



東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

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

Tel : 2695 8318

E-mail : etl@ets-testconsult.com

Fax : 2695 3944

Web site : www.ets-testconsult.com

TEST REPORT

WO HING – PENTA-OCEAN JOINT VENTURE

**CONTRACT NO. 9/WSD/08
LAYING OF WESTERN CROSS
HARBOUR MAIN AND ASSOCIATED
LAND MAINS FROM WEST
KOWLOON TO SAI YING PUN**

**MONTHLY EM&A REPORT
NO.11**

(MARCH 2011)

Prepared by:

LAW, Sau Yee
Senior Environmental Officer

Checked by:

LAU, Chi Leung
Environmental Team Leader

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ENVIRON

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13th Apr 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

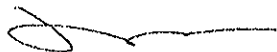
**Re: Contact No. 9/WSD/08
Laying of Western Cross Harbour Main and Associated Land Mains from West
Kowloon to Sai Ying Pun
Monthly Environmental Monitoring and Audit Report No. 11**

Reference is made to Environment Team's submission of the Environmental Monitoring and Audit Report No. 11 by Email on 9th Apr 2011 (entitled "9/WSD/08 - Draft Monthly Report (Mar 11)") and the subsequent revision of the report by Email on 13th Apr 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

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

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EXECUTIVE SUMMARY

Under the requirements of "Environmental Monitoring & Audit Manual – Agreement No. CE42/2005(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.11 was prepared by ETS-Testconsult Ltd (ET) for the Project. This report documented the findings of EM&A Works conducted during the Project in March 2011.

Site Activities

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

- Grouting works beneath the seawater intake in West Kowloon (Portion H1 & H2);
- Placing of granular material for restoring over-dredging (Portion I);
- Excavation inside the cofferdam (Portion J);
- Installation of the strutting system of the cofferdam (Portion J)
- Concreting of the foundation of turn roller B and back anchor (Portion J);
- Installation of turn roller B (Portion J);
- Placing of precast concrete struts inside the cofferdam (Portion J); and
- Grouting of the "TACOM MAT" concrete mattress (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): 4 Occasions at KS6, CGa, RWM and KY3
- Night-time Noise Monitoring (2300-0700 of next day): 2 Occasions at KS6, CGa, RWM and KY3
- Holiday-time Noise Monitoring (0700-1900 on Holiday): 4 Occasions at KS6, CGa, RWM and KY3
- Marine Water Quality Monitoring: 14 Occasions at 9 monitoring stations and 4 control stations
- Weekly-site inspection: 5 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.

Twenty-one exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 05 and 12 March 2011 (2300-2400) at KY3, RWM and CGa and 13 March 2011 (0000-0100) at KS6. All of the exceedances were considered to be invalid (not project related) and hence 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:

Concerned Parties

ET Weekly site inspection
Monthly Joint site inspection

Dates of Audit / Inspection

03, 08, 15, 22 and 28 March 2011
28 March 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(W) Laying of Western Cross Harbour Main and Associated Land Main from West Kowloon to Sai Ying Pun” (the EM&A Manual).

This report documented the findings of EM&A Works conducted in March 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:

- Grouting works beneath the seawater intake in West Kowloon (Portion H1 & H2);
- Placing of granular material for restoring over-dredging (Portion I);
- Excavation inside the cofferdam (Portion J);
- Installation of the strutting system of the cofferdam (Portion J)
- Concreting of the foundation of turn roller B and back anchor (Portion J);
- Installation of turn roller B (Portion J);



- Placing of precast concrete struts inside the cofferdam (Portion J); and
- Grouting of the "TACOM MAT" concrete mattress (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>
KS6	Podium at the Culliman	Façade
CGa	Pavement in front of Connaught Garden	Façade
RWM	Roof at Richwealth Mansion	Free Field
KY3	Roof at Kwan Yik Building Phase 3	Free Field
<i>Evening-time and Night-time Noise monitoring station</i>	<i>Description of location</i>	<i>Type of Measurement</i>
KS6	Podium at the Culliman	Façade
CGa	Pavement in front of Connaught Garden	Façade
RWM	Pavement at Richwealth Mansion	Façade
KY3	Pavement at Kwan Yik Building Phase 3	Façade

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, 4 occasions of evening-time noise monitoring, 2 occasion of night-time noise monitoring and 4 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. Twenty-one exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 05 and 12 March 2011 (2300-2400) at KY3, RWM and CGa and 13 March 2011 (0000-0100) at KS6. 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	04/03/11	11:20	64.3	X
	11/03/11	14:25	63.5	X
	18/03/11	17:20	65.2	X
	25/03/11	17:50	63.5	X
Evening-time	05/03/11	21:25	61.8	X
	05/03/11	21:30	62.2	X
	05/03/11	21:35	60.4	X
	12/03/11	21:00	59.4	X
	12/03/11	21:05	59.2	X
	12/03/11	21:10	60.1	X
	19/03/11	21:10	62.1	X
	19/03/11	21:15	61.9	X
	19/03/11	21:20	61.0	X
	27/03/11	20:35	61.0	X
	27/03/11	20:40	59.6	X
	27/03/11	20:45	58.9	X



Monitoring Parameter	Date	KS6		
		Time	Result	Exceed*
Night-time	06/03/11	00:40	54.8	X
	06/03/11	00:45	54.7	X
	06/03/11	00:50	55.0	X
	13/03/11	00:10	59.0	L
	13/03/11	00:15	59.0	L
	13/03/11	00:20	57.6	L
Holiday-time	06/03/11	10:25	62.0	X
	06/03/11	10:30	62.2	X
	06/03/11	10:35	62.9	X
	13/03/11	09:10	59.2	X
	13/03/11	09:15	59.7	X
	13/03/11	09:20	59.7	X
	20/03/11	14:55	63.1	X
	20/03/11	15:00	62.8	X
	20/03/11	15:05	63.0	X
	27/03/11	16:45	61.9	X
	27/03/11	16:50	61.4	X
27/03/11	16:55	62.3	X	
Monitoring Parameter	Date	CGa		
		Time	Result	Exceed*
Daytime	02/03/11	10:00	72.6	X
	07/03/11	11:10	73.1	X
	14/03/11	10:05	73.4	X
	25/03/11	10:30	69.1	X
Evening-time	05/03/11	22:00	70.0	X
	05/03/11	22:05	69.7	X
	05/03/11	22:10	69.9	X
	12/03/11	22:00	67.8	X
	12/03/11	22:05	68.0	X
	12/03/11	22:10	68.2	X
	19/03/11	22:10	69.8	X
	19/03/11	22:15	69.6	X
	19/03/11	22:20	69.9	X
	27/03/11	19:35	69.9	X
	27/03/11	19:40	70.0	X
27/03/11	19:45	70.0	X	
Night-time	05/03/11	23:25	63.8	L
	05/03/11	23:30	63.6	L
	05/03/11	23:35	63.0	L
	12/03/11	23:00	60.7	L
	12/03/11	23:05	60.1	L
	12/03/11	23:10	59.8	L
Holiday-time	06/03/11	11:50	69.9	X
	06/03/11	11:55	69.6	X
	06/03/11	12:00	69.3	X
	13/03/11	10:10	67.8	X
	13/03/11	10:15	68.2	X
	13/03/11	10:20	68.0	X
	20/03/11	15:50	69.7	X
	20/03/11	15:55	69.4	X
	20/03/11	16:00	69.8	X
	27/03/11	18:20	70.0	X
27/03/11	18:25	70.0	X	
27/03/11	18:30	69.9	X	
Monitoring Parameter	Date	RWM		
		Time	Result	Exceed*
Daytime	02/03/11	10:35	63.2	X
	07/03/11	10:35	65.4	X
	14/03/11	10:40	64.6	X
	25/03/11	11:00	66.3	X



Monitoring Parameter	Date	RWM		
		Time	Result	Exceed*
Evening-time	05/03/11	22:15	69.0	X
	05/03/11	22:20	68.5	X
	05/03/11	22:25	69.1	X
	12/03/11	22:20	66.2	X
	12/03/11	22:25	66.7	X
	12/03/11	22:30	66.8	X
	19/03/11	22:27	69.3	X
	19/03/11	22:32	69.1	X
	19/03/11	22:37	68.8	X
	27/03/11	19:20	70.0	X
	27/03/11	19:25	69.8	X
27/03/11	19:30	69.6	X	
Night-time	05/03/11	23:20	62.3	L
	05/03/11	23:25	62.0	L
	05/03/11	23:30	61.8	L
	12/03/11	23:20	58.6	L
	12/03/11	23:25	59.0	L
	12/03/11	23:30	59.3	L
	06/03/11	11:30	60.8	X
Holiday-time	06/03/11	11:35	60.4	X
	06/03/11	11:40	60.9	X
	13/03/11	10:35	59.9	X
	13/03/11	10:40	60.2	X
	13/03/11	10:45	60.1	X
	20/03/11	16:10	61.3	X
	20/03/11	16:15	61.1	X
	20/03/11	16:20	60.9	X
	27/03/11	18:00	61.6	X
	27/03/11	18:05	61.9	X
27/03/11	18:10	61.9	X	
Monitoring Parameter	Date	KY3		
Daytime	02/03/11	11:10	61.5	X
	07/03/11	10:00	63.1	X
	14/03/11	11:15	62.3	X
	25/03/11	11:30	62.1	X
Evening-time	05/03/11	22:35	65.7	X
	05/03/11	22:40	64.8	X
	05/03/11	22:45	66.4	X
	12/03/11	22:40	64.2	X
	12/03/11	22:45	64.6	X
	12/03/11	22:50	64.9	X
	19/03/11	22:44	66.6	X
	19/03/11	22:49	65.3	X
	19/03/11	22:54	65.8	X
	27/03/11	19:00	66.5	X
27/03/11	19:05	66.3	X	
27/03/11	19:10	66.1	X	
Night-time	05/03/11	23:00	61.0	L
	05/03/11	23:05	61.2	L
	05/03/11	23:10	60.8	L
	12/03/11	23:40	59.7	L
	12/03/11	23:45	59.9	L
	12/03/11	23:50	60.2	L
Holiday-time	06/03/11	11:10	59.8	X
	06/03/11	11:15	59.9	X
	06/03/11	11:20	60.2	X
	13/03/11	10:55	60.7	X
	13/03/11	11:00	60.5	X
	13/03/11	11:05	59.8	X



Monitoring Parameter	Date	KY3		
		Time	Result	Exceed*
Holiday-time	20/03/11	16:30	60.6	X
	20/03/11	16:35	59.7	X
	20/03/11	16:40	60.3	X
	27/03/11	17:35	60.8	X
	27/03/11	17:40	60.5	X
	27/03/11	17:45	59.9	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	21	0
Cumulative	0	0	149	0

5.0 WATER QUALITY MONITORING

5.1 Monitoring Requirements

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

5.2 Monitoring Locations

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

Table 5.1 Water Quality Monitoring Stations

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

Remark (*): Station R15 = WSD Seawater Intake

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



5.3 Monitoring Parameters

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

Table 5.2 Water Quality Monitoring Parameters

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

Table 5.3 Other relevant water quality parameters

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

5.4 Monitoring Frequency

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

Table 5.4 Monitoring Frequency of Impact Water Quality Monitoring

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

5.5 Monitoring Methodology and Equipment Used

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

Location of the monitoring stations

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

Water Depth measurement

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

In-situ Water Quality Monitoring Equipment

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



Dissolved Oxygen, salinity and temperature measuring equipment

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

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

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

Turbidity Measurement Instrument

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

Water Sampling and Sample Analysis

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

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

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

5.6 Details of site Equipment used for In-situ Measurement

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

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

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

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

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



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

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

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

Table 5.6 Summary of test method

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

5.8 Action and Limit Level

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

Table 5.7 Water Quality Action and Limit Levels

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

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

5.9 Event and Action Plan

Please refer to the Appendix D for details.

5.10 Monitoring Duration and Period In this reporting month

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



Table 5.8 Schedule for Impact Water Quality Monitoring

March 2011						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		▼		▼		▼
6	7	8	9	10	11	12
		▼		▼		▼
13	14	15	16	17	18	19
		▼		▼		▼
20	21	22	23	24	25	26
		▼		▼		▼
27	28	29	30	31		
		▼		▼		

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 03, 08, 15, 22 and 28 March 2011 by ET. Monthly joint site inspection at 28 March 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 March 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	Rubbish skip at Portion J was noted full of rubbish during the weekly site inspection on 03/03/11.	Collect and dispose of rubbish inside the rubbish skip at Portion J. (Photo Ref.1 of the Contractor Follow-up Action – 07/03/11)	Rubbish inside the rubbish skip at Portion J was disposed of during the subsequent weekly site inspection on 08/03/11.	Closed
2	Water	Silt screen at the sea water intake at Kowloon South Salt Water Pumping Station was found damaged during the weekly site inspection on 08/03/11.	Repair the damaged part of silt screen and maintain it properly. (Photo Ref.1 of the Contractor Follow-up Action – 14/03/11)	During the subsequent weekly site inspection on 15/03/11, silt screen at the sea water intake at Kowloon South Salt Water Pumping Station was found repaired and maintain properly.	Closed



Item	Aspect	Finding	Action(s) taken by the Contractor	ET Verification	Status of the finding
3	Water	Standing water was noted accumulated below the Contractor's site office at Portion J during the weekly site inspection on 22/03/11.	▪ Drain the stagnant water away. (Photo Ref.2 of the Contractor Follow-up Action – 27/03/11)	During the next weekly site inspection on 28/03/11, no standing water was observed below the Contractor's site office at Portion J,	Closed.
4	Water	Water leakage was observed from an air-conditioner at Contractor's site office at Portion J during the weekly site inspection on 22/03/11.	▪ Repair the air-conditioner at Contractor's site office at Portion J. (Photo Ref.1 of the Contractor Follow-up Action – 27/03/11)	During the subsequent weekly site inspection on 28/03/11, water outlet of the air-conditioner at Contractor's site office at Portion J was connect to a water bucket and no condensed water was noted on the ground.	Closed
5	Water	Standing water was found inside the drip tray for a generator at Portion J during the weekly site inspection on 22/03/11.	▪ Drain the standing water away from the drip tray. (Photo Ref.3 of the Contractor Follow-up Action – 27/03/11)	During the next site inspection on 28/03/11, no standing water was inside the drip tray.	Closed
6	Water	Excavated materials (e.g. rock and mud) were noted accumulated along the sea-front at Portion J during the weekly site inspection on 22/03/11.	▪ An appropriated area (away from the sea-front) was provided for temporary storage of excavated materials. (Photo Ref.4 of the Contractor Follow-up Action – 27/03/11 and Photo Ref.03 of the Contractor Follow-up Action – 06/04/11))	During the last weekly site inspection on 28/03/11, some excavated materials were still noted accumulated closed to the sea-front. The Contractor was reminded to remove all excavated materials as soon as possible. It will be verified in the first weekly site inspection in the coming month.	Follow-up
7	Water	Silt screen at Portion J was found damaged and a lot of rubbish was trapped between the inner and outer layer of silt screen during the weekly site inspection on 28/03/11.	▪ Repair the damaged silt screen and remove the rubbish inside the silt screen. (Photo Ref.01 & 02 of the Contractor Follow-up Action – 06/04/11)	Since the finding was observed in the last weekly site inspection on 28/03/11, it will be verified in the first weekly site inspection in the coming month.	Follow-up

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

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

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

7.0 STATUS OF ENVIRONMENTAL PERMITS

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



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

Description	Permit No.	Valid Period		Remarks
		From	To	
Environmental Permit	EP-273/2007	31/07/07	End of Project	Whole Project
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	Group A 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 $\leq 98\text{dB(A)}$ One Generator, silenced, 108dB(A) (CNP 101) One Derrick barge (CNP 061) Group 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 $\leq 98\text{dB(A)}$ One Generator, silenced, 108dB(A) (CNP 101) Group C 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 $\leq 98\text{dB(A)}$ One Generator, silenced, 108dB(A) (CNP 101) Group D 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 $\leq 98\text{dB(A)}$ Group E One Air compressor with Noise Emission Label showing a sound power level of $\leq 98\text{dB(A)}$ One Generator, silenced, 108dB(A) (CNP 101)
Construction Noise Permit (West Kowloon)	GW-RE0160-11	18/03/11	14/09/11	Group A One Crane, mobile (diesel) (CNP 048) (Zone A) One Generator, silenced, $\leq 75\text{dB(A)}$ at 7m (Zone A) One Generator, standard (CNP 101) (Zone B) Group B One Crane, mobile (diesel) (CNP 048) (Zone A) One Air compressor, air flow $\leq 10\text{m}^3/\text{min}$ (CNP 001) (Zone B) Two Crane, mobile (diesel) (CNP 048) (Zone B) One Derrick barge (CNP 061) (Zone B) Four Generator, silenced, $\leq 75\text{dB(A)}$ at 7m (Zone B) Six Grinder, hand-held (electric) (CNP065) (Zone B) Two Guard boats (Zone B) Two Poker, vibratory, external (electric) (Zone B) One Tug boat (CNP 221) (Zone B) Group C One Generator, silenced, $\leq 75\text{dB(A)}$ at 7m (Zone A) One Air compressor, air flow $\leq 10\text{m}^3/\text{min}$ (CNP 001) (Zone B) One Grinder, hand-held (electric) (CNP065) (Zone B) Group D One Derrick barge (CNP 061) (Zone B) One dredger, grab (CNP 063) (Zone B) One Generator, standard (CNP 101) (Zone B) Two Guard boats (Zone B) One Tug boat (CNP 221) (Zone B)



Description	Permit No.	Valid Period		Remarks
		From	To	
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
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 ³)	1382.28		12105.71
	Broken Concrete (in m ³)	0	---	0
	Reused in the Contract (in m ³)	0	---	0
	Reused in other Projects (in m ³)	0	---	0
	Disposal as Public Fill (in m ³)	1382.28	SENT Landfill	12105.71
C&D Waste	Metals (in kg)	0	---	0
	Paper/Cardboard Packaging (in kg)	13	Collected by recycling company	104
	Plastics (in kg)	0	---	0
	Chemical Waste (in kg)	0	---	0
	Other, e.g. General Refuse (in m ³)	6.93	SENT Landfill	67.58
Dredged Materials*	Type 1 (in m ³)	0	East Ninepin Mud Disposal Ground	160500
	Type 2 (in m ³)	0	The East Sha Chau	104990

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. Twenty-one exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 05 and 12 March 2011 (2300-2400) at KY3, RWM and CGa and 13 March 2011 (0000-0100) at KS6. 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.

Twenty-one exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 05 and 12 March 2011 (2300-2400) at KY3, RWM and CGa and 13 March 2011 (0000-0100) at KS6. 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

<i>Complaints logged</i>		<i>Summons served</i>		<i>Successful prosecution received</i>	
<i>March 2011</i>	<i>Cumulative</i>	<i>March 2011</i>	<i>Cumulative</i>	<i>March 2011</i>	<i>Cumulative</i>
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. Twenty-one exceedances in Limit Level were recorded according to the results from night-time noise monitoring on 05 and 12 March 2011 (2300-2400) at KY3, RWM and CGa and 13 March 2011 (0000-0100) at KS6.

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);
- Grouting works beneath the seawater intake in West Kowloon (Portion H1 & H2);
- Excavation inside the cofferdam (Portion J);
- Installation of the strutting system for the cofferdam (Portion J);
- Installation of the precast concrete struts inside the cofferdam (Portion J);
- Installation of the turn roller A and the dry well (Portion J); and
- Preparation for pipe pulling works (Portion J).

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.

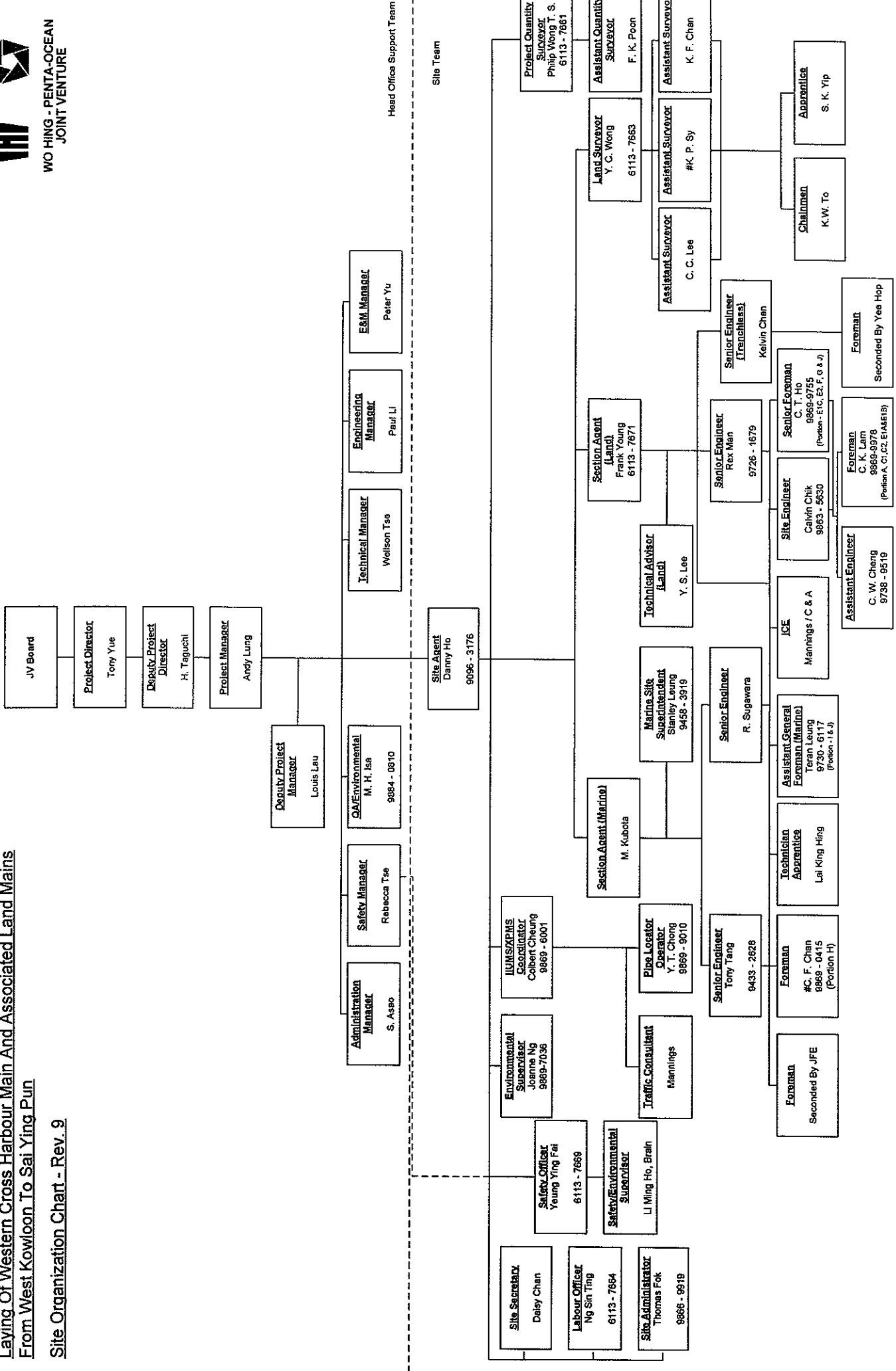
12.3 Monitoring Schedule for the Coming Month

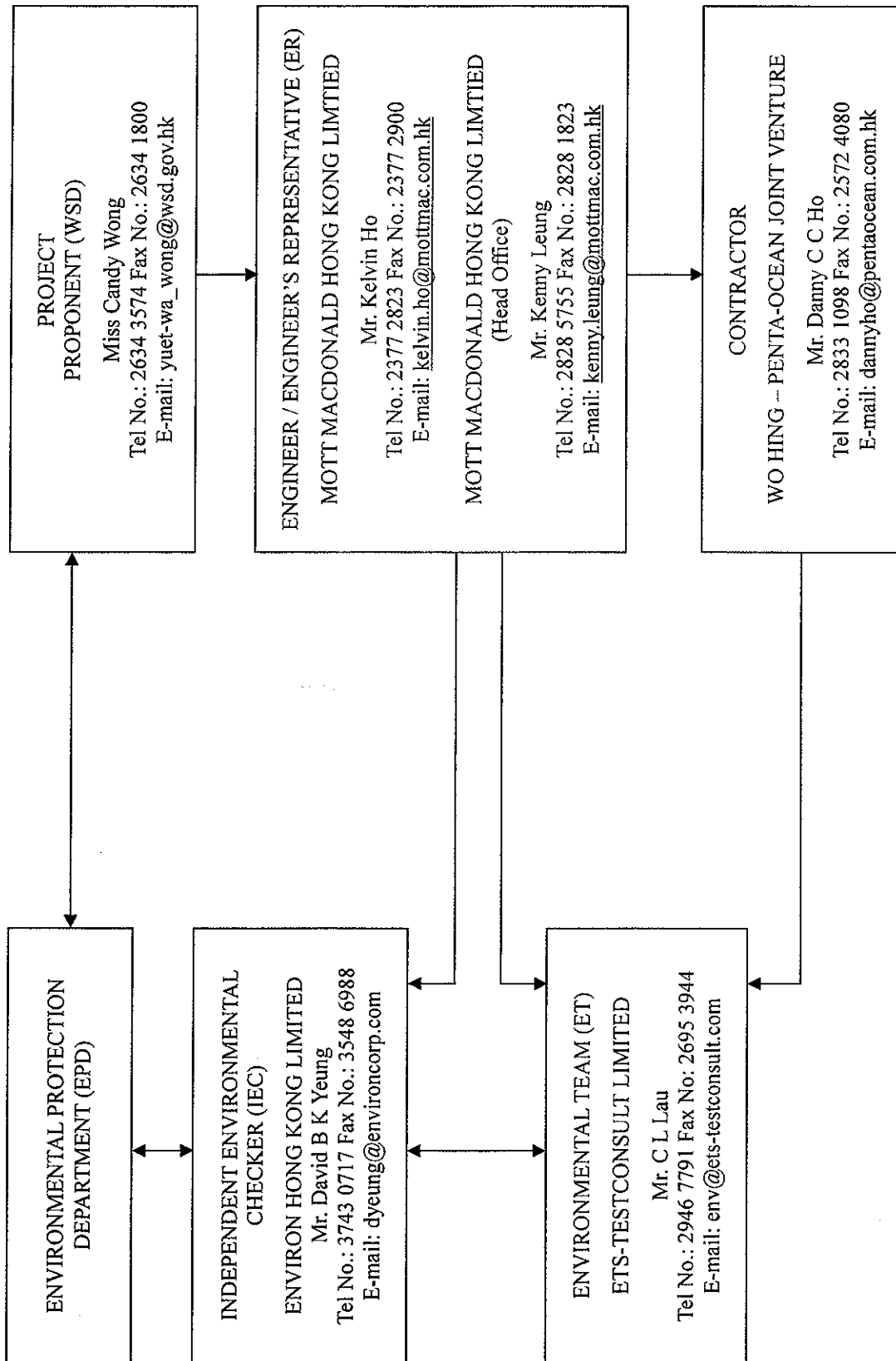
The proposed EM&A program of the coming month is attached in Appendix I.



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 8646

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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 _A	Fast	94.03	93.7
		Slow		93.7
	L _C	Fast		93.7
	L _p	Fast		93.7
	L _A	Fast		93.7
30 - 120	L _A	Fast	94.03	93.7
		Slow		93.6
	L _C	Fast		93.7
	L _p	Fast		93.7
30 - 120	L _A	Fast	113.97	113.6
		Slow		113.6
	L _C	Fast		113.6
	L _p	Fast		113.6

IEC Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 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

Page 4 of 4 Pages

4. Time Averaging

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

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

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


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


Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
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

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

Date: 14-Sep-10



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 _A	Fast	94.0	93.7
		Slow		93.7
	L _C L _p	Fast		93.7
		Fast		93.8
		Fast		93.8
30 – 120	L _A	Fast	94.0	93.7
		Slow		93.7
	L _C L _p	Fast		93.7
		Fast		93.7
		Fast		93.7
30 – 120	L _A	Fast	114.0	113.5
		Slow		113.5
	L _C L _p	Fast		113.5
		Fast		113.5
		Fast		113.5

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.1 dB

2. Level Stability : 0.1 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.1 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	113.9	+0.2	± 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	
80	54.0	53.7	0.0	

Uncertainty : ± 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 ²	40.0	40.1	
1/10 ³	40.0	40.2	± 1.0 dB
1/10 ⁴	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 -----



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:

Equipment No.	Description	Cert. No.	Due Date	Traceable to
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

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

Date: 23-Apr-10



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	± 0.3 dB

Uncertainty : ± 0.2 dB

2. Frequency Accuracy

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

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

3. Level Stability : 0.0 dB

IEC 942 Class 1 Spec.: ± 1 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 2.5 %

IEC 942 Class 1 Spec. : < 3 %

Uncertainty : ± 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).

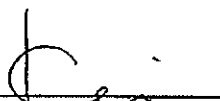
Main Test equipment used:

<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 8646

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	
04/03/11	Fine	11:20	11:50	64.3	65.7	62.1	0.4
11/03/11	Cloudy	14:25	14:55	63.5	65.2	61.4	1.4
18/03/11	Cloudy	17:20	17:50	65.2	66.1	62.7	0.7
25/03/11	Fine	17:50	18:20	63.5	64.6	62.3	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 (30min)	L10	L90	
02/03/11	Cloudy	10:00	10:30	72.6	75.5	65.7	0.2
07/03/11	Fine	11:10	11:40	73.1	76.0	67.4	0.1
14/03/11	Fine	10:05	10:35	73.4	76.8	67.7	0.3
25/03/11	Fine	10:30	11:00	69.1	70.9	65.4	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 (30min)	L10	L90	
02/03/11	Cloudy	10:35	11:05	63.2	65.0	61.8	0.3
07/03/11	Fine	10:35	11:05	65.4	67.2	61.3	0.1
14/03/11	Fine	10:40	11:10	64.6	66.8	61.4	0.5
25/03/11	Fine	11:00	11:30	66.3	68.7	63.2	0.6

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

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
02/03/11	Cloudy	11:10	11:40	61.5	63.1	58.7	0.5
07/03/11	Fine	10:00	10:30	63.1	66.0	59.4	0.3
14/03/11	Fine	11:15	11:45	62.3	64.2	59.5	0.4
25/03/11	Fine	11:30	12:00	62.1	65.4	60.5	0.5



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	
05/03/11	Cloudy	21:25	21:30	61.8	63.6	59.3	0.8
05/03/11	Cloudy	21:30	21:35	62.2	64.2	59.7	0.8
05/03/11	Cloudy	21:35	21:40	60.4	62.3	58.5	0.8
12/03/11	Fine	21:00	21:05	59.4	61.0	57.2	0.9
12/03/11	Fine	21:05	21:10	59.2	60.3	57.8	1.1
12/03/11	Fine	21:10	21:15	60.1	61.9	57.6	1.0
19/03/11	Drizzle	21:10	21:15	62.1	63.9	59.3	1.2
19/03/11	Drizzle	21:15	21:20	61.9	63.4	59.1	1.2
19/03/11	Drizzle	21:20	21:25	61.0	62.7	58.8	1.2
27/03/11	Cloudy	20:35	20:40	61.0	62.5	58.5	0.2
27/03/11	Cloudy	20:40	20:45	59.6	60.9	57.7	0.2
27/03/11	Cloudy	20:45	20:50	58.9	60.7	56.7	0.2

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

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (5min)	L10	L90	
05/03/11	Cloudy	22:00	22:05	70.0	74.2	63.4	0.4
05/03/11	Cloudy	22:05	22:10	69.7	73.5	62.8	0.4
05/03/11	Cloudy	22:10	22:15	69.9	74.0	63.0	0.4
12/03/11	Fine	22:00	22:05	67.8	69.7	64.3	0.9
12/03/11	Fine	22:05	22:10	68.0	70.1	64.7	1.0
12/03/11	Fine	22:10	22:15	68.2	70.4	65.0	1.1
19/03/11	Drizzle	22:10	22:15	69.8	74.0	64.1	1.1
19/03/11	Drizzle	22:15	22:20	69.6	73.7	63.6	1.1
19/03/11	Drizzle	22:20	22:25	69.9	74.2	63.9	1.1
27/03/11	Cloudy	19:35	19:40	69.9	72.8	63.7	0.1
27/03/11	Cloudy	19:40	19:45	70.0	72.8	63.9	0.1
27/03/11	Cloudy	19:45	19:50	70.0	73.0	63.9	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	
05/03/11	Cloudy	22:15	22:20	69.0	72.5	61.8	0.4
05/03/11	Cloudy	22:20	22:25	68.5	72.1	61.6	0.4
05/03/11	Cloudy	22:25	22:30	69.1	72.4	61.5	0.4
12/03/11	Fine	22:20	22:25	66.2	68.9	63.9	1.2
12/03/11	Fine	22:25	22:30	66.7	69.3	64.2	0.9
12/03/11	Fine	22:30	22:35	66.8	69.5	64.4	1.1
19/03/11	Drizzle	22:27	22:32	69.3	73.1	62.0	1.1
19/03/11	Drizzle	22:32	22:37	69.1	72.8	61.7	1.1
19/03/11	Drizzle	22:37	22:42	68.8	72.2	61.4	1.1
27/03/11	Cloudy	19:20	19:25	70.0	72.8	63.6	0.1
27/03/11	Cloudy	19:25	19:30	69.8	72.6	63.5	0.1
27/03/11	Cloudy	19:30	19:35	69.6	72.6	63.3	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	
05/03/11	Cloudy	22:35	22:40	65.7	69.9	59.4	0.4
05/03/11	Cloudy	22:40	22:45	64.8	68.0	60.4	0.4
05/03/11	Cloudy	22:45	22:50	66.4	70.4	58.6	0.4
12/03/11	Fine	22:40	22:45	64.2	66.5	61.2	1.3
12/03/11	Fine	22:45	22:50	64.6	66.1	61.0	1.2
12/03/11	Fine	22:50	22:55	64.9	66.3	61.1	1.1
19/03/11	Drizzle	22:44	22:49	66.6	70.0	60.5	1.1
19/03/11	Drizzle	22:49	22:54	65.3	69.5	59.3	1.1
19/03/11	Drizzle	22:54	22:59	65.8	69.7	59.6	1.1
27/03/11	Cloudy	19:00	19:05	66.5	67.0	59.8	0.1
27/03/11	Cloudy	19:05	19:10	66.3	67.0	59.6	0.1
27/03/11	Cloudy	19:10	19:15	66.1	67.1	59.6	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	
06/03/11	Cloudy	00:40	00:45	54.8	56.0	51.9	0.5
06/03/11	Cloudy	00:45	00:50	54.7	55.8	51.9	0.5
06/03/11	Cloudy	00:50	00:55	55.0	56.1	52.1	0.5
13/03/11	Fine	00:10	00:15	59.0	60.0	57.4	1.3
13/03/11	Fine	00:15	00:20	59.0	60.0	57.9	1.2
13/03/11	Fine	00:20	00:25	57.6	58.4	56.9	1.2

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

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (5min)	L10	L90	
05/03/11	Cloudy	23:25	23:30	63.8	67.3	61.1	0.2
05/03/11	Cloudy	23:30	23:35	63.6	67.1	61.0	0.2
05/03/11	Cloudy	23:35	23:40	63.0	66.8	60.7	0.2
12/03/11	Fine	23:00	23:05	60.7	63.0	57.3	1.2
12/03/11	Fine	23:05	23:10	60.1	62.6	56.8	1.3
12/03/11	Fine	23:10	23:15	59.8	61.8	55.7	1.0

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	
05/03/11	Cloudy	23:20	23:25	62.3	65.6	58.8	0.2
05/03/11	Cloudy	23:25	23:30	62.0	65.3	58.5	0.2
05/03/11	Cloudy	23:30	23:30	61.8	65.1	58.1	0.2
12/03/11	Fine	23:20	23:25	58.6	60.7	54.6	1.0
12/03/11	Fine	23:25	23:30	59.0	61.1	55.0	1.1
12/03/11	Fine	23:30	23:35	59.3	61.4	55.3	0.9

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	
05/03/11	Cloudy	23:00	23:05	61.0	64.8	56.6	0.2
05/03/11	Cloudy	23:05	23:10	61.2	64.9	56.8	0.2
05/03/11	Cloudy	23:10	23:15	60.8	64.5	56.2	0.2
12/03/11	Fine	23:40	23:45	59.7	61.4	55.8	0.8
12/03/11	Fine	23:45	23:50	59.9	61.8	56.0	1.1
12/03/11	Fine	23:50	23:55	60.2	62.4	56.7	0.9



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	
06/03/11	Cloudy	10:25	10:30	62.0	63.6	60.0	0.4
06/03/11	Cloudy	10:30	10:35	62.2	63.3	60.0	0.4
06/03/11	Cloudy	10:35	10:40	62.9	65.1	60.6	0.4
13/03/11	Sunny	09:10	09:15	59.2	60.0	58.1	0.9
13/03/11	Sunny	09:15	09:20	59.7	60.6	58.7	0.7
13/03/11	Sunny	09:20	09:25	59.7	60.6	58.9	1.0
20/03/11	Cloudy	14:55	15:00	63.1	65.6	61.1	1.1
20/03/11	Cloudy	15:00	15:05	62.8	64.9	60.7	1.1
20/03/11	Cloudy	15:05	15:10	63.0	65.2	60.8	1.1
27/03/11	Cloudy	16:45	16:50	61.9	63.9	59.8	0.5
27/03/11	Cloudy	16:50	16:55	61.4	62.9	59.8	0.5
27/03/11	Cloudy	16:55	17:00	62.3	64.6	59.8	0.5

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	
06/03/11	Cloudy	11:50	11:55	69.9	73.8	62.8	0.1
06/03/11	Cloudy	11:55	12:00	69.6	72.6	62.5	0.1
06/03/11	Cloudy	12:00	12:05	69.3	72.6	62.3	0.1
13/03/11	Sunny	10:10	10:15	67.8	69.6	63.5	0.9
13/03/11	Sunny	10:15	10:20	68.2	70.1	63.8	1.1
13/03/11	Sunny	10:20	10:25	68.0	69.9	63.6	1.0
20/03/11	Cloudy	15:50	15:55	69.7	72.8	63.4	1.0
20/03/11	Cloudy	15:55	16:00	69.4	72.6	63.0	1.0
20/03/11	Cloudy	16:00	16:05	69.8	73.5	63.5	1.0
27/03/11	Cloudy	18:20	18:25	70.0	73.5	63.9	0.2
27/03/11	Cloudy	18:25	18:30	70.0	73.3	64.6	0.2
27/03/11	Cloudy	18:30	18:35	69.9	73.1	63.9	0.2

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	
06/03/11	Cloudy	11:30	11:35	60.8	62.3	59.2	0.3
06/03/11	Cloudy	11:35	11:40	60.4	62.2	58.8	0.3
06/03/11	Cloudy	11:40	11:45	60.9	62.6	59.0	0.3
13/03/11	Sunny	10:35	10:40	59.9	61.7	55.8	1.3
13/03/11	Sunny	10:40	10:45	60.2	61.9	55.9	1.2
13/03/11	Sunny	10:45	10:50	60.1	61.7	55.9	1.1
20/03/11	Cloudy	16:10	16:15	61.3	62.9	59.5	1.0
20/03/11	Cloudy	16:15	16:20	61.1	62.7	59.3	1.0
20/03/11	Cloudy	16:20	16:25	60.9	62.4	58.7	1.0
27/03/11	Cloudy	18:00	18:05	61.6	63.4	59.3	0.4
27/03/11	Cloudy	18:05	18:10	61.9	63.6	59.5	0.4
27/03/11	Cloudy	18:10	18:15	61.9	63.8	59.5	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	
06/03/11	Cloudy	11:10	11:15	59.8	61.3	56.2	0.5
06/03/11	Cloudy	11:15	11:20	59.9	61.5	56.4	0.5
06/03/11	Cloudy	11:20	11:25	60.2	61.9	56.6	0.5
13/03/11	Sunny	10:55	11:00	60.7	62.0	56.2	1.4
13/03/11	Sunny	11:00	11:05	60.5	61.8	55.7	1.2
13/03/11	Sunny	11:05	11:10	59.8	61.6	55.5	1.3
20/03/11	Cloudy	16:30	16:30	60.6	62.0	57.2	1.0
20/03/11	Cloudy	16:35	16:40	59.7	61.6	56.8	1.0
20/03/11	Cloudy	16:40	16:45	60.3	61.8	57.1	1.0
27/03/11	Cloudy	17:35	17:40	60.8	61.7	58.3	0.5
27/03/11	Cloudy	17:40	17:45	60.5	61.2	57.8	0.5
27/03/11	Cloudy	17:45	17:50	59.9	61.0	57.5	0.5



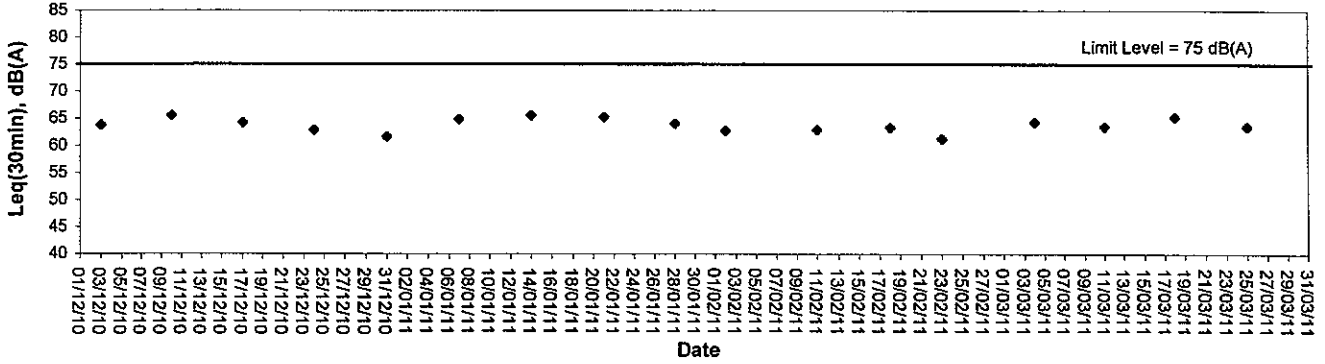
Appendix B3

Graphical Plots of Impact Noise Monitoring Data

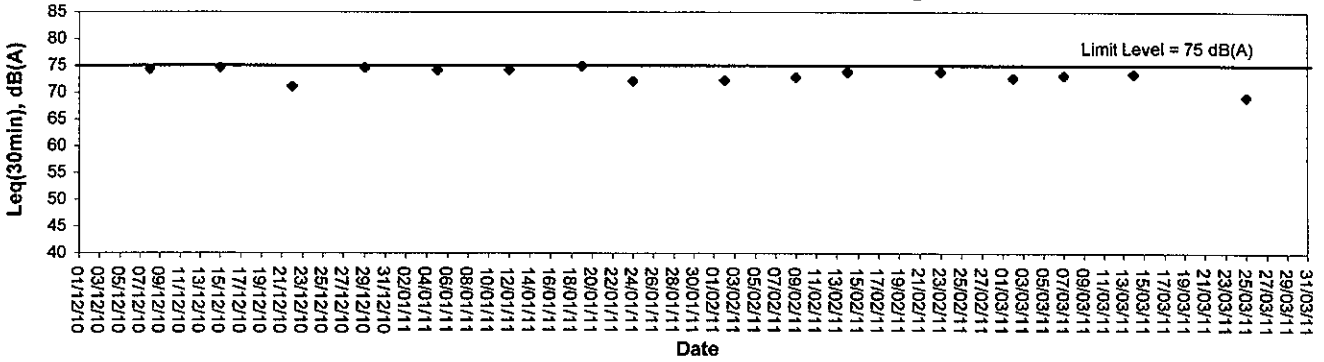


Noise Monitoring (Day-time)

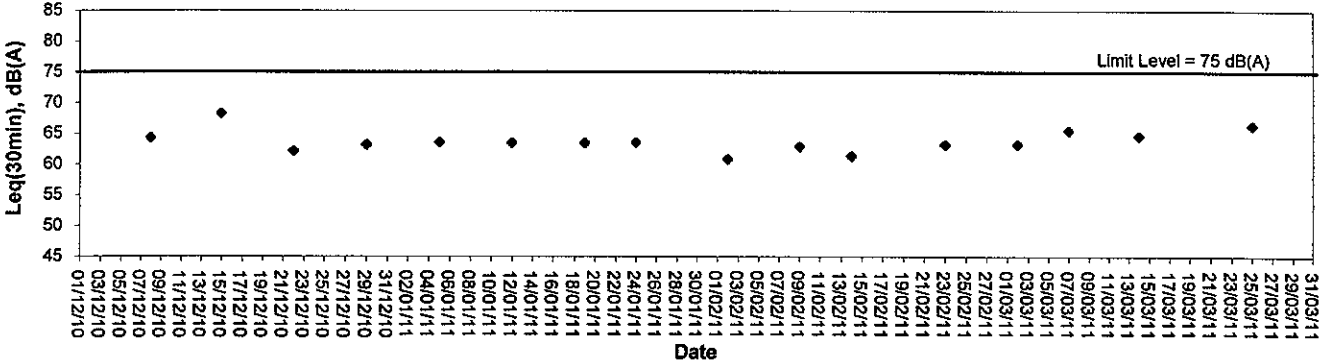
Noise level at KS6 - Podium at the Culliman



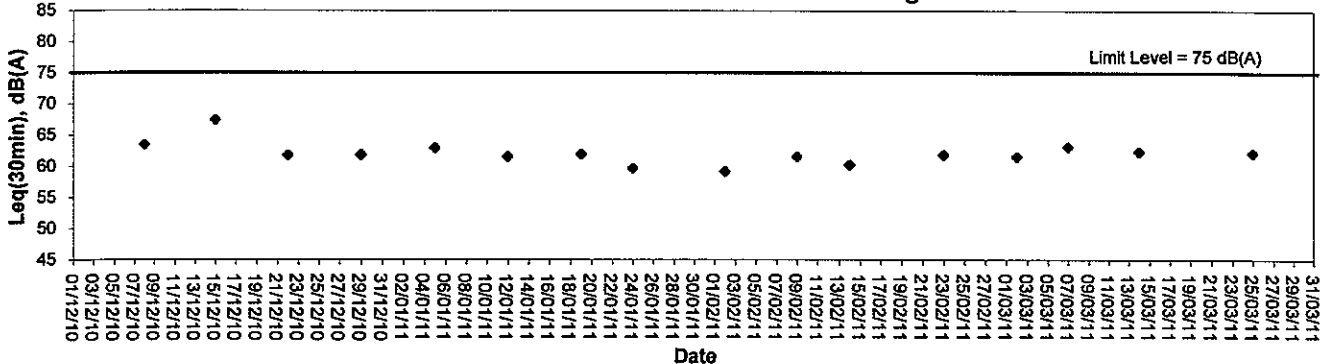
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



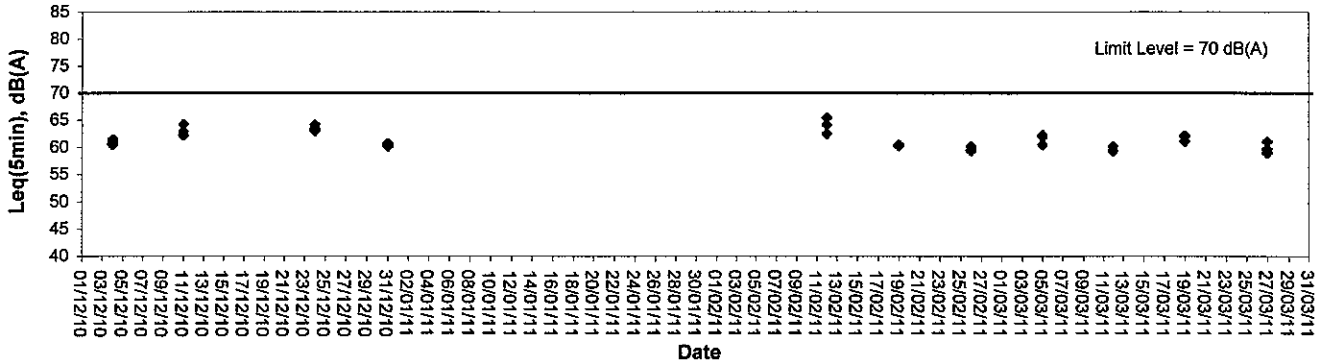
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



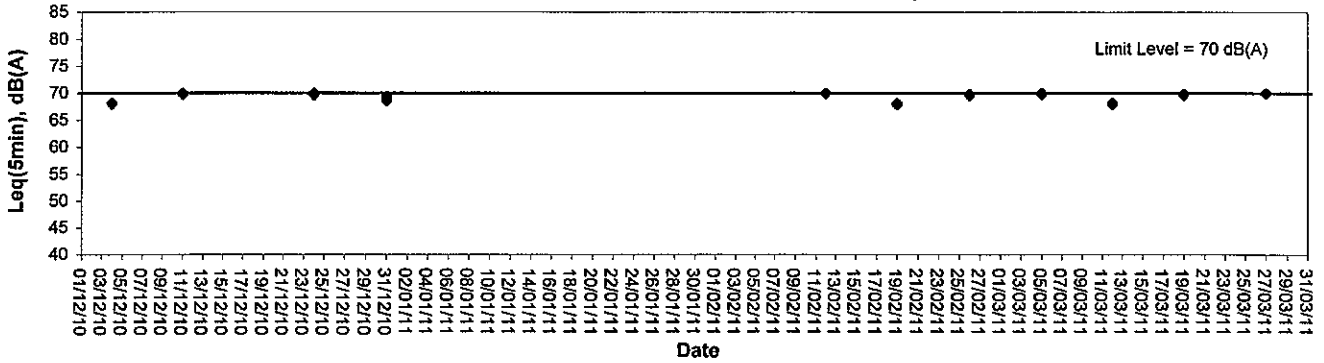


Noise Monitoring (Evening-time)

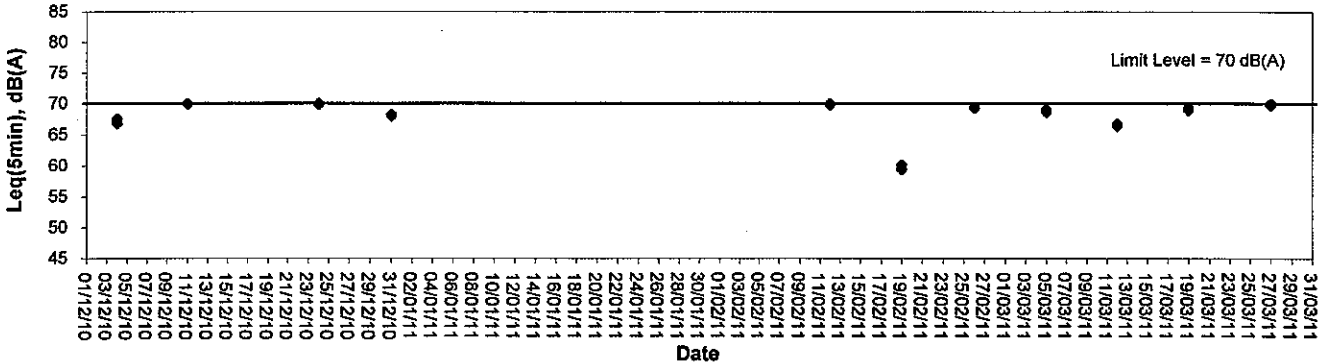
Noise level at KS6 - Podium at the Culliman



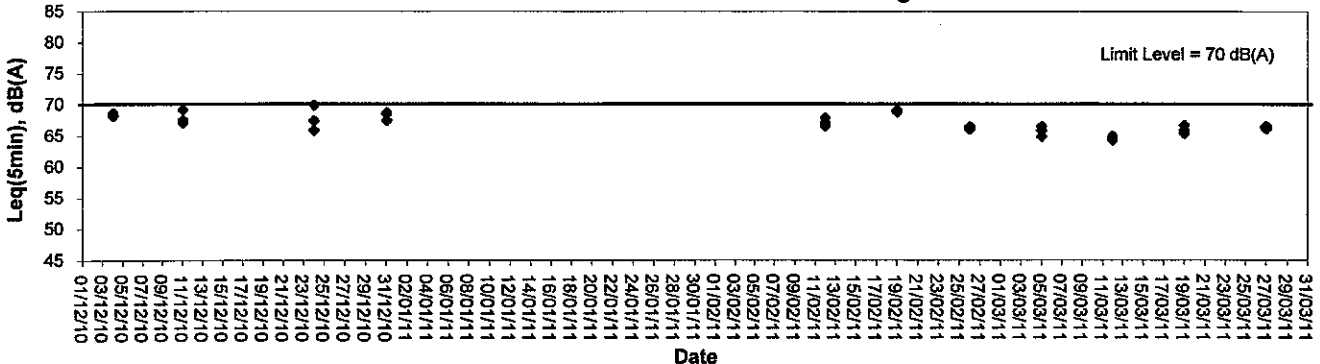
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



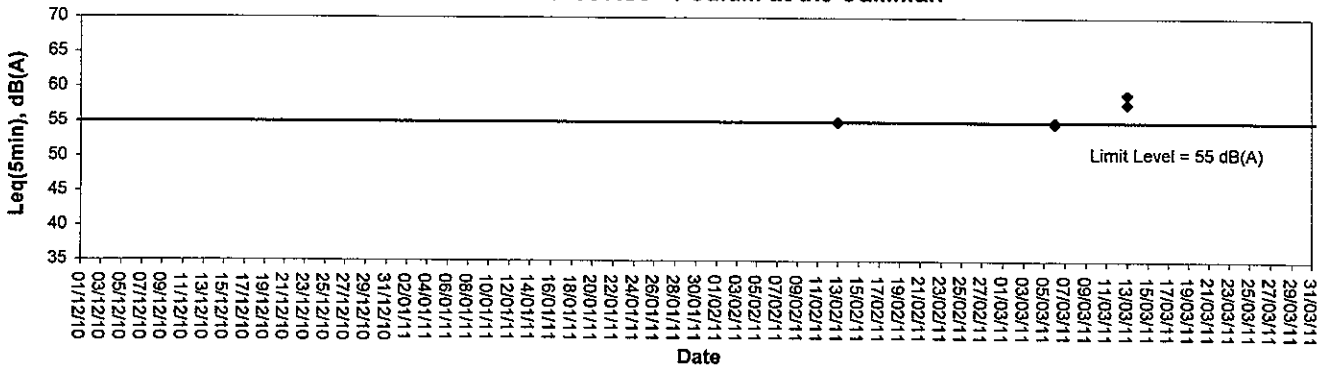
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



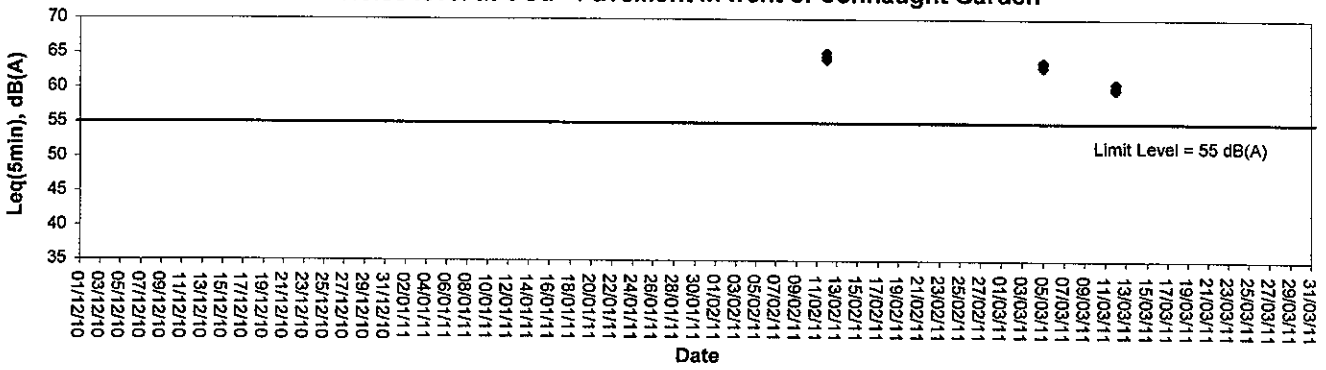


Noise Monitoring (Night-time)

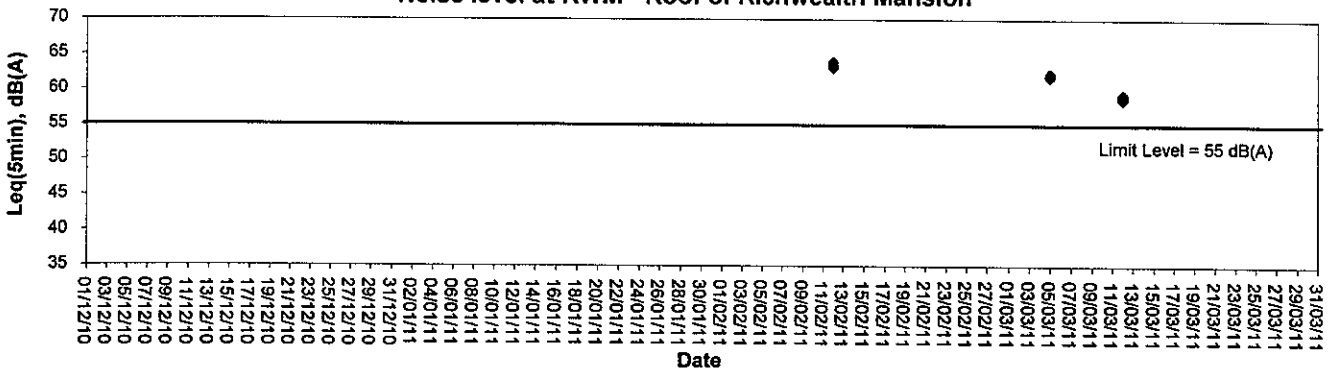
Noise level at KS6 - Podium at the Culliman



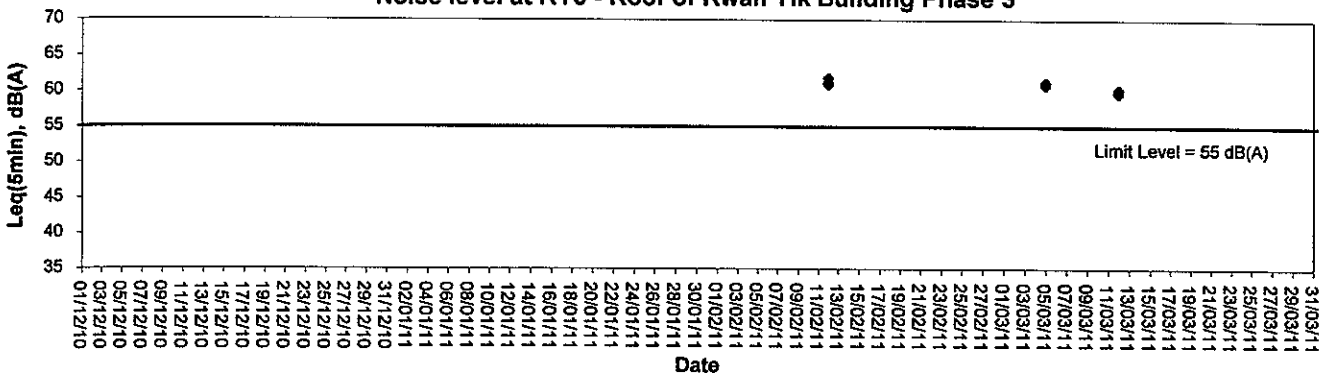
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



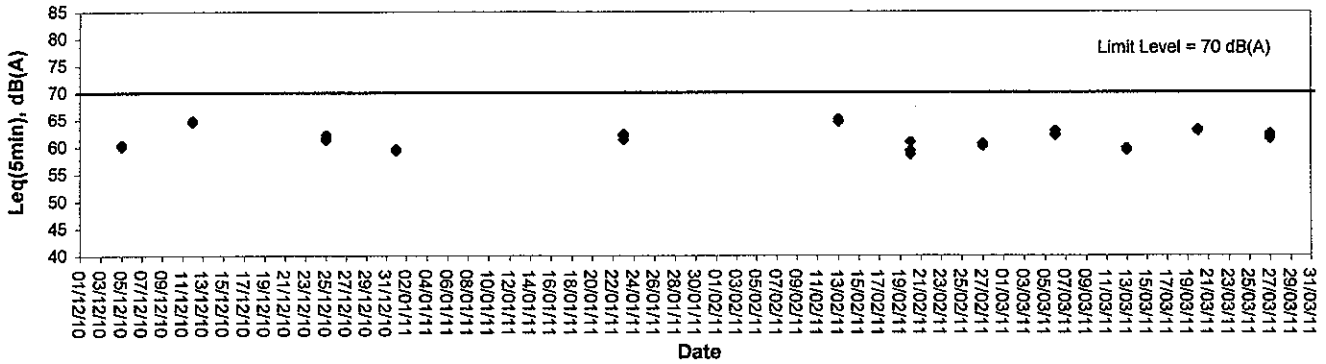
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



