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TEST REPORT

WO HING – PENTA-OCEAN JOINT VENTURE

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

**MONTHLY EM&A REPORT
NO.15**

(JULY 2011)

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11th Aug 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

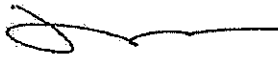
**Re: Contact No. 9/WSD/08
Laying of Western Cross Harbour Main and Associated Land Mains from West
Kowloon to Sai Ying Pun
Monthly Environmental Monitoring and Audit Report No. 15**

Reference is made to Environment Team's submission of the Environmental Monitoring and Audit Report No. 15 by Email on 8th Aug 2011 (entitled "9/WSD/08 - Draft Monthly Report (July 11)") and the subsequent revision of the report by Email on 11th Aug 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.15 was prepared by ETS-Testconsult Ltd (ET) for the Project. This report documented the findings of EM&A Works conducted during the Project in July 2011.

Site Activities

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

- Pipe pulling by bottom pull method from West Kowloon to Sai Ying Pun (Portion J);
- Dismantle of the kentledge system of the turn roller "A" (Portion J);
- Erection of the kentledge system of the dry well (Portion J);
- Dismantle of the back anchor (Portion J);
- Erection of noise barriers (Portion H2);
- Transfer the stored pipes to the flattop pontoon (Portion I);
- Fabrication of steel waling for strutting system of the cofferdam (Portion H1 & H2);
- Site clearance after bottom of pull of the pipeline;
- Pipe pulling works, including welding of the field joint, apply external coating, install steel wire mesh, install steel jacket to the field joint, concrete coating of the field joint, internal lining of the field welded joint and pipe pulling (Portion I);
- Excavation within cofferdam in West Kowloon (Portion I); and
- Installation of strutting system for the cofferdam in West Kowloon (Portion I).

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, CGa, RWM and KY3
- Evening-time Noise Monitoring (1900-2300): 2 Occasions at KS6, CGa, RWM and KY3
- Night-time Noise Monitoring (2300-0700 of next day): 2 Occasion at KS6
- Holiday-time Noise Monitoring (0700-1900 on Holiday): 5 Occasions at KS6, CGa, RWM and KY3
- Marine Water Quality Monitoring: 13 Occasions at 9 monitoring stations and 4 control stations
- Weekly-site inspection: 4 Occasions

Noise Monitoring

No exceedance of Action Level of noise monitoring was recorded in this reporting month since no complaint on noise issue was received. No exceedance in Limit Level was recorded according to the noise monitoring results in this reporting month.

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

08, 12, 20 and 26 July 2011
20 July 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 complaint, notification of summons and prosecution 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.S) 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 July 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:

- Pipe pulling by bottom pull method from West Kowloon to Sai Ying Pun (Portion J);
- Dismantle of the kentledge system of the turn roller "A" (Portion J);
- Erection of the kentledge system of the dry well (Portion J);
- Dismantle of the back anchor (Portion J);
- Erection of noise barriers (Portion H2);
- Transfer the stored pipes to the flattop pontoon (Portion I);



- Fabrication of steel waling for strutting system of the cofferdam (Portion H1 & H2);
- Site clearance after bottom of pull of the pipeline;
- Pipe pulling works, including welding of the field joint, apply external coating, install steel wire mesh, install steel jacket to the field joint, concrete coating of the field joint, internal lining of the field welded joint and pipe pulling (Portion I);
- Excavation within cofferdam in West Kowloon (Portion I); and
- Installation of strutting system for the cofferdam in West Kowloon (Portion I).

4.0 IMPACT NOISE MONITORING

4.1 Monitoring Requirements

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

4.2 Monitoring Equipment

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

Table 4.1 Noise Monitoring Equipment

Equipment	Model	Equipment No.	Serial No.	Calibration Date.	Expired Date
Sound Level Meter	Rion NL-31 Sound Level Meter	ET/EN/003/06	00110024	15/04/11	14/04/12
		ET/EN/003/13	00593620	14/09/10	13/09/11
		ET/EN/003/12	00773032	08/12/10	07/12/11
Sound Level Calibrator	Rion NC-73 Sound Level Calibrator	ET/EN/002/01	10196943	12/11/10	11/11/11
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 June 2011. Hence, noise monitoring at noise station CG was moved to another noise station CGa (pavement in front of Connaught Garden) temporarily until the completion of repairing and maintenance works at Connaught Garden since CGa locates close to the major site activities which are likely to have noise impacts and low disturbance to the occupants was observed during the noise monitoring. As a result, there were three noise monitoring locations, CGa (Pavement in front of Connaught Garden), RWM (Roof at Richwealth Mansion) and KY3 (Roof at Kwan Yik Building Phase 3) selected to conduct impact environmental monitoring.

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

Table 4.3 Noise Monitoring Stations

<i>Daytime and Holiday-time Noise monitoring station</i>	<i>Description of location</i>	<i>Type of Measurement</i>
KS6	Podium at the Cullinan	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 Cullinan	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, CGa, RWM and KY3 of day-time noise monitoring, 2 occasions of evening-time noise monitoring at KS6, CGa, RWM and KY3, 2 occasions of night-time noise monitoring at KS6 and 5 occasions of holiday-time noise monitoring at 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. Besides, no exceedances in Limit Level were recorded according to the noise monitoring results of this reporting month.

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

Table 4.5 Summary of Noise Daytime Monitoring Results

Monitoring Parameter	Date	KS6		
		Time	Result	Exceed*
Day-time	08/07/11	09:25	65.4	X
	11/07/11	15:10	65.2	X
	20/07/11	15:30	63.0	X
	27/07/11	15:20	63.1	X
Evening-time	02/07/11	22:15	62.3	X
	02/07/11	22:20	62.0	X
	02/07/11	22:25	61.9	X
	09/07/11	21:00	60.1	X
	09/07/11	21:05	59.8	X
Night-time	09/07/11	21:10	60.4	X
	02/07/11	23:00	54.8	X
	02/07/11	23:05	54.9	X
	02/07/11	23:10	54.7	X
	10/07/11	00:10	59.1	X
	10/07/11	00:15	58.9	X
	10/07/11	00:20	58.4	X



Monitoring Parameter	Date	KS6		
		Time	Result	Exceed*
Holiday-time	03/07/11	11:15	62.4	X
	03/07/11	11:20	62.9	X
	03/07/11	11:25	62.1	X
	10/07/11	09:00	60.4	X
	10/07/11	09:05	61.3	X
	10/07/11	09:10	60.9	X
	17/07/11	14:35	62.7	X
	17/07/11	14:40	63.1	X
	17/07/11	14:45	62.5	X
	24/07/11	09:20	60.5	X
	24/07/11	09:25	60.3	X
	24/07/11	09:30	60.7	X
	31/07/11	13:55	63.0	X
	31/07/11	14:00	62.4	X
31/07/11	14:05	62.8	X	
Monitoring Parameter	Date	CGa		
		Time	Result	Exceed*
Day-time	06/07/11	13:15	71.8	X
	15/07/11	10:10	71.7	X
	18/07/11	11:35	74.2	X
	25/07/11	13:00	72.7	X
Evening-time	02/07/11	20:30	69.1	X
	02/07/11	20:35	69.8	X
	02/07/11	20:40	69.2	X
	09/07/11	22:00	69.0	X
	09/07/11	22:05	68.4	X
Holiday-time	09/07/11	22:10	68.7	X
	03/07/11	09:30	69.8	X
	03/07/11	09:35	69.9	X
	03/07/11	09:40	69.6	X
	10/07/11	10:10	68.5	X
	10/07/11	10:15	68.8	X
	10/07/11	10:20	68.6	X
	17/07/11	13:00	69.6	X
	17/07/11	13:05	69.2	X
	17/07/11	13:10	69.9	X
	24/07/11	10:30	68.7	X
	24/07/11	10:35	68.4	X
	24/07/11	10:40	68.5	X
31/07/11	14:45	69.2	X	
31/07/11	14:50	69.7	X	
31/07/11	14:55	69.5	X	
Monitoring Parameter	Date	RWM		
		Time	Result	Exceed*
Day-time	06/07/11	11:30	64.1	X
	15/07/11	10:45	62.4	X
	18/07/11	11:05	66.4	X
	25/07/11	13:35	64.1	X
Evening-time	02/07/11	20:50	69.1	X
	02/07/11	20:55	69.3	X
	02/07/11	21:00	68.8	X
	09/07/11	22:20	67.7	X
	09/07/11	22:25	68.2	X
Holiday-time	09/07/11	22:20	68.5	X
	03/07/11	09:50	62.9	X
	03/07/11	09:55	63.5	X
	03/07/11	10:00	63.4	X
	10/07/11	10:30	61.4	X
10/07/11	10:35	61.2	X	
10/07/11	10:40	60.9	X	



Monitoring Parameter	Date	RWM		
		Time	Result	Exceed*
Holiday-time	17/07/11	13:20	63.7	X
	17/07/11	13:25	63.5	X
	17/07/11	13:30	63.0	X
	24/07/11	10:50	61.3	X
	24/07/11	10:55	60.9	X
	24/07/11	11:00	61.1	X
	31/07/11	15:05	63.2	X
	31/07/11	15:10	63.8	X
	31/07/11	15:15	63.3	X
Monitoring Parameter	Date	KY3		
		Time	Result	Exceed*
Day-time	06/07/11	10:55	62.5	X
	15/07/11	11:20	61.8	X
	18/07/11	10:30	62.3	X
	25/07/11	14:10	62.9	X
Evening-time	02/07/11	21:10	66.3	X
	02/07/11	21:15	65.8	X
	02/07/11	21:20	66.2	X
	09/07/11	22:40	67.4	X
	09/07/11	22:45	67.2	X
	09/07/11	22:50	68.0	X
Holiday-time	03/07/11	10:10	60.9	X
	03/07/11	10:15	60.8	X
	03/07/11	10:20	61.2	X
	10/07/11	10:50	60.7	X
	10/07/11	10:55	61.0	X
	10/07/11	11:00	60.6	X
	17/07/11	13:40	60.9	X
	17/07/11	13:45	61.1	X
	17/07/11	13:50	61.2	X
	24/07/11	11:15	60.8	X
	24/07/11	11:20	61.0	X
	24/07/11	11:25	60.9	X
	31/07/11	15:25	61.0	X
31/07/11	15:30	60.8	X	
31/07/11	15:35	61.3	X	

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

The summary of noise exceedances is shown in Table 4.6.

Table 4.6 Summary of Impact Noise Exceedances in this reporting month

Exceedance Level	Daytime	Evening-time	Night-time	Holiday-time
Action	0	0	0	0
Cumulative	0	0	0	0
Limit	0	0	0	0
Cumulative	0	0	155	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 impact stations were selected to conduct impact water quality monitoring for the Project. Table 5.1 shows the water quality monitoring stations of the Project.

Table 5.1 Water Quality Monitoring Stations

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

Remark (*): Station R15 = WSD Seawater Intake

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

5.3 Monitoring Parameters

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

Table 5.2 Water Quality Monitoring Parameters

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

Table 5.3 Other relevant water quality parameters

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

5.4 Monitoring Frequency

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

Table 5.4 Monitoring Frequency of Impact Water Quality Monitoring

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



5.5 Monitoring Methodology and Equipment Used

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

Location of the monitoring stations

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

Water Depth measurement

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

In-situ Water Quality Monitoring Equipment

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

Dissolved Oxygen, salinity and temperature measuring equipment

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

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

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

Turbidity Measurement Instrument

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

Water Sampling and Sample Analysis

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

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

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



5.6 Details of site Equipment used for In-situ Measurement

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

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

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

Parameter	Model	Date of Calibration	Due Date	Equipment No.	Serial No.
Coordinate of Monitoring stations	Magellan GPS Navigator	-----	-----	ET/EW/005/03	211836B
Dissolved Oxygen (Saturation), Temperature and Salinity	YSI Dissolved Oxygen, Salinity & Temperature Meter, YSI 85	21/05/11	20/08/11	ET/EW/008/002*	06C1998AD
Turbidity	HACH Model 2100P Turbid Meter	14/04/11 13/07/11	13/07/11 12/10/11	ET/0505/007*	08060C030281
Water Depth	Speedtech Instrument SM-5A	-----	-----	ET/EW/002/04	56657

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

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

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

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

Table 5.6 Summary of test method

Laboratory Analysis	Testing Procedure	Method Detection Limit
Total suspended solids	In house method based on APHA 19 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

July 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.
(▽) = Water quality monitoring scheduled on 23 June 2011 (mid-flood) was cancelled due to bad weather (Typhoon No.3).



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 08, 12, 20 and 26 July 2011 by ET. Monthly joint site inspection at 20 July 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 July 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 finding
1	Water	Follow up action to outstanding finding in the previous month, standing water noted in most drip trays during raining were cleaned during the weekly site inspection on 08/07/11.	---	---	Closed
2	Site Practice	Follow up action to outstanding finding in the previous month, rubbish noted inside the silt screen at the sea water intake at Kowloon South Salt Water Pumping Station was collected during the weekly site inspection on 08/07/11.	---	---	Closed
3	Site Practice	Rubbish was noted at some working areas in Portion H during the weekly site inspection on 12/07/11.	Rubbish at Portion H was collected. (Photo Ref. 1 and 2 of the Contractor Follow-up Action – 15/07/11)	During the subsequent weekly site inspection on 20/07/11, rubbish was collected.	Closed



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

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

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

7.0 STATUS OF ENVIRONMENTAL PERMITS

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

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

Description	Permit No.	Valid Period		Remarks
		From	To	
Environmental Permit	EP-273/2007	31/07/07	End of Project	Whole Project
Water Discharge Licence (West Kowloon)	WT00005347-2009	07/01/10	31/01/15	Effluent and all other wastewater arising from the construction site through Screen & Sedimentation Tank
Water Discharge Licence (Sai Yung Pun)	WT00005800-2010	14/01/10	31/01/15	Effluent arising from the construction site through Sedimentation Tank
Chemical Waste Producer	5213-217-W3086-01	13/10/09	End of Project	Spent oil, surplus flammable liquid, surplus paint, soil, rags & containers contaminated with lubricating oil, diesel, flammable liquid & paint, & used batteries
Notification under APCO	Application had been submitted to EPD on 25/09/09 and approved from 29/09/09.			
Construction Noise Permit (West Kowloon)	GW-RE0257-11	19/04/11	04/10/11	<p>Group A</p> <p>One Air Compressor, air flow $\leq 10\text{m}^3/\text{min}$ (CNP 001) (Zone A)</p> <p>One Crane, mobile (diesel) (CNP 048) (Zone A)</p> <p>One Generator, silenced, $\leq 75\text{dB(A)}$ at 7m (Zone A)</p> <p>One Generator, standard (CNP 101) (Zone B)</p> <p>Group B</p> <p>One Concrete lorry mixer (CNP 044) (Zone A)</p> <p>One Crane, mobile (diesel) (CNP 048) (Zone A)</p> <p>One Air compressor, air flow $\leq 10\text{m}^3/\text{min}$ (CNP 001) (Zone B)</p> <p>Two Crane, mobile (diesel) (CNP 048) (Zone B)</p> <p>One Derrick barge (CNP 061) (Zone B)</p> <p>Four Generator, silenced, $\leq 75\text{dB(A)}$ at 7m (Zone B)</p> <p>Six Grinder, hand-held (electric) (CNP065) (Zone B)</p> <p>Two Guard boats (Zone B)</p> <p>Two Poker, vibratory, external (electric) (Zone B)</p> <p>One Tug boat (CNP 221) (Zone B)</p> <p>Group C</p> <p>One Generator, silenced, $\leq 75\text{dB(A)}$ at 7m (Zone A)</p> <p>One Air compressor, air flow $\leq 10\text{m}^3/\text{min}$ (CNP 001) (Zone B)</p> <p>One Grinder, hand-held (electric) (CNP065) (Zone B)</p> <p>One Generator, silenced, $\leq 75\text{dB(A)}$ at 7m (Zone B)</p> <p>Group D</p> <p>One Derrick barge (CNP 061) (Zone B)</p> <p>One dredger, grab (CNP 063) (Zone B)</p> <p>One Generator, standard (CNP 101) (Zone B)</p> <p>Two Guard boats (Zone B)</p> <p>One Tug boat (CNP 221) (Zone B)</p>



Description	Permit No.	Valid Period		Remarks
		From	To	
Construction Noise Permit (Sai Ying Pun)	GW-RS0352- 11	26/04/11	10/10/11	<p>Group A One dredger, grab (CNP 063) Two Guard boats One 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)</p> <p>Group B 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)</p> <p>Group C Two Derrick barge (CNP 061) Three Guard boats One Tug boat (CNP 221) One Air compressor with Noise Emission Label showing a sound power level of $\leq 98\text{dB(A)}$ Two Generator, silenced, 108dB(A) (CNP 101)</p> <p>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 $\leq 98\text{dB(A)}$ One Generator, silenced, 108dB(A) (CNP 101)</p> <p>Group E One Derrick barge (CNP 061) Two Guard boats One Tug boat (CNP 221) One Crane, mobile (diesel) (CNP 048) Two Generator, silenced, 108dB(A) (CNP 101) One Winch (electric) (CNP 262)</p> <p>Group F 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)</p>

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)	744.58		14185.10
	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)	744.58	SENT Landfill	14185.10
C&D Waste	Metals (in kg)	0	---	0
	Paper/Cardboard Packaging (in kg)	0	Collected by recycling company	117
	Plastics (in kg)	0	---	0
	Chemical Waste (in kg)	0	---	0
	Other, e.g. General Refuse (in m ³)	6.56	SENT Landfill	85.46
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. No exceedance in Limit Level was recorded according to the noise monitoring results in this reporting month.

9.2 Summary of Environmental Complaints

No complaint was received in this reporting month.

9.3 Summary of Notification of Summons and Prosecution

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

10.0 IMPLEMENTATION STATUS

10.1 Implementation Status of Environmental Mitigation Measures

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

10.2 Implementation Status of Event and Action Plan

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

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

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



Table 10.1 Summary of Environmental Complaints and Prosecutions

Complaints logged		Summons served		Successful prosecution received	
July 2011	Cumulative	July 2011	Cumulative	July 2011	Cumulative
0	1	0	0	0	0

11.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

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

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

No exceedance of Action Level of noise monitoring was recorded in this reporting month since no complaint on noise issue was received. No exceedance in Limit Level was recorded according to the noise monitoring results in this reporting month.

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

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

Recommendations

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

Air Quality

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

Noise

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

Water Quality

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

Chemical and Waste Management

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



12.0 FUTURE KEY ISSUES

12.1 Work Programme for the Coming Month

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

- Erection of the dry well openings for the connection of the riser pipe (Portion J),
- Fabrication of the riser spool (Portion J);
- Tie-in works (Portion J);
- Fabrication of the riser spools (Portion H1 & H2);
- Fabrication of the steel members of the strutting system for the cofferdam in West Kowloon (Portion H1 & H2);
- Removal of buoyancy tanks (Portion I); and
- Construction of cofferdam in West Kowloon, including installation of strutting system and excavation (Portion I).

12.2 Key Issues for the Coming Month

Key issues to be considered in the coming month include:

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

Mitigation measures to be required in the coming month:

Air Quality Impact

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

Noise

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

Water Quality Impact

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

Chemical and Waste Management

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

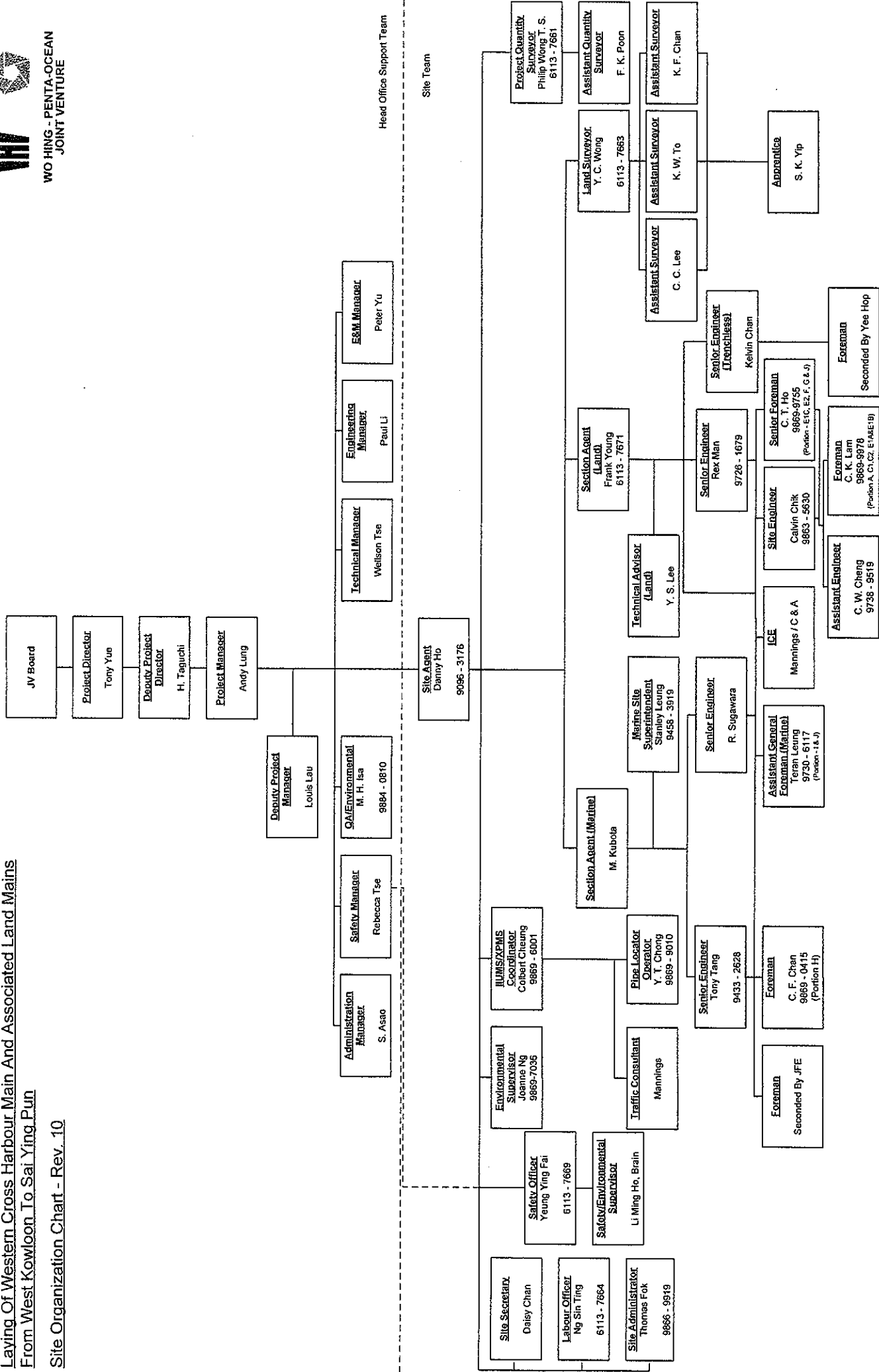
12.3 Monitoring Schedule for the Coming Month

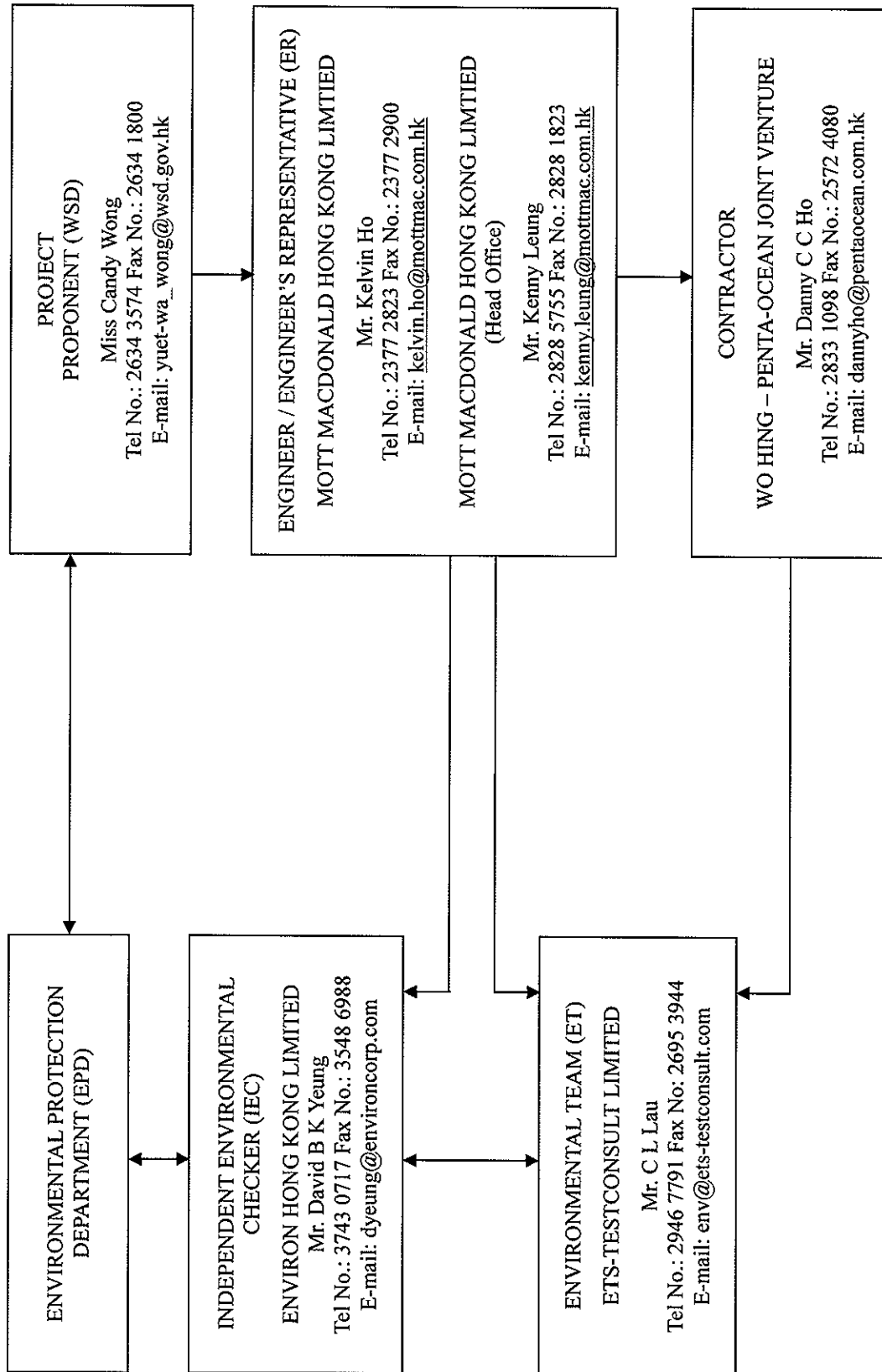
The proposed EM&A program of the coming month is attached in Appendix I.



