	+5	+17.5
			706	718	+7.5	-7.5						
			698	710	-5	-17.5	19:00	7:00	698	710	-5	-17.5
			690	706	+7.5	-7.5			690	706	+7.5	-7.5
06-10-2010	7:00	7:00	682	690	+7.5	-7.5			682	690	+7.5	-7.5
			666	702	+17.5	+5			666	702	+17.5	+5
			682	698	-5	-17.5			682	698	-5	-17.5
			662	682	-5	-17.5						
			654	682	+7.5	-7.5	19:00	7:00	654	682	+7.5	-7.5
			638	662	-5	-17.5			638	662	-5	-17.5
			646	654	+7.5	-7.5			646	654	+7.5	-7.5
			650	666	+5	+17.5			650	666	+5	+17.5
			606	650	+5	+17.5	19:00	21:55	606	650	+5	+17.5
			632	650	+7.5	-7.5	19:00	19:15	632	650	+7.5	-7.5
08-10-2010	7:00	23:00	572	638	-5	-17.5	19:00	6:00	572	638	-5	-17.5
			602	606	+5	+17.5			602	606	+5	+17.5
09-10-2010	7:00	7:00	580	602	+5	+17.5						
10-10-2010	7:00	7:00	580	602	+5	+17.5						
11-10-2010	7:00	7:00	580	602	+5	+17.5						

**Wo Hing – Penta-Ocean Joint Venture**

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

**Dredging Location of GD "Shun Tai 20" during Overtime Hours 19:00 - 07:00 (next day)**

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)					
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to
12-10-2010	7:00	7:00	640	646	+7.5	-7.5	19:00	7:00	496	512	+5	+20
			512	520	+5	+20			508	520	-5	-20
			496	512	+5	+20			500	508	-5	-20
			508	520	-5	-20			492	500	-5	-20
			500	508	-5	-20			492	500	+7.5	-7.5
			492	500	+7.5	-7.5			480	492	+7.5	-7.5
			480	492	+7.5	-7.5			472	480	-5	-20
13-10-2010	7:00	7:00	472	480	-5	-20	19:00	7:00	472	480	-5	-20
			472	496	+5	+20			476	480	+7.5	-7.5
			476	480	+7.5	-7.5			460	472	-5	-20
			460	472	-5	-20			456	460	-5	-20
14-10-2010	7:00	7:00	456	460	-5	-20	19:00	20:50	448	456	-5	-20
			468	472	+5	+20			462	468	+5	+20
			472	476	+7.5	-7.5			452	462	+5	+20
			448	456	-5	-20			448	452	+5	+20
			462	468	+5	+20			436	448	+7.5	-7.5
15-10-2010	7:00	7:00	452	462	+5	+20	19:00	23:10	424	436	+7.5	-7.5
			448	452	+5	+20			436	448	-5	-20
			436	472	+7.5	-7.5			444	452	+5	+20
			424	436	+7.5	-7.5			420	436	-5	-20
			436	448	-5	-20			420	432	+20	+5
			444	452	+5	+20			412	420	-5	-20
16-10-2010	7:00	7:00	420	436	-5	-20	19:00	6:30	412	420	-5	-20
			420	432	+20	+5			416	424	+7.5	-7.5
			412	420	-5	-20			436	444	+20	+5
			416	424	+7.5	-7.5			432	436	+20	+5
			436	444	+20	+5			400	412	+7.5	-7.5
			432	436	+20	+5			404	420	+5	+20
			400	412	+7.5	-7.5			392	404	+5	+20
17-10-2010	7:00	7:00	404	420	+5	+20	19:00	0:00	392	404	+5	+20
			392	404	+5	+20			404	436	-5	-20
			404	436	-5	-20			440	460	+7.5	-7.5
			440	460	+7.5	-7.5			436	440	+7.5	-7.5
			436	440	+7.5	-7.5			396	400	+7.5	-7.5
			396	400	+7.5	-7.5			376	396	+7.5	-7.5
			376	396	+7.5	-7.5			368	392	+20	+5
			368	392	+20	+5			376	404	-5	-20
18-10-2010	7:00	7:00	376	404	-5	-20	19:00	23:30	376	404	-5	-20
			436	460	+5	+20			436	460	+5	+20
			372	376	-5	-20			372	376	-5	-20
			360	376	+7.5	-7.5			360	376	+7.5	-7.5
			348	360	+7.5	-7.5			356	372	-5	-20
			356	372	-5	-20			360	368	+5	+20
19-10-2010	7:00	7:00	360	376	+7.5	-7.5	19:00	20:05	356	372	-5	-20
			348	360	+7.5	-7.5			360	368	+5	+20
			356	372	-5	-20			456	480	-5	-20
			360	368	+5	+20			436	456	-5	-20
			456	480	-5	-20			356	360	+5	+20
			436	456	-5	-20			340	348	+7.5	-7.5
			356	360	+5	+20			336	340	+7.5	-7.5
20-10-2010	7:00	23:00	340	348	+5	+20	19:00	21:10	348	356	+5	+20
			336	340	+7.5	-7.5			340	348	+5	+20
			348	356	+5	+20			340	348	+5	+20
			340	348	+5	+20			-	-	-	-
21-10-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
22-10-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
23-10-2010	7:00	7:00	336	356	-5	-20	19:00	22:40	336	356	-5	-20
			430	460	+7.5	-7.5			430	460	+7.5	-7.5
24-10-2010	7:00	7:00	320	336	+5	+20	19:00	3:20	320	336	+5	+20
			328	336	+7.5	-7.5			316	336	-5	-17.5
			296	320	+20	+5			480	500	-5	-20
			316	336	-5	-17.5			460	500	+5	+20
			480	500	-5	-20			320	328	+7.5	-7.5
			460	500	+5	+20			284	316	-5	-17.5
			320	328	+7.5	-7.5			284	304	+7.5	-7.5
			284	304	+7.5	-7.5			280	284	+7.5	-7.5
			280	284	+7.5	-7.5			260	296	+5	+17.5
			260	296	+5	+17.5			276	280	+7.5	-7.5
25-10-2010	7:00	23:00	276	280	+7.5	-7.5	19:00	23:00	264	276	+7.5	-7.5
			264	276	+7.5	-7.5			260	284	-5	-17.5
			480	500	-5	-20			252	264	+7.5	-7.5
			460	500	+5	+20			248	252	+7.5	-7.5
			320	328	+7.5	-7.5			188	260	+5	+17.5
			284	316	-5	-17.5			240	248	+7.5	-7.5
			280	284	+7.5	-7.5			256	260	-5	-17.5
			260	284	-5	-17.5			240	256	-5	-17.5
26-10-2010	7:00	23:00	252	264	+7.5	-7.5	19:00	22:00	240	256	-5	-17.5
			248	252	+7.5	-7.5			216	240	0	-12.5
			188	260	+5	+17.5			236	240	+12.5	0
			240	248	+7.5	-7.5			204	236	0	+12.5
27-10-2010	7:00	19:00	240	248	+7.5	-7.5	19:00	22:55	180	216	0	-12.5
			256	260	-5	-17.5			176	204	+12.5	0
			240	256	-5	-17.5			172	180	0	-12.5
28-10-2010	7:00	23:00	240	256	-5	-17.5	19:00	21:50	176	204	+12.5	0
			216	240	0	-12.5			172	180	0	-12.5
29-10-2010	7:00	23:00	204	236	0	+12.5	22:45	23:00	236	240	+12.5	0
30-10-2010	7:00	23:00	180	216	0	-12.5	19:00	21:50	180	216	0	-12.5
			176	204	+12.5	0			176	204	+12.5	0
			172	180	0	-12.5			172	180	0	-12.5