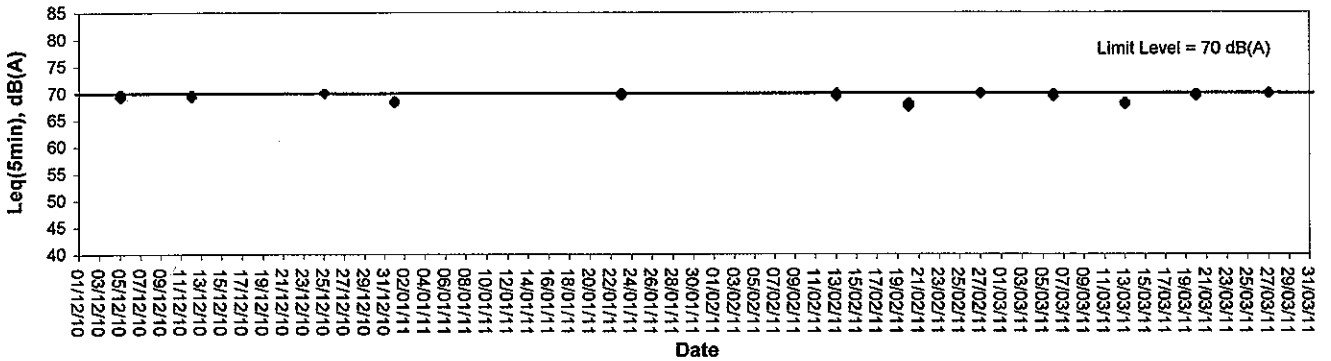


Noise Monitoring (Holiday-time)

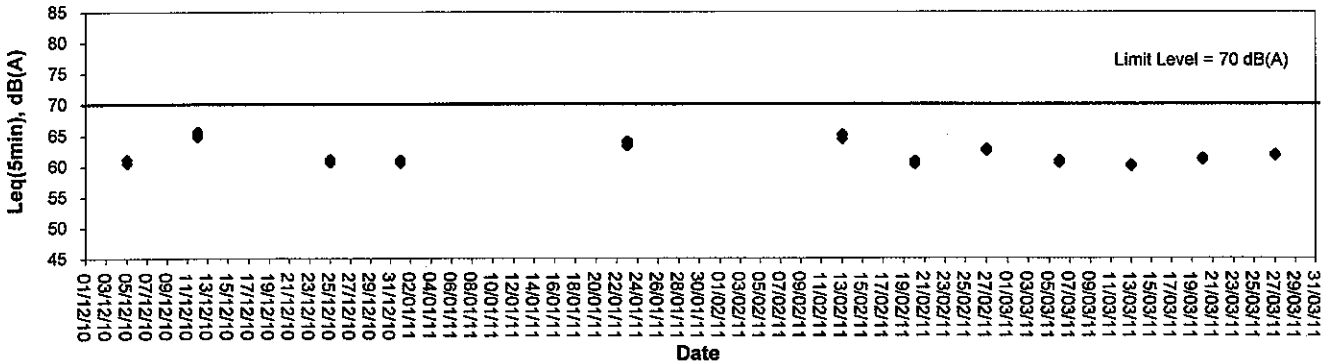
Noise level at KS6 - Podium at the Culliman



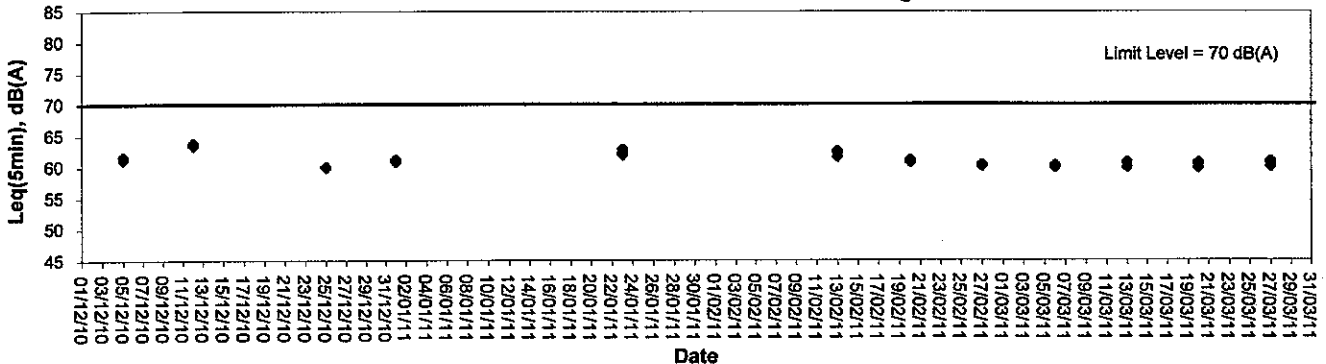
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



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





Appendix C1

Calibration Certificates for Impact Water Quality Monitoring Equipments



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 : 21/2/11⁵

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. : ETIEW10081002 Manufacturer : YSI
 Model No. : 85 Serial No. : 0601998AD
 Date of Calibration : 22/2/11 Calibration Due Date : 2/15/11

Temperature Verification

Ref. No. of Reference Thermometer : ET10521001
 Ref. No. of Water Bath : ET105331001

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

Standardization of sodium thiosulphate (Na₂S₂O₃) solution

Reagent No. of Na₂S₂O₃ titrant : J418 Reagent No. of 0.025N K₂Cr₂O₇ : J419

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

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

Linearity Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	<u>0</u>	<u>11.75</u>	<u>0</u>	<u>9.80</u>	<u>0</u>	<u>6.55</u>
Final Vol. of Na ₂ S ₂ O ₃ (ml)	<u>11.75</u>	<u>23.55</u>	<u>9.80</u>	<u>19.50</u>	<u>6.55</u>	<u>13.05</u>
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	<u>11.75</u>	<u>11.80</u>	<u>9.80</u>	<u>9.70</u>	<u>6.55</u>	<u>6.50</u>
Dissolved Oxygen (DO), mg/L	<u>7.86</u>	<u>7.87</u>	<u>6.55</u>	<u>6.47</u>	<u>4.38</u>	<u>4.35</u>
Acceptance criteria, Deviation	<u>Less than + 0.3mg/L</u>		<u>Less than + 0.3mg/L</u>		<u>Less than + 0.3mg/L</u>	

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	<u>7.98</u>	<u>7.98</u>	<u>7.98</u>	<u>7.86</u>	<u>7.87</u>	<u>7.87</u>	<u>1.39</u>
5	<u>6.60</u>	<u>6.44</u>	<u>6.52</u>	<u>6.55</u>	<u>6.47</u>	<u>6.51</u>	<u>0.15</u>
10	<u>4.48</u>	<u>4.40</u>	<u>4.44</u>	<u>4.38</u>	<u>4.35</u>	<u>4.37</u>	<u>1.55</u>
Linear regression coefficient				<u>0.9993</u>			



Performance Check of Turbidimeter



Equipment Ref. No. : 57105051007 Manufacturer : HACH
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 : 



Appendix C2

Impact Water Quality Monitoring Results

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
01/03/11	1808-1819	25/Fine	Surface	1.0	17.8	30.5	30.6	6.19	6.20	85.4	85.6	5.18	5.21	5.31	8.2	8.4	8.7
						30.7		6.21		85.7		5.23			8.5		
			Middle	8.1	18.4	31.4	31.4	6.06	6.07	83.6	83.8	5.33	5.31		8.8	8.8	
						31.3		6.08		83.9		5.28			8.7		
			Bottom	15.2	18.9	31.8	31.8	5.93	5.94	81.2	81.4	5.45	5.42		9.2	9.1	
						31.7		5.95		81.5		5.39			9.0		
03/03/11	1913-1923	19/Cloudy	Surface	1.0	18.2	31.3	31.3	6.08	6.07	84.5	84.3	4.94	4.92	4.98	7.9	7.8	7.9
						31.3		6.05		84.0		4.90			7.6		
			Middle	8.4	20.9	32.0	32.0	5.79	5.78	79.9	79.7	4.87	4.90		7.8	7.9	
						31.9		5.76		79.4		4.92			8.0		
			Bottom	15.8	21.0	32.3	32.4	5.75	5.77	79.3	79.6	5.15	5.13		8.3	8.2	
						32.4		5.79		79.9		5.10			8.0		
05/03/11	1943-1957	16/Cloudy	Surface	1.0	17.2	30.6	30.7	6.12	6.14	84.4	84.6	5.34	5.36	5.47	8.6	8.5	9.0
						30.7		6.15		84.8		5.37			8.4		
			Middle	8.3	17.6	31.1	31.1	6.04	6.06	83.3	83.5	5.41	5.44		8.8	8.9	
						31.1		6.07		83.7		5.47			9.0		
			Bottom	15.6	17.9	31.7	31.8	5.93	5.92	81.8	81.6	5.64	5.62		9.3	9.5	
						31.8		5.90		81.4		5.59			9.6		
08/03/11	1122-1135	15/Cloudy	Surface	1.0	17.5	30.0	30.1	6.05	6.04	82.9	82.7	5.31	5.30	5.43	8.5	8.4	8.7
						30.2		6.02		82.5		5.28			8.2		
			Middle	8.6	17.5	30.4	30.5	5.94	5.94	81.4	81.3	5.40	5.43		8.7	8.7	
						30.5		5.93		81.2		5.46			8.7		
			Bottom	16.2	18.2	31.1	31.4	5.86	5.86	80.3	80.3	5.54	5.55		9.0	9.2	
						31.6		5.86		80.3		5.56			9.3		
10/03/11	1128-1139	17/Cloudy	Surface	1.0	17.1	30.4	30.5	6.23	6.22	86.6	86.5	5.12	5.10	5.19	8.0	8.0	8.2
						30.5		6.21		86.3		5.07			8.0		
			Middle	8.2	17.5	30.7	30.7	6.10	6.09	84.2	84.1	5.16	5.19		8.2	8.3	
						30.7		6.08		83.9		5.21			8.4		
			Bottom	15.4	17.9	31.3	31.3	5.99	5.98	82.7	82.6	5.33	5.30		8.5	8.4	
						31.2		5.97		82.4		5.27			8.2		
12/03/11	1151-1203	17/Cloudy	Surface	1.0	19.2	30.3	30.3	6.11	6.13	83.1	83.3	5.30	5.32	5.63	8.5	8.5	9.1
						30.3		6.14		83.5		5.34			8.5		
			Middle	8.1	19.6	31.5	31.6	6.05	6.07	82.3	82.6	5.66	5.64		9.2	9.3	
						31.6		6.09		82.8		5.61			9.4		
			Bottom	15.2	20.1	32.1	32.1	5.79	5.82	78.7	79.2	5.92	5.94		9.5	9.4	
						32.1		5.85		79.6		5.95			9.3		
15/03/11	1413-1428	18/Cloudy	Surface	1.0	17.9	30.5	30.6	6.17	6.16	84.5	84.4	5.11	5.13	5.20	8.2	8.1	8.4
						30.6		6.15		84.3		5.14			8.0		
			Middle	8.3	18.7	31.4	31.4	6.07	6.09	84.4	84.6	5.20	5.18		8.4	8.5	
						31.4		6.10		84.8		5.16			8.6		
			Bottom	15.6	19.4	31.9	32.0	5.88	5.90	81.7	81.9	5.28	5.31		8.6	8.6	
						32.0		5.91		82.1		5.33			8.5		
17/03/11	1751-1802	17/Cloudy	Surface	1.0	17.9	31.6	31.6	6.10	6.12	86.6	86.9	4.94	4.91	5.05	7.9	7.8	8.0
						31.6		6.14		87.1		4.87			7.6		
			Middle	8.6	20.0	32.1	32.1	5.95	5.97	84.4	84.7	5.06	5.11		8.1	8.2	
						32.0		5.98		84.9		5.15			8.2		
			Bottom	16.2	20.3	32.5	32.5	5.99	5.97	85.0	84.7	5.19	5.15		8.0	8.0	
						32.4		5.95		84.4		5.10			8.0		
19/03/11	1808-1821	18/Rainy	Surface	1.0	18.7	30.5	30.6	6.14	6.16	85.3	85.6	5.16	5.15	5.25	7.8	7.9	8.2
						30.6		6.18		85.9		5.13			8.0		
			Middle	8.1	19.5	31.4	31.4	6.05	6.07	83.5	83.8	5.23	5.24		8.4	8.3	
						31.3		6.09		84.0		5.25			8.2		
			Bottom	15.2	20.0	32.0	32.0	5.96	5.98	81.7	81.9	5.33	5.35		8.6	8.3	
						31.9		5.99		82.1		5.37			8.0		
22/03/11	1128-1139	22/Cloudy	Surface	1.0	19.3	30.6	30.6	6.23	6.22	88.5	88.4	5.20	5.23	5.33	8.4	8.3	8.6
						30.6		6.21		88.2		5.25			8.2		
			Middle	8.4	18.8	31.2	31.3	6.08	6.09	86.3	86.5	5.29	5.32		8.5	8.5	
						31.3		6.10		86.6		5.34			8.5		
			Bottom	15.8	18.5	31.7	31.8	5.99	5.99	84.5	84.4	5.47	5.44		8.8	8.9	
						31.8		5.98		84.3		5.41			9.0		
24/03/11	1134-1147	15/Fine	Surface	1.0	17.4	30.7	30.7	6.11	6.13	84.9	85.2	5.15	5.14	5.18	8.1	8.1	8.1
						30.7		6.15		85.5		5.13			8.0		
			Middle	8.2	19.3	31.4	31.4	6.05	6.04	82.9	82.8	5.14	5.16		7.8	7.9	
						31.3		6.03		82.6		5.18			8.0		
			Bottom	15.4	20.1	31.9	32.0	5.87	5.89	81.6	81.8	5.22	5.25		8.5	8.4	
						32.0		5.90		82.0		5.27			8.2		
26/03/11	1240-1253	19/Cloudy	Surface	1.0	18.0	30.7	30.7	6.10	6.11	85.4	85.5	5.20	5.20	5.31	8.4	8.3	8.5
						30.7		6.11		85.5		5.19			8.2		
			Middle	8.3	17.6	31.7	31.7	5.94	5.96	83.2	83.5	5.27	5.31		8.5	8.6	
						31.6		5.98		83.7		5.34			8.6		
			Bottom	15.6	17.1	32.0	32.1	5.82	5.81	81.5	81.4	5.45	5.44		8.8	8.7	
						32.1		5.80		81.2		5.43			8.5		
29/03/11	1608-1618	20/Cloudy	Surface	1.0	19.3	31.3	31.4	6.25	6.27	86.8	87.0	5.09	5.05	5.08	8.0	8.0	8.0
						31.4		6.28		87.2		5.01			8.0		
			Middle	8.6	20.2	32.0	32.1	6.10	6.09	84.7	84.5	5.27	5.24		8.4	8.3	
						32.1		6.07		84.3		5.21			8.1		
			Bottom	16.2	20.3	32.3	32.4	5.90	5.93	82.0	82.4	4.97	4.94		7.9	7.8	
						32.4		5.95		82.7		4.91			7.7		
31/03/11	1823-1837	22/Fine	Surface	1.0	17.8	30.6	30.7	6.34	6.35	89.3	89.5	4.86	4.89	5.06	7.7	7.8	8.1
						30.7		6.36		89.6		4.91			7.9		
			Middle	8.3	17.3	31.0	31.1	6.24	6.22	87.9	87.7	4.99	5.03		8.0	8.1	
						31.1		6.20		87.4		5.06			8.2		
			Bottom	15.6	16.9	31.5	31.6	6.03	6.06	85.0	85.4	5.25	5.28		8.4	8.3	
						31.6		6.08		85.7		5.31			8.2		

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
01/03/11	1615-1627	25/Fine	Surface	1.0	17.8	30.6	30.7	5.97	5.96	82.4	82.3	5.38	5.35	5.46	8.5	8.6	8.9
						30.7		5.95		82.1		5.32			8.6		
			Middle	8.8	18.4	31.5	31.5	5.89	5.88	81.3	81.1	5.43	5.45		8.8	8.9	
						31.4		5.86		80.9		5.47			9.0		
			Bottom	16.6	18.9	31.8	31.9	5.76	5.77	78.9	79.1	5.59	5.57		9.2	9.1	
						31.9		5.78		79.2		5.54			9.0		
03/03/11	1120-1730	19/Cloudy	Surface	1.0	18.6	31.1	31.2	6.09	6.07	84.6	84.3	5.04	5.06	5.23	8.2	8.2	8.4
						31.2		6.05		84.0		5.08			8.1		
			Middle	8.7	20.8	31.9	31.9	5.87	5.86	81.0	80.8	5.43	5.40		8.8	8.7	
						31.9		5.84		80.5		5.37			8.6		
			Bottom	16.4	21.3	32.2	32.2	5.93	5.95	82.4	82.6	5.21	5.24		8.4	8.4	
						32.2		5.96		82.8		5.26			8.3		
05/03/11	1745-1801	17/Cloudy	Surface	1.0	17.2	30.6	30.7	6.01	6.04	82.9	83.3	5.31	5.33	5.53	8.5	8.6	9.1
						30.7		6.06		83.6		5.35			8.6		
			Middle	8.7	17.7	31.2	31.2	5.92	5.91	81.6	81.4	5.51	5.53		9.3	9.3	
						31.2		5.89		81.2		5.54			9.3		
			Bottom	16.4	18.2	31.8	31.8	5.78	5.77	79.7	79.5	5.72	5.74		9.5	9.4	
						31.7		5.75		79.3		5.76			9.2		
08/03/11	0926-0939	15/Cloudy	Surface	1.0	16.6	30.4	30.5	6.04	6.06	82.7	83.0	5.40	5.38	5.55	9.0	8.9	9.2
						30.6		6.07		83.2		5.36			8.8		
			Middle	8.9	17.1	31.1	31.0	6.01	6.00	82.3	82.1	5.54	5.55		9.3	9.3	
						30.9		5.98		81.9		5.56			9.2		
			Bottom	16.8	17.5	31.5	31.6	5.84	5.84	80.0	80.0	5.71	5.72		9.5	9.4	
						31.6		5.83		79.9		5.73			9.3		
10/03/11	0935-0947	17/Cloudy	Surface	1.0	17.1	30.5	30.5	5.99	5.98	83.3	83.1	5.40	5.38	5.48	8.8	8.7	8.9
						30.4		5.96		82.8		5.35			8.6		
			Middle	8.6	17.5	30.8	30.8	5.86	5.87	81.5	81.6	5.40	5.47		9.0	8.9	
						30.8		5.87		81.6		5.45			8.7		
			Bottom	16.2	17.9	31.2	31.3	5.75	5.75	79.4	79.3	5.57	5.60		9.0	9.1	
						31.3		5.74		79.2		5.63			9.1		
12/03/11	1002-1015	16/Cloudy	Surface	1.0	18.8	30.5	30.6	5.97	5.95	81.2	80.9	5.03	5.05	5.29	8.0	8.1	8.5
						30.6		5.93		80.6		5.06			8.1		
			Middle	8.4	19.4	31.4	31.5	5.90	5.92	80.2	80.5	5.29	5.26		8.4	8.3	
						31.5		5.94		80.8		5.22			8.2		
			Bottom	15.8	20.1	32.0	32.1	5.76	5.75	78.3	78.2	5.56	5.58		9.0	9.1	
						32.1		5.74		78.1		5.59			9.2		
15/03/11	1225-1236	18/Cloudy	Surface	1.0	18.0	30.6	30.7	6.06	6.05	83.0	82.8	5.15	5.18	5.30	8.2	8.3	8.5
						30.7		6.03		82.6		5.20			8.4		
			Middle	8.9	18.7	31.3	31.4	5.89	5.91	81.3	81.6	5.27	5.29		8.3	8.3	
						31.4		5.93		81.8		5.31			8.3		
			Bottom	16.8	19.4	31.9	31.9	5.83	5.85	79.9	80.1	5.44	5.42		9.0	8.9	
						31.8		5.86		80.3		5.40			8.8		
17/03/11	1552-1604	17/Cloudy	Surface	1.0	18.1	31.6	31.6	6.19	6.17	87.8	87.6	4.69	4.72	5.05	7.5	7.7	8.0
						31.6		6.15		87.3		4.74			7.9		
			Middle	8.6	20.0	32.0	32.0	6.02	6.04	85.4	85.7	5.27	5.24		8.4	8.3	
						31.9		6.05		85.9		5.21			8.2		
			Bottom	16.2	20.3	32.4	32.5	5.83	5.82	82.2	82.0	5.15	5.20		8.0	8.1	
						32.5		5.80		81.7		5.24			8.2		
19/03/11	1622-1632	18/Rainy	Surface	1.0	18.7	30.5	30.6	6.10	6.09	83.6	83.5	5.19	5.21	5.28	8.2	8.3	8.4
						30.6		6.08		83.3		5.22			8.3		
			Middle	8.7	19.5	31.2	31.3	6.01	5.99	82.9	82.7	5.27	5.28		8.3	8.3	
						31.3		5.97		82.4		5.29			8.2		
			Bottom	16.4	20.1	31.8	31.8	5.83	5.85	81.0	81.3	5.35	5.37		8.6	8.7	
						31.8		5.87		81.6		5.38			8.8		
22/03/11	0935-0947	23/Fine	Surface	1.0	19.2	30.8	30.8	5.94	5.95	84.3	84.4	5.28	5.26	5.36	8.2	8.3	8.5
						30.7		5.95		84.5		5.24			8.3		
			Middle	8.7	18.9	31.4	31.4	5.88	5.87	83.5	83.3	5.32	5.35		8.6	8.5	
						31.4		5.85		83.1		5.37			8.4		
			Bottom	16.4	18.5	31.6	31.7	5.74	5.75	80.9	81.0	5.49	5.47		9.0	8.9	
						31.8		5.75		81.1		5.44			8.7		
24/03/11	0948-1000	15/Cloudy	Surface	1.0	17.4	30.7	30.7	6.03	6.05	82.6	82.8	5.15	5.18	5.23	8.2	8.3	8.2
						30.6		6.06		83.0		5.20			8.4		
			Middle	8.8	19.4	31.4	31.5	5.95	5.93	81.5	81.3	5.19	5.21		8.2	8.3	
						31.5		5.91		81.0		5.23			8.3		
			Bottom	16.6	19.9	32.0	32.1	5.84	5.85	81.2	81.4	5.29	5.31		8.2	8.2	
						32.1		5.86		81.5		5.33			8.1		
26/03/11	1055-1108	18/Cloudy	Surface	1.0	17.9	30.6	30.7	6.12	6.11	85.7	85.5	5.16	5.14	5.38	8.2	8.1	8.8
						30.7		6.09		85.3		5.11			8.0		
			Middle	8.9	17.5	31.6	31.6	6.02	6.00	84.3	84.0	5.43	5.42		9.0	8.9	
						31.5		5.97		83.6		5.40			8.8		
			Bottom	16.8	17.0	32.1	32.1	5.93	5.92	83.0	82.9	5.56	5.58		9.2	9.3	
						32.0		5.91		82.7		5.59			9.3		
29/03/11	1412-1423	20/Cloudy	Surface	1.0	19.3	31.2	31.2	6.30	6.32	87.5	87.8	4.82	4.88	4.94	7.8	7.8	7.9
						31.1		6.34		88.1		4.93			7.8		
			Middle	8.6	20.1	31.8	31.9	6.07	6.08	84.3	84.5	4.94	4.92		7.9	7.8	
						31.9		6.09		84.6		4.90			7.7		
			Bottom	16.2	20.3	32.0	32.1	5.98	5.97	83.1	82.9	5.06	5.04		8.2	8.1	
						32.1		5.95		82.7		5.01			8.0		
31/03/11	1627-1642	22/Fine	Surface	1.0	17.8	30.5	30.6	6.02	6.04	84.8	85.1	5.26	5.28	5.42	8.5	8.2	8.2
						30.6		6.06		85.4		5.30			7.8		
			Middle	8.8	17.3	31.1	31.1	5.89	5.91	83.0	83.3	5.41	5.43		8.1	8.1	
						31.1		5.93		83.6		5.44			8.0		
			Bottom	16.6	16.9	31.7	31.7	5.81	5.84	81.9	82.3	5.53	5.56		8.4	8.3	
						31.7		5.86		82.6		5.58			8.2		

Mid-Flood Tide



東業恆動測試顧問有限公司
ETS-TESTCONSULT LIMITED

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		
01/03/11	1710-1722	25/Fine	Surface	1.0	17.7	30.6	30.6	6.19	6.19	85.4	85.4	5.29	5.33	5.49	8.4	8.3	8.7		
						30.6		6.18		85.3		5.36			8.2				
			Middle	8.4	18.4	31.4	31.5	6.09	6.10	83.4	83.6	5.48	5.51		5.48	5.51		8.6	8.7
						31.5		6.11		83.7		5.53			8.8				
			Bottom	15.8	18.7	31.7	31.7	5.98	5.97	81.9	81.8	5.66	5.64		5.66	5.64		9.0	9.0
						31.7		5.96		81.7		5.61			9.0				
03/03/11	1816-1827	19/Cloudy	Surface	1.0	18.5	31.2	31.2	6.20	6.22	86.1	86.4	4.94	4.91	5.21	7.9	8.0	8.1		
						31.2		6.24		86.7		4.87			8.0				
			Middle	8.4	21.0	32.0	32.0	6.07	6.06	84.3	84.1	5.15	5.18		5.15	5.18		8.1	8.2
						32.0		6.04		83.9		5.21			8.2				
			Bottom	15.8	21.0	32.3	32.3	5.92	5.94	82.2	82.5	5.50	5.54		5.50	5.54		8.0	8.1
						32.3		5.95		82.7		5.57			8.2				
05/03/11	1845-1900	17/Cloudy	Surface	1.0	17.3	30.7	30.7	6.21	6.23	85.6	85.9	5.16	5.18	5.36	8.2	8.3	8.5		
						30.7		6.25		86.2		5.20			8.4				
			Middle	8.3	17.6	31.2	31.2	6.07	6.11	83.7	84.2	5.34	5.36		5.34	5.36		8.6	8.5
						31.2		6.14		84.7		5.38			8.4				
			Bottom	15.6	18.0	31.8	31.8	5.99	5.97	82.6	82.3	5.51	5.54		5.51	5.54		8.8	8.8
						31.8		5.94		81.9		5.56			8.8				
08/03/11	1022-1035	15/Cloudy	Surface	1.0	16.7	30.4	30.3	6.04	6.03	82.7	82.6	5.30	5.29	5.45	8.6	8.5	8.8		
						30.2		6.02		82.5		5.28			8.4				
			Middle	8.3	17.4	31.1	31.2	5.93	5.93	81.2	81.2	5.44	5.45		5.44	5.45		9.0	8.9
						31.2		5.92		81.1		5.46			8.8				
			Bottom	15.6	17.6	31.5	31.6	5.76	5.77	78.9	79.1	5.60	5.62		5.60	5.62		9.2	9.1
						31.6		5.78		79.2		5.63			9.0				
10/03/11	1030-1042	17/Cloudy	Surface	1.0	17.0	30.4	30.4	6.19	6.18	86.0	85.9	5.32	5.29	5.39	8.5	8.4	8.8		
						30.3		6.17		85.8		5.26			8.3				
			Middle	8.2	17.4	30.7	30.7	6.09	6.09	84.7	84.6	5.40	5.38		5.40	5.38		8.9	8.8
						30.7		6.08		84.5		5.36			8.6				
			Bottom	15.4	17.8	31.0	31.1	5.96	5.95	82.2	82.1	5.46	5.49		5.46	5.49		9.0	9.1
						31.1		5.94		82.0		5.51			9.2				
12/03/11	1053-1106	16/Cloudy	Surface	1.0	18.9	30.2	30.3	5.94	5.96	80.8	81.1	5.28	5.30	5.48	8.5	8.6	8.9		
						30.3		5.98		81.3		5.31			8.6				
			Middle	7.9	19.5	31.5	31.6	6.05	6.03	82.3	82.0	5.43	5.45		5.43	5.45		8.8	8.8
						31.6		6.01		81.7		5.47			8.8				
			Bottom	14.8	20.1	32.3	32.3	5.83	5.85	79.3	79.6	5.69	5.71		5.69	5.71		9.3	9.2
						32.2		5.87		79.8		5.72			9.1				
15/03/11	1313-1326	18/Cloudy	Surface	1.0	17.9	30.6	30.7	6.20	6.18	86.2	85.9	5.16	5.14	5.25	8.1	8.1	8.3		
						30.7		6.16		85.6		5.12			8.0				
			Middle	8.4	18.7	31.5	31.5	6.09	6.08	84.0	83.9	5.21	5.23		5.21	5.23		8.4	8.3
						31.5		6.07		83.8		5.24			8.2				
			Bottom	15.8	19.5	32.0	32.0	5.87	5.90	80.4	80.8	5.39	5.38		5.39	5.38		8.6	8.5
						31.9		5.92		81.1		5.36			8.4				
17/03/11	1650-1702	17/Cloudy	Surface	1.0	18.3	31.5	31.5	6.15	6.17	87.3	87.6	4.79	4.76	4.92	7.8	7.7	7.9		
						31.5		6.19		87.8		4.72			7.6				
			Middle	8.4	20.3	32.1	32.1	5.87	5.86	82.7	82.5	4.94	4.92		4.94	4.92		8.0	8.0
						32.1		5.84		82.3		4.90			7.9				
			Bottom	15.8	20.4	32.4	32.4	5.94	5.96	83.7	83.9	5.06	5.09		5.06	5.09		8.1	8.1
						32.4		5.97		84.1		5.12			8.0				
19/03/11	1708-1721	18/Rainy	Surface	1.0	18.7	30.7	30.7	6.19	6.17	86.0	85.8	5.08	5.11	5.23	8.0	8.1	8.3		
						30.6		6.15		85.5		5.14			8.2				
			Middle	8.2	19.6	31.4	31.4	6.04	6.06	82.7	83.0	5.26	5.24		5.26	5.24		8.4	8.3
						31.3		6.08		83.3		5.21			8.1				
			Bottom	15.4	20.0	31.9	32.0	5.87	5.89	80.4	80.6	5.32	5.33		5.32	5.33		8.6	8.6
						32.0		5.90		80.8		5.34			8.5				
22/03/11	1030-1042	23/Fine	Surface	1.0	19.3	30.7	30.7	6.14	6.15	87.2	87.3	5.19	5.22	5.31	8.1	8.0	8.5		
						30.6		6.15		87.3		5.24			7.9				
			Middle	8.3	18.9	31.2	31.3	6.08	6.09	86.3	86.4	5.27	5.30		5.27	5.30		8.5	8.5
						31.4		6.09		86.5		5.33			8.4				
			Bottom	15.6	18.6	31.7	31.7	5.94	5.95	83.8	83.9	5.45	5.42		5.45	5.42		9.0	8.9
						31.7		5.96		84.0		5.39			8.8				
24/03/11	1036-1048	15/Cloudy	Surface	1.0	17.5	30.7	30.7	6.11	6.12	83.7	83.9	5.10	5.12	5.22	8.0	8.1	8.3		
						30.6		6.13		84.0		5.13			8.2				
			Middle	8.4	19.4	31.4	31.4	6.04	6.06	83.4	83.6	5.19	5.21		5.19	5.21		8.3	8.2
						31.4		6.07		83.8		5.23			8.1				
			Bottom	15.8	19.9	32.0	32.1	5.89	5.91	81.9	82.1	5.34	5.32		5.34	5.32		8.6	8.6
						32.1		5.92		82.3		5.30			8.5				
26/03/11	1137-1150	18/Cloudy	Surface	1.0	17.9	30.6	30.7	5.93	5.92	83.0	82.9	5.20	5.19	5.34	8.4	8.3	8.7		
						30.7		5.91		82.7		5.18			8.2				
			Middle	8.4	17.6	31.6	31.6	5.82	5.81	81.5	81.4	5.36	5.38		5.36	5.38		8.8	8.7
						31.5		5.80		81.2		5.39			8.6				
			Bottom	15.8	17.1	32.0	32.0	5.77	5.76	80.8	80.7	5.42	5.46		5.42	5.46		8.9	9.0
						32.0		5.75		80.5		5.49			9.0				
29/03/11	1510-1522	20/Cloudy	Surface	1.0	19.3	31.3	31.3	6.29	6.28	87.4	87.2	4.88	4.85	5.06	7.8	7.7	8.0		
						31.2		6.26		87.0		4.81			7.6				
			Middle	8.4	20.3	32.0	32.0	5.94	5.92	81.9	81.7	5.21	5.19		5.21	5.19		8.4	8.3
						32.0		5.90		81.4		5.17			8.2				
			Bottom	15.8	20.4	32.4	32.4	5.90	5.89	81.4	81.2	5.17	5.14		5.17	5.14		8.1	8.1
						32.4		5.87		81.0		5.11			8.0				
31/03/11	1724-1740	22/Fine	Surface	1.0	17.9	30.6	30.7	6.28	6.31	88.5	88.9	4.96	4.98	5.19	8.0	7.9	8.3		
						30.7		6.33		89.2		5.00			7.8				
			Middle	8.2	17.2	31.1	31.2	6.11	6.13	86.1	86.4	5.16	5.18		5.16	5.18		8.2	8.3
						31.2		6.15		86.7		5.20			8.4				
			Bottom	15.4	16.9	31.7	31.7	6.04	6.01	85.1	84.7	5.38	5.41		5.38	5.41		8.7	8.6
						31.7		5.98		84.3		5.43			8.5				

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		
01/03/11	1725-1737	25/Fine	Surface	1.0	17.8	30.7	30.7	6.22	6.23	85.8	86.0	5.15	5.17	5.27	8.1	8.1	8.2		
				9.2	18.3	31.3		6.05		83.5		5.28			8.3				
			17.4	18.8	31.9	5.94	81.4	5.36	8.4										
03/03/11	1830-1841	19/Cloudy	Surface	1.0	18.4	31.1	31.2	6.15	6.13	85.4	85.2	5.06	5.08		5.31	8.0		8.0	8.4
				9.3	21.0	31.2		6.11		84.9		5.10				8.0			
			17.6	21.2	32.0	5.91	82.1	5.46	8.9										
05/03/11	1903-1917	17/Cloudy	Surface	1.0	17.2	30.6	30.7	6.17	6.19	85.1	85.3	5.12	5.14	5.35		8.0	8.0	8.6	
				9.3	17.6	31.2		6.11		84.3		5.30				8.6			
			17.6	18.1	31.3	6.03	83.4	5.33	8.5										
08/03/11	1038-1050	15/Cloudy	Surface	1.0	16.9	30.2	30.3	6.04	6.03	82.7	82.6	5.41	5.41		5.59	8.8	8.7		8.9
				9.1	17.5	30.3		5.95		81.5		5.56				9.3			
			17.2	17.7	30.8	5.92	81.1	5.58	9.0										
10/03/11	1045-1057	17/Cloudy	Surface	1.0	17.0	30.4	30.5	6.28	6.29	87.3	87.4	5.24	5.26	5.36		8.2	8.3	8.6	
				9.4	17.3	30.5		6.29		87.4		5.27				8.4			
			17.8	17.8	30.8	6.04	83.4	5.38	8.5										
12/03/11	1109-1122	16/Cloudy	Surface	1.0	18.8	31.2	31.3	5.98	5.97	82.5	82.3	5.48	5.46		5.52	9.0	8.9		9.0
				8.8	19.4	31.4		5.95		82.1		5.44				8.8			
			16.6	20.2	30.3	6.01	81.7	5.36	8.7										
15/03/11	1332-1345	18/Cloudy	Surface	1.0	18.0	30.4	30.4	6.07	6.04	82.6	82.2	5.39	5.38	5.27		8.5	8.6	8.5	
				9.1	18.7	31.5		5.99		81.5		5.44				8.9			
			17.2	19.5	31.4	5.92	80.5	5.48	9.0										
17/03/11	1705-1717	17/Cloudy	Surface	1.0	18.3	30.7	31.6	6.17	6.17	85.1	87.5	5.13	5.05		5.09	8.0	8.1		8.2
				9.1	20.1	30.7		6.21		85.7		5.17				8.2			
			17.2	20.4	31.6	6.10	84.8	5.28	8.4										
19/03/11	1727-1740	18/Rainy	Surface	1.0	18.7	31.5	31.6	6.07	6.09	84.4	84.6	5.25	5.27	5.27		8.5	8.5	8.4	
				9.2	19.6	32.0		5.94		81.4		5.41				8.7			
			17.4	20.1	31.4	5.89	80.7	5.38	8.9										
22/03/11	1045-1057	23/Fine	Surface	1.0	19.2	30.5	30.6	6.13	6.15	84.6	84.8	5.15	5.17		5.28	8.2	8.2		8.4
				9.2	18.8	30.6		6.16		85.0		5.18				8.2			
			17.4	18.5	31.4	6.05	84.1	5.25	8.5										
24/03/11	1054-1106	15/Cloudy	Surface	1.0	17.4	31.6	31.5	5.97	5.99	84.2	82.7	5.37	5.25	5.26		8.3	8.2	8.4	
				9.2	19.3	31.7		5.98		84.3		5.42				8.4			
			17.4	20.2	30.8	6.08	83.9	5.18	8.6										
26/03/11	1153-1206	18/Cloudy	Surface	1.0	17.8	30.7	30.8	5.98	5.97	83.7	83.6	5.04	5.03		5.25	8.0	8.1		8.5
				9.1	17.5	30.7		6.12		84.5		5.15				8.2			
			17.2	17.2	31.4	6.01	82.9	5.22	8.1										
29/03/11	1525-1535	20/Cloudy	Surface	1.0	19.4	31.5	31.5	5.97	5.99	82.4	82.7	5.27	5.25	5.12		8.2	8.3	8.2	
				9.1	20.4	32.1		5.85		80.7		5.27				8.4			
			17.2	20.4	32.0	5.79	81.2	5.35	8.3										
31/03/11	1745-1800	22/Fine	Surface	1.0	17.8	31.2	31.3	6.18	6.16	85.9	85.6	4.74	4.79		5.25	7.7	7.8		8.5
				9.3	17.3	31.3		6.14		85.3		4.83				7.8			
			17.6	16.8	32.0	5.89	81.2	5.34	8.6										

Mid-Flood Tide

Monitoring Station : R8a

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
01/03/11	1743-1755	25/Fine	Surface	1.0	17.7	30.5	30.6	6.16	6.15	85.0	84.9	5.28	5.25	5.35	8.1	8.2	8.5		
						30.6		6.14		84.7		5.22			8.2				
			Middle	6.9	18.3	31.3	31.3	6.07	6.06	83.2	83.1	5.32	5.34		5.36	5.34		8.5	8.5
						31.3		6.05		82.9		5.36			8.5				
			Bottom	12.8	18.8	31.7	31.8	5.97	5.98	81.8	81.9	5.48	5.46		5.48	5.46		8.9	9.0
						31.8		5.98		81.9		5.43			9.0				
03/03/11	1848-1858	19/Cloudy	Surface	1.0	18.2	31.2	31.2	6.10	6.09	84.7	84.6	4.87	4.91	4.99	7.8	7.9	8.0		
						31.1		6.08		84.5		4.94			8.0				
			Middle	6.7	20.9	31.9	31.9	5.83	5.82	80.4	80.2	4.98	4.95		4.91	4.95		8.0	8.1
						31.9		5.80		80.0		4.91			8.2				
			Bottom	12.4	21.0	32.3	32.3	5.88	5.86	81.1	80.8	5.09	5.13		5.16	5.13		7.9	8.0
						32.2		5.84		80.5		5.16			8.0				
05/03/11	1923-1938	16/Cloudy	Surface	1.0	17.2	30.6	30.6	6.16	6.18	85.0	85.3	5.27	5.29	5.45	8.3	8.4	8.7		
						30.5		6.20		85.5		5.31			8.5				
			Middle	6.7	17.5	30.8	30.8	6.10	6.09	84.1	83.9	5.38	5.41		5.43	5.41		8.5	8.6
						30.8		6.07		83.7		5.43			8.6				
			Bottom	12.4	17.8	31.3	31.4	6.02	6.00	83.0	82.7	5.62	5.64		5.66	5.64		9.3	9.2
						31.4		5.97		82.3		5.66			9.1				
08/03/11	1057-1110	15/Cloudy	Surface	1.0	17.3	30.2	30.1	6.02	6.00	82.5	82.2	5.46	5.46	5.62	8.9	8.9	9.0		
						29.9		5.98		81.9		5.45			8.8				
			Middle	6.8	17.6	30.8	30.7	5.91	5.90	81.0	80.9	5.60	5.63		5.66	5.63		9.0	9.0
						30.6		5.89		80.7		5.66			8.9				
			Bottom	12.6	17.8	31.4	31.4	5.77	5.76	79.0	78.9	5.77	5.76		5.75	5.76		9.4	9.3
						31.3		5.75		78.8		5.75			9.2				
10/03/11	1103-1115	17/Cloudy	Surface	1.0	17.0	30.4	30.4	6.16	6.16	85.6	85.6	5.20	5.23	5.33	8.4	8.5	8.5		
						30.3		6.15		85.5		5.26			8.5				
			Middle	6.8	17.4	30.6	30.7	6.07	6.08	84.4	84.5	5.35	5.33		5.31	5.33		8.3	8.4
						30.7		6.08		84.5		5.31			8.3				
			Bottom	12.6	17.7	31.2	31.2	5.96	5.95	82.2	82.1	5.42	5.44		5.46	5.44		8.8	8.7
						31.2		5.94		82.0		5.46			8.6				
12/03/11	1129-1141	17/Cloudy	Surface	1.0	19.1	30.4	30.5	5.92	5.96	80.5	81.0	5.62	5.66	5.64	9.2	9.1	9.1		
						30.5		5.99		81.5		5.69			9.0				
			Middle	6.0	19.8	31.4	31.5	5.77	5.78	78.5	78.6	5.50	5.49		5.48	5.49		8.8	8.9
						31.5		5.79		78.7		5.48			8.9				
			Bottom	11.0	20.2	32.0	32.1	5.80	5.82	78.9	79.2	5.75	5.77		5.79	5.77		9.4	9.4
						32.1		5.84		79.4		5.79			9.4				
15/03/11	1353-1405	18/Cloudy	Surface	1.0	17.9	30.7	30.7	6.18	6.16	85.3	85.0	5.10	5.12	5.19	8.0	8.0	8.3		
						30.6		6.14		84.7		5.14			8.0				
			Middle	6.7	18.6	31.4	31.4	6.05	6.07	82.9	83.2	5.21	5.20		5.18	5.20		8.5	8.4
						31.3		6.09		83.4		5.18			8.3				
			Bottom	12.4	19.3	31.8	31.9	5.91	5.93	82.1	82.4	5.25	5.27		5.28	5.27		8.4	8.4
						31.9		5.94		82.6		5.28			8.4				
17/03/11	1724-1736	17/Cloudy	Surface	1.0	18.0	31.5	31.6	6.06	6.05	86.0	85.8	5.07	5.11	5.23	8.1	8.2	8.5		
						31.6		6.03		85.6		5.15			8.3				
			Middle	6.7	19.9	32.1	32.1	5.92	5.91	83.7	83.4	5.27	5.23		5.18	5.23		8.5	8.5
						32.1		5.89		83.0		5.18			8.4				
			Bottom	12.4	20.3	32.5	32.5	5.85	5.83	82.4	82.2	5.32	5.36		5.40	5.36		8.6	8.7
						32.5		5.81		81.9		5.40			8.8				
19/03/11	1748-1800	18/Rainy	Surface	1.0	18.6	30.7	30.7	6.20	6.19	85.6	85.4	5.11	5.09	5.17	8.0	8.0	8.0		
						30.6		6.17		85.1		5.06			8.0				
			Middle	6.8	19.4	31.2	31.3	6.11	6.10	83.7	83.5	5.18	5.17		5.15	5.17		7.7	7.9
						31.3		6.08		83.3		5.15			8.0				
			Bottom	12.6	19.9	31.9	31.9	5.93	5.95	81.2	81.5	5.24	5.26		5.27	5.26		8.3	8.2
						31.8		5.97		81.8		5.27			8.1				
22/03/11	1103-1115	22/Cloudy	Surface	1.0	19.3	30.6	30.7	6.14	6.15	87.2	87.4	5.18	5.20	5.29	8.1	8.2	8.4		
						30.8		6.16		87.5		5.22			8.2				
			Middle	6.6	18.9	31.4	31.4	6.09	6.08	86.5	86.4	5.30	5.28		5.25	5.28		8.5	8.4
						31.3		6.07		86.2		5.25			8.2				
			Bottom	12.2	18.6	31.8	31.8	5.92	5.94	83.5	83.7	5.36	5.38		5.40	5.38		8.6	8.7
						31.8		5.95		83.9		5.40			8.8				
24/03/11	1114-1126	15/Fine	Surface	1.0	17.3	30.7	30.8	6.14	6.16	84.7	84.9	5.09	5.11	5.18	8.0	7.9	8.1		
						30.8		6.17		85.1		5.12			7.7				
			Middle	6.9	19.2	31.3	31.3	6.10	6.08	83.6	83.3	5.16	5.18		5.19	5.18		8.2	8.3
						31.3		6.06		83.0		5.19			8.3				
			Bottom	12.8	20.0	31.8	31.9	5.95	5.93	82.7	82.4	5.24	5.26		5.27	5.26		8.4	8.3
						31.9		5.91		82.1		5.27			8.2				
26/03/11	1213-1226	19/Cloudy	Surface	1.0	18.1	30.6	30.7	6.13	6.13	85.8	85.8	5.17	5.16	5.36	8.2	8.1	8.6		
						30.7		6.12		85.7		5.15			8.0				
			Middle	6.5	17.7	31.5	31.6	6.03	6.04	84.4	84.3	5.36	5.35		5.33	5.35		8.5	8.5
						31.6		6.05		84.1		5.33			8.5				
			Bottom	12.0	17.0	32.1	32.1	5.91	5.94	82.7	83.2	5.56	5.58		5.59	5.58		9.0	9.2
						32.0		5.97		83.6		5.59			9.3				
29/03/11	1543-1553	20/Cloudy	Surface	1.0	19.2	31.3	31.3	6.21	6.20	86.3	86.1	5.12	5.10	5.03	8.2	8.2	8.0		
						31.2		6.18		85.9		5.07			8.2				
			Middle	6.7	20.3	31.9	32.0	6.04	6.06	83.9	84.1	5.01	5.06		5.10	5.06		8.0	8.2
						32.0		6.07		84.3		5.10			8.3				
			Bottom	12.4	20.3	32.3	32.3	5.83	5.82	80.4	80.2	4.89	4.94		4.99	4.94		7.8	7.8
						32.2		5.80		80.0		4.89			7.7				
31/03/11	1805-1818	22/Fine	Surface	1.0	17.8	30.6	30.6	6.37	6.39	89.8	90.1	4.81	4.84	4.94	7.7	7.8	8.1		
						30.6		6.41		90.3		4.87			7.8				
			Middle	6.6	17.5	30.9	30.9	6.27	6.26	88.4	88.3	4.46	4.74		5.01	4.74		8.2	8.2
						30.9		6.25		88.1		5.01			8.1				
			Bottom	12.2	17.1	31.3	31.3	6.07	6.09	85.5	85.8	5.21	5.24		5.26	5.24		8.5	8.5
						31.3		6.10		86.0		5.26			8.5				

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
01/03/11	1503-1514	22/Fine	Surface	1.0	17.8	30.6	30.6	5.95	5.94	82.1	81.9	5.34	5.38	5.50	8.3	8.3	8.8
				5.9	18.4	31.3		5.87		81.0		5.51			8.2		
			10.8	18.9	31.4	5.84	80.8	5.45	9.1								
03/03/11	1604-1615	19/Cloudy	Surface	1.0	18.5	31.7	31.4	5.75	5.86	81.0	80.8	5.62	5.48	4.92	8.9	9.0	7.9
				5.8	20.3	31.8		5.97		82.9		4.98			8.0		
			10.6	21.0	31.9	5.94	82.5	4.90	7.8								
05/03/11	1645-1700	17/Cloudy	Surface	1.0	17.3	32.1	30.9	5.86	5.93	80.8	81.8	5.06	5.34	5.37	8.1	8.5	8.6
				5.7	17.5	32.2		5.90		81.4		5.01			8.0		
			10.4	17.8	30.6	6.02	83.0	5.22	8.4								
08/03/11	0809-0822	14/Cloudy	Surface	1.0	16.2	30.5	30.6	6.05	6.04	83.4	83.2	5.26	5.24	5.50	8.3	8.4	8.8
				5.9	16.8	29.8		6.08		83.3		5.38			8.5		
			10.8	17.0	29.6	6.06	83.0	5.35	8.3								
10/03/11	0823-0834	16/Cloudy	Surface	1.0	17.0	30.1	30.4	5.97	5.97	82.3	82.9	5.32	5.35	5.46	8.6	8.5	8.9
				5.7	17.4	30.3		6.03		82.6		5.48			8.4		
			10.4	17.8	30.8	5.87	80.4	5.66	9.2								
12/03/11	0839-0852	16/Cloudy	Surface	1.0	18.7	30.9	30.9	5.84	5.86	81.9	81.8	5.35	5.34	5.15	8.9	9.0	8.1
				5.2	19.6	31.3		5.80		80.0		5.51			8.4		
			9.4	20.2	31.4	5.83	80.4	5.56	9.0								
15/03/11	1133-1145	18/Cloudy	Surface	1.0	18.0	31.2	31.2	5.79	5.78	79.9	79.8	5.55	5.58	5.27	9.2	9.2	8.5
				5.9	18.6	31.1		5.77		79.6		5.61			9.1		
			10.8	19.3	30.3	6.06	82.4	5.03	8.0								
17/03/11	1434-1445	17/Cloudy	Surface	1.0	17.9	30.4	31.4	6.01	6.16	82.7	82.0	5.21	4.06	4.65	8.2	8.5	7.3
				5.8	20.0	31.4		5.93		81.8		5.28			8.5		
			10.6	20.2	31.4	5.95	82.1	5.28	8.5								
19/03/11	1532-1543	18/Rainy	Surface	1.0	18.6	31.7	31.8	5.86	5.84	80.9	80.6	5.37	5.35	5.30	8.7	8.7	8.4
				5.9	19.3	31.8		5.82		80.3		5.33			8.6		
			10.8	19.9	31.2	5.96	82.2	5.31	8.2								
22/03/11	0823-0834	21/Fine	Surface	1.0	19.3	31.8	31.8	5.87	5.87	80.0	80.2	5.38	5.37	5.38	8.7	8.3	8.7
				5.8	18.8	31.9		5.83		80.4		5.35			8.7		
			10.6	18.6	30.7	5.98	84.9	5.31	8.4								
24/03/11	0834-0845	15/Fine	Surface	1.0	17.3	30.7	31.4	5.96	5.97	84.6	84.8	5.25	5.28	5.27	8.2	8.2	8.4
				5.9	19.2	31.4		5.86		83.2		5.40			8.9		
			10.8	19.9	31.3	5.87	83.4	5.34	8.6								
26/03/11	0932-0945	17/Cloudy	Surface	1.0	17.9	31.7	31.3	5.79	5.87	81.6	80.4	5.48	5.33	5.33	9.0	8.6	8.6
				5.5	17.4	31.8		5.77		81.4		5.52			8.9		
			10.0	17.1	30.8	6.08	84.5	5.19	8.8								
29/03/11	1305-1316	20/Cloudy	Surface	1.0	19.0	31.9	32.0	5.90	5.93	83.7	83.6	5.20	5.20	4.72	8.4	8.3	7.4
				5.9	20.1	31.3		5.88		83.0		5.30			8.6		
			10.8	20.3	31.2	6.17	80.6	5.44	8.8								
31/03/11	1526-1540	22/Fine	Surface	1.0	17.9	31.9	30.6	5.95	6.04	82.0	85.1	5.06	5.35	5.38	8.0	8.5	8.6
				5.6	17.6	31.8		5.94		82.7		5.12			8.4		
			10.2	17.1	32.1	5.90	82.4	4.94	8.0								

Mid-Flood Tide



東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

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
01/03/11	1445-1456	22/Fine	Surface	1.0	17.7	30.7	30.6	6.14	6.16	84.7	84.9	5.19	5.22	5.33	8.2	8.3	8.6
						30.5		6.17		85.1		5.24			8.4		
			Middle	6.7	18.3	31.4	31.5	6.08	6.08	83.3	83.3	5.36	5.33		8.5	8.6	
						31.5		6.07		83.2		5.29			8.7		
			Bottom	12.4	18.7	31.9	31.9	5.96	5.97	81.7	81.8	5.49	5.46		8.9	8.8	
						31.8		5.98		81.9		5.43			8.7		
03/03/11	1544-1556	19/Cloudy	Surface	1.0	18.4	30.9	31.0	6.15	6.13	85.4	85.2	4.87	4.91	5.09	7.9	8.0	8.2
						31.0		6.11		84.9		4.94			8.0		
			Middle	6.7	20.1	31.8	31.8	6.01	6.03	83.5	83.8	5.09	5.08		8.2	8.1	
						31.8		6.05		84.0		5.06			8.0		
			Bottom	12.4	21.0	32.1	32.2	5.82	5.84	80.3	80.5	5.33	5.30		8.5	8.6	
						32.2		5.85		80.7		5.27			8.6		
05/03/11	1626-1641	17/Cloudy	Surface	1.0	17.3	30.6	30.6	6.22	6.20	85.8	85.5	5.04	5.07	5.16	8.0	7.9	8.1
						30.6		6.17		85.1		5.10			7.8		
			Middle	6.5	17.5	31.1	31.1	6.12	6.14	84.4	84.6	5.08	5.12		8.2	8.2	
						31.1		6.15		84.8		5.15			8.1		
			Bottom	12.0	17.9	31.7	31.8	6.01	6.03	82.9	83.1	5.28	5.31		8.3	8.2	
						31.8		6.04		83.3		5.33			8.1		
08/03/11	0747-0800	14/Cloudy	Surface	1.0	16.3	30.2	30.3	6.10	6.09	83.6	83.8	5.44	5.43	5.57	8.9	8.8	9.1
						30.4		6.08		83.9		5.42			8.7		
			Middle	6.4	16.6	30.8	30.8	5.99	5.99	82.1	82.0	5.61	5.60		9.3	9.3	
						30.8		5.98		81.9		5.58			9.3		
			Bottom	11.8	17.0	31.4	31.5	5.86	5.85	80.3	80.2	5.66	5.68		9.2	9.1	
						31.6		5.84		80.0		5.69			9.0		
10/03/11	0805-0816	16/Cloudy	Surface	1.0	17.0	30.5	30.5	6.15	6.15	85.5	85.4	5.23	5.20	5.31	8.2	8.1	8.2
						30.5		6.14		85.3		5.17			8.0		
			Middle	6.9	17.4	30.7	30.8	6.06	6.08	83.6	83.8	5.28	5.31		8.3	8.3	
						30.8		6.09		84.0		5.34			8.2		
			Bottom	12.8	17.8	31.3	31.3	5.93	5.94	81.8	81.9	5.39	5.42		8.5	8.4	
						31.2		5.94		82.0		5.44			8.2		
12/03/11	0816-0829	16/Cloudy	Surface	1.0	18.8	30.4	30.5	5.89	5.91	80.1	80.3	4.91	4.95	5.19	7.6	7.7	8.2
						30.5		5.92		80.5		4.99			7.8		
			Middle	6.0	19.4	31.5	31.6	5.78	5.77	78.6	78.4	5.16	5.18		8.2	8.1	
						31.6		5.75		78.2		5.19			8.0		
			Bottom	11.0	20.1	31.9	32.0	5.82	5.84	79.2	79.4	5.48	5.45		8.8	8.9	
						32.0		5.85		79.6		5.42			9.0		
15/03/11	1116-1126	18/Cloudy	Surface	1.0	18.0	30.5	30.6	6.16	6.18	85.6	85.9	5.12	5.11	5.18	8.2	8.1	8.2
						30.6		6.20		86.2		5.09			8.0		
			Middle	6.9	18.6	31.4	31.4	6.07	6.09	83.2	83.4	5.16	5.18		8.3	8.2	
						31.4		6.10		83.6		5.19			8.0		
			Bottom	12.8	19.4	31.8	31.8	5.93	5.95	81.8	82.1	5.24	5.26		8.5	8.5	
						31.7		5.97		82.4		5.27			8.4		
17/03/11	1415-1426	17/Cloudy	Surface	1.0	17.9	31.4	31.4	6.11	6.09	86.7	86.4	3.95	4.01	4.37	6.4	6.5	7.1
						31.3		6.07		86.1		4.06			6.6		
			Middle	6.4	19.9	31.8	31.9	6.01	6.03	85.3	85.6	4.21	4.19		6.8	6.9	
						31.9		6.05		85.9		4.17			7.0		
			Bottom	11.8	20.1	32.2	32.3	5.85	5.87	82.4	82.7	4.94	4.91		7.8	7.9	
						32.3		5.88		82.9		4.87			8.0		
19/03/11	1514-1525	18/Rainy	Surface	1.0	18.6	30.6	30.6	6.13	6.16	84.6	85.0	5.10	5.11	5.19	8.2	8.1	8.3
						30.5		6.18		85.3		5.12			8.0		
			Middle	6.9	19.5	31.4	31.4	6.02	6.04	83.7	84.0	5.19	5.20		8.2	8.3	
						31.3		6.06		84.2		5.21			8.4		
			Bottom	12.8	19.9	31.7	31.8	5.90	5.91	81.4	81.6	5.25	5.27		8.5	8.4	
						31.8		5.92		81.7		5.28			8.3		
22/03/11	0805-0816	21/Fine	Surface	1.0	19.2	30.6	30.7	6.15	6.14	87.3	87.1	5.19	5.17	5.27	8.1	8.1	8.4
						30.7		6.12		86.9		5.14			8.1		
			Middle	6.9	18.9	31.3	31.3	6.06	6.07	86.1	86.2	5.23	5.26		8.4	8.3	
						31.2		6.08		86.3		5.29			8.1		
			Bottom	12.8	18.6	31.7	31.7	5.94	5.94	83.8	83.7	5.41	5.39		8.6	8.7	
						31.6		5.93		83.6		5.36			8.8		
24/03/11	0815-0826	15/Fine	Surface	1.0	17.4	30.8	30.8	6.17	6.16	85.8	85.7	5.18	5.16	5.21	8.2	8.1	8.2
						30.7		6.15		85.5		5.14			8.0		
			Middle	6.9	19.4	31.4	31.5	6.10	6.09	84.2	84.1	5.21	5.20		8.3	8.2	
						31.5		6.08		83.9		5.19			8.1		
			Bottom	12.8	20.0	32.1	32.1	6.00	5.98	82.2	81.9	5.27	5.26		8.2	8.2	
						32.1		5.95		81.5		5.24			8.2		
26/03/11	0919-0922	17/Cloudy	Surface	1.0	17.9	30.5	30.6	5.99	5.97	81.5	81.2	5.12	5.13	5.39	8.0	8.0	8.6
						30.6		5.95		80.9		5.14			8.0		
			Middle	6.4	17.3	31.2	31.3	5.92	5.91	80.5	80.4	5.41	5.45		8.7	8.8	
						31.3		5.90		80.2		5.48			8.9		
			Bottom	11.8	17.0	32.1	32.1	5.71	5.75	77.7	78.2	5.56	5.58		9.0	9.1	
						32.0		5.78		78.6		5.60			9.2		
29/03/11	1245-1257	20/Cloudy	Surface	1.0	19.2	31.2	31.2	6.09	6.08	84.6	84.4	3.89	3.92	4.43	6.4	6.5	7.1
						31.2		6.06		84.2		3.94			6.5		
			Middle	6.4	20.0	31.8	31.9	5.93	5.92	81.6	81.6	4.43	4.41		7.0	6.9	
						31.9		5.90		81.4		4.39			6.8		
			Bottom	11.8	20.2	32.0	32.1	5.98	5.97	83.1	82.9	4.95	4.97		8.0	7.9	
						32.1		5.95		82.7		4.99			7.7		
31/03/11	1504-1519	22/Fine	Surface	1.0	17.9	30.3	30.4	6.24	6.27	87.9	88.3	4.97	5.01	5.18	7.9	8.0	8.3
						30.4		6.29		88.6		5.04			8.1		
			Middle	6.6	17.5	30.9	30.9	6.18	6.16	87.1	86.8	5.12	5.15		8.2	8.2	
						30.9		6.14		86.5		5.17			8.2		
			Bottom	12.2	17.0	31.5	31.6	6.01	6.03	84.7	85.0	5.35	5.38		8.6	8.7	
						31.6		6.05		85.3		5.40			8.8		