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. **06467**

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 : Sound Level Calibrator (ET/EN/002/01)

Manufacturer : Rion

Model : NC-73

Serial No. : 10196943

Test Conditions

Date of Test : 12-Nov-10

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02.

Test Results

All results were within the manufacturer's specification.

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

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	03926	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	04062	NIM-PRC & SCL-HKSAR
S041	Universal Counter	04461	SCL-HKSAR
S206	Sound Level Meter	04462	SCL-HKSAR

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

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

Calibrated by : 

P. F. Wong

Approved by : 

Dorothy Cheuk

Date: 15-Nov-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



Calibration Certificate

Certificate No. 06467

Page 2 of 2 Pages

Results :

1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value		Mfr's Spec.
	Before Adjust.	After Adjust.	
94 dB	93.52 dB	93.82 dB	± 1 dB

Uncertainty : ± 0.1 dB

2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.988 kHz	± 2 %

Uncertainty : ± 0.1 %

3. Level Stability : 0.0 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.3 %

Mfr's Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

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

3. Atmospheric Pressure : 1 006 hPa

----- END -----



Calibration Certificate

Certificate No. **12016**

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. : Q10853

Date of receipt : 11-Apr-11

Item Tested

Description : Precision Integrating Sound Level Meter

Manufacturer : Rion

Model : NL-31

Serial No. : 00110024

Test Conditions

Date of Test : 15-Apr-11

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

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

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


Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C101623	SCL-HKSAR
S024	Sound Level Calibrator	04062	NIM-PRC & SCL-HKSAR

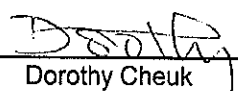
The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling,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

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

Calibrated by :


P. F. Wong

Approved by :


Dorothy Cheuk

Date: 18-Apr-11

This Certificate is Issued by:

Hong Kong Calibration Ltd.

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

Tel: 2425 8801 Fax: 2425 8846

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Calibration Certificate

Certificate No. **12016**

Page 2 of 3 Pages

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 - 100	L _A	Fast	94.0	94.2
		Slow		94.2
	L _C	Fast		94.2
		L _p		Fast
30 - 120	L _A	Fast	94.0	94.1
		Slow		94.1
	L _C	Fast		94.1
		L _p		Fast
30 - 120	L _A	Fast	114.0	114.0
		Slow		114.0
	L _C	Fast		114.0
		L _p		Fast

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.2 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.1 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	114.2	+0.1	± 0.7 dB
130	104.0	104.2	+0.1	
120	94.0	94.1(Ref.)	--	
110	84.0	84.0	-0.1	
100	74.0	74.2	+0.1	
90	64.0	64.1	0.0	
80	54.0	53.9	-0.1	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 12016

Page 3 of 3 Pages

3.2 Differential level linearity

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

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-40.0	- 39.4 dB, ± 1.5 dB
63 Hz	-26.6	- 26.2 dB, ± 1.5 dB
125 Hz	-16.5	- 16.1 dB, ± 1 dB
250 Hz	-8.9	- 8.6 dB, ± 1 dB
500 Hz	-3.4	- 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	+1.5	+ 1.0 dB, ± 1 dB
8 kHz	-0.7	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.3	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB

5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	40.0	± 0.5 dB
1/10 ²	40.0	39.9	
1/10 ³	40.0	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 : 1 010 hPa.

----- END -----



Calibration Certificate

Certificate No. 07049

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. : Q02790

Date of receipt : 7-Dec-10

Item Tested

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

Manufacturer : Rion

Model : NL-31

Serial No. : 00773032

Test Conditions

Date of Test : 8-Dec-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).

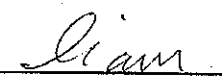
Main Test equipment used:

<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

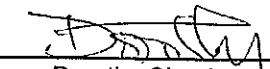
The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, 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

Date: 9-Dec-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. 07049

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	93.9
		Slow		93.9
	L _C	Fast		93.9
		L _p		Fast
30 - 120	L _A	Fast	94.0	93.9
		Slow		93.9
	L _C	Fast		93.9
		L _p		Fast
30 - 120	L _A	Fast	114.0	113.7
		Slow		113.7
	L _C	Fast		113.7
		L _p		Fast

IEC 651 Type 1 Spec. : ± 0.7 dB
Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB
Uncertainty : ± 0.1 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	114.0	+0.1	± 0.7 dB
130	104.0	104.0	+0.1	
120	94.0	93.9 (Ref.)	--	
110	84.0	83.9	0.0	
100	74.0	73.9	0.0	
90	64.0	64.0	+0.1	
80	54.0	54.0	+0.1	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. **07049**

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	83.9	0.0	± 0.4 dB
	94.0	93.9 (Ref.)	--	
	95.0	94.9	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	-40.1	- 39.4 dB, ± 1.5 dB
63 Hz	-26.8	- 26.2 dB, ± 1.5 dB
125 Hz	-16.8	- 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	+1.6	+ 1.2 dB, ± 1 dB
4 kHz	+1.6	+ 1.0 dB, ± 1 dB
8 kHz	-0.6	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.2	- 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	40.0	
1/10 ³	40.0	40.1	± 1.0 dB
1/10 ⁴	40.0	40.1	

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 : 1 008 hPa.

----- 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

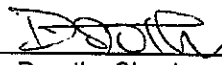
The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, 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

Date: 14-Sep-10

This Certificate is issued by:

Hong Kong Calibration Ltd.

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

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Calibration Certificate

Certificate No. **05083**

Page 2 of 3 Pages

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 - 100	L _A	Fast	94.0	93.7
		Slow		93.7
	L _C	Fast		93.7
		L _p		Fast
30 - 120	L _A	Fast	94.0	93.7
		Slow		93.7
	L _C	Fast		93.7
	L _p	Fast		93.7
30 - 120	L _A	Fast	114.0	113.5
		Slow		113.5
	L _C	Fast		113.5
	L _p	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	

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

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

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	
08/07/11	Sunny	09:25	09:55	65.4	68.0	62.9	0.2
11/07/11	Cloudy	15:10	15:40	65.2	67.0	62.1	0.4
20/07/11	Drizzle	15:30	16:00	63.0	63.9	61.9	1.3
27/07/11	Sunny	15:20	15:50	63.1	64.4	61.5	1.3

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

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
06/07/11	Sunny	13:15	13:45	71.8	74.8	65.4	0.1
15/07/11	Drizzle	10:10	10:40	71.7	73.9	67.5	0.9
18/07/11	Cloudy	11:35	12:05	74.2	76.3	71.8	0.4
25/07/11	Sunny	13:00	13:30	72.7	74.1	65.0	0.3

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	
06/07/11	Sunny	11:30	12:00	64.1	65.7	61.2	0.1
15/07/11	Drizzle	10:45	11:15	62.4	64.0	57.3	1.4
18/07/11	Cloudy	11:05	11:35	66.4	68.1	59.9	0.2
25/07/11	Sunny	13:35	14:05	64.1	66.2	60.7	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 (30min)	L10	L90	
06/07/11	Sunny	10:55	11:25	62.5	64.8	59.9	0.2
15/07/11	Drizzle	11:20	11:50	61.8	63.3	56.8	1.3
18/07/11	Cloudy	10:30	11:00	62.3	65.8	59.1	0.1
25/07/11	Sunny	14:10	14:40	62.9	64.9	60.3	0.4



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 (30min)	L10	L90	
02/07/11	Fine	22:15	22:20	62.3	64.1	59.5	0.5
02/07/11	Fine	22:20	22:25	62.0	63.7	59.2	0.5
02/07/11	Fine	22:25	22:30	61.9	63.3	58.6	0.5
09/07/11	Fine	21:00	21:05	60.1	61.3	58.9	0.9
09/07/11	Fine	21:05	21:10	59.8	61.0	58.5	1.1
09/07/11	Fine	21:10	21:15	60.4	61.5	58.7	1.0

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	
02/07/11	Fine	20:30	20:35	69.1	73.8	63.6	0.2
02/07/11	Fine	20:35	20:40	69.8	74.2	62.7	0.2
02/07/11	Fine	20:40	20:45	69.2	73.5	63.2	0.2
09/07/11	Fine	22:00	22:05	69.0	71.2	65.3	0.8
09/07/11	Fine	22:05	22:10	68.4	70.6	64.4	1.0
09/07/11	Fine	22:10	22:15	68.7	70.8	64.8	1.1

Monitoring Station: RWM (Roof at Richwealth Mansion)

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
02/07/11	Fine	20:50	20:55	69.1	72.4	61.3	0.2
02/07/11	Fine	20:55	21:00	69.3	72.7	61.5	0.2
02/07/11	Fine	21:00	21:05	68.8	72.0	61.5	0.2
09/07/11	Fine	22:20	22:25	67.7	69.6	63.9	0.9
09/07/11	Fine	22:25	22:30	68.2	70.1	64.3	0.7
09/07/11	Fine	22:20	22:35	68.5	70.4	64.7	1.0

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	
02/07/11	Fine	21:10	21:15	66.3	70.5	59.9	0.2
02/07/11	Fine	21:15	21:20	65.8	69.9	59.3	0.2
02/07/11	Fine	21:20	21:25	66.2	70.3	59.6	0.2
09/07/11	Fine	22:40	22:45	67.4	69.3	63.6	1.2
09/07/11	Fine	22:45	22:50	67.2	69.0	63.1	0.9
09/07/11	Fine	22:50	22:55	68.0	69.7	63.9	1.1



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 (30min)	L10	L90	
02/07/11	Fine	23:00	23:05	54.8	55.8	51.7	0.5
02/07/11	Fine	23:05	23:10	54.9	56.1	52.0	0.5
02/07/11	Fine	23:10	23:15	54.7	55.6	51.5	0.5
10/07/11	Fine	00:10	00:15	59.1	60.1	57.8	1.4
10/07/11	Fine	00:15	00:20	58.9	60.3	57.6	1.5
10/07/11	Fine	00:20	00:25	58.4	59.9	57.1	1.3



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	
03/07/11	Fine	11:15	11:20	62.4	63.8	60.4	0.3
03/07/11	Fine	11:20	11:25	62.9	64.3	60.7	0.3
03/07/11	Fine	11:25	11:30	62.1	63.5	60.2	0.3
10/07/11	Fine	09:00	09:05	60.4	61.3	59.4	1.3
10/07/11	Fine	09:05	09:10	61.3	62.3	59.1	1.4
10/07/11	Fine	09:10	09:15	60.9	61.8	59.0	1.2
17/07/11	Cloudy	14:35	14:40	62.7	64.3	61.0	0.4
17/07/11	Cloudy	14:40	14:45	63.1	64.7	61.2	0.4
17/07/11	Cloudy	14:45	14:50	62.5	63.9	60.6	0.4
24/07/11	Sunny	09:20	09:25	60.5	62.3	58.7	1.1
24/07/11	Sunny	09:25	09:30	60.3	61.5	58.4	1.2
24/07/11	Sunny	09:30	09:35	60.7	62.1	59.2	1.3
31/07/11	Sunny	13:55	14:00	63.0	64.5	61.2	0.4
31/07/11	Sunny	14:00	14:05	62.4	64.3	60.5	0.4
31/07/11	Sunny	14:05	14:10	62.8	63.7	61.1	0.4

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

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (5min)	L10	L90	
03/07/11	Fine	09:30	09:35	69.8	73.0	63.2	0.2
03/07/11	Fine	09:35	09:40	69.9	73.1	63.4	0.2
03/07/11	Fine	09:40	09:45	69.6	72.5	62.7	0.2
10/07/11	Fine	10:10	10:15	68.5	70.4	64.4	0.8
10/07/11	Fine	10:15	10:20	68.8	70.9	65.0	0.9
10/07/11	Fine	10:20	10:25	68.6	70.6	65.2	1.1
17/07/11	Cloudy	13:00	13:05	69.6	72.9	62.9	0.2
17/07/11	Cloudy	13:05	13:10	69.2	72.5	63.4	0.2
17/07/11	Cloudy	13:10	13:15	69.9	73.1	63.7	0.2
24/07/11	Sunny	10:30	10:35	68.7	70.1	65.8	0.9
24/07/11	Sunny	10:35	10:40	68.4	69.6	65.5	1.0
24/07/11	Sunny	10:40	10:45	68.5	69.8	65.7	0.8
31/07/11	Sunny	14:45	14:50	69.2	72.6	63.2	0.4
31/07/11	Sunny	14:50	14:55	69.7	73.0	63.5	0.4
31/07/11	Sunny	14:55	15:00	69.5	72.7	63.4	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 (5min)	L10	L90	
03/07/11	Fine	09:50	09:55	62.9	64.2	59.3	0.3
03/07/11	Fine	09:55	10:00	63.5	64.9	59.8	0.3
03/07/11	Fine	10:00	10:05	63.4	64.7	59.7	0.3
10/07/11	Fine	10:30	10:35	61.4	62.8	58.5	1.5
10/07/11	Fine	10:35	10:40	61.2	62.6	58.2	1.6
10/07/11	Fine	10:40	10:45	60.9	62.3	57.6	1.4
17/07/11	Cloudy	13:20	13:25	63.7	65.1	60.0	0.3
17/07/11	Cloudy	13:25	13:30	63.5	64.7	59.9	0.3
17/07/11	Cloudy	13:30	13:35	63.0	64.5	59.7	0.3
24/07/11	Sunny	10:50	10:55	61.3	62.2	58.0	1.3
24/07/11	Sunny	10:55	11:00	60.9	61.8	57.7	1.5
24/07/11	Sunny	11:00	11:05	61.1	62.0	57.9	1.4
31/07/11	Sunny	15:05	15:10	63.2	64.4	59.7	0.6
31/07/11	Sunny	15:10	15:15	63.8	65.0	60.1	0.6
31/07/11	Sunny	15:15	15:20	63.3	64.6	60.0	0.6



Holiday-time Noise Monitoring

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	
03/07/11	Fine	10:10	10:15	60.9	62.3	58.6	0.3
03/07/11	Fine	10:15	10:20	60.8	62.2	58.3	0.3
03/07/11	Fine	10:20	10:25	61.2	62.5	58.9	0.3
10/07/11	Fine	10:50	10:55	60.7	61.6	57.4	1.7
10/07/11	Fine	10:55	11:00	61.0	61.9	57.8	1.5
10/07/11	Fine	11:00	11:05	60.6	61.4	57.4	1.4
17/07/11	Cloudy	13:40	13:45	60.9	63.6	57.1	0.3
17/07/11	Cloudy	13:45	13:50	61.1	63.2	56.7	0.3
17/07/11	Cloudy	13:50	13:55	61.2	63.0	56.4	0.3
24/07/11	Sunny	11:15	11:20	60.8	61.7	57.9	1.5
24/07/11	Sunny	11:20	11:25	61.0	61.9	58.1	1.4
24/07/11	Sunny	11:25	11:30	60.9	61.7	58.0	1.4
31/07/11	Sunny	15:25	15:30	61.0	62.9	57.2	0.6
31/07/11	Sunny	15:30	15:35	60.8	62.8	56.9	0.6
31/07/11	Sunny	15:35	15:40	61.3	63.2	57.5	0.6



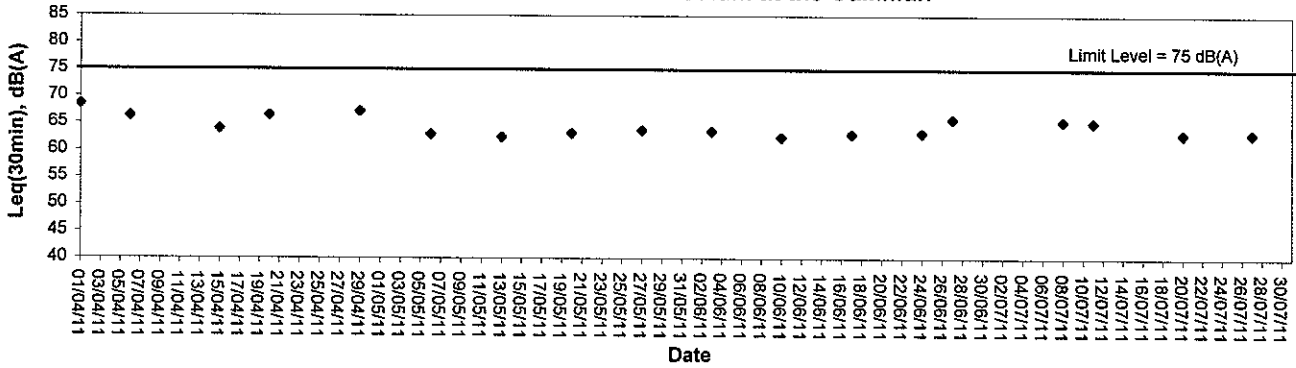
Appendix B3

Graphical Plots of Impact Noise Monitoring Data

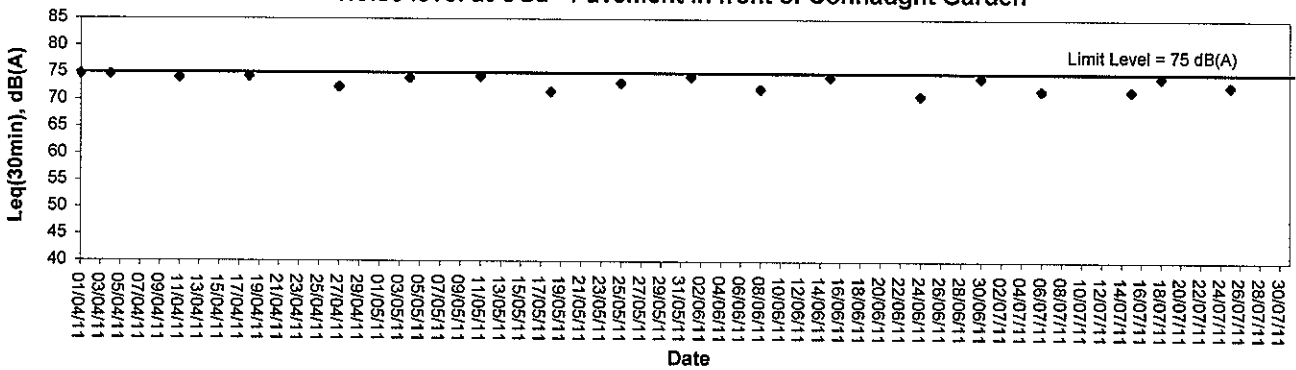


Noise Monitoring (Day-time)

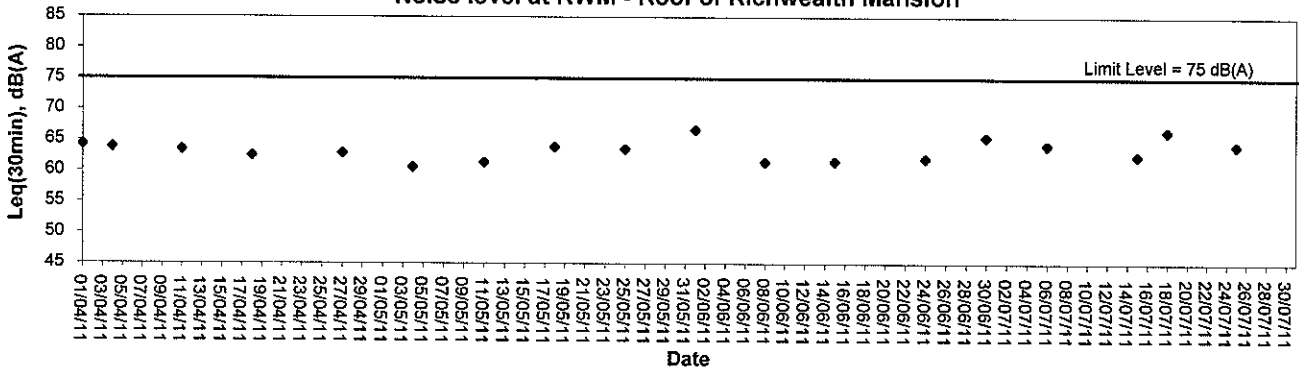
Noise level at KS6 - Podium at the Cullinan



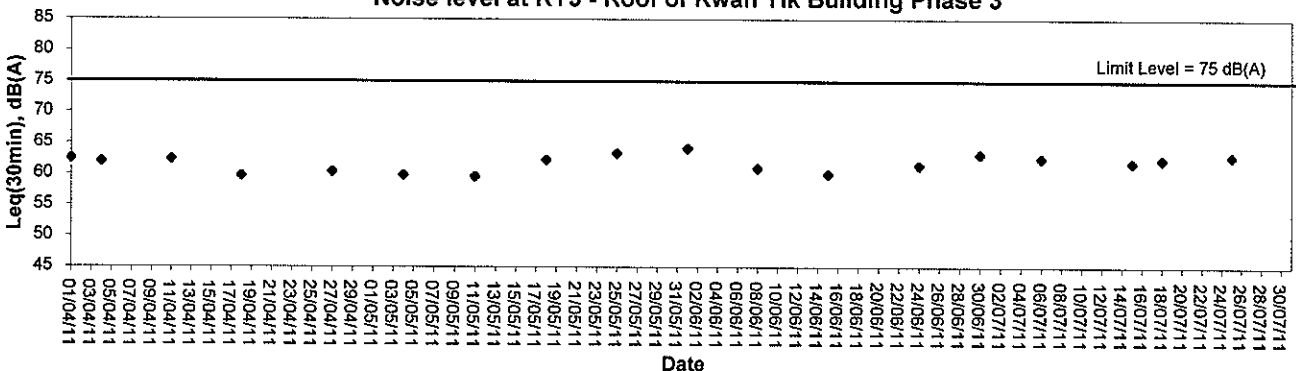
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



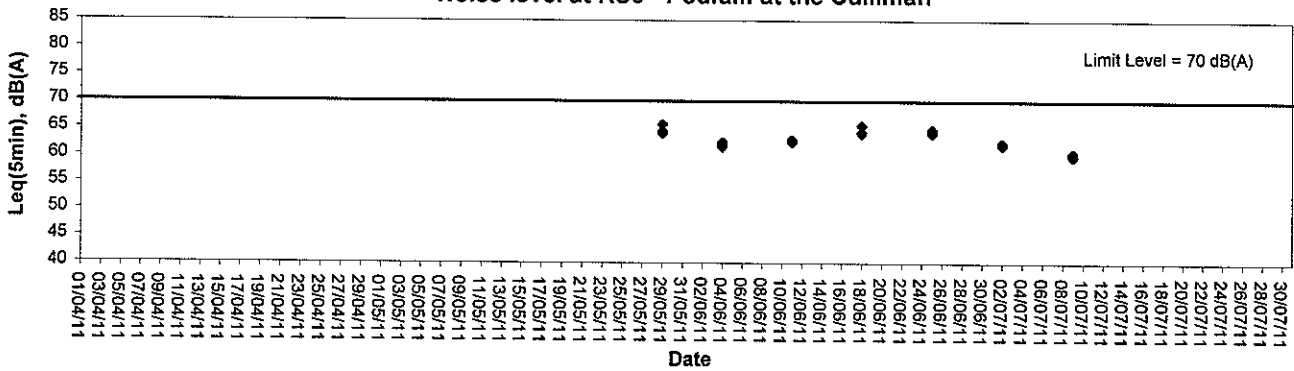
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