**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

**Dredging Location of GD "Shun Tat 20" during Overtime Hours 19:00 - 07:00 (next day)**

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)					
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to
31-10-2010	7:00	23:00	168	172	0	-12.5	22:05	23:00	168	172	0	-12.5
			140	168	0	-12.5	19:00	23:00	140	168	0	-12.5
			136	176	0	+12.5			136	176	0	+12.5
			128	136	0	+12.5			128	136	0	+12.5
01-11-2010	7:00	23:00	104	128	+12.5	0						
			116	140	0	-12.5	19:00	23:00	116	140	0	-12.5
			112	116	0	-12.5			112	116	0	-12.5
02-11-2010	7:00	23:00	80	112	0	-12.5						
			84	104	0	+12.5	19:00	21:55	84	104	0	+12.5
03-11-2010	7:00	20:30	60	84	+12.5	0						
			60	80	+17.5	+15						
04-11-2010	7:00	23:00	48	80	0	-12.5	19:00	20:30	48	80	0	-12.5
			48	60	0	+12.5	19:00	23:00	48	60	0	+12.5
05-11-2010	7:00	23:00	24	48	0	+12.5	19:00	22:45	24	48	0	+12.5
			4	24	0	+12.5			4	24	0	+12.5
06-11-2010	7:00	23:00	6	24	0	-12.5	19:00	23:00	6	24	0	-12.5
			0	4	0	+12.5			0	4	0	+12.5
07-11-2010	7:00	20:00	0	-12	0	+16						
			-12	-18.5	0	+16	19:00	20:00	-12	-18.5	0	+16
08-11-2010	7:00	23:00	240	256	+5	-5	19:00	23:00	240	256	+5	-5
09-11-2010	7:00	23:00	256	280	+5	-5						
			280	308	+5	-5	19:00	23:00	280	308	+5	-5
10-11-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
11-11-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
12-11-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
13-11-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
14-11-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
15-11-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
16-11-2010	7:00	19:00	-	-	-	-	-	-	-	-	-	
17-11-2010	7:00	7:00	504	536	+5	-5	18:30	22:20	504	536	+5	-5
			500	504	+5	-5	0:25	5:30	500	504	+5	-5
			470	500	+15	+5			470	500	+15	+5
			476	500	+5	-5			476	500	+5	-5
18-11-2010	7:00	7:00	444	476	+5	-5						
			396	444	+5	-5	19:00	23:40	396	444	+5	-5
			430	470	+15	+5	0:10	4:30	430	470	+15	+5
			392	396	+5	-5	5:55	8:00	392	396	+5	-5
19-11-2010	7:00	7:00	364	392	+5	-5						
			320	364	+5	-5	19:00	22:10	320	364	+5	-5
			460	520	-5	-16	23:20	3:16	460	520	-5	-16
			304	320	+5	-5	5:00	7:00	304	320	+5	-5
20-11-2010	7:00	7:00	620	636	+5	-5						
			636	668	+5	-5	19:00	0:40	636	668	+5	-5
			668	688	+5	-5	2:55	7:00	668	688	+5	-5
			688	700	+5	-5						
21-11-2010	7:00	7:00	700	732	+5	-5	19:00	21:00	700	732	+5	-5
			732	760	+5	-5	21:50	3:00	732	760	+5	-5
			760	780	+5	-5	3:35	7:00	760	780	+5	-5
			780	788	+5	-5						
22-11-2010	7:00	7:00	788	824	+5	-5	19:00	21:40	788	824	+5	-5
			824	832	+5	-5	2:35	7:00	824	832	+5	-5
			808	832	+7.5	+15			808	832	+7.5	+15
			832	848	+12.5	-5						
23-11-2010	7:00	7:00	848	888	+12.5	-7.5	19:00	20:50	848	888	+12.5	-7.5
			888	920	+12.5	-7.5	2:00	21:30	888	920	+12.5	-7.5
			920	952	+7.5	-7.5	2:30	6:30	920	952	+7.5	-7.5
			952	988	-5	+15						
24-11-2010	7:00	7:00	988	1012	-7.5	+7.5	19:00	22:25	988	1012	-7.5	+7.5
			1012	1044	-7.5	+5	22:50	2:50	1012	1044	-7.5	+5
			1044	1084	+7.5	-7.5						
25-11-2010	7:00	7:00	1084	1128	+7.5	-5	21:20	2:55	1084	1128	+7.5	-5
			1128	1152	+7.5	-5	3:15	7:00	1128	1152	+7.5	-5
			1152	1156	+5	-12.5						
26-11-2010	7:00	7:00	1156	1180	+5	-12.5	19:00	20:05	1156	1180	+5	-12.5
			1180	1204	+10	-10	20:40	0:45	1180	1204	+10	-10
			1204	1224	+10	-10	1:30	7:00	1204	1224	+10	-10
			1224	1244	+10	0						
27-11-2010	7:00	7:00	1244	1328	-12.5	+7.5	19:00	23:35	1244	1328	-12.5	+7.5
			1200	1244	-12.5	-5	2:00	6:00	1200	1244	-12.5	-5
			1328	1340	-12.5	-5	6:45	8:00	1328	1340	-12.5	-5
			1324	1360	+5	-5						
28-11-2010	7:00	7:00	1360	1388	0	-12.5	19:00	21:00	1360	1388	0	-12.5
			1388	1400	0	-12.5	21:50	2:00	1388	1400	0	-12.5
			1150	1200	-10	0			1150	1200	-10	0
			1150	1200	+10	0	2:40	7:00	1150	1200	+10	0
29-11-2010	7:00	7:00	1412	1420	0	+7.5						
			1420	1432	+7.5	0	19:00	7:00	1420	1432	+7.5	0
			1432	1452	+5	-5			1432	1452	+5	-5
			1452	1492	+5	-5			1452	1492	+5	-5
30-11-2010	7:00	7:00	1492	1500	+5	-5			1492	1500	+5	-5
			1492	1516	+5	-5						

**Wo Hing – Penta-Ocean Joint Venture**

Contract No. 9/WSD/08  
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 From West Kowloon to Sai Ying Pun