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
01/03/11	1430-1442	22/Fine	Surface	1.0	17.8	30.6	30.7	6.14	6.13	84.7	84.6	5.29	5.26	5.37	8.3	8.4	8.6
						30.7		6.12		84.5		5.23			8.5		
			Middle	6.4	18.3	31.4	31.4	6.02	6.04	83.1	83.3	5.32	5.36		8.3	8.3	
						31.3		6.05		83.5		5.39			8.2		
			Bottom	11.8	18.8	31.7	31.7	5.96	5.95	81.7	81.6	5.47	5.50		9.0	9.1	
						31.7		5.94		81.4		5.52			9.2		
03/03/11	1530-1541	19/Cloudy	Surface	1.0	18.4	30.8	30.9	6.24	6.22	86.7	86.4	5.02	5.04	5.25	8.0	8.0	8.3
						30.9		6.20		86.1		5.06			8.0		
			Middle	6.4	20.0	31.7	31.8	6.02	6.04	83.6	83.8	5.43	5.40		8.2	8.4	
						31.8		6.05		84.0		5.37			8.5		
			Bottom	11.8	20.9	32.0	32.1	5.95	5.93	82.7	82.4	5.27	5.30		8.5	8.5	
						32.1		5.91		82.1		5.32			8.4		
05/03/11	1605-1622	17/Cloudy	Surface	1.0	17.3	30.5	30.6	6.18	6.17	85.2	85.0	5.08	5.11	5.14	8.1	8.1	8.2
						30.6		6.15		84.8		5.13			8.1		
			Middle	6.2	17.5	31.0	31.1	6.10	6.08	84.1	83.9	5.05	5.08		7.9	8.1	
						31.1		6.06		83.6		5.11			8.3		
			Bottom	11.4	18.0	31.7	31.7	5.93	5.91	81.8	81.5	5.20	5.23		8.2	8.3	
						31.7		5.89		81.2		5.26			8.4		
08/03/11	0731-0744	14/Cloudy	Surface	1.0	16.1	30.0	30.1	6.08	6.07	83.3	83.1	5.21	5.22	5.33	8.3	8.2	8.5
						30.2		6.05		82.9		5.23			8.1		
			Middle	6.4	16.6	30.8	30.8	5.96	5.97	81.7	81.8	5.36	5.36		8.5	8.4	
						30.7		5.98		81.9		5.36			8.3		
			Bottom	11.8	17.1	31.2	31.4	5.90	5.89	80.8	80.6	5.41	5.42		9.0	8.9	
						31.5		5.87		80.4		5.42			8.7		
10/03/11	0750-0802	16/Cloudy	Surface	1.0	17.0	30.3	30.4	6.24	6.25	86.7	86.9	5.13	5.15	5.25	8.0	8.1	8.3
						30.4		6.26		87.0		5.16			8.1		
			Middle	6.3	17.3	30.7	30.7	6.07	6.07	83.8	83.7	5.27	5.24		8.4	8.4	
						30.6		6.06		83.6		5.21			8.3		
			Bottom	11.6	17.8	31.1	31.2	5.98	5.97	82.5	82.4	5.33	5.35		8.5	8.4	
						31.2		5.96		82.2		5.37			8.3		
12/03/11	0800-0813	16/Cloudy	Surface	1.0	18.9	30.5	30.6	6.02	6.03	81.9	82.0	4.98	5.01	5.21	7.9	8.0	8.2
						30.6		6.04		82.1		5.04			8.1		
			Middle	5.6	19.5	31.7	31.7	5.91	5.93	80.4	80.7	5.20	5.23		8.3	8.3	
						31.6		5.95		80.9		5.25			8.2		
			Bottom	10.2	20.2	32.0	32.1	5.76	5.77	78.3	78.4	5.38	5.40		8.5	8.5	
						32.1		5.77		78.5		5.42			8.4		
15/03/11	1100-1112	18/Cloudy	Surface	1.0	18.0	30.5	30.5	6.16	6.15	84.4	84.2	5.09	5.11	5.19	8.1	8.0	8.1
						30.5		6.13		84.0		5.12			7.9		
			Middle	6.2	18.6	31.3	31.4	6.08	6.06	83.3	83.0	5.18	5.20		8.0	8.0	
						31.4		6.04		82.7		5.21			8.0		
			Bottom	11.4	19.4	31.9	31.9	5.93	5.92	82.4	82.2	5.26	5.28		8.2	8.4	
						31.8		5.90		82.0		5.29			8.5		
17/03/11	1400-1412	17/Cloudy	Surface	1.0	17.7	31.2	31.2	6.09	6.07	86.4	86.2	3.74	3.76	4.19	6.8	6.7	7.3
						31.1		6.05		85.9		3.77			6.6		
			Middle	6.2	19.8	31.8	31.8	5.93	5.92	83.6	83.4	3.94	3.97		7.0	7.2	
						31.7		5.90		83.1		3.99			7.3		
			Bottom	11.4	20.1	32.2	32.2	5.89	5.87	83.0	82.7	4.80	4.84		8.0	8.0	
						32.1		5.85		82.4		4.87			8.0		
19/03/11	1500-1510	18/Rainy	Surface	1.0	18.6	30.6	30.7	6.17	6.16	84.5	84.4	5.16	5.15	5.21	8.1	8.2	8.4
						30.7		6.15		84.3		5.13			8.2		
			Middle	6.3	19.4	31.3	31.3	6.04	6.06	84.0	84.3	5.22	5.20		8.4	8.3	
						31.2		6.08		84.5		5.18			8.2		
			Bottom	11.6	19.9	31.8	31.8	5.93	5.95	81.8	82.0	5.27	5.29		8.5	8.6	
						31.7		5.96		82.2		5.30			8.7		
22/03/11	0750-0802	21/Fine	Surface	1.0	19.3	30.8	30.8	6.20	6.19	88.0	87.9	5.12	5.14	5.24	8.2	8.1	8.4
						30.7		6.18		87.8		5.16			8.0		
			Middle	6.2	18.9	31.3	31.4	6.05	6.06	85.3	85.5	5.25	5.23		8.4	8.5	
						31.4		6.07		85.6		5.21			8.5		
			Bottom	11.4	18.5	31.6	31.7	5.96	5.97	84.0	84.1	5.33	5.36		8.5	8.6	
						31.7		5.97		84.2		5.39			8.7		
24/03/11	0800-0812	15/Fine	Surface	1.0	17.3	30.7	30.7	6.16	6.14	84.4	84.1	5.10	5.09	5.17	8.1	8.1	8.2
						30.7		6.12		83.8		5.07			8.0		
			Middle	6.4	19.3	31.3	31.4	6.07	6.05	83.2	82.9	5.16	5.17		8.1	8.2	
						31.4		6.03		82.6		5.18			8.2		
			Bottom	11.8	20.0	31.8	31.9	5.97	5.96	83.0	82.8	5.23	5.24		8.5	8.4	
						31.9		5.94		82.6		5.25			8.2		
26/03/11	0900-0913	17/Cloudy	Surface	1.0	17.8	30.7	30.7	5.97	5.98	81.2	81.3	5.01	5.04	5.28	8.0	7.9	8.4
						30.6		5.98		81.3		5.06			7.8		
			Middle	6.1	17.4	31.3	31.4	5.80	5.84	78.9	79.4	5.27	5.29		8.3	8.2	
						31.4		5.87		79.8		5.30			8.0		
			Bottom	11.2	17.1	32.0	32.1	5.82	5.84	79.2	79.4	5.51	5.53		9.0	9.1	
						32.1		5.85		79.6		5.54			9.1		
29/03/11	1230-1242	20/Cloudy	Surface	1.0	19.2	31.1	31.1	6.12	6.10	85.0	84.8	3.97	3.96	4.84	6.6	6.5	7.6
						31.0		6.08		84.5		3.94			6.4		
			Middle	6.2	20.0	31.7	31.8	6.01	6.03	83.5	83.8	4.68	4.64		7.6	7.6	
						31.8		6.05		84.0		4.60			7.5		
			Bottom	11.4	20.2	32.0	32.0	5.94	5.92	81.9	81.7	5.94	5.92		8.5	8.6	
						31.9		5.90		81.4		5.90			8.7		
31/03/11	1445-1500	22/Fine	Surface	1.0	17.9	30.2	30.3	6.28	6.31	88.5	88.9	4.98	4.95	5.11	7.8	7.7	8.1
						30.3		6.33		89.2		4.92			7.6		
			Middle	6.2	17.4	30.8	30.9	6.25	6.23	88.1	87.8	5.03	5.05		8.0	8.1	
						30.9		6.20		87.4		5.06			8.1		
			Bottom	11.4	17.0	31.5	31.6	6.03	6.05	85.0	85.2	5.31	5.34		8.5	8.6	
						31.6		6.06		85.4		5.37			8.7		

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
01/03/11	1633-1644	25/Fine	Surface	1.0	17.7	30.5	30.6	6.14	6.15	84.7	84.8	5.21	5.24	5.35	8.4	8.3	8.6
						30.7		6.15		84.9		5.26			8.2		
			Middle	5.9	18.3	31.3	31.4	6.06	6.05	83.6	83.5	5.38	5.35		8.7	8.6	
						31.5		6.04		83.4		5.32			8.5		
			Bottom	10.8	18.8	31.8	31.8	5.98	5.98	81.9	81.9	5.45	5.47		9.0	9.0	
						31.8		5.97		81.8		5.49			9.0		
03/03/11	1737-1748	19/Cloudy	Surface	1.0	18.7	31.2	31.2	6.14	6.12	85.3	85.0	4.82	4.80	4.93	7.7	7.8	7.9
						31.2		6.10		84.7		4.77			7.9		
			Middle	5.9	20.9	32.0	32.0	6.02	6.04	83.6	83.8	4.99	4.96		8.0	7.9	
						31.9		6.05		84.0		4.92			7.8		
			Bottom	10.8	21.2	32.2	32.2	5.98	5.97	83.1	83.0	5.07	5.04		7.9	8.0	
						32.1		5.96		82.8		5.01			8.0		
05/03/11	1806-1821	17/Cloudy	Surface	1.0	17.3	30.6	30.6	6.14	6.16	84.7	85.0	5.15	5.17	5.22	8.2	8.1	8.2
						30.6		6.18		85.2		5.18			8.0		
			Middle	5.9	17.5	30.8	30.8	6.10	6.09	84.1	83.9	5.10	5.14		8.1	8.1	
						30.7		6.07		83.7		5.17			8.0		
			Bottom	10.8	17.9	31.0	31.2	5.91	5.93	80.9	81.2	5.35	5.37		8.5	8.5	
						31.4		5.95		81.5		5.38			8.5		
08/03/11	0951-1003	15/Cloudy	Surface	1.0	16.6	30.5	30.4	6.08	6.07	83.3	83.1	5.36	5.35	5.53	8.4	8.5	8.9
						30.3		6.05		82.9		5.33			8.6		
			Middle	6.2	17.2	30.9	31.0	6.00	5.99	82.2	82.1	5.48	5.50		9.0	8.9	
						31.1		5.98		81.9		5.52			8.8		
			Bottom	11.4	17.6	31.6	31.6	5.83	5.82	79.9	79.7	5.74	5.75		9.4	9.3	
						31.6		5.80		79.5		5.76			9.2		
10/03/11	0953-1004	17/Cloudy	Surface	1.0	17.1	30.3	30.4	6.13	6.14	85.2	85.3	5.23	5.26	5.37	8.2	8.2	8.6
						30.4		6.14		85.3		5.29			8.2		
			Middle	5.8	17.4	30.6	30.7	6.07	6.06	83.8	83.7	5.34	5.37		8.5	8.4	
						30.7		6.05		83.5		5.39			8.3		
			Bottom	10.6	17.9	31.1	31.1	5.91	5.92	81.6	81.7	5.52	5.50		9.2	9.1	
						31.0		5.93		81.8		5.47			9.0		
12/03/11	1022-1035	16/Cloudy	Surface	1.0	18.9	30.4	30.5	6.08	6.09	82.7	82.8	5.18	5.15	5.41	8.1	8.1	8.7
						30.5		6.10		82.9		5.11			8.1		
			Middle	5.4	19.5	31.6	31.6	5.87	5.84	79.8	79.4	5.46	5.45		9.0	8.9	
						31.5		5.81		79.0		5.44			8.7		
			Bottom	9.8	20.1	32.2	32.2	5.82	5.86	79.2	79.7	5.63	5.62		9.3	9.2	
						32.1		5.89		80.1		5.61			9.1		
15/03/11	1241-1253	18/Cloudy	Surface	1.0	18.0	30.7	30.7	6.13	6.15	84.6	84.8	5.13	5.15	5.24	8.2	8.1	8.3
						30.7		6.16		85.0		5.16			8.0		
			Middle	5.8	18.6	31.4	31.4	6.04	6.06	84.0	84.2	5.22	5.23		8.3	8.2	
						31.4		6.07		84.4		5.24			8.1		
			Bottom	10.6	19.5	31.7	31.8	5.91	5.89	81.0	80.7	5.32	5.34		8.6	8.7	
						31.8		5.87		80.4		5.35			8.7		
17/03/11	1611-1622	17/Cloudy	Surface	1.0	18.2	31.6	31.6	6.27	6.26	89.0	88.8	4.93	4.92	5.27	7.9	8.0	8.5
						31.5		6.24		88.6		4.90			8.0		
			Middle	5.9	20.1	32.1	32.1	6.07	6.08	86.1	86.3	5.34	5.36		8.6	8.6	
						32.0		6.09		86.4		5.38			8.5		
			Bottom	10.8	20.3	32.5	32.5	5.91	5.93	83.3	83.5	5.59	5.55		9.2	9.1	
						32.5		5.94		83.7		5.50			9.0		
19/03/11	1637-1648	18/Rainy	Surface	1.0	18.6	30.6	30.6	6.17	6.19	84.5	84.7	5.13	5.15	5.25	8.1	8.1	8.3
						30.5		6.20		84.9		5.16			8.0		
			Middle	5.7	19.5	31.3	31.3	6.10	6.08	83.6	83.3	5.23	5.25		8.4	8.3	
						31.2		6.06		83.0		5.26			8.2		
			Bottom	10.4	20.0	31.7	31.8	5.94	5.93	82.6	82.5	5.33	5.35		8.6	8.6	
						31.8		5.92		82.3		5.37			8.6		
22/03/11	0953-1004	23/Fine	Surface	1.0	19.1	30.8	30.8	6.13	6.13	87.0	87.0	5.23	5.20	5.31	8.3	8.2	8.6
						30.8		6.12		86.9		5.17			8.1		
			Middle	6.0	18.8	31.4	31.4	6.05	6.05	85.3	85.3	5.28	5.31		8.5	8.6	
						31.3		6.04		85.2		5.33			8.6		
			Bottom	11.0	18.4	31.8	31.8	5.95	5.96	83.9	84.1	5.45	5.43		8.9	9.0	
						31.7		5.97		84.2		5.40			9.0		
24/03/11	1005-1016	15/Cloudy	Surface	1.0	17.4	30.8	30.8	6.12	6.14	84.5	84.7	5.05	5.07	5.13	7.8	7.9	8.1
						30.8		6.15		84.9		5.08			8.0		
			Middle	5.8	19.3	31.2	31.3	6.02	6.04	82.5	82.7	5.14	5.13		8.3	8.2	
						31.3		6.05		82.9		5.12			8.1		
			Bottom	10.6	19.9	31.8	31.8	5.93	5.91	81.2	81.0	5.19	5.21		8.2	8.1	
						31.8		5.89		80.7		5.22			8.0		
26/03/11	1115-1128	18/Cloudy	Surface	1.0	17.9	30.5	30.6	6.04	6.03	82.1	81.9	5.07	5.08	5.30	8.2	8.1	8.6
						30.6		6.01		81.7		5.09			8.0		
			Middle	6.2	17.4	31.5	31.5	5.99	5.96	83.9	83.5	5.36	5.35		8.5	8.5	
						31.4		5.93		83.0		5.33			8.5		
			Bottom	11.4	16.9	32.0	32.1	5.86	5.86	82.0	82.0	5.50	5.49		9.0	9.1	
						32.1		5.85		81.9		5.47			9.2		
29/03/11	1431-1443	20/Cloudy	Surface	1.0	19.3	31.3	31.3	6.27	6.28	87.1	87.3	4.97	4.94	4.89	8.0	8.0	7.8
						31.2		6.29		87.4		4.91			8.0		
			Middle	5.9	20.2	31.9	31.9	6.02	6.04	83.6	83.8	4.81	4.80		7.6	7.7	
						31.9		6.05		84.0		4.78			7.8		
			Bottom	10.8	20.3	32.2	32.2	5.87	5.89	81.0	81.2	4.89	4.92		7.9	7.8	
						32.2		5.90		81.4		4.95			7.6		
31/03/11	1646-1700	22/Fine	Surface	1.0	17.8	30.6	30.6	6.38	6.37	89.9	89.7	4.90	4.92	5.08	8.0	7.9	8.1
						30.6		6.35		89.5		4.94			7.8		
			Middle	5.8	17.5	30.8	30.9	6.30	6.33	88.8	89.2	5.03	5.06		8.1	8.1	
						30.9		6.36		89.6		5.08			8.0		
			Bottom	10.6	17.2	31.3	31.4	6.13	6.11	86.4	86.1	5.24	5.26		8.4	8.3	
						31.4		6.08		85.7		5.28			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				
01/03/11	1656-1707	25/Fine	Surface	1.0	17.8	30.6	30.6	5.91	5.93	81.6	81.8	5.42	5.39	5.51	8.9	8.8	9.0				
						30.5		5.94		82.0		5.36			8.6						
			Middle	8.6	18.4	31.4	31.4	5.85	5.86	80.1	80.2	5.48	5.51		4.79	4.81		5.03	9.0	9.1	
						31.3		5.86		80.3		5.53			9.1						
			Bottom	16.2	18.8	31.7	31.8	5.77	5.76	79.0	78.8	5.66	5.64		5.61	5.64			5.50	9.2	9.3
						31.8		5.74		78.6		5.61			9.3						
03/03/11	1802-1813	19/Cloudy	Surface	1.0	18.5	31.2	31.2	6.17	6.16	85.7	85.5	4.79	4.81	5.03	7.6	7.7					
						31.1		6.14		85.3		4.83			7.8						
			Middle	8.8	21.0	31.9	31.9	6.04	6.03	83.9	83.7	5.06	5.09		5.12	5.09	5.50	8.1		8.1	
						31.8		6.01		83.5		5.12			8.0						
			Bottom	16.6	21.1	32.3	32.3	5.86	5.88	80.8	81.1	5.21	5.20		5.18	5.20		5.50	8.1	8.1	
						32.2		5.90		81.4		5.18			8.0						
05/03/11	1826-1841	17/Cloudy	Surface	1.0	17.2	30.6	30.7	6.07	6.09	83.7	84.0	5.26	5.28	5.50	8.4	8.5					
						30.7		6.11		84.3		5.30			8.6						
			Middle	8.9	17.6	31.1	31.2	6.00	5.99	82.8	82.7	5.47	5.49		5.50	5.49	5.50		9.0	8.9	
						31.2		5.98		82.5		5.50			8.8						
			Bottom	16.8	18.1	31.8	31.8	5.81	5.83	80.1	80.3	5.71	5.73		5.75	5.73		5.59	9.3	9.3	
						31.8		5.84		80.5		5.75			9.2						
08/03/11	1006-1019	15/Cloudy	Surface	1.0	16.7	30.3	30.4	6.09	6.09	83.4	83.4	5.38	5.39	5.50	8.6	8.7					
						30.5		6.08		83.3		5.40			8.7						
			Middle	8.7	17.3	30.8	30.8	5.96	5.96	81.7	81.6	5.56	5.58		5.59	5.58	5.59		9.0	9.1	
						30.8		5.95		81.5		5.59			9.2						
			Bottom	16.4	17.5	31.4	31.5	5.84	5.84	80.0	80.0	5.81	5.81		5.80	5.81		5.50	9.5	9.4	
						31.5		5.83		79.9		5.80			9.3						
10/03/11	1016-1027	17/Cloudy	Surface	1.0	16.9	30.4	30.4	5.93	5.94	82.4	82.5	5.37	5.39	5.50	8.6	8.7					
						30.4		5.94		82.6		5.41			8.8						
			Middle	8.7	17.4	30.8	30.8	5.83	5.84	81.0	81.2	5.53	5.50		5.47	5.50	5.50		9.0	9.0	
						30.7		5.85		81.3		5.47			9.0						
			Bottom	16.4	17.8	31.3	31.3	5.78	5.78	79.8	79.7	5.65	5.62		5.59	5.62		5.50	9.3	9.2	
						31.2		5.77		79.6		5.59			9.1						
12/03/11	1038-1050	16/Cloudy	Surface	1.0	18.8	30.5	30.6	5.86	5.84	79.7	79.5	5.10	5.13	5.32	8.2	8.2					
						30.6		5.82		79.2		5.16			8.2						
			Middle	8.5	19.4	31.6	31.6	5.81	5.80	79.0	78.9	5.39	5.37		5.35	5.37	5.32		8.6	8.5	
						31.6		5.79		78.7		5.35			8.4						
			Bottom	16.0	20.2	32.0	32.1	5.93	5.95	80.6	80.9	5.42	5.46		5.49	5.46		5.32	8.7	8.8	
						32.1		5.96		81.1		5.49			8.8						
15/03/11	1256-1308	18/Cloudy	Surface	1.0	18.0	30.5	30.6	6.12	6.14	83.8	84.1	5.14	5.16	5.26	8.0	8.0					
						30.6		6.15		84.3		5.18			7.9						
			Middle	8.8	18.7	31.4	31.5	6.06	6.04	84.2	84.0	5.26	5.26		5.25	5.26	5.26		8.2	8.1	
						31.5		6.02		83.7		5.25			8.0						
			Bottom	16.6	19.5	31.9	31.9	5.82	5.84	80.9	81.2	5.37	5.36		5.34	5.36		5.26	8.4	8.3	
						31.9		5.86		81.5		5.34			8.1						
17/03/11	1636-1647	17/Cloudy	Surface	1.0	18.2	31.5	31.5	6.21	6.22	88.1	88.3	4.87	4.91	5.14	7.6	7.7					
						31.4		6.23		88.4		4.94			7.8						
			Middle	8.6	20.2	32.0	32.0	5.98	5.97	84.9	84.7	5.06	5.04		5.01	5.04	5.14		8.1	8.1	
						32.0		5.95		84.4		5.01			8.0						
			Bottom	16.2	20.4	32.4	32.4	5.87	5.86	82.7	82.5	5.43	5.48		5.52	5.48		5.14	8.7	8.9	
						32.3		5.84		82.3		5.52			9.0						
19/03/11	1651-1702	18/Rainy	Surface	1.0	18.7	30.6	30.7	6.12	6.10	84.5	84.2	5.24	5.23	5.30	8.3	8.2					
						30.7		6.08		83.9		5.21			8.1						
			Middle	8.9	19.6	31.3	31.4	5.96	5.98	81.7	81.9	5.31	5.29		5.27	5.29	5.30		8.4	8.5	
						31.4		5.99		82.1		5.27			8.5						
			Bottom	16.8	20.1	31.9	31.9	5.85	5.88	80.7	81.1	5.37	5.39		5.41	5.39		5.30	8.7	8.9	
						31.9		5.90		81.4		5.41			9.0						
22/03/11	1016-1027	23/Fine	Surface	1.0	19.3	30.6	30.7	5.99	5.98	85.1	85.0	5.26	5.28	5.38	8.2	8.1					
						30.7		5.97		84.8		5.30			8.0						
			Middle	8.9	18.9	31.2	31.2	5.83	5.83	82.8	82.7	5.38	5.36		5.34	5.36	5.38		8.5	8.6	
						31.2		5.82		82.6		5.34			8.6						
			Bottom	16.8	18.6	31.7	31.7	5.76	5.77	81.2	81.4	5.46	5.49		5.51	5.49		5.38	9.0	9.0	
						31.6		5.78		81.5		5.51			9.0						
24/03/11	1019-1031	15/Cloudy	Surface	1.0	17.5	30.9	30.9	6.20	6.18	86.2	85.9	5.12	5.14	5.24	8.2	8.3					
						30.8		6.16		85.6		5.16			8.4						
			Middle	8.9	19.4	31.4	31.4	6.11	6.09	84.3	84.0	5.21	5.23		5.25	5.23	5.24		8.2	8.3	
						31.3		6.06		83.6		5.25			8.3						
			Bottom	16.8	20.1	31.9	32.0	5.95	5.94	81.5	81.3	5.36	5.34		5.31	5.34		5.24	8.5	8.6	
						32.0		5.92		81.1		5.31			8.6						
26/03/11	1131-1134	18/Cloudy	Surface	1.0	17.9	30.5	30.5	5.86	5.88	82.0	82.3	5.14	5.15	5.30	8.0	7.9					
						30.5		5.89		82.5		5.16			7.8						
			Middle	8.9	17.5	31.5	31.6	5.90	5.91	82.6	82.8	5.27	5.29		5.31	5.29	5.30		8.5	8.6	
						31.6		5.92		82.9		5.31			8.7						
			Bottom	16.8	17.0	32.0	32.1	5.79	5.78	81.1	80.9	5.46	5.45		5.44	5.45		5.30	8.8	8.9	
						32.1		5.76		80.6		5.44			9.0						
29/03/11	1456-1506	20/Cloudy	Surface	1.0	19.3	31.3	31.3	6.15	6.17	85.4	85.7	5.01	5.06	5.05	8.0	8.1					
						31.3		6.18		85.9		5.10			8.2						
			Middle	8.6	20.3	31.9	32.0	5.87	5.86	81.0	80.8	5.15	5.11		5.06	5.11	5.05		8.4	8.3	
						32.0		5.84		80.5		5.06			8.2						
			Bottom	16.2	20.3	32.3	32.3	5.92	5.94	82.2	82.5	4.96	4.99		5.02	4.99		5.05	7.9	7.8	
						32.2		5.95		82.7		5.02			7.7						
31/03/11	1704-1720	22/Fine	Surface	1.0	17.8	30.6	30.6	6.01	6.03	84.7	84.9	5.22	5.24	5.41	8.2	8.2					
						30.6		6.04		85.1		5.25			8.2						
			Middle	8.9	17.3	31.0	31.1	5.88	5.90	82.9	83.2	5.38	5.41		5.43	5.41	5.41		8.6	8.5	
						31.1		5.92		83.4		5.43			8.4						
			Bottom	16.8	17.0	31.7	31.8	5.72	5.74	80.6	80.9	5.56	5.58		5.60	5.58		5.41	9.2	9.3	
						31.8		5.76		81.2		5.60			9.3						

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
01/03/11	1527-1539	22/Fine	Surface	1.0	17.8	30.5	30.6	6.20	6.21	85.6	85.7	5.31	5.28	5.41	8.6	8.5	8.8
						30.6		6.22		85.8		5.25			8.4		
			Middle	7.3	18.3	31.5	31.4	6.04	6.03	83.4	82.9	5.43	5.40		9.0	8.9	
						31.3		6.01		82.3		5.37			8.8		
			Bottom	13.6	18.7	31.8	31.8	5.95	5.95	81.5	81.5	5.51	5.54		9.1	9.1	
						31.7		5.94		81.4		5.56			9.0		
03/03/11	1630-1641	19/Cloudy	Surface	1.0	18.6	31.0	31.0	6.28	6.26	87.2	87.0	5.23	5.20	5.29	8.3	8.2	8.5
						31.0		6.24		86.7		5.17			8.1		
			Middle	7.4	20.5	31.9	31.9	6.01	6.03	83.5	83.7	5.18	5.14		8.2	8.1	
						31.8		6.04		83.9		5.09			8.0		
			Bottom	13.8	20.9	32.2	32.2	5.88	5.86	81.1	80.8	5.52	5.54		9.0	9.1	
						32.2		5.84		80.5		5.55			9.2		
05/03/11	1706-1721	17/Cloudy	Surface	1.0	17.3	30.6	30.6	6.21	6.23	85.6	85.9	5.11	5.13	5.25	8.2	8.2	8.4
						30.6		6.25		86.2		5.15			8.2		
			Middle	7.3	17.6	31.0	31.1	6.18	6.16	85.2	84.9	5.21	5.23		8.5	8.4	
						31.1		6.13		84.5		5.25			8.3		
			Bottom	13.6	18.0	31.6	31.7	6.00	6.03	82.8	83.2	5.36	5.38		8.6	8.6	
						31.7		6.06		83.6		5.39			8.5		
08/03/11	0837-0849	14/Cloudy	Surface	1.0	16.4	30.3	30.4	6.05	6.04	82.7	82.7	5.41	5.43	5.58	8.8	8.8	9.0
						30.4		6.03		82.6		5.44			8.7		
			Middle	7.7	16.9	30.8	30.7	6.00	5.99	82.2	82.0	5.56	5.58		9.0	9.1	
						30.6		5.97		81.8		5.60			9.2		
			Bottom	14.4	17.2	31.1	31.2	5.81	5.82	79.6	79.8	5.75	5.75		9.2	9.1	
						31.3		5.83		79.9		5.74			9.0		
10/03/11	0847-0859	16/Cloudy	Surface	1.0	17.1	30.3	30.3	6.16	6.17	85.6	85.7	5.21	5.18	5.28	8.2	8.2	8.3
						30.3		6.17		85.8		5.15			8.2		
			Middle	7.2	17.5	30.6	30.7	6.04	6.04	83.4	83.3	5.29	5.27		8.4	8.3	
						30.7		6.03		83.2		5.25			8.2		
			Bottom	13.4	17.9	31.1	31.1	5.97	5.96	82.4	82.3	5.36	5.39		8.5	8.4	
						31.0		5.95		82.1		5.42			8.2		
12/03/11	0909-0923	16/Cloudy	Surface	1.0	18.9	30.4	30.5	5.86	5.87	79.7	79.8	5.15	5.17	5.33	8.3	8.3	8.5
						30.5		5.87		79.8		5.19			8.2		
			Middle	7.1	19.5	31.5	31.5	5.99	5.97	81.5	81.2	5.28	5.30		8.6	8.5	
						31.4		5.94		80.8		5.31			8.4		
			Bottom	13.2	20.3	32.2	32.2	5.72	5.75	77.8	78.2	5.52	5.54		8.7	8.8	
						32.1		5.78		78.6		5.55			8.8		
15/03/11	1151-1202	18/Cloudy	Surface	1.0	17.9	30.7	30.7	6.18	6.17	85.3	85.1	5.06	5.08	5.16	7.8	7.9	8.0
						30.6		6.15		84.9		5.09			8.0		
			Middle	7.2	18.7	31.2	31.3	6.08	6.06	84.5	84.3	5.13	5.15		8.1	8.1	
						31.3		6.04		84.0		5.16			8.0		
			Bottom	13.4	19.4	31.9	31.9	5.91	5.93	81.0	81.3	5.28	5.26		8.3	8.2	
						31.9		5.95		81.5		5.24			8.0		
17/03/11	1500-1512	17/Cloudy	Surface	1.0	18.0	31.5	31.5	6.23	6.25	88.4	88.7	4.27	4.24	4.81	6.6	6.6	7.6
						31.4		6.27		89.0		4.20			6.5		
			Middle	7.1	20.1	31.9	31.9	6.09	6.08	86.4	86.2	5.01	5.08		8.0	8.1	
						31.9		6.06		86.0		5.15			8.2		
			Bottom	13.2	20.2	32.3	32.4	5.94	5.92	84.3	84.0	5.15	5.12		8.3	8.2	
						32.4		5.90		83.7		5.08			8.0		
19/03/11	1549-1600	18/Rainy	Surface	1.0	18.7	30.6	30.6	6.16	6.18	85.6	85.9	5.06	5.08	5.16	8.0	8.0	8.3
						30.5		6.20		86.2		5.09			8.0		
			Middle	7.2	19.5	31.3	31.3	6.08	6.10	83.3	83.5	5.17	5.17		8.2	8.3	
						31.2		6.11		83.7		5.16			8.4		
			Bottom	13.4	20.1	31.9	31.9	5.97	5.95	82.4	82.1	5.22	5.24		8.6	8.6	
						31.9		5.93		81.8		5.26			8.5		
22/03/11	0847-0859	21/Fine	Surface	1.0	19.2	30.7	30.8	6.22	6.21	88.3	88.2	5.22	5.24	5.35	8.4	8.3	8.6
						30.8		6.20		88.0		5.26			8.2		
			Middle	7.2	18.7	31.3	31.4	6.12	6.11	86.3	86.1	5.37	5.34		8.7	8.6	
						31.4		6.09		85.9		5.31			8.5		
			Bottom	13.4	18.5	31.7	31.7	5.99	6.01	84.5	84.7	5.43	5.46		8.9	9.0	
						31.7		6.02		84.9		5.48			9.0		
24/03/11	0859-0912	15/Fine	Surface	1.0	17.4	30.9	30.9	6.13	6.15	84.6	84.9	5.09	5.11	5.17	7.8	7.7	7.9
						30.8		6.17		85.1		5.13			7.6		
			Middle	7.3	19.3	31.5	31.5	6.05	6.07	83.5	83.8	5.15	5.18		8.0	7.9	
						31.4		6.09		84.0		5.20			7.8		
			Bottom	13.6	20.1	32.0	32.1	5.91	5.93	81.0	81.2	5.21	5.24		8.2	8.1	
						32.1		5.94		81.4		5.26			8.0		
26/03/11	1002-1015	17/Cloudy	Surface	1.0	17.9	30.7	30.8	6.02	6.05	84.3	84.7	5.23	5.25	5.42	8.3	8.4	8.9
						30.8		6.08		85.1		5.26			8.5		
			Middle	7.7	17.5	31.4	31.4	5.96	5.94	83.4	83.1	5.44	5.46		9.0	9.0	
						31.3		5.91		82.7		5.47			9.0		
			Bottom	14.4	17.1	31.8	31.9	5.88	5.86	82.3	82.1	5.55	5.56		9.5	9.4	
						31.9		5.84		81.8		5.57			9.3		
29/03/11	1331-1343	20/Cloudy	Surface	1.0	19.1	31.1	31.2	6.24	6.27	86.7	87.1	4.17	4.14	4.89	6.8	6.9	8.0
						31.2		6.29		87.4		4.11			7.0		
			Middle	7.1	20.0	31.9	31.9	6.01	6.03	83.5	83.7	5.23	5.22		8.4	8.5	
						31.9		6.04		83.9		5.20			8.6		
			Bottom	13.2	20.3	32.0	32.0	5.95	5.93	82.7	82.4	5.33	5.30		8.8	8.7	
						32.0		5.90		82.0		5.27			8.5		
31/03/11	1546-1600	22/Fine	Surface	1.0	17.9	30.4	30.5	6.26	6.28	88.2	88.5	5.03	5.05	5.23	8.0	8.1	8.4
						30.5		6.30		88.8		5.07			8.1		
			Middle	7.3	17.5	30.9	31.0	6.12	6.14	86.2	86.5	5.16	5.19		8.2	8.3	
						31.0		6.16		86.8		5.21			8.4		
			Bottom	13.6	17.0	31.6	31.7	6.01	5.99	84.7	84.4	5.43	5.45		8.9	8.9	
						31.7		5.97		84.1		5.47			8.8		

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
01/03/11	1550-1602	22/Fine	Surface	1.0	17.7	30.7	30.7	6.16	6.17	85.0	85.2	5.21	5.19	5.29	8.2	8.1	8.4
						30.6		6.18		85.3		5.17			8.0		
			Middle	6.6	18.3	31.5	31.5	6.08	6.09	83.3	83.4	5.25	5.28		8.3		
31.5	6.09	83.4				5.31		8.3									
Bottom	12.2	18.8	31.9	31.9	5.99	5.98	82.1	81.9	5.41	5.39	8.6						
			31.8		5.96		81.7		5.37		8.9						
03/03/11	1654-1705	19/Cloudy	Surface	1.0	18.6	31.1	31.1	6.30	6.32	87.5	87.8	5.15	5.13	5.29	8.1	8.1	8.4
						31.0		6.34		88.1		5.11			8.0		
			Middle	6.8	20.6	31.9	32.0	6.07	6.06	84.3	84.1	5.07	5.10		8.0		
32.0	6.04	83.9				5.13		8.0									
Bottom	12.6	20.9	32.2	32.2	5.93	5.91	82.4	82.1	5.60	5.63	9.2						
			32.1		5.88		81.7		5.66		9.0						
05/03/11	1725-1740	17/Cloudy	Surface	1.0	17.2	30.7	30.7	6.20	6.17	85.5	85.1	5.17	5.19	5.30	8.2	8.3	8.6
						30.7		6.14		84.7		5.20			8.4		
			Middle	6.9	17.5	31.0	31.0	6.10	6.13	84.1	84.6	5.28	5.30		8.5		
31.0	6.16	85.0				5.32		8.5									
Bottom	12.8	17.9	31.6	31.6	6.02	6.05	83.0	83.4	5.40	5.42	8.9						
			31.6		6.07		83.7		5.44		8.8						
08/03/11	0901-0913	14/Cloudy	Surface	1.0	16.3	30.4	30.3	6.01	6.00	82.3	82.1	5.43	5.42	5.57	8.8	8.7	9.0
						30.2		5.98		81.9		5.40			8.6		
			Middle	6.8	16.9	30.9	31.0	5.93	5.92	81.2	81.0	5.56	5.56		9.0		
31.1	5.90	80.8				5.55		9.0									
Bottom	12.6	17.2	31.3	31.4	5.82	5.83	79.7	79.9	5.74	5.75	9.3						
			31.4		5.84		80.0		5.76		9.1						
10/03/11	0910-0922	16/Cloudy	Surface	1.0	17.0	30.4	30.5	6.28	6.29	87.3	87.5	5.15	5.12	5.21	8.3	8.2	8.4
						30.5		6.30		87.6		5.09			8.0		
			Middle	6.8	17.4	30.8	30.7	6.11	6.10	84.9	84.7	5.18	5.20		8.2		
30.6	6.08	84.5				5.22		8.4									
Bottom	12.6	17.8	31.3	31.3	5.98	5.99	82.5	82.6	5.35	5.32	8.6						
			31.3		5.99		82.7		5.29		8.7						
12/03/11	0935-0947	16/Cloudy	Surface	1.0	18.8	30.3	30.4	5.78	5.76	78.6	78.4	5.28	5.33	5.60	8.4	8.5	9.0
						30.4		5.74		78.1		5.37			8.6		
			Middle	6.4	19.6	31.6	31.6	5.88	5.87	79.9	79.8	5.62	5.64		8.9		
31.5	5.85	79.6				5.66		9.1									
Bottom	11.8	20.1	32.0	32.1	5.70	5.73	77.5	77.9	5.83	5.84	9.5						
			32.1		5.76		78.3		5.85		9.5						
15/03/11	1207-1219	18/Cloudy	Surface	1.0	17.9	30.6	30.7	6.13	6.15	84.0	84.2	5.13	5.11	5.19	8.0	8.0	8.2
						30.7		6.16		84.4		5.08			8.0		
			Middle	6.9	18.6	31.4	31.4	6.06	6.04	83.0	82.8	5.15	5.17		8.2		
31.3	6.02	82.5				5.19		8.0									
Bottom	12.8	19.4	31.8	31.8	5.94	5.93	82.0	81.9	5.31	5.30	8.7						
			31.7		5.92		81.7		5.29		8.5						
17/03/11	1525-1537	17/Cloudy	Surface	1.0	18.1	31.5	31.5	6.18	6.16	87.7	87.4	4.40	4.45	4.88	7.2	7.1	7.9
						31.4		6.14		87.1		4.50			7.0		
			Middle	6.7	20.1	32.0	32.1	6.10	6.09	86.6	86.4	4.94	4.91		8.0		
32.1	6.07	86.1				4.87		7.8									
Bottom	12.4	20.2	32.4	32.4	5.88	5.87	82.9	82.7	5.33	5.29	8.7						
			32.4		5.85		82.4		5.24		8.5						
19/03/11	1605-1616	18/Rainy	Surface	1.0	18.6	30.6	30.7	6.15	6.17	84.9	85.1	5.14	5.13	5.21	8.0	8.1	8.3
						30.7		6.18		85.3		5.11			8.2		
			Middle	6.8	19.5	31.4	31.4	6.05	6.07	83.5	83.7	5.18	5.20		8.4		
31.3	6.08	83.9				5.21		8.6									
Bottom	12.6	20.1	31.7	31.7	5.94	5.95	82.0	82.1	5.28	5.30	8.3						
			31.7		5.96		82.2		5.31		8.3						
22/03/11	0910-0922	21/Fine	Surface	1.0	19.3	30.7	30.7	6.17	6.17	87.6	87.6	5.15	5.18	5.27	8.2	8.3	8.3
						30.6		6.16		87.5		5.20			8.4		
			Middle	6.8	18.8	31.2	31.3	6.07	6.08	86.2	86.3	5.23	5.26		8.2		
31.3	6.08	86.3				5.28		8.4									
Bottom	12.6	18.5	31.6	31.6	5.95	5.94	83.9	83.8	5.39	5.38	8.5						
			31.6		5.93		83.6		5.36		8.3						
24/03/11	0925-0937	15/Fine	Surface	1.0	17.3	30.8	30.8	6.14	6.15	84.1	84.3	5.15	5.14	5.18	8.1	8.2	8.3
						30.7		6.16		84.4		5.12			8.3		
			Middle	6.9	19.4	31.5	31.5	6.06	6.05	83.6	83.4	5.20	5.19		8.4		
31.5	6.03	83.2				5.17		8.5									
Bottom	12.8	20.0	32.1	32.1	5.93	5.91	82.4	82.2	5.19	5.22	8.2						
			32.0		5.89		81.9		5.24		8.2						
26/03/11	1027-1040	17/Cloudy	Surface	1.0	17.8	30.6	30.7	6.04	6.03	84.6	84.4	5.12	5.11	5.30	8.2	8.2	8.6
						30.7		6.01		84.1		5.10			8.2		
			Middle	6.8	17.4	31.3	31.3	5.92	5.91	82.9	82.8	5.36	5.37		8.6		
31.2	5.90	82.6				5.38		8.4									
Bottom	12.6	17.0	31.9	32.0	5.77	5.76	80.8	80.6	5.42	5.41	9.0						
			32.0		5.74		80.4		5.40		9.1						
29/03/11	1346-1357	20/Cloudy	Surface	1.0	19.1	31.2	31.2	6.18	6.16	85.9	85.6	4.21	4.19	5.00	6.9	6.8	8.2
						31.2		6.14		85.3		4.17			6.6		
			Middle	6.7	20.1	31.9	31.9	6.06	6.05	84.2	84.0	5.37	5.34		8.6		
31.8	6.03	83.8				5.31		8.8									
Bottom	12.4	20.4	31.9	32.0	5.88	5.90	81.1	81.4	5.45	5.47	9.2						
			32.0		5.92		81.6		5.49		9.0						
31/03/11	1605-1620	22/Fine	Surface	1.0	17.8	30.5	30.5	6.31	6.33	88.9	89.1	4.92	4.95	5.16	7.9	8.0	8.1
						30.5		6.34		89.3		4.98			8.0		
			Middle	6.9	17.5	31.0	31.0	6.22	6.21	87.7	87.6	5.08	5.11		8.0		
30.9	6.20	87.4				5.14		8.1									
Bottom	12.8	17.1	31.6	31.6	6.05	6.03	85.3	85.0	5.39	5.41	8.5						
			31.6		6.00		84.6		5.43		8.2						

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	
01/03/11	1324-1337	20/Cloudy	Surface	1.0	17.4	30.5	30.5	6.21	6.23	85.0	85.3	5.21	5.24	5.43	8.5	8.6	8.8	
						30.5		6.25		85.6		5.26			8.6			
			Middle	7.4	17.9	31.0	31.0	6.12	6.14	83.8	84.0	5.40	5.44		5.42	8.7		8.9
						31.0		6.15		84.2		5.44			9.0			
			Bottom	13.8	18.2	31.5	31.6	5.92	5.94	81.1	81.4	5.62	5.67		5.65	9.1		9.1
						31.6		5.96		81.6		5.67			9.0			
03/03/11	1421-1434	19/Fine	Surface	1.0	19.1	30.2	30.3	6.04	6.06	82.1	82.4	5.10	5.14	5.49	8.0	8.1	8.8	
						30.3		6.08		82.7		5.18			8.2			
			Middle	7.4	19.4	31.7	31.7	5.97	5.96	80.5	80.4	5.56	5.53		5.55	9.0		9.0
						31.6		5.95		80.3		5.53			9.0			
			Bottom	13.8	20.2	32.2	32.3	5.70	5.72	76.9	75.8	5.76	5.78		5.77	9.3		9.2
						32.3		5.74		74.6		5.78			9.1			
05/03/11	1445-1457	17/Cloudy	Surface	1.0	17.7	30.6	30.6	6.15	6.15	85.5	85.4	5.17	5.20	5.30	8.0	8.2	8.4	
						30.6		6.14		85.3		5.23			8.3			
			Middle	7.2	18.4	31.3	31.3	6.05	6.06	83.5	83.6	5.32	5.28		5.30	8.5		8.6
						31.2		6.06		83.6		5.28			8.6			
			Bottom	13.4	18.8	31.8	31.8	5.95	5.95	82.1	82.1	5.39	5.43		5.41	8.7		8.6
						31.7		5.94		82.0		5.43			8.5			
08/03/11	1718-1730	17/Cloudy	Surface	1.0	16.8	30.2	30.3	5.99	5.97	82.1	81.8	5.18	5.19	5.30	8.2	8.3	8.5	
						30.3		5.94		81.4		5.19			8.4			
			Middle	7.4	17.3	31.5	31.5	6.02	6.01	82.5	82.3	5.21	5.25		5.23	8.4		8.4
						31.4		5.99		82.1		5.25			8.3			
			Bottom	13.8	17.8	32.2	32.2	6.01	5.98	82.3	81.9	5.46	5.49		5.48	9.0		9.0
						32.1		5.95		81.5		5.49			8.9			
10/03/11	1724-1737	18/Cloudy	Surface	1.0	17.3	30.5	30.5	6.21	6.22	85.6	85.8	5.24	5.27	5.42	8.5	8.5	8.8	
						30.5		6.23		85.9		5.29			8.4			
			Middle	7.4	17.7	31.0	31.0	6.12	6.11	84.4	84.3	5.38	5.43		5.41	8.6		8.8
						31.0		6.10		84.1		5.43			8.9			
			Bottom	13.8	18.1	31.6	31.7	5.97	6.00	82.3	82.8	5.58	5.61		5.60	9.0		9.2
						31.7		6.03		83.2		5.61			9.3			
12/03/11	1735-1745	18/Cloudy	Surface	1.0	19.5	31.6	31.6	6.17	6.16	85.7	85.5	5.19	5.22	5.18	8.0	8.2	8.2	
						31.6		6.14		85.3		5.25			8.4			
			Middle	8.6	21.0	32.1	32.1	5.90	5.92	82.0	82.3	5.08	5.11		5.10	8.0		8.1
						32.0		5.94		82.5		5.11			8.2			
			Bottom	16.2	21.2	32.3	32.3	5.81	5.80	80.1	79.9	5.25	5.20		5.23	8.5		8.4
						32.3		5.78		79.7		5.20			8.3			
15/03/11	2100-2115	18/Cloudy	Surface	1.0	17.7	30.5	30.5	6.20	6.19	83.7	83.6	5.10	5.13	5.29	8.2	8.1	8.3	
						30.4		6.18		83.4		5.15			8.0			
			Middle	7.3	18.5	31.3	31.4	5.93	5.95	80.0	80.3	5.29	5.32		5.31	7.9		8.0
						31.4		5.97		80.6		5.32			8.1			
			Bottom	13.6	19.4	31.6	31.7	5.89	5.88	80.7	79.9	5.41	5.45		5.43	8.7		8.8
						31.7		5.86		79.1		5.45			8.8			
17/03/11	1244-1256	17/Cloudy	Surface	1.0	17.4	31.3	31.3	6.17	6.18	87.6	87.8	5.25	5.23	5.33	8.2	8.1	8.5	
						31.2		6.19		87.9		5.20			8.0			
			Middle	7.6	20.3	31.7	31.8	6.05	6.04	85.3	85.2	5.29	5.35		5.32	8.4		8.3
						31.8		6.03		85.0		5.35			8.2			
			Bottom	14.2	20.5	32.2	32.1	5.96	5.96	84.0	84.0	5.48	5.43		5.46	8.9		9.0
						32.0		5.95		83.9		5.43			9.0			
19/03/11	1340-1352	17/Rainy	Surface	1.0	18.9	30.6	30.7	6.21	6.22	86.3	86.5	5.25	5.22	5.33	8.0	8.1	8.4	
						30.7		6.23		86.6		5.19			8.1			
			Middle	7.8	19.4	31.3	31.3	6.11	6.10	84.9	84.8	5.29	5.36		5.33	8.4		8.3
						31.3		6.09		84.7		5.36			8.2			
			Bottom	14.6	19.8	31.7	31.8	5.98	5.99	82.5	82.6	5.49	5.42		5.46	9.0		8.9
						31.8		5.99		82.7		5.42			8.8			
22/03/11	1705-1725	18/Cloudy	Surface	1.0	18.7	30.6	30.6	6.12	6.14	85.6	85.9	5.18	5.21	5.33	8.2	8.3	8.5	
						30.6		6.15		86.1		5.23			8.3			
			Middle	7.4	18.3	31.0	31.0	6.03	6.05	84.4	84.6	5.31	5.34		5.33	8.5		8.5
						31.0		6.06		84.8		5.34			8.5			
			Bottom	13.8	17.9	31.5	31.5	5.91	5.93	82.7	82.9	5.47	5.44		5.46	8.8		8.7
						31.5		5.94		83.1		5.44			8.6			
24/03/11	1735-1745	17/Cloudy	Surface	1.0	17.9	31.1	31.2	6.17	6.15	85.7	85.5	5.17	5.15	5.25	8.0	8.2	8.4	
						31.2		6.13		85.2		5.12			8.3			
			Middle	8.4	20.1	31.9	32.0	5.95	5.93	82.7	82.4	5.21	5.17		5.19	8.4		8.5
						32.0		5.90		82.0		5.17			8.6			
			Bottom	15.8	20.3	32.1	32.2	5.98	5.96	83.1	82.8	5.37	5.45		5.41	8.8		8.7
						32.2		5.93		82.4		5.45			8.5			
26/03/11	1824-1840	19/Fine	Surface	1.0	17.8	30.7	30.7	6.21	6.20	86.9	86.7	5.19	5.22	5.36	8.2	8.3	8.7	
						30.7		6.18		86.5		5.24			8.3			
			Middle	7.4	17.3	31.2	31.2	6.11	6.09	85.5	85.2	5.30	5.36		5.33	8.5		8.6
						31.2		6.07		84.9		5.36			8.7			
			Bottom	13.8	16.8	31.7	31.7	5.91	5.94	82.7	83.1	5.51	5.56		5.54	9.0		9.1
						31.7		5.96		83.4		5.56			9.2			
29/03/11	1056-1106	18/Cloudy	Surface	1.0	19.1	31.1	31.1	6.14	6.16	85.3	85.6	5.23	5.21	5.22	8.2	8.3	8.4	
						31.1		6.18		85.9		5.19			8.3			
			Middle	8.5	19.9	31.9	31.9	6.06	6.05	83.6	83.4	4.94	5.01		4.98	7.8		7.9
						31.9		6.03		83.2		5.01			8.0			
			Bottom	16.0	20.2	32.0	32.1	5.98	5.97	82.5	82.4	5.52	5.45		5.49	9.2		9.1
						32.1		5.96		82.2		5.45			9.0			
31/03/11	1308-1322	19/Cloudy	Surface	1.0	18.4	30.5	30.4	6.03	6.01	82.6	82.3	5.34	5.35	5.48	8.5	8.5	8.8	
						30.3		5.98		81.9		5.36			8.5			
			Middle	7.5	18.7	31.1	31.0	5.93	5.91	81.2	81.0	5.48	5.50		5.49	9.0		8.9
						30.9		5.89		80.7		5.50			8.8			
			Bottom	14.0	18.9	31.8	31.7	5.84	5.82	80.0	79.8	5.59	5.63		5.61	9.2		9.1
						31.6		5.80		79.5		5.63			9.0			

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
01/03/11	1307-1320	20/Cloudy	Surface	1.0	17.4	30.5	30.6	6.23	6.25	85.3	85.5	5.25	5.27	5.42	8.3	8.2	8.6
						30.6		6.26		85.7		5.29			8.1		
			Middle	7.8	17.9	31.0	31.0	6.14	6.16	84.1	84.3	5.27	5.35		8.6	8.6	
						31.0		6.17		84.5		5.43			8.6		
			Bottom	14.6	18.2	31.5	31.5	5.95	5.93	81.5	81.2	5.60	5.63		9.1	9.1	
						31.5		5.90		80.8		5.66			9.0		
03/03/11	1400-1413	19/Fine	Surface	1.0	18.9	30.2	30.3	5.92	5.94	79.9	80.1	5.12	5.14	5.49	8.1	8.2	8.8
						30.3		5.95		80.2		5.16			8.2		
			Middle	8.1	19.2	31.6	31.6	5.82	5.81	79.2	79.1	5.43	5.42		8.9	9.0	
						31.5		5.80		78.9		5.41			9.0		
			Bottom	15.2	20.2	32.3	32.3	5.72	5.75	77.2	77.6	5.94	5.92		9.3	9.3	
						32.2		5.78		78.0		5.90			9.3		
05/03/11	1427-1438	17/Cloudy	Surface	1.0	17.8	30.7	30.8	6.23	6.24	86.6	86.7	5.18	5.16	5.27	8.1	8.3	8.7
						30.8		6.24		86.7		5.13			8.4		
			Middle	7.9	18.4	31.4	31.4	6.09	6.09	84.7	84.6	5.23	5.26		8.5	8.6	
						31.4		6.08		84.5		5.29			8.7		
			Bottom	14.8	18.8	31.9	31.9	5.98	6.00	82.5	82.7	5.43	5.40		9.3	9.2	
						31.8		6.01		82.9		5.37			9.0		
08/03/11	1657-1710	17/Cloudy	Surface	1.0	16.9	30.2	30.3	5.84	5.84	80.0	80.0	5.42	5.41	5.61	9.0	8.9	9.2
						30.3		5.83		79.9		5.40			8.7		
			Middle	8.2	17.4	31.3	31.4	5.77	5.78	79.0	79.1	5.58	5.59		9.0	9.1	
						31.4		5.78		79.2		5.59			9.2		
			Bottom	15.4	17.7	32.0	32.1	5.91	5.92	80.9	81.1	5.82	5.83		9.6	9.7	
						32.1		5.93		81.2		5.84			9.8		
10/03/11	1705-1720	18/Cloudy	Surface	1.0	17.2	30.5	30.6	6.25	6.27	86.2	86.5	5.16	5.18	5.33	8.1	8.2	8.6
						30.6		6.29		86.8		5.19			8.2		
			Middle	8.0	17.8	31.0	31.1	6.18	6.16	85.2	85.0	5.25	5.29		8.4	8.5	
						31.1		6.14		84.7		5.32			8.5		
			Bottom	15.0	18.2	31.7	31.7	6.01	6.03	82.9	83.1	5.52	5.54		9.2	9.1	
						31.7		6.04		83.3		5.56			9.0		
12/03/11	1717-1727	18/Cloudy	Surface	1.0	19.4	31.6	31.6	6.10	6.12	84.7	85.0	5.15	5.17	5.31	8.3	8.2	8.5
						31.5		6.14		85.3		5.18			8.1		
			Middle	8.6	21.0	32.1	32.1	5.95	5.97	82.7	82.9	5.37	5.36		8.6	8.5	
						32.0		5.98		83.1		5.34			8.4		
			Bottom	16.2	21.2	32.3	32.3	5.97	5.96	82.9	82.7	5.42	5.40		9.0	8.9	
						32.2		5.94		82.5		5.37			8.8		
15/03/11	2037-2050	18/Cloudy	Surface	1.0	17.8	30.6	30.6	6.06	6.04	82.4	82.1	5.30	5.32	5.40	8.2	8.2	8.5
						30.5		6.01		81.7		5.33			8.2		
			Middle	7.9	18.3	31.2	31.3	6.05	6.08	81.7	82.1	5.42	5.41		8.5	8.4	
						31.3		6.10		82.4		5.40			8.3		
			Bottom	14.8	19.2	31.7	31.7	5.88	5.90	79.9	80.2	5.49	5.49		8.8	8.8	
						31.6		5.92		80.5		5.46			8.8		
17/03/11	1226-1237	17/Cloudy	Surface	1.0	17.3	31.2	31.2	6.22	6.22	86.3	88.3	5.23	5.26	5.37	8.3	8.3	8.6
						31.2		6.21		88.2		5.29			8.3		
			Middle	8.1	20.3	31.8	31.8	6.06	6.08	86.1	86.3	5.39	5.37		8.6	8.5	
						31.7		6.09		86.5		5.34			8.4		
			Bottom	15.2	20.6	32.0	32.0	5.99	5.99	84.5	84.4	5.52	5.49		9.0	9.0	
						32.0		5.98		84.3		5.46			9.0		
19/03/11	1321-1332	17/Rainy	Surface	1.0	18.8	30.7	30.7	6.19	6.19	86.0	86.0	5.21	5.24	5.35	8.4	8.3	8.6
						30.6		6.18		85.9		5.27			8.1		
			Middle	8.2	19.4	31.5	31.4	6.05	6.05	83.5	83.5	5.38	5.35		8.7	8.6	
						31.3		6.04		83.4		5.32			8.5		
			Bottom	15.4	19.8	31.7	31.7	5.95	5.96	82.1	82.3	5.44	5.46		9.0	9.0	
						31.7		5.97		82.4		5.48			9.0		
22/03/11	1646-1700	18/Cloudy	Surface	1.0	18.7	30.6	30.6	6.19	6.21	86.6	86.8	5.12	5.14	5.27	8.0	8.1	8.5
						30.6		6.22		87.0		5.15			8.2		
			Middle	7.9	18.3	31.0	31.0	6.13	6.11	85.8	85.5	5.28	5.27		8.4	8.5	
						31.0		6.09		85.2		5.25			8.6		
			Bottom	14.8	17.9	31.5	31.6	5.96	5.94	83.4	83.1	5.40	5.42		8.9	9.0	
						31.6		5.92		82.8		5.44			9.0		
24/03/11	1717-1727	17/Cloudy	Surface	1.0	17.9	31.1	31.1	6.21	6.19	86.3	86.0	5.15	5.17	5.22	8.2	8.2	8.3
						31.1		6.17		85.7		5.19			8.2		
			Middle	8.4	20.0	31.8	31.9	6.09	6.07	84.6	84.3	5.18	5.15		8.0	8.0	
						31.9		6.05		84.0		5.11			8.0		
			Bottom	15.8	20.4	32.3	32.4	5.90	5.92	81.4	81.7	5.30	5.34		8.6	8.6	
						32.4		5.94		81.9		5.37			8.5		
26/03/11	1805-1820	19/Fine	Surface	1.0	17.7	30.6	30.7	6.23	6.25	87.2	87.4	5.17	5.19	5.33	8.1	8.2	8.5
						30.7		6.26		87.6		5.21			8.2		
			Middle	7.9	17.3	31.1	31.2	6.14	6.12	85.9	85.7	5.29	5.31		8.5	8.4	
						31.2		6.10		85.4		5.33			8.3		
			Bottom	14.8	16.8	31.7	31.7	6.02	6.00	84.2	84.0	5.47	5.49		8.7	8.9	
						31.7		5.98		83.7		5.50			9.0		
29/03/11	1043-1053	18/Cloudy	Surface	1.0	19.1	31.0	31.1	6.29	6.28	87.4	87.3	5.03	5.06	5.10	8.1	8.1	8.2
						31.2		6.27		87.2		5.09			8.0		
			Middle	8.4	19.9	31.8	31.9	6.09	6.11	84.7	84.9	5.24	5.27		8.4	8.5	
						31.9		6.12		85.1		5.29			8.5		
			Bottom	15.8	20.2	32.1	32.1	5.92	5.94	81.7	82.0	4.94	4.97		8.0	8.0	
						32.1		5.96		82.2		4.99			8.0		
31/03/11	1245-1258	19/Cloudy	Surface	1.0	18.5	30.4	30.3	6.01	6.00	82.3	82.1	5.35	5.36	5.48	8.3	8.4	8.9
						30.2		5.98		81.9		5.36			8.5		
			Middle	8.0	18.6	30.9	31.1	5.94	5.95	81.4	81.6	5.46	5.45		9.0	9.0	
						31.3		5.96		81.7		5.44			9.0		
			Bottom	15.0	18.7	31.5	31.7	5.83	5.85	79.9	80.1	5.61	5.63		9.3	9.4	
						31.8		5.86		80.3		5.64			9.5		