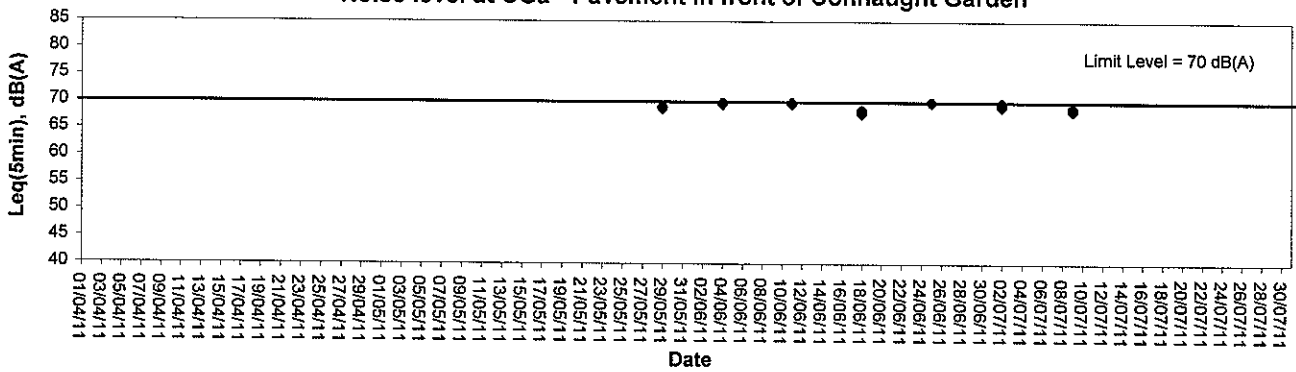


Noise Monitoring (Evening-time)

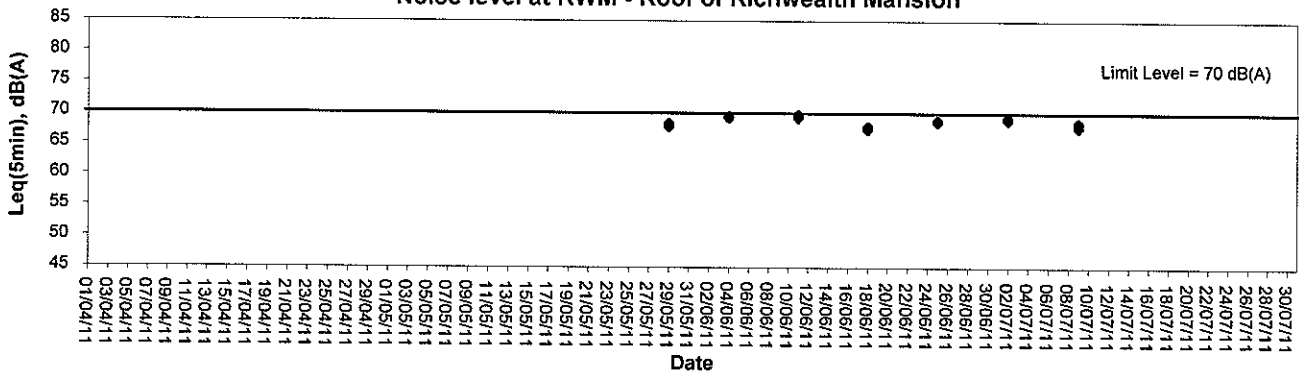
Noise level at KS6 - Podium at the Cullinan



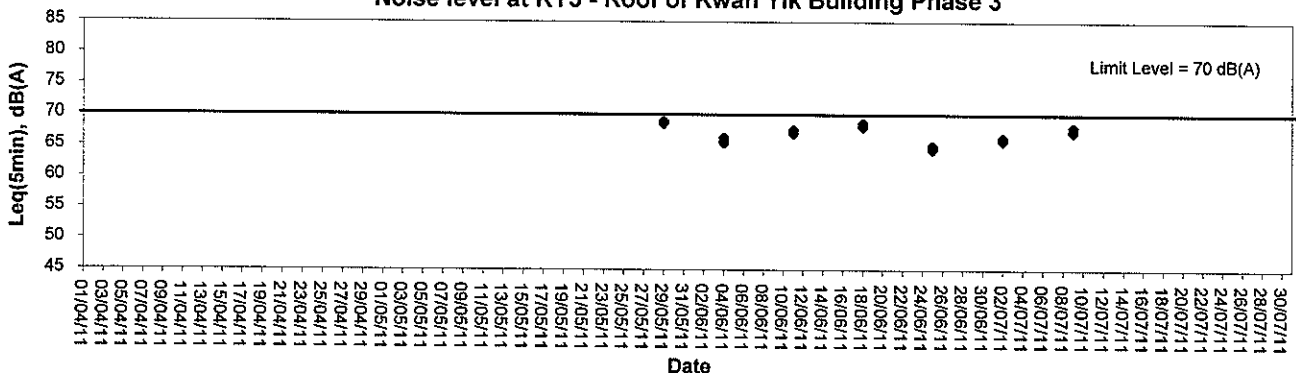
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



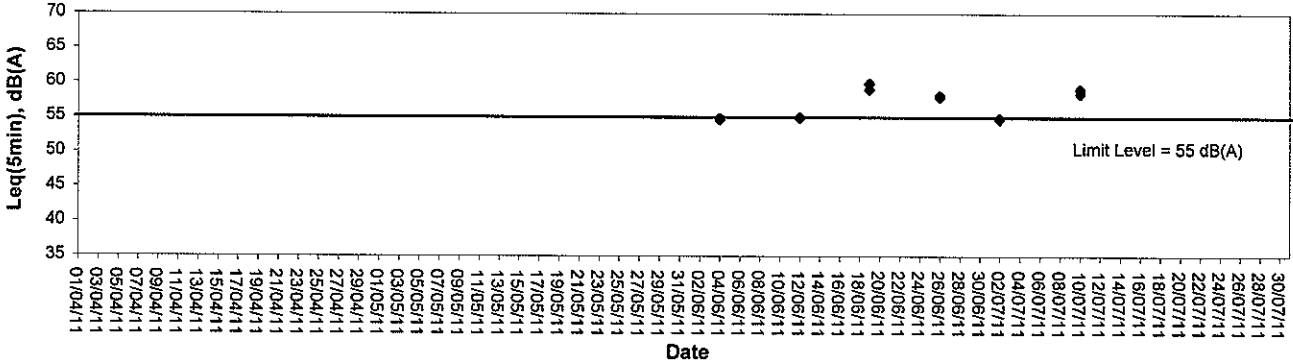
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



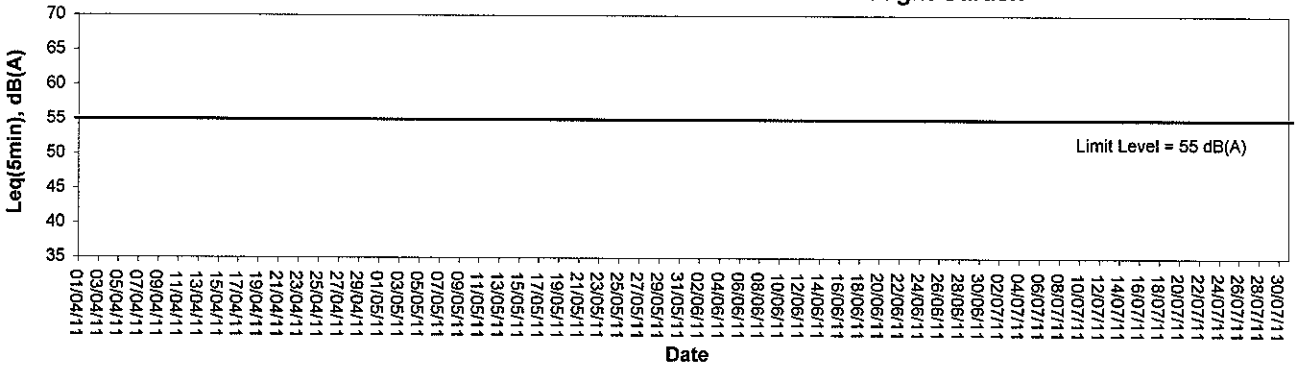


Noise Monitoring (Night-time)

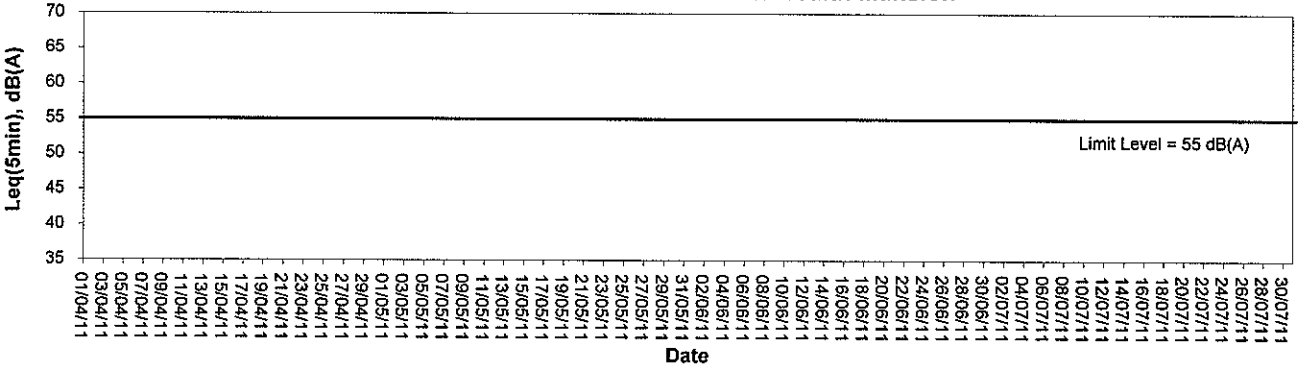
Noise level at KS6 - Podium at the Cullinan



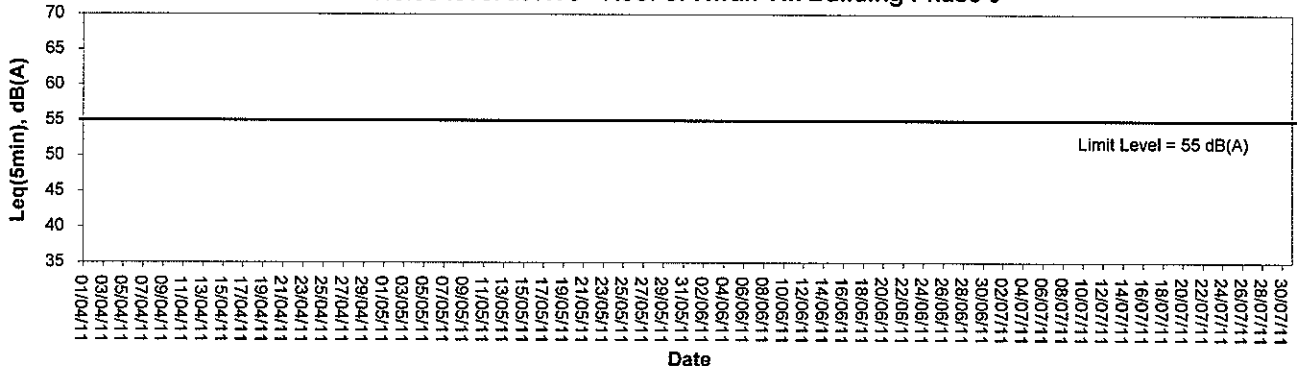
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



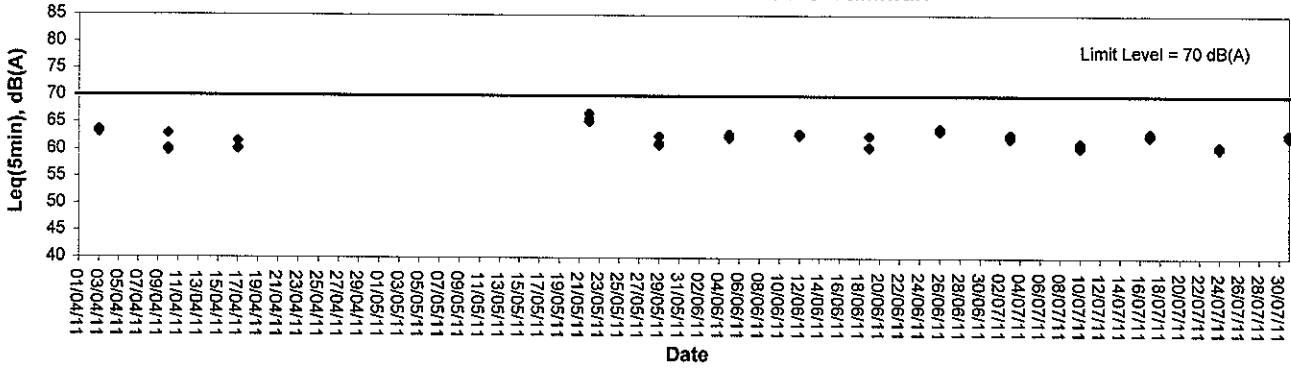
Noise level at KY3 - Roof of Kwan Yik Building Phase 3



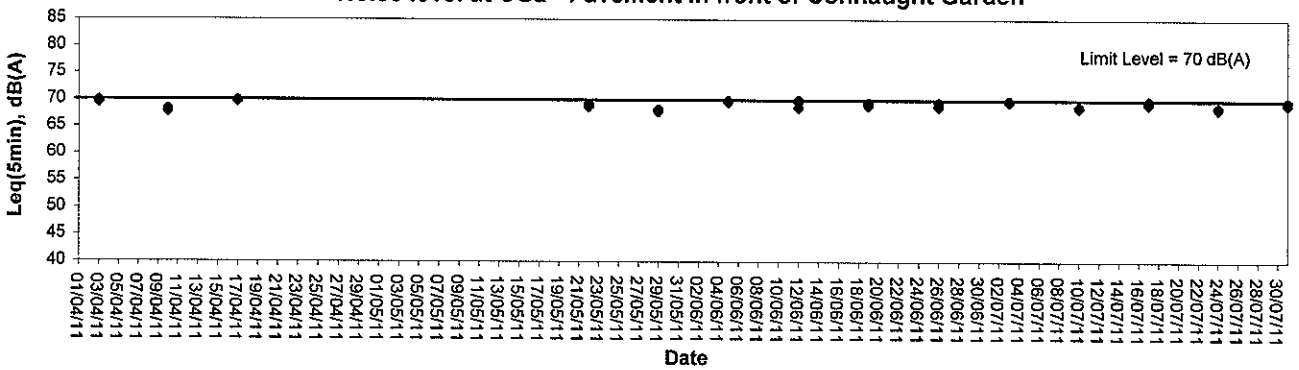


Noise Monitoring (Holiday-time)

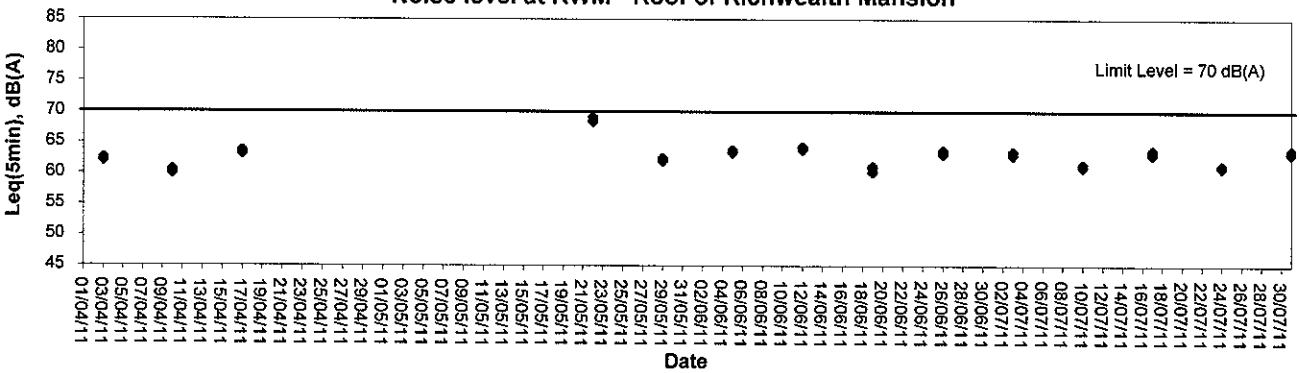
Noise level at KS6 - Podium at the Cullinan



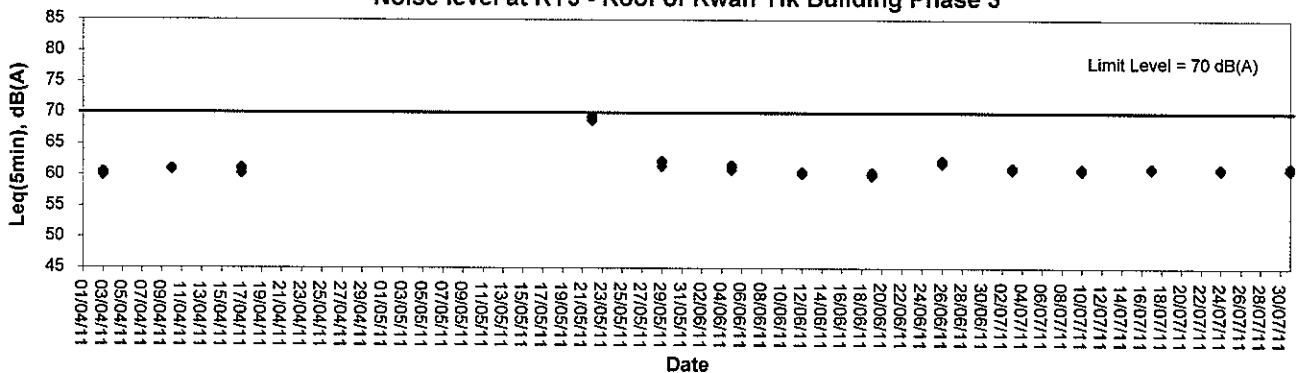
Noise level at CGa - Pavement in front of Connaught Garden



Noise level at RWM - Roof of Richwealth Mansion



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





Appendix C1

Calibration Certificates for Impact Water Quality Monitoring Equipments



Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No. : <u>E7/EW/1008/002</u>	Manufacturer : <u>YSI</u>
Model No. : <u>85</u>	Serial No. : <u>0601998 AD</u>
Date of Calibration : <u>21/5/11</u>	Calibration Due Date : <u>20/8/11</u>

Temperature Verification

Ref. No. of Reference Thermometer : E7 10521 / 001
 Ref. No. of Water Bath : E7 10533 / 001

		Temperature (°C)		
Reference Thermometer reading	Measured	21.0	Corrected	20.1
DO Meter reading	Measured	20.9	Difference	0.1

Standardization of sodium thiosulphate (Na₂S₂O₃) solution

Reagent No. of Na ₂ S ₂ O ₃ titrant	<u>CPE/012/45/001</u>	Reagent No. of 0.025N K ₂ Cr ₂ O ₇	<u>CPE/012/44/001/2</u>
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	Trial 1	Trial 2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0	0
Final Vol. of Na ₂ S ₂ O ₃ (ml)	40.1	40.1
Vol. of Na ₂ S ₂ O ₃ used (ml)	40.1	40.1
Normality of Na ₂ S ₂ O ₃ solution (N)	0.02494	0.02494
Average Normality (N) of Na ₂ S ₂ O ₃ solution (N)	0.02494	
Acceptance criteria, Deviation	Less than ± 0.001N	

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

Linearity Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Trial	1	2	1	2	1	2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0	11.70	0	9.85	0	6.50
Final Vol. of Na ₂ S ₂ O ₃ (ml)	11.70	23.40	9.85	19.75	6.50	13.05
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	11.70	11.70	9.85	9.90	6.50	6.55
Dissolved Oxygen (DO), mg/L	7.83	7.83	6.59	6.63	4.35	4.39
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.86	7.84	7.85	7.83	7.83	7.83	0.26
5	7.58	6.52	6.55	6.59	6.63	6.61	0.91
10	4.43	4.41	4.42	4.35	4.39	4.37	1.14
Linear regression coefficient							0.9991



Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00
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Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/47/00/12	Reagent No. of NaCl (30ppt)	CPE/012/48/00/12
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Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
	1	2	1	2
Trial				
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0	11.65	0	11.00
Final Vol. of Na ₂ S ₂ O ₃ (ml)	11.65	23.25	11.00	22.00
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	11.65	11.60	11.00	11.00
Dissolved Oxygen (DO), mg/L	7.80	7.77	7.36	7.36
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

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

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.92	7.88	7.90	7.80	7.77	7.79	1.40
30	7.30	7.30	7.30	7.36	7.36	7.36	0.82

Acceptance Criteria

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

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

* Delete as appropriate

Calibrated by : _____

Approved by : _____



Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008102 Manufacturer : YSI

Model No. : 85 Serial No. : 060 1998 AD

Date of Calibration : 2/15/11 Due Date : 2018/11

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

2/15/11
ET-1214.8/1001/2 S/001/11

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 : z Approved by : [Signature]

Performance Check of Turbidimeter

Equipment Ref. No. : E710505/007 Manufacturer : HACH

Model No. : Σ100P Serial No. : 0806 000 30281

Date of Calibration : 13/7/11 Due Date : 12/10/11
~~13/8/11~~

Gelex Vial Std	Theoretical Value (NTU)	Measured Value (NTU)	Difference %
0-10 NTU	5.34	5.24	1.87%
10-100 NTU	52.5	53.0	0.95%
100-1000 NTU	543	559	2.95%

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 : 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
02/07/11	2058-2108	30/Fine	Surface	1.0	27.4	31.0	31.1	6.12	6.11	86.9	86.7	5.15	5.18	5.05	8.0	8.2	8.3
						31.1		6.09		86.4		5.21			8.4		
			Middle	8.7	26.3	31.8	31.8	6.04	6.03	85.7	85.5	4.97	4.94		8.2		
						31.8		6.01		85.3		4.91			8.5		
			Bottom	16.4	26.0	31.9	32.0	5.83	5.85	82.2	82.5	4.99	5.03		8.5		
						32.0		5.87		82.7		5.06			8.3		
05/07/11	1210-1225	30/Fine	Surface	1.0	26.4	31.0	31.0	6.27	6.30	87.1	87.5	4.71	4.74	4.94	7.5	7.6	8.0
						30.9		6.32		87.8		4.77			7.6		
			Middle	8.4	25.6	31.5	31.5	6.18	6.16	85.9	85.6	4.89	4.91		7.9		
						31.5		6.14		85.3		4.93			8.0		
			Bottom	15.8	25.0	32.0	32.1	6.06	6.03	84.2	83.8	5.16	5.18		8.4		
						32.1		6.00		83.4		5.20			8.5		
07/07/11	1256-1308	32/Fine	Surface	1.0	27.3	30.5	30.5	6.34	6.32	90.0	89.8	4.91	4.95	5.13	7.5	7.6	8.0
						30.4		6.30		89.5		4.98			7.6		
			Middle	8.5	26.6	31.4	31.4	6.22	6.19	88.3	87.8	5.17	5.15		8.1		
						31.4		6.15		87.3		5.12			7.8		
			Bottom	16.0	25.2	31.9	31.9	6.08	6.05	86.3	85.9	5.26	5.30		8.5		
						31.9		6.02		85.5		5.33			8.6		
09/07/11	1352-1410	32/Sunny	Surface	1.0	26.4	31.1	31.1	6.35	6.37	87.6	87.8	4.94	4.97	5.17	7.7	7.9	8.3
						31.1		6.38		88.0		4.99			8.0		
			Middle	8.5	25.4	31.8	31.8	6.20	6.18	85.5	85.2	5.15	5.18		8.4		
						31.8		6.15		84.8		5.20			8.3		
			Bottom	16.0	24.7	32.3	32.3	6.10	6.08	84.1	83.9	5.34	5.38		8.9		
						32.3		6.06		83.6		5.41			8.5		
12/07/11	1820-1834	27/Cloudy	Surface	1.0	26.2	29.4	29.4	6.29	6.31	88.0	88.2	5.15	5.17	5.30	7.7	7.8	8.4
						29.4		6.32		88.4		5.19			7.8		
			Middle	8.4	25.7	30.5	30.6	6.17	6.15	86.3	86.6	5.26	5.28		8.4		
						30.6		6.13		86.8		5.30			8.6		
			Bottom	15.8	24.8	31.7	31.7	6.00	6.03	84.0	84.4	5.42	5.46		9.0		
						31.7		6.06		84.8		5.49			8.7		
14/07/11	1959-2012	26/Cloudy	Surface	1.0	27.0	30.3	30.3	6.16	6.15	86.2	86.0	4.92	4.90	5.05	7.5	7.7	8.1
						30.2		6.13		85.8		4.88			7.8		
			Middle	8.2	25.7	31.0	31.0	6.06	6.04	84.8	84.6	5.09	5.07		8.2		
						30.9		6.02		84.3		5.04			8.0		
			Bottom	15.4	24.9	31.7	31.8	6.01	5.99	84.1	83.8	5.16	5.19		8.6		
						31.8		5.96		83.4		5.22			8.5		
16/07/11	2102-2115	26/Cloudy	Surface	1.0	27.0	30.1	30.1	6.08	6.11	85.1	85.5	4.73	4.76	4.99	7.8	7.8	8.0
						30.0		6.13		85.8		4.79			7.8		
			Middle	7.4	26.1	30.6	30.7	6.03	5.99	84.4	83.8	5.02	5.05		7.9		
						30.7		5.94		83.2		5.08			8.1		
			Bottom	13.8	25.3	31.5	31.6	5.82	5.84	81.5	81.8	5.18	5.17		8.3		
						31.6		5.86		82.0		5.16			8.0		
19/07/11	1135-1147	30/Fine	Surface	1.0	25.8	29.1	29.1	6.17	6.16	86.4	86.3	5.29	5.26	5.45	8.5	8.5	8.9
						29.1		6.15		86.1		5.23			8.4		
			Middle	8.3	25.4	30.3	30.3	5.98	6.00	83.7	84.0	5.42	5.46		8.9		
						30.3		6.02		84.3		5.49			9.0		
			Bottom	15.6	24.8	31.6	31.7	5.87	5.86	82.2	82.1	5.67	5.64		9.3		
						31.7		5.85		81.9		5.61			9.2		
21/07/11	1212-1223	28/Cloudy	Surface	1.0	24.7	30.1	30.1	6.20	6.22	87.4	87.6	5.00	4.98	5.10	7.5	7.7	8.0
						30.0		6.23		87.8		4.96			7.9		
			Middle	8.2	24.2	30.7	30.7	6.15	6.13	86.7	86.4	5.08	5.10		8.1		
						30.7		6.10		86.0		5.12			8.0		
			Bottom	15.4	23.6	31.6	31.7	6.03	6.01	85.0	84.7	5.20	5.22		8.2		
						31.7		5.98		84.3		5.23			8.4		
23/07/11	1256-1308	30/Fine	Surface	1.0	26.2	31.0	31.0	6.24	6.22	86.1	85.8	4.99	4.97	5.13	8.0	7.9	8.2
						31.0		6.19		85.4		4.95			7.8		
			Middle	8.4	25.5	31.9	32.0	6.02	6.04	83.1	83.3	5.16	5.15		8.2		
						32.0		6.05		83.5		5.13			8.1		
			Bottom	15.8	25.0	32.3	32.3	5.90	5.92	81.4	81.6	5.29	5.27		8.6		
						32.3		5.93		81.8		5.24			8.5		
26/07/11	1828-1838	31/Sunny	Surface	1.0	27.5	31.4	31.4	6.19	6.17	86.0	85.7	5.01	5.04	5.17	8.0	8.1	8.3
						31.4		6.14		85.3		5.07			8.1		
			Middle	8.6	25.9	32.2	32.2	5.94	5.92	82.5	82.3	5.15	5.13		8.2		
						32.2		5.90		82.0		5.10			8.4		
			Bottom	16.2	25.2	32.6	32.6	5.97	5.96	82.9	82.7	5.33	5.36		8.8		
						32.5		5.94		82.5		5.38			8.5		
28/07/11	1913-1925	32/Fine	Surface	1.0	27.7	30.1	30.1	6.20	6.24	85.5	86.0	4.82	4.90	5.06	7.7	8.0	8.2
						30.0		6.27		86.5		4.97			8.2		
			Middle	8.3	26.5	30.8	30.9	6.12	6.11	84.5	84.4	5.06	5.08		8.5		
						30.9		6.10		84.2		5.09			8.4		
			Bottom	15.6	25.6	31.7	31.8	5.86	5.85	80.9	80.8	5.19	5.21		8.1		
						31.8		5.84		80.6		5.23			8.0		
30/07/11	1954-2005	29/Cloudy	Surface	1.0	26.3	30.1	30.1	6.13	6.11	85.2	84.9	5.30	5.33	5.55	8.2	8.2	8.7
						30.0		6.08		84.5		5.36			8.1		
			Middle	8.4	25.5	31.0	31.0	5.97	5.94	82.9	82.5	5.52	5.55		8.7		
						31.0		5.90		82.0		5.57			8.7		
			Bottom	15.8	24.8	31.8	31.8	5.78	5.82	80.3	80.8	5.74	5.76		9.2		
						31.8		5.85		81.3		5.78			9.0		