**Dredging Location of GD "Shun Tat 20" during Overtime Hours 19:00 - 07:00 (next day)**

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)					
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to
01-12-2010	7:00	7:00	1516	1548	+5	-10	19:00	7:00	1516	1548	+5	-10
			1548	1564	+5	-10			1548	1564	+5	-10
			1564	1568	+5	-10			1564	1568	+5	-10
			1564	1576	-10	+5						
			1676	1620	-10	+5						
			1620	1640	-12.5	-5			19:00	7:00	1620	1640
02-12-2010	7:00	7:00	1620	1640	0	+7.5			1620	1640	0	+7.5
			1620	1632	+5	-5			1620	1632	+5	-5
			1632	1636	+5	-5			1632	1636	+5	-5
			1636	1640	+5	-5						
			1640	1644	+5	-5	19:00	7:00	1640	1644	+5	-5
			1640	1664	+5	+12.5			1640	1664	+5	+12.5
03-12-2010	7:00	7:00	1640	1644	-5	-12.5			1640	1644	-5	-12.5
			1644	1664	-5	-12.5						
			1644	1656	+5	-5						
			1656	1664	+5	-5						
			1664	1680	-15	-2.5						
			1664	1680	+2.5	+15	19:00	7:00	1664	1680	+2.5	+15
04-12-2010	7:00	7:00	1644	1680	-5	+5			1644	1680	-5	+5
			1680	1688	+15	+2.5			1680	1688	+15	+2.5
			1688	1700	+2.5	+12.5						
			1680	1692	-2.5	-12.5						
			1692	1700	-2.5	-12.5	19:00	7:00	1692	1700	-2.5	-12.5
			1680	1696	+5	-5			1680	1696	+5	-5
05-12-2010	7:00	7:00	1696	1700	+5	-5			1696	1700	+5	-5
			1700	1716	+2.5	+12.5			1700	1716	+2.5	+12.5
			1700	1708	-2.5	-12.5			1700	1708	-2.5	-12.5
			1708	1720	-2.5	-12.5						
			1700	1704	-5	+5						
			1704	1720	+5	-5						
06-12-2010	7:00	7:00	1720	1736	+2.5	+12.5						
			1736	1744	+2.5	+12.5	19:00	7:00	1736	1744	+2.5	+12.5
			1720	1744	-12.5	-2.5			1720	1744	-12.5	-2.5
			1720	1732	+5	-5			1720	1732	+5	-5
			1732	1740	-5	+5			1732	1740	-5	+5
			1740	1744	+5	-5	19:00	7:00	1740	1744	+5	-5
07-12-2010	7:00	7:00	1744	1752	0	+12.5			1744	1752	0	+12.5
			1752	1756	0	+12.5			1752	1756	0	+12.5
			1744	1748	0	-12.5			1744	1748	0	-12.5
			1748	1776	-12.5	0						
			1756	1796	0	+12.5	19:00	7:00	1756	1796	0	+12.5
			1776	1792	-12.5	0			1776	1792	-12.5	0
08-12-2010	7:00	7:00	1792	1796	-12.5	0			1792	1796	-12.5	0
			1796	1808	0	-12.5						
			1808	1828	0	-12.5						
			1808	1840	0	+12.5	19:00	23:00	1808	1840	0	+12.5
			1828	1836	0	-12.5	23:00	7:00	1828	1836	0	-12.5
			1836	1860	-12.5	0						
09-12-2010	7:00	7:00	1840	1860	0	+12.5						
			1860	1900	0	-12.5	19:00	21:25	1860	1900	0	-12.5
			1860	1868	0	+12.5	22:00	23:00	1860	1868	0	+12.5
			1868	1872	0	+12.5	23:00	7:00	1868	1872	0	+12.5
			1872	1900	0	+12.5						
			1900	1920	0	+12.5	19:00	7:00	1900	1920	0	+12.5
10-12-2010	7:00	7:00	1900	1916	0	-12.5			1900	1916	0	-12.5
			1916	1932	0	-12.5			1916	1932	0	-12.5
			1920	1924	0	+12.5			1920	1924	0	+12.5
			1924	1956	0	+12.5						
			1932	1940	-12.5	0	19:00	7:00	1932	1940	-12.5	0
			1900	1940	-12.5	0			1900	1940	-12.5	0
11-12-2010	7:00	7:00	1940	1924	0	+12.5			1900	1924	0	+12.5
			1924	1932	0	+12.5			1924	1932	0	+12.5
			1932	1944	0	+12.5						
			1900	1872	0	+12.5			1924	1932	0	+12.5
			1944	1872	0	+12.5						
			1900	1872	0	+12.5						
12-12-2010	7:00	19:00	-	-	-	-						
			-	-	-	-						
			-	-	-	-						
			-	-	-	-						
			-	-	-	-						
			-	-	-	-						
13-12-2010	7:00	19:00	330	370	+15	-15	19:00	7:00	330	380	+15	-15
			370	380	+15	-15						
			380	575	+10	-10	19:00	7:00	380	575	+10	-10
			575	610	+10	-10						
			610	930	+10	-10	19:00	7:00	610	930	+10	-10
			950	1200	+10	-10	19:00	7:00	950	1200	+10	-10
21-12-2010	7:00	7:00	1200	1250	+10	-10						
			-	-	-	-						
			-	-	-	-						
			-	-	-	-						
			-	-	-	-						
			-	-	-	-						
22-12-2010	7:00	7:00	1670	1680	+5	-10						
			1680	1720	+10	-10	19:00	7:00	1680	1720	+10	-10



**Wo Hing – Penta-Ocean Joint Venture**

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

**Dredging Location of GD "Shun Tai 20" during Overtime Hours 19:00 - 07:00 (next day)**

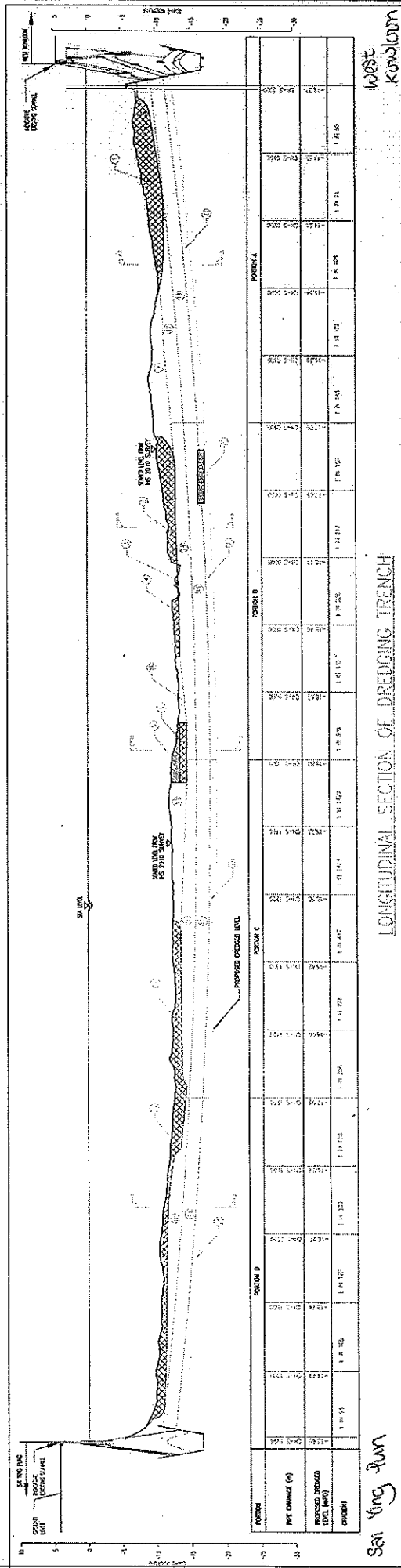
Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)					
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to
28-12-2010	7:00	19:00	1744	1780	0	-12.5	19:00	7:00	1744	1780	0	-12.5
			1744	1752	0	+12.5			1744	1752	0	+12.5
			1752	1780	0	+12.5			1752	1780	0	+12.5
29-12-2010	7:00	19:00	1780	1788	0	+12.5	19:00	7:00	1780	1788	0	+12.5
			1788	1816	0	+12.5			1788	1816	0	+12.5
			1780	1804	0	-12.5			1780	1804	0	-12.5
30-12-2010	7:00	7:00	1804	1812	0	-12.5	19:00	7:00	1804	1812	0	-12.5
			1812	1832	-12.5	0			1812	1832	-12.5	0
			1832	1844	-12.5	0			1832	1844	-12.5	0
31-12-2010	7:00	7:00	1816	1828	0	+12.5	19:00	7:00	1816	1828	0	+12.5
			1836	1852	0	+12.5			1836	1852	0	+12.5
			1844	1852	0	-12.5			1844	1852	0	-12.5
01-01-2011	7:00	7:00	1852	1872	0	+12.5	19:00	7:00	1852	1872	0	+12.5
			1852	1856	0	-12.5			1852	1856	0	-12.5
			1856	1888	0	-12.5			1856	1888	0	-12.5
02-01-2011	7:00	7:00	1872	1916	0	+12.5	19:00	7:00	1872	1916	0	+12.5
			1916	1924	0	+12.5			1916	1924	0	+12.5
			1924	1948	0	+12.5			1924	1948	0	+12.5
03-01-2011	7:00	7:00	1888	1956	0	-12.5	19:00	7:00	1888	1956	0	-12.5
			1948	1952	0	+12.5			1948	1952	0	+12.5
			1952	1972	+2.5	-12.5			1952	1972	+2.5	-12.5
04-01-2011	7:00	7:00	1200	1440	+7.5	-7.5	23:20	7:00	1200	1440	+7.5	-7.5
			1560	1640	+7.5	-7.5	19:00	7:00	1560	1640	+7.5	-7.5
			255	290	+10	-10	19:00	7:00	255	290	+10	-10
05-01-2011	7:00	7:00	175	255	+10	-10	19:00	7:00	175	255	+10	-10
			165	175	+10	0			165	175	+10	0
			80	165	+10	-10			80	165	+10	-10
06-01-2011	7:00	7:00	70	80	+10	-10	19:00	7:00	70	80	+10	-10
			10	70	+10	-10			10	70	+10	-10
			0	10	+5	-5			0	10	+5	-5
07-01-2011	7:00	22:30	10	70	+10	-10	19:00	22:30	10	70	+10	-10
			0	10	+5	-5			0	10	+5	-5
			0	10	+5	-5			0	10	+5	-5

NOTE:

LOGISTIC OF DREDGING

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

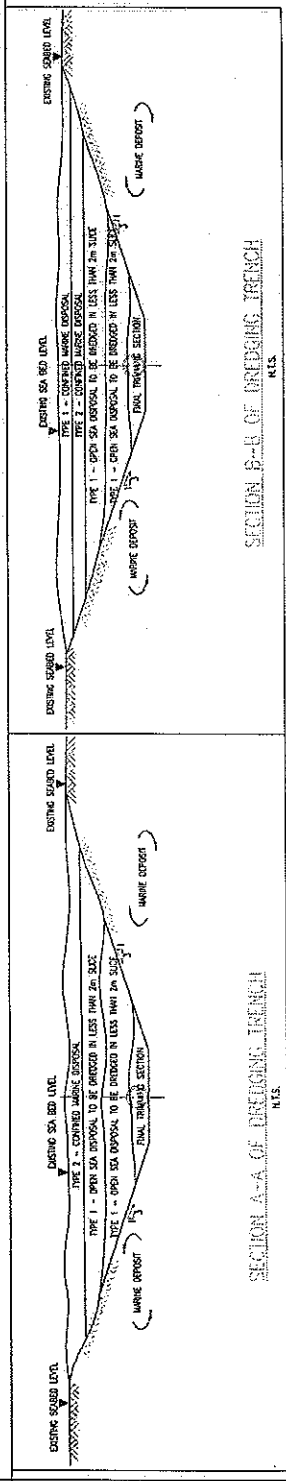
IF SIMILAR DISPOSAL SITE IS DEDICATED FOR TYPE 1D AND TYPE 1 MARINE SEDIMENT DREDGING LOGISTIC AT ㉚ WILL BE DELETED AND INCLUDED IN ㉙ AND ㉛



San Ying Run

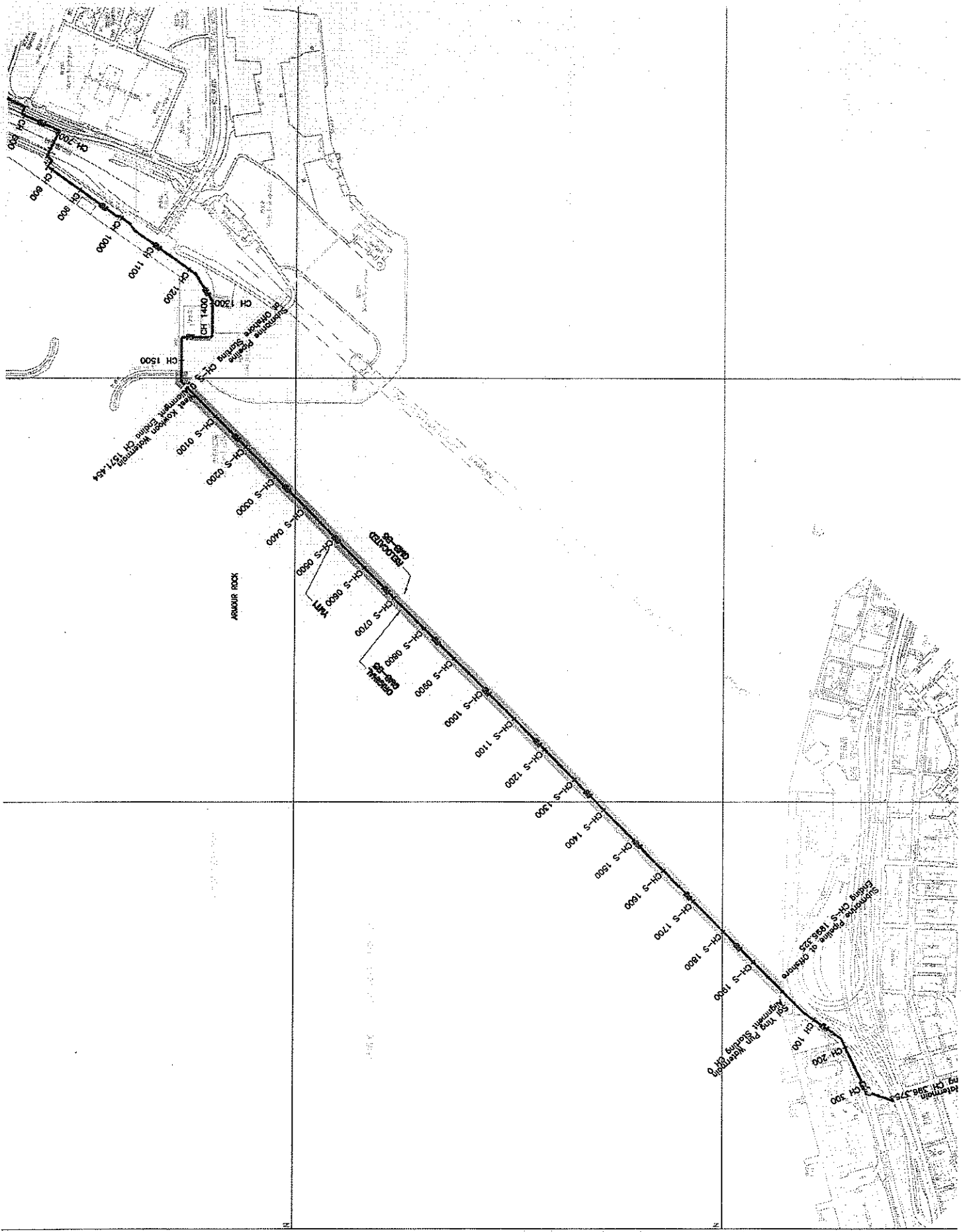
LONGITUDINAL SECTION OF DREDGING TRENCH

West Kowloon



THE NUMBER INDICATE THE SEQUENCE OF DREDGING

CONTRACTOR	CONTRACT NO. 9/WSD/08	DRAW BY	TONY TANG	SCALE	NTS
WO HING-PENTAOCEAN JOINT VENTURE 和興五洲聯合	Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Sai Ying Pun	CHECKED BY	STANLEY LEUNG	DWG No.	SK-D-002
	DRAWING TITLE: DREDGING LOGISTIC	DATE	08 Apr 2010	REVISION	D





## **Appendix K**

### **Details of Interim Notifications of Exceedance (NOEs) in this reporting month**



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

Date and Time of Noise Monitoring: 12 February 2011 (2300-2400) at KY3, RWM and CGa

Construction Works carried out during the monitoring: Underwater welding at Portion J

Corresponding CNP: GW-RS1143-10 (23 December 2010 to 19 June 2011)

Monitoring Location	Measured Value, dB(A)	Action Level	Limit Level, dB(A)	Possible Reason(s) for the Exceedance	Action to be taken	Remark
KY3	61.8 61.2 60.9	When one documented complaint is received	55	Underwater welding was carried out by using one generator and one air compressor, which fulfill the requirement described in corresponding CNP. Refer to the observation during the monitoring, main source of noise impact was due to local traffic along Connaught Road West and Western Harbour Crossing. According to the summary of baseline noise monitoring, the range of background noise level from 2300-0100 * is between 53.5dB(A) and 62.9dB(A). The impact monitoring results were found within the range of baseline noise level. Hence, the exceedance recorded is considered invalid and no related to the construction works.	Nil	Nil
RWM	63.5 63.9 63.1	When one documented complaint is received	55	Underwater welding was carried out by using one generator and one air compressor, which fulfill the requirement described in corresponding CNP. Refer to the observation during the monitoring, main source of noise impact was due to local traffic along Connaught Road West and Western Harbour Crossing. According to the summary of baseline noise monitoring, the range of background noise level from 2300-0100 * is between 52.8dB(A) and 67.3dB(A). The impact monitoring results were found within the range of baseline noise level. Hence, the exceedance recorded is considered invalid and no related to the construction works.	Nil	Nil
CGa	65.1 64.5 64.1	When one documented complaint is received	55	Underwater welding was carried out by using one generator and one air compressor, which fulfill the requirement described in corresponding CNP. Refer to the observation during the monitoring, main source of noise impact was due to local traffic along Connaught Road West and Western Harbour Crossing. According to the summary of baseline noise monitoring, the range of background noise level from 2300-0100 * is between 58.7dB(A) and 66.1dB(A). The impact monitoring results were found below 62.6dB(A) and within the range of baseline noise level. Hence, the exceedance recorded is considered invalid and no related to the construction works.	Nil	Nil

Remark (\*): Refer to the baseline data, it shows that the range of noise level during 2300-0700 is very large (around from 52dB(A) to 67dB(A)) and noise from 2300-0100 is in high level (around 60dB(A)) at all monitoring stations. As a result, baseline noise data measured between 2300-0100 at CGa, RWM, KY3 are more suitable for being as background indicator (instead of 2300-0700 of next day).