Mid-Ebb Tide

Monitoring Station : R5

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Safinity (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
01/03/11	1112-1127	21/Cloudy	Surface	1.0	17.3	30.4	30.5	6.05	6.07	82.8	83.0	5.29	5.32	5.58	8.2	8.4	9.0
				8.3	17.7	30.5		6.08		83.2		5.35			8.5		
			Bottom	15.6	18.2	30.9	31.0	5.95	5.93	81.5	81.2	5.58	5.61		9.0		
03/03/11	1203-1216	18/Fine	Surface	1.0	18.5	31.0	31.0	5.90	6.05	80.8	82.3	5.63	5.41	5.64	9.2	9.2	9.2
				8.4	19.4	31.5		5.97		81.2		5.66			9.1		
			Bottom	15.8	20.4	31.6	32.3	5.91	5.93	80.4	80.7	5.81	5.85		9.4		
05/03/11	1231-1243	17/Cloudy	Surface	1.0	17.8	31.5	30.8	5.73	5.94	78.5	81.9	5.79	5.36	5.49	9.5	8.8	8.9
				8.2	18.4	31.6		5.77		79.0		5.83			9.3		
			Bottom	15.4	18.8	30.2	31.3	5.95	5.93	81.0	81.1	5.88	5.50		8.9		
08/03/11	1503-1516	17/Cloudy	Surface	1.0	17.0	30.7	30.5	5.94	6.05	81.8	82.9	5.41	5.11	5.40	8.8	8.9	8.8
				8.4	17.6	30.8		5.94		82.0		5.41			9.0		
			Bottom	15.8	17.9	31.4	31.3	5.91	6.03	80.6	82.6	5.67	5.67		9.2		
10/03/11	1503-1518	18/Cloudy	Surface	1.0	17.2	31.2	30.5	5.97	5.98	80.4	82.5	5.66	5.37	5.52	9.1	8.6	9.0
				8.3	17.7	31.3		5.95		81.1		5.35			8.7		
			Bottom	15.6	18.0	31.2	31.0	5.95	5.86	81.2	80.8	5.47	5.49		9.1		
12/03/11	1525-1535	18/Cloudy	Surface	1.0	19.4	31.0	31.5	5.83	6.17	80.4	85.7	5.51	5.07	5.10	8.0	7.9	8.0
				8.6	21.1	31.7		6.04		83.9		5.32			8.6		
			Bottom	16.2	21.1	31.4	31.9	5.90	6.06	84.3	84.1	5.27	5.30		8.5		
15/03/11	1850-1901	18/Cloudy	Surface	1.0	17.7	31.9	30.5	5.94	6.13	81.4	83.3	4.92	5.24	5.35	8.5	8.6	8.8
				8.1	18.4	31.6		6.02		83.2		5.21			8.7		
			Bottom	15.2	19.3	31.2	31.2	6.02	6.02	81.9	81.9	5.34	5.37		8.6		
17/03/11	1031-1043	16/Cloudy	Surface	1.0	17.4	31.7	31.7	5.80	5.81	78.9	84.7	5.47	5.27	5.37	9.0	8.6	8.7
				8.2	20.3	31.7		5.82		79.2		5.44			9.1		
			Bottom	15.4	20.5	31.1	31.3	5.89	5.89	83.0	83.0	5.38	5.36		8.5		
19/03/11	1122-1134	17/Rainy	Surface	1.0	18.8	31.7	30.7	5.88	5.92	82.9	82.2	5.34	5.28	5.38	8.8	8.7	8.8
				8.1	19.3	31.7		5.82		82.1		5.51			8.5		
			Bottom	15.2	19.7	31.2	31.4	5.84	5.83	80.6	80.5	5.35	5.37		8.7		
22/03/11	1446-1500	18/Cloudy	Surface	1.0	18.8	31.8	30.6	5.77	6.07	79.6	84.9	5.46	5.41	5.57	8.6	8.6	9.1
				8.2	18.3	31.6		6.05		83.3		5.60			8.7		
			Bottom	15.4	17.9	31.0	31.1	5.95	5.97	80.3	83.5	5.57	5.59		9.3		
24/03/11	1520-1531	17/Cloudy	Surface	1.0	18.1	31.7	31.1	5.86	6.09	82.0	84.6	5.71	5.05	5.25	8.0	8.1	8.3
				8.4	20.2	31.6		5.89		82.4		5.75			8.2		
			Bottom	15.8	20.3	31.1	31.9	5.90	5.92	82.0	82.2	5.34	5.38		8.5		
26/03/11	1558-1615	19/Fine	Surface	1.0	17.7	31.9	30.7	5.83	5.98	80.8	83.7	5.37	5.36	5.54	8.3	8.4	9.0
				8.2	17.2	31.8		5.83		80.4		5.30			8.5		
			Bottom	15.4	16.7	31.2	31.3	5.87	5.85	81.6	81.9	5.51	5.53		9.1		
29/03/11	0923-0933	18/Cloudy	Surface	1.0	19.0	31.8	31.1	5.72	6.34	80.0	88.1	5.76	4.90	4.97	8.0	8.0	8.0
				8.4	19.8	31.9		6.11		84.9		4.97			8.0		
			Bottom	15.8	20.0	31.1	31.8	6.09	6.10	82.2	84.8	4.92	4.95		8.1		
31/03/11	1048-1102	18/Cloudy	Surface	1.0	17.7	31.8	30.4	5.96	6.00	82.2	82.1	5.11	5.36	5.47	8.2	8.6	8.9
				8.3	17.8	31.2		5.99		81.5		5.50			9.0		
			Bottom	15.6	18.0	30.5	30.7	5.95	5.98	80.5	81.9	5.76	5.73		9.5		

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	
01/03/11	1208-1223	21/Cloudy	Surface	1.0	17.4	30.4	30.4	6.14	6.17	84.1	84.5	5.12	5.14	5.35	8.2	8.2	8.5	
						30.4		6.20		84.9		5.16			8.2			
			Middle	7.7	17.8	30.9	30.9	6.09	6.11	83.4	83.6	5.33	5.36		5.35	8.4		8.3
						30.9		6.12		83.8		5.38			8.2			
			Bottom	14.4	18.1	31.4	31.4	5.93	5.96	81.2	81.6	5.52	5.54		5.54	9.0		8.9
						31.3		5.98		81.9		5.56			8.8			
03/03/11	1256-1309	18/Fine	Surface	1.0	18.7	30.3	30.3	6.07	6.08	82.6	82.7	5.63	5.62	5.76	9.1	9.2	9.4	
						30.2		6.09		82.8		5.60			9.3			
			Middle	7.8	18.9	31.4	31.5	6.01	6.00	81.7	81.6	5.79	5.77		5.77	9.5		9.4
						31.5		5.99		81.5		5.75			9.2			
			Bottom	14.6	20.3	32.2	32.2	5.84	5.83	79.4	79.3	5.89	5.89		5.89	9.6		9.5
						32.1		5.82		79.2		5.88			9.4			
05/03/11	1328-1340	17/Cloudy	Surface	1.0	17.8	30.8	30.8	6.16	6.17	85.6	85.7	5.26	5.28	5.37	8.4	8.5	8.6	
						30.7		6.17		85.8		5.30			8.6			
			Middle	7.8	18.3	31.4	31.3	6.11	6.10	84.3	84.2	5.38	5.36		5.36	8.5		8.4
						31.2		6.09		84.0		5.34			8.3			
			Bottom	14.6	18.8	31.9	31.9	5.95	5.94	82.1	82.0	5.45	5.48		5.48	8.8		8.9
						31.8		5.93		81.8		5.51			9.0			
08/03/11	1553-1606	17/Cloudy	Surface	1.0	17.0	30.4	30.5	6.12	6.11	83.8	83.7	5.02	5.03	5.29	8.0	8.1	8.5	
						30.5		6.10		83.5		5.04			8.2			
			Middle	7.8	17.4	31.4	31.5	6.02	6.04	82.5	82.8	5.29	5.30		5.30	8.4		8.5
						31.5		6.06		83.0		5.31			8.6			
			Bottom	14.6	17.7	32.1	32.1	5.99	5.97	82.1	81.8	5.52	5.54		5.54	9.0		8.9
						32.0		5.94		81.4		5.56			8.7			
10/03/11	1603-1618	18/Cloudy	Surface	1.0	17.4	30.5	30.5	6.11	6.14	84.3	84.7	5.23	5.25	5.40	8.3	8.4	8.7	
						30.4		6.17		85.1		5.27			8.4			
			Middle	7.8	17.8	30.9	31.0	6.04	6.05	83.3	83.4	5.38	5.41		5.41	8.7		8.8
						31.0		6.05		83.4		5.44			8.8			
			Bottom	14.6	18.1	31.6	31.7	5.92	5.94	81.6	81.9	5.52	5.55		5.55	9.1		9.1
						31.7		5.95		82.1		5.58			9.1			
12/03/11	1621-1632	18/Cloudy	Surface	1.0	19.5	31.5	31.5	6.10	6.12	84.7	85.0	5.01	5.04	5.21	8.0	8.1	8.3	
						31.5		6.14		85.3		5.06			8.1			
			Middle	8.3	21.1	31.9	31.9	5.88	5.86	81.1	80.8	5.15	5.19		5.19	8.2		8.1
						31.9		5.84		80.5		5.22			8.0			
			Bottom	15.6	21.0	32.3	32.3	5.80	5.82	80.0	80.3	5.44	5.42		5.42	8.8		8.7
						32.3		5.84		80.5		5.39			8.6			
15/03/11	1937-1950	18/Cloudy	Surface	1.0	17.6	30.3	30.4	6.09	6.08	82.8	82.4	5.18	5.19	5.24	8.2	8.3	8.4	
						30.4		6.07		81.9		5.20			8.4			
			Middle	7.6	18.4	31.3	31.4	5.90	5.93	79.7	80.3	5.19	5.18		5.18	8.3		8.3
						31.4		5.95		80.9		5.17			8.3			
			Bottom	14.2	19.3	31.7	31.8	5.85	5.84	78.9	78.8	5.36	5.36		5.36	8.6		8.6
						31.8		5.83		78.7		5.35			8.5			
17/03/11	1128-1140	16/Cloudy	Surface	1.0	17.4	31.4	31.4	6.15	6.14	87.3	87.1	5.16	5.19	5.28	8.2	8.1	8.3	
						31.3		6.12		86.9		5.21			8.0			
			Middle	7.9	20.2	31.8	31.8	6.05	6.06	85.9	86.0	5.29	5.27		5.27	8.5		8.4
						31.8		6.06		86.1		5.25			8.2			
			Bottom	14.8	20.6	32.1	32.2	5.98	5.97	84.3	84.2	5.35	5.38		5.38	8.6		8.6
						32.2		5.96		84.0		5.41			8.5			
19/03/11	1220-1232	17/Rainy	Surface	1.0	18.9	30.8	30.8	6.19	6.20	86.0	86.2	5.25	5.23	5.33	8.2	8.2	8.4	
						30.7		6.21		86.3		5.20			8.2			
			Middle	8.1	19.4	31.4	31.4	6.10	6.09	84.2	84.1	5.29	5.32		5.32	8.3		8.2
						31.3		6.08		83.9		5.34			8.1			
			Bottom	15.2	19.8	31.7	31.7	5.96	5.98	82.2	82.5	5.42	5.45		5.45	8.7		8.9
						31.7		5.99		82.7		5.48			9.0			
22/03/11	1545-1600	18/Cloudy	Surface	1.0	18.8	30.5	30.6	6.22	6.20	87.0	86.8	5.18	5.21	5.34	8.2	8.3	8.6	
						30.6		6.18		86.5		5.23			8.3			
			Middle	7.8	18.2	31.0	31.1	6.12	6.11	85.6	85.5	5.30	5.33		5.33	8.5		8.6
						31.1		6.10		85.4		5.35			8.7			
			Bottom	14.6	17.9	31.6	31.7	6.02	6.04	84.2	84.5	5.51	5.50		5.50	9.0		8.9
						31.7		6.06		84.8		5.48			8.8			
24/03/11	1618-1630	17/Cloudy	Surface	1.0	18.1	31.1	31.1	6.15	6.13	85.4	85.2	4.89	4.85	5.00	7.6	7.7	7.9	
						31.1		6.11		84.9		4.81			7.8			
			Middle	8.1	20.3	31.9	31.9	5.88	5.86	81.1	80.8	4.94	4.91		4.91	8.0		7.9
						31.9		5.84		80.5		4.87			7.7			
			Bottom	15.2	20.4	32.2	32.3	5.95	5.93	82.7	82.4	5.21	5.23		5.23	8.3		8.3
						32.3		5.90		82.0		5.25			8.2			
26/03/11	1702-1717	19/Fine	Surface	1.0	17.8	30.6	30.6	6.13	6.15	85.8	86.0	5.14	5.16	5.31	8.1	8.1	8.5	
						30.6		6.16		86.2		5.17			8.0			
			Middle	7.8	17.4	31.1	31.2	6.04	6.02	84.5	84.2	5.27	5.29		5.29	8.4		8.5
						31.2		5.99		83.8		5.31			8.6			
			Bottom	14.6	17.0	31.7	31.8	5.86	5.88	82.0	82.2	5.45	5.48		5.48	8.8		8.9
						31.8		5.89		82.4		5.50			9.0			
29/03/11	1003-1013	18/Cloudy	Surface	1.0	19.1	31.0	31.0	6.27	6.29	87.2	87.5	4.84	4.87	5.09	7.6	7.7	8.1	
						31.0		6.31		87.7		4.90			7.8			
			Middle	8.2	19.9	31.8	31.8	5.91	5.94	82.1	82.5	5.19	5.22		5.22	8.2		8.1
						31.7		5.96		82.8		5.25			8.0			
			Bottom	15.4	20.2	31.9	32.0	5.91	5.90	81.6	81.5	5.20	5.17		5.17	8.4		8.5
						32.0		5.89		81.3		5.14			8.5			
31/03/11	1142-1156	18/Cloudy	Surface	1.0	17.6	30.0	30.2	5.98	5.96	81.9	81.7	5.41	5.43	5.53	8.7	8.8	9.1	
						30.4		5.94		81.4		5.44			8.8			
			Middle	7.8	18.0	30.8	31.1	5.87	5.86	80.4	80.3	5.56	5.55		5.55	9.2		9.2
						31.3		5.85		80.1		5.53			9.2			
			Bottom	14.6	18.2	31.6	31.6	5.76	5.77	78.9	79.0	5.61	5.63		5.63	9.3		9.3
						31.6		5.77		79.0		5.64			9.2			

Mid-Ebb Tide

Monitoring Station : R7

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
01/03/11	1227-1242	21/Cloudy	Surface	1.0	17.4	30.4	30.5	6.18	6.15	84.6	84.2	5.18	5.22	5.44	8.0	8.2	8.8
				8.9	17.8	31.0		6.02		82.4		5.44			8.4		
			Middle	31.0	31.0	6.05	6.04	82.8	82.6	5.48	5.46	8.9					
31.0	6.05	82.8		5.48		9.1											
Bottom	16.8	18.1	31.5	31.5	5.94	5.92	81.3	81.1	5.60	5.64	9.2						
	31.5	5.90	80.8		5.67		9.0										
03/03/11	1312-1325	18/Fine	Surface	1.0	19.3	30.2	30.3	5.89	5.91	80.1	80.1	5.67	5.64	5.80	9.1	9.1	9.3
				8.9	18.4	31.4		5.96		81.1		5.86			9.0		
			Middle	31.3	31.4	5.92	5.94	79.9	80.5	5.82	5.84	9.5					
31.3	5.92	79.9		5.82		9.3											
Bottom	16.8	19.9	32.3	32.3	5.74	5.76	78.7	78.3	5.90	5.92	9.5						
	32.2	5.77	77.9		5.94		9.5										
05/03/11	1344-1356	17/Cloudy	Surface	1.0	17.7	30.6	30.7	6.14	6.14	85.3	85.3	5.34	5.31	5.42	8.4	8.3	8.8
				8.7	18.4	31.3		6.06		83.6		5.40			8.1		
			Middle	31.4	31.4	6.07	6.07	83.8	83.7	5.44	5.42	8.9					
31.8	5.99	82.7		5.56		9.0											
Bottom	16.4	18.7	31.8	31.8	5.98	5.99	82.5	82.6	5.49	5.53	9.2						
	31.8	5.98	82.5		5.49		9.0										
08/03/11	1609-1622	17/Cloudy	Surface	1.0	16.9	30.4	30.4	6.06	6.04	82.4	82.5	5.36	5.37	5.42	8.5	8.5	8.7
				8.8	17.5	30.3		6.02		82.5		5.37			8.5		
			Middle	31.6	31.6	5.92	5.91	81.1	81.0	5.29	5.25	8.3					
31.5	5.90	80.8		5.20		8.4											
Bottom	16.6	17.8	31.9	31.9	5.73	5.75	78.5	78.8	5.66	5.65	9.3						
	31.8	5.77	79.0		5.63		9.0										
10/03/11	1624-1639	18/Cloudy	Surface	1.0	17.3	30.5	30.6	6.14	6.18	84.7	85.2	5.15	5.18	5.37	8.0	8.1	8.5
				8.9	17.9	31.0		6.11		84.3		5.36			8.2		
			Middle	31.1	31.1	6.07	6.09	83.7	84.0	5.40	5.38	8.4					
31.7	5.86	80.8		5.55		8.8											
Bottom	16.8	18.2	31.7	31.7	5.90	5.88	81.4	81.1	5.58	5.57	9.0						
	31.7	5.90	81.4		5.58		9.0										
12/03/11	1635-1645	18/Cloudy	Surface	1.0	19.5	31.6	31.6	6.22	6.24	86.4	86.6	4.94	4.92	5.23	7.9	7.8	8.3
				9.2	21.0	32.1		5.97		82.9		5.21			8.2		
			Middle	32.1	32.1	5.94	5.96	82.5	82.7	5.27	5.24	8.4					
32.4	5.79	79.9		5.57		9.0											
Bottom	17.4	21.2	32.4	32.4	5.75	5.77	79.3	79.6	5.52	5.55	8.8						
	32.4	5.75	79.3		5.52		8.8										
15/03/11	1956-2009	18/Cloudy	Surface	1.0	17.5	30.2	30.3	6.15	6.14	83.6	83.4	5.08	5.10	5.24	8.1	8.1	8.3
				8.6	18.4	31.5		6.06		82.4		5.29			8.0		
			Middle	31.4	31.5	6.09	6.08	82.8	82.6	5.25	5.27	8.3					
31.7	5.91	80.4		5.33		8.6											
Bottom	16.2	19.3	31.6	31.7	5.93	5.92	80.6	80.5	5.38	5.36	8.4						
	31.6	5.93	80.6		5.38		8.4										
17/03/11	1143-1155	16/Cloudy	Surface	1.0	17.3	31.3	31.3	6.19	6.20	87.9	88.0	5.18	5.16	5.26	8.2	8.1	8.3
				8.7	20.2	31.8		6.06		86.1		5.27			8.0		
			Middle	31.9	31.9	6.08	6.07	86.3	86.2	5.23	5.25	8.4					
32.2	6.01	84.7		5.33		8.2											
Bottom	16.4	20.5	32.2	32.2	5.99	6.00	84.5	84.6	5.39	5.36	8.5						
	32.2	5.99	84.5		5.39		8.5										
19/03/11	1235-1247	17/Rainy	Surface	1.0	18.9	30.7	30.8	6.18	6.18	85.9	85.9	5.30	5.27	5.38	8.6	8.5	8.8
				8.8	19.3	31.4		6.09		84.7		5.35			8.4		
			Middle	31.4	31.4	6.06	6.08	84.2	84.5	5.41	5.38	8.8					
31.6	5.97	82.4		5.47		9.0											
Bottom	16.6	19.7	31.7	31.7	5.98	5.98	82.5	82.5	5.52	5.50	9.2						
	31.7	5.98	82.5		5.52		9.0										
22/03/11	1606-1620	18/Cloudy	Surface	1.0	18.9	30.6	30.6	6.15	6.17	86.1	86.4	5.23	5.26	5.41	8.1	8.2	8.8
				8.8	18.2	31.1		6.09		85.2		5.40			8.2		
			Middle	31.1	31.1	6.05	6.07	84.7	85.0	5.46	5.43	8.8					
31.7	5.94	83.1		5.52		9.0											
Bottom	16.6	17.9	31.7	31.7	5.97	5.96	83.5	83.3	5.56	5.54	9.2						
	31.7	5.97	83.5		5.56		9.3										
24/03/11	1633-1644	17/Cloudy	Surface	1.0	18.0	31.2	31.2	6.20	6.22	86.1	86.4	4.94	4.93	5.06	8.0	7.9	8.1
				8.9	20.3	32.0		5.97		82.9		5.07			8.1		
			Middle	31.9	32.0	5.94	5.96	82.5	82.7	5.15	5.11	8.0					
32.3	5.99	83.2		5.18		8.2											
Bottom	16.8	20.4	32.2	32.3	5.95	5.97	82.7	83.0	5.11	5.15	8.2						
	32.2	5.95	82.7		5.11		8.2										
26/03/11	1722-1740	19/Fine	Surface	1.0	17.8	30.6	30.7	6.22	6.20	87.0	86.7	5.19	5.21	5.36	8.0	8.2	8.7
				8.7	17.3	31.4		6.06		84.8		5.30			8.3		
			Middle	31.3	31.4	6.09	6.08	85.2	85.0	5.35	5.33	8.6					
31.8	5.90	82.6		5.51		8.7											
Bottom	16.4	16.8	31.8	31.8	5.94	5.92	83.1	82.9	5.56	5.54	9.3						
	31.8	5.94	83.1		5.56		9.0										
29/03/11	1016-1026	18/Cloudy	Surface	1.0	19.0	31.1	31.1	6.15	6.18	85.5	85.9	4.77	4.81	5.15	7.5	7.5	8.2
				8.9	19.9	31.9		5.87		81.0		5.31			8.7		
			Middle	31.7	31.8	5.90	5.89	81.4	81.2	5.37	5.34	8.5					
32.1	5.99	82.7		5.32		8.7											
Bottom	16.8	20.2	32.1	32.1	5.96	5.98	82.2	82.5	5.26	5.29	8.5						
	32.1	5.96	82.2		5.26		8.5										
31/03/11	1159-1212	18/Cloudy	Surface	1.0	17.5	30.5	30.6	6.05	6.04	82.9	82.8	5.39	5.41	5.51	8.5	8.6	8.9
				8.7	17.9	31.1		5.93		82.6		5.42			8.7		
			Middle	31.4	31.3	5.90	5.92	81.2	81.0	5.55	5.54	9.0					
31.6	5.90	80.8		5.52		9.1											
Bottom	17.3	18.0	31.6	31.6	5.83	5.82	79.9	79.8	5.58	5.60	9.2						
	31.6	5.83	79.9		5.58		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	
01/03/11	1248-1303	20/Cloudy	Surface	1.0	17.4	30.5	30.5	6.17	6.19	84.5	84.7	5.23	5.26	5.39	8.3	8.3	8.6	
						30.5		6.20		84.9		5.28			8.2			
			Middle	6.2	17.8	30.8	30.9	6.10	6.12	83.9	83.7	5.35	5.37		5.39	8.5		8.5
						30.9		6.13		83.5		5.39			8.4			
			Bottom	11.4	18.0	31.2	31.3	5.96	5.98	81.6	81.8	5.51	5.54		5.51	8.9		9.1
						31.3		5.99		82.0		5.56			9.2			
03/03/11	1332-1345	19/Fine	Surface	1.0	18.9	30.1	30.2	5.87	5.86	79.8	79.4	5.07	5.08	5.36	8.0	8.1	8.6	
						30.2		5.85		79.0		5.09			8.2			
			Middle	6.2	19.3	31.4	31.5	5.79	5.75	78.7	78.2	5.31	5.31		5.31	8.5		8.4
						31.5		5.71		77.7		5.30			8.3			
			Bottom	11.4	20.5	32.2	32.3	5.77	5.76	78.5	78.3	5.71	5.70		5.71	9.3		9.2
						32.3		5.74		78.1		5.69			9.1			
05/03/11	1402-1414	17/Cloudy	Surface	1.0	17.7	30.8	30.7	6.17	6.18	85.8	85.9	5.27	5.25	5.35	8.2	8.2	8.5	
						30.6		6.18		85.9		5.23			8.2			
			Middle	6.4	18.3	31.2	31.3	6.03	6.04	83.8	83.9	5.37	5.34		5.31	8.4		8.3
						31.3		6.04		84.0		5.31			8.4			
			Bottom	11.8	18.7	31.7	31.8	5.97	5.97	82.4	82.3	5.47	5.45		5.42	8.9		8.9
						31.8		5.96		82.2		5.42			8.8			
08/03/11	1629-1642	17/Cloudy	Surface	1.0	17.0	30.4	30.4	5.96	5.96	81.7	81.6	5.50	5.51	5.70	9.0	9.0	9.4	
						30.3		5.95		81.5		5.52			9.0			
			Middle	6.1	17.5	31.4	31.5	5.69	5.73	77.9	78.4	5.72	5.75		5.72	9.5		9.5
						31.5		5.76		78.9		5.77			9.5			
			Bottom	11.2	17.8	32.1	32.1	5.86	5.84	80.3	80.0	5.82	5.86		5.82	9.6		9.6
						32.0		5.81		79.6		5.89			9.5			
10/03/11	1645-1700	18/Cloudy	Surface	1.0	17.3	30.5	30.5	6.28	6.30	86.6	86.9	5.11	5.13	5.26	8.1	8.1	8.4	
						30.5		6.32		87.2		5.14			8.0			
			Middle	6.3	17.6	30.9	31.0	6.20	6.18	85.5	85.3	5.22	5.24		5.22	8.4		8.4
						31.0		6.16		85.0		5.26			8.4			
			Bottom	11.6	17.9	31.5	31.6	6.02	6.04	83.0	83.2	5.40	5.43		5.40	8.9		8.9
						31.6		6.05		83.4		5.45			8.8			
12/03/11	1652-1702	18/Cloudy	Surface	1.0	19.4	31.5	31.5	6.04	6.06	83.9	84.1	5.20	5.22	5.16	8.3	8.3	8.1	
						31.5		6.07		84.3		5.24			8.2			
			Middle	6.6	20.9	31.9	32.0	5.82	5.80	80.3	80.0	5.07	5.09		5.07	8.0		8.1
						32.0		5.78		79.7		5.10			8.1			
			Bottom	12.2	21.2	32.2	32.3	5.87	5.86	81.0	80.9	5.19	5.18		5.19	8.0		8.0
						32.3		5.85		80.7		5.16			7.9			
15/03/11	2017-2029	18/Cloudy	Surface	1.0	17.7	30.7	30.7	6.12	6.14	83.2	83.4	5.21	5.24	5.36	8.6	8.6	8.6	
						30.6		6.15		83.6		5.27			8.5			
			Middle	6.2	18.4	31.1	31.2	6.08	6.05	81.7	81.5	5.38	5.37		5.38	8.6		8.6
						31.2		6.02		81.3		5.35			8.6			
			Bottom	11.4	19.3	31.8	31.8	5.83	5.84	79.3	79.5	5.47	5.49		5.47	8.8		8.8
						31.7		5.85		79.6		5.50			8.9			
17/03/11	1201-1213	17/Cloudy	Surface	1.0	17.4	31.4	31.3	6.15	6.16	87.3	87.5	5.17	5.20	5.29	8.1	8.2	8.5	
						31.2		6.17		87.6		5.22			8.2			
			Middle	6.2	20.3	31.9	31.9	6.10	6.09	86.0	85.8	5.30	5.28		5.30	8.8		8.7
						31.9		6.07		85.6		5.26			8.6			
			Bottom	11.4	20.6	32.1	32.2	5.95	5.96	83.9	84.1	5.36	5.39		5.36	8.7		8.8
						32.2		5.97		84.2		5.41			8.8			
19/03/11	1254-1306	17/Rainy	Surface	1.0	18.8	30.7	30.7	6.15	6.14	85.5	85.4	5.29	5.26	5.38	8.3	8.3	8.5	
						30.7		6.13		85.2		5.23			8.3			
			Middle	6.4	19.3	31.4	31.5	6.07	6.08	84.4	84.5	5.40	5.38		5.40	8.5		8.5
						31.5		6.08		84.5		5.35			8.6			
			Bottom	11.8	19.7	31.8	31.8	5.95	5.95	82.1	82.1	5.51	5.49		5.51	8.7		8.8
						31.8		5.94		82.0		5.47			8.9			
22/03/11	1627-1640	18/Cloudy	Surface	1.0	18.8	30.6	30.6	6.13	6.15	85.8	85.7	5.16	5.18	5.33	8.3	8.2	8.6	
						30.6		6.16		85.6		5.20			8.0			
			Middle	6.2	18.3	31.0	31.0	6.05	6.03	84.7	84.4	5.31	5.33		5.31	8.5		8.7
						31.0		6.00		84.0		5.35			8.8			
			Bottom	11.4	17.9	31.5	31.5	5.91	5.93	82.7	82.9	5.46	5.48		5.46	8.7		8.9
						31.5		5.94		83.1		5.50			9.0			
24/03/11	1651-1702	17/Cloudy	Surface	1.0	18.0	31.0	31.1	6.18	6.17	85.9	85.7	5.21	5.24	5.20	8.4	8.5	8.2	
						31.1		6.15		85.4		5.26			8.5			
			Middle	6.4	20.0	31.9	31.9	6.03	6.05	83.8	84.1	5.06	5.10		5.06	8.0		8.0
						31.9		6.07		84.3		5.14			7.9			
			Bottom	11.8	20.3	32.2	32.2	5.82	5.81	80.3	80.1	5.29	5.25		5.29	8.4		8.3
						32.1		5.79		79.9		5.21			8.2			
26/03/11	1746-1800	19/Fine	Surface	1.0	17.8	30.7	30.7	6.15	6.17	86.1	86.3	5.10	5.13	5.26	8.2	8.1	8.5	
						30.7		6.18		86.5		5.15			8.0			
			Middle	6.3	17.3	31.1	31.1	6.05	6.07	84.7	85.0	5.22	5.24		5.22	8.5		8.5
						31.0		6.09		85.2		5.26			8.4			
			Bottom	11.6	17.0	31.6	31.6	5.93	5.95	83.0	83.3	5.40	5.43		5.40	8.7		8.8
						31.6		5.97		83.5		5.45			8.9			
29/03/11	1029-1039	18/Cloudy	Surface	1.0	19.1	31.2	31.2	6.23	6.21	86.6	86.3	5.11	5.13	5.06	8.2	8.3	8.1	
						31.1		6.19		86.0		5.15			8.3			
			Middle	6.5	20.0	31.8	31.8	6.09	6.07	84.0	83.8	5.13	5.09		5.13	8.2		8.3
						31.8		6.05		83.5		5.05			8.3			
			Bottom	12.0	20.2	32.1	32.1	5.82	5.84	80.3	80.5	4.91	4.97		4.91	7.9		7.9
						32.0		5.85		80.7		5.03			7.8			
31/03/11	1219-1232	19/Cloudy	Surface	1.0	18.4	30.5	30.7	6.08	6.06	83.3	83.0	5.31	5.33	5.43	8.7	8.6	8.9	
						30.8		6.04		82.7		5.34			8.5			
			Middle	6.2	18.3	30.8	30.7	6.01	6.00	82.3	82.2	5.40	5.42		5.40	9.3		9.2
						30.6		5.99		82.1		5.44			9.0			
			Bottom	11.4	18.5	31.1	31.3	5.87	5.87	80.4	80.4	5.56	5.55		5.56	8.8		8.9
						31.4		5.86		80.3		5.54			9.0			

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	
01/03/11	1010-1025	21/Cloudy	Surface	1.0	17.2	30.3	30.3	6.00	6.02	82.2	82.5	5.41	5.44	5.59	8.9	8.8	9.1	
				5.2	17.5	30.7		5.92		81.1		5.53			8.7			
			Middle	5.2	17.5	30.6	30.7	5.96	5.94	81.6	81.4	5.59	5.56		9.2			9.2
				9.4	17.9	31.0		5.80		79.4		5.76			9.3			
			Bottom	9.4	17.9	31.1	31.1	5.75	5.78	78.7	79.1	5.80	5.78		9.5			9.4
				9.4	17.9	30.3		5.90		80.2		5.24			8.2			
03/03/11	1040-1053	18/Cloudy	Surface	1.0	18.3	30.3	30.3	5.90	5.93	80.2	80.6	5.24	5.22	5.37	8.2	8.3	8.7	
				5.4	19.1	31.7		5.95		80.9		5.20			8.4			
			Middle	5.4	19.1	31.6	31.7	6.04	6.05	82.1	82.3	5.37	5.34		8.5			8.6
				9.8	19.9	32.1		5.86		79.7		5.57			9.2			
			Bottom	9.8	19.9	32.2	32.2	5.84	5.85	79.4	79.6	5.51	5.54		9.1			9.2
				9.8	19.9	30.6		5.96		82.2		5.38			8.6			
05/03/11	1119-1130	17/Cloudy	Surface	1.0	17.7	30.6	30.7	5.96	5.97	82.2	82.4	5.38	5.36	5.46	8.6	8.6	8.9	
				5.4	18.3	30.7		5.98		82.5		5.34			8.6			
			Middle	5.4	18.3	31.4	31.3	5.82	5.83	80.3	80.4	5.43	5.46		8.9			9.0
				9.8	18.7	31.7		5.77		79.6		5.59			9.3			
			Bottom	9.8	18.7	31.8	31.8	5.76	5.77	79.5	79.6	5.55	5.57		9.1			9.2
				9.8	18.7	30.4		5.96		81.7		5.23			8.4			
08/03/11	1340-1353	18/Cloudy	Surface	1.0	16.9	30.3	30.4	5.88	5.93	81.1	81.3	5.34	5.26	5.50	8.4	8.3	8.7	
				5.4	17.5	30.3		5.90		80.8		5.28			8.2			
			Middle	5.4	17.5	31.5	31.6	5.76	5.78	78.9	79.1	5.35	5.37		8.3			8.4
				9.8	17.8	31.6		5.79		79.3		5.38			8.5			
			Bottom	9.8	17.8	32.0	32.0	5.62	5.63	76.9	77.0	5.87	5.87		9.5			9.4
				9.8	17.8	31.9		5.63		77.1		5.86			9.3			
10/03/11	1400-1415	18/Cloudy	Surface	1.0	17.3	30.3	30.4	5.88	5.91	81.1	81.5	5.34	5.32	5.46	8.6	8.5	8.8	
				5.3	17.6	30.4		5.94		81.9		5.30			8.4			
			Middle	5.3	17.6	30.7	30.7	5.82	5.84	80.3	80.5	5.39	5.42		8.5			8.5
				9.6	17.8	30.7		5.85		80.7		5.44			9.2			
			Bottom	9.6	17.8	31.1	31.1	5.70	5.72	78.6	78.8	5.61	5.64		9.3			9.3
				9.6	17.8	31.0		5.73		79.0		5.67			9.3			
12/03/11	1408-1420	18/Cloudy	Surface	1.0	19.2	31.3	31.3	6.04	6.03	83.9	83.7	3.98	3.95	4.27	6.6	6.5	6.8	
				5.7	21.1	31.3		6.01		83.5		3.92			6.4			
			Middle	5.7	21.1	32.0	32.0	5.87	5.89	81.0	81.2	4.09	4.06		6.4			6.5
				10.4	21.0	31.9		5.90		81.4		4.02			6.5			
			Bottom	10.4	21.0	32.0	32.1	5.90	5.92	81.4	81.7	4.78	4.81		7.5			7.6
				10.4	21.0	32.1		5.94		81.9		4.83			7.6			
15/03/11	1801-1812	18/Cloudy	Surface	1.0	17.4	30.5	30.5	5.99	5.97	81.5	81.2	5.36	5.33	5.35	8.6	8.7	8.8	
				5.1	18.3	30.5		5.96		80.9		5.30			8.8			
			Middle	5.1	18.3	31.2	31.3	5.85	5.83	78.9	78.7	5.29	5.28		8.4			8.3
				9.2	19.3	31.3		5.81		78.4		5.26			8.2			
			Bottom	9.2	19.3	31.8	31.9	5.77	5.78	78.5	78.6	5.47	5.45		9.3			9.3
				9.2	19.3	31.9		5.79		78.7		5.42			9.2			
17/03/11	0919-0930	15/Cloudy	Surface	1.0	17.4	31.2	31.3	5.93	5.94	84.2	84.3	5.26	5.24	5.34	8.3	8.4	8.5	
				5.4	20.2	31.3		5.94		84.3		5.22			8.4			
			Middle	5.4	20.2	31.7	31.8	5.87	5.88	82.8	82.9	5.35	5.33		8.5			8.4
				9.8	20.6	31.8		5.88		82.9		5.31			8.3			
			Bottom	9.8	20.6	32.1	32.1	5.76	5.75	81.2	81.1	5.42	5.45		8.7			8.8
				9.8	20.6	32.1		5.74		80.9		5.47			8.9			
19/03/11	1004-1015	16/Rainy	Surface	1.0	18.8	30.8	30.8	5.96	5.96	82.8	82.8	5.22	5.24	5.34	8.4	8.3	8.5	
				5.6	19.2	30.8		5.95		82.7		5.26			8.2			
			Middle	5.6	19.2	31.4	31.5	5.88	5.89	81.7	81.8	5.35	5.33		8.6			8.6
				10.2	19.7	31.5		5.89		81.9		5.31			8.5			
			Bottom	10.2	19.7	31.7	31.8	5.77	5.77	79.6	79.6	5.43	5.46		8.8			8.8
				10.2	19.7	31.8		5.76		79.5		5.49			8.7			
22/03/11	1346-1400	18/Cloudy	Surface	1.0	18.8	30.6	30.6	6.06	6.05	84.8	84.6	5.34	5.36	5.46	8.5	8.5	8.8	
				5.1	18.6	30.6		6.03		84.4		5.38			8.5			
			Middle	5.1	18.6	30.9	30.9	6.09	6.07	85.2	85.0	5.44	5.45		8.8			8.7
				9.2	18.2	30.9		6.05		84.7		5.46			8.6			
			Bottom	9.2	18.2	31.1	31.1	5.87	5.88	82.1	82.3	5.55	5.57		9.2			9.1
				9.2	18.2	31.1		5.89		82.4		5.58			9.0			
24/03/11	1403-1415	17/Cloudy	Surface	1.0	18.0	30.9	31.0	6.23	6.22	86.5	86.3	4.97	4.94	5.11	7.7	7.6	8.1	
				5.6	20.2	31.0		6.20		86.1		4.91			7.5			
			Middle	5.6	20.2	31.9	31.9	6.02	6.04	83.6	83.8	5.21	5.18		8.6			8.6
				10.2	20.2	31.8		6.05		84.0		5.15			8.6			
			Bottom	10.2	20.2	32.0	32.1	5.92	5.94	82.2	82.5	5.15	5.21		8.2			8.1
				10.2	20.2	32.1		5.95		82.7		5.26			8.0			
26/03/11	1455-1510	20/Fine	Surface	1.0	17.7	30.6	30.6	6.03	6.01	84.4	84.1	5.18	5.21	5.40	8.0	8.1	8.7	
				5.2	17.3	30.6		5.98		83.7		5.23			8.2			
			Middle	5.2	17.3	31.0	31.0	5.92	5.91	82.8	82.7	5.34	5.36		8.6			8.7
				9.4	17.0	31.0		5.90		82.6		5.38			8.7			
			Bottom	9.4	17.0	31.5	31.5	5.74	5.76	80.3	80.5	5.62	5.64		9.3			9.2
				9.4	17.0	31.5		5.77		80.7		5.66			9.1			
29/03/11	0841-0851	18/Cloudy	Surface	1.0	19.1	31.0	31.1	6.19	6.17	86.0	85.8	4.15	4.12	4.75	6.7	6.6	7.5	
				5.7	19.8	31.1		6.15		85.5		4.09			6.5			
			Middle	5.7	19.8	31.7	31.8	5.95	5.97	82.1	82.3	5.15	5.12		8.2			8.1
				10.4	20.1	31.8		5.98		82.5		5.08			8.0			
			Bottom	10.4	20.1	32.1	32.1	5.96	5.94	82.2	82.0	4.97	5.02		7.8			7.9
				10.4	20.1	32.1		5.92		81.7		5.06			8.0			
31/03/11	0936-0949	18/Sunny	Surface	1.0	17.4	30.7	30.8	5.98	5.97	81.9	81.8	5.40	5.39	5.51	8.7	8.8	9.0	
				5.3	17.4	30.8		5.96		81.7		5.38			8.8			
			Middle	5.3	17.4	31.1	31.2	6.01	5.99	82.3	82.1	5.46	5.48		9.0			9.0
				9.6	17.8	31.3		5.97		81.8		5.50			9.0			
			Bottom	9.6	17.8	31.8	31.8	5.84	5.85	80.0	80.1	5.64	5.66		9.2			9.3
				9.6	17.8	31.8		5.85		80.1		5.68			9.3			

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			
01/03/11	0949-1004	21/Cloudy	Surface	1.0	17.2	30.3	30.4	6.17	6.15	84.5	84.2	5.27	5.29	5.44	8.3	8.4	8.5			
						30.4		6.12		83.8		5.31			8.4					
			Middle	6.2	17.6	30.8	30.8	6.04	6.07	82.7	83.1	5.38	5.40		5.42	5.40		8.2	8.3	8.5
						30.8		6.10		83.5		5.42			8.4					
			Bottom	11.4	18.0	31.4	31.4	5.94	5.91	81.3	80.9	5.61	5.64		5.61	5.64		8.9	8.8	8.8
						31.4		5.88		80.5		5.66			8.7					
03/03/11	1017-1030	18/Cloudy	Surface	1.0	18.2	30.2	30.2	5.83	5.86	79.3	78.7	5.23	5.25	5.41	8.4	8.3	8.8			
						30.2		5.88		78.0		5.26			8.2					
			Middle	6.1	19.0	31.6	31.7	5.92	5.93	80.5	80.7	5.40	5.38		5.36	5.38		8.8	8.9	8.8
						31.7		5.94		80.8		5.36			9.0					
			Bottom	11.2	20.0	32.2	32.2	5.76	5.78	78.3	78.5	5.62	5.61		5.60	5.61		9.3	9.2	9.2
						32.1		5.79		78.7		5.60			9.1					
05/03/11	1101-1112	17/Cloudy	Surface	1.0	17.8	30.7	30.7	6.13	6.12	85.2	85.1	5.31	5.28	5.38	8.2	8.3	8.5			
						30.6		6.11		84.9		5.25			8.4					
			Middle	6.3	18.3	31.4	31.4	6.04	6.05	84.0	84.1	5.39	5.37		5.35	5.37		8.5	8.4	8.5
						31.3		6.06		84.2		5.35			8.3					
			Bottom	11.6	18.9	31.7	31.7	5.94	5.95	82.0	82.1	5.52	5.49		5.46	5.49		9.0	8.9	8.9
						31.7		5.95		82.1		5.46			8.8					
08/03/11	1318-1331	18/Cloudy	Surface	1.0	16.9	30.3	30.3	6.02	6.03	82.5	82.6	5.12	5.15	5.46	8.2	8.1	8.9			
						30.2		6.04		82.7		5.18			8.0					
			Middle	6.1	17.3	31.6	31.7	5.96	5.98	81.7	81.9	5.50	5.53		5.55	5.53		9.3	9.2	9.2
						31.7		5.99		82.1		5.55			9.0					
			Bottom	11.2	17.9	32.1	32.2	5.86	5.85	80.3	80.1	5.72	5.71		5.70	5.71		9.5	9.5	9.5
						32.3		5.83		79.9		5.70			9.4					
10/03/11	1338-1353	18/Cloudy	Surface	1.0	17.3	30.4	30.4	6.02	6.04	83.0	83.2	5.25	5.28	5.40	8.2	8.4	8.6			
						30.4		6.05		83.4		5.31			8.5					
			Middle	6.2	17.6	30.7	30.7	6.08	6.04	83.9	83.4	5.38	5.40		5.42	5.40		8.6	8.5	8.6
						30.7		6.00		82.8		5.42			8.4					
			Bottom	11.4	17.9	31.3	31.3	5.94	5.92	81.9	81.7	5.50	5.53		5.55	5.53		9.0	8.9	8.9
						31.3		5.90		81.4		5.55			8.7					
12/03/11	1345-1356	18/Cloudy	Surface	1.0	19.3	31.2	31.2	6.07	6.06	84.3	84.1	4.17	4.14	4.32	6.8	6.9	7.2			
						31.2		6.04		83.9		4.11			7.0					
			Middle	6.3	20.9	31.9	31.9	6.01	6.03	83.5	83.7	4.21	4.19		4.17	4.19		7.2	7.1	7.1
						31.9		6.04		83.9		4.17			7.0					
			Bottom	11.6	21.1	32.0	32.1	5.95	5.97	82.1	82.3	4.60	4.64		4.68	4.64		7.8	7.7	7.7
						32.1		5.98		82.5		4.68			7.5					
15/03/11	1744-1754	18/Cloudy	Surface	1.0	17.5	30.5	30.5	6.08	6.09	82.7	82.8	5.20	5.17	5.25	8.4	8.3	8.5			
						30.4		6.09		82.8		5.13			8.2					
			Middle	6.2	18.4	31.3	31.4	6.01	5.99	81.1	80.9	5.27	5.25		5.22	5.25		8.5	8.5	8.5
						31.4		5.97		80.6		5.22			8.5					
			Bottom	11.4	19.3	31.8	31.8	5.80	5.82	78.9	79.1	5.31	5.33		5.34	5.33		8.7	8.8	8.8
						31.7		5.83		79.3		5.34			8.8					
17/03/11	0901-0912	15/Cloudy	Surface	1.0	17.3	31.3	31.3	6.13	6.14	87.0	87.1	5.18	5.16	5.26	8.2	8.2	8.6			
						31.2		6.14		87.2		5.13			8.1					
			Middle	6.3	20.3	31.7	31.8	6.05	6.05	85.3	85.3	5.22	5.24		5.26	5.24		8.4	8.5	8.5
						31.9		6.04		85.2		5.26			8.5					
			Bottom	11.6	20.5	32.2	32.2	5.97	5.98	84.2	84.3	5.40	5.37		5.34	5.37		9.0	9.2	9.2
						32.1		5.98		84.3		5.34			9.3					
19/03/11	0945-0956	16/Rainy	Surface	1.0	18.8	30.6	30.6	6.16	6.15	85.6	85.5	5.20	5.18	5.28	8.3	8.3	8.5			
						30.6		6.14		85.3		5.15			8.2					
			Middle	6.1	19.3	31.4	31.4	6.09	6.09	84.7	84.6	5.24	5.26		5.28	5.26		8.5	8.4	8.4
						31.3		6.08		84.5		5.28			8.3					
			Bottom	11.2	19.7	31.7	31.7	6.01	6.00	82.9	82.8	5.36	5.39		5.42	5.39		8.7	8.8	8.8
						31.7		5.99		82.7		5.42			8.9					
22/03/11	1327-1340	18/Cloudy	Surface	1.0	18.8	30.5	30.6	6.16	6.14	86.2	85.9	5.22	5.20	5.29	8.2	8.3	8.6			
						30.6		6.12		85.6		5.17			8.4					
			Middle	6.2	18.6	30.9	30.9	6.08	6.07	85.1	84.9	5.26	5.28		5.30	5.28		8.5	8.4	8.4
						30.9		6.05		84.7		5.30			8.3					
			Bottom	11.4	18.1	31.2	31.2	5.98	5.96	83.7	83.4	5.41	5.40		5.41	5.40		9.0	9.1	9.1
						31.2		5.93		83.0		5.38			9.2					
24/03/11	1344-1355	17/Cloudy	Surface	1.0	17.9	30.8	30.8	6.07	6.06	84.3	84.1	4.63	4.67	4.83	7.5	7.5	7.7			
						30.8		6.04		83.9		4.71			7.4					
			Middle	6.3	20.1	31.8	31.8	5.98	5.96	83.1	82.8	4.97	4.95		4.92	4.95		7.7	7.8	7.8
						31.8		5.94		82.5		4.92			7.9					
			Bottom	11.6	20.3	31.9	32.0	5.94	5.96	81.9	82.1	4.83	4.87		4.90	4.87		7.8	7.9	7.9
						32.0		5.97		82.3		4.90			8.0					
26/03/11	1434-1448	20/Fine	Surface	1.0	17.6	30.7	30.7	6.13	6.15	85.8	86.0	5.03	5.05	5.19	8.0	8.0	8.3			
						30.7		6.16		86.2		5.07			8.0					
			Middle	6.3	17.3	31.1	31.1	6.05	6.07	84.7	85.0	5.16	5.18		5.20	5.18		8.2	8.1	8.1
						31.0		6.09		85.2		5.20			8.0					
			Bottom	11.6	17.0	31.6	31.7	5.95	5.93	83.3	83.0	5.32	5.34		5.35	5.34		8.6	8.7	8.7
						31.7		5.90		82.6		5.35			8.8					
29/03/11	0828-0838	18/Cloudy	Surface	1.0	19.1	31.2	31.2	6.07	6.09	84.4	84.7	3.97	3.94	4.46	6.2	6.3	6.9			
						31.1		6.11		84.9		3.91			6.4					
			Middle	6.1	20.0	31.9	31.9	5.95	5.93	82.1	81.9	4.41	4.44		4.47	4.44		6.8	6.9	6.9
						31.9		5.91		81.6		4.47			7.0					
			Bottom	11.2	20.2	32.1	32.1	5.99	5.98	82.7	82.5	4.97	5.00		5.02	5.00		7.5	7.6	7.6
						32.0		5.96		82.2		5.02			7.6					
31/03/11	0915-0928	18/Sunny	Surface	1.0	17.5	30.9	30.8	5.96	5.97	81.7	81.8	5.37	5.39	5.49	8.4	8.5	8.9			
						30.6		5.98		81.9		5.40			8.6					
			Middle	6.2	17.6	31.2	31.3	5.85	5.86	80.1	80.2	5.44	5.46		5.48	5.46		8.8	8.8	8.8
						31.4		5.86		80.3		5.48			8.7					
			Bottom	11.4	17.8	31.7	31.8	5.81	5.79	79.6	79.3	5.60	5.62		5.63	5.62		9.3	9.4	9.4
						31.9		5.77		79.0		5.63			9.5					

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		
01/03/11	0930-0945	21/Cloudy	Surface	1.0	17.3	30.4	30.4	6.14	6.12	84.1	83.8	5.25	5.27	5.40	8.4	8.3	8.6		
				5.7	17.6	30.4		6.10		83.5		5.28			8.2				
			Middle	5.7	17.6	30.8	30.8	6.02	6.04	82.4	82.7	5.32	5.35		8.6	8.6			
Bottom	10.4	18.0		30.7	6.06	83.0		5.37		8.5									
	03/03/11	1000-1014	18/Cloudy	Surface	1.0	18.1	31.4	31.4	5.90	5.94	80.8	81.2	5.55		5.58	5.39		9.0	9.0
5.9					19.0	31.3	5.96		81.6		5.60		8.2						
Middle				5.9	19.0	30.1	31.6	5.97	5.92	80.4	80.2	5.19	5.35	8.2	8.5				
	Bottom	10.8	20.0	30.2	5.91	80.2		5.14		8.2									
05/03/11		1045-1057	17/Cloudy	Surface	1.0	17.7	31.5	31.3	5.94	6.06	80.2	83.7	5.36	5.25	5.35		8.4	8.4	8.6
	5.9				18.3	31.6	5.90		80.2		5.33		8.5						
	Middle			5.9	18.3	30.7	31.7	6.05	6.06	83.5	83.7	5.38	5.47	8.5		9.1			
Bottom		10.8	18.8	30.8	6.16	85.6		5.27		8.3									
	08/03/11	1300-1315	18/Cloudy	Surface	1.0	17.1	31.2	31.7	6.07	5.98	83.8	81.3	5.22	5.47		5.63	9.0	9.0	
5.6					17.6	31.1	5.91		80.9		5.56		9.2						
Middle				5.6	17.6	30.4	32.1	5.94	5.94	80.7	80.8	5.49	5.65	9.0	9.1				
	Bottom	10.2	17.8	31.5	5.89	81.2		5.58		9.0									
10/03/11		1320-1334	18/Cloudy	Surface	1.0	17.3	31.6	31.2	5.93	6.06	81.2	83.6	5.44	5.47	5.32		9.5	8.9	8.5
	5.8				17.6	30.4	5.94		81.4		5.85		9.4						
	Middle			5.8	17.6	30.3	30.7	6.04	6.11	83.9	84.3	5.28	5.28	8.4		8.4			
Bottom		10.6	17.9	30.6	6.09	83.3		5.22		8.3									
	12/03/11	1330-1342	18/Cloudy	Surface	1.0	19.2	30.7	31.1	5.93	6.12	84.5	85.0	5.25	4.25		4.35	7.0	6.9	
6.0					21.0	31.1	5.97		84.0		5.30		6.8						
Middle				6.0	21.0	31.2	31.9	5.94	5.96	82.3	82.1	4.15	4.11	6.4	6.5				
	Bottom	11.0	21.0	31.8	5.94	81.9		4.07		6.5									
15/03/11		1730-1740	18/Cloudy	Surface	1.0	17.6	32.0	31.8	5.84	6.05	80.5	82.3	4.64	5.22	5.33		7.5	8.3	8.6
	5.7				18.3	31.2	5.93		80.6		5.35		8.4						
	Middle			5.7	18.3	31.3	31.3	5.90	5.92	80.2	80.4	5.31	5.33	8.8		8.6			
Bottom		10.4	19.2	31.7	5.81	78.4		5.44		9.0									
	17/03/11	0845-0857	15/Cloudy	Surface	1.0	17.3	31.8	31.8	5.85	6.17	78.9	87.7	5.47	5.17		5.28	8.8	8.9	
6.0					20.2	31.2	6.18		87.8		5.19		8.1						
Middle				6.0	20.2	31.2	31.8	6.07	6.08	87.5	86.4	5.15	5.27	8.1	8.1				
	Bottom	11.0	20.5	31.7	6.09	86.2		5.30		8.6									
19/03/11		0930-0942	16/Rainy	Surface	1.0	18.8	32.0	31.2	5.95	6.20	83.9	86.1	5.41	5.20	5.32		9.0	8.1	8.6
	6.2				19.3	32.1	5.94		83.8		5.37		8.8						
	Middle			6.2	19.3	30.6	31.4	6.19	6.05	86.0	83.5	5.17	5.31	8.2		8.5			
Bottom		11.4	19.7	30.7	6.20	86.2		5.23		8.0									
	22/03/11	1310-1323	18/Cloudy	Surface	1.0	18.9	31.4	31.8	5.95	6.11	82.1	82.3	5.46	5.23		5.33	9.2	9.1	
5.6					18.6	31.2	5.94		82.4		5.41		9.0						
Middle				5.6	18.6	30.5	31.2	6.13	6.05	85.4	84.6	5.25	5.31	8.4	8.3				
	Bottom	10.2	18.2	30.7	6.06	84.8		5.29		8.2									
24/03/11		1330-1341	17/Cloudy	Surface	1.0	17.8	30.8	31.2	6.03	6.11	84.4	83.0	5.33	4.76	5.04		7.9	7.8	8.0
	5.9				20.0	31.1	5.95		83.3		5.46		7.6						
	Middle			5.9	20.0	30.9	31.8	6.12	6.05	85.0	84.8	4.72	5.19	8.2		8.1			
Bottom		10.8	20.3	31.2	6.09	84.6		4.80		8.0									
	26/03/11	1415-1430	20/Fine	Surface	1.0	17.7	31.7	31.7	6.07	6.11	84.3	85.4	5.21	5.11		5.22	8.2	7.9	
5.7					17.3	31.8	6.02		83.6		5.17		8.0						
Middle				5.7	17.3	30.9	31.1	6.09	6.02	84.6	84.3	4.80	5.21	8.3	8.1				
	Bottom	10.4	17.0	30.7	6.12	83.3		5.13		8.1									
29/03/11		0815-0825	18/Cloudy	Surface	1.0	19.1	31.7	31.1	5.91	6.12	81.9	85.0	5.18	3.99	4.48		8.5	6.4	7.3
	6.0				19.9	31.1	5.95		81.7		5.34		7.8						
	Middle			6.0	19.9	31.1	31.9	6.04	6.05	84.0	84.0	5.22	4.67	8.0		8.1			
Bottom		11.0	20.1	31.8	6.06	84.2		4.63		7.5									
	31/03/11	0900-0912	18/Sunny	Surface	1.0	17.7	32.0	31.3	5.95	5.94	82.1	81.9	4.82	5.33		5.44	7.8	7.7	
5.7					17.8	31.1	5.92		81.7		4.75		7.6						
Middle				5.7	17.8	30.3	30.7	6.00	5.93	82.2	81.3	5.31	5.43	8.5	8.5				
	Bottom	10.4	18.1	30.3	5.96	81.7		5.34		8.5									
01/03/11		0930-0945	21/Cloudy	Surface	1.0	17.3	30.4	30.4	6.14	6.12	84.1	83.8	5.25	5.27	5.40		8.4	8.3	8.6
	5.7				17.6	30.8	6.10		83.5		5.28		8.2						
	Middle			5.7	17.6	30.7	30.8	6.02	6.04	82.4	82.7	5.32	5.35	8.6		8.6			
Bottom		10.4	18.0	30.4	6.06	83.0		5.37		8.5									

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
01/03/11	1132-1145	21/Cloudy	Surface	1.0	17.4	30.4	30.4	6.18	6.21	84.6	85.0	5.18	5.21	5.36	8.1	8.1	8.4
						30.4		6.23		85.3		5.23			8.0		
			Middle	5.4	17.5	30.8	30.8	6.12	6.14	83.8	84.0	5.29	5.32		8.3	8.2	
						30.7		6.15		84.2		5.34			8.1		
			Bottom	9.8	17.9	31.0	31.1	6.03	6.04	82.6	82.7	5.55	5.57		9.0	8.9	
						31.1		6.05		82.8		5.59			8.7		
03/03/11	1223-1237	18/Fine	Surface	1.0	18.6	30.4	30.4	6.12	6.11	83.2	83.1	5.58	5.56	5.77	9.2	9.1	9.3
						30.3		6.10		83.0		5.54			9.0		
			Middle	5.8	19.3	31.6	31.6	6.05	6.03	82.3	82.0	5.78	5.79		9.4	9.3	
						31.5		6.01		81.7		5.79			9.2		
			Bottom	9.8	20.2	32.0	32.1	5.87	5.86	79.8	79.7	5.94	5.96		9.5	9.6	
						32.1		5.85		79.6		5.97			9.6		
05/03/11	1249-1300	17/Cloudy	Surface	1.0	17.7	30.7	30.7	6.12	6.13	85.1	85.2	5.35	5.32	5.43	8.5	8.5	8.8
						30.6		6.14		85.3		5.29			8.5		
			Middle	5.6	18.4	31.3	31.3	6.04	6.05	83.4	83.5	5.41	5.43		9.0	8.9	
						31.3		6.05		83.5		5.45			8.8		
			Bottom	10.2	18.9	31.8	31.8	5.98	5.98	82.5	82.5	5.57	5.55		9.2	9.1	
						31.7		5.97		82.4		5.52			9.0		
08/03/11	1523-1535	17/Cloudy	Surface	1.0	16.9	30.3	30.3	5.92	5.93	81.1	81.3	5.32	5.33	5.64	8.6	8.5	9.0
						30.2		5.94		81.4		5.34			8.4		
			Middle	5.4	17.4	31.3	31.6	5.84	5.85	80.0	80.1	5.62	5.66		9.0	9.1	
						31.9		5.85		80.1		5.69			9.2		
			Bottom	9.8	17.9	32.1	32.2	5.71	5.72	78.2	78.4	5.92	5.94		9.6	9.5	
						32.2		5.73		78.5		5.95			9.4		
10/03/11	1524-1539	18/Cloudy	Surface	1.0	17.3	30.4	30.5	6.21	6.19	85.6	85.4	5.16	5.18	5.33	8.2	8.1	8.4
						30.5		6.17		85.1		5.20			8.0		
			Middle	5.4	17.5	30.7	30.7	6.19	6.16	85.4	85.0	5.31	5.33		8.3	8.4	
						30.7		6.13		84.5		5.35			8.4		
			Bottom	9.8	17.8	31.0	31.0	6.03	6.05	83.2	83.4	5.50	5.49		8.8	8.7	
						31.0		6.06		83.6		5.47			8.6		
12/03/11	1542-1552	18/Cloudy	Surface	1.0	19.4	31.6	31.6	6.27	6.26	87.1	86.9	4.89	4.92	5.07	7.8	7.9	8.1
						31.6		6.24		86.7		4.94			7.9		
			Middle	5.9	21.0	31.9	31.9	6.02	6.04	83.6	83.8	5.02	5.06		8.0	8.1	
						31.9		6.05		84.0		5.09			8.1		
			Bottom	10.8	21.2	32.3	32.4	5.85	5.87	80.7	80.9	5.21	5.24		8.4	8.3	
						32.4		5.88		81.1		5.27			8.2		
15/03/11	1906-1917	18/Cloudy	Surface	1.0	17.6	30.4	30.4	6.09	6.12	82.8	83.2	5.16	5.14	5.32	8.2	8.1	8.4
						30.3		6.14		83.5		5.12			8.0		
			Middle	5.2	18.3	31.1	31.2	5.95	5.94	80.9	80.8	5.36	5.38		8.5	8.4	
						31.2		5.93		80.6		5.39			8.3		
			Bottom	19.2	19.2	31.6	31.6	5.71	5.75	77.1	77.6	5.40	5.44		8.7	8.8	
						31.6		5.78		78.0		5.47			8.8		
17/03/11	1049-1100	16/Cloudy	Surface	1.0	17.3	31.3	31.3	6.16	6.17	87.5	87.6	5.18	5.16	5.27	8.2	8.2	8.6
						31.3		6.17		87.6		5.14			8.1		
			Middle	5.6	20.2	31.7	31.8	6.08	6.09	86.3	86.4	5.29	5.27		8.6	8.6	
						31.8		6.09		86.5		5.24			8.5		
			Bottom	10.2	20.4	32.0	32.1	5.96	5.96	84.0	84.0	5.40	5.38		9.0	9.0	
						32.1		5.95		83.9		5.35			9.0		
19/03/11	1141-1152	17/Rainy	Surface	1.0	18.8	30.6	30.7	6.12	6.13	85.1	85.2	5.19	5.21	5.32	8.2	8.1	8.6
						30.7		6.14		85.3		5.23			8.0		
			Middle	5.8	19.3	31.3	31.3	6.04	6.04	84.0	83.9	5.35	5.32		8.4	8.4	
						31.3		6.03		83.8		5.29			8.4		
			Bottom	10.6	19.6	31.6	31.6	5.97	5.97	82.4	82.3	5.42	5.44		9.3	9.2	
						31.6		5.96		82.2		5.46			9.1		
22/03/11	1506-1520	18/Cloudy	Surface	1.0	18.8	30.6	30.6	6.21	6.19	86.9	86.6	5.22	5.24	5.33	8.4	8.4	8.6
						30.6		6.17		86.3		5.25			8.3		
			Middle	5.3	18.6	30.9	31.0	6.11	6.12	85.5	85.7	5.29	5.31		8.4	8.5	
						31.0		6.13		85.8		5.32			8.5		
			Bottom	9.6	18.2	31.2	31.3	6.07	6.08	84.9	85.1	5.48	5.46		9.0	9.1	
						31.3		6.09		85.2		5.44			9.2		
24/03/11	1538-1550	17/Cloudy	Surface	1.0	18.0	31.1	31.1	6.17	6.16	85.7	85.5	4.97	5.02	5.13	7.9	8.0	8.2
						31.1		6.14		85.3		5.06			8.0		
			Middle	5.6	20.3	31.9	32.0	6.01	6.03	83.5	83.7	5.07	5.11		8.2	8.1	
						32.0		6.04		83.9		5.15			8.0		
			Bottom	10.2	20.3	32.2	32.2	5.94	5.92	82.5	82.3	5.24	5.27		8.4	8.5	
						32.1		5.90		82.0		5.29			8.6		
26/03/11	1621-1635	19/Fine	Surface	1.0	17.7	30.7	30.7	6.19	6.17	86.6	86.3	5.18	5.21	5.32	8.3	8.4	8.5
						30.7		6.14		85.9		5.24			8.5		
			Middle	5.3	17.4	31.0	31.0	6.03	6.05	84.4	84.6	5.28	5.31		8.3	8.3	
						31.0		6.06		84.8		5.33			8.2		
			Bottom	9.6	17.0	31.5	31.6	5.92	5.91	82.8	82.7	5.41	5.44		8.9	9.0	
						31.6		5.90		82.6		5.46			9.0		
29/03/11	0936-0946	18/Cloudy	Surface	1.0	19.1	31.1	31.1	6.29	6.30	87.4	87.6	4.99	4.97	4.91	8.0	7.9	7.9
						31.0		6.31		87.7		4.94			7.8		
			Middle	5.7	20.0	31.7	31.8	6.07	6.05	83.8	83.5	4.79	4.81		7.6	7.7	
						31.8		6.03		83.2		4.83			7.8		
			Bottom	10.4	20.2	32.0	32.0	5.91	5.90	81.6	81.5	4.92	4.95		7.9	8.0	
						32.0		5.89		81.3		4.97			8.0		
31/03/11	1109-1122	18/Cloudy	Surface	1.0	17.7	30.4	30.5	5.99	6.00	82.1	82.2	5.38	5.40	5.48	8.7	8.6	8.9
						30.6		6.01		82.3		5.41			8.5		
			Middle	5.4	17.7	31.1	31.2	5.91	5.90	81.0	80.8	5.49	5.49		8.9	9.0	
						31.2		5.88		80.6		5.48			9.0		
			Bottom	9.8	17.9	31.6	31.6	5.84	5.85	80.0	80.1	5.55	5.56		9.0	9.0	
						31.6		5.85		80.1		5.57			9.0		