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
02/07/11	2040-2050	30/Fine	Surface	1.0	27.3	31.1	31.1	6.14	6.13	87.1	87.0	5.27	5.25	5.26	8.4	8.4	8.2
				8.7	26.4	31.8	31.8	6.12	6.03	86.9	85.5	5.23	5.32		8.3		
			Middle	8.7	26.4	31.8	31.8	6.01	6.03	85.3	85.5	5.34	5.32		8.0		
				16.4	25.9	32.0	32.0	6.04	5.75	85.7	81.0	5.30	5.20		8.2		
			Bottom	16.4	25.9	32.0	32.0	5.76	5.75	81.2	81.0	5.17	5.20		8.0		
				16.4	25.9	32.0	32.0	5.73	5.75	80.7	81.0	5.22	5.20		8.0		
05/07/11	1153-1205	30/Fine	Surface	1.0	26.4	31.0	31.0	6.26	6.28	87.0	87.2	4.68	4.71	4.93	8.0	8.1	7.9
				8.5	25.7	31.5	31.6	6.17	6.15	85.7	85.5	4.90	4.93		8.1		
			Middle	8.5	25.7	31.6	31.6	6.13	6.15	85.2	85.5	4.96	4.93		7.7		
				16.0	25.0	31.9	32.0	6.05	6.02	84.0	83.6	5.11	5.14		8.0		
			Bottom	16.0	25.0	32.0	32.0	5.99	6.02	83.2	83.6	5.17	5.14		8.0		
				16.0	25.0	32.0	32.0	5.99	6.02	83.2	83.6	5.17	5.14		8.0		
07/07/11	1238-1249	32/Fine	Surface	1.0	27.4	30.5	30.5	6.37	6.38	91.1	91.3	4.96	4.92	5.10	7.9	7.9	8.0
				8.4	26.6	31.5	31.5	6.24	6.22	89.2	88.9	5.13	5.11		8.1		
			Middle	8.4	26.6	31.5	31.5	6.19	6.22	88.5	88.9	5.09	5.11		8.0		
				15.8	25.1	32.0	32.0	6.04	6.08	86.4	86.9	5.24	5.27		8.1		
			Bottom	15.8	25.1	31.9	32.0	6.11	6.08	87.4	86.9	5.29	5.27		8.2		
				15.8	25.1	31.9	32.0	6.11	6.08	87.4	86.9	5.29	5.27		8.2		
09/07/11	1330-1345	32/Sunny	Surface	1.0	26.4	31.1	31.1	6.28	6.31	86.6	87.0	4.90	4.89	5.12	7.4	7.5	8.0
				8.5	25.4	31.8	31.8	6.13	6.15	84.5	84.8	5.10	5.13		8.0		
			Middle	8.5	25.4	31.7	31.8	6.17	6.15	85.1	84.8	5.16	5.13		7.8		
				16.0	24.8	32.2	32.3	6.04	6.06	83.3	83.6	5.32	5.35		8.6		
			Bottom	16.0	24.8	32.3	32.3	6.08	6.06	83.9	83.6	5.38	5.35		8.5		
				16.0	24.8	32.3	32.3	6.08	6.06	83.9	83.6	5.38	5.35		8.5		
12/07/11	1802-1815	27/Cloudy	Surface	1.0	26.3	29.4	29.4	6.34	6.36	88.7	89.0	5.11	5.14	5.30	8.0	8.0	8.5
				8.5	25.7	30.5	30.5	6.23	6.21	87.2	86.9	5.29	5.31		8.4		
			Middle	8.5	25.7	30.5	30.5	6.19	6.21	86.6	86.9	5.32	5.31		8.2		
				16.0	24.7	31.6	31.7	6.02	6.04	84.4	84.6	5.44	5.46		9.0		
			Bottom	16.0	24.7	31.7	31.7	6.05	6.04	84.7	84.6	5.48	5.46		9.3		
				16.0	24.7	31.7	31.7	6.05	6.04	84.7	84.6	5.48	5.46		9.3		
14/07/11	1934-1945	26/Cloudy	Surface	1.0	27.1	30.2	30.2	6.29	6.30	88.1	88.2	5.02	5.02	5.10	8.2	8.1	8.1
				8.4	25.9	30.8	30.8	6.20	6.19	86.8	86.7	5.17	5.14		8.4		
			Middle	8.4	25.9	30.7	30.8	6.18	6.19	86.5	86.7	5.11	5.14		8.1		
				15.8	25.1	31.8	31.8	6.15	6.17	86.1	86.4	5.14	5.15		8.0		
			Bottom	15.8	25.1	31.8	31.8	6.19	6.17	86.7	86.4	5.16	5.15		8.0		
				15.8	25.1	31.8	31.8	6.19	6.17	86.7	86.4	5.16	5.15		8.0		
16/07/11	2040-2052	26/Cloudy	Surface	1.0	26.9	30.1	30.2	6.31	6.29	88.3	88.1	4.82	4.85	4.96	8.0	7.8	8.0
				8.0	26.2	30.5	30.6	6.12	6.15	85.7	86.1	4.89	4.93		7.6		
			Middle	8.0	26.2	30.6	30.6	6.18	6.15	86.5	86.1	4.96	4.93		7.7		
				15.0	25.4	31.6	31.7	5.98	6.01	83.7	84.2	5.09	5.12		8.2		
			Bottom	15.0	25.4	31.7	31.7	6.04	6.01	84.6	84.2	5.14	5.12		8.5		
				15.0	25.4	31.7	31.7	6.04	6.01	84.6	84.2	5.14	5.12		8.5		
19/07/11	1116-1127	30/Fine	Surface	1.0	25.7	29.2	29.2	6.14	6.12	86.0	85.7	5.25	5.28	5.49	8.1	8.2	8.8
				8.4	25.4	29.1	29.2	6.09	6.12	85.3	85.7	5.31	5.28		8.2		
			Middle	8.4	25.4	30.4	30.4	5.91	5.94	82.7	83.1	5.47	5.49		8.9		
				15.8	24.8	30.4	30.4	5.96	5.94	83.4	83.1	5.51	5.49		9.0		
			Bottom	15.8	24.8	31.7	31.7	5.84	5.83	81.8	81.7	5.73	5.69		9.4		
				15.8	24.8	31.7	31.7	5.82	5.83	81.5	81.7	5.65	5.69		9.3		
21/07/11	1150-1200	28/Cloudy	Surface	1.0	24.6	30.0	30.1	6.12	6.14	86.3	86.6	4.98	5.00	5.11	7.8	7.7	8.1
				8.4	24.2	30.1	30.1	6.16	6.14	86.9	86.6	5.02	5.00		7.6		
			Middle	8.4	24.2	30.7	30.8	6.02	6.04	84.9	85.2	5.10	5.12		8.2		
				15.8	23.6	30.8	30.8	6.06	6.04	85.4	85.2	5.13	5.12		8.2		
			Bottom	15.8	23.6	31.7	31.8	5.93	5.95	83.6	83.8	5.18	5.20		8.5		
				15.8	23.6	31.8	31.8	5.96	5.95	84.0	83.8	5.22	5.20		8.0		
23/07/11	1238-1249	30/Fine	Surface	1.0	26.3	31.0	31.1	6.17	6.19	85.8	86.1	4.98	5.01	5.13	7.9	7.9	8.3
				8.3	25.6	31.1	31.1	6.21	6.19	86.3	86.1	5.04	5.01		7.9		
			Middle	8.3	25.6	32.0	32.0	6.10	6.09	84.8	84.6	5.19	5.15		8.3		
				15.6	24.9	31.9	32.0	6.07	6.09	84.4	84.6	5.11	5.15		8.1		
			Bottom	15.6	24.9	32.3	32.4	5.92	5.96	82.3	82.8	5.21	5.24		8.5		
				15.6	24.9	32.4	32.4	5.99	5.96	83.3	82.8	5.27	5.24		8.8		
26/07/11	1810-1820	31/Sunny	Surface	1.0	27.5	31.5	31.5	6.07	6.06	84.3	84.1	4.87	4.91	5.05	7.8	7.9	8.1
				8.6	26.1	31.4	31.5	6.04	6.06	83.9	84.1	4.94	4.91		8.0		
			Middle	8.6	26.1	32.2	32.2	5.98	5.97	83.1	82.9	5.13	5.10		8.2		
				16.2	25.2	32.1	32.2	5.95	5.97	82.7	82.9	5.07	5.10		8.3		
			Bottom	16.2	25.2	32.6	32.6	5.86	5.88	80.8	81.1	5.17	5.15		8.1		
				16.2	25.2	32.6	32.6	5.90	5.88	81.4	81.1	5.12	5.15		8.0		
28/07/11	1853-1908	32/Fine	Surface	1.0	27.6	30.2	30.2	6.19	6.22	85.4	85.8	5.09	5.11	5.25	8.2	8.1	8.5
				8.4	26.6	30.1	31.0	6.24	6.07	86.1	83.7	5.13	5.23		8.0		
			Middle	8.4	26.6	30.9	31.0	6.04	6.07	83.4	83.7	5.20	5.23		8.4		
				15.8	25.6	31.0	31.0	6.09	6.07	84.0	83.7	5.25	5.23		8.5		
			Bottom	15.8	25.6	31.5	31.6	5.88	5.88	81.1	81.1	5.44	5.42		8.9		
				15.8	25.6	31.6	31.6	5.87	5.88	81.0	81.1	5.40	5.42		9.0		
30/07/11	1938-1950	29/Cloudy	Surface	1.0	26.3	30.1	30.1	6.11	6.13	84.9	85.2	5.25	5.28	5.56	8.5	8.5	8.6
				8.5	25.5	30.1	31.1	6.15	6.13	85.4	85.2	5.31	5.28		8.4		
			Middle	8.5	25.5	31.0	31.1	6.00	5.98	83.4	83.1	5.54	5.57		8.7		
				16.0	24.8	31.1	31.9	5.96	5.86	82.8	81.4	5.59	5.83		8.5		
			Bottom	16.0	24.8	31.8	31.9	5.83	5.86	81.0	81.4	5.80	5.83		8.5		
				16.0	24.8	31.9	31.9	5.88	5.86	81.7	81.4	5.86	5.83		9.0		

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
02/07/11	1847-1857	30/Fine	Surface	1.0	27.7	31.0	31.1	6.27	6.26	89.0	88.8	5.01	5.05	5.07	7.8	7.9	8.0
				8.7	26.4	31.6		6.12		86.9		5.17			8.3		
			Middle	8.7	26.4	31.5	6.14	87.1	5.10	8.0							
				Bottom	16.4	25.9	32.0	5.95	84.4	5.06	8.1						
			32.1		5.98	84.9	5.01	8.0									
			05/07/11	0950-1007	30/Fine	Surface	1.0	26.3	30.9	31.0	6.15	6.17	85.4		85.7		
8.6	25.4	31.6					6.03	83.8	5.14		8.4						
Middle	8.6	25.4				31.5	6.06	84.2	5.17	8.3							
	Bottom	16.2				24.8	32.1	5.86	81.4	5.31	8.7						
32.2		5.90				82.0	5.35	8.5									
07/07/11	1045-1057	31/Fine				Surface	1.0	27.4	30.5	30.5	6.24	6.26	89.2	89.5	5.21	5.18	5.30
			8.8	26.5	31.4		6.16	88.1	5.27		8.3						
			Middle	8.8	26.5	31.5	6.13	87.7	5.32	8.0							
				Bottom	16.6	25.2	32.0	5.97	85.4	5.46	8.8						
			31.9		6.04	86.4	5.40	9.0									
			09/07/11	1308-1323	31/Sunny	Surface	1.0	26.4	31.0	31.1	6.12	6.13	84.4	84.6	5.00	5.03	
8.7	25.5	31.7					6.14	84.7	5.06		8.1						
Middle	8.7	25.5				31.7	6.03	83.2	5.14	8.2							
	Bottom	16.4				24.9	31.7	5.97	82.3	5.20	8.4						
32.1		5.81				79.7	5.34	8.5									
80.1	79.9	5.39				8.2											
12/07/11	1600-1614	27/Drizzle	Surface	1.0	26.3	29.3	29.3	6.15	6.17	86.1	86.4	5.28	5.31	5.47	8.5	8.6	8.9
				8.7	25.5	30.2		6.02		86.6		5.33			8.7		
			Middle	8.7	25.5	30.3	6.05	84.2	5.45	9.0							
				Bottom	16.4	24.8	31.5	5.84	81.7	5.63	9.3						
			31.6		5.88	82.3	5.67	9.0									
			30.3	6.06	84.8	5.12	8.3										
30.1	6.03	84.4	5.08	8.1													
14/07/11	1748-1802	27/Cloudy	Surface	1.0	26.9	30.0	30.1	6.06	6.05	84.8	84.6	5.12	5.10	5.14	8.3	8.2	8.1
				9.0	25.9	30.9		5.89		82.5		5.15			8.4		
			Middle	9.0	25.9	31.0	5.95	83.3	5.18	8.2							
				Bottom	17.0	24.9	31.7	5.87	82.2	5.12	8.0						
			31.8		5.82	81.5	5.19	7.8									
			81.5	81.9	5.19	7.8											
16/07/11	1851-1905	26/Cloudy	Surface	1.0	27.0	30.0	30.0	6.22	6.21	87.1	87.0	5.06	5.04	5.13	8.0	8.2	8.3
				8.3	26.4	29.9		6.20		86.8		5.01			8.3		
			Middle	8.3	26.4	30.3	6.13	85.8	5.14	8.5							
				Bottom	15.6	25.5	30.4	6.15	86.1	5.18	8.3						
			31.4		6.06	84.8	5.22	8.4									
			31.5	6.04	84.6	5.19	8.4										
19/07/11	0917-0929	29/Fine	Surface	1.0	25.8	29.1	29.2	6.05	6.03	85.3	85.0	5.49	5.48	5.64	9.3	9.2	9.3
				8.9	25.4	30.3		5.95		83.9		5.63			9.1		
			Middle	8.9	25.4	30.3	5.92	83.5	5.67	9.4							
				Bottom	16.8	24.8	31.7	5.83	82.2	5.83	9.5						
			31.6		5.84	82.3	5.77	9.5									
			31.7	5.83	82.3	5.83	9.5										
31.6	5.84	82.3	5.77	9.5													
21/07/11	1004-1017	27/Cloudy	Surface	1.0	24.7	30.0	30.0	6.03	6.00	85.0	84.6	5.04	5.06	5.15	8.0	8.0	8.3
				8.7	24.3	30.7		5.91		83.3		5.12			8.4		
			Middle	8.7	24.3	30.8	5.87	82.8	5.18	8.3							
				Bottom	16.4	23.6	31.7	5.83	82.2	5.23	8.5						
			31.7		5.79	81.6	5.27	8.3									
			31.7	5.79	81.6	5.27	8.3										
23/07/11	1045-1057	29/Fine	Surface	1.0	26.3	31.0	31.0	6.04	6.03	84.0	83.8	5.01	5.05	5.18	8.0	8.2	8.3
				8.7	25.6	31.9		5.88		81.7		5.22			8.6		
			Middle	8.7	25.6	32.0	5.93	82.4	5.16	8.7							
				Bottom	16.4	25.0	32.4	5.79	80.5	5.28	8.1						
			32.3		5.82	80.9	5.33	8.0									
			32.3	5.82	80.9	5.33	8.0										
26/07/11	1612-1624	31/Sunny	Surface	1.0	27.7	31.4	31.4	6.29	6.28	87.4	87.2	4.80	4.84	5.15	7.5	7.7	8.2
				8.8	26.2	32.1		6.07		84.3		5.17			8.2		
			Middle	8.8	26.2	32.2	6.02	83.6	5.11	8.4							
				Bottom	16.6	25.3	32.5	5.91	81.5	5.43	8.9						
			32.6		5.94	81.9	5.51	8.5									
			32.6	5.94	81.9	5.51	8.5										
28/07/11	1658-1711	32/Fine	Surface	1.0	27.6	30.2	30.3	6.39	6.35	89.5	88.9	5.12	5.16	5.18	8.0	8.2	8.3
				9.0	26.6	30.8		6.13		85.8		5.14			8.1		
			Middle	9.0	26.6	30.9	6.12	85.7	5.10	8.3							
				Bottom	17.0	25.8	31.4	6.03	84.4	5.22	8.5						
			31.5		6.06	84.8	5.30	8.5									
			31.5	6.06	84.8	5.30	8.5										
30/07/11	1737-1750	30/Cloudy	Surface	1.0	26.3	30.1	30.1	6.01	6.04	83.5	83.9	5.42	5.45	5.72	8.8	8.7	8.9
				8.5	25.5	30.9		5.87		81.5		5.68			9.0		
			Middle	8.5	25.5	30.8	5.83	81.0	5.71	8.8							
				Bottom	16.0	24.9	31.6	5.71	79.3	5.98	9.2						
			31.7		5.76	80.0	6.03	9.0									
			31.7	5.76	80.0	6.03	9.0										

Mid-Flood Tide

Monitoring Station : R6

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
02/07/11	1929-1940	30/Fine	Surface	1.0	27.5	31.0	31.1	6.15	6.17	87.3	87.5	4.88	4.91	5.09	7.8	7.9	8.2
						31.1		6.18		87.7		4.93			8.0		
			Middle	8.4	26.3	31.7	31.8	6.10	6.08	86.6	86.3	5.05	5.07		8.1	8.1	
						31.8		6.05		85.9		5.09			8.0		
			Bottom	15.8	26.0	31.9	32.0	5.92	5.94	83.4	83.6	5.32	5.29		8.5	8.5	
						32.0		5.95		83.8		5.26			8.5		
05/07/11	1050-1105	30/Fine	Surface	1.0	26.4	31.0	31.0	6.28	6.26	87.2	87.0	4.89	4.92	5.13	7.5	7.6	7.9
						31.0		6.24		86.7		4.94			7.6		
			Middle	8.3	25.6	31.6	31.7	6.15	6.13	85.4	85.1	5.13	5.16		7.9	7.9	
						31.7		6.10		84.7		5.18			7.8		
			Bottom	15.6	24.8	32.2	32.2	6.06	6.04	84.2	83.9	5.30	5.33		8.3	8.2	
						32.1		6.01		83.5		5.35			8.1		
07/07/11	1140-1152	31/Fine	Surface	1.0	27.4	30.4	30.4	6.29	6.31	89.9	90.2	5.03	5.01	5.17	8.2	8.3	8.3
						30.4		6.32		90.4		4.99			8.3		
			Middle	8.4	26.6	31.5	31.5	6.16	6.14	88.1	87.8	5.14	5.18		7.9	8.0	
						31.4		6.11		87.4		5.22			8.1		
			Bottom	15.8	25.2	32.0	32.0	6.13	6.09	86.2	86.4	5.36	5.33		8.5	8.5	
						32.0		6.05		86.5		5.30			8.5		
09/07/11	1415-1430	31/Sunny	Surface	1.0	26.4	31.1	31.1	6.31	6.33	87.0	87.2	4.84	4.82	5.01	7.5	7.6	8.0
						31.1		6.34		87.4		4.80			7.7		
			Middle	8.4	25.5	31.7	31.7	6.21	6.23	85.6	85.9	4.95	4.98		8.0	8.1	
						31.7		6.24		86.1		5.01			8.2		
			Bottom	15.8	24.9	32.2	32.2	6.05	6.09	83.4	83.9	5.21	5.24		8.3	8.2	
						32.2		6.12		84.4		5.26			8.1		
12/07/11	1702-1715	27/Drizzle	Surface	1.0	26.2	29.3	29.3	6.38	6.41	89.3	89.7	5.10	5.12	5.25	8.1	8.1	8.4
						29.3		6.44		90.1		5.14			8.0		
			Middle	8.3	25.4	30.4	30.4	6.29	6.27	88.1	87.7	5.23	5.26		8.6	8.7	
						30.4		6.24		87.3		5.28			8.7		
			Bottom	15.6	24.8	31.6	31.6	6.01	6.03	84.1	84.3	5.36	5.38		8.5	8.6	
						31.6		6.04		84.5		5.40			8.7		
14/07/11	1838-1847	27/Cloudy	Surface	1.0	27.0	30.1	30.2	6.23	6.22	87.2	87.1	4.90	4.89	5.06	7.5	7.6	8.0
						30.2		6.21		86.9		4.87			7.6		
			Middle	8.4	25.6	30.7	30.7	6.05	6.06	84.7	84.8	5.09	5.11		8.1	8.1	
						30.7		6.06		84.8		5.13			8.0		
			Bottom	15.8	24.9	31.8	31.8	5.95	5.93	83.3	83.0	5.21	5.20		8.6	8.5	
						31.7		5.90		82.6		5.18			8.4		
16/07/11	1940-1948	26/Cloudy	Surface	1.0	26.9	29.9	30.0	6.05	6.06	84.7	84.8	4.72	4.75	4.94	7.5	7.7	7.9
						30.0		6.06		84.8		4.78			7.8		
			Middle	7.8	26.2	30.4	30.5	6.08	6.05	85.1	84.6	4.97	4.94		7.9	7.9	
						30.5		6.01		84.1		4.90			7.8		
			Bottom	14.6	25.5	31.7	31.8	5.93	5.96	83.0	83.4	5.09	5.14		8.1	8.1	
						31.8		5.98		83.7		5.18			8.0		
19/07/11	1015-1027	29/Fine	Surface	1.0	25.8	29.1	29.1	6.15	6.13	86.1	85.8	5.24	5.26	5.44	8.6	8.5	8.7
						29.1		6.11		85.5		5.27			8.3		
			Middle	8.5	25.4	30.3	30.4	5.94	5.95	83.2	83.3	5.39	5.43		8.5	8.6	
						30.4		5.96		83.4		5.47			8.7		
			Bottom	16.0	24.8	31.6	31.7	5.89	5.87	82.5	82.2	5.65	5.63		9.1	9.1	
						31.7		5.84		81.8		5.61			9.0		
21/07/11	1053-1103	27/Cloudy	Surface	1.0	24.8	30.2	30.2	6.16	6.14	86.9	86.6	4.91	4.94	5.06	7.6	7.7	8.0
						30.1		6.12		86.3		4.96			7.8		
			Middle	8.4	24.2	30.7	30.7	6.05	6.04	85.3	85.1	5.05	5.07		8.1	8.1	
						30.6		6.02		84.9		5.09			8.0		
			Bottom	15.8	23.7	31.6	31.7	5.97	5.94	84.2	83.8	5.14	5.16		8.2	8.2	
						31.7		5.91		83.3		5.18			8.2		
23/07/11	1140-1152	29/Fine	Surface	1.0	26.3	31.0	31.1	6.15	6.13	85.5	85.2	4.93	4.96	5.13	7.8	7.9	8.3
						31.1		6.11		84.9		4.98			8.0		
			Middle	8.4	25.6	31.9	32.0	5.97	6.00	83.0	83.4	5.18	5.15		8.3	8.5	
						32.0		6.03		83.8		5.12			8.6		
			Bottom	15.8	25.0	32.3	32.3	5.83	5.82	81.0	80.9	5.26	5.29		8.5	8.5	
						32.3		5.81		80.8		5.32			8.5		
26/07/11	1710-1722	31/Sunny	Surface	1.0	27.6	31.5	31.5	6.19	6.17	86.0	85.7	5.01	5.04	5.07	8.1	8.1	7.8
						31.4		6.15		85.4		5.07			8.0		
			Middle	8.6	26.1	32.3	32.3	5.98	5.96	83.1	82.5	4.94	4.98		7.8	7.8	
						32.2		5.94		81.9		5.02			7.7		
			Bottom	16.2	25.1	32.6	32.6	5.93	5.92	81.8	81.6	5.17	5.19		7.5	7.5	
						32.6		5.90		81.4		5.21			7.5		
28/07/11	1749-1759	32/Fine	Surface	1.0	27.6	30.2	30.2	6.20	6.24	85.6	86.1	4.96	4.96	5.15	7.8	7.9	8.2
						30.2		6.27		86.5		4.95			7.9		
			Middle	8.4	26.5	31.0	31.0	6.17	6.18	85.1	85.3	5.12	5.14		8.2	8.1	
						30.9		6.19		85.4		5.16			8.0		
			Bottom	15.8	25.9	31.6	31.7	6.01	5.98	82.9	82.5	5.37	5.34		8.7	8.6	
						31.7		5.95		82.1		5.31			8.4		
30/07/11	1835-1853	30/Cloudy	Surface	1.0	26.3	30.1	30.2	6.20	6.22	86.1	86.4	5.29	5.31	5.60	8.4	8.4	8.7
						30.2		6.24		86.7		5.33			8.3		
			Middle	8.4	25.5	31.0	31.0	6.09	6.12	84.6	85.0	5.60	5.63		8.7	8.6	
						31.0		6.14		85.3		5.66			8.5		
			Bottom	15.8	24.9	31.7	31.7	5.91	5.88	82.1	81.7	5.82	5.85		9.0	9.1	
						31.7		5.85		81.3		5.87			9.2		