**Attachment**

Night-time Noise monitoring data sheets (12 February 2011)  
Summary of Baseline Noise Monitoring at KY3, RWM and CGa (2300-0100)

Prepared by: \_\_\_\_\_

(Linda Law) (Senior Environmental Officer)

Date: 14 February 2011

Checked by: \_\_\_\_\_

(C. L. Lau) (Environmental Team Leader)

Date: 14 February 2011



Agreement No. CE 42/2005 (WS)  
Laying of Western Cross Harbour Main and Associated Land Mains  
From West Kowloon to Sai Ying Pun - Investigation

**Impact Noise Monitoring at Sai Ying Pun during 1900-2300 / 2300-0700 / 0700-1900 (Holiday)**  
**Data Record Sheet**

Date of Monitoring		12-2-2011								
Monitoring Location For 1900-2300		CGa - Pavement at Connaught Garden			RWM - Pavement at Richwealth Mansion			KY3 - Pavement at Kwan Yik Building Phase 3		
Monitoring Location For 2300-0700 and 0700-1900 (Holiday)		CGa - Pavement at Connaught Garden			RWM - Roof at Richwealth Mansion			KY3 - Roof at Kwan Yik Building Phase 3		
Sound Level Meter (Model and Serial No.)		R10N-NL-31 (S/N: 00110024)			R10N-NL-31 (S/N: 00110024)			R10N-NL-31 (S/N: 00110024)		
Sound Pressure Calibrator (Model and Serial No.)		R10N-NC-73 (S/N: 10196943)			R10N-NC-73 (S/N: 10196943)			R10N-NC-73 (S/N: 10196943)		
Weather Condition		cloudy			cloudy			cloudy		
Temperature (°C)		14			14			14		
Type of Measurement		Free Field / Façade			Free Field / Façade			Free Field / Façade		
Measurement Period (min)		5			5			5		
Calibration before Measurement, dB(A)	Before	94.0			94.0			94.0		
	After	94.0			94.0			94.0		
Measurement Time	From	23:25	23:40	23:45	23:20	23:25	23:30	23:00	23:05	23:10
	To	23:40	23:45	23:50	23:25	23:30	23:35	23:05	23:10	23:15
Wind Strength (m/s)		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Leq, dB(A)		65.1	64.5	64.1	63.5	63.9	63.1	61.8	61.2	60.9
L10, dB(A)		68.0	67.5	67.2	66.8	67.0	66.5	63.9	63.1	62.7
L50, dB(A)		59.4	59.3	59.1	59.1	59.5	58.4	57.6	57.1	56.9
Major Construction Noise Source(s) During Measurement		/			/			/		
Other Noise Source(s) During Measurement		Vehicles passing by			/			/		
Remarks		The result was / was not exceeded the Limit Level.			The result was / was not exceeded the Limit Level.			The result was / was not exceeded the Limit Level.		

Time Period	Action	Limit
0700-1900 hrs normal weekdays	When one documented complaint is received	75 dB(A)
1900-2300 hrs on normal weekdays		70 dB(A)
0700-1900 hrs on holidays		70 dB(A)
Restricted hrs (2300-0700 hrs)		55 dB(A)

	Name	Signature	Date
Recorded by	K.M. Kwun	<i>[Signature]</i>	12-2-2011
Checked by	Kide Lam	<i>[Signature]</i>	12/2/11

**Summary of Baseline Noise Monitoring (Night-time:2300-0100) - KY3 (Kwan Yik Building Phase 3)**

Date	1/0/10	12/0/10	13/0/10	14/0/10	15/0/10	16/0/10	17/0/10	18/0/10	19/0/10	20/0/10	21/0/10	22/0/10	23/0/10	24/0/10
Daily Average, Leq(dBmin)	57.3	59.9	58.4	60.7	57.9	57.7	58.8	57.2	57.0	59.5	56.8	57.7	57.2	57.0
Max Leq(dBmin)	60.8	61.5	59.4	62.9	61.7	61.9	60.2	58.4	59.7	61.6	59.1	61.6	59.4	59.5
Min Leq(dBmin)	54.2	58.5	54.3	58.6	55.1	54.6	53.8	55.0	54.9	57.3	53.7	55.3	54.4	53.6

Overall Average, Leq(dB-min)    58.0    dB(A)  
 Max                                        62.9    dB(A)  
 Min                                        53.5    dB(A)

**Summary of Baseline Noise Monitoring (Night-time: 2300-0100) - RWM (Richwealth Mansion)**

Date	11/01/10	12/01/10	13/01/10	14/01/10	15/01/10	16/01/10	17/01/10	18/01/10	19/01/10	20/01/10	21/01/10	22/01/10	23/01/10	24/01/10
Daily Average, Leq(5min)	60.2	60.6	59.4	63.8	61.0	56.6	55.6	58.1	59.4	57.9	57.3	57.4	62.1	61.3
Max Leq(5min)	62.1	64.1	61.9	67.3	63.1	57.7	57.6	59.3	57.3	59.4	62.1	59.2	64.7	63.6
Min Leq(5min)	58.8	57.0	56.2	67.4	58.9	55.5	52.8	56.9	55.1	55.6	54.8	56.9	59.5	68.0

Overall Average, Leq(5-min)    59.8    dB(A)  
 Max                                    67.3    dB(A)  
 Min                                    52.8    dB(A)



**Summary of Baseline Noise Monitoring (Night-time 2300-0100) - CG (Connaught Garden)**

Date	11/01/10	12/01/10	13/01/10	14/01/10	15/01/10	16/01/10	17/01/10	18/01/10	19/01/10	20/01/10	21/01/10	22/01/10	23/01/10	24/01/10
Daily Average, Leq(5min)	62.8	62.7	62.6	62.8	63.5	63.5	62.5	62.3	61.7	61.4	60.9	63.6	63.2	62.2
Max Leq(5min)	64.8	64.7	64.4	64.2	66.0	66.1	64.8	63.7	63.6	63.0	63.6	64.7	65.3	64.0
Min Leq(5min)	60.0	59.7	59.7	59.9	61.1	60.8	59.0	60.2	59.5	59.5	58.7	61.2	59.3	59.3

Overall Average Leq(5min)    62.6    dB(A)  
 Max                                    66.1    dB(A)  
 Min                                    58.7    dB(A)