Mid-Ebb Tide



東業儀器測試顧問有限公司
ETS-TESTCONSULT LIMITED

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		
01/03/11	1149-1204	21/Cloudy	Surface	1.0	17.4	30.4	30.5	6.02	6.04	82.4	82.7	5.30	5.34	5.58	8.6	8.5	9.0		
				8.3	17.8	30.5		6.06		83.0		5.37			8.4				
			Middle	8.3	17.8	30.9	31.0	5.91	5.92	80.9	81.1	5.60	5.63		9.1	9.2			
Bottom	15.6	18.1		31.0	5.93	81.2		5.66		9.3									
	03/03/11	1240-1253	18/Fine	Surface	1.0	18.6	31.5	31.5	5.71	5.73	78.2	78.5	5.75		5.78	5.66		8.8	8.9
8.5					19.3	31.5	5.84		78.7		5.80		9.0						
Middle				8.5	19.3	31.5	31.5	5.80	5.82	79.4	79.2	5.69	5.72	9.3	9.3				
	Bottom	16.0	20.4	32.2	5.89	80.1		5.85		9.4									
05/03/11		1312-1323	17/Cloudy	Surface	1.0	17.7	30.7	30.7	5.96	5.96	82.8	82.8	5.37	5.35	5.46		8.6	8.5	8.9
	8.1				18.3	30.7	5.95		82.7		5.32		8.4						
	Middle			8.1	18.3	31.2	31.3	5.83	5.84	81.0	81.1	5.44	5.46	9.0		9.0			
Bottom		15.2	18.8	31.3	5.84	81.2		5.48		9.0									
	08/03/11	1538-1550	17/Cloudy	Surface	1.0	17.1	30.6	30.4	5.96	5.77	82.8	82.8	5.37	5.35		5.46	8.6	8.5	
8.6					17.5	30.7	5.95		82.7		5.32		8.4						
Middle				8.6	17.5	31.2	31.5	5.83	5.84	81.0	81.1	5.44	5.46	9.0	9.0				
	Bottom	16.2	17.9	31.3	5.84	81.2		5.48		9.0									
10/03/11		1543-1558	18/Cloudy	Surface	1.0	17.3	31.6	30.5	5.74	5.75	79.2	79.3	5.61	5.58	5.58		8.6	8.5	8.9
	8.4				17.7	30.7	5.95		82.7		5.32		8.4						
	Middle			8.4	17.7	31.2	30.9	5.83	5.84	81.0	81.1	5.44	5.46	9.0		9.0			
Bottom		15.8	18.0	31.3	5.84	81.2		5.48		9.0									
	12/03/11	1606-1618	18/Cloudy	Surface	1.0	19.5	31.6	31.6	5.74	6.17	79.2	85.7	5.61	5.58		5.58	8.6	8.5	
8.6					21.2	31.6	5.95		82.7		5.32		8.4						
Middle				8.6	21.2	32.0	32.0	5.98	5.97	83.1	82.9	4.98	4.96	9.0	9.0				
	Bottom	16.2	21.2	32.0	5.97	82.9		4.98		9.0									
15/03/11		1920-1932	18/Cloudy	Surface	1.0	17.7	31.6	30.5	5.96	6.16	82.8	83.2	5.37	5.35	5.46		8.6	8.5	8.9
	8.3				18.3	30.6	5.95		82.7		5.32		8.4						
	Middle			8.3	18.3	31.2	31.3	6.05	6.03	82.3	82.0	5.38	5.39	9.0		9.0			
Bottom		15.6	19.4	31.3	6.01	81.7		5.40		9.0									
	17/03/11	1112-1123	16/Cloudy	Surface	1.0	17.4	31.6	31.4	5.98	5.99	84.9	85.0	5.33	5.30		5.41	8.7	8.6	
8.3					20.3	31.4	5.99		85.1		5.27		8.5						
Middle				8.3	20.3	31.9	31.8	5.86	5.85	82.6	82.5	5.37	5.40	9.0	9.0				
	Bottom	15.6	20.6	31.7	5.84	82.3		5.43		9.0									
19/03/11		1206-1217	17/Rainy	Surface	1.0	18.9	32.1	30.7	5.78	5.97	81.5	83.0	5.55	5.30	5.41		8.7	8.5	8.8
	8.5				19.3	31.7	5.88		79.9		5.53		8.5						
	Middle			8.5	19.3	31.4	31.5	5.86	5.86	80.9	80.8	5.38	5.41	9.0		9.0			
Bottom		16.0	19.8	31.5	5.85	80.7		5.44		9.0									
	22/03/11	1524-1540	18/Cloudy	Surface	1.0	18.8	31.7	30.6	5.76	6.10	79.5	85.4	5.50	5.38		5.52	8.7	8.6	
8.3					18.2	30.6	6.07		83.1		5.33		8.5						
Middle				8.3	18.2	31.1	31.2	6.01	5.99	83.0	83.8	5.28	5.50	9.0	9.0				
	Bottom	15.6	17.9	31.2	5.97	83.5		5.52		9.0									
24/03/11		1604-1615	17/Cloudy	Surface	1.0	18.0	31.6	31.2	5.84	6.07	81.7	84.3	5.70	5.04	5.08		8.7	8.0	8.1
	8.4				20.3	31.6	5.87		82.1		5.67		8.0						
	Middle			8.4	20.3	31.2	32.0	6.08	5.97	84.5	82.9	5.06	5.11	9.0		9.0			
Bottom		15.8	20.4	31.9	5.98	83.1		5.07		9.0									
	26/03/11	1640-1656	19/Fine	Surface	1.0	17.7	32.2	30.7	5.84	6.06	81.1	84.8	5.11	5.40		5.55	8.3	8.6	
8.3					17.3	32.2	5.84		80.5		5.06		8.5						
Middle				8.3	17.3	31.2	31.2	5.92	5.90	82.8	82.5	5.52	5.55	9.0	9.1				
	Bottom	15.6	16.9	31.2	5.87	82.1		5.57		9.0									
29/03/11		0950-1000	18/Cloudy	Surface	1.0	19.1	31.8	31.2	5.78	6.18	80.9	85.9	5.74	5.07	5.08		8.7	8.1	8.0
	8.5				19.9	31.8	5.94		82.4		5.06		8.0						
	Middle			8.5	19.9	31.2	31.9	6.17	5.87	85.8	81.5	5.11	5.15	9.0		9.0			
Bottom		16.0	20.1	31.2	6.19	86.0		5.03		9.0									
	31/03/11	1125-1139	18/Cloudy	Surface	1.0	17.7	31.8	30.2	5.88	6.03	81.3	82.6	5.18	5.33		5.51	8.2	8.3	
8.3					17.8	31.9	5.94		81.7		5.11		8.0						
Middle				8.3	17.8	32.1	31.2	5.94	5.92	82.0	81.0	4.99	5.61	9.0	9.1				
	Bottom	15.6	17.9	32.1	5.99	82.4		5.06		9.0									

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		
01/03/11	1030-1045	21/Cloudy	Surface	1.0	17.2	30.3	30.4	6.16	6.18	84.3	84.6	5.22	5.25	5.45	8.3	8.2	8.8		
						30.4		6.20		84.9		5.27			8.1				
			Middle	6.9	17.6	30.7	30.7	6.11	6.10	83.7	83.5	5.40	5.43		5.46	5.43		8.6	8.9
						30.7		6.08		83.2		5.46			9.0				
			Bottom	12.8	18.1	31.3	31.4	5.92	5.90	81.1	80.8	5.63	5.66		5.69	5.66		9.3	9.2
						31.4		5.87		80.4		5.69			9.0				
03/03/11	1110-1123	18/Cloudy	Surface	1.0	18.3	30.2	30.2	6.09	6.06	82.8	82.4	5.18	5.17	5.39	8.1	8.2	8.8		
						30.1		6.03		82.0		5.16			8.3				
			Middle	7.1	19.2	31.5	31.6	5.93	5.96	80.6	81.1	5.44	5.47		5.49	5.47		8.8	8.9
						31.6		5.99		81.5		5.49			9.0				
			Bottom	13.2	20.0	32.1	32.2	5.87	5.85	79.8	79.5	5.56	5.54		5.52	5.54		9.3	9.2
						32.2		5.82		79.2		5.52			9.0				
05/03/11	1143-1155	17/Cloudy	Surface	1.0	17.8	30.8	30.8	6.20	6.21	86.2	86.3	5.24	5.27	5.37	8.2	8.3	8.5		
						30.7		6.21		86.3		5.29			8.4				
			Middle	6.8	18.4	31.3	31.4	6.08	6.07	83.9	83.8	5.37	5.35		5.33	5.35		8.6	8.4
						31.4		6.06		83.6		5.33			8.1				
			Bottom	12.6	18.8	31.8	31.9	5.98	5.99	82.5	82.6	5.43	5.50		5.57	5.50		8.9	8.9
						31.9		5.99		82.7		5.57			8.8				
08/03/11	1410-1422	18/Cloudy	Surface	1.0	16.8	30.3	30.4	5.82	5.85	79.7	80.2	5.50	5.53	5.71	9.0	9.0	9.3		
						30.4		5.88		80.6		5.55			9.0				
			Middle	7.2	17.6	31.4	31.5	5.97	5.97	81.8	81.8	5.63	5.66		5.68	5.66		9.3	9.2
						31.5		5.96		81.7		5.68			9.1				
			Bottom	13.4	17.9	32.1	32.1	5.99	5.98	82.1	82.0	5.92	5.96		5.99	5.96		9.6	9.6
						32.0		5.97		81.8		5.99			9.5				
10/03/11	1421-1435	18/Cloudy	Surface	1.0	17.3	30.4	30.4	5.99	6.02	82.6	83.0	5.19	5.21	5.34	8.2	8.2	8.4		
						30.4		6.04		83.3		5.22			8.2				
			Middle	6.9	17.6	30.8	30.9	5.92	5.94	81.6	81.9	5.29	5.31		5.33	5.31		8.3	8.2
						30.9		5.95		82.1		5.33			8.1				
			Bottom	12.8	17.9	31.3	31.4	5.82	5.84	80.3	80.6	5.51	5.50		5.48	5.50		9.0	8.9
						31.4		5.86		80.8		5.48			8.8				
12/03/11	1435-1446	18/Cloudy	Surface	1.0	19.1	31.3	31.3	6.09	6.08	84.6	84.4	4.72	4.76	4.56	7.7	7.6	7.2		
						31.2		6.06		84.2		4.80			7.5				
			Middle	6.9	21.0	31.9	32.0	5.92	5.94	82.2	82.5	4.29	4.32		4.34	4.32		7.2	7.1
						32.0		5.95		82.7		4.34			7.0				
			Bottom	12.8	20.9	32.2	32.2	5.82	5.81	80.3	80.1	4.58	4.62		4.65	4.62		6.8	6.9
						32.2		5.79		79.9		4.65			7.0				
15/03/11	1818-1828	18/Cloudy	Surface	1.0	17.5	30.6	30.6	5.97	5.97	80.6	80.6	5.25	5.28	5.47	8.3	8.2	8.9		
						30.5		5.96		80.5		5.30			8.1				
			Middle	6.8	18.5	31.3	31.3	5.83	5.86	79.3	79.7	5.56	5.54		5.52	5.54		9.0	9.1
						31.2		5.88		80.0		5.52			9.2				
			Bottom	12.6	19.2	31.7	31.8	5.86	5.88	79.7	79.9	5.59	5.61		5.62	5.61		9.4	9.4
						31.8		5.89		80.1		5.62			9.3				
17/03/11	0943-0955	15/Cloudy	Surface	1.0	17.3	31.2	31.3	6.27	6.27	89.0	89.0	5.17	5.20	5.30	8.1	8.1	8.4		
						31.4		6.26		88.9		5.23			8.0				
			Middle	6.7	20.2	31.9	31.9	6.11	6.10	86.8	86.7	5.27	5.29		5.31	5.29		8.4	8.3
						31.8		6.09		86.5		5.31			8.2				
			Bottom	12.4	20.5	32.1	32.2	5.94	5.95	83.8	83.9	5.42	5.40		5.37	5.40		8.8	8.9
						32.2		5.96		84.0		5.37			9.0				
19/03/11	1030-1042	16/Rainy	Surface	1.0	18.9	30.7	30.7	6.12	6.12	85.1	85.0	5.13	5.16	5.26	8.1	8.1	8.3		
						30.6		6.11		84.9		5.18			8.0				
			Middle	6.9	19.4	31.3	31.4	6.05	6.04	83.5	83.4	5.28	5.25		5.22	5.25		8.4	8.3
						31.4		6.03		83.2		5.22			8.2				
			Bottom	12.8	19.8	31.7	31.7	5.94	5.95	82.0	82.1	5.34	5.36		5.38	5.36		8.5	8.5
						31.6		5.96		82.2		5.38			8.5				
22/03/11	1405-1420	18/Cloudy	Surface	1.0	18.8	30.6	30.6	6.21	6.19	86.9	86.6	5.24	5.27	5.37	8.3	8.2	8.7		
						30.6		6.17		86.3		5.29			8.1				
			Middle	6.9	18.4	30.9	31.0	6.10	6.09	85.4	85.3	5.40	5.38		5.35	5.38		9.0	8.9
						31.0		6.08		85.1		5.35			8.7				
			Bottom	12.8	18.0	31.3	31.4	6.00	5.98	84.0	83.7	5.46	5.48		5.50	5.48		9.0	9.1
						31.4		5.96		83.4		5.50			9.2				
24/03/11	1430-1441	17/Cloudy	Surface	1.0	18.1	31.0	31.0	6.30	6.32	87.5	87.8	5.04	5.07	5.19	8.0	8.0	8.3		
						31.0		6.34		88.1		5.10			8.0				
			Middle	6.8	20.3	31.9	31.9	6.07	6.06	84.3	84.1	5.24	5.21		5.17	5.21		8.3	8.3
						31.9		6.04		83.9		5.17			8.2				
			Bottom	12.6	20.4	32.0	32.0	5.89	5.91	81.2	81.5	5.33	5.30		5.26	5.30		8.6	8.7
						32.0		5.93		81.8		5.26			8.8				
26/03/11	1515-1529	20/Fine	Surface	1.0	17.7	30.6	30.7	6.20	6.18	86.8	86.5	5.06	5.08	5.18	7.9	8.0	8.2		
						30.7		6.15		86.1		5.10			8.0				
			Middle	6.9	17.3	31.1	31.2	6.08	6.06	85.1	84.8	5.15	5.17		5.19	5.17		8.2	8.1
						31.2		6.03		84.4		5.19			8.0				
			Bottom	12.8	16.9	31.7	31.8	5.91	5.93	82.7	82.9	5.28	5.30		5.32	5.30		8.4	8.5
						31.8		5.94		83.1		5.32			8.5				
29/03/11	0855-0905	18/Cloudy	Surface	1.0	19.0	31.2	31.2	6.30	6.28	87.6	87.3	4.20	4.17	4.92	6.9	6.7	7.9		
						31.2		6.25		86.9		4.13			6.5				
			Middle	7.0	19.9	31.9	31.9	6.03	6.04	83.8	84.0	5.24	5.26		5.27	5.26		8.5	8.4
						31.8		6.05		84.1		5.27			8.2				
			Bottom	13.0	20.1	32.0	32.1	5.96	5.94	82.2	81.9	5.31	5.33		5.31	5.33		8.7	8.6
						32.1		5.91		81.6		5.35			8.5				
31/03/11	1000-1013	18/Sunny	Surface	1.0	17.6	30.1	30.2	6.03	6.01	82.6	82.4	5.37	5.40	5.49	8.6	8.7	9.0		
						30.3		5.99		82.1		5.43			8.8				
			Middle	6.9	17.8	30.6	30.6	5.87	5.87	80.4	80.4	5.48	5.47		5.46	5.47		9.0	8.9
						30.5		5.86		80.3		5.46			8.8				
			Bottom	12.8	18.0	30.9	31.1	5.79	5.80	79.3	79.4	5.61	5.60		5.59	5.60		9.3	9.3
						31.3		5.80		79.5		5.59			9.3				

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
01/03/11	1051-1105	21/Cloudy	Surface	1.0	17.2	30.4	30.4	6.18	6.21	84.6	85.0	5.26	5.29	5.49	8.3	8.4	8.8
				6.3	17.6	30.4		6.23		85.3		5.32			8.5		
			Middle	6.3	17.6	30.8	30.8	6.13	6.12	83.9	83.7	5.48	5.50		8.9	9.0	
						30.7		6.10		83.5		5.51			9.0		
			Bottom	11.6	18.1	31.4	31.4	5.94	5.92	81.3	81.1	5.67	5.69		9.2	9.1	
						31.4		5.90		80.8		5.71			9.0		
03/03/11	1135-1148	18/Cloudy	Surface	1.0	18.2	30.3	30.3	5.96	5.97	81.1	81.2	5.13	5.12	5.46	8.1	8.1	8.8
				6.3	19.4	31.7		5.94		81.3		5.10			8.0		
			Middle	6.3	19.4	31.8	31.8	5.91	5.93	80.9	80.7	5.52	5.55		9.0	9.1	
						31.8		5.91		80.4		5.58			9.2		
			Bottom	11.6	20.1	32.0	32.1	5.76	5.74	78.3	77.8	5.72	5.72		9.4	9.4	
						32.1		5.72		77.2		5.71			9.3		
05/03/11	1206-1218	17/Cloudy	Surface	1.0	17.7	30.7	30.7	6.18	6.18	85.9	85.9	5.21	5.18	5.28	8.4	8.3	8.6
				6.4	18.3	31.3		6.09		84.7		5.25			8.4		
			Middle	6.4	18.3	31.2	31.3	6.10	6.10	84.8	84.8	5.29	5.27		8.5	8.5	
						31.8		5.95		82.1		5.42			9.0		
			Bottom	11.8	18.7	31.7	31.8	5.96	5.96	82.2	82.2	5.36	5.39		8.8	8.9	
						31.7		5.96		82.2		5.36			8.8		
08/03/11	1434-1447	18/Cloudy	Surface	1.0	16.9	30.3	30.3	5.59	5.62	76.6	77.0	5.27	5.29	5.49	8.2	8.2	8.9
				6.3	17.5	30.2		5.64		77.3		5.30			8.2		
			Middle	6.3	17.5	31.5	31.6	5.69	5.70	77.9	78.1	5.55	5.54		9.0	9.1	
						31.6		5.71		78.2		5.52			9.2		
			Bottom	11.6	17.8	32.0	32.0	5.73	5.72	79.2	78.7	5.68	5.66		9.5	9.4	
						31.9		5.71		78.2		5.63			9.2		
10/03/11	1441-1456	18/Cloudy	Surface	1.0	17.3	30.4	30.5	6.10	6.12	84.1	84.3	5.13	5.15	5.27	8.2	8.2	8.4
				6.4	17.6	30.8		6.01		82.9		5.24			8.3		
			Middle	6.4	17.6	30.8	30.8	6.04	6.03	83.3	83.1	5.28	5.26		8.2	8.3	
						31.4		5.88		81.4		5.39			8.6		
			Bottom	14.8	17.9	31.4	31.4	5.92	5.90	81.6	81.5	5.43	5.41		8.8	8.7	
						31.4		5.92		81.6		5.43			8.8		
12/03/11	1459-1510	18/Cloudy	Surface	1.0	19.2	31.4	31.4	6.15	6.14	85.4	85.3	4.83	4.81	4.92	7.9	7.8	7.9
				6.7	20.8	31.3		6.13		85.2		4.78			7.7		
			Middle	6.7	20.8	32.0	32.1	6.03	6.04	83.8	83.9	5.01	5.04		8.0	8.1	
						32.1		6.05		84.0		5.06			8.2		
			Bottom	12.4	21.0	32.2	32.2	5.98	5.96	83.1	82.8	4.87	4.91		7.8	7.8	
						32.1		5.94		82.5		4.94			7.8		
15/03/11	1833-1844	18/Cloudy	Surface	1.0	17.5	30.4	30.4	6.08	6.10	82.1	82.6	5.10	5.13	5.30	8.0	8.0	8.5
				6.3	18.4	31.2		6.05		83.1		5.16			8.0		
			Middle	6.3	18.4	31.3	31.3	6.02	6.04	81.7	81.5	5.27	5.29		8.6	8.5	
						31.3		6.02		81.3		5.31			8.4		
			Bottom	11.6	19.3	31.8	31.9	5.95	5.95	80.9	80.9	5.44	5.47		8.9	9.0	
						31.9		5.94		80.8		5.49			9.0		
17/03/11	1006-1018	15/Cloudy	Surface	1.0	17.3	31.4	31.4	6.20	6.22	88.0	88.3	5.24	5.22	5.32	8.3	8.2	8.5
				6.2	20.2	31.8		6.07		86.2		5.26			8.4		
			Middle	6.2	20.2	31.9	31.9	6.06	6.07	86.1	86.2	5.34	5.31		8.2	8.3	
						32.1		5.96		84.0		5.44			8.9		
			Bottom	11.4	20.5	32.1	32.1	5.99	5.98	84.5	84.3	5.40	5.42		9.0	9.0	
						32.1		5.99		84.5		5.40			9.0		
19/03/11	1055-1107	16/Rainy	Surface	1.0	18.8	30.8	30.8	6.22	6.24	86.5	86.7	5.21	5.18	5.29	8.4	8.4	8.6
				6.3	19.3	31.4		6.08		84.5		5.26			8.6		
			Middle	6.3	19.3	31.4	31.4	6.07	6.08	84.3	84.4	5.31	5.29		8.4	8.5	
						31.8		5.98		82.5		5.44			8.9		
			Bottom	11.6	19.7	31.8	31.8	5.95	5.97	82.1	82.3	5.39	5.42		9.1	9.0	
						31.8		5.95		82.1		5.39			9.1		
22/03/11	1425-1439	18/Cloudy	Surface	1.0	18.7	30.6	30.6	6.15	6.17	86.1	86.3	5.31	5.34	5.44	8.4	8.5	8.8
				6.3	18.5	30.6		6.18		86.5		5.36			8.5		
			Middle	6.3	18.5	30.9	31.0	6.10	6.09	85.4	85.2	5.42	5.45		8.7	8.8	
						31.0		6.07		84.9		5.48			8.9		
			Bottom	11.6	18.0	31.3	31.3	5.93	5.95	83.0	83.3	5.53	5.54		9.1	9.1	
						31.3		5.97		83.5		5.55			9.0		
24/03/11	1454-1505	17/Cloudy	Surface	1.0	18.0	31.0	31.0	6.21	6.19	86.3	86.0	5.09	5.12	5.14	8.0	8.1	8.2
				6.4	20.2	31.0		6.17		85.7		5.15			8.1		
			Middle	6.4	20.2	31.9	31.9	5.95	5.93	82.7	82.4	5.21	5.19		8.4	8.3	
						31.8		5.90		82.0		5.16			8.2		
			Bottom	11.8	20.4	32.0	32.1	5.90	5.92	82.0	82.3	5.09	5.12		8.0	8.1	
						32.1		5.94		82.5		5.15			8.2		
26/03/11	1535-1550	20/Fine	Surface	1.0	17.8	30.7	30.7	6.11	6.14	85.5	85.9	5.11	5.14	5.26	8.3	8.2	8.4
				6.3	17.4	31.1		6.01		84.1		5.23			8.1		
			Middle	6.3	17.4	31.1	31.1	6.05	6.03	84.7	84.4	5.28	5.26		8.2	8.3	
						31.7		5.95		83.3		5.37			8.6		
			Bottom	12.6	16.9	31.7	31.7	5.89	5.92	82.4	82.9	5.40	5.39		8.8	8.7	
						31.7		5.89		82.4		5.40			8.8		
29/03/11	0909-0919	18/Cloudy	Surface	1.0	19.0	31.1	31.1	6.19	6.18	86.0	85.8	4.23	4.21	5.03	6.8	6.9	8.3
				6.4	19.8	31.0		6.16		85.6		4.19			7.0		
			Middle	6.4	19.8	31.7	31.8	6.04	6.06	83.4	83.7	5.40	5.37		9.0	8.9	
						31.9		6.08		83.9		5.33			8.7		
			Bottom	11.8	20.1	32.0	32.0	5.93	5.92	81.8	81.6	5.53	5.51		9.1	9.1	
						32.0		5.90		81.4		5.48			9.0		
31/03/11	1023-1036	18/Sunny	Surface	1.0	17.4	30.1	30.3	5.96	5.95	81.7	81.5	5.38	5.37	5.51	8.5	8.5	8.8
				6.3	17.7	30.4		5.93		81.2		5.36			8.5		
			Middle	6.3	17.7	30.8	31.0	5.89	5.87	80.7	80.4	5.47	5.49		9.0	8.9	
						31.1		5.84		80.0		5.51			8.8		
			Bottom	11.6	17.9	31.4	31.4	5.83	5.81	79.9	79.6	5.66	5.68		9.2	9.1	
						31.3		5.78		79.2		5.69			9.0		

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	
01/03/11	1826-1838	25/Fine	Surface	1.0	17.7	30.6	30.7	6.17	6.17	85.1	85.1	5.26	5.29	5.40	8.5	8.6	8.7	
						30.7		6.16		85.0		5.32			8.6			
			Middle	8.3	18.4	31.5	31.5	6.09	6.08	83.4	83.3	5.36	5.39		8.5	8.7		8.9
						31.4		6.07		83.2		5.42			8.8			
			Bottom	15.6	18.8	31.8	31.8	5.99	5.99	82.1	82.0	5.53	5.51		9.0	8.9		9.0
						31.8		5.98		81.9		5.49			8.8			
03/03/11	1930-1940	19/Cloudy	Surface	1.0	18.1	31.3	31.3	6.04	6.06	83.9	84.2	5.02	5.06	5.10	8.0	7.9	8.1	
						31.3		6.08		84.5		5.09			7.8			
			Middle	8.4	20.9	32.0	32.1	5.89	5.87	81.8	81.6	4.94	5.00		8.0	8.2		8.3
						32.1		5.85		81.3		5.05			8.2			
			Bottom	15.8	21.0	32.4	32.4	5.92	5.91	82.2	82.0	5.23	5.26		8.2	8.3		8.3
						32.3		5.89		81.8		5.28			8.2			
05/03/11	2002-2015	16/Cloudy	Surface	1.0	17.1	30.7	30.7	6.14	6.16	84.7	84.9	5.31	5.34	5.50	8.5	8.6	9.0	
						30.7		6.17		85.1		5.36			8.6			
			Middle	8.4	17.5	31.2	31.2	6.03	6.01	83.2	82.9	5.49	5.52		9.1	9.1		9.1
						31.2		5.98		82.5		5.55			9.0			
			Bottom	15.8	17.8	31.8	31.8	5.87	5.85	81.0	80.7	5.62	5.65		9.3	9.3		9.2
						31.8		5.83		80.4		5.68			9.2			
08/03/11	1143-1155	15/Cloudy	Surface	1.0	17.6	29.8	29.7	6.03	6.02	82.6	82.4	5.28	5.29	5.41	8.3	8.2	8.7	
						29.6		6.00		82.2		5.30			8.0			
			Middle	8.3	17.5	30.6	30.7	5.90	5.91	80.8	81.0	5.43	5.42		9.0	8.9		8.7
						30.8		5.92		81.1		5.40			8.7			
			Bottom	15.6	17.8	31.4	31.5	5.85	5.84	80.1	80.0	5.50	5.51		9.1	9.1		9.0
						31.6		5.83		79.9		5.52			9.0			
10/03/11	1146-1158	17/Cloudy	Surface	1.0	17.1	30.4	30.4	6.19	6.19	86.0	86.0	5.22	5.19	5.29	8.0	8.1	8.3	
						30.4		6.18		85.9		5.16			8.1			
			Middle	8.1	17.5	30.7	30.7	6.05	6.06	83.5	83.6	5.26	5.28		8.3	8.3		8.2
						30.6		6.06		83.6		5.30			8.5			
			Bottom	15.2	17.9	31.2	31.3	5.96	5.97	82.2	82.4	5.37	5.40		8.5	8.5		8.5
						31.3		5.98		82.5		5.43			8.6			
12/03/11	1210-1222	17/Cloudy	Surface	1.0	18.9	30.4	30.5	6.07	6.07	82.6	82.5	5.42	5.45	5.67	8.8	8.7	9.1	
						30.5		6.06		82.4		5.47			8.6			
			Middle	7.4	19.5	31.5	31.6	5.93	5.92	80.6	80.5	5.60	5.70		9.3	9.2		9.1
						31.6		5.91		80.4		5.72			9.6			
			Bottom	13.8	20.2	32.2	32.2	5.88	5.85	80.0	79.6	5.82	5.86		9.4	9.5		9.4
						32.1		5.82		79.2		5.89			9.4			
15/03/11	1438-1453	18/Cloudy	Surface	1.0	17.8	30.6	30.6	6.21	6.20	85.7	85.5	5.09	5.11	5.19	8.0	8.1	8.2	
						30.5		6.18		85.3		5.12			8.1			
			Middle	8.2	18.6	31.4	31.5	6.11	6.10	84.3	84.1	5.15	5.17		8.2	8.1		8.0
						31.5		6.08		83.9		5.18			8.5			
			Bottom	15.4	19.4	32.0	32.0	5.94	5.92	82.6	82.3	5.27	5.29		8.4	8.5		8.7
						31.9		5.89		81.9		5.31			8.5			
17/03/11	1810-1820	17/Cloudy	Surface	1.0	17.9	31.6	31.6	6.13	6.15	87.0	87.3	5.21	5.26	5.26	8.2	8.4	8.5	
						31.5		6.17		87.6		5.30			8.5			
			Middle	8.6	20.0	32.1	32.1	6.01	6.03	85.3	85.5	5.15	5.13		8.1	8.1		8.1
						32.0		6.04		85.7		5.10			8.2			
			Bottom	16.2	20.3	32.3	32.4	5.87	5.86	82.7	82.5	5.43	5.40		9.0	8.9		8.8
						32.4		5.84		82.3		5.37			8.8			
19/03/11	1831-1846	18/Rainy	Surface	1.0	18.7	30.6	30.6	6.15	6.17	84.9	85.2	5.10	5.09	5.19	8.2	8.2	8.4	
						30.5		6.19		85.4		5.07			8.2			
			Middle	8.3	19.6	31.4	31.4	6.06	6.08	83.6	83.9	5.20	5.18		8.4	8.4		8.3
						31.4		6.10		84.2		5.16			8.7			
			Bottom	15.6	20.1	32.0	32.0	5.95	5.94	81.5	81.3	5.28	5.30		8.7	8.6		8.5
						32.0		5.92		81.1		5.31			8.5			
22/03/11	1146-1158	22/Cloudy	Surface	1.0	19.3	30.8	30.8	6.19	6.19	87.9	87.9	5.16	5.20	5.30	8.0	8.0	8.4	
						30.7		6.18		87.8		5.23			8.0			
			Middle	8.2	18.8	31.3	31.3	6.06	6.06	86.1	86.0	5.32	5.30		8.5	8.4		8.5
						31.3		6.05		85.9		5.28			8.3			
			Bottom	15.4	18.6	31.8	31.8	5.94	5.95	83.8	83.9	5.43	5.41		8.8	8.9		9.0
						31.7		5.96		84.0		5.38			8.8			
24/03/11	1157-1210	15/Fine	Surface	1.0	17.4	30.6	30.7	6.16	6.14	85.0	84.8	5.07	5.09	5.19	8.0	8.0	8.1	
						30.7		6.12		84.5		5.10			7.9			
			Middle	8.3	19.3	31.3	31.3	6.07	6.05	83.8	83.5	5.17	5.20		8.1	8.1		8.0
						31.3		6.02		83.1		5.22			8.5			
			Bottom	15.6	20.1	32.0	32.1	5.83	5.86	81.0	81.4	5.30	5.28		8.5	8.4		8.2
						32.1		5.88		81.7		5.26			8.2			
26/03/11	1301-1314	19/Cloudy	Surface	1.0	17.9	30.6	30.6	6.08	6.07	85.1	85.0	5.13	5.12	5.34	8.0	8.1	8.6	
						30.5		6.06		84.8		5.10			8.2			
			Middle	8.1	17.5	31.5	31.6	5.93	5.95	83.0	83.2	5.46	5.44		8.8	8.8		8.8
						31.6		5.96		83.4		5.41			8.8			
			Bottom	15.2	17.0	32.1	32.2	5.79	5.80	81.1	81.2	5.47	5.48		9.0	8.9		8.7
						32.2		5.81		81.3		5.49			8.7			
29/03/11	1626-1638	20/Cloudy	Surface	1.0	19.3	31.4	31.4	6.17	6.15	85.7	85.4	5.21	5.19	5.20	8.5	8.4	8.4	
						31.3		6.12		85.0		5.17			8.2			
			Middle	8.6	20.4	32.2	32.2	6.01	6.03	83.5	83.7	4.98	4.95		7.9	7.9		7.9
						32.1		6.04		83.9		4.91			7.9			
			Bottom	16.2	20.3	32.4	32.4	5.95	5.97	82.7	82.9	5.43	5.46		8.8	8.9		8.8
						32.3		5.98		83.1		5.49			9.0			
31/03/11	1840-1855	22/Fine	Surface	1.0	17.9	30.6	30.6	6.32	6.30	89.1	88.8	4.98	5.01	5.17	8.0	7.9	8.2	
						30.6		6.28		88.5		5.03			7.7			
			Middle	8.4	17.2	31.0	31.1	6.18	6.16	87.1	86.8	5.14	5.16		8.2	8.1		8.0
						31.1		6.14		86.5		5.18			8.0			
			Bottom	15.8	16.9	31.6	31.6	6.05	6.03	85.3	85.0	5.30	5.33		8.6	8.6		8.6
						31.6		6.01		84.7		5.36			8.5			

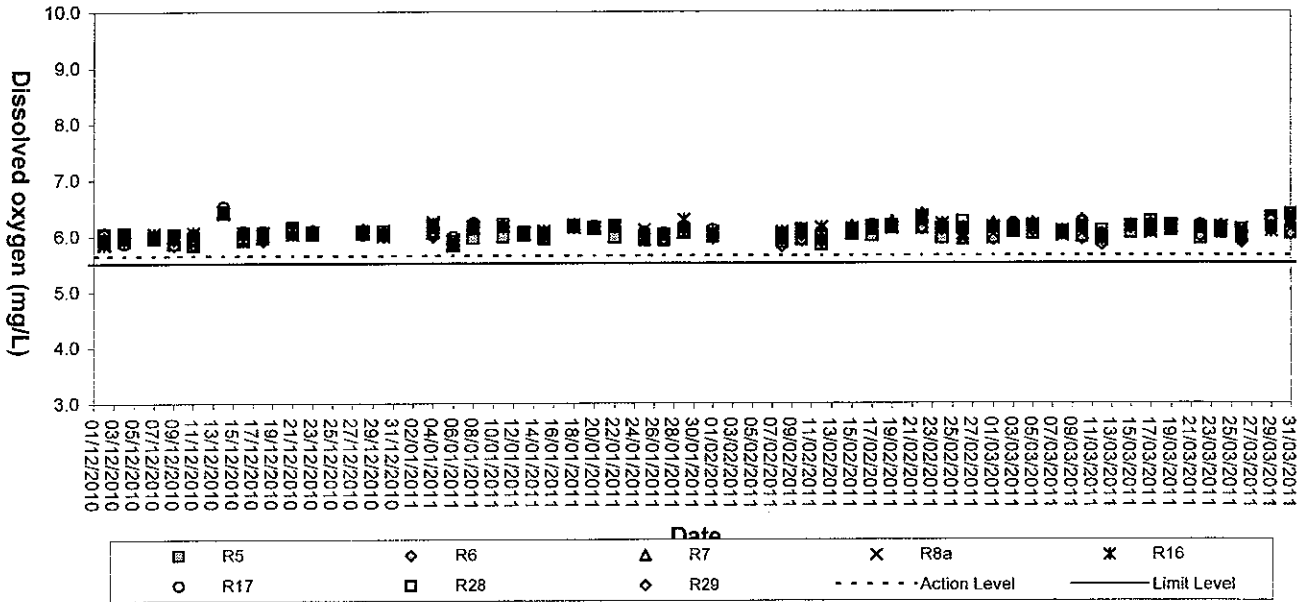


Appendix C3

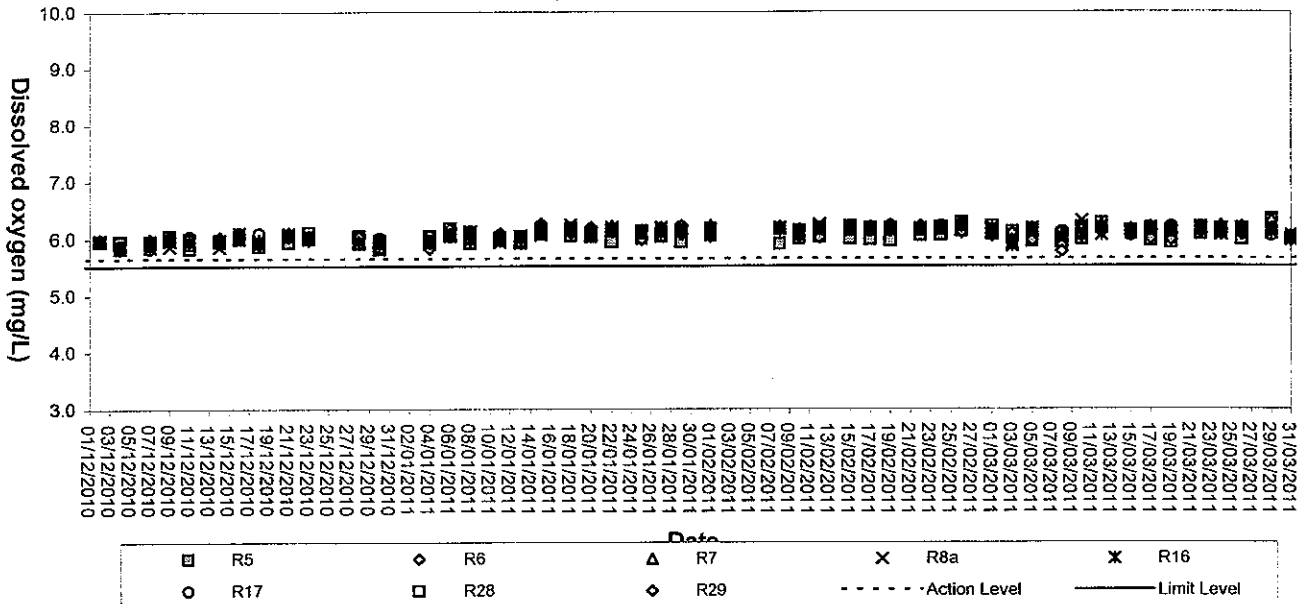
Graphical Plots of Impact Water Quality Monitoring Data



Dissolved Oxygen (Surface) at Mid-Flood Tide

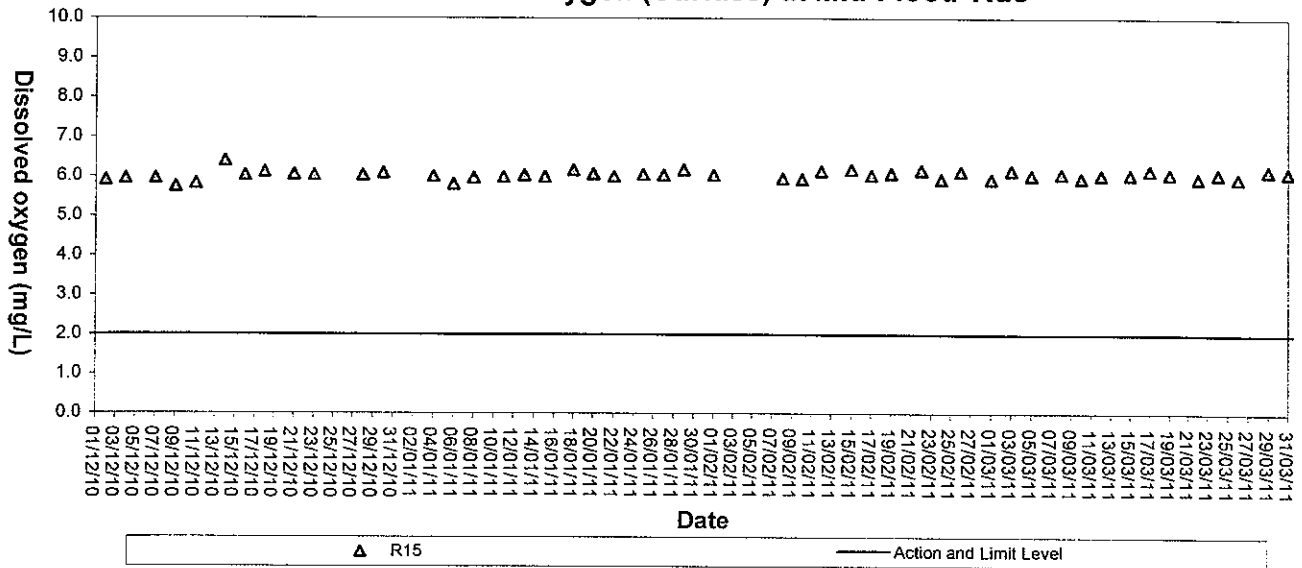


Dissolved Oxygen (Surface) at Mid-Ebb Tide





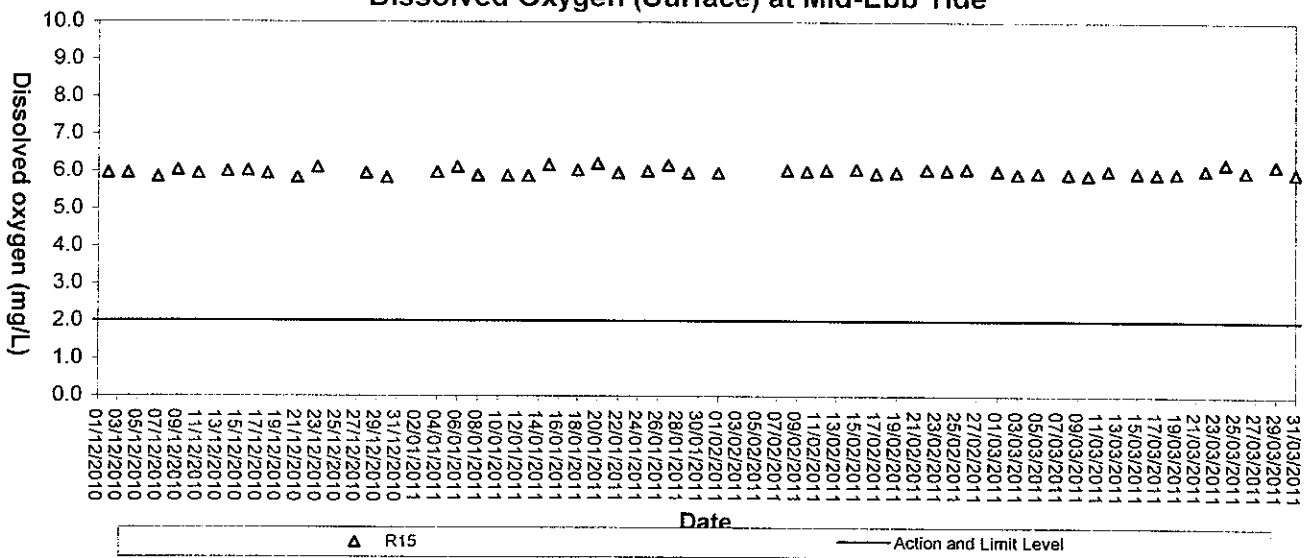
Dissolved Oxygen (Surface) at Mid-Flood Tide