Mid-Flood Tide

Monitoring Station : R7

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)				
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average		
02/07/11	1958-2008	30/Fine	Surface	1.0	27.4	31.1	31.1	6.11	6.09	86.7	86.4	4.90	4.94	5.09	7.8	7.9	8.0		
						31.1		6.07		86.1		4.98			8.0				
			Middle	9.3	26.3	31.8	31.8	6.06	6.05	86.0	85.9	4.98	5.02		7.9			7.9	8.0
						31.8		6.04		85.7		5.06			7.8				
			Bottom	17.6	25.9	31.9	32.0	5.87	5.89	82.7	82.9	5.27	5.31		8.4			8.3	8.0
						32.0		5.90		83.1		5.34			8.2				
05/07/11	1110-1125	30/Fine	Surface	1.0	26.4	31.0	31.0	6.27	6.30	87.1	87.5	4.81	4.83	5.00	7.8	7.8	8.1		
						31.0		6.32		87.8		4.84			7.8				
			Middle	9.2	25.5	31.7	31.7	6.18	6.15	85.9	85.5	4.90	4.93		8.0			7.9	8.1
						31.7		6.12		85.0		4.96			7.7				
			Bottom	17.4	24.8	32.3	32.3	6.03	6.01	83.8	83.5	5.22	5.25		8.6			8.6	8.1
						32.3		5.98		83.1		5.27			8.5				
07/07/11	1155-1207	31/Fine	Surface	1.0	27.4	30.5	30.5	6.32	6.34	89.7	90.0	5.04	5.01	5.19	8.1	8.1	8.2		
						30.5		6.36		90.3		4.97			8.0				
			Middle	9.3	26.6	31.4	31.4	6.13	6.16	87.0	87.5	5.17	5.21		8.2			8.2	8.2
						31.4		6.19		87.9		5.24			8.2				
			Bottom	17.6	25.1	32.0	32.0	6.07	6.05	86.2	85.9	5.33	5.36		8.4			8.4	8.2
						32.0		6.02		85.5		5.38			8.3				
09/07/11	1434-1450	31/Sunny	Surface	1.0	26.4	31.1	31.1	6.36	6.33	87.7	87.3	4.86	4.88	5.08	7.8	7.9	8.1		
						31.0		6.30		86.9		4.90			8.0				
			Middle	9.2	25.4	31.7	31.7	6.22	6.20	85.8	85.5	5.09	5.07		8.1			8.1	8.1
						31.7		6.18		85.2		5.05			8.0				
			Bottom	17.4	24.8	32.3	32.3	6.01	6.03	82.9	83.1	5.25	5.28		8.3			8.4	8.1
						32.3		6.04		83.3		5.31			8.4				
12/07/11	1720-1735	27/Drizzle	Surface	1.0	26.3	29.3	29.4	6.40	6.42	89.6	89.8	5.15	5.18	5.32	8.2	8.2	8.4		
						29.4		6.43		90.0		5.20			8.2				
			Middle	9.3	25.3	30.5	30.6	6.31	6.28	88.3	87.9	5.31	5.34		8.5			8.4	8.4
						30.6		6.25		87.5		5.36			8.3				
			Bottom	17.6	24.6	31.8	31.8	6.05	6.07	84.7	85.0	5.43	5.45		8.7			8.7	8.4
						31.8		6.09		85.2		5.47			8.6				
14/07/11	1850-1901	27/Cloudy	Surface	1.0	27.0	30.3	30.3	6.31	6.30	88.3	88.1	4.77	4.79	4.95	7.7	7.6	8.1		
						30.2		6.28		87.9		4.80			7.5				
			Middle	9.2	25.7	30.8	30.8	6.16	6.13	86.2	85.8	5.01	4.99		8.0			8.0	8.1
						30.7		6.10		85.4		4.96			8.0				
			Bottom	17.4	25.1	31.5	31.6	5.97	5.96	83.6	83.4	5.09	5.07		8.5			8.6	8.1
						31.6		5.94		83.2		5.05			8.6				
16/07/11	1950-2004	26/Cloudy	Surface	1.0	26.9	30.1	30.1	6.03	6.08	84.4	85.1	4.96	4.98	5.05	7.9	8.1	8.1		
						30.0		6.12		85.7		4.99			8.2				
			Middle	8.7	26.2	30.6	30.7	5.91	5.90	82.7	82.6	5.02	5.04		8.0			8.0	8.1
						30.7		5.89		82.5		5.06			8.0				
			Bottom	16.4	25.4	31.6	31.7	5.97	5.95	83.6	83.3	5.12	5.14		8.1			8.3	8.1
						31.7		5.92		82.9		5.15			8.4				
19/07/11	1030-1042	29/Fine	Surface	1.0	25.8	29.2	29.2	6.13	6.10	85.8	85.4	5.25	5.23	5.39	8.1	8.2	8.8		
						29.2		6.07		85.0		5.20			8.3				
			Middle	9.3	25.3	30.4	30.4	5.97	5.99	83.6	83.9	5.43	5.40		8.8			8.9	8.8
						30.4		6.01		84.1		5.36			9.0				
			Bottom	17.6	24.8	31.7	31.7	5.85	5.84	81.9	81.7	5.51	5.55		9.4			9.3	8.8
						31.6		5.82		81.5		5.59			9.2				
21/07/11	1106-1119	27/Cloudy	Surface	1.0	24.7	30.1	30.1	6.10	6.12	86.0	86.2	5.03	5.01	5.13	8.0	8.1	8.2		
						30.1		6.13		86.4		4.99			8.4				
			Middle	9.2	24.1	30.8	30.8	6.00	5.97	84.6	84.2	5.11	5.13		8.2			8.1	8.2
						30.8		5.94		83.8		5.15			8.0				
			Bottom	17.4	23.5	31.7	31.8	5.85	5.83	82.5	82.2	5.23	5.25		8.1			8.2	8.2
						31.8		5.80		81.8		5.26			8.3				
23/07/11	1155-1207	29/Fine	Surface	1.0	26.3	31.1	31.1	6.18	6.17	85.3	85.2	5.02	4.99	5.15	8.1	8.1	8.3		
						31.0		6.16		85.0		4.95			8.0				
			Middle	9.3	25.6	32.0	32.0	6.01	6.00	82.9	82.8	5.09	5.12		8.2			8.2	8.3
						32.0		5.99		82.7		5.15			8.2				
			Bottom	17.6	25.0	32.4	32.4	5.82	5.85	80.3	80.7	5.37	5.33		8.8			8.7	8.3
						32.4		5.87		81.0		5.29			8.6				
26/07/11	1725-1737	31/Sunny	Surface	1.0	27.5	31.5	31.5	6.20	6.18	86.1	85.8	4.89	4.93	5.05	7.9	7.8	8.0		
						31.5		6.15		85.4		4.96			7.6				
			Middle	9.3	26.0	32.3	32.3	5.90	5.92	82.0	82.2	5.06	5.04		8.2			8.1	8.0
						32.3		5.93		82.4		5.01			8.0				
			Bottom	17.6	25.1	32.5	32.5	5.71	5.69	78.7	78.5	5.15	5.19		8.1			8.2	8.0
						32.4		5.67		78.2		5.22			8.3				
28/07/11	1804-1818	32/Fine	Surface	1.0	27.6	30.3	30.4	6.02	6.05	83.1	83.5	4.82	4.81	4.95	7.5	7.6	7.9		
						30.4		6.08		83.9		4.79			7.6				
			Middle	9.2	26.7	30.9	30.9	5.95	5.93	82.1	81.8	4.95	4.93		8.0			7.9	7.9
						30.9		5.90		81.4		4.91			8.0				
			Bottom	17.4	25.8	31.5	31.6	5.84	5.83	80.6	80.5	5.11	5.13		8.3			8.2	7.9
						31.6		5.82		80.3		5.14			8.0				
30/07/11	1858-1915	30/Cloudy	Surface	1.0	26.3	30.2	30.2	6.27	6.25	87.1	86.8	5.24	5.27	5.58	8.3	8.2	8.7		
						30.1		6.22		86.4		5.30			8.1				
			Middle	9.1	25.4	31.1	31.1	6.10	6.08	84.7	84.5	5.58	5.60		8.8			8.7	8.7
						31.0		6.06		84.2		5.62			8.6				
			Bottom	17.2	24.8	31.8	31.9	5.83	5.86	81.0	81.4	5.85	5.88		9.0			9.1	8.7
						31.9		5.88		81.7		5.90			9.1				

Mid-Flood Tide

Monitoring Station : R8a

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)			
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average	
02/07/11	2015-2025	30/Fine	Surface	1.0	27.4	31.2	31.2	6.10	6.09	86.6	86.4	5.19	5.22	5.09	8.1	8.2	8.2	
						31.1		6.07		86.1		5.24			8.3			
			Middle	6.7	26.3	31.7	31.7	5.97	5.96	84.7	84.6	4.97	4.94		8.0			8.1
						31.7		5.95		84.4		4.91			8.1			
			Bottom	12.4	25.9	32.0	32.0	5.88	5.86	82.9	82.6	5.06	5.10		8.2			8.4
						31.9		5.84		82.3		5.14			8.5			
05/07/11	1134-1148	30/Fine	Surface	1.0	26.4	31.0	31.0	6.30	6.32	85.7	86.8	4.70	4.73	4.90	7.6	7.6	7.8	
						30.9		6.33		87.9		4.76			7.5			
			Middle	6.7	25.8	31.3	31.3	6.24	6.22	86.7	86.4	4.87	4.90		7.8			7.8
						31.3		6.20		86.1		4.93			7.7			
			Bottom	12.4	25.2	31.8	31.8	6.06	6.08	84.2	84.5	5.06	5.08		8.2			8.1
						31.8		6.10		84.7		5.10			8.0			
07/07/11	1213-1225	32/Fine	Surface	1.0	27.4	30.5	30.6	6.41	6.38	91.0	90.6	4.94	4.97	5.11	8.0	8.0	8.1	
						30.6		6.35		90.2		4.99			8.0			
			Middle	7.0	26.7	31.4	31.4	6.17	6.19	87.6	87.9	5.15	5.11		8.0			7.9
						31.3		6.21		88.2		5.07			7.8			
			Bottom	13.0	25.4	31.8	31.8	6.09	6.07	86.5	86.2	5.27	5.24		8.5			8.4
						31.8		6.05		85.9		5.21			8.3			
09/07/11	1308-1322	32/Sunny	Surface	1.0	26.3	31.0	31.0	6.24	6.27	86.1	86.5	4.96	4.99	5.13	7.9	8.0	8.2	
						31.0		6.30		86.9		5.02			8.0			
			Middle	6.8	25.9	31.2	31.3	6.20	6.18	85.5	85.2	5.08	5.11		8.2			8.2
						31.3		6.15		84.8		5.13			8.1			
			Bottom	12.6	25.2	31.7	31.8	6.03	6.05	83.2	83.4	5.27	5.29		8.7			8.6
						31.8		6.06		83.6		5.31			8.4			
12/07/11	1741-1755	27/Cloudy	Surface	1.0	26.3	29.3	29.4	6.40	6.43	89.6	90.0	5.09	5.12	5.25	7.8	7.9	8.3	
						29.4		6.45		90.3		5.14			8.0			
			Middle	6.7	25.8	29.9	30.0	6.37	6.34	89.1	88.7	5.23	5.25		8.5			8.3
						30.0		6.30		88.2		5.26			8.1			
			Bottom	12.4	25.2	31.0	31.1	6.16	6.18	86.2	86.5	5.35	5.38		8.6			8.7
						31.1		6.20		86.8		5.40			8.7			
14/07/11	1913-1925	26/Cloudy	Surface	1.0	27.0	30.1	30.1	6.26	6.28	87.6	87.9	5.10	5.09	5.08	8.0	7.9	8.0	
						30.1		6.30		88.2		5.08			7.7			
			Middle	6.8	25.8	31.0	31.0	6.22	6.24	87.1	87.3	4.99	5.02		7.8			7.9
						30.9		6.25		87.5		5.05			7.9			
			Bottom	12.6	25.0	31.9	31.9	6.12	6.11	85.7	85.6	5.09	5.12		8.3			8.2
						31.8		6.10		85.4		5.14			8.0			
16/07/11	2019-2031	26/Cloudy	Surface	1.0	27.0	29.9	29.9	6.19	6.17	86.7	86.4	5.11	5.10	5.10	8.2	8.3	8.1	
						29.8		6.15		86.1		5.09			8.3			
			Middle	6.0	26.3	30.4	30.4	6.09	6.07	85.3	85.0	5.12	5.14		8.0			8.1
						30.3		6.04		84.6		5.15			8.1			
			Bottom	11.0	25.3	31.5	31.6	5.95	5.97	83.3	83.6	5.05	5.08		8.2			8.1
						31.6		5.99		83.9		5.10			8.0			
19/07/11	1049-1101	30/Fine	Surface	1.0	25.8	29.2	29.3	6.12	6.15	86.3	86.7	5.28	5.30	5.48	8.2	8.2	9.0	
						29.3		6.18		87.1		5.32			8.2			
			Middle	6.9	25.5	30.2	30.2	5.99	6.02	84.5	84.9	5.49	5.48		9.3			9.2
						30.2		6.04		85.2		5.46			9.0			
			Bottom	12.8	25.0	31.6	31.6	5.88	5.90	82.9	83.2	5.63	5.65		9.6			9.5
						31.6		5.92		83.5		5.67			9.4			
21/07/11	1129-1138	28/Cloudy	Surface	1.0	24.8	30.1	30.2	6.19	6.17	87.3	87.0	4.93	4.94	5.03	7.9	8.0	8.1	
						30.2		6.15		86.7		4.95			8.0			
			Middle	6.7	24.3	30.6	30.7	6.10	6.09	86.0	85.8	5.01	5.03		8.2			8.1
						30.7		6.07		85.6		5.05			7.9			
			Bottom	12.4	23.7	31.6	31.6	5.99	5.98	84.5	84.4	5.11	5.13		8.3			8.2
						31.6		5.97		84.2		5.14			8.0			
23/07/11	1213-1225	30/Fine	Surface	1.0	26.3	31.2	31.2	6.13	6.15	84.6	84.8	4.91	4.94	5.06	7.5	7.7	8.1	
						31.1		6.16		85.0		4.96			7.8			
			Middle	6.9	25.7	31.8	31.8	6.03	6.06	83.2	83.6	5.02	5.04		8.3			8.2
						31.8		6.08		83.9		5.05			8.1			
			Bottom	12.8	25.2	32.2	32.3	5.95	5.93	82.1	81.9	5.24	5.21		8.6			8.6
						32.3		5.91		81.6		5.17			8.5			
26/07/11	1744-1756	31/Sunny	Surface	1.0	27.4	31.5	31.5	6.11	6.10	84.9	84.7	5.02	5.05	5.04	8.0	8.0	7.8	
						31.5		6.08		84.5		5.08			8.0			
			Middle	6.7	26.2	32.1	32.2	5.92	5.94	82.2	82.5	4.94	5.01		7.7			7.8
						32.2		5.95		82.7		5.07			7.7			
			Bottom	12.4	25.1	32.6	32.6	5.85	5.83	80.7	80.4	4.98	5.05		7.7			7.7
						32.5		5.80		80.0		5.12			7.6			
28/07/11	1832-1844	32/Fine	Surface	1.0	27.7	30.3	30.3	6.36	6.34	87.8	87.5	5.17	5.21	5.26	8.6	8.7	8.5	
						30.2		6.32		87.2		5.24			8.8			
			Middle	6.8	26.6	30.8	30.9	6.16	6.17	85.0	85.2	5.19	5.17		8.2			8.3
						30.9		6.18		85.3		5.15			8.3			
			Bottom	12.6	25.8	31.6	31.7	5.94	5.96	81.9	82.2	5.37	5.40		8.6			8.5
						31.7		5.97		82.4		5.42			8.4			
30/07/11	1920-1933	29/Cloudy	Surface	1.0	26.3	30.0	30.1	6.19	6.21	86.0	86.2	5.28	5.31	5.48	8.4	8.2	8.8	
						30.1		6.22		86.4		5.33			8.0			
			Middle	6.6	25.8	30.6	30.6	6.08	6.10	84.5	84.8	5.40	5.44		9.0			8.8
						30.6		6.12		85.0		5.47			8.6			
			Bottom	12.2	25.2	31.6	31.6	5.90	5.92	82.0	82.3	5.68	5.71		9.4			9.5
						31.6		5.94		82.5		5.73			9.5			

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
02/07/11	1732-1742	30/Fine	Surface	1.0	28.1	30.9 30.9	30.9	6.27 6.24	6.26	89.0 88.6	88.8	4.56 4.63	4.60	4.86	7.5 7.2	7.4	7.9
			Middle	6.1	26.8	31.4 31.4	31.4	6.02 6.05	6.04	85.4 85.9	85.7	5.02 5.10	5.06		8.1 8.0		
			Bottom	11.2	26.2	31.9 31.9	31.9	5.95 5.91	5.93	83.8 83.3	83.6	4.95 4.90	4.93		8.4 8.2		
05/07/11	0852-0905	29/Fine	Surface	1.0	26.2	30.9 30.9	30.9	6.16 6.12	6.14	85.6 85.0	85.3	4.90 4.85	4.88	5.02	7.6 7.8	7.7	7.9
			Middle	5.9	25.8	31.1 31.0	31.1	6.03 6.01	6.02	83.8 83.5	83.7	4.97 5.02	5.00		8.0 7.8		
			Bottom	10.8	25.2	31.8 31.9	31.9	5.85 5.89	5.87	81.3 81.8	81.6	5.21 5.17	5.19		8.0 8.0		
07/07/11	0933-0944	29/Fine	Surface	1.0	27.3	30.6 30.5	30.6	6.23 6.20	6.22	89.1 88.7	88.9	5.04 5.08	5.06	5.17	8.1 8.0	8.1	8.3
			Middle	5.9	26.5	31.3 31.3	31.3	6.12 6.07	6.10	87.5 86.8	87.2	5.12 5.19	5.16		8.4 8.3		
			Bottom	10.8	25.3	31.8 31.8	31.8	5.94 5.96	5.95	84.9 85.2	85.1	5.31 5.25	5.28		8.5 8.5		
09/07/11	1206-1220	30/Sunny	Surface	1.0	26.4	31.0 31.0	31.0	6.16 6.20	6.18	85.0 85.5	85.3	5.01 5.06	5.04	5.15	8.0 8.2	8.1	8.3
			Middle	6.0	26.0	31.4 31.5	31.5	6.10 6.06	6.08	84.1 83.6	83.9	5.12 5.18	5.15		8.1 8.1		
			Bottom	11.0	25.3	31.8 31.8	31.8	5.93 5.97	5.95	81.8 82.3	82.1	5.26 5.29	5.28		8.6 8.4		
12/07/11	1451-1505	28/Cloudy	Surface	1.0	26.4	29.2 29.3	29.3	6.18 6.21	6.20	86.5 86.9	86.7	5.21 5.26	5.24	5.34	8.4 8.2	8.3	8.5
			Middle	6.0	26.0	29.8 29.9	29.9	6.13 6.09	6.11	85.8 85.2	85.5	5.29 5.34	5.32		8.3 8.5		
			Bottom	11.0	25.2	30.9 30.9	30.9	5.91 5.95	5.93	82.7 83.3	83.0	5.46 5.49	5.48		9.0 8.7		
14/07/11	1640-1654	27/Cloudy	Surface	1.0	26.8	30.2 30.1	30.2	6.02 6.09	6.06	84.3 85.3	84.8	5.12 5.10	5.11	5.15	8.2 8.0	8.1	8.1
			Middle	5.8	25.7	30.9 30.8	30.9	6.01 5.95	5.98	84.1 83.3	83.7	5.16 5.22	5.19		8.4 8.6		
			Bottom	10.8	25.0	31.6 31.7	31.7	5.79 5.81	5.80	81.1 81.3	81.2	5.09 5.19	5.14		7.9 7.6		
16/07/11	1736-1750	26/Cloudy	Surface	1.0	26.9	30.0 29.9	30.0	6.01 5.97	5.99	84.1 83.6	83.9	5.10 5.08	5.09	5.16	8.3 8.0	8.2	8.4
			Middle	5.3	26.2	30.4 30.5	30.5	5.94 5.90	5.92	83.2 82.6	82.9	5.19 5.16	5.18		8.6 8.4		
			Bottom	9.6	25.5	31.2 31.2	31.2	5.87 5.85	5.86	82.2 81.9	82.1	5.23 5.21	5.22		8.5 8.5		
19/07/11	0759-0810	27/Fine	Surface	1.0	25.7	29.3 29.2	29.3	6.04 6.08	6.06	85.2 85.7	85.5	5.41 5.44	5.43	5.56	8.7 8.5	8.6	8.8
			Middle	5.9	25.3	30.2 30.2	30.2	5.96 5.94	5.95	84.0 83.8	83.9	5.56 5.61	5.59		9.0 8.7		
			Bottom	10.8	24.8	31.5 31.6	31.6	5.82 5.87	5.85	82.1 82.8	82.5	5.71 5.64	5.68		9.2 8.9		
21/07/11	0848-0900	27/Cloudy	Surface	1.0	24.7	30.2 30.1	30.2	6.02 6.05	6.04	84.9 85.3	85.1	5.08 5.12	5.10	5.19	7.9 8.1	8.0	8.4
			Middle	5.8	24.3	30.6 30.6	30.6	5.91 5.94	5.93	83.3 83.8	83.6	5.17 5.21	5.19		8.3 8.5		
			Bottom	10.6	23.7	31.5 31.6	31.6	5.85 5.83	5.84	82.5 82.2	82.4	5.26 5.30	5.28		8.7 8.6		
23/07/11	0933-0944	29/Fine	Surface	1.0	26.2	31.2 31.2	31.2	6.07 6.02	6.05	84.4 83.7	84.1	5.04 5.08	5.06	5.18	7.9 8.0	8.0	8.1
			Middle	5.9	25.5	31.9 31.8	31.9	5.94 5.91	5.93	82.6 82.1	82.4	5.13 5.21	5.17		8.2 8.0		
			Bottom	10.8	25.1	32.2 32.2	32.2	5.85 5.83	5.84	81.3 81.0	81.2	5.32 5.27	5.30		8.4 8.1		
26/07/11	1504-1515	31/Sunny	Surface	1.0	27.8	31.2 31.3	31.3	6.21 6.17	6.19	86.3 85.7	86.0	4.06 4.01	4.04	4.81	7.2 7.3	7.3	7.8
			Middle	6.1	26.3	32.1 32.1	32.1	6.04 6.01	6.03	83.9 83.5	83.7	5.03 5.10	5.07		7.7 7.5		
			Bottom	11.2	25.0	32.5 32.4	32.5	5.99 5.95	5.97	83.2 82.7	83.0	5.37 5.30	5.34		8.6 8.3		
28/07/11	1547-1559	33/Fine	Surface	1.0	27.6	30.1 30.2	30.2	5.91 5.97	5.94	82.7 83.6	83.2	5.13 5.16	5.15	5.17	8.0 7.9	8.0	8.3
			Middle	5.9	26.5	30.7 30.8	30.8	5.80 5.89	5.85	81.2 82.5	81.9	5.09 5.15	5.12		8.2 8.2		
			Bottom	10.8	25.8	31.6 31.7	31.7	5.76 5.81	5.79	80.6 81.3	81.0	5.27 5.23	5.25		8.5 8.7		
30/07/11	1625-1640	31/Cloudy	Surface	1.0	26.2	30.0 30.0	30.0	6.02 6.05	6.04	83.6 84.0	83.8	5.51 5.57	5.54	5.72	8.5 8.6	8.6	8.8
			Middle	5.9	25.9	30.4 30.5	30.5	5.92 5.96	5.94	82.2 82.8	82.5	5.66 5.69	5.68		8.9 8.5		
			Bottom	10.8	25.4	31.3 31.4	31.4	5.74 5.70	5.72	79.7 79.2	79.5	5.93 5.98	5.96		9.3 9.1		