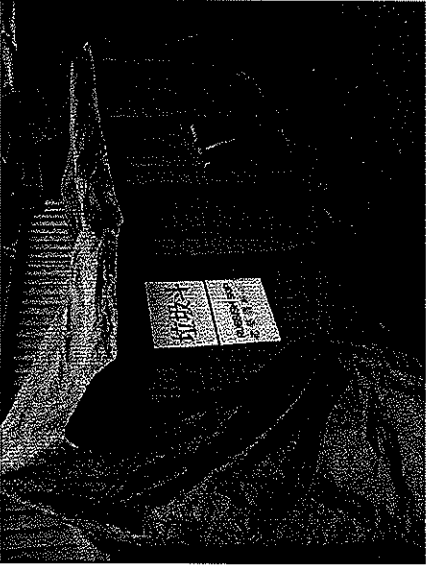


## **Appendix L**

### **Contractor's Follow up Actions to ET Weekly Site Inspections**

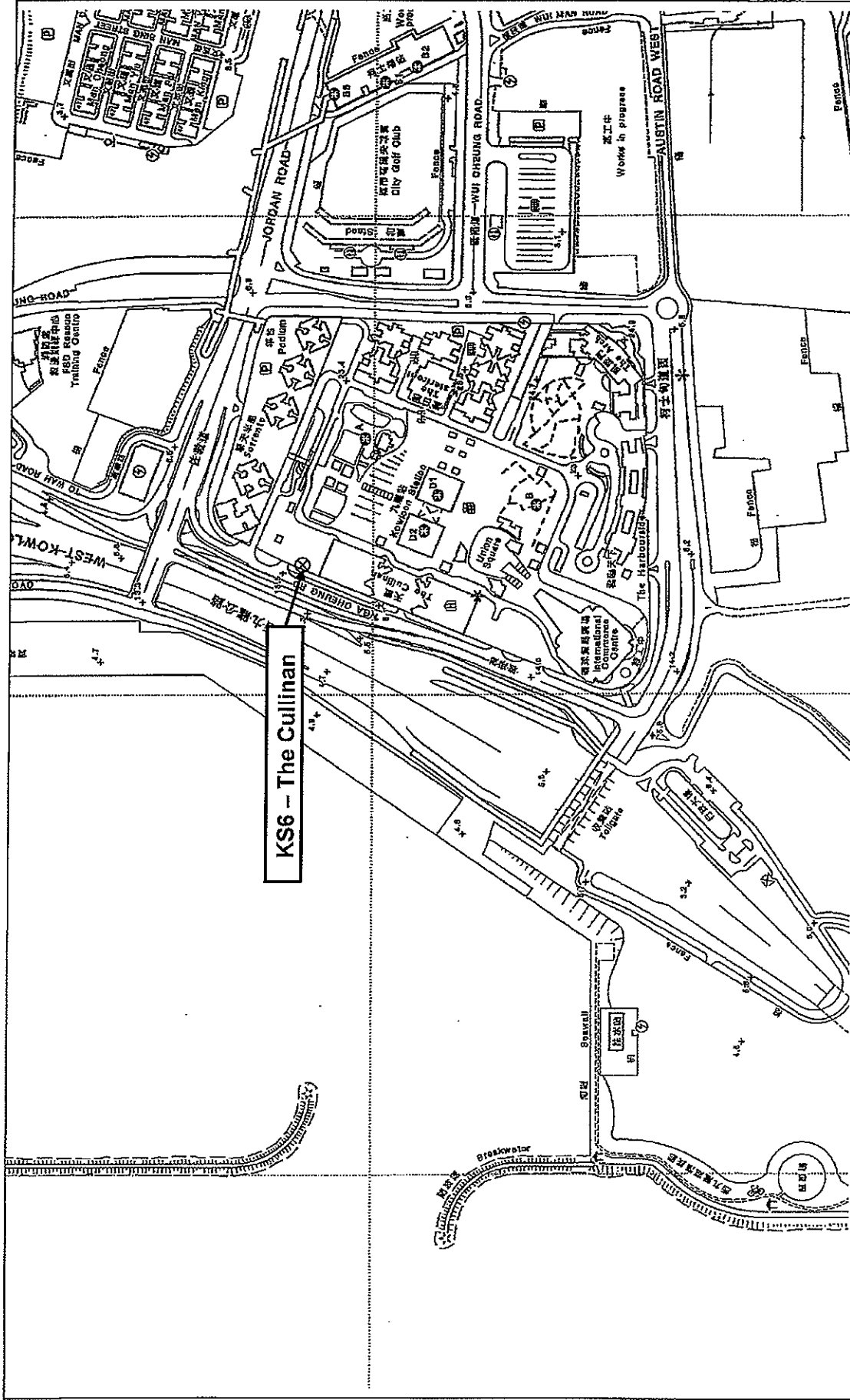


**Photo of Follow-up Action**

 <p><b>Photo Ref. : 01</b></p>		



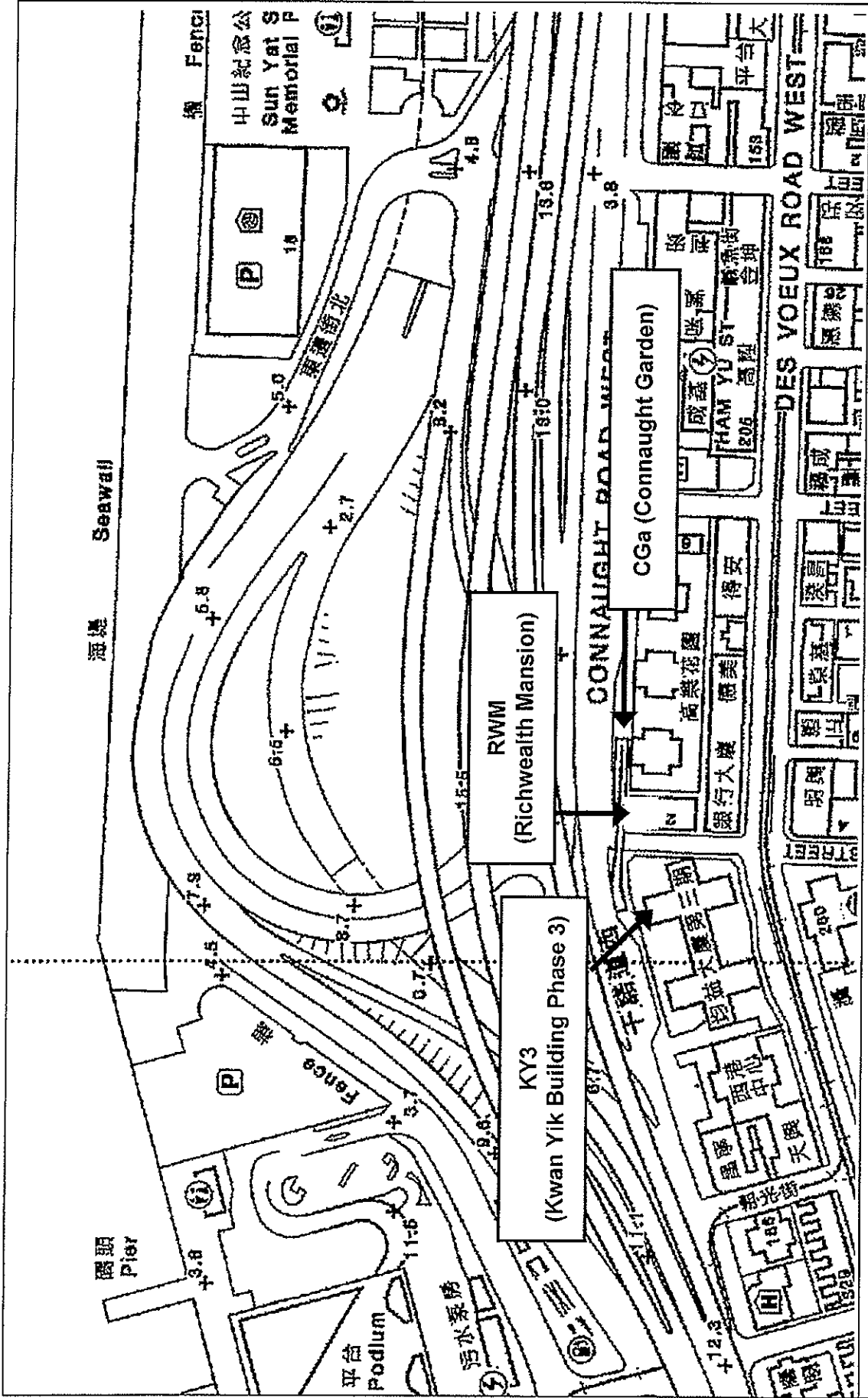
## Figures



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

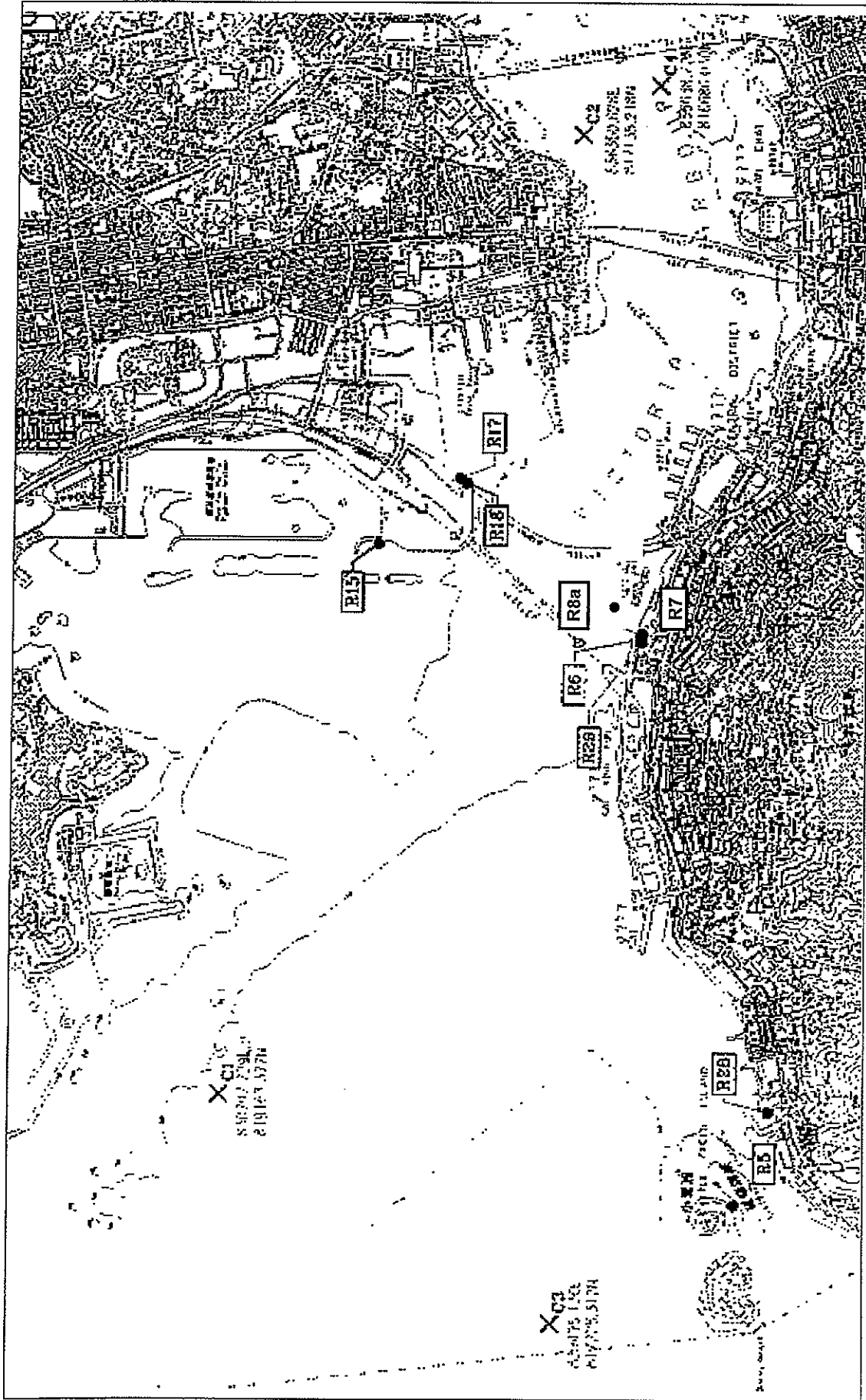


Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains for West Kowloon to Sai Ying Pun

Figure 2

Locations of Noise Monitoring Stations at Sai Ying Pun

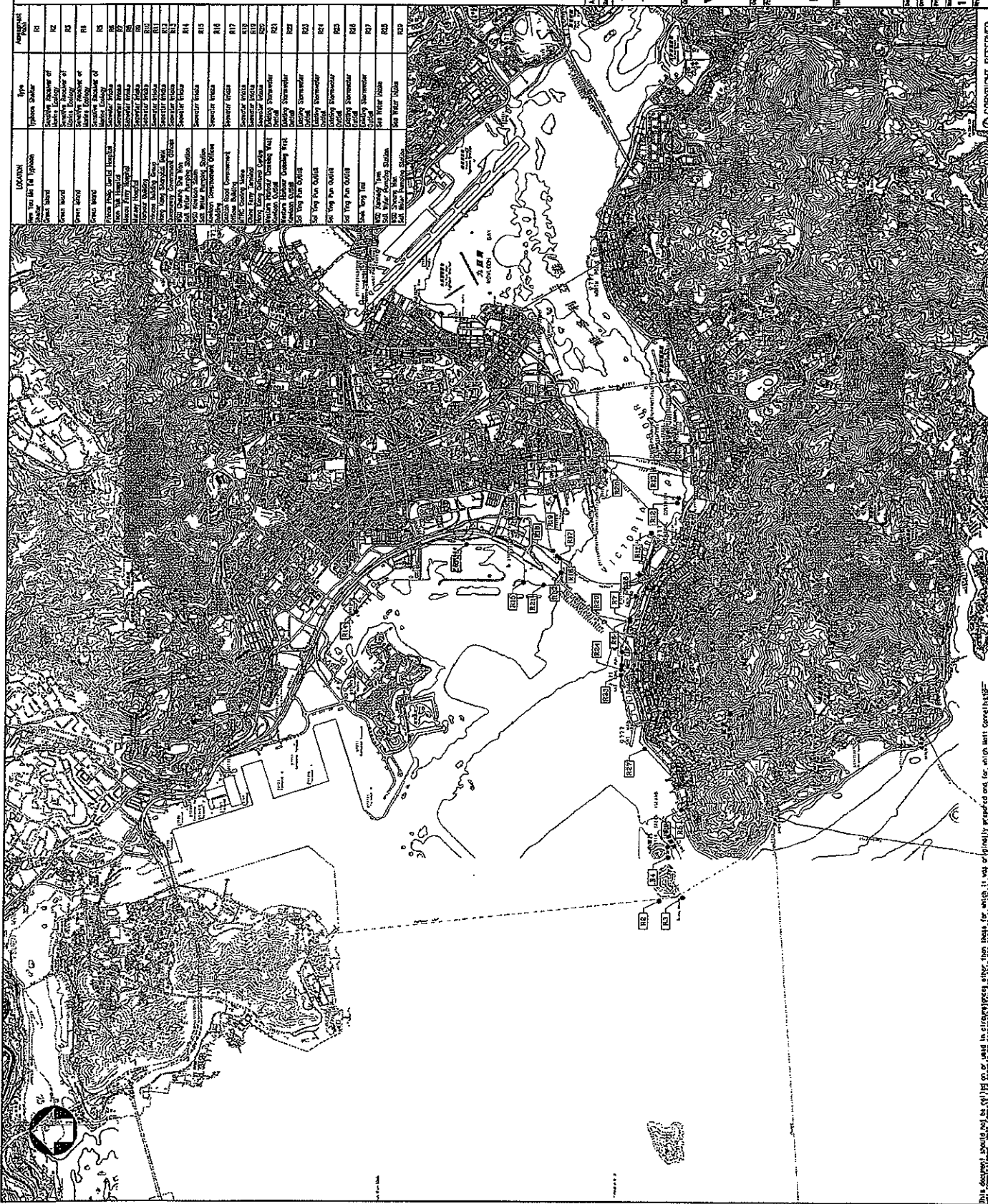




Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains for West Kowloon to Sai Ying Pun

Figure 3  
Locations of Water Quality Monitoring Stations





15/7/16	1/16	PRELIMINARY	2/16	2/16
15/7/16	1/16	PRELIMINARY	2/16	2/16
		Mott MacDonald 4/F Research Centre 77 Wing Lok Street, Mong Kok Kowloon, Hong Kong Tel: +852 2387 8377 Fax: +852 2387 8322 Email: mottmac@mottmac.com		
		THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION WATER SUPPLIES DEPARTMENT GEAZ/2005/WS		
LAYING OF WESTERN CROSS HARBOUR MAIN AND ASSOCIATED LAND MAINS FROM WEST KOWLOON TO SAU YING PUN - INVESTIGATION				
LOCATIONS OF WATER SENSITIVE RECEIVERS AND STORMWATER OUTFALLS AT WESTERN HARBOUR				
Scale	1:25000(0/1)	1:25000	1:25000	1:25000
Sheet No.	1	2	3	4
Project No.	GEAZ/2005/WS			
Revision				
Drawn by				
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Date				

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- NOISE SENSITIVE RECEIVERS
- NOISE ASSESSMENT BOUNDARY
- WORKS AREA BOUNDARY

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 WATER SUPPLIES DEPARTMENT**