▲ R15

— Action and Limit Level

Dissolved Oxygen (Surface) at Mid-Ebb Tide

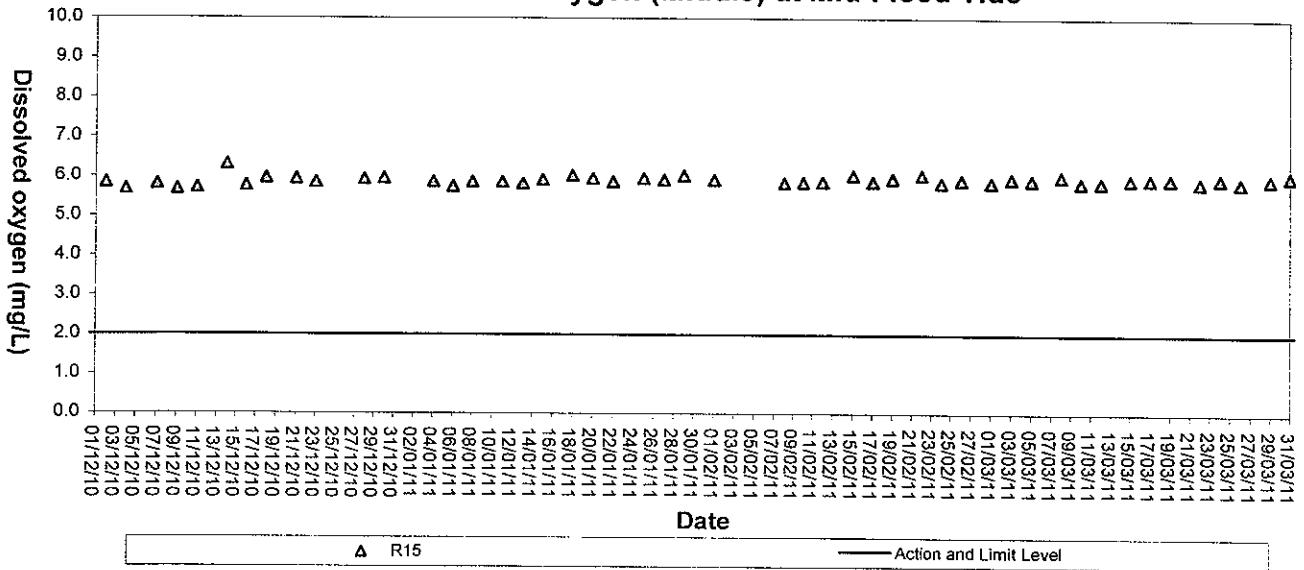


▲ R15

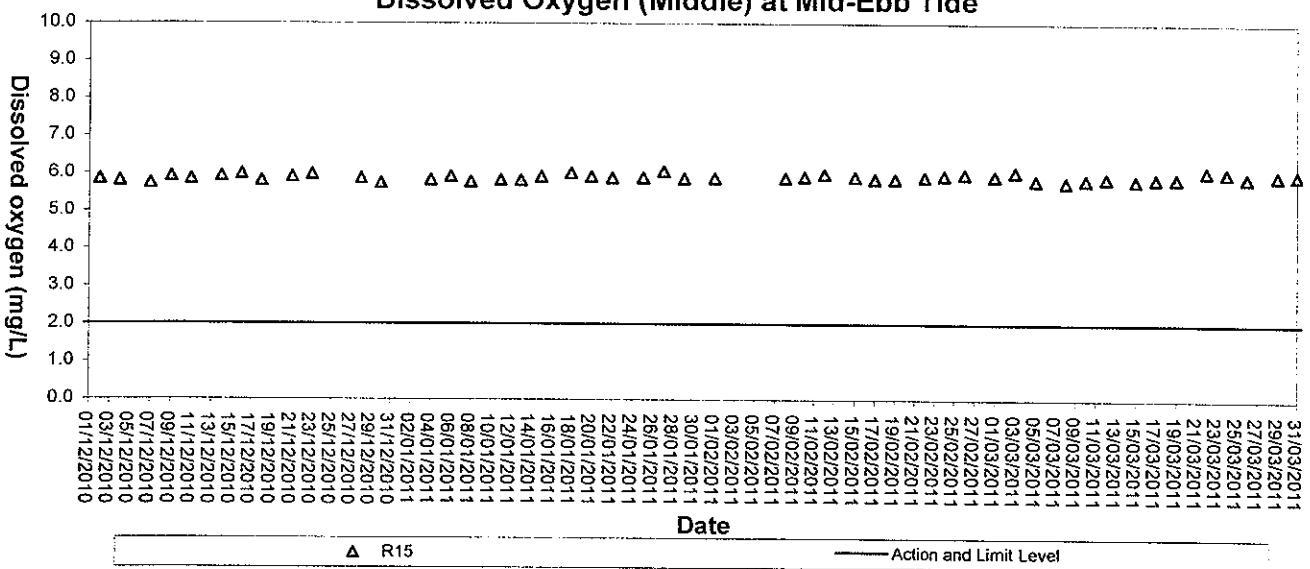
— Action and Limit Level



Dissolved Oxygen (Middle) at Mid-Flood Tide

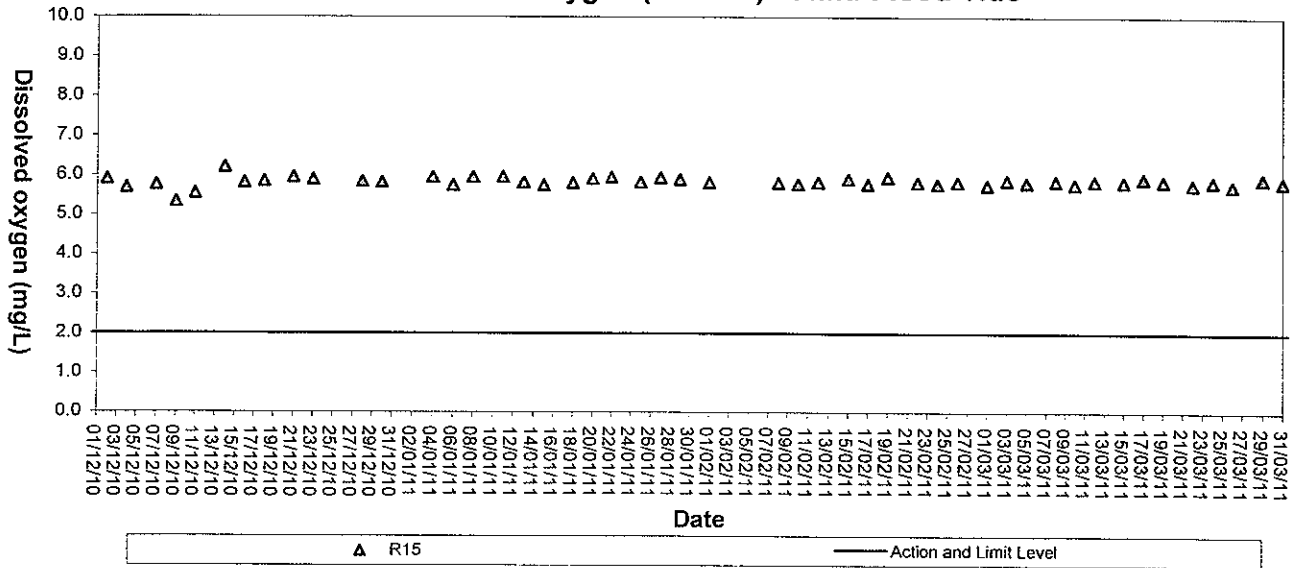


Dissolved Oxygen (Middle) at Mid-Ebb Tide

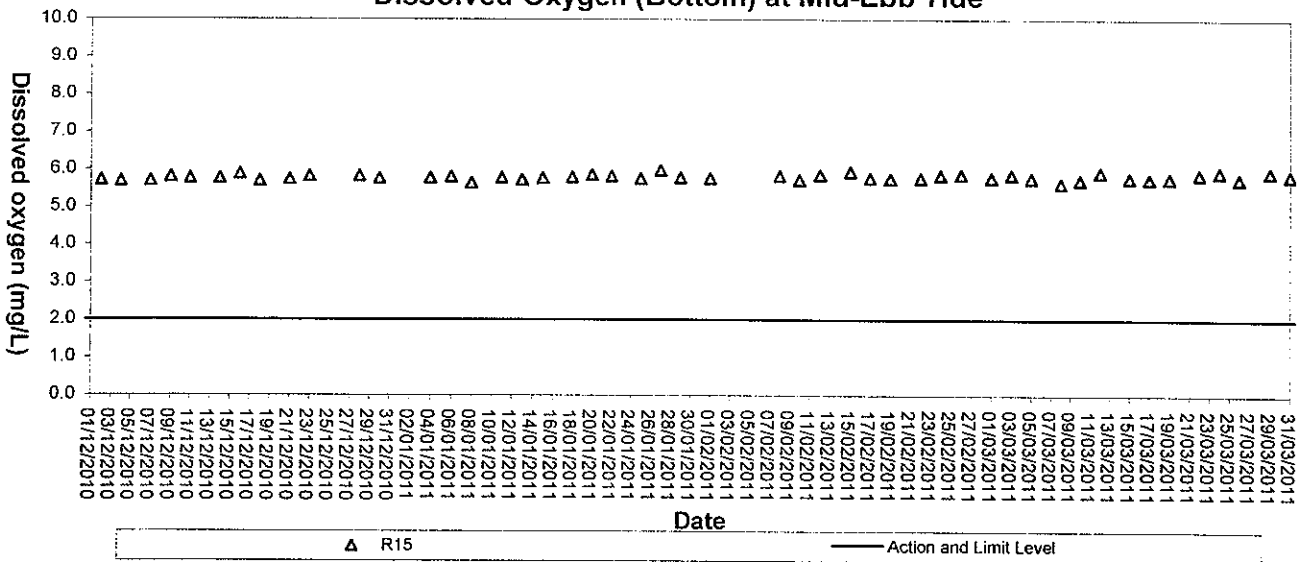




Dissolved Oxygen (Bottom) at Mid-Flood Tide

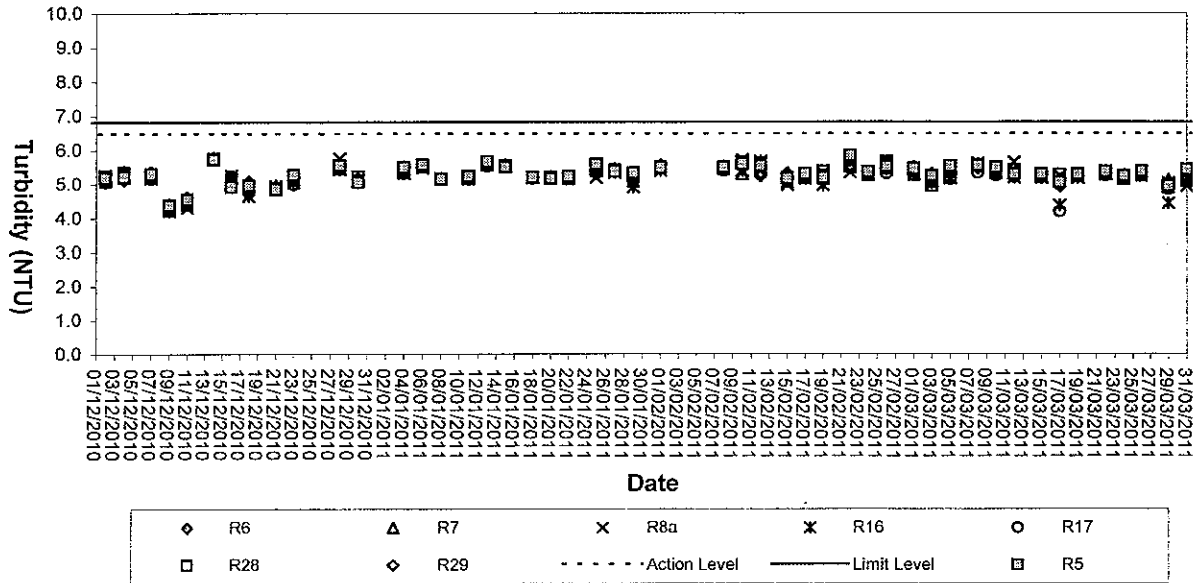


Dissolved Oxygen (Bottom) at Mid-Ebb Tide

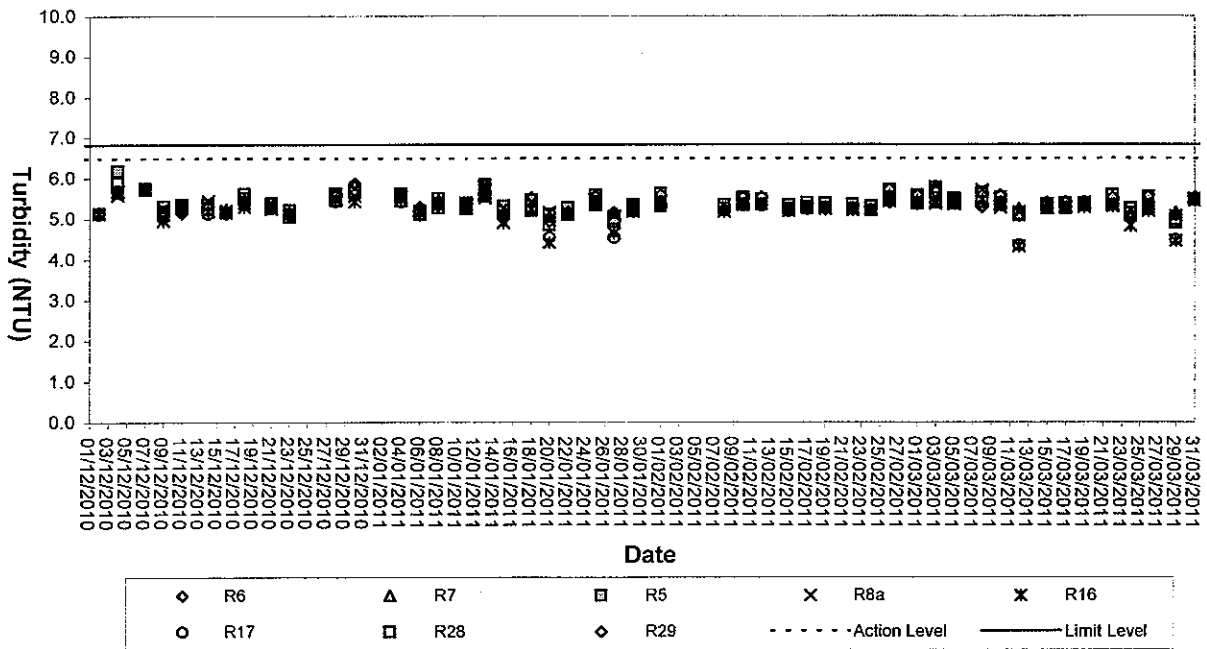




Turbidity (Depth-average) at Mid-Flood Tide

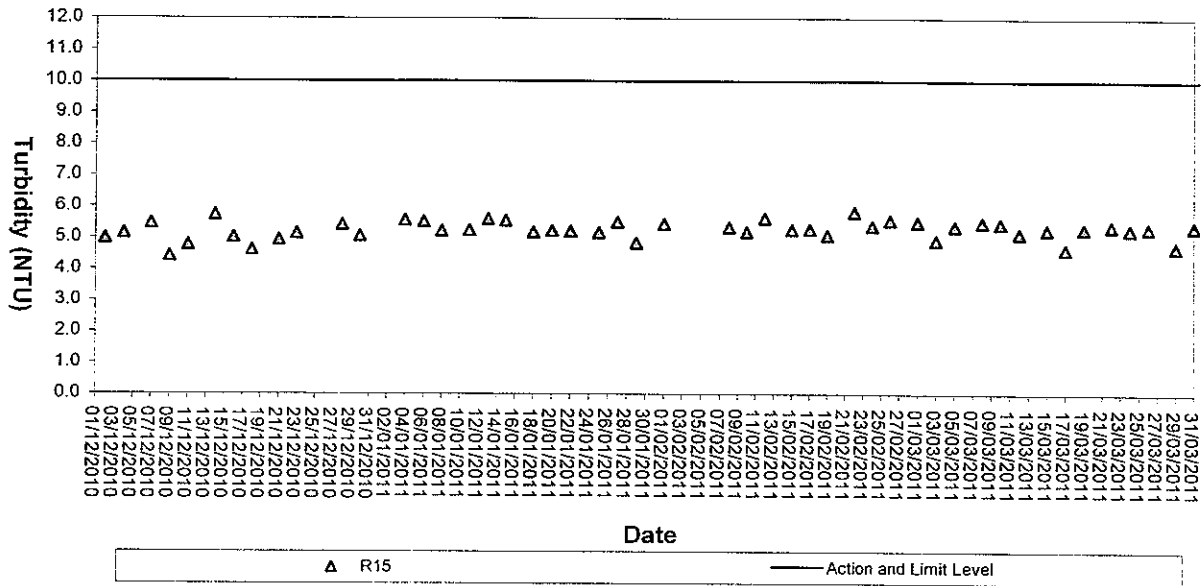


Turbidity (Depth-average) at Mid-Ebb Tide

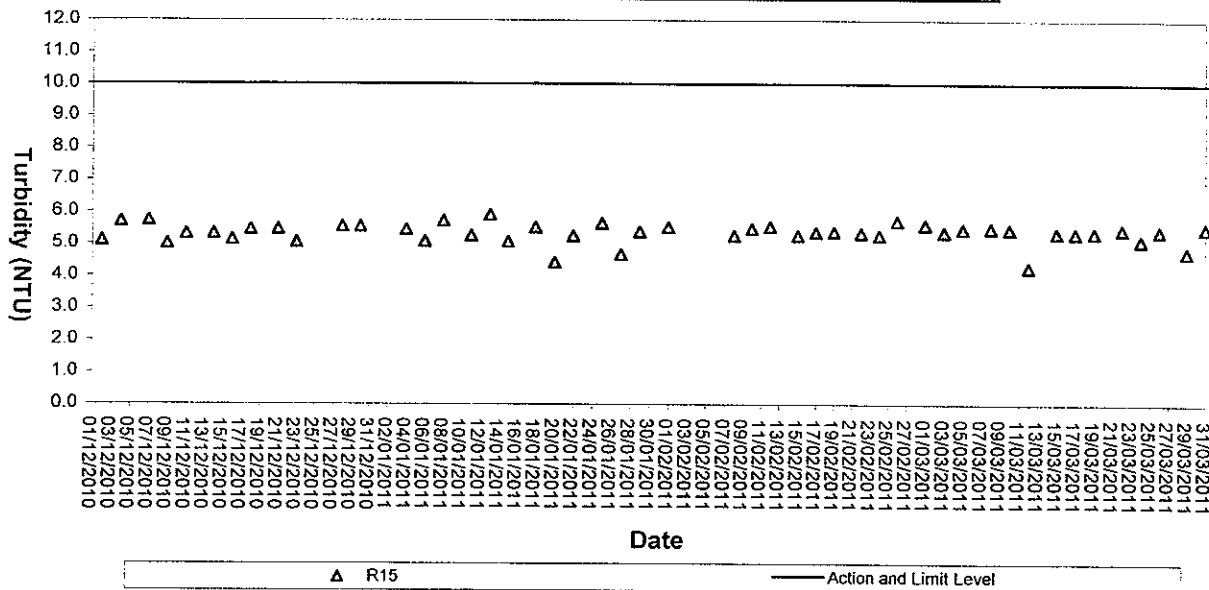




Turbidity (Depth-average) of R15 at Mid-Flood Tide

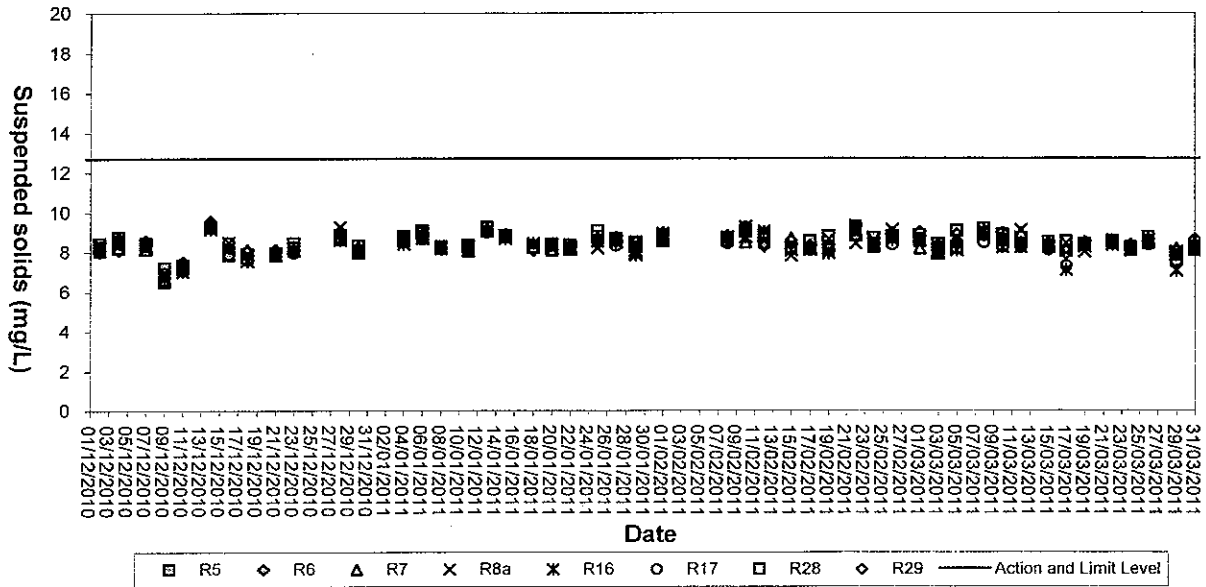


Turbidity (Depth-average) of R15 at Mid-Ebb Tide

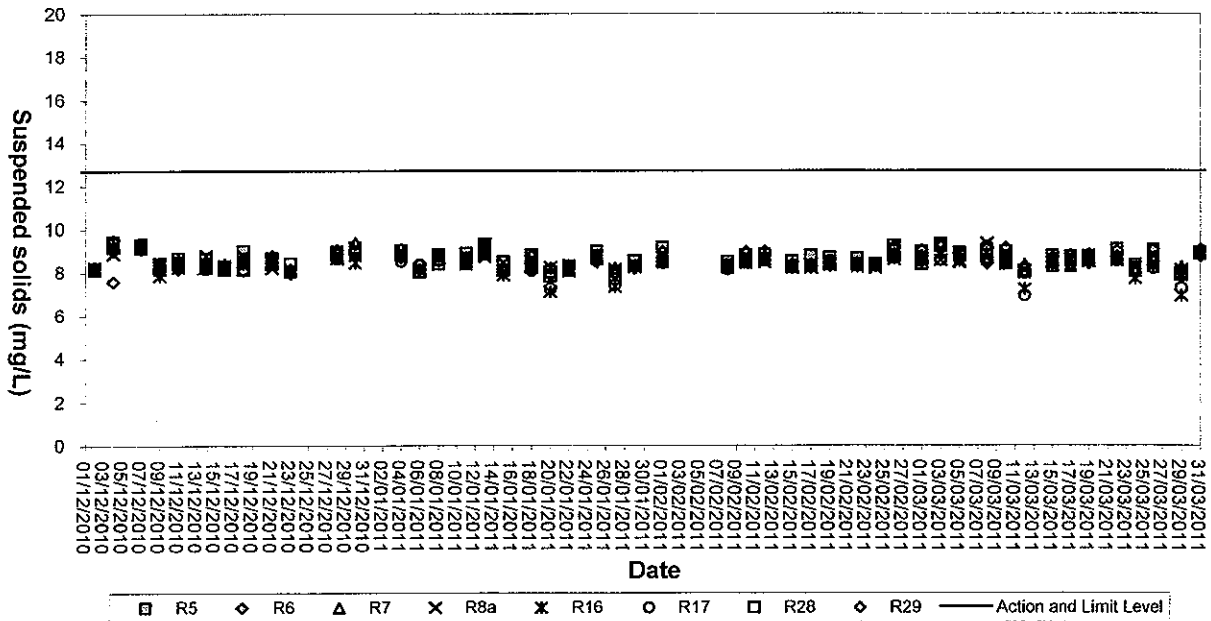




Suspended solids (Depth-average) at Mid-Flood Tide

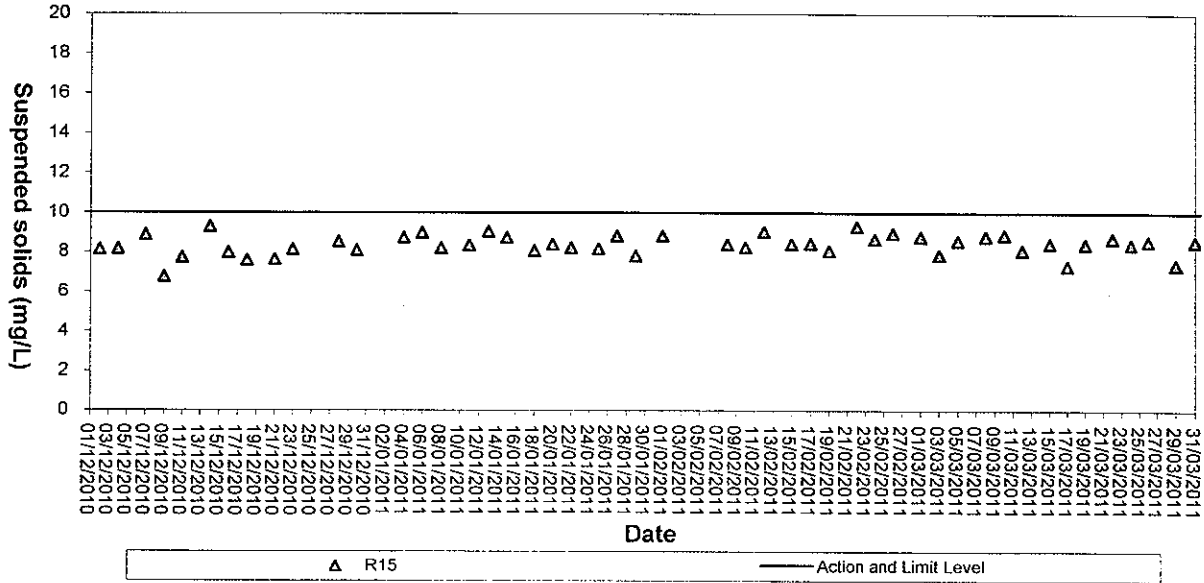


Suspended Solids (Depth-average) at Mid-Ebb Tide

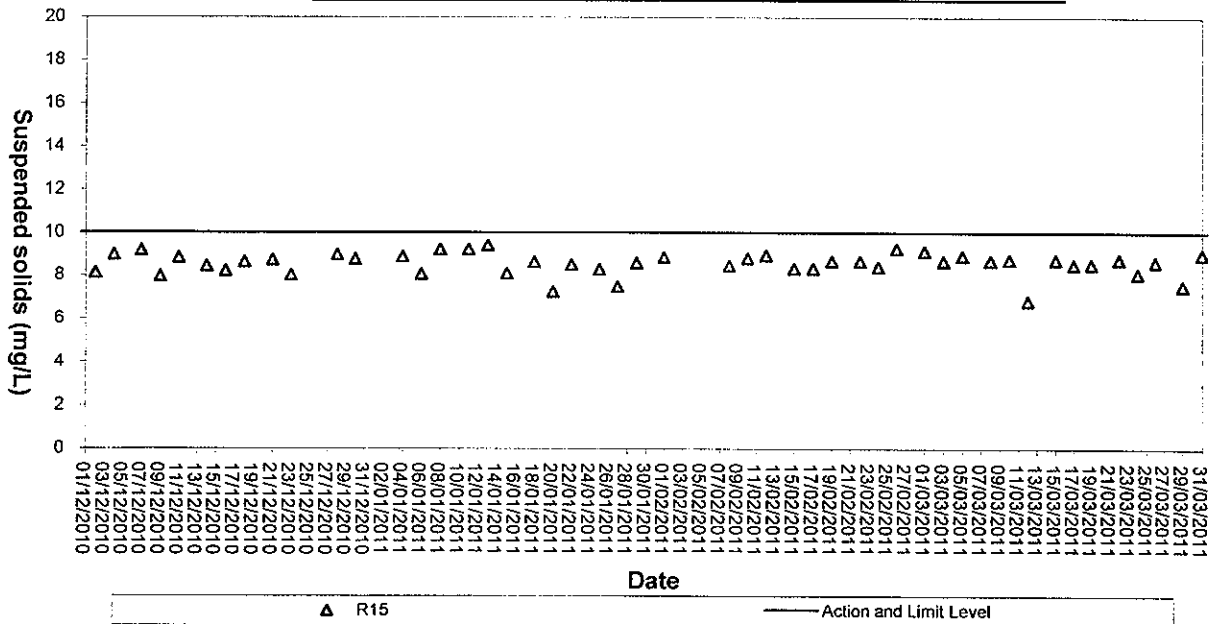




Suspended solids (Depth-average) of R15 at Mid-Flood Tide



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 ®
01/03/11	99.8	R5FS	3.0	R8FS	95.9
	99.2	R8FM	2.9	R17FM	105.8
	100.4	R17FB	2.7	C1FB	104.1
	101.2	C2FS	0.0	C4FB	92.0
	100.4	R5ES	3.1	R8ES	100.0
	101.9	R8EM	3.0	R17EM	108.0
	101.8	R17EB	2.7	C1EB	110.6
	103.2	C2ES	2.9	C4EB	90.6
03/03/11	99.0	R5FS	3.1	R8FS	98.0
	99.8	R8FM	3.2	R17FM	96.2
	94.2	R17FB	0.0	C1FB	96.2
	97.3	C2FS	0.0	C4FB	97.9
	94.0	R5ES	2.8	R8ES	92.2
	98.8	R8EM	0.0	R17EM	110.2
	95.1	R17EB	2.7	C1EB	110.6
	102.9	C2ES	3.1	C4EB	90.4
05/03/11	97.5	R5FS	2.9	R8FS	88.5
	97.5	R8FM	0.0	R17FM	108.2
	105.4	R17FB	3.1	C1FB	97.9
	93.4	C2FS	2.3	C4FB	92.3
	102.8	R5ES	2.8	R8ES	90.4
	99.0	R8EM	0.0	R17EM	112.2
	96.9	R17EB	2.7	C1EB	108.2
	94.5	C2ES	3.2	C4EB	98.0
08/03/11	103.2	R5FS	2.8	R8FS	90.0
	106.7	R8FM	2.7	R17FM	102.1
	101.3	R17FB	2.8	C1FB	96.1
	94.8	C2FS	3.1	C4FB	107.7
	94.0	R5ES	3.1	R8ES	84.6
	93.9	R8EM	2.7	R17EM	100.0
	96.0	R17EB	2.7	C1EB	106.4
	98.0	C2ES	3.1	C4EB	84.9
10/03/11	101.9	R5FS	3.1	R8FS	86.3
	96.7	R8FM	2.8	R17FM	106.1
	98.5	R17FB	2.9	C1FB	103.9
	103.9	C2FS	0.0	C4FB	106.1
	106.1	R5ES	3.2	R8ES	88.7
	97.6	R8EM	3.2	R17EM	117.0
	95.6	R17EB	3.4	C1EB	108.3
	98.8	C2ES	3.1	C4EB	96.1
12/03/11	95.6	R5FS	2.8	R8FS	97.9
	92.1	R8FM	2.9	R17FM	103.9
	95.7	R17FB	3.0	C1FB	94.3
	105.6	C2FS	3.1	C4FB	98.0
	106.1	R5ES	3.0	R8ES	94.1
	97.0	R8EM	0.0	R17EM	101.9
	102.0	R17EB	2.7	C1EB	101.9
	100.4	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 @
15/03/11	102.5	R5FS	3.1	R8FS	94.1
	101.2	R8FM	2.9	R17FM	100.0
	100.6	R17FB	3.0	C1FB	102.1
	103.7	C2FS	3.1	C4FB	96.2
	97.2	R5ES	0.0	R8ES	88.5
	92.8	R8EM	3.0	R17EM	110.4
	101.6	R17EB	2.8	C1EB	100.0
	95.1	C2ES	3.1	C4EB	104.3
17/03/11	93.9	R5FS	3.3	R8FS	94.0
	107.0	R8FM	3.0	R17FM	94.0
	106.3	R17FB	3.2	C1FB	100.0
	101.4	C2FS	3.0	C4FB	93.7
	106.9	R5ES	0.0	R8ES	92.2
	95.9	R8EM	2.9	R17EM	108.0
	96.2	R17EB	2.7	C1EB	104.0
19/03/11	96.7	C2ES	0.0	C4EB	100.0
	107.7	R5FS	3.0	R8FS	96.0
	99.6	R8FM	3.2	R17FM	96.0
	92.9	R17FB	2.9	C1FB	100.0
	99.4	C2FS	3.1	C4FB	94.1
	105.8	R5ES	2.8	R8ES	90.4
	92.6	R8EM	3.0	R17EM	112.5
	94.5	R17EB	2.7	C1EB	108.0
22/03/11	98.2	C2ES	3.1	C4EB	102.1
	94.7	R5FS	3.1	R8FS	88.7
	93.0	R8FM	3.0	R17FM	106.4
	100.6	R17FB	3.2	C1FB	96.1
	108.0	C2FS	3.2	C4FB	98.1
	95.0	R5ES	0.0	R8ES	90.6
	96.3	R8EM	2.9	R17EM	112.2
	94.5	R17EB	2.7	C1EB	104.1
24/03/11	103.3	C2ES	3.1	C4EB	96.0
	97.4	R5FS	3.0	R8FS	102.1
	104.5	R8FM	3.1	R17FM	102.0
	94.8	R17FB	0.0	C1FB	95.8
	103.9	C2FS	3.2	C4FB	100.0
	97.3	R5ES	3.1	R8ES	90.2
	101.7	R8EM	3.2	R17EM	107.7
	98.8	R17EB	3.0	C1EB	103.9
26/03/11	96.0	C2ES	3.1	C4EB	100.0
	99.0	R5FS	3.1	R8FS	98.0
	102.8	R8FM	2.9	R17FM	98.0
	103.3	R17FB	2.7	C1FB	93.8
	107.2	C2FS	3.1	C4FB	105.7
	103.5	R5ES	2.9	R8ES	98.0
	92.8	R8EM	3.0	R17EM	109.8
	100.8	R17EB	0.0	C1EB	110.2
	100.0	C2ES	3.1	C4EB	96.0

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 @
29/03/11	99.6	R5FS	3.2	R8FS	94.0
	102.7	R8FM	3.1	R17FM	93.8
	103.8	R17FB	3.3	C1FB	102.0
	100.8	C2FS	6.1	C4FB	96.2
	98.8	R5ES	3.2	R8ES	88.7
	100.0	R8EM	3.0	R17EM	116.7
	103.1	R17EB	3.3	C1EB	112.5
	95.2	C2ES	3.1	C4EB	102.0
31/03/11	98.6	R5FS	0.0	R8FS	94.2
	104.8	R8FM	3.1	R17FM	108.3
	95.4	R17FB	2.9	C1FB	100.0
	94.8	C2FS	3.2	C4FB	98.0
	103.3	R5ES	2.9	R8ES	95.8
	99.6	R8EM	2.7	R17EM	100.0
	94.9	R17EB	0.0	C1EB	98.1
	101.2	C2ES	0.0	C4EB	97.9

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



Appendix D

Event-Action Plans



Event and Action Plan for Construction Noise

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



Event and Action Plan for Water Quality for Construction Phase

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



Event and Action Plan for Water Quality for Construction Phase

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



Appendix E

Work Programme

Act ID	Description	Orig Start	Early Start	Early Finish	Late Start	Late Finish	Total Float	2009	2010	2011										
								JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
General Information																				
Key Dates		1156	07SEP09 A	05NOV12	07SEP09 A	05NOV12	0													
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 (781Days)	830	07SEP09 A	06NOV11	07SEP09 A	06NOV11	0													
KD-1040	Works Period of Section 2 Works (426Days)	448	07SEP09 A	06NOV10	29NOV10	06NOV11	234	Works Period of Section 2 Works (426Days)												
KD-1050	Works Period of Section 4 Works (548Days)	576	07SEP09 A	06MAR11	05APR11	06MAR11	276	Works Period of Section 4 Works (548Days)												
KD-1060	Works Period of Section 5 Works (1156Days)	1156	07SEP09 A	05NOV12	07SEP09 A	05NOV12	0													
*Preliminaries																				
Section 1																				
1156	07SEP09 A	05NOV12	07SEP09 A	05NOV12	07SEP09 A	05NOV12	0													
Land Works																				
General																				
S1-1010	Approval & Consent - XP, TTA, MS & Temp Works	190	07SEP09 A	05MAR10	07SEP09 A	18MAR10	134	Approval & Consent - XP, TTA, MS & Temp Works												
S1-1020	Trial PI & Utilities Detection (Except E2 & K)	120	07DEC09 A	17MAR10	08OCT09 A	17MAR10	1d	Trial PI & Utilities Detection (Except E2 & K)												
S1-1030	Portion H2 Cycle Track & Footpath Proposal	40	07SEP09 A	08OCT09 A	08OCT09 A	08OCT09 A	0	Portion H2 Cycle Track & Footpath Proposal												
S1-1040	Portion H2 Diversion Route For Cycle Track	60	07OCT09 A	28NOV09 A	07OCT09 A	28NOV09 A	0	Portion H2 Diversion Route For Cycle Track												
S1-1050	Portion H2 Submission For Hoarding Mural Design	80	07SEP09 A	17FEB10	07SEP09 A	08OCT10	962d	Portion H2 Submission For Hoarding Mural Design												
S1-1060	Portion H2 Set Up For Hoarding Approved Design	30	18FEB10	18MAR10	07OCT10	05NOV12	962d	Portion H2 Set Up For Hoarding Approved Design												
S1-1080	Initial & Utilities Survey (Except E2 & K)	120	05OCT09 A	04MAR10	05OCT09 A	04MAR10	2d	Initial & Utilities Survey (Except E2 & K)												
S1-2010	Final Pipe Tearing & Reinstatement	45	21SEP11	04NOV11	23SEP11	08NOV11	2d	Final Pipe Tearing & Reinstatement												
S1-2020	Completion of Section 1 Works	0	0	08NOV11	08NOV11	08NOV11	0	Completion of Section 1 Works												
Portion C1																				
S1-3010	MTRCL Consent For Works Commencement	160	07SEP09 A	05MAR10	07SEP09 A	06MAR10	1d	MTRCL Consent For Works Commencement												
S1-3020	MTRCL Structure Stability Monitoring	270	15MAY10	03FEB11	13DEC10	06MAR10	212d	MTRCL Structure Stability Monitoring												
S1-3030	Portion C1 Pipe Works CH165.0-237.5 (O)	90	24JUN10	21FEB11	21FEB11	21MAY11	242d	Portion C1 Pipe Works CH165.0-237.5 (O)												
S1-3030A10	Preparation & Submission Of Risk Assessment	40	22FEB10	02APR10	07OCT10	15NOV10	227d	Preparation & Submission Of Risk Assessment												
S1-3030A20	Preparation & Submission Of Method Statement	40	22FEB10	02APR10	07OCT10	15NOV10	227d	Preparation & Submission Of Method Statement												
S1-3030A30	Preparation & Submission Of Temp. Design	40	22FEB10	02APR10	07OCT10	15NOV10	227d	Preparation & Submission Of Temp. Design												
S1-3030B10	Excavation & Shoring	30	28MAY10	15AUG10	16NOV10	03FEB11	172d	Excavation & Shoring												
S1-3030B20	Pipe Laying & Welding	50	17JUL10	05JAN11	23FEB11	172d	0	Pipe Laying & Welding												
S1-3030B30	Backfilling & Reinstatement	60	08MAR10	14SEP10	24FEB11	05MAR11	172d	Backfilling & Reinstatement												
S1-3040	Portion C1 Trough Construction CH237.5-290.0	260	17JUL10	04MAY10	07MAY10	05MAY10	15d	Portion C1 Trough Construction CH237.5-290.0												
S1-3040A20	Preparation & Submission Of Risk Assessment	15	16OCT10	17FEB11	16MAR11	16MAR11	215d	Preparation & Submission Of Risk Assessment												
S1-3040A30	Preparation & Submission Of Method Statement	28	17JUL10	13AUG10	17FEB11	16MAR11	215d	Preparation & Submission Of Method Statement												
S1-3040A40	Preparation & Submission Of Temp. Works	28	17JUL10	13AUG10	17FEB11	16MAR11	215d	Preparation & Submission Of Temp. Works												
S1-3040B10	Installation Of Settlement Marker	3	31JUL10	02AUG10	03MAY11	05MAY11	43d	Installation Of Settlement Marker												
S1-3040B30	Excavation & Shoring For Pipe Trough (Stage 1)	15	18SEP10	09MAR11	09MAR11	20MAR11	172d	Excavation & Shoring For Pipe Trough (Stage 1)												
S1-3040B40	Formwork & Blinding For Trough	3	30SEP10	02OCT10	21MAR11	23MAR11	172d	Formwork & Blinding For Trough												
S1-3040B50	Formwork & Reinforcement For Trough	10	16OCT10	19OCT10	24MAR11	02APR11	172d	Formwork & Reinforcement For Trough												
S1-3040C10	Concreting Of Pipe Trough	3	16OCT10	19OCT10	19OCT10	05APR11	172d	Concreting Of Pipe Trough												
S1-3040C20	Excavation & Shoring For Watermain	15	16OCT10	30OCT10	06APR11	20APR11	172d	Excavation & Shoring For Watermain												
S1-3050	Portion C1 Pipe Works CH237.5-290 (PT)	50	05MAY10	23JUN10	13NOV10	01JAN11	192d	Portion C1 Pipe Works CH237.5-290 (PT)												
S1-3050B10	Pipe Laying & Connection (Welding)	10	31OCT10	09NOV10	21APR11	30APR11	172d	Pipe Laying & Connection (Welding)												
S1-3050B20	Concrete Surround For Installed Watermain	6	10NOV10	01MAY11	08MAY11	08MAY11	172d	Concrete Surround For Installed Watermain												
S1-3050B30	Backfilling Of Pipe Trough	10	21NOV10	11MAY11	11MAY11	21MAY11	172d	Backfilling Of Pipe Trough												
S1-3050B40	Backfilling & Reinstatement	70	01DEC10	03FEB11	23MAY11	30JUL11	172d	Backfilling & Reinstatement												
S1-3060	Portion C1 Pipe Works CH290.0-325.5 (O)	14	09FEB11	22FEB11	09SEP11	22SEP11	210d	Portion C1 Pipe Works CH290.0-325.5 (O)												
S1-3070	Area C1 Portional Pipe Testing	160	17MAR10	12SEP10	05JUL10	03JAN11	113d	Area C1 Portional Pipe Testing												
Portion E1A																				
S1-4020	Portion E1A Pipe Works CH387.5-578.9 (O)	40	03MAR10	11APR10	24JUN10	02AUG10	113d	Portion E1A Pipe Works CH387.5-578.9 (O)												
S1-4020A30	Preparation & Submission Of Risk Assessment	40	03MAR10	11APR10	24JUN10	02AUG10	113d	Preparation & Submission Of Risk Assessment												
S1-4020A40	Preparation & Submission Of Method Statement	40	03MAR10	11APR10	24JUN10	02AUG10	113d	Preparation & Submission Of Method Statement												
S1-4020B10	Preparation & Submission Of Temp. Works	52	03MAY10	23JUN10	24AUG10	14OCT10	113d	Preparation & Submission Of Temp. Works												
S1-4020B20	Stage 1 UTD & Trial PI (CH380-420)	30	12SEP10	11OCT10	03JAN11	01FEB11	113d	Stage 1 UTD & Trial PI (CH380-420)												
S1-4020B30	Fabrication of Access Shaft	0	0	11OCT10	03JAN11	01FEB11	0	Fabrication of Access Shaft												

Start date: 07SEP09
Finish date: 05NOV12
Run date: 04JAN11
Page number: 1A
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Early bar
Progress bar
Critical bar
Start milestone point
Finish milestone point

3 Months Rolling Program (March 2011)

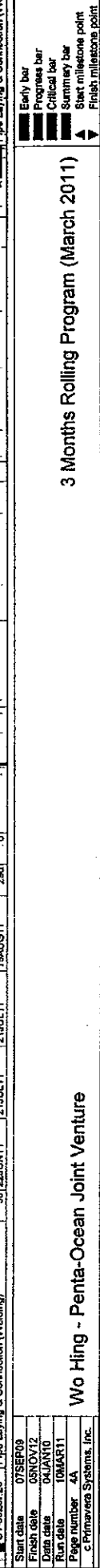
Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
S1-4020B30	Excavation & Support for Trenchless Works	48	12OCT10	25NOV10	02FEB11	18MAR11	113d
S1-4020B40	Pipe Laying & Joint Connection	20	20NOV10	15DEC10	18MAR11	07APR11	173d
S1-4020B50	Backfilling & Reinstatement	7	16DEC10	22AUG10	09APR11	14APR11	113d
S1-4020C05	Existing Trees Relocation	4	19AUG10	22AUG10	25APR11	24PR11	248d
S1-4020C10	Stage 2 UID & Trial PH (CH420-CH480)	10	23AUG10	01SEP10	09MAY11	09MAY11	248d
S1-4020C20	Excavation & Shoring	50	02SEP10	21OCT10	09MAY11	27JUN11	248d
S1-4020C30	Pipe Laying & Connection (Welding)	25	20OCT10	15NOV10	28JUN11	28JUN11	248d
S1-4020C40	Backfilling & Reinstatement	7	16NOV10	23NOV10	23JUL11	24PR11	248d
S1-4020D10	Backfilling & Reinstatement	6	01APR11	06APR11	15APR11	20APR11	14d
S1-4020D20	Excavation & Shoring	100	07APR11	15JUL11	27APR11	25JUL11	14d
S1-4020D30	Pipe Laying & Connection (Welding)	25	16JUL11	09AUG11	30JUL11	23AUG11	14d
S1-4020D40	Backfilling & Reinstatement	16	10AUG11	24AUG11	24AUG11	06SEP11	14d
S1-4030	Portion E1A Pipe Works CH576.6-585.8 (TL-B)	108	23FEB11	10JUN11	24MAY11	08SEP11	90d
S1-4030B10	Fabrication of Access Shaft	95	27SEP10	20NOV10	01FEB11	27MAR11	127d
S1-4030B20	Excavation & Support for Trenchless Works	50	21NOV10	09JAN11	28MAR11	19MAY11	127d
S1-4030B30	Pipe Laying & Joint Connection	15	10JAN11	24JAN11	17MAY11	31MAY11	127d
S1-4030B40	Backfilling & Reinstatement	8	25JAN11	01FEB11	01SEP11	219d	
S1-4050	Area E1A Portional Pipe Testing	14	26AUG11	08SEP11	08SEP11	22SEP11	14d
Portion E1B + E2 SWM							
S1-4010	Portion E1B Diversion of Existing Storm Drain	50	13SEP10	01NOV10	28MAR11	18MAY11	186d
S1-4010A10	Trees Transplanting (LCSD Consent Required)	5	09SEP10	13SEP10	18DEC10	22DEC10	100d
S1-4010A20	Temporary Relocation of Irrigation Pipe	50	14SEP10	12NOV10	23DEC10	20FEB11	100d
S1-4010A30	Excavation for Irrigation Pipe Perm. Diversion	20	11MAR11	30MAR11	16JUL11	04AUG11	127d
S1-4010A40	Irrigation Pipe Installation	20	31MAR11	09APR11	20AUG11	29AUG11	142d
S1-4010A50	Excavation for Storm Drain Diversion	20	11MAR11	30MAR11	16JUL11	04AUG11	127d
S1-4010A60	Pipe Laying & MH Construction	25	31MAR11	06AUG11	05AUG11	29AUG11	127d
S1-4010A70	Backfilling & Reinstatement	10	25APR11	04MAY11	30AUG11	03SEP11	127d
S1-4010A80	Portion E1B Pipe Works CH585.6-590.5 (C)	115	02NOV10	24FEB11	17MAY11	08SEP11	195d
S1-4040B10	Excavation & Shoring For Pipe Trough (Stage 1)	15	18NOV10	22DEC10	21FEB11	01APR11	100d
S1-4040B20	FW & Reinforcement for Pipe Trough	15	23DEC10	06JAN11	17MAY11	31MAY11	145d
S1-4040B30	Pipe Laying & Support Casting	25	25JAN11	18FEB11	07JUN11	25JUN11	127d
S1-4040B40	Backfilling & Reinstatement	20	18FEB11	10MAR11	26JUN11	15JUL11	127d
S1-4410	Portion E2 DN600A SWM Works CH7.1-63.7 (UC)	50	05MAR10	23APR10	26JUL10	13SEP10	143d
S1-4410A10	Preparation & Submission Of Risk Assessment	26	18FEB10	18MAR10	19JAN11	15FEB11	334d
S1-4410A20	Preparation & Submission Of Method Statement	24	18FEB10	18MAR10	19JAN11	15FEB11	334d
S1-4410A30	Submission & Approval Of Temp. Work	26	18FEB10	18MAR10	19JAN11	15FEB11	334d
S1-4410B10	Installation & Connection Of DN600A SWM	8	14FEB11	21FEB11	16FEB11	23FEB11	2d
S1-4410B20	Support & Fixing Of DN600A SWM	3	22FEB11	24FEB11	24FEB11	25FEB11	2d
S1-4420	Portion E1B DN600A SWM Works CH0.0-7.1 (O)	30	24APR10	23MAY10	14SEP10	13OCT10	143d
S1-4420B10	Excavation & Shoring	6	25FEB11	02MAR11	27FEB11	05MAR11	2d
S1-4420B20	Main Laying & Connection With Trough Portion	8	03MAR11	10MAR11	05MAR11	12NOV10	143d
S1-4430B10	Excavation & Shoring	4	18MAR11	23MAR11	21MAR11	29MAR11	2d
S1-4430B20	Main Laying & Connection With Trough Portion	30	23JUN10	22JUL10	13NOV10	12DEC10	143d
S1-4440	E1B Existing DN600 SWM Diversion & Demolition	14	08MAR11	23MAR11	23MAR11	24MAR11	2d
S1-4440A10	Issuance Of Temp. Water Supply Suspension Notice	2	23MAR11	24MAR11	23MAR11	24MAR11	2d
S1-4440B10	Shut Off Of Existing DN600 SWM	2	23MAR11	24MAR11	23MAR11	24MAR11	2d
S1-4440B20	DN600A Diversion Main Connect To Existing	6	25MAR11	30MAR11	23MAR11	24MAR11	2d
S1-4440B30	Removal Of Existing DN600 SWM	6	25MAR11	30MAR11	23MAR11	24MAR11	2d
S1-4445	Portion E1B Trough Construction Under Planter	60	24JUN10	22AUG10	02JAN11	02MAY11	192d
S1-4445B10	Excavation & Shoring For Pipe Trough (Stage 2)	40	23DEC10	31JAN11	12MAY11	11MAY11	100d
S1-4445B20	FW & Reinforcement for Pipe Trough	15	01FEB11	15FEB11	12MAY11	12MAY11	100d
S1-4450	Portion E1B Pipe Works CH680.4-677.4 (PT)	60	11OCT10	09DEC10	03MAR11	01MAY11	143d
S1-4450B10	Pipe Laying & Support Casting	25	18FEB11	12MAR11	27MAY11	23JUN11	100d
S1-4450B20	Backfilling & Reinstatement	20	13MAR11	01APR11	27MAY11	19JUL11	100d
S1-4460	Portion E1B Pipe Works CH677.4-695.9 (O)	40	09FEB11	31MAY11	20MAR11	08SEP11	100d
S1-4460B10	Portion E1B Pipe Works CH677.4-695.9 (O)	30	02MAY11	31MAY11	10AUG11	08SEP11	100d
S1-4470	Portion E1B Pipe Works CH695.9-698.5 (UC)	20	10DEC10	29DEC10	02MAY11	21MAY11	143d

Start date 07SEP09
Finish date 05NOV12
Run date 04JAN10
Run date 10MAY11
Page number 2A
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Legend:
 ■ Early bar
 ■ Progress bar
 ■ Critical bar
 ■ Summary bar
 ■ Start milestone point
 ■ Finish milestone point

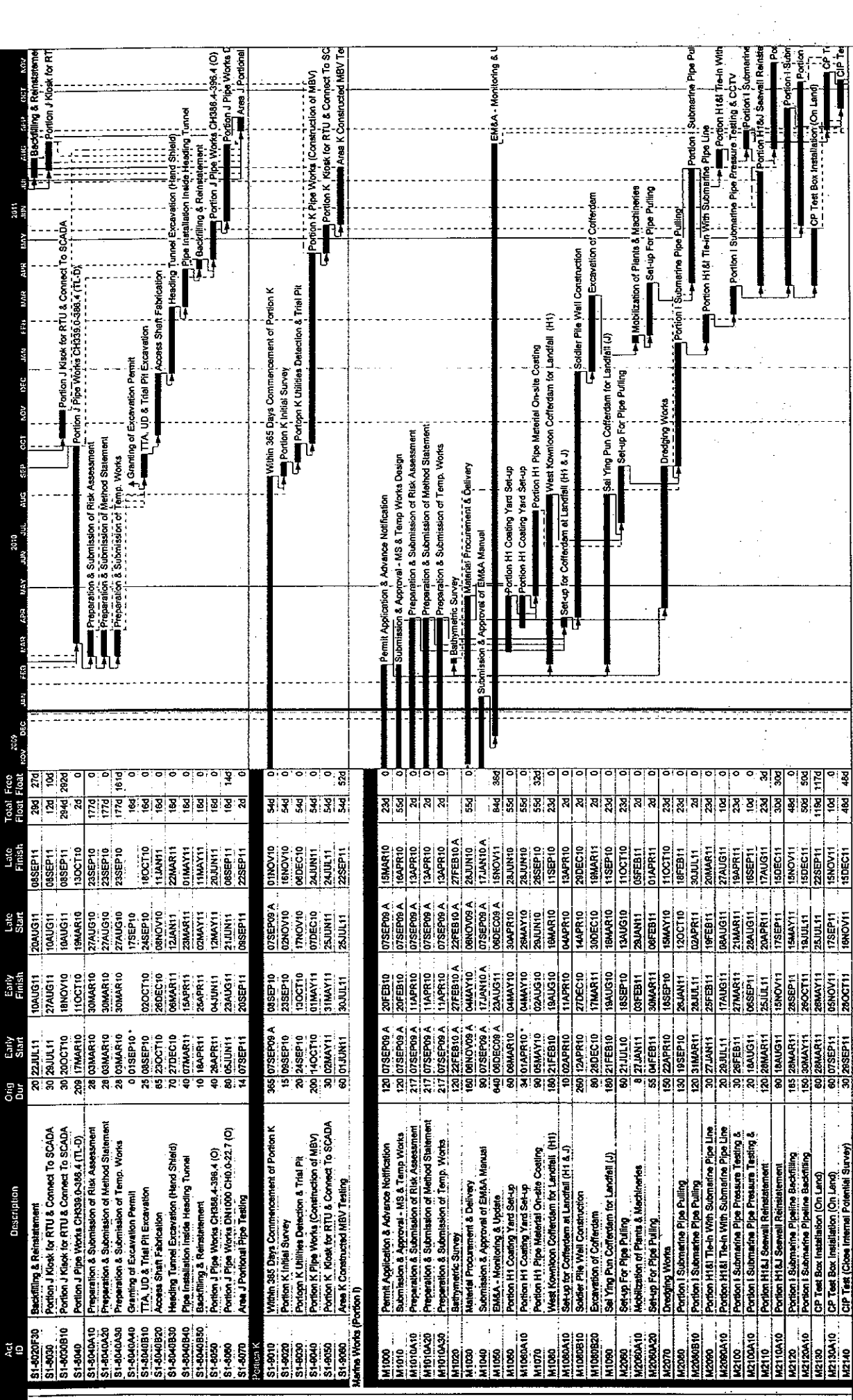
3 Months Rolling Program (March 2011)

Act ID	Description	Orig Dur	Early Start	Early Finish	Latest Start	Latest Finish	Total Float	Free Float
S1-5110330	Excavation & Shoring for Receiving Pit (A1)	42	28JUN10	08AUG10	24AUG10	04OCT10	56d	0
S1-5110310	Sleeve Pipe Installation by Jacking	9	10AUG10	19AUG10	05OCT10	13OCT10	56d	0
S1-5115115	TL-E DN800 SWM Pipe Installation CH90.0-225.5	25	23MAR11	06NOV11	17APR11	11MAY11	25d	0
S1-5115220	Pipe Laying & Connection	30	08OCT10	06NOV11	03DEC10	01JAN11	56d	0
S1-5115230	Sleeve Pipe Grouting	10	07NOV10	16NOV10	21FEB11	02MAR11	106d	0
S1-5115240	Backfilling & Reinstatement of Jacking Pit	30	17NOV10	16DEC10	03MAR11	01APR11	106d	0
S1-5120020	Portion E2 DN800 SWM Works CH225.5-252.0 (O)	25	17APR11	11MAY11	12MAY11	05JUN11	25d	0
S1-5120030	Portion E2 DN800 SWM Works CH225.2-252.0 (O)	25	17DEC10	10JAN11	02APR11	26APR11	106d	50d
S1-5120040	TL-F SWM Sleeve Jacking CH252.0-432.0 (A1-A3)	142	08MAR10	06APR10	30OCT10	28DEC10	20d	0
S1-5120050	Preparation & Submission of Risk Assessment	60	06FEB10	06APR10	30OCT10	28DEC10	268d	164d
S1-5120060	Preparation & Submission of Method Statement	60	06FEB10	06APR10	30OCT10	28DEC10	268d	164d
S1-5120070	Preparation & Submission of Temp. Design	14	18SEP10	01OCT10	29DEC10	11JAN11	102d	28d
S1-5120080	Jacking Pit (A3) Modification & Set-up (TL-F)	30	18SEP10	17OCT10	09DEC10	10JAN11	76d	20d
S1-5120090	Sleeve Pipe Installation by Jacking	30	18SEP10	17OCT10	09DEC10	10JAN11	76d	20d
S1-5120100	TL-F DN800 SWM Pipe Installation CH252.0-432.0	50	01FEB11	22MAR11	26FEB11	16APR11	25d	0
S1-5120110	Pipe Laying & Connection	25	07NOV10	01DEC10	02JAN11	26JAN11	56d	0
S1-5120120	Sleeve Pipe Grouting	10	02DEC10	10DEC10	01JAN11	10JUL11	211d	0
S1-5120130	Backfilling & Reinstatement	30	12DEC10	10JAN11	11JUL11	09AUG11	211d	50d
S1-5120140	Area E2 Portional Pipe Testing	14	07SEP11	20SEP11	05SEP11	22SEP11	2d	0
S1-51403810	Area E2 Portional Pipe Testing	31	01APR11	14APR11	08SEP11	22SEP11	191d	156d
Portion F								
S1-4010010	Portion F Pipe Works CH985.5-1240.5 (O)	180	23NOV10	21MAY11	13DEC10	10JUN11	20d	0
S1-4010020	Stage 1 Excavation & Shoring CH1060-1240.5	100	24MAR10	21JAN11	13DEC10	10JUN11	304d	0
S1-4010030	Formation Trimming	10	02JUL10	11JUL10	02MAY11	11MAY11	304d	0
S1-4010040	Pipe Laying & Connection (Welding)	30	12JUL10	10AUG10	12MAY11	10JUN11	304d	0
S1-4010050	Backfilling & Reinstatement	50	11AUG10	29SEP10	13JUN11	30JUL11	304d	63d
S1-4010060	Stage 2 Excavation & Shoring CH985.5-1060	40	02DEC10	10JAN11	31JUL11	08SEP11	241d	131d
S1-4020010	Portion F DN800 SWM Works CH432.0-494.7 (O)	120	26JUL10	23NOV10	15AUG10	12DEC10	20d	0
S1-4020020	Portion F DN800 SWM Works CH432.0-494.7	120	12NOV10	11MAR11	12MAY11	08SEP11	181d	71d
S1-4020030	Area F Portional Pipe Testing	14	22MAY11	04JUN11	06SEP11	22SEP11	110d	106d
Portion H1								
S1-7010	Portion H1 Temporary Access Road	80	28DEC09 A	31JAN10	26DEC09 A	05MAR10	33d	2d
S1-7020	Portion H1 Pipe Works CH1468.5-1516.5 (O)	40	22MAY11	30JUN11	11JUN11	20JUL11	20d	0
S1-7030	Portion H1 Pipe Works CH1516.5-1544.7 (O-S)	50	01JUL11	19AUG11	21JUL11	08SEP11	20d	0
S1-7040	Area H1 Portional Pipe Testing	14	28AUG11	02SEP11	09SEP11	22SEP11	26d	18d
Portion J								
S1-4020040	Portion J Pipe Works CH40.0-48.0 (O-S Wall)	40	28JUL11	06SEP11	31JUL11	08SEP11	2d	0
S1-4020050	Portion J Pipe Works CH48.0-338.0 (O)	300	02OCT10	28JUL11	04OCT10	30JUL11	2d	0
S1-4020060	Stage 1 Excavation & Shoring CH250-290 S1	55	22JUN10	15AUG10	21JUL10	13SEP10	29d	0
S1-4020070	Pipe Laying & Connection (Welding)	20	16AUG10	04SEP10	14SEP10	03OCT10	29d	0
S1-4020080	Associated Chamber Construction	30	05SEP10	04OCT10	04OCT10	02NOV10	29d	0
S1-4020090	Backfilling & Reinstatement	15	05OCT10	16OCT10	03NOV10	17NOV10	29d	0
S1-4020100	Stage 1 Excavation & Shoring CH250-290 S2	20	27FEB11	18MAR11	29MAR11	16APR11	29d	0
S1-4020110	Associated Chamber Construction	30	19MAR11	17APR11	17APR11	16MAY11	29d	0
S1-4020120	Backfilling & Reinstatement	15	16APR11	02MAY11	17MAY11	31MAY11	29d	0
S1-4020130	Stage 2 Excavation & Shoring CH180-250	55	20OCT10	13DEC10	18NOV10	11JAN11	29d	0
S1-4020140	Pipe Laying & Connection (Welding)	30	14DEC10	12JAN11	12JAN11	10FEB11	29d	0
S1-4020150	Associated Chamber Construction	30	13JAN11	11FEB11	12MAY11	12MAY11	29d	0
S1-4020160	Backfilling & Reinstatement	15	12FEB11	28FEB11	13MAR11	27MAR11	29d	0
S1-4020170	Stage 3 Excavation & Shoring CH140-180	35	11OCT10	14NOV10	04JUN11	05JUL11	233d	0
S1-4020180	Pipe Laying & Connection (Welding)	20	19NOV10	04DEC10	06JUL11	25JUL11	233d	0
S1-4020190	Associated Chamber Construction	30	05DEC10	03JAN11	28JUL11	24AUG11	233d	0
S1-4020200	Backfilling & Reinstatement	15	04JAN11	18JAN11	26AUG11	08SEP11	233d	231d
S1-4020210	Stage 4 Excavation & Shoring CH45-CH140	20	30MAY11	18JUL11	01JUN11	20JUL11	2d	0
S1-4020220	Pipe Laying & Connection (Welding)	20	19JUL11	07AUG11	21JUL11	09AUG11	2d	0
S1-4020230	Associated Chamber Construction	20	08AUG11	10AUG11	10AUG11	29AUG11	2d	0
S1-4020240	Backfilling & Reinstatement	10	28AUG11	06SEP11	30AUG11	08SEP11	2d	0
S1-4020250	Stage 5 Excavation & Shoring CH290-340	50	03MAY11	21JUN11	01JUN11	20JUL11	29d	0
S1-4020260	Pipe Laying & Connection (Welding)	30	22JUN11	21JUL11	19AUG11	19AUG11	29d	0



3 Months Rolling Program (March 2011)

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



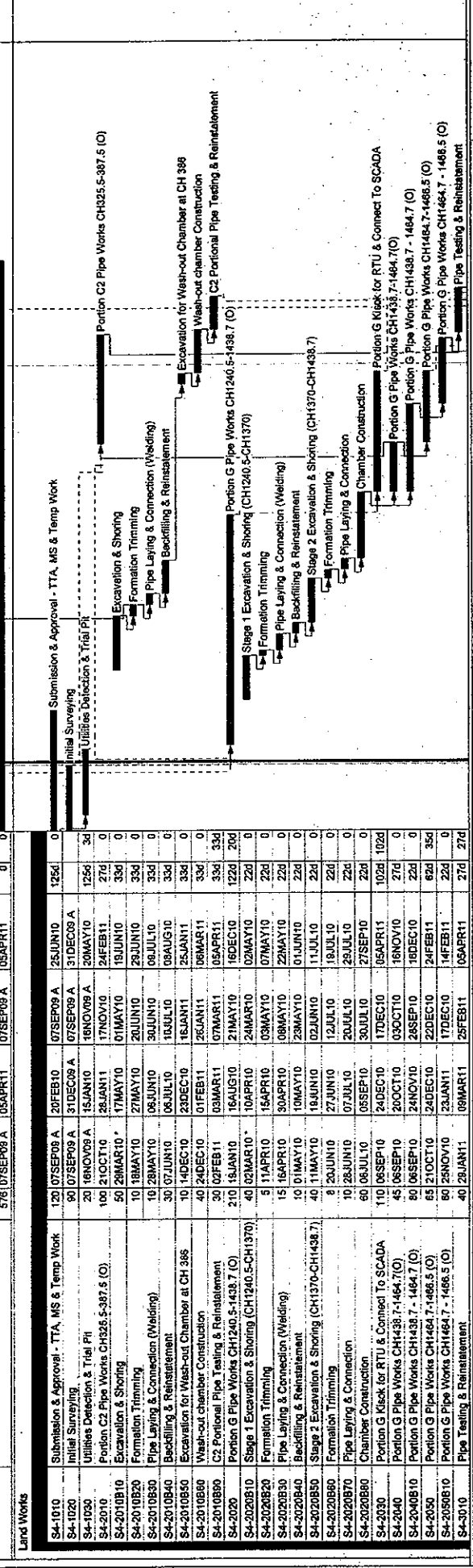
Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float	Free Float
S1-9020F30	Backfilling & Reinstatement	20	22JUL11	10AUG11	20AUG11	03SEP11	23d	27d
S1-9030	Portion J Kiosk for RTU & Connect To SCADA	30	28JUL11	27AUG11	10AUG11	03SEP11	12d	10d
S1-9030B10	Portion J Kiosk for RTU & Connect To SCADA	30	28JUL11	27AUG11	10AUG11	03SEP11	29d	29d
S1-9040	Portion J Pipe Works CH339.6-396.4 (TL-D)	209	17MAR10	11OCT10	19MAR10	13OCT10	2d	0
S1-9040A10	Preparation & Submission of Risk Assessment	28	03MAR10	30MAR10	27AUG10	23SEP10	177d	0
S1-9040B20	Preparation & Submission of Method Statement	28	03MAR10	30MAR10	27AUG10	23SEP10	177d	16d
S1-9040C30	Granting of Excavation Permit	0	01SEP10*	17SEP10	27AUG10	23SEP10	16d	0
S1-9040B10	TTA, UD & Trial Pit Excavation	65	23OCT10	02NOV10	24SEP10	18OCT10	16d	0
S1-9040B20	Access Shaft Fabrication	70	27DEC10	06MAR11	08NOV10	22MAR11	16d	0
S1-9040B30	Heading Tunnel Excavation (Hard Shield)	40	07MAR11	15APR11	23MAR11	01MAY11	16d	0
S1-9040B40	Pipe Installation Inside Heading Tunnel	10	18APR11	25APR11	02MAY11	11MAY11	16d	0
S1-9040B50	Backfilling & Reinstatement	40	28APR11	04JUN11	12MAY11	26JUN11	16d	0
S1-9050	Portion J Pipe Works CH339.6-396.4 (C)	60	05JUN11	23AUG11	21JUN11	08SEP11	16d	14d
S1-9060	Portion J Pipe Works DN1000 CH40.0-22.7 (C)	14	07SEP11	20SEP11	08SEP11	22SEP11	2d	0
S1-9070	Area J Portion Pipe Trailing	365	07SEP09 A	09SEP10	07SEP09 A	01NOV10	54d	0
200905K	Within 365 Days Commencement of Portion K	19	09SEP10	23SEP10	02NOV10	16NOV10	54d	0
S1-9020	Portion K Initial Survey	20	24SEP10	13OCT10	17NOV10	06DEC10	54d	0
S1-9030	Portion K Utilities Detection & Trial Pit	200	14OCT10	01MAY11	07DEC10	24JUN11	54d	0
S1-9040	Portion K Pipe Works (Construction of MBV)	30	02MAY11	31MAY11	25JUN11	24JUL11	54d	0
S1-9050	Portion K Kiosk for RTU & Connect To SCADA	60	07JUN11	30JUL11	25JUL11	22SEP11	54d	52d
S1-9060	Area K Constructed MBV Testing							
M1000	Permit Application & Advance Notification	120	07SEP09 A	20FEB10	07SEP09 A	19MAR10	23d	0
M1010	Submission & Approval - MS & Temp Works Design	120	07SEP09 A	20FEB10	07SEP09 A	16APR10	55d	0
M1010A10	Preparation & Submission of Risk Assessment	217	07SEP09 A	11APR10	07SEP09 A	13APR10	2d	0
M1010A20	Preparation & Submission of Method Statement	217	07SEP09 A	11APR10	07SEP09 A	13APR10	2d	0
M1010A30	Preparation & Submission of Temp. Works	217	07SEP09 A	11APR10	07SEP09 A	13APR10	2d	0
M1020	Bathymetric Survey	120	22FEB10 A	04MAY10	22FEB10 A	27FEB10 A	2d	0
M1030	Material Procurement & Delivery	160	08NOV09 A	04MAY10	08NOV09 A	26JUN10	55d	0
M1040	Submission & Approval of EM&A Manual	90	07SEP09 A	17JAN10 A	07SEP09 A	17JAN10 A	84d	0
M1050	EM&A - Monitoring & Update	640	06DEC09 A	23AUG11	06DEC09 A	19NOV11	36d	0
M1060	Portion H1 Coating Yard Set-up	60	08MAR10	04MAY10	30APR10	28JUN10	55d	0
M1060A10	Portion H1 Coating Yard Set-up	34	01APR10*	04MAY10	28MAY10	28JUN10	55d	0
M1070	Portion H1 Pipe Material On-site Coating	90	09MAY10	02AUG10	26JUN10	25SEP10	95d	32d
M1080	West Kowloon Cofferdam for Landfall (H1)	180	21FEB10	19AUG10	19MAR10	11SEP10	23d	0
M1090A10	Set-up for Cofferdam at Landfall (H1 & J)	10	02APR10	11APR10	04APR10	13APR10	2d	0
M1090B10	Soldier Pile Wall Construction	280	12APR10	27DEC10	14APR10	20DEC10	2d	0
M1090B20	Excavation of Cofferdam	80	28DEC10	17MAR11	30DEC10	19MAR11	2d	0
M1090	Set-up for Pipe Pulling	180	21FEB10	19AUG10	19AUG10	11SEP10	23d	0
M2060	Mobilization of Plants & Machinery	8	27JAN11	03FEB11	28JAN11	03FEB11	2d	0
M2060A10	Set-up for Pipe Pulling	55	04FEB11	30MAR11	08FEB11	01APR11	2d	0
M2070	Dredging Works	150	22APR10	18SEP10	18MAY10	11OCT10	23d	0
M2080	Portion I Submarine Pipe Pulling	130	19SEP10	26JAN11	12OCT10	18FEB11	23d	0
M2090B10	Portion I Submarine Pipe Pulling	120	31MAR11	28JUL11	02APR11	30JUL11	2d	0
M2090	Portion H1&J Tie-in With Submarine Pipe Line	30	27JAN11	25FEB11	10FEB11	20MAR11	23d	0
M2090A10	Portion H1&J Tie-in With Submarine Pipe Line	20	28JUL11	17AUG11	09AUG11	27AUG11	10d	0
M2100	Portion I Submarine Pipe Pressure Testing & CCTV	30	28FEB11	27MAR11	21MAR11	19APR11	23d	0
M2100A10	Portion I Submarine Pipe Pressure Testing & CCTV	10	08AUG11	06SEP11	29AUG11	16SEP11	10d	0
M210	Portion H1&J Seawall Reinstatement	120	28MAR11	25JUL11	20APR11	17AUG11	23d	3d
M210A10	Portion H1&J Seawall Reinstatement	90	18AUG11	15NOV11	17SEP11	15DEC11	30d	30d
M2120	Portion I Submarine Pipeline Backfilling	185	29MAR11	26SEP11	15MAY11	19NOV11	48d	0
M2120A10	Portion I Submarine Pipeline Backfilling	150	30MAY11	26OCT11	13JUL11	15DEC11	50d	50d
M2130	CP Test Box Installation (On Land)	60	28MAR11	29MAY11	23JUL11	22SEP11	119d	117d
M2130A10	CP Test Box Installation (On Land)	60	07SEP11	05NOV11	17SEP11	15NOV11	10d	0
M2140	CP Test Box Installation (On Land)	30	26SEP11	29OCT11	16NOV11	15DEC11	48d	48d

3 Months Rolling Program (March 2011)

Start date: 07SEP09
 Finish date: 09NOV12
 Run date: 04JAN10
 Run date: 19MAR11
 Page number: 5A
 c Primavera Systems, Inc.

Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float	Free Float
M210A10	CIP Test (Close Interval Potential Survey)	30	08NOV11	05DEC11	18NOV11	15DEC11	10d	10d
M2150	Completion of Section 1 Works	0	15DEC11	15DEC11	15DEC11	15DEC11	0	0

Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float	Free Float
Section 2								
Land Works								
S2-1010	Submission & Approval - XP, MS & Temp Works	180	07SEP09 A	28FEB10	07SEP09 A	05MAR10	71d	0
S2-1020	Initial & Utilities Survey	90	02JAN10 A	02JAN10 A	02JAN10 A	02JAN10 A	0	0
S2-1030	Utilities Detection & Trial Pit	30	06DEC09 A	17JAN10	06DEC09 A	03FEB10	17d	0
S2-1040	Within 90 Days Commencement of Portion A	90	07SEP09 A	09DEC09 A	07SEP09 A	09DEC09 A	0	0
S2-2010	Portion A Pipe Works CH20.0-88.5 (O)	150	27FEB10	26JUL10	06MAR10	02AUG10	7d	0
S2-2010B1	Excavation & Shoring	40	27FEB10	09APR10	09APR10	18MAY10	45d	0
S2-2010B2	Formulation Trimming	10	04APR10	19APR10	19MAY10	28MAY10	45d	0
S2-2010B30	Pipe Laying & Connection (Welding)	15	14APR10	29MAY10	29MAY10	12JUN10	45d	0
S2-2010B40	Construction of Chamber	75	29APR10	12JUL10	13JUN10	26AUG10	45d	0
S2-2010B50	Backfilling	5	13JUL10	17JUL10	27AUG10	31AUG10	45d	0
S2-2020	Portion A Kiosk For RTU & Connect To SCADA	30	27JUL10	28AUG10	01SEP10	30SEP10	35d	0
S2-2020A10	Portion A Kiosk For RTU & Connect To SCADA	30	18JUL10	16AUG10	01SEP10	30SEP10	45d	0
S2-2030	Portion A Pipe Trough Construction CH88.5-102	30	18JAN10	16FEB10	04FEB10	05MAR10	17d	0
S2-2030B10	Excavation & Shoring For Pipe Trough	40	20JAN10	28FEB10	28JUN10	06AUG10	158d	0
S2-2030B20	Pipe Trough Concrete & Associated Works	10	01MAR10	10MAR10	07AUG10	16AUG10	158d	0
S2-2040	Portion A Pipe Works CH88.5-102 (PT)	30	17FEB10	10MAR10	03JUL10	01AUG10	139d	0
S2-2040B10	Pipe Laying & Connection (Welding)	5	14APR10	16APR10	17AUG10	21AUG10	125d	0
S2-2040B20	Construction of Saddle	5	19APR10	23APR10	23AUG10	28AUG10	125d	0
S2-2040B30	Bedfilling	5	24APR10	28APR10	27AUG10	31AUG10	125d	0
S2-2050	Portion A Pipe Works CH102.0-105.0 (O)	30	18APR10	17MAY10	01SEP10	30SEP10	136d	106d
S2-2060	Pipe Testing & Reinstatement	80	28AUG10	14OCT10	01OCT10	29NOV10	36d	36d
S2-3010	Completion of Section 2 Works	60	17AUG10	29OCT10	01OCT10	29NOV10	45d	45d
Section 4								
Land Works								
S4-1010	Submission & Approval - TTA, MS & Temp Work	120	07SEP09 A	20FEB10	07SEP09 A	25JUN10	125d	0
S4-1020	Initial Surveying	90	07SEP09 A	31DEC09 A	07SEP09 A	31DEC09 A	0	0
S4-1030	Utilities Detection & Trial Pit	20	16NOV09 A	15JAN10	16NOV09 A	20MAY10	125d	3d
S4-2010	Portion C2 Pipe Works CH325.5-387.5 (O)	180	21OCT10	25JAN11	17NOV10	24FEB11	27d	0
S4-2010B10	Excavation & Shoring	50	28MAY10	17MAY10	01MAY10	19JUN10	33d	0
S4-2010B20	Formulation Trimming	10	28MAY10	06JUN10	20JUN10	28JUN10	33d	0
S4-2010B30	Pipe Laying & Connection (Welding)	30	07JUN10	06JUL10	10JUL10	09AUG10	33d	0
S4-2010B40	Bedfilling & Reinstatement	10	14DEC10	23DEC10	16JAN11	25JAN11	33d	0
S4-2010B50	Excavation for Wash-out Chamber at CH 388	40	24DEC10	01FEB11	26JAN11	06MARR11	33d	0
S4-2010B60	Wash-out chamber Construction	20	02FEB11	16AUG10	07MARR11	05APR11	33d	33d
S4-2010B70	C2 Portional Pipe Testing & Reinstatement	210	18JAN10	16AUG10	17MAY10	16DEC10	122d	29d
S4-2020	Portion G Pipe Works CH1240.5-1438.7 (O)	5	11APR10	15APR10	03MAY10	07MAY10	22d	0
S4-2020B10	Stage 1 Excavation & Shoring (CH1240.5-CH1370)	15	15APR10	30APR10	30APR10	22MAY10	22d	0
S4-2020B20	Formulation Trimming	10	01MAY10	10MAY10	10MAY10	01JUN10	22d	0
S4-2020B30	Pipe Laying & Connection (Welding)	40	11MAY10	10MAY10	28MAY10	11JUN10	22d	0
S4-2020B40	Bedfilling & Reinstatement	8	20JUN10	07JUL10	12JUL10	18JUL10	22d	0
S4-2020B50	Formulation Trimming	10	28JUN10	07JUL10	20JUL10	18JUL10	22d	0
S4-2020B60	Pipe Laying & Connection	60	06JUL10	05SEP10	30JUL10	27SEP10	102d	0
S4-2030	Portion G Kiosk For RTU & Connect To SCADA	110	06SEP10	24OCT10	17DEC10	05APR11	102d	102d
S4-2040	Portion G Pipe Works CH1438.7-1464.7 (O)	45	06SEP10	20OCT10	03OCT10	16NOV10	27d	0
S4-2040B10	Portion G Pipe Works CH1438.7-1464.7 (O)	80	06SEP10	24NOV10	28SEP10	18DEC10	22d	0
S4-2050	Portion G Pipe Works CH1464.7-1466.5 (O)	65	21OCT10	24DEC10	22DEC10	24FEB11	62d	35d
S4-2050B10	Portion G Pipe Works CH1464.7-1466.5 (O)	60	29NOV10	23JAN11	17DEC10	14FEB11	22d	0
S4-3010	Pipe Testing & Reinstatement	40	28JAN11	09MARR11	25FEB11	05APR11	27d	27d



Start date	07SEP09
Finish date	05NOV12
Data date	04JAN10
Run date	10MARR11
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3 Months Rolling Program (March 2011)

Wo Hing - Penta-Ocean Joint Venture

Crimmanna Systems, Inc.



Appendix F

ET Weekly Site Inspection Records

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	03/03/11	Inspected by	RE	IEC	Contractor	ET
Time	07:30	Name	WYTH Rosa	2/11	George Ng	Linda Lam 6/26/2002

Weather Condition Wind : Sunny / Fine / Cloudy / Drizzle / Rain / Storm / Hazy : Calm (Light) Breeze / Strong : 18 °C : High / Moderate / Low

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs	
Fugitive Dust Emission				
▪ Dust control / mitigation measures shall be provided to prevent dust nuisance.	✓			
▪ Any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading.	✓			
▪ The working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet.	✓			
▪ The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle	✓			
▪ Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.	✓			
▪ The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or 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	
Noise Impact					
▪	The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	✓			
▪	The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	✓			
▪	Noisy equipment and mobile plant shall always be site away from NSRs.	✓			
▪	Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪	Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	✓			
▪	Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of PME whenever practicable.	✓			
▪	Quality Powered mechanical equipment (Quality PME), which are construction plants and equipments that are notably quieter, more environmental friendly and efficiently, recognized by the Noise Control Authority for the purpose of CNP application should be used to reduce the noise generated from the construction plants effectively. The Contractor shall note the required procedures involved in application of the QPME.	✓			
▪	Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪	Air compressors and hand held breakers should have noise labels.	✓			
▪	Compressors and generators should operate with door closed.	✓			
▪	Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	✓			
Water Quality					
Mitigation Measures for Dredging					
▪	Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m ³ per day.			✓	No dredging work was observed.
▪	Deployment of frame type silt curtain should be fully enclosed the grab while dredging works are in progress.			✓	No dredging work was observed.
▪	Deployment of silt screen should be at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress	✓			
▪	Tight-closing grabs should be used to minimize the loss of sediment to suspension during dredging works. For dredging of any contaminated mud, closed watertight grabs must be used.	✓			
▪	All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash	✓			
▪	The decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard	✓			
▪	Adequate free board shall be maintained on barges to ensure that decks are not washed by wave action.	✓			
▪	All barges used for the transport of dredged materials should be fitted with tight bottom seals to prevent leakage of material during loading and transport	✓			
▪	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	
Water Quality				
Mitigation Measures for other Construction Activities				
<ul style="list-style-type: none"> Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the storm runoff being directed into foul sewers 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. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains 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 WCs Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices. Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS. Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. 	√			
Waste Management				
C&D Materials				
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	√		√	
Chemical Waste				
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	√			

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


Implementation Stages*	Remark		
	Yes	No	Not Obs N/A
Environmental Checklist			
Marine Ecology			
Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.		✓	No dredging work was observed.
Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress.		✓	No dredging work was observed.
Deployment of silt screen at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.	✓		
Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	✓		
Good Site Practices			
The Environmental Permit should be displaced conspicuously on site.	✓		
Construction noise permits should be posted at site entrance or available for site inspection.	✓		
Chemical storage area provided with lock and located on sealed areas.	✓		
All chemicals should be placed at the banded area with adequate band capacity (>110% of largest tank).	✓		
Any unused chemicals or those with remaining functional capacity should be recycled.	✓		
All generators, fuel and oil storage are within bundle areas.	✓		
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
1	Rubbish skip at Portion J was noted full of rubbish.	Follow-up	To dispose of the rubbish properly and regularly.	110303_001	08/03/11

Remark

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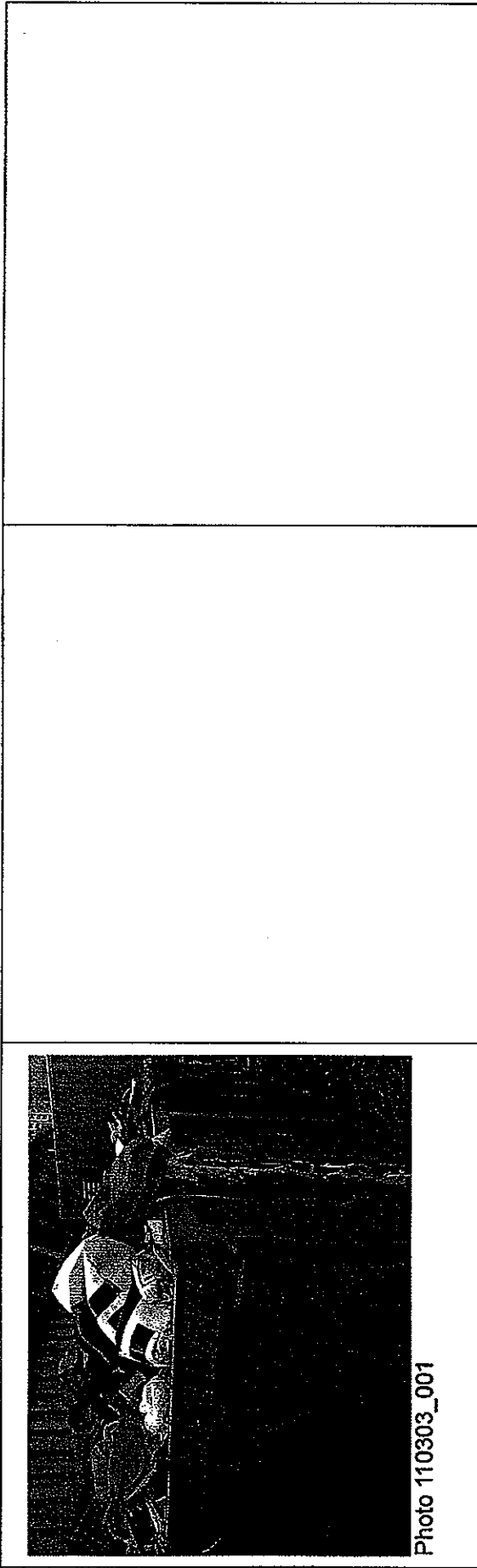
Inspected by	Name	Signature	Date
	Linda Law		03 March 2011

Contract No. 9/MSD/08

Laying of Western Cross Harbour Main and Associated Land Mains

From West Kowloon to Sai Ying Pun

Photos



WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	08/03/11	Inspected by	RE	IEC	Contractor	ET
Time	09:30	Name				Loke Lam Kwok Lan

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

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

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs	
Noise Impact				
<ul style="list-style-type: none"> The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted. The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process. Noisy equipment and mobile plant shall always be site away from NSRs. Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials. Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of PME whenever practicable. Quality Powered mechanical equipment (Quality PME), which are construction plants and equipments that are notably quieter, more environmental friendly and efficiently, recognized by the Noise Control Authority for the purpose of CNP application should be used to reduce the noise generated from the construction plants effectively. The Contractor shall note the required procedures involved in application of the QPME. Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works. Air compressors and hand held breakers should have noise labels. Compressors and generators should operate with door closed. Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 	✓			
Water Quality				
Mitigation Measures for Dredging				
<ul style="list-style-type: none"> Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m³ per day. Deployment of frame type silt curtain should be fully enclosed the grab while dredging works are in progress. 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. 	✓	✓	✓	No dredging work was observed. No dredging work was observed.

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

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

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Marine Ecology				
Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.			√	No dredging work was observed.
Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress.			√	No dredging work was observed.
Deployment of silt screen at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.		√		
Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	√			
Good Site Practices				
The Environmental Permit should be displaced conspicuously on site.	√			
Construction noise permits should be posted at site entrance or available for site inspection.	√			
Chemical storage area provided with lock and located on sealed areas.	√			
All chemicals should be placed at the banded area with adequate band capacity (> 110% of largest tank).	√			
Any unused chemicals or those with remaining functional capacity should be recycled.	√			
All generators, fuel and oil storage are within bundle areas.	√			
Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, surps 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
1	Follow up action to item 1 on 03/03/11, rubbish inside the rubbish skip at Portion J was disposed of.	Closed	---	110308_001	---
2	Silt screen at the sea water intake at Kowloon South Salt Water Pumping Station was found damaged.	Follow-up	To repair and maintain the silt screen properly.	110308_002	15/03/11

Remark

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Inspected by	Name Linda Law	Signature <i>Linda Law</i>	Date 08 March 2011

Contract No. 9/WSD/08

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

Photos



Photo 110308_001



Photo 110308_002

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	15/03/11	Inspected by	RE [Signature]	IEC	Contractor	ET
Time	09:45	Name	[Signature]		JWC	hde con Gde con

Weather : Sunny / Fine / Cloudy / Drizzle / Storm / Hazy
 Condition : Calm / Light / Breeze / Strong
 Wind : 15°C
 Humidity : High / Moderate / Low

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



Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
Noise Impact				
<ul style="list-style-type: none"> 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. All compressors and hand held breakers should have noise labels. Compressors and generators should operate with door closed. Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 	✓			
Water Quality				
Mitigation Measures for Dredging				
<ul style="list-style-type: none"> Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m³ per day. Deployment of frame type silt curtain should be fully enclosed the grab while dredging works are in progress. 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 	✓	✓	✓	No dredging work was observed.
				No dredging work was observed.

Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs	
Water Quality					
Mitigation Measures for other Construction Activities					
▪	Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m ³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped	✓			
▪	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 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.			✓	
▪	An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process.			✓	
▪	The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains			✓	
▪	Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour WCZs	✓			
▪	Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices.	✓			
▪	Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS.	✓			
▪	Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.	✓			
Waste Management					
C&D Materials					
▪	Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable.			✓	
▪	C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses.			✓	
▪	A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed			✓	
▪	A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods.			✓	
Chemical Waste					
▪	Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.	✓			
▪	Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.	✓			
▪	The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility.	✓			

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

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs N/A	
Marine Ecology				
• Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.			√	No dredging work was observed.
• Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress.			√	No dredging work was observed.
• Deployment of silt screen at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.	√			
• Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	√			
Good Site Practices				
• The Environmental Permit should be displayed 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 item 1 on 08/03/11, silt screen at the sea water intake at Kowloon South Salt Water Pumping Station was repaired.	Closed	---	110315_001	---

Remark

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

Photos

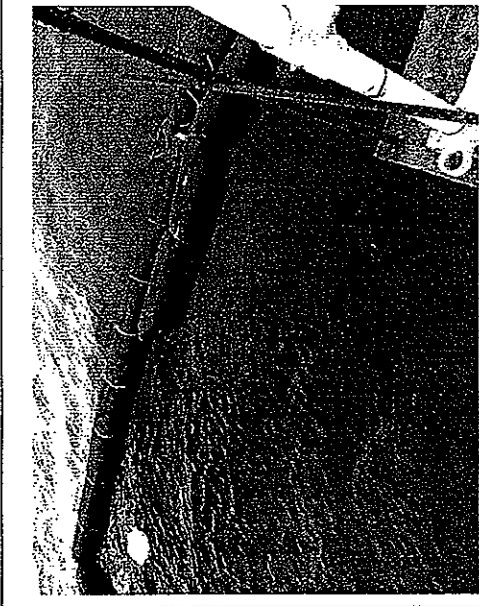


Photo 110315_001

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

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	22/3/11	Inspected by	RE	IEC	Contractor	ET
Time	9:45	Name	RE Vicki 22/3		SAC Linda Lam Linda Lam	

Weather : Sunny / Fine / Cloudy / Drizzle / Rain / Storm / Hazy
 Condition : Calm / Light Breeze / Strong
 Wind : High / Moderate / Low
 Temperature : 18°C
 Humidity :

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs / N/A	
Fugitive Dust Emission				
▪ Dust control / mitigation measures shall be provided to prevent dust nuisance.	✓			
▪ Any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading.	✓			
▪ The working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet.	✓			
▪ The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle	✓			
▪ Where a site boundary adjoins a road, streets or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit.	✓			
▪ The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or 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 N/A	
Noise Impact				
▪ The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	✓			
▪ The constructions works should be scheduled to minimize noise nuisance. Concurrent noisy works should be carried out at different time slots or spread around the construction sites in order to help to reduce the cumulative noise effect produced in the construction process.	✓			
▪ Noisy equipment and mobile plant shall always be site away from NSRs.	✓			
▪ Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	✓			
▪ Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	✓			
▪ Mobile or movable noise barriers should be erected near to the construction plants to reduce the noise levels from stationary items of PME whenever practicable.	✓			
▪ Quality Powered mechanical equipment (Quality PME), which are construction plants and equipments that are notably quieter, more environmental friendly and efficiently, recognized by the Noise Control Authority for the purpose of CNP application should be used to reduce the noise generated from the construction plants effectively. The Contractor shall note the required procedures involved in application of the QPME.	✓			
▪ Well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	✓			
▪ Air compressors and hand held breakers should have noise labels.	✓			
▪ Compressors and generators should operate with door closed.	✓			
▪ Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	✓			
Water Quality				
Mitigation Measures for Dredging				
▪ Dredging should be undertaken using one grab dredger only with a maximum production rate of 4,000m ³ per day.			✓	No dredging work was observed.
▪ Deployment of frame type silt curtain should be fully enclosed the grab while dredging works are in progress.			✓	No dredging work was observed.
▪ Deployment of silt screen should be at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress	✓			
▪ Tight-closing grabs should be used to minimize the loss of sediment to suspension during dredging works. For dredging of any contaminated mud, closed watertight grabs must be used.	✓			
▪ All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash	✓			
▪ The decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard	✓			
▪ Adequate free board shall be maintained on barges to ensure that decks are not washed by wave action.	✓			
▪ All barges used for the transport of dredged materials should be fitted with tight bottom seals to prevent leakage of material during loading and transport	✓			
▪ 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		✓		Item 4
▪ Loading of barges should be controlled to prevent splashing of material into the surrounding waters. Barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation	✓			
▪ The speed of vessels should be controlled within the works area to prevent propeller wash from stirring up the seabed sediments	✓			

		Implementation Stages*			Remark
		Yes	No	Not Obs	
Environmental Checklist					
Water Quality					
Mitigation Measures for other Construction Activities					
▪	Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m ³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped	√			
▪	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 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.			√	
▪	An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process.			√	
▪	The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains			√	
▪	Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour WCZs	√			
▪	Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices.	√			
▪	Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS.	√			
▪	Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.		√		Item 1 and 3
Waste Management					
C&D Materials					
▪	Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable.			√	
▪	C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses.			√	
▪	A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed			√	
▪	A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods.			√	
Chemical Waste					
▪	Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.	√			
▪	Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.	√			
▪	The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility.	√			

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


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

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	Standing water was noted accumulated below the Contractor's site office at Portion J.	Follow-up	To drain the standing water and fill up the ground to avoid water accumulation.	110322_001	28/03/11
2	Water leakage was observed from an air-conditioner at Contractor's site office at Portion J.	Follow-up	To connect the water outlet of the air-conditioner to an appropriate container in order to prevent water leakage to the nearby environment.	110322_002	28/03/11
3	Standing water was found inside the drip tray for an generator at Portion J.	Follow-up	To drain the standing water or apply pesticide to avoid mosquito breeding.	110322_003	28/03/11
4	Excavated materials (e.g. rock and mud) were noted accumulated along the sea-front at Portion J.	Follow-up	To prevent appropriate mitigation measures, such as providing another appropriate area (away from the sea-front) for temporary storage of excavated materials and placing concrete bunding along sea-front to prevent the excavated materials dropped into the sea.	110322_004	28/03/11

Remark

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Inspected by	Name Linda Law	Signature 	Date 22 March 2011

Photos



Photo 110322_001 (Contractor's site office at Portion J)

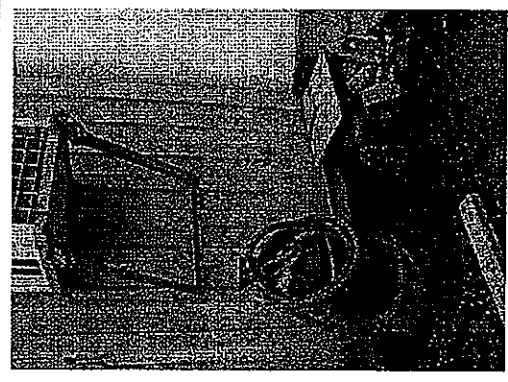


Photo 110322_002 (Contractor's site office at Portion J)



Photo 110322_003 (Generator at Portion J)



Photo 110322_004 (sea front at Portion J)



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

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	28-03-2011	Inspected by	RE	IEC	Contractor	ET
Time	13:00	Name	Justin Ye	28/3	Justin Ye	Justin Ye

Weather : Sunny (Fine) / Cloudy / Drizzle / Rain / Storm / Hazy
 Condition : Calm / Light / Breeze / Strong
 Humidity : High / Moderate / Low
 Temperature : 19 °C

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

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



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

Environmental Checklist


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

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 item 1 on 22/03/11, no standing water was observed below the Contractor's site office at Portion J.	Closed	---	110328_001	---
2	Follow up action to item 2 on 22/03/11, water outlet of the air conditioner at Contractor's site office at Portion J was connected to a water bucket and no condensed water was noted on the ground.	Closed	---	110328_002	---
3	Follow up action to item 3 on 22/03/11, standing water had been removed from the drip tray for an generator at Portion J.	Closed	---	110328_003	---
4	Follow up action to item 3 on 22/03/11, excavated materials (e.g. rock and mud) noted accumulated along the sea-front at Portion J was removed. Besides, steel bunding was noted provided in order to prevent the excavated materials dropping into the sea. However, the Contractor was still reminded to remove all excavated materials as soon as possible.	Follow-up	To remove all excavated materials as soon as possible	110328_004	08/04/11
5	Silt screen at Portion J was found damaged and a lot of rubbish was trapped between the inner and outer silt screen.	Follow-up	To collect and dispose of the rubbish trapped. Besides, repair and maintain the silt screen properly.	110328_005	08/04/11

Remark

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Inspected by	Name	Signature	Date
	Linda Law, Tony Chow		28 March 2011

Photos



Photo 110328_001 (Contractor's site office at Portion J)

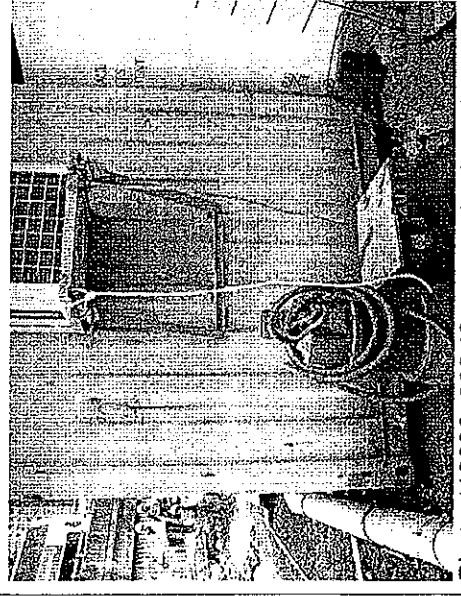


Photo 110328_002 (Contractor's site office at Portion J)

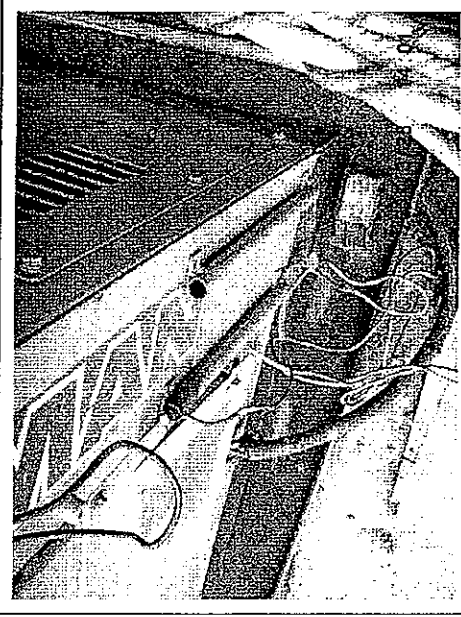


Photo 110328_003 (Generator at Portion J)



Photo 110328_004 (sea front at Portion J)



Photo 110328_005 (sea front at Portion J)

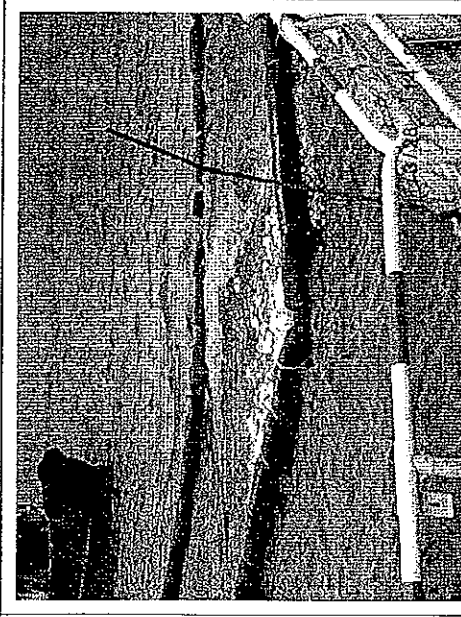


Photo 110328_006 (Silt screen at Portion J)



Appendix G

Implementation Schedule of Mitigation Measures



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

Environmental Protection Measures	Location	Implementation Status		
		Implemented	Partially implemented	Not implemented
Water Quality				
Mitigation Measures for other Construction Activities				
<ul style="list-style-type: none"> Portable chemical toilets should be used to handle construction workforce sewage prior to discharge to the existing trunk sewer. Sufficient numbers of portable toilets shall be provided by a licensed contractor to serve the construction workers. The Contractor shall also be responsible for waste disposal and maintenance practices. Construction site runoff should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 7/94). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WCZ under the TM-DSS. Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. 	All areas	✓		
Waste Management				
C&D Materials				
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	All areas			✓
	All areas			✓
	All areas	✓		
	All areas	✓		
Chemical Waste				
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	All areas	✓		
	All areas	✓		
General Refuse				
<ul style="list-style-type: none"> General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material. 	All areas	✓		
	All areas	✓		
	All areas	✓		
Marine Dredged Sediment (During transportation and disposal)				
<ul style="list-style-type: none"> Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and dredgers before the vessel is moved Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the EPD Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation. 	Marine			✓
	Marine			✓
	Marine			✓
Good Site Practices				
<ul style="list-style-type: none"> Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site Training of site personnel in proper waste management and chemical handling procedures Provision of sufficient waste disposal points and regular collection of waste 	All areas	✓		
	All areas	✓		
	All areas	✓		



Appendix H

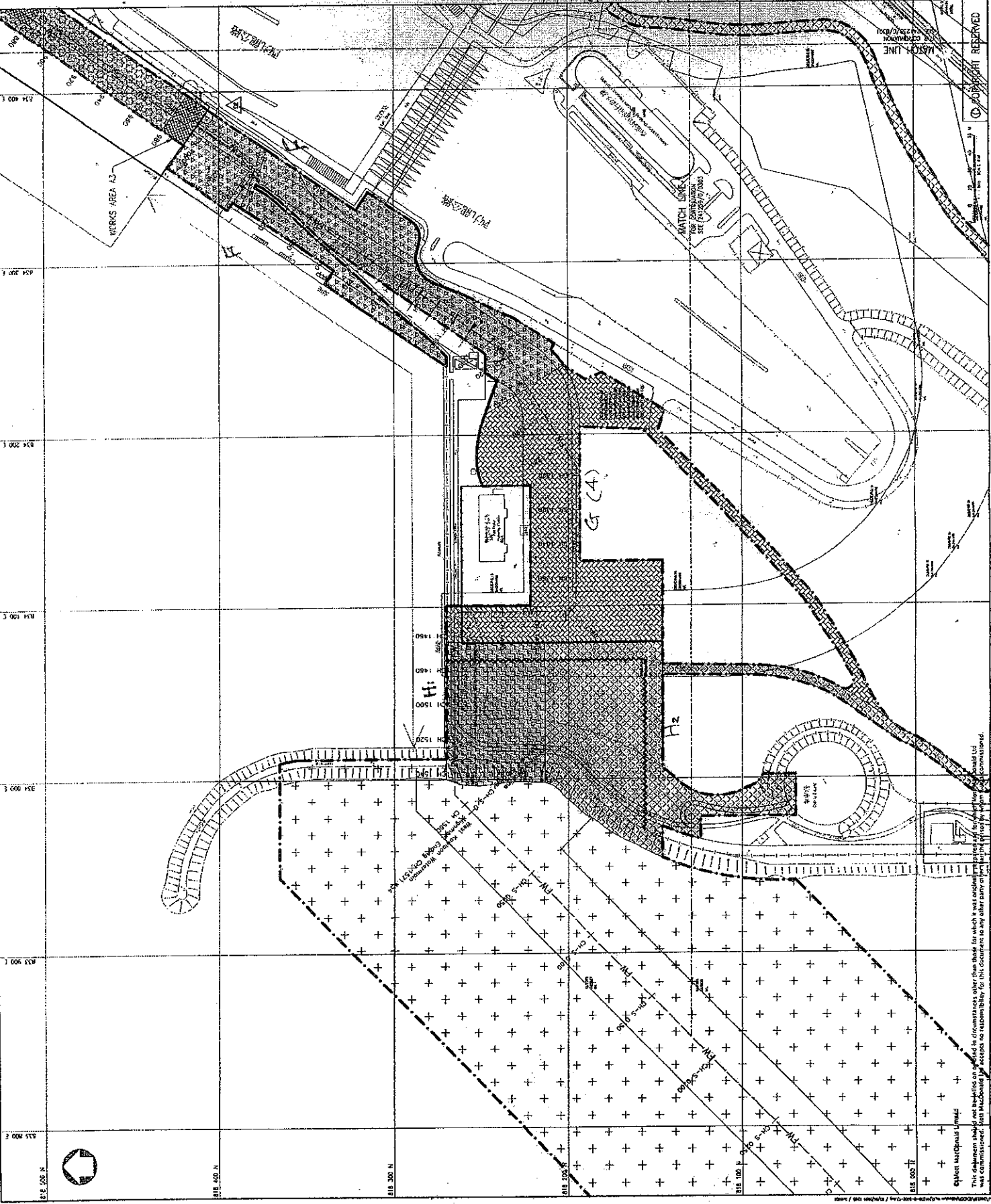
Site General Layout plan

NOTES:
 1. THE DRAWING SHALL BE MADE IN CONFORMANCE WITH DRAWING AND PRACTICE/CODES TO WHICH REFERRED.

LEGEND:
 PROPOSED FRESH WATER MAIN
 PROPOSED SALT WATER MAIN
 PROPOSED WASTEWATER MAIN
 (a) 750
 (b) 450
 (c) 300
 (d) 150
 (e) 75
 (f) 30
 (g) 15
 (h) 7.5
 (i) 3
 (j) 1.5
 (k) 0.75
 (l) 0.375
 (m) 0.1875
 (n) 0.09375
 (o) 0.046875
 (p) 0.0234375
 (q) 0.01171875
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NOTES :

1. THIS DRAWING SHALL BE READ IN CONNECTION WITH DRAWING NO. 241239/G/0301 AND DATA TO AREA.
2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/G/0301.



NO.	REV.	DESCRIPTION	DATE
1		ISSUED FOR PERMITS	24/03/08
2		ISSUED FOR CONSTRUCTION	24/03/08
3		ISSUED FOR AS-BUILT	24/03/08

Mott MacDonald
 11th Floor, One World Finance Centre
 181 Queen's Road East
 Hong Kong
 Tel: 852 2511 8111
 Fax: 852 2511 8112
 Web: www.mottmac.com.hk

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

7/24SD/08
 LAYING OF WESTERN CROSS HARBOUR MAIN
 AND ASSOCIATED BAND MAINS FROM WEST
 KOWLOON TO SAUVING PUN

POSSESSION OF SITE
 (SHEET 2 OF 5)

Project	WSSC	Phase	1	Scale	1:1000
Drawn	CH	Checked	CH	Scale	1:1000
Revised	CH	Approved	CH	Date	24/03/08
Sheet	2	Project No.	241239	Drawn	CH
Scale	1:1000	Project Title	Laying of Western Cross Harbour Main and Associated Band Mains from West Kowloon to Sauving Pun	Checked	CH
Drawn	CH	Project No.	241239	Approved	CH
Checked	CH	Project Title	Laying of Western Cross Harbour Main and Associated Band Mains from West Kowloon to Sauving Pun	Date	24/03/08
Approved	CH	Drawn	CH	Scale	1:1000
Date	24/03/08	Checked	CH	Date	24/03/08
Scale	1:1000	Approved	CH	Scale	1:1000
Date	24/03/08	Date	24/03/08	Date	24/03/08

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NOTES :

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

NO.	DATE	DESCRIPTION	BY
1	21/1/72	ISSUED FOR CONSTRUCTION	MM
2	15/1/72	ISSUED FOR CONSTRUCTION	MM
3	15/1/72	ISSUED FOR CONSTRUCTION	MM

MOI
Mott MacDonald
INCORPORATED IN HONG KONG
2/F, 200 WING LOK STREET
HONG KONG

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

PROJECT NO. 5/MSD/03

LAYOUT OF WESTERN CROSS HARBOUR MAIN
AND ASSOCIATED LAND MAINS FROM WEST
KOWLOON TO SAN YING PUN

POSSESSION OF SITE
(SHEET 3 OF 5)

Scale	1:1000
Sheet No.	0301
Project No.	241239
Revision No.	TEN

DATE: 21/1/72

BY: MM

CHECKED BY: MM

APPROVED BY: MM

DATE: 21/1/72

BY: MM

CHECKED BY: MM

APPROVED BY: MM

DATE: 21/1/72

BY: MM

CHECKED BY: MM

APPROVED BY: MM

DATE: 21/1/72

BY: MM

CHECKED BY: MM

APPROVED BY: MM

DATE: 21/1/72

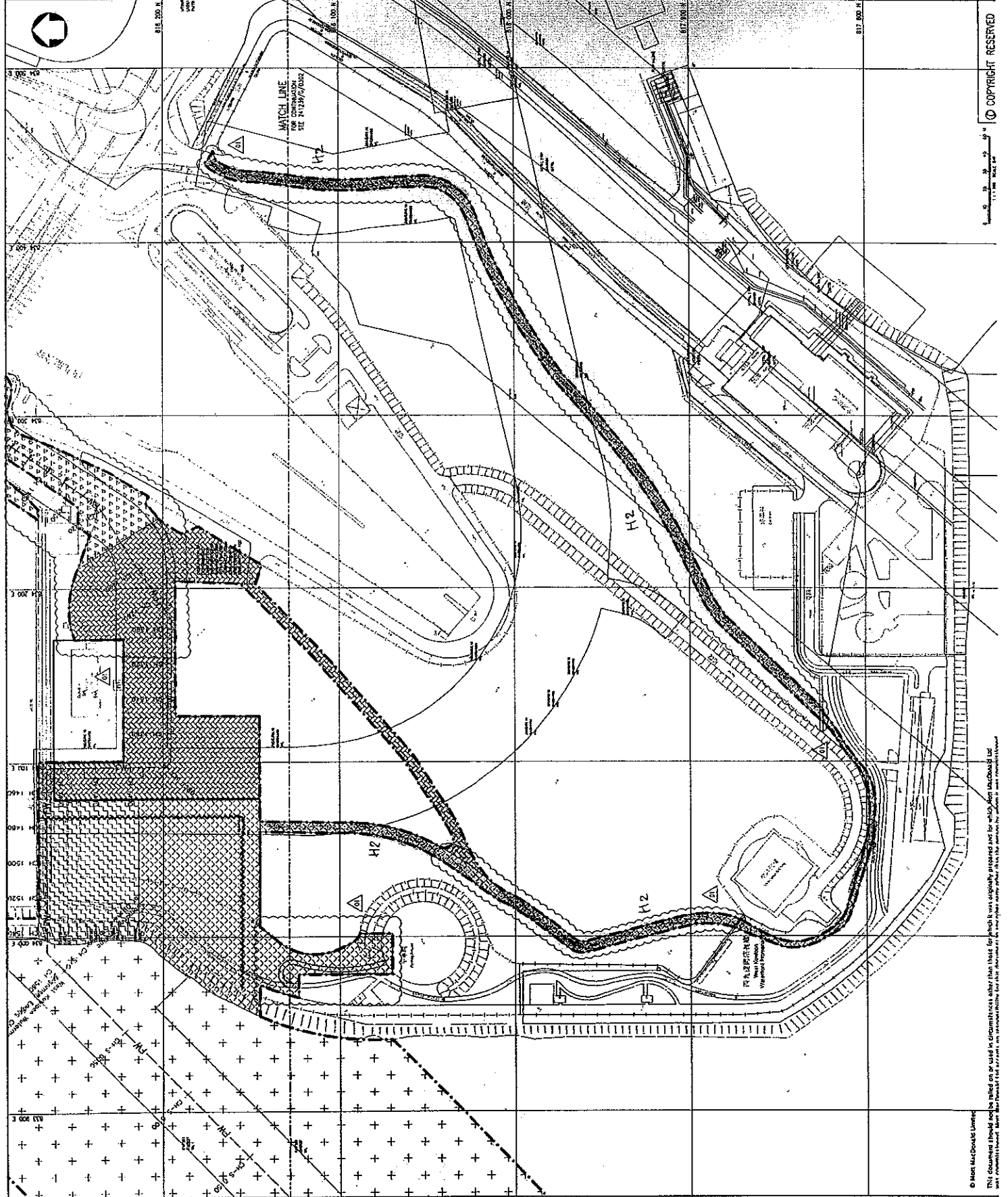
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CHECKED BY: MM

APPROVED BY: MM

DATE: 21/1/72

BY: MM



Scale: 1:1000

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241239/6/0303

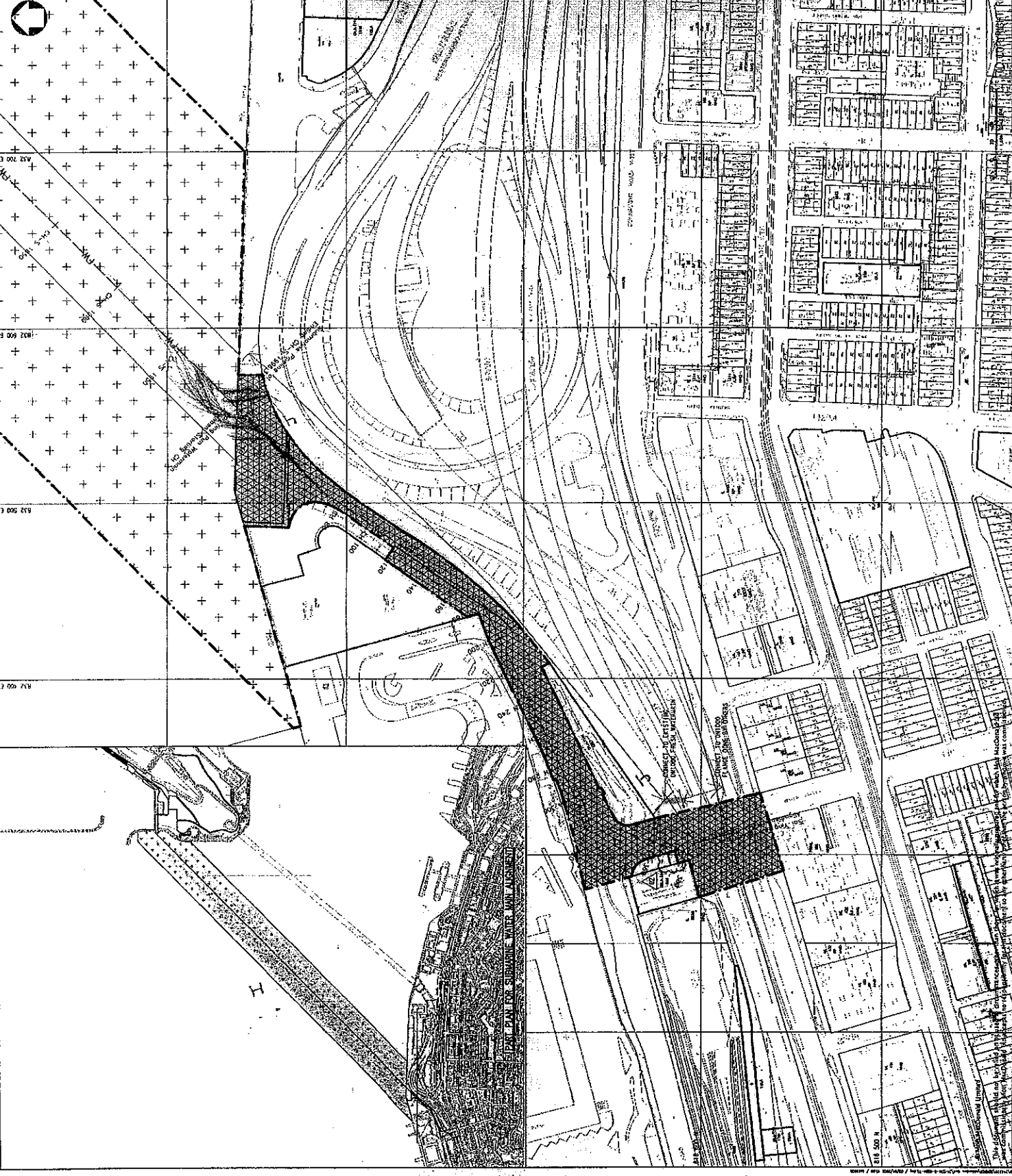
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2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/6/0301.



1	REVISION	DATE	BY	CHK
2	ISSUE FOR TENDER			
3	ISSUE FOR CONSTRUCTION			

9/MSB/DB

Mott MacDonald

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

JAYING OF WESTERN CROSS HARBOUR MAIN
AND ASSOCIATED LAND MAINS FROM WEST
KOWLOON TO SAI KONG PUIK

POSSESSION OF SITE
(SHEET 4 OF 5)

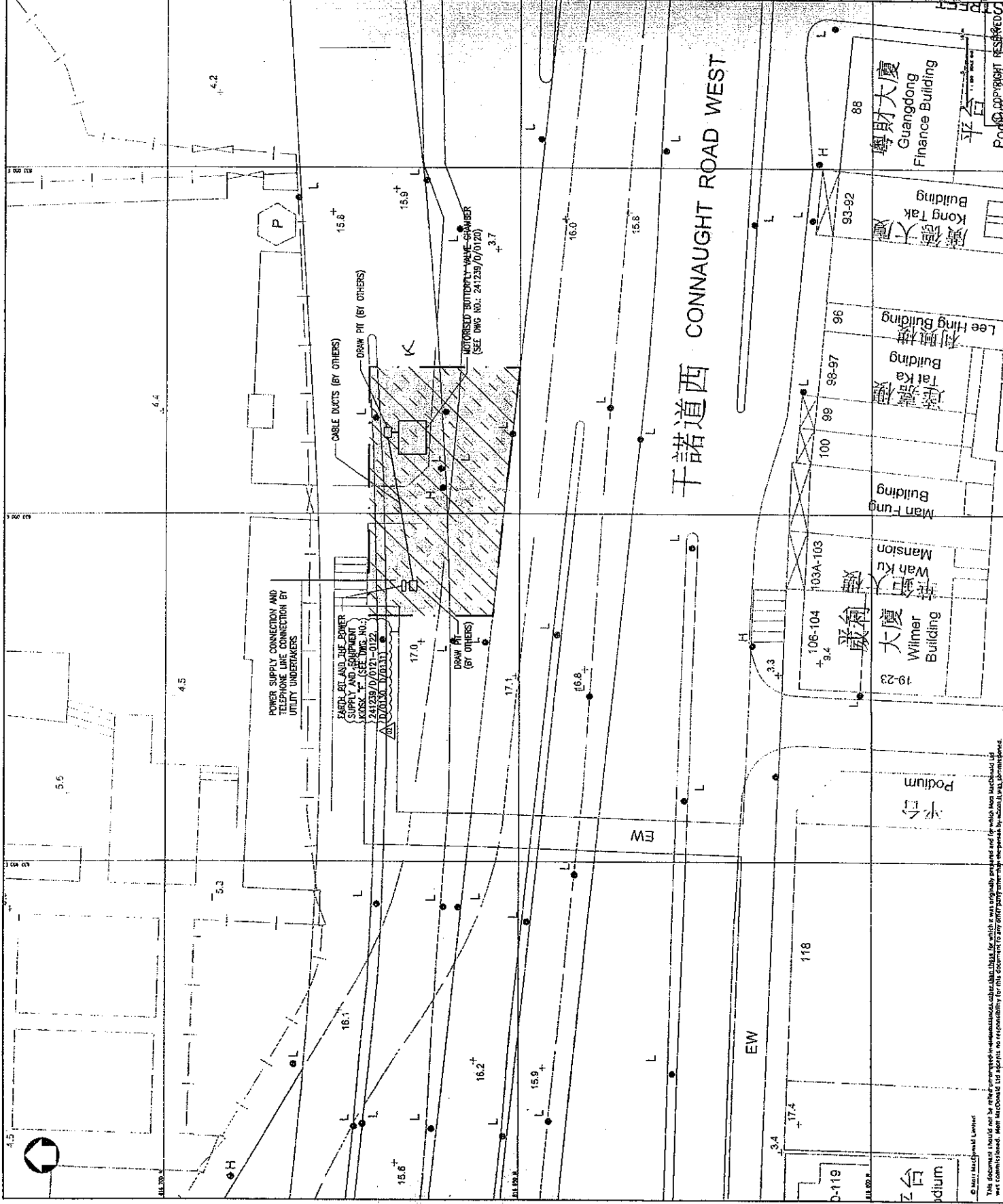
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NO.	DATE	REVISION	BY	CHK
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2				
3				
4				
5				
6				
7				
8				
9				
10				

241239/6/0304

02

NOTES:
 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS 241239/0/001 TO 004.
 2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/0/001.



DATE OF ISSUE	12/11/08	PROJECT REFERENCE NO.	241239
DATE OF REV.	12/11/08	PROJECT APPROVAL NO.	1
BY	KL	ISSUE FOR TENDER	KL
CHKD	KL	DATE FOR TENDER	24/12/08
APP'D	KL	DATE FOR TENDER	24/12/08

Mott MacDonald
 27/F, The Hongkong Hotel
 10 Salisbury Road
 Hong Kong
 Tel: 2522 1111
 Fax: 2522 1113
 www.mottmacdonald.com.hk

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

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

POSSESSION OF SITE
 (SHEET 5 OF 6)

Project	RSC	Phase	KL	KL
Drawn	KL	Checked	KL	KL
Approved	KL	Approved	KL	KL
Scale	1:250	Drawn By	KL	241239
Sheet No.	01	Drawn For	KL	TEN
Project No.	241239/0/005	Drawn Date	12/11/08	02

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Appendix I

Monitoring Schedule for this Month and Coming Month

Contract No. 9/WSD/08
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun
Time Schedule for Impact Marine Water Quality Monitoring (WQM), Noise Monitoring (NM) and Weekly Site Inspection (SI)
March 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
06-Mar	07-Mar	08-Mar	09-Mar	10-Mar	11-Mar	12-Mar
NM Holiday (West Kowloon) (Sai Ying Pun) NM Night-time (West Kowloon)	NM (SYP-Daytime)	WQM Mid-Flood 07:15 - 11:15 Mid-Ebb 13:00 - 17:00	WQM Mid-Flood 07:30 - 11:30 Mid-Ebb 13:00 - 17:00	WQM Mid-Ebb 10:00 - 14:00 Mid-Flood 15:30 - 19:30 SI	NM (WK-Daytime)	WQM Mid-Ebb 10:30 - 14:30 Mid-Flood 16:00 - 20:00 NM Evening-time (West Kowloon) (Sai Ying Pun) NM Night-time (Sai Ying Pun)
13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
NM Holiday (West Kowloon) (Sai Ying Pun) NM Night-time (West Kowloon)	NM (SYP-Daytime)	WQM Mid-Flood 11:00 - 15:00 Mid-Ebb 17:30 - 21:30 SI	WQM Mid-Ebb 08:45 - 12:45 Mid-Flood 14:00 - 18:00	WQM Mid-Ebb 08:45 - 12:45 Mid-Flood 14:00 - 18:00	NM (WK-Daytime)	WQM Mid-Ebb 09:30 - 13:30 Mid-Flood 15:00 - 19:00 NM Evening-time (West Kowloon) (Sai Ying Pun)
20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar
NM Holiday (West Kowloon) (Sai Ying Pun)	WQM Mid-Flood 07:00 - 11:00 Mid-Ebb 12:30 - 16:30 SI	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30	NM (WK-Daytime) NM (SYP-Daytime)	WQM Mid-Flood 08:30 - 12:30 Mid-Ebb 14:00 - 18:00
27-Mar	28-Mar	29-Mar	30-Mar	31-Mar		
NM Holiday (West Kowloon) (Sai Ying Pun) NM Evening-time (West Kowloon) (Sai Ying Pun)	WQM Mid-Ebb 08:15 - 11:00 Mid-Flood 12:30 - 16:30 SI	WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30	WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30			

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)
April 2011

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



Appendix J

Daily Dredging Summary

Wo Hing - Penta-Ocean Joint Venture					
Contract no. 9/WSD/08					
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun					
Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)					
Date	Dumping qty (m ³)	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	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
15-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
16-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
17-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
18-Jun-2010	0	0	0	EP/MD/10-085	East Ninepin Mud Disposal Ground
19-Jun-2010	0	0	0	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
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

Wo Hing - Penta-Ocean Joint Venture					
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Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)					
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
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/10-085	East Ninepin Mud Disposal Ground
27-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
28-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
29-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
30-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
31-Jul-2010	0	0	32,800	EP/MD/10-085	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
07-Aug-2010	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
08-Aug-2010	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
09-Aug-2010	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
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	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
13-Aug-2010	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
14-Aug-2010	0	0	40,500	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
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

Wo Hing - Penta-Ocean Joint Venture					
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Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)					
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
26-Aug-2010	1,100	2	62,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
27-Aug-2010	1,100	2	63,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
28-Aug-2010	1,100	2	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	2,800	4	80,400	EP/MD/11-039	East Ninepin Mud Disposal Ground
06-Sep-2010	2,800	4	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
07-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
08-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
09-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
10-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
11-Sep-2010	0	0	83,200	EP/MD/11-039	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/11-039	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	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
23-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
24-Sep-2010	0	0	83,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
25-Sep-2010	0	0	83,200	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	0	0	84,900	EP/MD/11-069	South Cheung Chau
04-Oct-2010	0	0	84,900	EP/MD/11-069	South Cheung Chau
05-Oct-2010	0	0	84,900	EP/MD/11-069	South Cheung Chau
06-Oct-2010	0	0	84,900	EP/MD/11-069	South Cheung Chau
07-Oct-2010	0	0	84,900	EP/MD/11-069	South Cheung Chau
08-Oct-2010	0	0	84,900	EP/MD/11-069	South Cheung Chau
09-Oct-2010	0	0	84,900	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
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	0	0	101,400	EP/MD/11-069	South Cheung Chau
18-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
19-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
20-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
21-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
22-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
23-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
24-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
25-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
26-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
27-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
28-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
29-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
30-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau
31-Oct-2010	0	0	101,400	EP/MD/11-069	South Cheung Chau

Wo Hing - Penta-Ocean Joint Venture					
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Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)					
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
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	0	0	115,400	EP/MD/11-069	South Cheung Chau
01-Nov-2010	0	0	115,400	EP/MD/11-069	South Cheung Chau
02-Nov-2010	500	1	115,900	EP/MD/11-069	South Cheung Chau
03-Nov-2010	500	1	116,400	EP/MD/11-069	South Cheung Chau
04-Nov-2010	500	1	116,900	EP/MD/11-069	South Cheung Chau
05-Nov-2010	1,000	2	117,900	EP/MD/11-069	South Cheung Chau
06-Nov-2010	500	1	118,400	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	0	0	122,200	EP/MD/11-069	South Cheung Chau
19-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
20-Nov-2010	0	0	122,200	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	0	0	135,500	EP/MD/11-069	South Cheung Chau
29-Nov-2010	0	0	135,500	EP/MD/11-069	South Cheung Chau
30-Nov-2010	0	0	135,500	EP/MD/11-069	South Cheung Chau
01-Dec-2010	0	0	135,500	EP/MD/11-069	South Cheung Chau
02-Dec-2010	0	0	135,500	EP/MD/11-069	South Cheung Chau
03-Dec-2010	0	0	135,500	EP/MD/11-069	South Cheung Chau
04-Dec-2010	0	0	135,500	EP/MD/11-069	South Cheung Chau
05-Dec-2010	1,000	2	146,500	EP/MD/11-069	South Cheung Chau
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	0	0	152,500	EP/MD/11-069	South Cheung Chau
13-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau
14-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau
15-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau
16-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau
17-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau
18-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau
19-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau
20-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau
21-Dec-2010	0	0	152,500	EP/MD/11-069	South Cheung Chau

Wo Hing - Penta-Ocean Joint Venture					
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Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)					
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
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	500	1	155,000	EP/MD/11-069	South Cheung Chau
27-Dec-2010	500	1	155,500	EP/MD/11-069	South Cheung Chau
28-Dec-2010	500	1	156,000	EP/MD/11-069	South Cheung Chau
29-Dec-2010	500	1	156,500	EP/MD/11-069	South Cheung Chau
30-Dec-2010	500	1	157,000	EP/MD/11-069	South Cheung Chau
31-Dec-2010	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
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

Wo Hing - Penta-Ocean Joint Venture					
Contract no. 9/WSD/08					
Laying of Western Cross Harbour Main & Associated Land Mains from					
West Kowloon to Sai Ying Pun					
Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)					
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
19-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
01-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
02-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
03-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
04-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
05-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
13-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
14-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
15-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
16-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
17-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
18-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
19-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
27-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
28-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
29-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
30-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
31-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
TOTAL =	160,500	274			

Wo Hing - Penta-Ocean Joint Venture				
Contract no. 9/WSD/08				
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun				
Summary of Dumping Qty. of Type 2 Marine Sediment				
Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	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	8,920	EP/MD/10-086
17-May-2010	1,200	2	10,120	EP/MD/10-086
18-May-2010	700	1	10,820	EP/MD/10-086
19-May-2010	2,000	3	12,820	EP/MD/10-086
20-May-2010	1,400	2	14,220	EP/MD/10-086
21-May-2010	1,400	2	15,620	EP/MD/10-086
22-May-2010	2,100	3	17,720	EP/MD/10-086
23-May-2010	1,400	2	19,120	EP/MD/10-086
24-May-2010	1,400	2	20,520	EP/MD/10-086
25-May-2010	1,300	2	21,820	EP/MD/10-086
26-May-2010	1,400	2	23,220	EP/MD/10-086
27-May-2010	1,300	2	24,520	EP/MD/10-086
28-May-2010	1,400	2	25,920	EP/MD/10-086
29-May-2010	600	1	26,520	EP/MD/10-086
30-May-2010	2,100	3	28,620	EP/MD/11-012
31-May-2010	700	1	29,320	EP/MD/11-012
01-Jun-2010	1,900	3	31,220	EP/MD/11-012
02-Jun-2010	1,220	2	32,440	EP/MD/11-012
03-Jun-2010	1,300	2	33,740	EP/MD/11-012
04-Jun-2010	1,200	2	34,940	EP/MD/11-012
05-Jun-2010	1,400	2	36,340	EP/MD/11-012
06-Jun-2010	600	1	36,940	EP/MD/11-012
07-Jun-2010	0	0	36,940	EP/MD/11-012
08-Jun-2010	500	1	37,440	EP/MD/11-012
09-Jun-2010	0	0	37,440	EP/MD/11-012
10-Jun-2010	600	1	38,040	EP/MD/11-012
11-Jun-2010	1,200	2	39,240	EP/MD/11-012
12-Jun-2010	1,400	2	40,640	EP/MD/11-012
13-Jun-2010	1,400	2	42,040	EP/MD/11-012
14-Jun-2010	0	0	42,040	EP/MD/11-012
15-Jun-2010	0	0	42,040	EP/MD/11-012
16-Jun-2010	0	0	42,040	EP/MD/11-012
17-Jun-2010	0	0	42,040	EP/MD/11-012
18-Jun-2010	0	0	42,040	EP/MD/11-012
19-Jun-2010	0	0	42,040	EP/MD/11-012

Wo Hing - Penta-Ocean Joint Venture

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

Summary of Dumping Qty. of Type 2 Marine Sediment

Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Permit No.
	(bulk volume)		(bulk volume)	
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	0	0	42,540	EP/MD/11-012
01-Jul-2010	0	0	42,540	EP/MD/11-012
02-Jul-2010	0	0	42,540	EP/MD/11-012
03-Jul-2010	0	0	42,540	EP/MD/11-012
04-Jul-2010	0	0	42,540	EP/MD/11-012
05-Jul-2010	0	0	42,540	EP/MD/11-012
06-Jul-2010	0	0	42,540	EP/MD/11-012
07-Jul-2010	0	0	42,540	EP/MD/11-012
08-Jul-2010	0	0	42,540	EP/MD/11-012
09-Jul-2010	0	0	42,540	EP/MD/11-012
10-Jul-2010	0	0	42,540	EP/MD/11-012
11-Jul-2010	0	0	42,540	EP/MD/11-012
12-Jul-2010	0	0	42,540	EP/MD/11-012
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
21-Jul-2010	2,100	3	83,440	EP/MD/11-024
22-Jul-2010	2,100	3	85,540	EP/MD/11-024
23-Jul-2010	2,100	3	87,640	EP/MD/11-024
24-Jul-2010	2,100	3	89,740	EP/MD/11-024
25-Jul-2010	2,100	3	91,840	EP/MD/11-024
26-Jul-2010	2,100	3	93,940	EP/MD/11-024
27-Jul-2010	2,200	3	96,140	EP/MD/11-024
28-Jul-2010	1,450	2	97,590	EP/MD/11-024
29-Jul-2010	1,500	2	99,090	EP/MD/11-024
30-Jul-2010	0	0	99,090	EP/MD/11-024
31-Jul-2010	0	0	99,090	EP/MD/11-024
01-Aug-2010	0	0	99,090	EP/MD/11-024
02-Aug-2010	0	0	99,090	EP/MD/11-024