Mid-Flood Tide

Monitoring Station : R16

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
02/07/11	1713-1724	30/Fine	Surface	1.0	28.3	30.8	30.9	6.15	6.17	87.3	87.6	4.27	4.30	4.51	8.4	8.3	7.6
						30.9		6.19		87.8		4.33			8.1		
			Middle	6.7	26.9	31.3	31.4	6.04	6.06	85.7	85.9	4.64	4.62		7.2	7.3	
						31.4		6.07		86.1		4.60			7.4		
			Bottom	12.4	26.2	31.9	32.0	5.90	5.93	83.1	83.5	4.58	4.61		7.0	7.1	
						32.0		5.95		83.8		4.63			7.2		
05/07/11	0830-0845	29/Fine	Surface	1.0	26.1	30.9	30.9	6.30	6.33	87.5	87.9	4.76	4.78	4.94	7.8	7.9	7.8
						30.9		6.35		88.2		4.80			8.0		
			Middle	6.5	25.6	31.2	31.2	6.23	6.22	86.5	86.3	4.87	4.90		7.6	7.6	
						31.2		6.20		86.1		4.93			7.6		
			Bottom	12.0	25.0	31.9	32.0	6.14	6.12	85.3	85.0	5.12	5.14		8.0	7.9	
						32.0		6.10		84.7		5.16			7.8		
07/07/11	0915-0926	29/Fine	Surface	1.0	27.3	30.6	30.6	6.29	6.32	89.3	89.7	5.01	4.98	5.12	8.0	8.1	8.3
						30.6		6.34		90.0		4.95			8.2		
			Middle	6.8	26.4	31.3	31.4	6.15	6.16	87.3	87.5	5.09	5.12		8.0	8.1	
						31.4		6.17		87.6		5.14			8.1		
			Bottom	12.6	25.2	31.9	31.9	6.08	6.07	86.3	86.1	5.29	5.25		8.5	8.6	
						31.9		6.05		85.9		5.21			8.7		
09/07/11	1147-1200	30/Sunny	Surface	1.0	26.3	31.0	31.0	6.36	6.34	87.7	87.4	4.92	4.94	5.05	7.7	7.9	8.0
						30.9		6.31		87.0		4.96			8.0		
			Middle	6.4	26.0	31.5	31.5	6.23	6.21	85.9	85.7	5.03	5.05		8.1	8.2	
						31.5		6.19		85.4		5.07			8.3		
			Bottom	11.8	25.2	31.9	31.9	6.05	6.07	83.4	83.7	5.14	5.17		8.0	8.0	
						31.9		6.09		84.0		5.20			7.9		
12/07/11	1432-1445	28/Cloudy	Surface	1.0	26.3	29.3	29.3	6.42	6.40	89.8	89.5	5.06	5.08	5.20	8.2	8.1	8.4
						29.3		6.37		89.1		5.10			8.0		
			Middle	6.6	25.9	29.7	29.8	6.30	6.28	88.2	87.9	5.18	5.20		8.5	8.5	
						29.8		6.25		87.5		5.22			8.4		
			Bottom	12.2	25.1	30.9	31.0	6.12	6.11	85.6	85.4	5.31	5.33		8.8	8.7	
						31.0		6.09		85.2		5.35			8.5		
14/07/11	1622-1635	27/Cloudy	Surface	1.0	26.8	30.1	30.1	6.13	6.17	85.8	86.3	5.01	4.98	5.01	8.0	8.1	8.1
						30.0		6.20		86.8		4.95			8.2		
			Middle	6.5	25.5	30.7	30.7	6.16	6.14	86.2	86.0	4.96	4.95		7.9	7.9	
						30.6		6.12		85.7		4.93			7.8		
			Bottom	12.0	25.0	31.7	31.8	6.11	6.10	85.5	85.4	5.10	5.11		8.3	8.3	
						31.8		6.09		85.3		5.12			8.3		
16/07/11	1710-1725	26/Cloudy	Surface	1.0	27.0	30.2	30.2	6.20	6.18	86.8	86.5	5.02	5.01	5.09	7.8	7.9	8.1
						30.1		6.16		86.2		4.99			8.0		
			Middle	6.1	26.4	30.8	30.7	6.06	6.06	84.8	84.8	5.08	5.10		8.2	8.3	
						30.7		6.05		84.7		5.12			8.3		
			Bottom	11.2	25.6	31.3	31.4	5.91	5.90	82.7	82.5	5.14	5.16		8.1	8.1	
						31.4		5.88		82.3		5.17			8.0		
19/07/11	0740-0751	27/Fine	Surface	1.0	25.7	29.3	29.3	6.12	6.15	85.7	86.1	5.32	5.29	5.42	8.3	8.3	8.8
						29.3		6.17		86.4		5.25			8.2		
			Middle	6.7	25.2	30.2	30.3	6.04	6.02	84.6	84.3	5.40	5.44		8.9	9.0	
						30.3		5.99		83.9		5.47			9.0		
			Bottom	12.4	24.9	31.5	31.5	5.90	5.92	82.6	82.8	5.51	5.55		9.3	9.2	
						31.5		5.93		83.0		5.58			9.0		
21/07/11	0823-0837	27/Cloudy	Surface	1.0	24.7	30.1	30.1	6.09	6.11	85.9	86.2	4.96	4.99	5.09	7.9	7.7	8.1
						30.0		6.13		86.4		5.01			7.5		
			Middle	6.5	24.2	30.7	30.7	6.04	6.03	85.2	85.0	5.12	5.10		8.4	8.4	
						30.7		6.01		84.7		5.07			8.3		
			Bottom	12.0	23.6	31.7	31.8	5.95	5.94	83.9	83.7	5.17	5.19		8.2	8.1	
						31.8		5.92		83.5		5.20			8.0		
23/07/11	0915-0926	29/Fine	Surface	1.0	26.1	31.1	31.2	6.12	6.11	84.5	84.4	4.96	4.99	5.10	7.7	7.8	8.1
						31.2		6.10		84.2		5.01			7.8		
			Middle	6.7	25.5	31.8	31.8	6.01	6.03	82.9	83.2	5.14	5.12		8.2	8.1	
						31.8		6.05		83.5		5.09			8.0		
			Bottom	12.4	25.0	32.2	32.3	5.91	5.89	81.6	81.3	5.18	5.20		8.3	8.4	
						32.3		5.87		81.0		5.22			8.5		
26/07/11	1445-1456	31/Sunny	Surface	1.0	27.8	31.2	31.2	6.17	6.16	85.7	85.5	3.94	3.96	4.71	6.9	7.0	7.7
						31.2		6.14		85.3		3.98			7.0		
			Middle	6.7	26.4	32.0	32.1	5.98	5.97	83.1	82.9	4.95	4.93		7.6	7.6	
						32.1		5.95		82.7		4.90			7.5		
			Bottom	12.4	25.0	32.5	32.5	5.82	5.84	80.3	80.5	5.27	5.24		8.5	8.5	
						32.5		5.85		80.7		5.21			8.5		
28/07/11	1524-1536	33/Fine	Surface	1.0	27.5	30.2	30.2	6.16	6.13	86.2	85.8	5.04	5.03	5.17	8.1	8.1	8.4
						30.1		6.09		85.3		5.01			8.0		
			Middle	6.3	26.4	30.6	30.7	5.92	5.95	82.9	82.7	5.17	5.15		8.4	8.3	
						30.7		5.97		82.4		5.12			8.1		
			Bottom	11.6	25.8	31.5	31.5	5.79	5.81	79.9	80.7	5.30	5.33		8.8	8.9	
						31.4		5.82		81.5		5.36			8.9		
30/07/11	1604-1620	31/Cloudy	Surface	1.0	26.2	30.0	30.1	6.21	6.19	86.3	86.0	5.41	5.44	5.64	8.3	8.3	8.6
						30.1		6.17		85.7		5.47			8.2		
			Middle	6.6	25.8	30.7	30.7	6.09	6.10	84.6	84.8	5.58	5.61		8.8	8.7	
						30.7		6.11		84.9		5.63			8.6		
			Bottom	12.2	25.2	31.6	31.6	5.97	5.95	82.9	82.6	5.85	5.88		8.9	9.0	
						31.6		5.92		82.2		5.91			9.0		

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
02/07/11	1700-1710	30/Fine	Surface	1.0	28.2	30.6	30.7	6.20	6.22	88.0	88.2	4.34	4.38	4.72	7.5	7.5	7.9
						30.7		6.23		88.4		4.42			7.5		
			Middle	6.2	26.9	31.2	31.2	6.07	6.06	86.1	85.9	4.80	4.84		7.9	7.8	
						31.2		6.04		85.7		4.87			7.7		
			Bottom	11.4	26.1	31.8	31.9	5.82	5.84	82.0	82.3	4.97	4.94		8.5	8.4	
						31.9		5.86		82.6		4.91			8.2		
05/07/11	0810-0825	29/Fine	Surface	1.0	26.1	30.8	30.9	6.38	6.36	88.6	88.3	4.70	4.72	4.89	8.0	8.0	7.7
						30.9		6.33		87.9		4.74			7.9		
			Middle	6.4	25.7	31.2	31.3	6.21	6.23	86.3	86.6	4.86	4.88		7.6	7.7	
						31.3		6.25		86.8		4.90			7.7		
			Bottom	11.8	25.1	31.9	31.9	6.12	6.14	85.0	85.2	5.05	5.08		7.5	7.6	
						31.9		6.15		85.4		5.10			7.6		
07/07/11	0900-0912	29/Fine	Surface	1.0	27.2	30.5	30.6	6.38	6.37	90.6	90.5	4.99	4.96	5.08	7.8	7.9	8.1
						30.6		6.36		90.3		4.92			8.0		
			Middle	6.4	26.5	31.4	31.4	6.11	6.13	86.8	87.0	5.11	5.09		8.1	8.1	
						31.3		6.14		87.2		5.07			8.0		
			Bottom	11.8	25.3	31.9	31.9	5.98	6.00	84.9	85.2	5.18	5.21		8.5	8.5	
						31.8		6.02		85.5		5.23			8.4		
09/07/11	1130-1143	30/Sunny	Surface	1.0	26.4	31.0	31.0	6.34	6.32	87.4	87.2	4.86	4.88	5.00	7.5	7.7	8.0
						31.0		6.30		86.9		4.90			7.8		
			Middle	6.3	26.0	31.5	31.5	6.24	6.23	86.1	85.9	4.96	4.99		8.2	8.1	
						31.4		6.21		85.6		5.01			8.0		
			Bottom	11.6	25.3	31.9	32.0	6.13	6.11	84.5	84.2	5.10	5.13		8.5	8.3	
						32.0		6.08		83.9		5.16			8.1		
12/07/11	1415-1428	28/Cloudy	Surface	1.0	26.4	29.3	29.4	6.38	6.36	89.3	89.0	5.15	5.17	5.27	8.0	8.0	8.2
						29.4		6.33		88.6		5.19			7.9		
			Middle	6.5	26.0	29.6	29.7	6.28	6.26	87.9	87.6	5.23	5.25		8.6	8.6	
						29.7		6.23		87.2		5.27			8.5		
			Bottom	12.0	25.2	30.8	30.9	6.10	6.12	85.4	85.7	5.36	5.38		8.0	8.1	
						30.9		6.14		85.9		5.40			8.1		
14/07/11	1600-1614	27/Cloudy	Surface	1.0	27.0	30.2	30.2	6.27	6.25	87.8	87.5	5.05	5.07	5.14	8.1	8.3	8.3
						30.1		6.23		87.2		5.08			8.4		
			Middle	6.2	25.6	30.8	30.9	6.09	6.08	85.3	85.1	5.17	5.18		8.2	8.2	
						30.9		6.07		84.9		5.19			8.2		
			Bottom	11.4	25.1	31.5	31.6	6.05	6.03	84.7	84.4	5.14	5.18		8.5	8.4	
						31.6		6.01		84.1		5.21			8.3		
16/07/11	1648-1701	26/Cloudy	Surface	1.0	27.0	30.1	30.2	6.03	6.07	84.4	84.9	4.96	4.97	5.08	7.9	7.8	8.1
						30.2		6.10		85.4		4.97			7.6		
			Middle	5.6	26.3	30.4	30.5	6.07	6.08	84.9	85.1	5.05	5.07		8.2	8.1	
						30.5		6.09		85.3		5.09			8.0		
			Bottom	10.2	25.7	31.2	31.3	5.99	5.97	83.9	83.6	5.18	5.19		8.5	8.6	
						31.3		5.94		83.2		5.20			8.6		
19/07/11	0725-0737	27/Fine	Surface	1.0	25.6	29.2	29.3	6.13	6.12	85.8	85.7	5.23	5.25	5.40	8.4	8.3	8.6
						29.3		6.11		85.5		5.27			8.2		
			Middle	6.5	25.3	30.3	30.3	6.02	6.04	84.3	84.6	5.45	5.42		8.6	8.6	
						30.2		6.06		84.8		5.39			8.5		
			Bottom	12.0	24.9	31.5	31.6	5.95	5.92	83.3	82.9	5.52	5.54		8.8	9.1	
						31.6		5.89		82.5		5.55			9.3		
21/07/11	0800-0813	27/Cloudy	Surface	1.0	24.8	30.1	30.2	6.14	6.13	86.6	86.4	4.93	4.95	5.05	7.5	7.6	8.1
						30.2		6.11		86.2		4.97			7.7		
			Middle	6.3	24.3	30.6	30.7	6.03	6.05	85.0	85.2	5.04	5.06		8.1	8.1	
						30.7		6.06		85.4		5.08			8.0		
			Bottom	11.6	23.7	31.7	31.7	5.98	5.97	84.3	84.2	5.12	5.14		8.5	8.7	
						31.6		5.96		84.0		5.15			8.8		
23/07/11	0900-0912	29/Fine	Surface	1.0	26.2	31.2	31.2	6.14	6.16	84.7	84.9	4.98	4.95	5.09	8.0	7.9	8.2
						31.1		6.17		85.1		4.92			7.8		
			Middle	6.5	25.4	31.8	31.9	6.03	6.06	83.2	83.6	5.06	5.10		8.1	8.1	
						31.9		6.09		84.0		5.13			8.0		
			Bottom	12.0	25.1	32.2	32.3	5.93	5.94	81.8	82.0	5.25	5.23		8.5	8.6	
						32.3		5.95		82.1		5.20			8.6		
26/07/11	1430-1442	31/Sunny	Surface	1.0	27.8	31.1	31.2	6.11	6.09	84.9	84.6	3.79	3.75	4.51	6.8	6.7	7.4
						31.2		6.07		84.3		3.71			6.6		
			Middle	6.2	26.4	31.9	31.9	5.96	5.95	82.8	82.6	4.78	4.81		7.3	7.4	
						31.9		5.93		82.4		4.84			7.5		
			Bottom	11.4	25.1	32.4	32.5	5.89	5.88	81.2	81.0	4.94	4.98		8.3	8.1	
						32.5		5.86		80.8		5.02			7.9		
28/07/11	1500-1515	33/Fine	Surface	1.0	27.6	30.1	30.2	6.07	6.10	83.8	84.8	5.02	4.99	5.24	8.1	8.1	8.5
						30.2		6.13		85.8		4.95			8.0		
			Middle	6.4	26.5	30.7	30.8	6.09	6.06	85.3	84.8	5.23	5.27		8.6	8.5	
						30.8		6.02		84.3		5.30			8.3		
			Bottom	11.8	25.9	31.6	31.6	5.88	5.91	82.3	82.8	5.45	5.48		9.0	9.1	
						31.5		5.94		83.2		5.50			9.1		
30/07/11	1545-1600	31/Cloudy	Surface	1.0	26.2	29.9	30.0	6.10	6.13	84.7	85.2	5.46	5.48	5.70	8.7	8.8	9.0
						30.0		6.16		85.6		5.50			8.9		
			Middle	6.4	25.8	30.6	30.7	6.03	6.05	83.8	84.0	5.67	5.70		9.0	8.9	
						30.7		6.06		84.2		5.72			8.8		
			Bottom	11.8	25.3	31.5	31.6	5.88	5.91	81.7	82.1	5.90	5.93		9.5	9.4	
						31.6		5.93		82.4		5.96			9.3		

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
02/07/11	1904-1915	30/Fine	Surface	1.0	27.7	31.0	31.0	6.19	6.17	87.8	87.6	5.07	5.10	5.20	8.1	8.1	8.3
						30.9		6.15		87.3		5.13			8.0		
			Middle	5.9	26.4	31.6	31.7	6.08	6.07	86.3	86.1	5.30	5.33		8.7	8.7	
						31.7		6.05		85.9		5.36			8.6		
			Bottom	10.8	25.8	32.1	32.1	5.83	5.81	82.2	81.9	5.18	5.16		8.1	8.1	
						32.0		5.79		81.6		5.14			8.0		
05/07/11	1012-1025	30/Fine	Surface	1.0	26.3	30.9	31.0	6.31	6.33	87.7	88.0	4.82	4.84	4.97	7.9	7.8	7.7
						31.0		6.35		88.2		4.86			7.6		
			Middle	6.0	25.8	31.3	31.3	6.28	6.26	87.2	87.0	4.90	4.93		7.4	7.5	
						31.2		6.24		86.7		4.95			7.5		
			Bottom	11.0	25.2	31.8	31.8	6.15	6.14	85.4	85.2	5.13	5.15		8.0	7.9	
						31.8		6.12		85.0		5.16			7.7		
07/07/11	1103-1114	31/Fine	Surface	1.0	27.3	30.6	30.6	6.31	6.33	89.6	89.9	5.06	5.08	5.16	7.9	7.9	8.1
						30.5		6.35		90.2		5.10			7.8		
			Middle	6.1	26.7	31.3	31.3	6.18	6.20	87.8	88.1	5.16	5.14		8.0	7.9	
						31.3		6.22		86.3		5.12			7.7		
			Bottom	11.2	25.4	31.9	31.9	6.11	6.10	86.8	86.6	5.23	5.27		8.6	8.5	
						31.9		6.08		86.3		5.31			8.4		
09/07/11	1330-1345	31/Sunny	Surface	1.0	26.4	31.0	31.0	6.28	6.31	86.6	87.0	4.81	4.83	4.95	7.6	7.6	7.9
						31.0		6.33		87.3		4.85			7.5		
			Middle	6.1	25.8	31.5	31.5	6.20	6.18	85.5	85.2	4.93	4.95		8.0	8.0	
						31.4		6.15		84.8		4.97			7.9		
			Bottom	11.2	25.2	31.8	31.8	6.03	6.05	83.2	83.5	5.06	5.08		8.4	8.3	
						31.8		6.07		83.7		5.10			8.2		
12/07/11	1620-1635	27/Drizzle	Surface	1.0	26.2	29.2	29.3	6.31	6.34	88.3	88.7	5.08	5.11	5.17	8.0	8.0	8.2
						29.3		6.37		89.1		5.13			7.9		
			Middle	6.0	25.9	29.8	29.9	6.33	6.30	88.6	88.1	5.10	5.13		8.3	8.5	
						29.9		6.26		87.6		5.16			8.6		
			Bottom	11.0	25.3	30.7	30.8	6.14	6.16	85.9	86.1	5.27	5.29		8.1	8.2	
						30.8		6.17		86.3		5.30			8.2		
14/07/11	1807-1819	27/Cloudy	Surface	1.0	27.2	30.2	30.2	6.13	6.15	85.8	86.1	4.93	4.94	5.03	7.7	7.8	8.0
						30.1		6.17		86.4		4.95			7.9		
			Middle	6.2	25.8	30.6	30.7	6.07	6.06	84.9	84.8	5.03	5.06		8.2	8.3	
						30.7		6.05		84.7		5.09			8.3		
			Bottom	11.4	25.1	31.6	31.7	5.98	5.96	83.7	83.5	5.10	5.09		8.1	8.1	
						31.7		5.94		83.2		5.07			8.0		
16/07/11	1910-1922	26/Cloudy	Surface	1.0	26.9	30.1	30.1	6.09	6.11	85.3	85.5	5.12	5.11	5.11	8.0	7.9	8.0
						30.0		6.12		85.7		5.10			7.8		
			Middle	5.4	26.2	30.5	30.6	5.93	5.95	83.0	83.2	5.02	5.06		8.1	8.1	
						30.6		5.96		83.4		5.10			8.0		
			Bottom	9.8	25.4	31.6	31.6	5.80	5.80	81.2	81.2	5.12	5.16		8.3	8.2	
						31.5		5.79		81.1		5.19			8.0		
19/07/11	0936-0947	29/Fine	Surface	1.0	25.7	29.2	29.2	6.09	6.11	85.9	86.1	5.28	5.32	5.51	8.6	8.5	8.9
						29.2		6.12		86.3		5.36			8.4		
			Middle	6.0	25.5	30.2	30.3	6.03	6.00	85.0	84.6	5.54	5.52		9.0	9.0	
						30.3		5.97		84.2		5.50			9.0		
			Bottom	11.0	25.0	31.6	31.6	5.90	5.88	83.2	82.9	5.71	5.68		9.4	9.3	
						31.6		5.86		82.6		5.65			9.2		
21/07/11	1022-1033	27/Cloudy	Surface	1.0	24.8	30.2	30.2	6.12	6.15	86.3	86.7	4.96	4.98	5.09	7.8	7.9	8.3
						30.1		6.17		87.0		5.00			8.0		
			Middle	5.9	24.3	30.6	30.6	6.04	6.06	85.2	85.5	5.07	5.09		8.2	8.3	
						30.5		6.08		85.7		5.11			8.3		
			Bottom	10.8	23.7	31.5	31.5	5.92	5.94	83.5	83.8	5.17	5.19		8.5	8.6	
						31.5		5.96		84.0		5.20			8.7		
23/07/11	1103-1114	29/Fine	Surface	1.0	26.3	31.2	31.2	6.07	6.10	83.8	84.2	5.03	5.01	5.10	8.1	8.0	8.2
						31.1		6.12		84.5		4.99			7.9		
			Middle	6.0	25.7	31.9	31.9	5.99	5.98	82.7	82.5	5.07	5.09		8.1	8.1	
						31.9		5.96		82.2		5.10			8.0		
			Bottom	11.0	25.2	32.2	32.2	5.83	5.85	80.5	80.8	5.24	5.22		8.5	8.5	
						32.2		5.87		81.0		5.19			8.5		
26/07/11	1631-1642	31/Sunny	Surface	1.0	27.6	31.4	31.4	6.15	6.13	85.4	85.2	4.67	4.70	5.17	7.4	7.5	8.5
						31.3		6.11		84.9		4.73			7.6		
			Middle	6.2	26.1	32.2	32.2	5.96	5.94	82.8	82.5	5.21	5.20		8.7	8.8	
						32.1		5.92		82.2		5.18			8.9		
			Bottom	11.4	25.2	32.6	32.6	5.98	5.97	83.1	82.9	5.59	5.63		9.2	9.1	
						32.6		5.95		82.7		5.66			9.0		
28/07/11	1716-1730	32/Fine	Surface	1.0	27.5	30.1	30.2	6.17	6.14	86.4	86.0	5.02	5.06	5.21	8.2	8.2	8.5
						30.2		6.11		85.5		5.09			8.2		
			Middle	6.3	26.7	30.8	30.8	6.16	6.18	86.2	86.5	5.20	5.18		8.6	8.7	
						30.8		6.19		86.7		5.16			8.7		
			Bottom	11.6	25.9	31.6	31.6	5.96	5.94	83.4	83.2	5.37	5.39		8.9	8.8	
						31.5		5.92		82.9		5.40			8.6		
30/07/11	1755-1810	30/Cloudy	Surface	1.0	26.3	30.1	30.1	6.13	6.16	85.2	85.6	5.31	5.34	5.49	8.4	8.5	8.9
						30.0		6.18		85.9		5.36			8.5		
			Middle	6.0	25.8	30.5	30.5	6.09	6.06	84.6	84.2	5.43	5.46		8.9	9.0	
						30.5		6.03		83.8		5.49			9.0		
			Bottom	11.0	25.3	31.2	31.3	5.89	5.91	81.8	82.0	5.66	5.68		9.3	9.2	
						31.3		5.92		82.2		5.70			9.0		