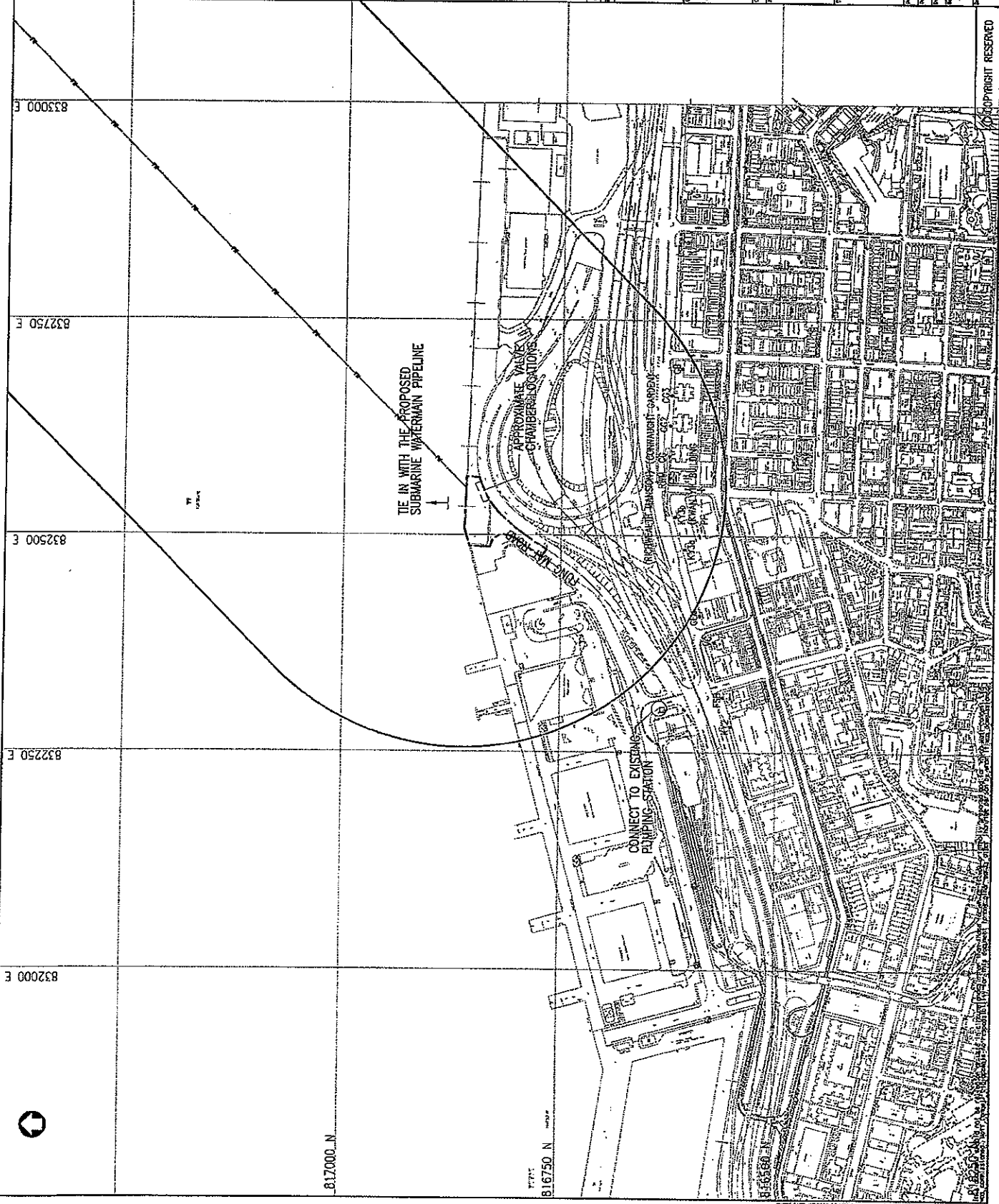
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LAYING OF WESTERN CROSS HARBOUR MAIN  
 AND ASSOCIATED LAND MAINS FROM WEST  
 KOWLOON TO SAI YING PUN - INVESTIGATION

LOCATIONS OF NOISE SENSITIVE  
 RECEIVERS IN SAI YING PUN

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FIGURE 1.2b



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**LEGEND:**

- PROPOSED ROUTE OF 1200V FEEDER UNDER MAIN
- NOISE SENSITIVE RECEIVERS
- TEMPORARY PLATFORM
- NOISE ASSESSMENT BOUNDARY
- WORKS AREA BOUNDARY

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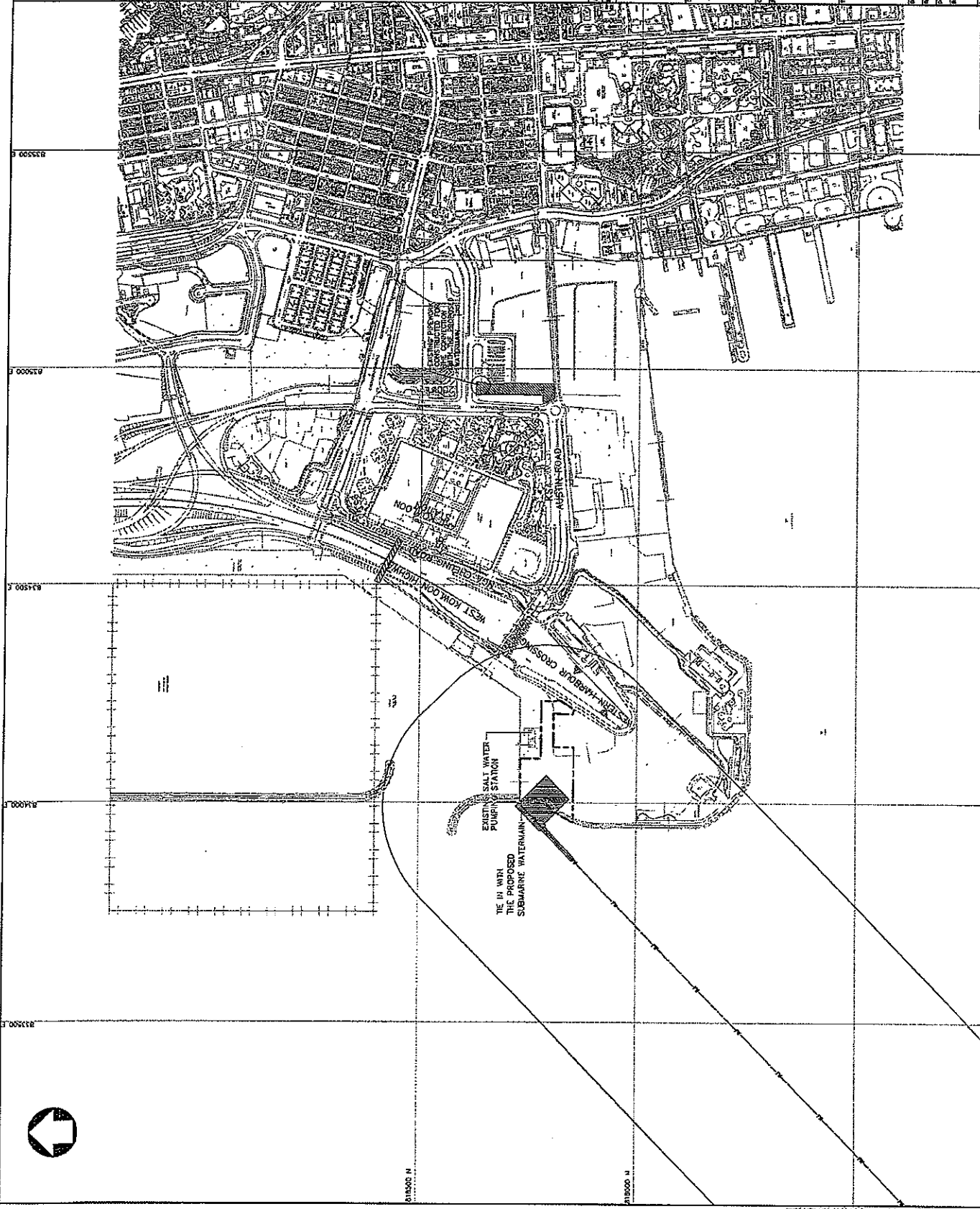
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LOCATION OF NOISE SENSITIVE RECEIVERS IN WEST KOWLOON

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Scale	1: 4000/041
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FIGURE 1.2c

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