Wo Hing – Penta-Ocean Joint Venture

Contract No. 9AWS08
 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	1284	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						
			1338	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. 9AWS08
 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		
27-06-2010	7:00	23:00	1362	1366	+5	+20	19:00	23:00	1362	1366	+5	+20		
			1326	1448	+7.5	+20.5			1400	1448	+7.5	+20.5		
			1400	1436	-7.5	-20.5			1400	1436	-7.5	-20.5		
28-06-2010	7:00	23:00	1448	1480	+7.5	+20	19:00	23:00	1448	1468	+7.5	-7.5		
			1444	1468	+7.5	-7.5			1436	1456	-7.5	-20		
			1436	1456	-7.5	-20			1496	1500	+7.5	-7.5		
29-06-2010	7:00	23:00	1456	1500	-7.5	-20	19:00	20:00	1496	1500	+7.5	-7.5		
			1468	1500	+7.5	-7.5			1076	1100	0	-16		
30-06-2010	23:00	7:00	1076	1100	0	-16	23:00	7:00	1076	1100	0	-16		
			7:00	7:00	1048	1076			0	-16	1064	1100	0	+16
01-07-2010	7:00	7:00	1064	1100	0	+16	19:00	7:00	1064	1100	0	+16		
			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			798	850	0	+17		
			798	850	0	+17			19:00	7:00	798	832	0	+17
05-07-2010	7:00	7:00	838	850	0	-17	19:00	7:00	838	850	0	-17		
			782	838	0	-17			20:50	7:00	782	826	0	-17
06-07-2010	7:00	7:00	758	782	0	-16	19:00	7:00	758	774	0	-16		
			774	798	0	+16			774	798	0	+16		
07-07-2010	7:00	7:00	728	774	0	+17	19:00	7:00	696	750	0	-17		
			096	750	0	-17			666	670	0	+17		
			666	710	0	+17			19:00	7:00	666	670	0	+17
08-07-2010	7:00	7:00	882	710	0	-17	19:00	7:00	682	710	0	-17		
			654	682	0	-17			654	662	0	-17		
			634	666	0	+17			634	666	0	+17		
09-07-2010	7:00	7:00	622	654	0	-17	20:55	1:10	622	642	0	-17		
			602	622	0	-17			602	626	0	+17		
10-07-2010	7:00	7:00	602	634	0	+17	19:00	7:00	602	626	0	+17		
			570	602	0	+17			19:00	7:00	570	598	0	+17
			574	602	0	-17			574	582	0	-17		
11-07-2010	7:00	7:00	558	570	0	+17	21:00	7:00	558	570	0	+17		
			562	574	0	-17			562	574	0	-17		
12-07-2010	7:00	7:00	546	562	0	-17	19:00	7:00	530	558	0	+17		
			530	558	0	+17			21:15	7:00	530	558	0	+17
			526	546	0	-17			19:00	7:00	526	538	0	-17
13-07-2010	7:00	7:00	526	536	0	+17	19:00	7:00	526	530	0	+17		
			-	-	-	-			-	-	-	-	-	-
14-07-2010	7:00	7:00	260	300	0	-17	19:00	23:00	260	276	0	-17		
			574	602	0	-17			574	582	0	-17		
15-07-2010	7:00	7:00	248	300	0	+17	19:00	21:15	248	256	0	+17		
			232	260	0	-15			232	260	0	-15		
16-07-2010	7:00	7:00	224	248	0	+15	19:00	23:00	224	236	0	+15		
			216	232	0	-15			216	232	0	-15		
			-	-	-	-			-	-	-	-	-	-
17-07-2010	7:00	19:00	200	216	0	-15			200	216	0	-15		
			208	224	0	+15			208	224	0	+15		
			204	224	0	+15			19:00	23:00	204	224	0	+15
18-07-2010	7:00	23:00	176	200	0	-15	19:00	20:50	176	184	0	-15		
			176	184	0	-15			19:00	23:00	176	184	0	-15
			172	176	0	-15			21:00	23:00	172	176	0	-15
19-07-2010	7:00	23:00	200	204	0	+15	19:00	23:00	200	204	0	+15		
			172	200	0	+15			172	200	0	+15		
			172	192	0	+15			19:00	22:40	172	192	0	+15
20-07-2010	7:00	19:00	168	172	0	+15			168	172	0	+15		
			148	172	0	-15			148	172	0	-15		
			152	168	0	+15			19:20	23:00	152	168	0	+15
21-07-2010	7:00	23:00	128	152	0	+15	19:00	21:00	128	136	0	+15		
			128	136	0	+15			21:45	23:00	128	136	0	+15
			124	128	0	+15			124	128	0	+15		
22-07-2010	7:00	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
			116	124	0	-15			116	124	0	-15		
23-07-2010	7:00	23:00	88	116	0	-15	19:00	20:45	88	100	0	-15		
			88	100	0	-15			88	100	0	-15		
24-07-2010	7:00	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		
25-07-2010	7:00	23:00	1500	1548	-5	-20.5	19:00	22:45	1500	1508	+7.5	-7.5		
			1508	1516	+7.5	-7.5			1508	1516	+7.5	-7.5		
			1516	1540	+7.5	-7.5			1516	1540	+7.5	-7.5		
26-07-2010	7:00	23:00	1516	1540	+7.5	-7.5	19:00	20:45	1516	1540	+7.5	-7.5		
			1540	1548	+7.5	-7.5			20:30	23:00	1540	1548	7.5	-7.5
			1548	1548	+7.5	-7.5			1548	1548	+7.5	-7.5		
27-07-2010	7:00	23:00	1548	1556	+7.5	-7.5	19:00	23:00	1548	1556	+7.5	-7.5		
			1528	1572	+5	+20.5			1528	1548	+7.5	-7.5		
			1548	1568	-5	-20.5			1548	1568	-5	-20.5		
28-07-2010	7:00	23:00	1548	1556	+7.5	-7.5	19:00	23:00	1548	1556	+7.5	-7.5		
			1548	1556	+7.5	-7.5			1548	1556	+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 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
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						
04-08-2010	7:00	23:00	1596	1604	-7.5	+7.5	21:10	23:00	1596	1604	-7.5	+7.5
05-08-2010	7:00	19:00	1604	1612	-7.5	+7.5	19:00	21:40	1604	1612	-7.5	+7.5
06-08-2010	7:00	23:00	1608	1636	+7.5	+20.5						
07-08-2010	7:00	23:00	112	124	0	+15	19:00	23:00	84	112	0	+15
			84	112	0	+15						
			76	84	0	+15						
08-08-2010	7:00	23:00	68	76	0	+15	19:00	23:00	76	84	0	+15
			68	76	0	+15						
			60	68	0	+15						
09-08-2010	7:00	23:00	72	88	0	-15	19:00	23:00	84	112	0	+15
			56	72	0	-15						
			52	56	0	-15						
10-08-2010	7:00	19:00	36	52	0	-15	19:00	23:00	56	72	0	-15
			20	36	0	-15						
			56	60	0	+15						
11-08-2010	7:00	7:00	54	56	0	+15	19:00	22:55	20	36	0	-15
			32	49	0	+15						
			0	32	0	+15						
12-08-2010	7:00	7:00	0	20	0	-15	1:30	7:00	0	20	0	-15
			1118	1130	-5	-20						
			1110	1118	-5	-20						
13-08-2010	7:00	7:00	1122	1130	+7.5	-7.5	19:00	7:00	1110	1122	+7.5	-7.5
			1110	1122	+7.5	-7.5						
			1122	1130	+5	+20						
14-08-2010	7:00	7:00	1114	1122	+5	+20	19:00	7:00	1086	1114	+5	+20
			1086	1114	+5	+20						
			1102	1110	+7.5	-7.5						
15-08-2010	7:00	7:00	1098	1110	-5	-20	19:00	21:30	1098	1110	-5	-20
			1078	1086	-5	-20						
			1078	1102	+7.5	-7.5						
16-08-2010	7:00	7:00	1070	1078	+7.5	-7.5	23:30	7:00	1078	1102	+7.5	-7.5
			1070	1098	-5	-20						
			1066	1078	+5	+20						
17-08-2010	7:00	7:00	1066	1070	+7.5	-7.5	20:20	2:30	1066	1078	+5	+20
			1066	1070	+7.5	-7.5						
			1058	1066	+7.5	-7.5						
18-08-2010	7:00	7:00	1058	1066	+7.5	-7.5	3:25	7:00	1058	1066	+7.5	-7.5
			1026	1070	-5	-17.5						
			1046	1058	+7.5	-7.5						
19-08-2010	7:00	7:00	1030	1046	-7.5	+7.5	21:55	2:30	1046	1058	+7.5	-7.5
			1026	1036	-7.5	+7.5						
			1038	1066	+5	+17.5						
20-08-2010	7:00	7:00	1018	1038	+5	+17.5	19:00	23:05	1038	1066	+5	+17.5
			1018	1026	-7.5	+7.5						
			986	1018	+5	+17.5						
21-08-2010	7:00	7:00	1006	1026	-5	-17.5	2:35	7:00	1018	1038	+5	+17.5
			1010	1018	-7.5	+7.5						
			1002	1010	-7.5	+7.5						
22-08-2010	7:00	7:00	994	1002	+7.5	-7.5	19:00	20:50	986	1018	+5	+17.5
			978	994	+7.5	-7.5						
			966	1006	-5	-17.5						
23-08-2010	7:00	7:00	958	986	+5	+17.5	20:55	2:50	1006	1026	-5	-17.5
			970	978	+7.5	-7.5						
			950	970	+7.5	-7.5						
24-08-2010	7:00	7:00	942	950	+7.5	-7.5	19:00	7:00	942	950	+7.5	-7.5
			938	942	+7.5	-7.5						
			942	966	-5	-17.5						
25-08-2010	7:00	7:00	938	958	+5	+17.5	19:00	1:35	942	966	-5	-17.5
			628	640	+7.5	-7.5						
26-08-2010	7:00	7:00	612	628	+7.5	-7.5	21:10	2:15	612	628	+7.5	-7.5
			596	620	+7.5	-7.5						
			580	596	+7.5	-7.5						
27-08-2010	7:00	7:00	572	580	+7.5	-7.5	22:10	3:15	572	596	+7.5	-7.5
			552	572	+7.5	-7.5						
			536	552	+7.5	-7.5						
28-08-2010	7:00	7:00	528	536	+7.5	-7.5	3:35	7:00	572	580	+7.5	-7.5
			520	528	+7.5	-7.5						
			564	572	-20	-5						
29-08-2010	7:00	7:00	588	620	+7.5	-7.5	19:00	0:50	588	620	+7.5	-7.5
			564	588	+7.5	-7.5						
			540	564	+7.5	-7.5						
30-08-2010	7:00	7:00	552	564	-5	-20	0:00	7:00	540	564	+7.5	-7.5
			520	552	-5	-20						
			564	580	+5	+20						
31-08-2010	7:00	7:00	520	564	+5	+20	19:00	22:20	520	564	+5	+20
			512	520	-7	+7						
			508	512	-7	+7						
01-09-2010	7:00	7:00	500	508	-7	+7	22:25	7:00	508	512	-7	+7
			850	870	0	+17.5						
			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
31-09-2010	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
			882	902	-5	-17.5	19:35	1:15	882	902	-5	-17.5
02-09-2010	7:00	7:00	894	902	+7.5	-7.5	4:25	7:00	894	902	+7.5	-7.5
			902	910	-5	-17.5						
			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
03-09-2010	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
			822	834	+5	+17.5						
04-09-2010	7:00	7:00	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
			798	822	-5	-17.5			798	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
05-09-2010	7:00	6:00	778	794	+7.5	-7.5			778	794	+7.5	-7.5
			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						
			754	778	+17.5	+5	19:00	23:30	754	778	+17.5	+5
			770	778	-17.5	-5	4:35	7:00	770	778	-17.5	-5
			746	770	-5	-17.5						
			734	754	+7.5	-7.5	19:00	22:55	734	754	+7.5	-7.5
03-10-2010	7:00	7:00	742	754	+5	+17.5	4:25	7:00	742	754	+5	+17.5
			726	742	+5	+17.5						
			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
04-10-2010	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
			682	690	+7.5	-7.5			682	690	+7.5	-7.5
05-10-2010	7:00	7:00	666	702	+17.5	+5			666	702	+17.5	+5
			682	698	-5	-17.5			682	698	-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
06-10-2010	7:00	7:00	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
			572	638	-5	-17.5	19:00	6:00	572	638	-5	-17.5
			602	606	+5	+17.5			602	606	+5	+17.5
07-10-2010	7:00	7:00	580	602	+5	+17.5						

Wo Hing – Penta-Ocean Joint Venture

Contract No. 9WSD/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		
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	-5	-20			480	492	+7.5	-7.5		
13-10-2010	7:00	7:00	472	480	-5	-20	19:00	7:00	472	480	+7.5	-7.5		
			472	480	-5	-20			460	472	-5	-20		
			472	480	-5	-20			456	460	-5	-20		
			472	480	-5	-20			468	472	+5	+20		
			472	480	-5	-20			462	468	+5	+20		
			472	480	-5	-20			452	462	+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	472	+7.5	-7.5		
			452	462	+5	+20			424	436	+7.5	-7.5		
15-10-2010	7:00	7:00	448	452	+5	+20	19:00	7:00	476	480	+7.5	-7.5		
			436	472	+7.5	-7.5			460	472	-5	-20		
			424	436	+7.5	-7.5			456	460	-5	-20		
			436	448	-5	-20			448	452	+5	+20		
			444	452	+5	+20			448	452	+5	+20		
			424	436	+7.5	-7.5			424	436	+7.5	-7.5		
16-10-2010	7:00	7:00	436	448	-5	-20	19:00	23:10	424	436	+7.5	-7.5		
			444	452	+5	+20			436	448	-5	-20		
			420	436	-5	-20			424	436	+7.5	-7.5		
			420	432	+20	+5			436	448	-5	-20		
			412	420	-5	-20			444	452	+5	+20		
			416	424	+7.5	-7.5			420	436	-5	-20		
17-10-2010	7:00	7:00	436	444	+20	+5	19:00	6:30	412	420	-5	-20		
			432	436	+20	+5			416	424	+7.5	-7.5		
			400	412	+7.5	-7.5			436	444	+20	+5		
			404	420	+5	+20			432	436	+20	+5		
			392	404	+5	+20			404	436	-5	-20		
			404	436	-5	-20			440	460	+7.5	-7.5		
18-10-2010	7:00	7:00	440	460	+7.5	-7.5	19:00	0:00	392	404	+5	+20		
			436	440	+7.5	-7.5			404	436	-5	-20		
			396	400	+7.5	-7.5			440	460	+7.5	-7.5		
			376	396	+7.5	-7.5			436	440	+7.5	-7.5		
			368	392	+20	+5			396	400	+7.5	-7.5		
			376	404	-5	-20			376	404	-5	-20		
19-10-2010	7:00	7:00	436	460	+5	+20	19:00	23:30	376	404	-5	-20		
			372	376	-5	-20			436	460	+5	+20		
			360	376	+7.5	-7.5			0:10	5:00	436	460	+5	+20
			348	360	+7.5	-7.5			5:30	7:00	372	376	-5	-20
			356	372	-5	-20			19:00	20:05	356	372	-5	-20
			360	368	+5	+20			21:20	2:45	360	368	+5	+20
20-10-2010	7:00	23:00	456	480	-5	-20	19:00	7:00	456	480	-5	-20		
			436	456	-5	-20			436	456	-5	-20		
			356	360	+5	+20			2:50	7:00	436	456	-5	-20
			340	348	+7.5	-7.5			356	360	+5	+20		
			336	340	+7.5	-7.5			19:00	21:10	336	340	+7.5	-7.5
			348	356	+5	+20			348	356	+5	+20		
21-10-2010	7:00	19:00	340	348	+5	+20	19:00	23:00	340	348	+5	+20		
			-	-	-	-			-	-	-	-	-	
			-	-	-	-			-	-	-	-	-	
			-	-	-	-			-	-	-	-	-	
			-	-	-	-			-	-	-	-	-	
			-	-	-	-			-	-	-	-	-	
22-10-2010	7:00	19:00	336	356	-5	-20	19:00	22:40	336	356	-5	-20		
			430	460	+7.5	-7.5			23:30	3:20	430	460	+7.5	-7.5
			320	336	+5	+20			320	336	+5	+20		
			328	336	+7.5	-7.5			19:00	23:00	316	336	-5	-17.5
			296	320	+20	+5			0:00	2:00	480	500	-5	-20
			316	336	-5	-17.5			2:05	7:00	460	500	+5	+20
24-10-2010	7:00	7:00	480	500	-5	-20	19:00	23:00	480	500	-5	-20		
			460	500	+5	+20			320	328	+7.5	-7.5		
			320	328	+7.5	-7.5			284	316	-5	-17.5		
			284	316	-5	-17.5			19:00	23:00	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		
25-10-2010	7:00	23:00	260	296	+5	+17.5	19:00	23:00	264	276	+7.5	-7.5		
			276	280	+7.5	-7.5			260	284	-5	-17.5		
			264	276	+7.5	-7.5			252	264	+7.5	-7.5		
			260	284	-5	-17.5			248	252	+7.5	-7.5		
			252	264	+7.5	-7.5			188	260	+5	+17.5		
			248	252	+7.5	-7.5			240	248	+7.5	-7.5		
26-10-2010	7:00	23:00	248	252	+7.5	-7.5	19:00	22:00	240	256	-5	-17.5		
			188	260	+5	+17.5			216	240	0	-12.5		
			240	248	+7.5	-7.5			236	240	+12.5	0		
			256	260	-5	-17.5			204	236	0	+12.5		
			240	256	-5	-17.5			180	216	0	-12.5		
			216	240	0	-12.5			176	204	+12.5	0		
27-10-2010	7:00	19:00	236	240	+12.5	0	19:00	21:50	180	216	0	-12.5		
			204	236	0	+12.5			176	204	+12.5	0		
			180	216	0	-12.5			172	180	0	-12.5		
			176	204	+12.5	0			172	180	0	-12.5		
			172	180	0	-12.5								

Wo Hing – Penta-Ocean Joint Venture

Contract No. 9AWS0/08
 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						
			48	80	0	-12.5	19:00	20:30	48	80	0	-12.5
04-11-2010	7:00	23:00	24	48	0	-12.5	19:00	23:00	24	48	0	-12.5
			48	60	0	+12.5			48	60	0	+12.5
			24	48	0	+12.5	19:00	22:45	24	48	0	+12.5
05-11-2010	7:00	23:00	4	24	0	+12.5			4	24	0	+12.5
			6	24	0	-12.5	19:00	23:00	6	24	0	-12.5
06-11-2010	7:00	23:00	0	4	0	+12.5			0	4	0	+12.5
			0	-12	0	+16						
07-11-2010	7:00	20:00	-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	-15	23:20	3:15	460	520	-5	-15
			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	21:30	2:00	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
			1412	1420	0	+7.5						
29-11-2010	7:00	7:00	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
			1492	1500	+5	-5			1492	1500	+5	-5
			1492	1516	+5	-5						
30-11-2010	7:00	7:00	1492	1516	+5	-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	
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	
			1576	1576	-10	+5							
			1576	1620	-10	+5							
			1620	1640	-12.5	-5	19:00	7:00	1620	1640	-12.5	-5	
			1620	1640	0	+7.5			1620	1640	0	+7.5	
02-12-2010	7:00	7:00	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	
			1640	1644	-5	-12.5			1640	1644	-5	-12.5	
			1644	1664	-5	-12.5							
03-12-2010	7:00	7:00	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	
			1644	1680	-5	+5			1644	1680	-5	+5	
			1680	1688	+15	+2.5			1680	1688	+15	+2.5	
04-12-2010	7:00	7:00	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	
			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	
05-12-2010	7:00	7:00	1708	1720	-2.5	-12.5							
			1700	1704	-5	+5							
			1704	1720	+5	-5							
			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	
06-12-2010	7:00	7:00	1732	1740	-5	+5			1732	1740	+5	-5	
			1740	1744	+5	-5	19:00	7:00	1740	1744	+5	-5	
			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	
07-12-2010	7:00	7:00	1776	1792	-12.5	0			1776	1792	-12.5	0	
			1792	1796	-12.5	0			1792	1796	-12.5	0	
			1796	1808	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							
			1840	1850	0	+12.5							
08-12-2010	7:00	7:00	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	
			1900	1916	0	-12.5			1900	1916	0	-12.5	
			1916	1932	0	-12.5			1914	1932	0	-12.5	
09-12-2010	7:00	7:00	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	
			1900	1924	0	+12.5			1900	1924	0	+12.5	
			1924	1932	0	+12.5			1924	1932	0	+12.5	
			1900	1872	0	+12.5							
13-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
14-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
15-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
16-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
17-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
18-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
19-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
20-12-2010	7:00	7:00	330	370	+15	-15	19:00	7:00	330	380	+15	-15	
21-12-2010	7:00	7:00	370	380	+15	-15							
			380	575	+10	-10	19:00	7:00	380	575	+10	-10	
			575	610	+10	-10							
22-12-2010	7:00	7:00	610	930	+10	-10	19:00	7:00	610	930	+10	-10	
			950	1200	+10	-10	19:00	7:00	950	1200	+10	-10	
23-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
24-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
25-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
26-12-2010	7:00	19:00	-	-	-	-	-	-	-	-	-		
27-12-2010	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/WSD/08
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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
			1780	1788	0	+12.5			1780	1788	0	+12.5
29-12-2010	7:00	19:00	1788	1816	0	+12.5	19:00	7:00	1788	1816	0	+12.5
			1780	1804	0	-12.5			1780	1804	0	-12.5
			1804	1812	0	-12.5			1804	1812	0	-12.5
			1812	1832	-12.5	0			1812	1832	-12.5	0
30-12-2010	7:00	7:00	1832	1844	-12.5	0	19:00	7:00	1832	1844	-12.5	0
			1816	1828	0	+12.5			1816	1828	0	+12.5
			1836	1852	0	+12.5						
			1844	1852	0	-12.5						
31-12-2010	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						
			1872	1916	0	+12.5			1872	1916	0	+12.5
01-01-2011	7:00	7:00	1916	1924	0	+12.5	19:00	7:00	1916	1924	0	+12.5
			1924	1948	0	+12.5						
			1888	1956	0	-12.5			1888	1956	0	-12.5
			1948	1952	0	+12.5			1948	1952	0	+12.5
03-01-2011	7:00	7:00	1952	1972	+2.5	-12.5	23:20	7:00				
			1200	1440	+7.5	-7.5						
04-01-2011	7:00	7:00	1560	1640	+7.5	-7.5	19:00	7:00	1560	1640	+7.5	-7.5
			255	290	+10	-10			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
06-01-2011	7:00	7:00	80	165	+10	-10	19:00	7:00	80	165	+10	-10
			70	80	+10	-10			70	80	+10	-10
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



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: 05 March 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	61.0 61.2 60.8	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	62.3 62.0 61.8	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	63.8 63.6 63.0	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 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 (05 March 2011)
 Summary of Baseline Noise Monitoring at KY3, RWM and CGa (2300-0100)

Prepared by:  (Linda Law) (Senior Environmental Officer) Date: **07 March 2011**
 Checked by:  (C. L. Lau) (Environmental Team Leader) Date: **07 March 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		5-3-2011								
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-NC-31 (S/N: 00773032)			R10N-NC-31 (S/N: 00773032)			R10N-NC-31 (S/N: 00773032)		
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)		17			17			17		
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	23:30	23:35	23:20	23:25	23:30	23:20	23:25	23:30
	To	23:30	23:35	23:40	23:25	23:30	23:35	23:05	23:10	23:15
Wind Strength (m/s)		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
L _{eq} , dB(A)		63.8	63.6	63.0	62.3	62.0	61.8	61.0	61.2	60.8
L ₁₀ , dB(A)		67.3	67.1	66.8	65.6	65.3	65.1	64.8	64.9	64.5
L ₅₀ , dB(A)		61.1	61.0	60.7	58.8	58.5	58.1	56.6	56.8	56.2
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)

Recorded by	Name K.M. KWAN	Signature <i>K.M. Kwan</i>	Date 5-3-2011
Checked by	Name Liza Lam	Signature <i>Liza Lam</i>	Date 5/3/11

Summary of Baseline Noise Monitoring (Night-time:2300-2400) - 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)	63.7	63.3	63.3	63.5	64.0	64.1	63.5	63.1	62.5	62.2	61.7	64.2	63.9	63.0
Max Leq(5min)	64.6	64.7	64.4	64.2	65.0	66.1	64.6	63.7	63.6	63.0	63.6	64.7	65.3	64.0
Min Leq(5min)	62.7	61.3	61.9	62.2	63.0	63.3	62.4	62.0	61.4	60.6	60.2	63.1	62.9	61.9

Overall Average, Leq(5-min) 63.3 dB(A)
 Max 66.1 dB(A)
 Min 60.2 dB(A)

Summary of Baseline Noise Monitoring (Night-time:2300-2400) - 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)	60.7	61.4	60.1	65.0	61.5	55.9	55.2	58.5	56.3	58.5	68.2	57.5	62.9	61.9
Max Leq(5min)	62.0	64.1	61.9	67.3	62.3	57.7	57.0	59.3	57.3	59.4	62.1	58.5	64.7	63.8
Min Leq(5min)	59.3	58.3	58.4	61.4	60.0	56.0	52.8	57.5	55.7	56.9	55.7	56.3	60.9	60.2

Overall Average, Leq(5-min) 60.5 dB(A)
 Max 67.3 dB(A)
 Min 52.8 dB(A)

Summary of Baseline Noise Monitoring (Night-time:2300-2400) - KY3 (Kwan Yik Building Phase 3)

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)	57.5	60.4	57.0	61.4	58.0	57.7	57.6	57.5	57.7	60.0	57.4	58.6	57.9	57.4
Max Leq(5min)	59.8	61.5	59.4	62.9	59.4	59.4	60.2	58.4	59.7	61.6	59.1	61.6	59.4	59.2
Min Leq(5min)	56.5	59.0	55.1	59.6	56.6	56.2	56.1	56.7	56.6	59.2	55.9	56.6	56.3	55.4

Overall Average, Leq(5-min) 58.5 dB(A)
 Max 62.9 dB(A)
 Min 55.1 dB(A)

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 March 2011 (2300-2400) at KY3, RWM and CGa and 13 March 2011 (0000-0100) at KS6

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

Corresponding CNP: GW-RS0078-11 (27 January 2011 to 31 March 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	59.7 59.9 60.2	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 2300-2400 * is between 55.1dB(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	58.6 59.0 59.3	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 2300-2400 * 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	60.7 60.1 59.8	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 2300-2400 * is between 60.2dB(A) and 66.1dB(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
KS6	59.0 59.0 57.6	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 0000-0100 * is between 54.2dB(A) and 64.7dB(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

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 on 2300-2400 at CGa, RWM, KY3 and 0000-0100 at KS6 are more suitable for being as background indicator (instead of 2300-0700 of next day).

Attachment

Night-time Noise monitoring data sheets (12 March 2011 at KY3, RWM and KS6 and 13 March 2011 at KS6)
Summary of Baseline Noise Monitoring at KY3, RWM and CGa (2300-2400) and at KS6 (0000-0100)

Prepared by: _____

(Linda Law) (Senior Environmental Officer)

Date: 14 March 2011

Checked by: _____

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

Date: 14 March 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		12/3/11									
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.)		Orion NL-31 (S/N: 00531142)			(S/N:)			(S/N:)			
Sound Pressure Calibrator (Model and Serial No.)		Orion NC-73 (S/N: 10196943)			(S/N:)			(S/N:)			
Weather Condition		Fine			Fine			Fine			
Temperature (°C)		17			17			17			
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	23:00	23:05	23:10	23:20	23:25	23:30	23:40	23:45	23:50	
	To	23:05	23:10	23:15	23:25	23:30	23:35	23:45	23:50	23:55	
Wind Strength (m/s)		1.2	1.3	1.0	1.0	1.1	0.9	0.8	1.1	0.9	
Leq, dB(A)		60.7	60.1	59.8	58.6	59.0	59.3	59.7	59.9	60.2	
L10, dB(A)		63.0	62.6	61.8	60.7	61.1	61.4	61.4	61.8	62.4	
L90, dB(A)		57.3	56.8	55.7	54.6	55.0	55.3	55.8	56.0	56.7	
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	Mark Kai Wai	Mark	12/3/11
Checked by	Kate Lam	Kate Lam	12/3/11



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 West Kowloon during 1900-2300 / (2300-0700) / 0700-1900 (Holiday) Data Record Sheet

Date of Monitoring		13/3/11					
Monitoring Location		KS6 - Podium at the Cullinan			KS4b - Footpath of West Kowloon Waterfront Promenade		
Sound Level Meter (Model and Serial No.)		Aion NL-31 (SN: 00531142)			Aion NL-31 (SN:)		
Sound Pressure Calibrator (Model and Serial No.)		Aion NC-73 (SN: 10196943)			Aion NC-73 (SN:)		
Weather Condition		Fine			Fine		
Temperature (°C)		17			17		
Type of Measurement		Free Field (Façade)			Free Field (Façade)		
Measurement Period (min)		5			5		
Calibration before Measurement, dB(A)	Before	94.0			94.0		
	After	94.0			94.0		
Measurement Time	From	00=10	00=15	00=20	00=30	00=35	00=40
	To	00=15	00=20	00=25	00=35	00=40	00=45
Wind Strength (m/s)		1.3	1.2	1.2	0.9	1.1	1.0
L _{eq} , dB(A)		59.0	59.0	57.6	59.8	60.2	60.5
L ₁₀ , dB(A)		60.0	60.0	58.4	61.5	61.9	62.0
L ₉₀ , dB(A)		57.4	57.9	56.9	58.4	58.8	59.0
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.		

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 holiday		70 dB(A)
Restricted hours (2300-0700 hrs)		55 dB(A)

	Name	Signature	Date
Recorded by	Hak Jui Wan	Hak	13/3/11
Checked by	Loe Lan	Loe Lan	13/3/11

Summary of Baseline Noise Monitoring (Night-time:2300-2400) - KY3 (Kwan Yik Building Phase 3)

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)	57.5	60.4	57.0	61.4	58.0	57.7	57.6	57.5	57.7	60.0	57.4	58.6	57.9	57.4
Max Leq(5min)	59.8	61.5	59.4	62.9	59.4	59.4	60.2	58.4	59.7	61.6	59.1	61.5	59.4	59.2
Min Leq(5min)	56.6	59.0	55.1	59.6	56.6	56.2	56.1	56.7	55.6	59.2	55.9	56.6	56.3	55.4

Overall Average, Leq(5-min) 58.5 dB(A)
 Max 62.9 dB(A)
 Min 55.1 dB(A)

Summary of Baseline Noise Monitoring (Night-time:2300-2400) - 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)	60.7	61.4	60.1	65.0	61.5	56.9	55.2	58.5	56.3	58.5	58.2	57.5	62.9	61.9
Max Leq(5min)	62.0	64.1	61.9	67.3	62.3	57.7	57.0	59.3	57.3	59.4	62.1	58.5	84.7	63.8
Min Leq(5min)	59.3	56.3	58.4	61.4	60.0	56.0	52.8	57.5	55.7	56.9	55.7	56.3	60.9	60.2

Overall Average, Leq(5-min) 60.5 dB(A)
 Max 67.3 dB(A)
 Min 52.8 dB(A)

Summary of Baseline Noise Monitoring (Night-time:2300-2400) - 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)	63.7	63.3	63.3	63.5	64.0	64.1	63.5	63.1	62.5	62.2	61.7	64.2	63.9	63.0
Max Leq(5min)	64.6	64.7	64.4	64.2	65.0	66.1	64.6	63.7	63.6	63.0	63.6	64.7	65.3	64.0
Min Leq(5min)	62.7	61.3	61.9	62.2	63.0	63.3	62.4	62.0	61.4	60.6	60.2	63.1	62.9	61.9

Overall Average, Leq(5-min) 63.3 dB(A)
 Max 66.1 dB(A)
 Min 60.2 dB(A)

Summary of Baseline Noise Monitoring (Night-time:0000-0100) - KS6 (The Cullinan)

Date	28/12/09	29/12/09	30/12/09	31/12/09	01/01/10	02/01/10	03/01/10	04/01/10	05/01/10	06/01/10	07/01/10	08/01/10	09/01/10	10/01/10
Daily Average, Leq(5min)	57.0	57.1	62.3	56.8	56.8	56.6	56.3	60.6	56.7	57.4	60.1	59.0	56.8	
Max Leq(5min)	58.5	58.5	63.6	59.5	59.5	58.3	57.8	61.1	58.2	58.9	61.4	64.7	58.3	
Min Leq(5min)	54.7	55.7	60.4	55.2	55.2	54.2	54.7	59.6	55.1	55.7	59.2	56.0	55.0	

Overall Average, Leq(5-min) 58.5 dB(A)
 Max 64.7 dB(A)
 Min 54.2 dB(A)



Appendix L

Contractor's Follow up Actions to ET Weekly Site Inspections

Photo of Follow-up Action



Photo ref. 1

Contract No. 9/WSD/08

Laying of Western Cross Harbour Main and Associated Land Mains

From West Kowloon to Sai Ying Pun




東業建築動測試驗有限公司
ETS-TESTCONSULT LIMITED

Photo of Follow-up Action



Photo ref. 1

 <p>Photo ref. 1</p>		

Follow-up Action of the Weekly Site Inspection by the Contractor

Inspection Date : 22 March 2011

Item	Details of defective works or observations	Follow up Action(s) taken	Date of Action taken	Photo Ref.
1	Water leakage was observed from an air-conditioner at Contractor's site office at Portion J.	Water leakage from an air-conditioner at Contractor's site office at Portion J was repaired.	27 Mar 11	1
2	Standing water was noted accumulated below the Contractor's site office at Portion J.	Stagnant water was drained away.	27 Mar 11	2
3	Standing water was found inside the drip tray for an generator at Portion J.	Standing water was drained away from the drip tray.	27 Mar 11	3
4	Excavated materials (e.g. rock and mud) were noted accumulated along the sea-front at Portion J.	An appropriated area (away from the sea-front) was provided for temporary storage of excavated materials.	27 Mar 11	4



Photo of Follow-up Action



Photo ref. 1

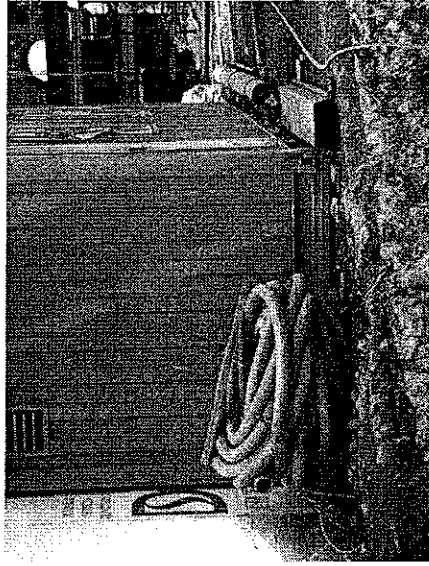


Photo ref. 2



Photo ref. 3

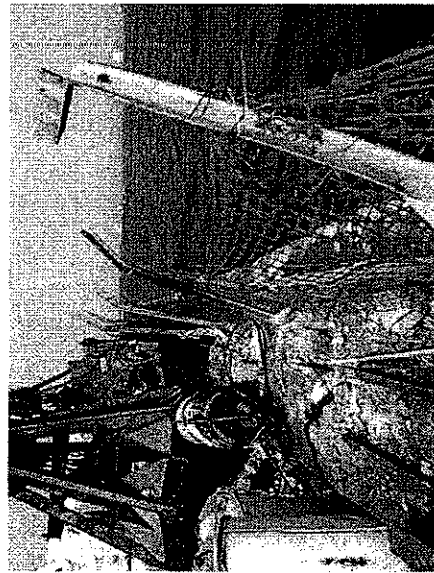


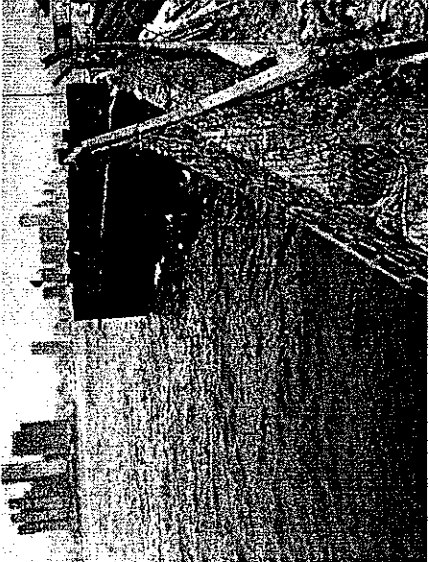

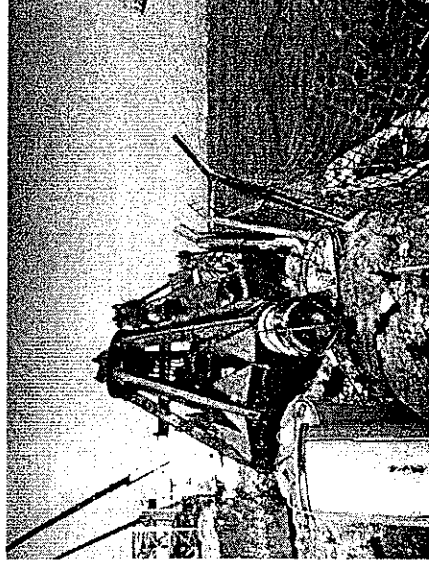
Photo ref. 4

Follow-up Action of the Weekly Site Inspection by the Contractor

Inspection Date : 28 March 2011

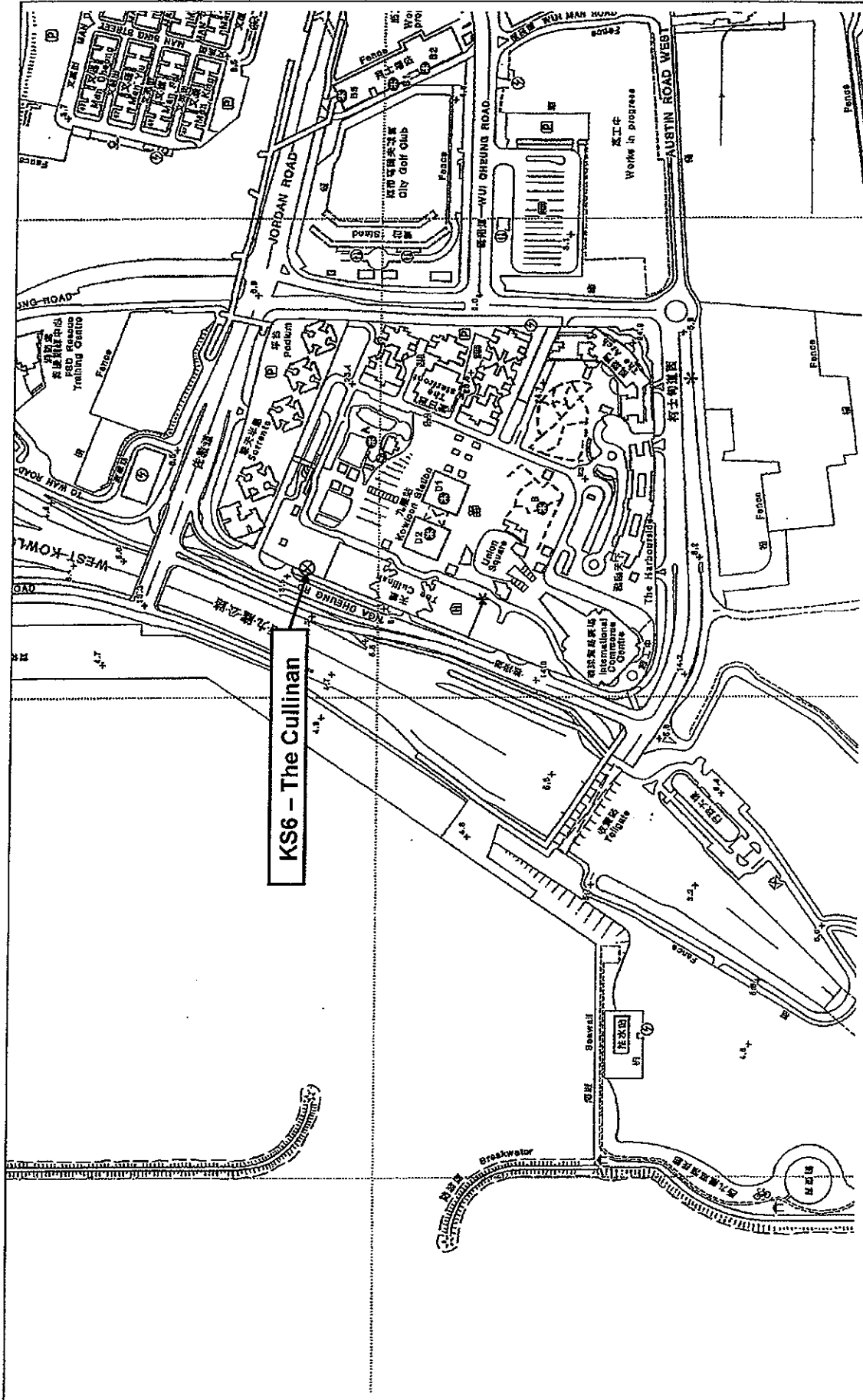
Item	Details of defective works or observations	Follow up Action(s) taken	Date of Action taken	Photo Ref.
1	Silt screen at Sai Ying Pun was found broken and the rubbish inside the silt screen should be removed regularly.	Repair the damaged silt screen and remove the rubbish inside the silt screen.	6 Apr 11	01, 02
2	The excavated materials (e.g. rock and mud) accumulated along the sea-front at Portion J should be removed as soon as possible.	The excavated material was removed.	6 Apr 11	03

Photo of Follow-up Action

 <p>Photo ref. 1</p>	 <p>Photo ref. 2</p>	 <p>Photo ref. 3</p>



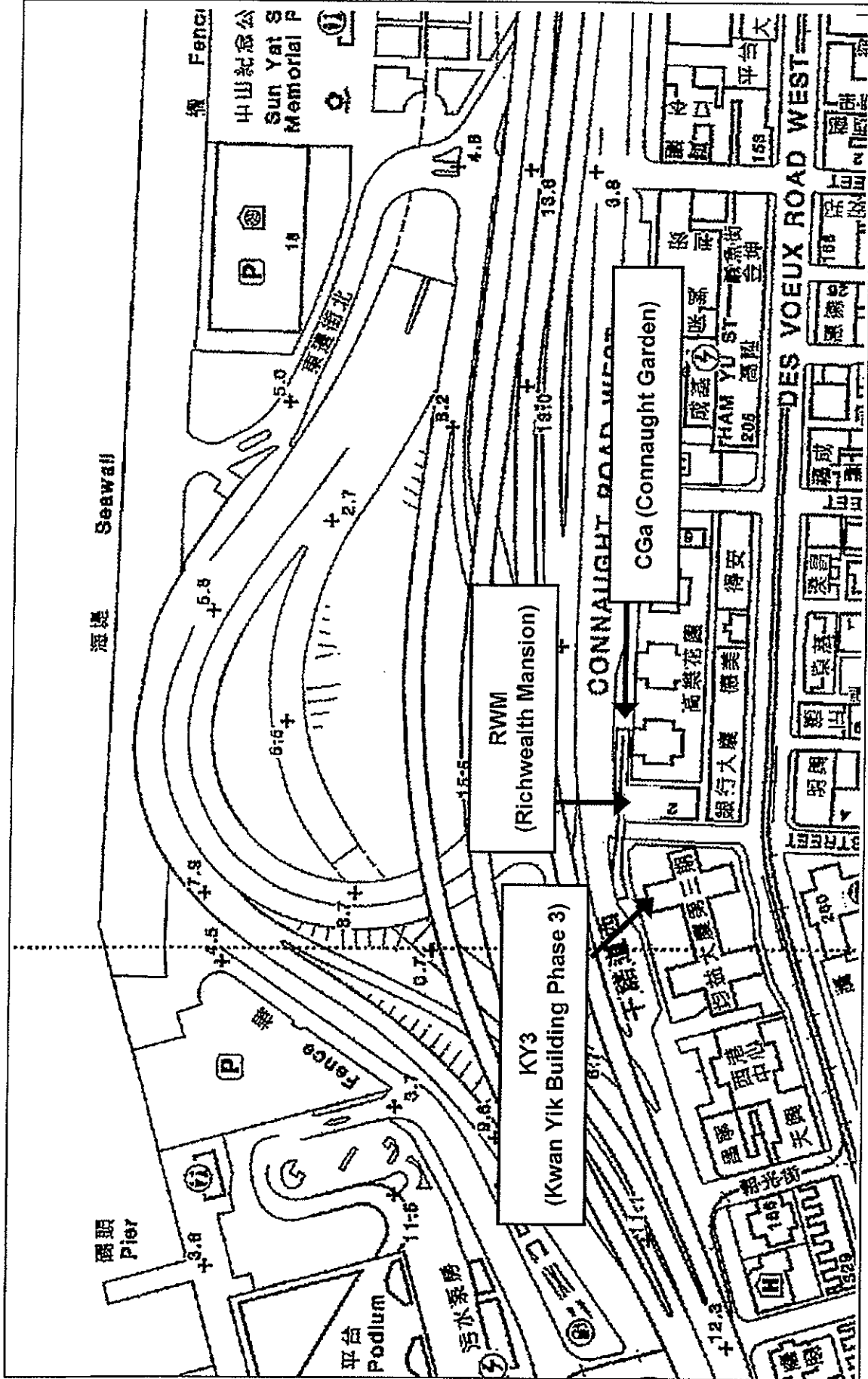
Figures



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

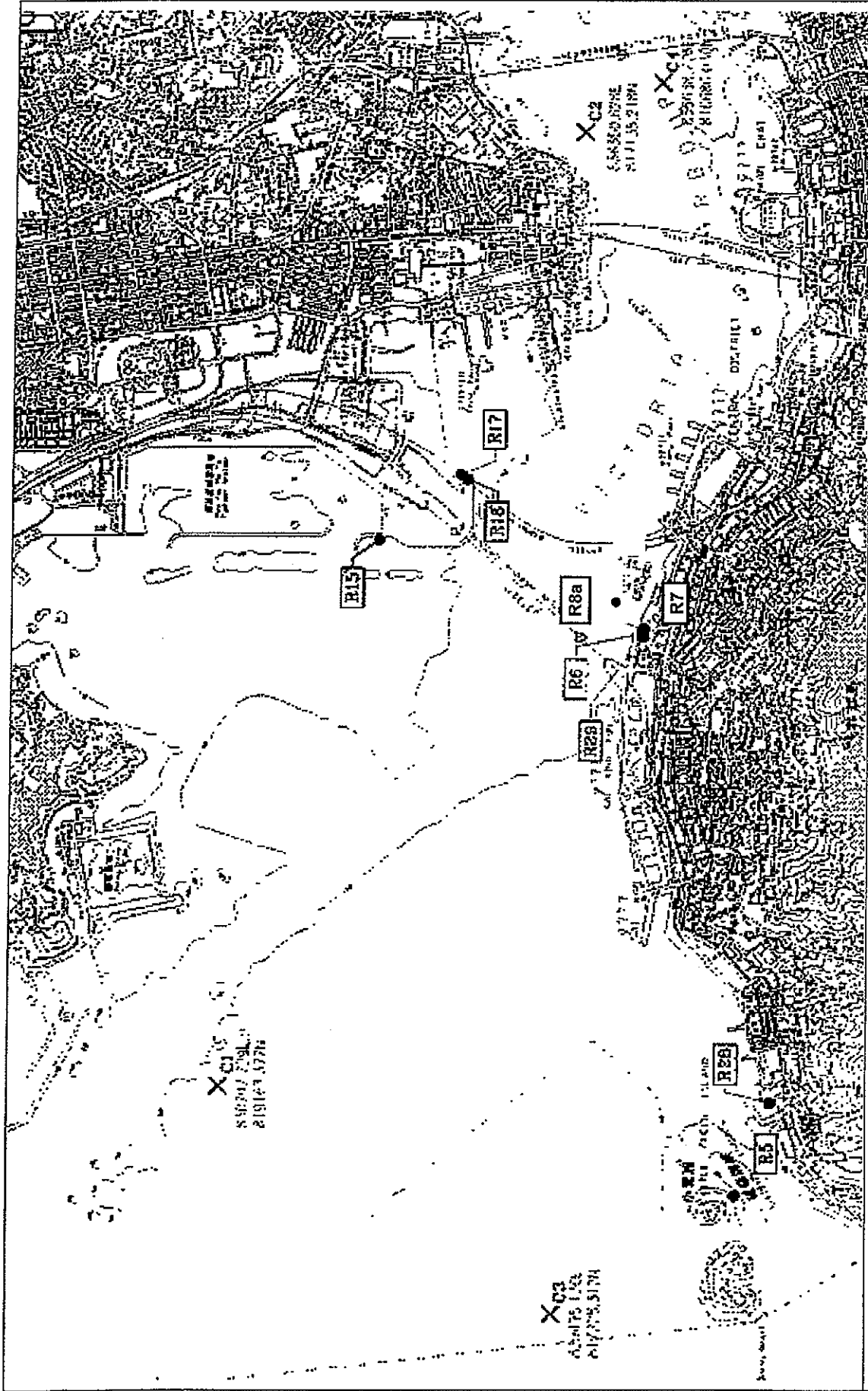


Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains for West Kowloon to Sai Ying Pun

Figure 2

Locations of Noise Monitoring Stations at Sai Ying Pun

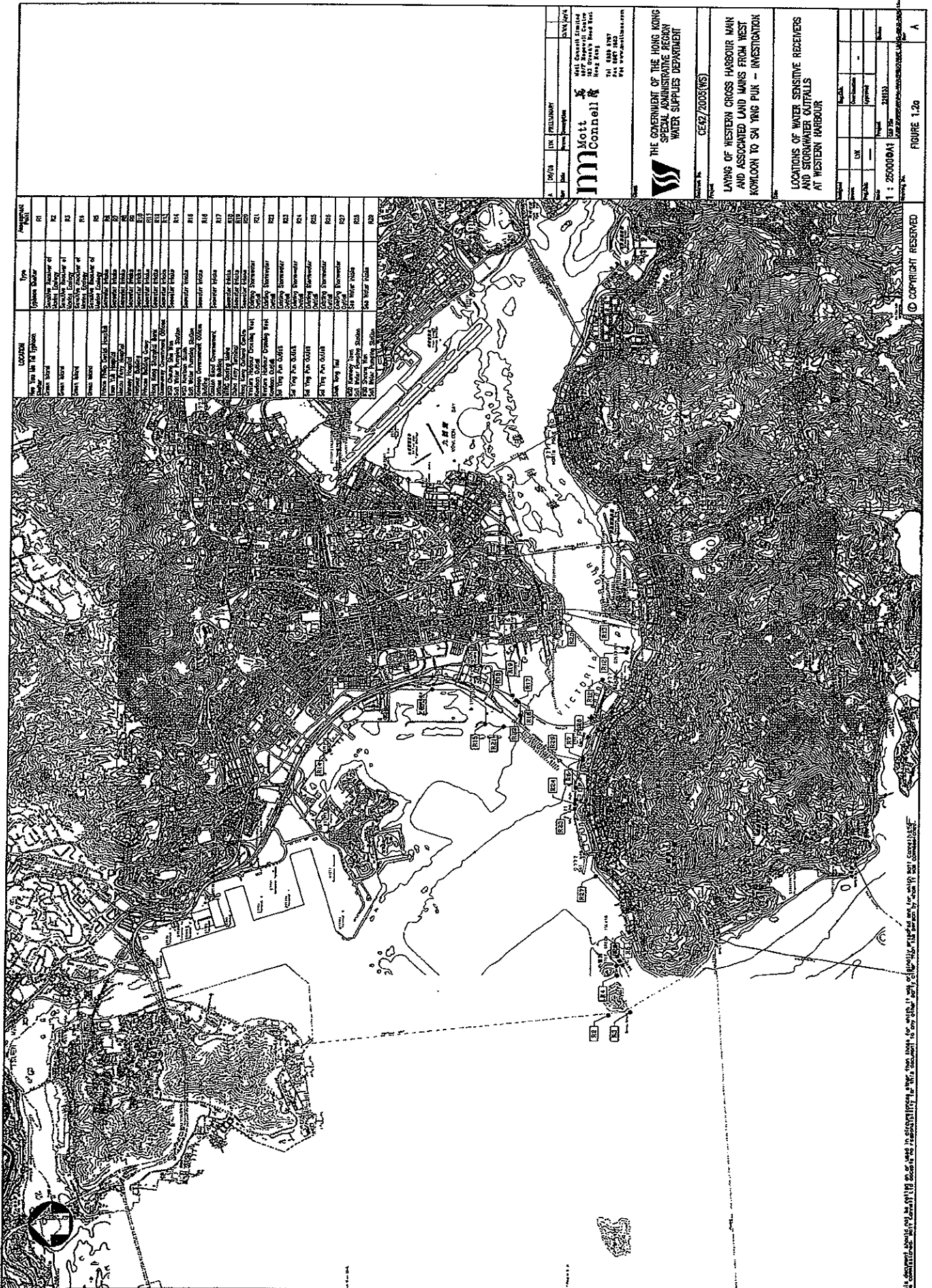




Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains for West Kowloon to Sai Ying Pun

Figure 3

Locations of Water Quality Monitoring Stations

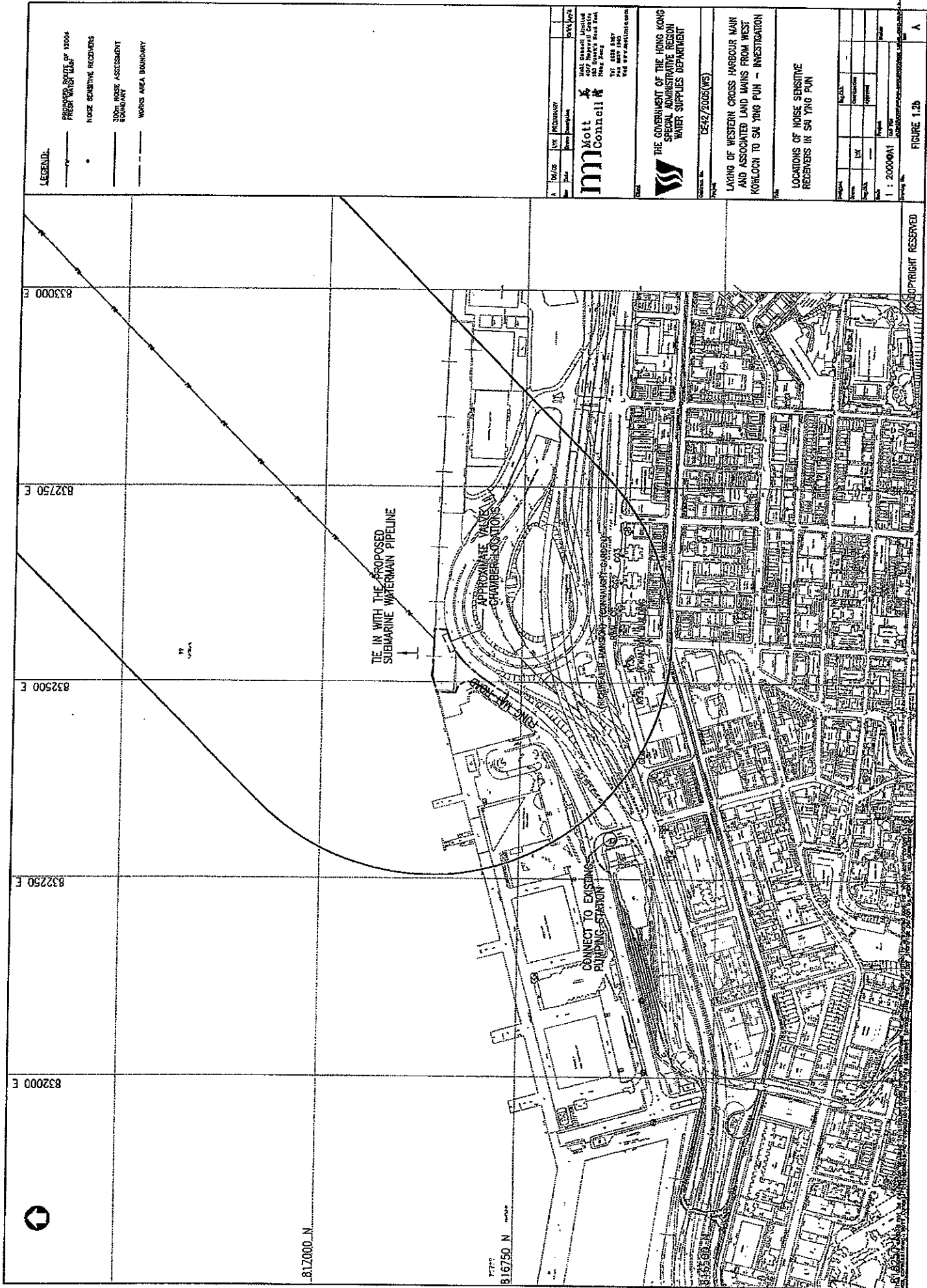


NO.	LOCATION	TYPE	REMARKS
R1	WATER TOWER	Water Tower	
R2	WATER TOWER	Water Tower	
R3	WATER TOWER	Water Tower	
R4	WATER TOWER	Water Tower	
R5	WATER TOWER	Water Tower	
R6	WATER TOWER	Water Tower	
R7	WATER TOWER	Water Tower	
R8	WATER TOWER	Water Tower	
R9	WATER TOWER	Water Tower	
R10	WATER TOWER	Water Tower	
R11	WATER TOWER	Water Tower	
R12	WATER TOWER	Water Tower	
R13	WATER TOWER	Water Tower	
R14	WATER TOWER	Water Tower	
R15	WATER TOWER	Water Tower	
R16	WATER TOWER	Water Tower	
R17	WATER TOWER	Water Tower	
R18	WATER TOWER	Water Tower	
R19	WATER TOWER	Water Tower	
R20	WATER TOWER	Water Tower	
R21	WATER TOWER	Water Tower	
R22	WATER TOWER	Water Tower	
R23	WATER TOWER	Water Tower	
R24	WATER TOWER	Water Tower	
R25	WATER TOWER	Water Tower	
R26	WATER TOWER	Water Tower	
R27	WATER TOWER	Water Tower	
R28	WATER TOWER	Water Tower	

DATE	1/20/18	TYPE	PRELIMINARY
DRAWN BY	mm	CHECKED BY	mm
Mott MacDonald 401 South Street 407th Avenue Hong Kong			
TEL: 852 2987 7777 FAX: 852 2987 7883 WWW: www.mottmac.com			
THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION WATER SUPPLIES DEPARTMENT			
DATE: 05/02/2008 (V2)			
LAYING OF WESTERN CROSS HARBOUR MAIN AND ASSOCIATED LAND MAINS FROM WEST KOWLOON TO SHI YING PUIK - INVESTIGATION			
LOCATIONS OF WATER SENSITIVE RECEIVERS AND STORAGE CAPACITIES AT WESTERN HARBOUR			
SCALE	1:25000(0/0/1)	DATE	2018/3
PROJECT NO.	25000(0/0/1)	DATE	2018/3
PROJECT NAME	Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Shi Ying PuiK - Investigation		
PROJECT NO.	25000(0/0/1)		
PROJECT NAME	Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Shi Ying PuiK - Investigation		

FIGURE 1.2a

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LEGEND.

- FRESH WATER MAIN OF 300mm
- NOISE SENSITIVE RECEIVERS
- 100m NOISE ASSESSMENT BOUNDARY
- - - WORSE AREA BOUNDARY

Mott MacDonald
 Mott MacDonald Limited
 250 Queen's Road East
 Hong Kong
 Tel: 8522 8200
 Fax: 8522 8110
 www.mottmac.com

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

Project No. DE42/2005(W5)

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

Scale	1 : 20000/1
Sheet No.	DE42/2005(W5)
Project No.	DE42/2005(W5)
Revision	
Author	
Checked	
Approved	
Date	

FIGURE 1.2b

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LEGEND:

- PROPOSED ROUTE OF 1200P FRESH WATER MAIN
- NOISE SENSITIVE RECEIVERS
- TEMPORARY PLANTING
- 200M NOISE ASSESSMENT BOUNDARY
- NOISE AREA BOUNDARY

m Mott MacDonald
 11th Floor, 100 Nathan Road, Kowloon, Hong Kong
 Tel: 852 2511 8888
 Fax: 852 2511 8889
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**THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
 WATER SUPPLIES DEPARTMENT**

CEA/2005(VS)

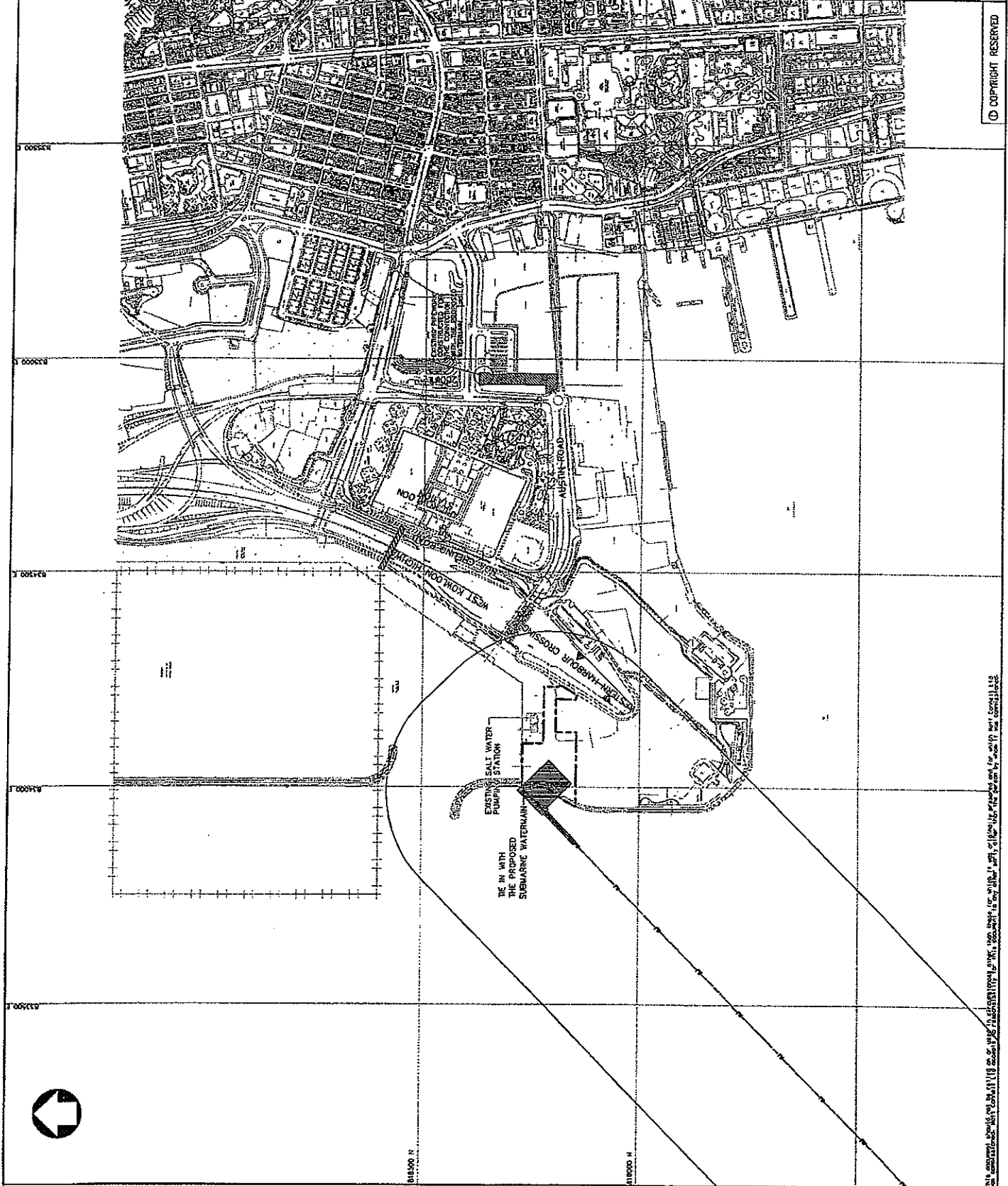
LAYING OF WESTERN CROSS HARBOUR MAIN AND ASSOCIATED LAND MAINS FROM WEST KOWLOON TO SU YING PUN - INVESTIGATION

LOCATION OF NOISE SENSITIVE RECEIVERS IN WEST KOWLOON

Project No.	WSD/2005(VS)
Scale	1:400000
Author	
Check	
Drawn	
Approved	
Date	

FIGURE 1.2c

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