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
02/07/11	1929-1940	30/Fine	Surface	1.0	27.6	31.0	31.0	6.20	6.22	88.0	88.3	4.92	4.90	5.12	7.6	7.7	8.1
						31.0		6.24		88.6		4.87			7.8		
			Middle	8.7	26.4	31.7	31.7	6.04	6.06	85.3	85.7	5.14	5.16		5.18		
31.7	6.07	86.1				5.18		8.0									
Bottom	16.4	25.9	32.0	32.0	5.97	5.95	84.7	84.5	5.29	5.32	5.34	5.32	8.4				
			32.0		5.93		84.2		5.34		8.5						
05/07/11	1032-1046	30/Fine	Surface	1.0	26.4	31.0	31.0	6.10	6.12	84.7	85.0	4.97	5.00	5.15	8.0	8.1	8.2
						31.0		6.14		85.3		5.02			8.1		
			Middle	8.9	25.5	31.6	31.7	6.02	6.00	83.6	83.4	5.11	5.14		5.16		
31.7	5.98	83.1				5.16		8.1									
Bottom	16.8	24.8	32.2	32.2	5.87	5.85	81.5	81.2	5.29	5.31	5.33	5.31	8.5				
			32.2		5.82		80.8		5.33		8.2						
07/07/11	1126-1137	31/Fine	Surface	1.0	27.3	30.5	30.5	6.25	6.22	89.4	89.0	5.09	5.13	5.26	8.1	8.1	8.4
						30.4		6.19		88.5		5.17			8.0		
			Middle	8.9	26.6	31.5	31.5	6.06	6.09	86.7	87.1	5.29	5.27		5.25		
31.5	6.12	87.5				5.25		8.3									
Bottom	16.8	25.2	31.9	32.0	5.95	5.97	85.1	85.4	5.35	5.39	5.42	5.39	8.7				
			32.0		5.99		85.7		5.42		8.6						
09/07/11	1356-1410	31/Sunny	Surface	1.0	26.4	31.0	31.1	6.13	6.11	84.5	84.3	4.98	5.01	5.15	7.5	7.7	8.1
						31.1		6.09		84.0		5.03			7.8		
			Middle	8.9	25.5	31.7	31.7	6.00	5.97	82.8	82.4	5.15	5.19		5.22		
31.6	5.94	81.9				5.22		7.9									
Bottom	16.8	24.8	32.2	32.2	5.74	5.76	79.2	79.4	5.37	5.37	5.37	5.37	8.5				
			32.1		5.77		79.6		5.37		8.7						
12/07/11	1643-1657	27/Drizzle	Surface	1.0	26.3	29.2	29.3	6.13	6.15	85.8	86.0	5.24	5.27	5.43	8.5	8.5	8.8
						29.3		6.16		86.2		5.29			8.5		
			Middle	8.9	25.4	30.4	30.5	6.01	5.99	84.1	83.8	5.42	5.44		5.46		
30.5	5.97	83.5				5.46		8.6									
Bottom	16.8	24.7	31.6	31.7	5.81	5.82	81.3	81.5	5.55	5.57	5.59	5.57	9.0				
			31.7		5.83		81.6		5.59		9.2						
14/07/11	1822-1835	27/Cloudy	Surface	1.0	27.0	30.2	30.2	6.11	6.16	85.5	86.2	4.99	4.97	5.04	7.6	7.7	8.0
						30.2		6.20		86.8		4.95			7.8		
			Middle	8.8	25.5	30.7	30.8	6.24	6.23	87.4	87.3	5.05	5.03		5.01		
30.8	6.22	87.1				5.01		8.0									
Bottom	16.6	25.0	31.9	31.9	6.03	6.06	84.4	84.9	5.13	5.12	5.11	5.12	8.1				
			31.8		6.09		85.3		5.11		8.0						
16/07/11	1925-1937	26/Cloudy	Surface	1.0	26.9	30.0	30.0	6.14	6.16	85.9	86.2	4.98	4.97	5.07	7.7	7.6	8.0
						30.0		6.17		86.4		4.96			7.5		
			Middle	8.4	26.3	30.6	30.6	6.07	6.05	84.9	84.6	5.11	5.09		5.07		
30.5	6.02	84.3				5.07		8.0									
Bottom	15.8	25.3	31.7	31.7	5.83	5.86	81.6	82.0	5.15	5.14	5.14	5.14	8.1				
			31.6		5.88		82.3		5.13		8.3						
19/07/11	1001-1012	29/Fine	Surface	1.0	25.8	29.1	29.2	6.03	6.05	85.0	85.2	5.48	5.46	5.60	8.6	8.8	9.1
						29.2		6.06		85.4		5.43			8.9		
			Middle	8.9	25.4	30.4	30.4	5.98	5.97	84.3	84.1	5.62	5.59		5.56		
30.3	5.95	83.9				5.56		9.0									
Bottom	16.8	24.7	31.7	31.7	5.83	5.82	82.2	82.1	5.74	5.77	5.79	5.77	9.2				
			31.7		5.81		81.9		5.79		9.5						
21/07/11	1036-1050	27/Cloudy	Surface	1.0	24.7	30.1	30.1	6.06	6.09	85.4	85.8	5.02	5.00	5.13	7.9	7.9	8.2
						30.0		6.11		86.2		4.98			7.9		
			Middle	8.9	24.2	30.8	30.8	6.00	5.98	84.6	84.3	5.13	5.14		5.15		
30.7	5.96	84.0				5.15		8.0									
Bottom	16.8	23.6	31.6	31.7	5.88	5.86	82.9	82.6	5.22	5.24	5.26	5.24	8.4				
			31.7		5.84		82.3		5.26		8.5						
23/07/11	1126-1137	29/Fine	Surface	1.0	26.2	31.1	31.1	6.09	6.08	84.7	84.5	5.05	5.09	5.21	7.8	7.7	8.2
						31.1		6.06		84.2		5.12			7.6		
			Middle	8.9	25.6	32.0	32.0	5.90	5.91	82.0	82.1	5.21	5.19		5.17		
31.9	5.91	82.1				5.17		8.0									
Bottom	16.8	24.9	32.3	32.4	5.85	5.82	81.3	80.9	5.35	5.37	5.38	5.37	8.7				
			32.4		5.79		80.5		5.38		8.8						
26/07/11	1656-1707	31/Sunny	Surface	1.0	27.5	31.5	31.5	6.28	6.26	87.2	87.0	4.94	5.01	5.09	8.0	7.9	8.2
						31.5		6.24		86.7		5.07			7.8		
			Middle	8.7	26.2	32.2	32.3	6.04	6.03	83.9	83.7	5.03	5.06		5.09		
32.3	6.01	83.5				5.09		8.1									
Bottom	16.4	25.1	32.6	32.6	5.88	5.87	81.1	80.9	5.22	5.20	5.18	5.20	8.6				
			32.5		5.85		80.7		5.18		8.4						
28/07/11	1734-1746	32/Fine	Surface	1.0	27.6	30.1	30.1	6.02	6.03	84.3	84.4	4.87	4.84	5.00	7.6	7.7	7.9
						30.1		6.03		84.4		4.80			7.8		
			Middle	8.9	26.6	30.9	30.9	6.06	6.02	83.6	83.3	4.93	4.95		4.96		
30.9	5.98	83.0				4.96		7.6									
Bottom	16.8	25.8	31.5	31.5	5.84	5.83	80.6	80.4	5.19	5.23	5.26	5.23	8.2				
			31.5		5.81		80.2		5.26		8.0						
30/07/11	1817-1832	30/Cloudy	Surface	1.0	26.3	30.1	30.1	6.10	6.08	84.7	84.4	5.44	5.47	5.71	8.6	8.7	9.1
						30.1		6.05		84.0		5.50			8.8		
			Middle	9.0	25.5	30.9	31.0	5.88	5.90	81.7	82.0	5.70	5.73		5.75		
31.0	5.92	82.2				5.75		9.0									
Bottom	17.0	24.8	31.8	31.8	5.70	5.72	79.2	79.5	5.91	5.94	5.96	5.94	9.5				
			31.7		5.74		79.7		5.96		9.5						

Mid-Flood Tide

Monitoring Station : C1

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
02/07/11	1757-1808	30/Fine	Surface	1.0	28.0	30.8	30.9	6.30	6.32	89.4	89.6	4.74	4.78	5.04	8.0	8.0	8.4
						30.9		6.33		89.8		4.82			8.0		
			Middle	7.2	26.6	31.5	31.6	6.10	6.09	86.6	86.4	5.17	5.14		8.4		
05/07/11	0912-0925	29/Fine	Surface	1.0	26.2	31.6	31.0	6.07	6.28	86.1	87.2	5.11	4.71	4.92	8.7	7.5	8.0
						31.9		5.80		81.7		5.16			8.8		
			Middle	7.3	25.5	31.4	31.4	6.13	6.15	85.2	85.5	4.90	4.93		8.0		
07/07/11	0957-1007	29/Fine	Surface	1.0	27.2	31.9	32.0	6.05	6.07	84.0	84.3	5.10	5.13	5.04	8.5	8.5	8.0
						32.0		6.09		84.6		5.16			8.5		
			Middle	7.5	26.4	31.4	31.4	6.21	6.24	88.2	88.6	5.05	5.03		8.1		
09/07/11	1226-1240	30/Sunny	Surface	1.0	26.3	31.3	31.1	6.27	6.35	89.0	87.6	5.01	4.83	5.00	8.0	7.7	8.0
						30.5		6.42		91.2		4.86			8.0		
			Middle	7.3	25.8	31.7	31.7	6.22	6.25	86.5	86.2	4.99	5.01		8.1		
12/07/11	1514-1529	28/Cloudy	Surface	1.0	26.3	31.8	31.3	6.14	6.18	87.2	84.6	5.20	5.36	5.23	8.5	8.2	8.2
						29.3		6.26		87.6		5.08			8.0		
			Middle	7.3	25.8	31.3	30.2	6.17	6.18	86.3	86.5	5.20	5.23		8.3		
14/07/11	1659-1713	27/Cloudy	Surface	1.0	26.8	30.2	30.1	6.19	6.09	86.6	85.3	5.25	4.89	5.03	8.0	7.5	7.9
						30.1		6.08		85.1		4.92			7.4		
			Middle	7.8	25.8	30.8	30.8	6.04	6.03	84.6	84.5	5.05	5.04		8.1		
16/07/11	1802-1818	26/Cloudy	Surface	1.0	26.9	30.7	30.1	6.02	6.16	84.3	86.3	5.02	5.03	5.07	8.0	7.9	8.1
						30.1		6.19		86.7		5.01			7.8		
			Middle	7.0	26.4	31.9	30.6	6.07	6.05	84.3	84.6	5.07	5.05		8.2		
19/07/11	0825-0837	27/Fine	Surface	1.0	25.7	30.5	29.3	6.07	6.15	84.9	86.0	5.02	5.27	5.45	8.0	8.1	8.5
						29.3		6.16		86.2		5.24			8.2		
			Middle	7.6	25.3	31.3	30.3	5.97	5.99	83.6	83.9	5.48	5.47		8.5		
21/07/11	0913-0926	27/Cloudy	Surface	1.0	24.7	30.3	30.1	6.01	6.16	84.1	86.8	5.45	4.93	5.04	8.6	8.0	8.1
						31.6		5.89		82.4		5.60			8.8		
			Middle	7.7	24.2	31.8	30.8	6.06	6.04	85.4	85.1	5.02	5.04		8.4		
23/07/11	0957-1009	29/Fine	Surface	1.0	26.2	30.8	31.2	6.01	6.19	84.7	85.4	5.06	4.97	5.08	8.1	7.9	8.2
						30.1		6.14		86.6		4.95			8.1		
			Middle	7.6	25.5	31.7	31.9	5.91	6.07	83.3	83.8	5.14	5.09		8.0		
26/07/11	1530-1542	31/Sunny	Surface	1.0	27.7	31.8	31.3	5.94	6.13	83.8	85.2	5.18	4.40	4.75	8.6	6.5	7.2
						32.3		5.94		82.0		5.23			8.6		
			Middle	7.2	26.1	32.6	32.0	5.95	5.92	82.5	82.3	4.81	4.84		7.0		
28/07/11	1612-1625	33/Fine	Surface	1.0	27.7	32.5	30.3	5.98	6.09	83.1	85.3	5.03	4.93	5.04	8.0	7.1	7.9
						30.2		6.12		84.8		4.94			7.6		
			Middle	7.9	26.6	30.9	30.9	6.04	6.03	84.6	84.4	5.12	5.08		8.2		
30/07/11	1648-1503	31/Cloudy	Surface	1.0	26.2	30.8	30.7	6.01	6.15	84.1	83.5	5.03	5.38	5.60	8.0	8.2	8.6
						31.7		5.92		82.9		5.13			8.1		
			Middle	7.3	25.6	31.7	31.7	5.92	6.01	83.2	83.5	5.11	5.57		8.0		
			Surface	1.0	26.2	30.7	31.8	5.96	6.15	83.4	80.4	5.11	5.85	5.60	8.6	9.0	8.6
						30.0		6.16		85.2		5.36			8.3		
			Middle	7.3	25.6	31.8	31.8	5.99	5.79	83.2	83.5	5.59	5.57		8.5		

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
02/07/11	1821-1832	30/Fine	Surface	1.0	27.8	31.0	31.0	6.21	6.19	88.1	87.9	4.92	4.95	5.03	7.2	7.3	7.8
				6.8		26.5		31.6		6.08		86.3			5.13		
			Middle	6.8	26.5	31.5	6.04	85.7	5.07	7.8							
Bottom	12.6	26.0		31.9	5.97	84.7	5.08	8.1									
			31.9	5.92	84.0	5.01	8.0										
05/07/11	0932-0945	29/Fine	Surface	1.0	26.3	31.0	31.0	6.22	6.25	86.4	86.8	4.78	4.81		4.98		
				6.9		25.5		31.3		6.16		85.6		4.93		8.0	
			Middle	6.9	25.5	31.3	6.10	84.7	4.99	7.6							
Bottom	12.8	25.0		31.8	6.05	84.0	5.15	8.2									
			31.9	6.00	83.4	5.18	8.0										
07/07/11	1020-1032	29/Fine	Surface	1.0	27.3	30.6	30.6	6.38	6.41	90.6	91.0	4.95	4.92	5.06		7.6	7.7
				6.9		26.5		31.4		6.23		88.5			5.09	8.0	
			Middle	6.9	26.5	31.4	6.19	87.9	5.03	7.8							
Bottom	12.8	25.3		31.9	6.12	86.9	5.24	8.5									
			31.8	6.10	86.6	5.18	8.4										
09/07/11	1247-1300	30/Sunny	Surface	1.0	26.4	31.0	31.0	6.34	6.32	87.4	87.2	4.88	4.91		5.07	7.7	
				7.0		25.8		31.6		6.25		86.2		5.04		8.1	
			Middle	7.0	25.8	31.7	6.20	85.5	5.10	8.1							
Bottom	13.0	25.1		32.1	6.11	84.3	5.19	8.2									
			32.1	6.08	83.9	5.24	8.0										
12/07/11	1537-1551	28/Cloudy	Surface	1.0	26.3	29.3	29.4	6.31	6.33	88.3	88.6	5.14	5.16	5.27		8.1	8.1
				7.0		25.8		30.1		6.26		87.6			5.24	8.4	
			Middle	7.0	25.8	30.1	6.20	86.8	5.29	8.2							
Bottom	13.0	25.0		31.2	6.12	85.6	5.37	8.7									
			31.3	6.07	84.9	5.42	8.6										
14/07/11	1723-1736	27/Cloudy	Surface	1.0	26.8	30.2	30.2	6.32	6.34	88.5	88.7	4.85	4.84		4.96	7.7	
				7.0		25.5		30.9		6.27		87.8		4.93		8.2	
			Middle	7.0	25.5	30.9	6.21	86.9	4.99	8.4							
Bottom	13.0	25.1		31.7	6.04	84.6	5.11	8.0									
			31.8	6.03	84.4	5.07	7.7										
16/07/11	1829-1840	26/Cloudy	Surface	1.0	27.0	30.0	30.0	6.21	6.24	86.9	87.4	4.85	4.83	4.94		7.7	7.9
				6.2		26.4		30.7		6.11		85.5			4.92	8.2	
			Middle	6.2	26.4	30.8	6.08	85.1	4.94	8.0							
Bottom	11.4	25.7		31.5	5.77	80.8	5.08	8.3									
			31.4	5.79	81.1	5.03	8.0										
19/07/11	0850-0902	27/Fine	Surface	1.0	25.7	29.2	29.2	6.15	6.17	86.1	86.4	5.27	5.24		5.40	8.2	
				6.9		25.3		30.3		6.08		85.1		5.41		8.0	
			Middle	6.9	25.3	30.2	6.02	84.3	5.36	8.2							
Bottom	12.8	24.9		31.5	5.94	83.2	5.54	9.2									
			31.5	5.92	82.9	5.58	9.0										
21/07/11	0939-0952	27/Cloudy	Surface	1.0	24.8	30.1	30.1	6.12	6.14	86.3	86.5	4.99	4.97	5.07		7.9	8.0
				6.9		24.2		30.7		6.07		85.6			5.06	8.0	
			Middle	6.9	24.2	30.6	6.03	85.0	5.09	8.3							
Bottom	12.8	23.7		31.7	5.96	84.0	5.20	8.6									
			31.7	5.92	83.5	5.16	8.7										
23/07/11	1020-1032	29/Fine	Surface	1.0	26.2	31.1	31.1	6.19	6.17	86.0	85.7	5.03	5.00		5.11	8.0	
				6.8		25.5		31.9		6.01		83.5		5.12		8.2	
			Middle	6.8	25.5	31.8	6.07	84.4	5.09	8.3							
Bottom	12.6	25.1		32.3	5.96	82.8	5.26	8.6									
			32.2	5.90	82.0	5.19	8.4										
26/07/11	1545-1557	31/Sunny	Surface	1.0	27.6	31.3	31.4	6.13	6.11	85.2	84.9	4.53	4.56	4.98		7.4	7.5
				6.8		26.0		32.0		5.87		81.0			5.21	8.7	
			Middle	6.8	26.0	32.1	5.90	81.4	5.17	8.6							
Bottom	12.6	25.2		32.5	5.75	79.3	5.16	8.2									
			32.6	5.78	79.7	5.22	8.0										
28/07/11	1634-1648	33/Fine	Surface	1.0	27.7	30.1	30.2	6.23	6.25	87.2	87.5	4.81	4.87		5.05	7.2	
				6.8		26.7		30.8		6.08		85.1		4.99		8.0	
			Middle	6.8	26.7	30.9	6.13	85.8	5.01	7.8							
Bottom	12.6	25.7		31.6	6.09	85.3	5.26	8.5									
			31.7	6.04	84.6	5.29	8.3										
30/07/11	1712-1728	31/Cloudy	Surface	1.0	26.3	30.0	30.1	6.18	6.20	85.9	86.2	5.25	5.28	5.53		8.5	8.6
				6.8		25.6		30.7		6.09		84.6			5.47	8.9	
			Middle	6.8	25.6	30.7	6.04	83.9	5.53	9.0							
Bottom	12.6	25.0		31.7	5.83	81.0	5.79	8.6									
			31.7	5.87	81.5	5.84	8.8										

Mid-Ebb Tide

Monitoring Station : C2

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
02/07/11	1510-1522	31/Fine	Surface	1.0	27.4	30.8	30.8	6.33	6.36	89.3	89.7	4.95	4.97	5.13	7.7	7.9	8.2
				7.8	26.5	31.5		6.21		87.6		5.17			8.1		
			Middle	31.6	6.14	86.6	5.11	8.2									
				14.6	25.6	32.2	6.02	84.9	5.25	8.0							
			Bottom	32.2	6.07	85.6	5.30	8.6									
05/07/11	1708-1720	30/Fine	Surface	1.0	27.5	30.4	30.5	6.10	6.12	85.4	85.7	4.62	4.66	4.84	7.5	7.5	7.7
				7.4	26.4	31.8		6.04		84.6		4.80			7.5		
			Middle	31.7	6.07	84.9	4.83	7.8									
				13.8	25.3	31.9	5.97	83.6	5.07	8.0							
			Bottom	31.9	5.91	82.7	5.01	8.0									
07/07/11	1840-1852	33/Fine	Surface	1.0	27.9	30.7	30.7	6.32	6.30	89.7	89.5	5.07	5.06	5.16	8.0	8.1	8.2
				8.1	26.8	31.4		6.21		88.2		5.16			8.1		
			Middle	31.4	6.18	87.8	5.18	8.0									
				15.2	25.7	31.9	6.10	86.6	5.26	8.3							
			Bottom	31.8	6.07	86.2	5.24	8.5									
09/07/11	2110-2124	30/Fine	Surface	1.0	26.6	31.0	31.0	5.96	6.02	83.4	84.2	5.06	5.11	5.21	7.7	7.9	8.4
				8.1	26.1	31.4		6.09		84.9		5.15			8.0		
			Middle	31.5	6.13	85.3	5.25	8.6									
				15.2	25.2	32.0	5.91	82.7	5.28	8.5							
			Bottom	31.9	5.95	83.3	5.24	8.5									
12/07/11	1300-1312	27/Rainy	Surface	1.0	26.2	29.2	29.2	6.45	6.44	90.3	90.1	5.02	5.06	5.26	8.0	8.1	8.5
				7.9	25.5	30.4		6.29		88.1		5.28			8.1		
			Middle	30.5	6.36	89.0	5.22	8.5									
				14.8	25.1	31.8	6.16	86.2	5.43	9.0							
			Bottom	31.8	6.11	85.5	5.49	8.9									
14/07/11	1439-1451	29/Cloudy	Surface	1.0	26.5	30.0	30.1	6.26	6.28	88.3	88.6	5.01	4.99	5.09	8.5	8.3	8.2
				8.1	25.7	30.9		6.15		86.7		5.07			8.1		
			Middle	30.9	6.11	86.2	5.10	8.2									
				15.2	25.1	31.9	6.03	85.0	5.18	8.4							
			Bottom	31.8	5.97	84.2	5.21	8.0									
16/07/11	1521-1536	27/Showers	Surface	1.0	26.5	29.4	29.5	6.31	6.30	90.2	90.0	5.01	4.99	5.11	8.5	8.5	8.4
				8.1	25.8	29.5		6.28		89.8		4.97			8.4		
			Middle	30.7	6.20	88.0	5.09	8.2									
				15.2	25.0	31.7	6.06	87.5	5.14	8.1							
			Bottom	31.8	6.03	86.2	5.23	8.6									
19/07/11	1617-1635	29/Cloudy	Surface	1.0	26.0	30.0	30.0	6.13	6.15	85.8	86.1	5.27	5.31	5.50	8.5	8.3	8.7
				8.0	25.4	30.8		6.06		86.3		5.34			8.1		
			Middle	30.8	6.01	84.8	5.48	8.9									
				15.0	24.7	31.7	5.85	84.1	5.52	8.6							
			Bottom	31.7	5.79	81.9	5.68	9.3									
21/07/11	1733-1745	29/Fine	Surface	1.0	25.2	30.1	30.1	6.11	6.15	84.3	84.9	4.88	4.90	5.05	7.5	7.6	8.0
				7.4	24.5	30.5		5.99		80.9		4.96			7.9		
			Middle	30.6	6.07	81.9	5.04	7.5									
				13.8	23.9	31.5	5.86	80.9	5.29	8.5							
			Bottom	31.6	5.94	81.9	5.20	8.8									
23/07/11	1823-1833	30/Sunny	Surface	1.0	27.0	31.2	31.2	6.15	6.17	85.4	85.7	5.17	5.14	5.08	8.2	8.2	8.1
				8.4	25.9	32.0		6.18		85.9		5.11			8.1		
			Middle	31.9	6.05	84.0	5.05	8.2									
				15.8	25.4	32.3	5.88	81.1	5.12	7.8							
			Bottom	32.4	5.84	80.5	5.07	8.0									
26/07/11	1310-1322	31/Sunny	Surface	1.0	27.4	31.6	31.6	6.25	6.24	86.3	86.1	4.94	4.98	5.18	7.5	7.7	8.3
				8.0	26.5	32.1		6.22		85.8		5.02			7.8		
			Middle	32.1	6.09	84.0	5.22	8.7									
				15.0	25.4	32.6	6.14	84.7	5.16	8.8							
			Bottom	32.6	5.99	82.7	5.34	8.5									
28/07/11	1340-1352	32/Sunny	Surface	1.0	27.5	30.1	30.1	6.24	6.26	88.6	88.9	4.96	4.97	5.08	7.5	7.7	7.9
				8.1	26.3	30.7		6.14		87.2		5.06			8.2		
			Middle	30.7	6.17	87.6	5.10	8.0									
				15.2	25.6	31.8	6.09	86.5	5.17	8.1							
			Bottom	31.7	6.05	85.9	5.22	8.0									
30/07/11	1440-1452	31/Fine	Surface	1.0	26.4	29.3	29.3	6.22	6.19	86.5	86.0	5.21	5.23	5.40	8.5	8.6	9.0
				7.8	25.7	29.3		6.15		85.5		5.25			8.6		
			Middle	30.9	6.02	83.7	5.47	9.0									
				14.6	25.1	30.9	6.01	83.5	5.38	9.2							
			Bottom	31.7	5.87	81.6	5.51	9.3									

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	
02/07/11	1451-1502	31/Fine	Surface	1.0	27.4	30.7	30.7	6.29	6.32	89.3	89.8	4.87	4.90	5.09	7.5	7.6	7.9	
						30.7		6.35		90.2		4.93			7.7			
			Middle	7.9	26.5	31.6	31.6	6.13	6.15	87.0	87.3	5.15	5.12		8.2	8.2		8.2
						31.6		6.17		87.6		5.08			8.2			
			Bottom	14.8	25.5	32.2	32.2	6.03	6.06	85.6	86.1	5.28	5.26		8.0	8.0		8.0
						32.1		6.09		86.5		5.23			8.0			
05/07/11	1647-1659	30/Fine	Surface	1.0	27.4	30.5	30.6	6.08	6.11	85.1	85.5	4.93	4.94	5.08	7.8	7.9	8.1	
						30.6		6.13		85.8		4.94			8.0			
			Middle	8.2	26.2	31.7	31.7	6.04	6.00	84.6	84.0	5.09	5.11		8.2	8.2		8.2
						31.6		5.95		83.3		5.12			8.1			
			Bottom	15.4	25.3	31.9	32.0	5.90	5.93	82.6	83.0	5.22	5.21		8.4	8.2		8.2
						32.0		5.95		83.3		5.20			8.0			
07/07/11	1821-1832	33/Fine	Surface	1.0	27.9	30.7	30.7	6.31	6.33	89.6	89.8	5.01	5.03	5.11	7.9	7.9	8.2	
						30.6		6.35		90.0		5.04			7.8			
			Middle	8.3	26.7	31.5	31.5	6.20	6.23	88.0	88.4	5.09	5.11		8.2	8.1		8.1
						31.4		6.25		88.8		5.13			8.0			
			Bottom	15.6	25.7	31.8	31.9	6.13	6.11	87.0	86.8	5.18	5.19		8.5	8.5		8.5
						31.9		6.09		86.5		5.20			8.5			
09/07/11	2047-2059	30/Fine	Surface	1.0	26.7	31.0	31.1	6.06	6.10	84.8	85.3	4.98	4.95	5.09	7.6	7.7	7.9	
						31.1		6.13		85.8		4.92			7.7			
			Middle	8.0	26.1	31.6	31.6	6.17	6.16	86.4	86.3	5.07	5.05		8.0	7.8		7.8
						31.5		6.15		86.1		5.02			7.5			
			Bottom	15.0	25.2	32.0	32.0	6.01	5.99	84.1	83.8	5.30	5.28		8.3	8.2		8.2
						32.0		5.96		83.4		5.26			8.0			
12/07/11	1241-1252	27/Rainy	Surface	1.0	26.1	29.3	29.3	6.40	6.37	90.2	89.8	5.11	5.10	5.27	8.0	7.9	8.3	
						29.2		6.33		89.3		5.08			7.7			
			Middle	8.0	25.6	30.4	30.5	6.18	6.21	87.1	87.5	5.29	5.27		8.4	8.3		8.3
						30.5		6.23		87.8		5.25			8.1			
			Bottom	15.0	25.0	31.8	31.8	6.04	6.05	85.2	85.3	5.41	5.44		9.0	8.9		8.9
						31.7		6.06		85.4		5.46			8.8			
14/07/11	1420-1431	29/Cloudy	Surface	1.0	26.4	30.1	30.1	6.30	6.27	88.8	88.4	4.96	4.95	5.06	7.6	7.5	7.9	
						30.1		6.24		88.0		4.94			7.4			
			Middle	8.2	25.7	30.9	31.0	6.13	6.15	86.4	86.7	5.05	5.07		8.1	8.1		8.1
						31.0		6.16		86.9		5.09			8.0			
			Bottom	15.4	25.1	31.9	31.9	6.05	6.03	85.3	85.0	5.15	5.16		8.2	8.1		8.1
						31.9		6.00		84.6		5.17			8.0			
16/07/11	1457-1511	27/Showers	Surface	1.0	26.5	29.5	29.5	6.23	6.25	89.1	89.4	5.04	5.05	5.16	8.3	8.2	8.3	
						29.4		6.27		89.7		5.06			8.0			
			Middle	8.3	25.8	30.8	30.8	6.15	6.14	87.3	87.1	5.15	5.16		8.1	8.1		8.1
						30.8		6.12		86.9		5.17			8.0			
			Bottom	15.6	25.0	31.8	31.8	6.00	6.02	85.8	86.1	5.25	5.27		8.6	8.6		8.6
						31.7		6.04		86.4		5.28			8.5			
19/07/11	1554-1610	29/Cloudy	Surface	1.0	26.1	30.0	30.0	6.26	6.23	87.6	87.2	5.25	5.23	5.38	8.4	8.3	8.7	
						30.0		6.20		86.8		5.20			8.2			
			Middle	8.1	25.3	30.8	30.8	6.12	6.11	85.6	85.4	5.31	5.34		8.5	8.7		8.7
						30.7		6.09		85.2		5.36			8.8			
			Bottom	15.2	24.7	31.8	31.9	5.80	5.82	81.2	81.5	5.55	5.57		9.0	9.1		9.1
						31.9		5.84		81.7		5.59			9.2			
21/07/11	1709-1724	29/Fine	Surface	1.0	25.2	30.1	30.2	6.15	6.16	83.0	83.1	4.96	4.93	5.06	7.8	7.9	8.1	
						30.2		6.17		83.2		4.90			8.0			
			Middle	8.0	24.5	30.6	30.6	5.96	5.95	80.5	80.6	5.08	5.09		8.4	8.5		8.5
						30.6		5.93		80.7		5.10			8.5			
			Bottom	15.0	23.9	31.6	31.7	5.90	5.91	79.7	79.8	5.14	5.16		8.1	8.1		8.1
						31.7		5.92		79.9		5.17			8.0			
23/07/11	1805-1815	30/Sunny	Surface	1.0	27.0	31.3	31.3	6.10	6.12	84.7	85.0	4.95	4.97	5.05	8.1	8.1	8.0	
						31.2		6.14		85.3		4.99			8.0			
			Middle	8.4	25.9	32.0	32.0	5.97	5.96	82.9	82.7	5.07	5.10		8.0	8.1		8.1
						32.0		5.94		82.5		5.13			8.2			
			Bottom	15.8	25.4	32.4	32.4	5.78	5.76	79.7	79.5	5.11	5.09		8.0	7.9		7.9
						32.4		5.74		79.2		5.07			7.7			
26/07/11	1251-1302	31/Sunny	Surface	1.0	27.4	31.5	31.6	6.16	6.17	85.6	85.8	5.05	5.02	5.15	8.1	8.0	8.2	
						31.6		6.18		85.9		4.98			7.8			
			Middle	7.9	26.6	32.2	32.2	6.11	6.09	84.9	84.7	5.13	5.16		8.2	8.3		8.2
						32.2		6.07		84.4		5.19			8.4			
			Bottom	14.8	25.3	32.6	32.6	5.89	5.92	81.9	82.3	5.25	5.29		8.3	8.3		8.3
						32.5		5.95		82.7		5.32			8.2			
28/07/11	1321-1332	32/Sunny	Surface	1.0	27.5	30.2	30.2	6.32	6.30	89.7	89.5	5.02	5.04	5.14	8.0	8.0	8.3	
						30.1		6.28		89.2		5.05			8.0			
			Middle	8.3	26.3	30.8	30.8	6.24	6.22	88.6	88.3	5.13	5.14		8.2	8.3		8.3
						30.7		6.19		87.9		5.15			8.4			
			Bottom	15.6	25.7	31.7	31.8	6.11	6.09	86.8	86.5	5.22	5.24		8.6	8.7		8.7
						31.8		6.07		86.2		5.25			8.8			
30/07/11	1421-1432	31/Fine	Surface	1.0	26.3	29.4	29.4	6.19	6.22	86.0	86.5	5.30	5.29	5.41	8.4	8.5	9.0	
						29.3		6.25		86.9		5.27			8.6			
			Middle	7.9	25.6	30.9	30.9	6.07	6.06	84.4	84.2	5.35	5.38		9.0	9.1		9.1
						30.8		6.04		84.0		5.41			9.1			
			Bottom	14.8	25.1	31.7	31.7	5.97	5.94	83.0	82.6	5.58	5.56		9.6	9.6		9.6
						31.7		5.91		82.1		5.53			9.5			

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
02/07/11	1252-1304	308/Fine	Surface	1.0	27.3	30.7	30.8	6.22	6.20	88.3	88.1	5.14	5.18	5.35	8.5	8.5	8.9
				8.1		26.5		31.6		31.6		6.10			6.07		
			Bottom	15.2	25.6	32.1	32.1	5.95	5.96	84.5	84.7	5.52	5.49		9.4		
05/07/11	1506-1518	30/Fine	Surface	1.0	27.5	30.5	30.6	6.28	6.26	87.9	87.6	4.92	4.94	5.02	7.8	7.9	8.1
				8.3		26.4		31.6		31.7		6.19			6.15		
			Bottom	15.6	25.2	32.0	32.0	5.96	5.97	83.4	83.6	4.97	5.03		8.1		
07/07/11	1622-1634	33/Fine	Surface	1.0	27.9	30.6	30.7	6.18	6.20	88.4	88.7	5.08	5.11	5.20	8.3	8.2	8.3
				8.3		26.8		31.5		31.5		6.12			6.10		
			Bottom	15.6	25.8	31.9	31.9	5.99	5.97	85.7	85.3	5.27	5.29		8.5		
09/07/11	1858-1910	32/Fine	Surface	1.0	27.0	31.2	31.2	6.10	6.14	85.4	85.8	5.07	5.06	5.11	8.0	8.1	8.2
				8.1		26.3		31.7		31.8		6.05			6.04		
			Bottom	15.2	25.5	32.2	32.2	5.87	5.89	82.2	82.4	5.15	5.18		8.4		
12/07/11	1042-1054	27/Drizzle	Surface	1.0	26.2	29.3	29.3	6.24	6.22	88.0	87.7	5.22	5.20	5.36	8.5	8.6	8.8
				8.2		25.6		30.5		30.5		6.05			6.08		
			Bottom	15.4	25.1	31.8	31.8	5.94	5.96	83.8	84.1	5.47	5.50		9.1		
14/07/11	1222-1234	29/Cloudy	Surface	1.0	26.4	30.2	30.3	6.13	6.15	86.4	86.7	5.11	5.13	5.21	8.2	8.2	8.4
				8.3		25.7		30.9		31.0		6.07			6.05		
			Bottom	15.6	25.1	31.9	31.9	5.94	5.93	83.8	83.6	5.28	5.30		8.5		
16/07/11	1259-1312	27/Showers	Surface	1.0	26.4	29.5	29.5	6.22	6.20	88.9	88.7	5.07	5.10	5.20	7.5	7.6	8.2
				8.2		25.8		30.8		30.8		6.11			6.10		
			Bottom	15.4	25.0	31.7	31.7	5.98	5.97	85.5	85.3	5.28	5.31		8.4		
19/07/11	1350-1405	29/Drizzle	Surface	1.0	26.0	30.0	30.0	6.01	6.03	84.1	84.4	5.37	5.39	5.62	8.8	8.7	9.0
				8.1		25.4		30.8		30.8		5.82			5.84		
			Bottom	15.2	24.7	31.8	31.8	5.70	5.72	79.8	80.1	5.83	5.86		9.0		
21/07/11	1520-1532	29/Fine	Surface	1.0	24.9	30.2	30.2	5.96	5.98	82.2	82.5	4.88	4.91	5.03	7.5	7.6	8.0
				8.3		24.5		30.4		30.5		5.93			5.94		
			Bottom	15.6	24.1	31.7	31.7	5.72	5.76	78.9	79.2	5.12	5.13		8.0		
23/07/11	1618-1630	30/Sunny	Surface	1.0	27.1	31.2	31.2	6.17	6.16	85.7	85.5	5.12	5.15	5.17	7.8	8.0	8.3
				8.2		26.2		32.0		32.0		6.03			6.05		
			Bottom	15.4	25.5	32.4	32.4	5.89	5.91	81.2	81.5	5.34	5.31		8.4		
26/07/11	1052-1104	30/Sunny	Surface	1.0	27.4	31.6	31.6	5.97	6.00	83.0	83.4	5.14	5.17	5.32	8.5	8.3	8.7
				8.3		26.6		32.2		32.2		5.90			5.91		
			Bottom	15.6	25.4	32.6	32.6	5.84	5.81	81.2	80.8	5.48	5.50		8.7		
28/07/11	1122-1134	31/Sunny	Surface	1.0	27.5	30.3	30.3	6.15	6.14	87.3	87.1	5.08	5.10	5.19	8.5	8.5	8.3
				8.3		26.3		30.8		30.8		6.07			6.05		
			Bottom	15.6	25.8	31.7	31.7	5.92	5.94	84.1	84.3	5.26	5.28		8.0		
30/07/11	1222-1234	30/Cloudy	Surface	1.0	26.4	29.4	29.4	6.06	6.04	84.8	84.5	5.39	5.35	5.46	9.0	9.1	9.2
				8.2		25.7		30.9		30.9		5.93			5.94		
			Bottom	15.4	25.1	31.6	31.7	5.87	5.86	82.2	82.0	5.54	5.56		9.2		

Mid-Ebb Tide



東業德驗測試顧問有限公司
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
02/07/11	1350-1402	30/Fine	Surface	1.0	27.4	30.8	30.8	6.36	6.34	90.3	90.0	4.99	5.02	5.18	8.0	8.1	8.2
						30.7		6.31		89.6		5.04			8.2		
			Middle	7.9	26.5	31.6	31.6	6.15	6.16	87.3	87.5	5.22	5.21		8.4		
						31.5		6.17		87.6		5.19			8.1		
			Bottom	14.8	25.6	32.2	32.2	6.08	6.05	86.3	85.9	5.29	5.31		8.2		
						32.1		6.02		85.5		5.33			8.2		
05/07/11	1553-1605	30/Fine	Surface	1.0	27.5	30.6	30.6	6.11	6.14	85.5	85.9	4.89	4.91	5.03	7.7	7.9	8.1
						30.5		6.16		86.2		4.93			8.0		
			Middle	7.8	26.4	31.6	31.7	6.02	6.04	84.3	84.5	5.06	5.05		8.2		
						31.7		6.05		84.7		5.03			8.0		
			Bottom	14.6	25.1	31.9	32.0	5.79	5.81	81.1	81.3	5.12	5.13		8.4		
						32.0		5.82		81.5		5.14			8.4		
07/07/11	1720-1732	33/Fine	Surface	1.0	27.9	30.7	30.8	6.32	6.34	90.4	90.6	5.10	5.08	5.17	8.2	8.1	8.3
						30.8		6.35		90.8		5.06			8.0		
			Middle	8.1	26.8	31.5	31.5	6.27	6.24	89.7	89.2	5.16	5.18		8.3		
						31.4		6.20		88.7		5.19			8.4		
			Bottom	15.2	25.7	31.9	32.0	6.14	6.12	87.8	87.5	5.24	5.27		8.6		
						32.0		6.10		87.2		5.29			8.3		
09/07/11	1945-1958	32/Fine	Surface	1.0	26.9	31.2	31.2	6.23	6.26	87.2	87.6	4.93	4.93	4.97	7.6	7.7	7.9
						31.1		6.28		87.9		4.92			7.8		
			Middle	7.8	26.4	31.6	31.7	6.15	6.17	86.1	86.3	4.94	4.92		8.0		
						31.7		6.18		86.5		4.90			7.7		
			Bottom	14.6	25.2	32.0	32.1	6.08	6.05	85.1	84.6	5.06	5.08		8.1		
						32.1		6.01		84.1		5.09			8.0		
12/07/11	1140-1152	27/Drizzle	Surface	1.0	26.2	29.2	29.2	6.34	6.33	89.4	89.3	5.15	5.11	5.25	8.3	8.4	8.4
						29.2		6.32		89.1		5.07			8.5		
			Middle	8.0	25.6	30.4	30.5	6.18	6.20	87.1	87.4	5.23	5.25		8.1		
						30.5		6.22		87.7		5.27			8.0		
			Bottom	15.0	25.1	31.7	31.7	6.01	6.03	84.7	85.0	5.41	5.38		8.8		
						31.7		6.05		85.3		5.34			8.7		
14/07/11	1320-1332	29/Cloudy	Surface	1.0	26.3	30.4	30.4	6.25	6.27	88.1	88.4	5.00	4.99	5.11	7.9	8.0	8.1
						30.3		6.29		88.7		4.97			8.0		
			Middle	8.1	25.7	30.9	30.9	6.19	6.17	87.3	87.0	5.10	5.12		8.0		
						30.9		6.14		86.6		5.14			8.4		
			Bottom	15.2	25.0	31.9	31.9	6.03	6.05	85.0	85.3	5.20	5.22		8.1		
						31.9		6.07		85.6		5.24			8.0		
16/07/11	1354-1407	27/Showers	Surface	1.0	26.5	29.6	29.6	6.30	6.29	90.1	89.9	5.06	5.05	5.12	8.0	8.0	8.2
						29.6		6.27		89.7		5.03			8.0		
			Middle	8.1	25.7	30.7	30.7	6.17	6.20	87.6	88.0	5.11	5.12		8.4		
						30.7		6.22		88.3		5.13			8.6		
			Bottom	15.2	24.9	31.6	31.7	6.10	6.08	87.2	87.0	5.19	5.20		8.1		
						31.7		6.06		86.7		5.21			8.0		
19/07/11	1449-1503	29/Drizzle	Surface	1.0	26.1	30.0	30.0	6.20	6.23	86.8	87.2	5.20	5.22	5.43	8.4	8.3	8.6
						29.9		6.25		87.5		5.24			8.2		
			Middle	8.0	25.4	30.8	30.8	6.13	6.11	85.8	85.5	5.36	5.39		8.5		
						30.8		6.08		85.1		5.41			8.5		
			Bottom	15.0	24.5	31.8	31.8	5.93	5.90	83.0	82.6	5.65	5.68		9.0		
						31.8		5.87		82.1		5.70			8.7		
21/07/11	1609-1623	29/Fine	Surface	1.0	25.1	30.0	30.0	6.20	6.23	85.6	86.0	4.72	4.75	4.95	7.8	7.7	8.0
						30.0		6.25		86.3		4.78			7.5		
			Middle	7.9	24.5	30.7	30.7	6.12	6.11	84.5	83.4	5.05	5.07		8.2		
						30.6		6.09		82.2		5.08			8.0		
			Bottom	14.8	23.9	31.7	31.7	5.95	5.97	82.1	81.5	5.02	5.04		8.1		
						31.6		5.99		80.9		5.06			8.1		
23/07/11	1704-1715	30/Sunny	Surface	1.0	27.1	31.3	31.3	6.15	6.17	85.4	85.7	4.87	4.91	5.04	7.6	7.7	7.9
						31.3		6.18		85.9		4.95			7.8		
			Middle	7.8	26.1	32.1	32.2	6.07	6.09	84.3	84.6	4.98	5.01		8.0		
						32.2		6.11		84.9		5.04			7.9		
			Bottom	14.6	25.4	32.5	32.5	5.92	5.94	81.6	81.9	5.15	5.19		8.3		
						32.4		5.95		82.1		5.23			8.0		
26/07/11	1150-1202	30/Sunny	Surface	1.0	27.4	31.5	31.5	6.06	6.09	84.2	84.6	4.96	4.95	5.12	7.7	7.9	8.2
						31.5		6.11		84.9		4.93			8.0		
			Middle	7.9	26.6	32.1	32.1	5.91	5.90	82.1	82.0	5.17	5.14		8.1		
						32.1		5.89		81.9		5.11			8.0		
			Bottom	14.8	25.4	32.6	32.6	5.80	5.82	80.6	80.9	5.31	5.28		8.5		
						32.5		5.84		81.2		5.25			8.6		
28/07/11	1220-1232	31/Sunny	Surface	1.0	27.4	30.3	30.3	6.34	6.33	90.0	89.8	4.97	4.99	5.08	7.6	7.7	8.0
						30.2		6.31		89.6		5.00			7.7		
			Middle	8.1	26.2	30.7	30.8	6.19	6.21	87.9	88.2	5.08	5.10		8.2		
						30.8		6.23		88.5		5.12			8.5		
			Bottom	15.2	25.7	31.7	31.7	6.11	6.10	86.8	86.7	5.15	5.17		8.1		
						31.7		6.09		86.5		5.18			8.1		
30/07/11	1320-1332	30/Cloudy	Surface	1.0	26.4	29.4	29.4	6.15	6.14	85.5	85.3	5.25	5.27	5.37	8.3	8.2	8.6
						29.4		6.12		85.1		5.29			8.0		
			Middle	7.9	25.7	30.9	30.9	6.03	6.05	83.8	84.0	5.34	5.33		8.5		
						30.9		6.06		84.2		5.31			8.6		
			Bottom	14.8	25.1	31.6	31.7	5.98	5.96	83.1	82.9	5.56	5.52		9.1		
						31.7		5.94		82.6		5.48			9.0		

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			
02/07/11	1405-1417	30/Fine	Surface	1.0	27.4	30.7	30.7	6.39	6.38	90.1	90.0	5.02	4.99	5.16	7.8	7.9	8.3			
						30.7		6.37		89.8		4.96			8.0					
			Middle	8.6	26.4	31.5	31.5	6.13	6.16	86.4	86.9	5.13	5.18		5.13	5.16		8.4	8.5	8.6
						31.5		6.19		87.3		5.18			8.6					
			Bottom	16.2	25.6	32.2	32.2	6.03	6.05	85.0	85.2	5.35	5.31		5.35	5.33		8.7	8.6	8.8
						32.2		6.06		85.4		5.31			8.5					
05/07/11	1608-1621	30/Fine	Surface	1.0	27.4	30.4	30.5	6.05	6.04	84.7	84.5	4.99	5.02	5.16	7.7	7.8	8.1			
						30.5		6.02		84.3		5.04			7.8					
			Middle	8.7	26.3	31.7	31.7	5.90	5.93	82.6	83.0	5.17	5.15		5.17	5.16		8.2	8.2	8.3
						31.6		5.95		83.3		5.15			8.2					
			Bottom	16.4	25.3	32.1	32.1	5.80	5.79	81.2	81.0	5.29	5.31		5.29	5.30		8.4	8.3	8.4
						32.0		5.77		80.8		5.31			8.1					
07/07/11	1735-1747	33/Fine	Surface	1.0	27.9	30.7	30.7	6.39	6.37	91.4	91.1	5.03	5.06	5.17	8.0	8.0	8.2			
						30.6		6.34		90.7		5.08			8.0					
			Middle	8.7	26.7	31.5	31.5	6.29	6.27	89.9	89.6	5.15	5.21		5.15	5.18		8.1	8.3	8.4
						31.4		6.24		89.2		5.21			8.1					
			Bottom	16.4	25.8	31.9	32.0	6.17	6.15	88.2	88.0	5.27	5.30		5.27	5.29		8.5	8.4	8.5
						32.0		6.13		87.7		5.30			8.2					
09/07/11	2001-2014	32/Fine	Surface	1.0	26.8	31.0	31.0	6.30	6.28	88.2	87.9	4.88	4.91	5.07	7.5	7.5	7.9			
						31.0		6.25		87.5		4.94			7.5					
			Middle	8.6	26.3	31.6	31.6	6.20	6.18	86.8	86.5	5.05	5.10		5.05	5.08		8.0	8.1	8.1
						31.5		6.16		86.2		5.10			8.0					
			Bottom	16.2	25.2	32.1	32.2	6.13	6.11	83.8	84.6	5.20	5.23		5.20	5.22		8.3	8.2	8.3
						32.2		6.09		85.3		5.23			8.1					
12/07/11	1155-1207	27/Drizzle	Surface	1.0	26.1	29.3	29.3	6.43	6.40	90.0	89.6	5.11	5.14	5.29	8.4	8.3	8.6			
						29.3		6.37		89.2		5.17			8.2					
			Middle	8.8	25.6	30.5	30.5	6.29	6.27	88.1	87.8	5.28	5.25		5.28	5.27		8.5	8.4	8.5
						30.5		6.25		87.5		5.25			8.3					
			Bottom	16.6	25.1	31.8	31.8	6.09	6.11	85.3	85.5	5.43	5.47		5.43	5.45		9.1	9.1	9.1
						31.7		6.12		85.7		5.47			9.0					
14/07/11	1335-1347	29/Cloudy	Surface	1.0	26.5	30.2	30.3	6.22	6.23	87.7	87.9	5.02	5.04	5.14	8.5	8.6	8.1			
						30.3		6.24		88.0		5.05			8.6					
			Middle	8.6	25.7	31.0	31.0	6.15	6.13	86.7	86.5	5.13	5.15		5.13	5.14		7.8	7.8	7.9
						30.9		6.11		86.2		5.15			7.8					
			Bottom	16.2	25.1	31.9	32.0	6.05	6.03	85.3	85.0	5.23	5.28		5.23	5.26		8.1	8.1	8.1
						32.0		6.01		84.7		5.28			8.0					
16/07/11	1414-1428	27/Showers	Surface	1.0	26.5	29.5	29.6	6.34	6.32	90.7	90.4	4.95	4.97	5.10	7.8	7.9	8.1			
						29.6		6.30		90.1		4.99			7.8					
			Middle	8.8	25.8	30.8	30.8	6.23	6.21	88.5	88.2	5.07	5.12		5.07	5.10		8.2	8.2	8.2
						30.7		6.19		87.9		5.12			8.2					
			Bottom	16.6	25.0	31.8	31.8	6.09	6.10	87.1	87.3	5.20	5.24		5.20	5.22		8.4	8.3	8.4
						31.7		6.11		87.4		5.24			8.1					
19/07/11	1508-1522	29/Drizzle	Surface	1.0	26.0	30.0	30.0	6.14	6.17	85.9	86.3	5.27	5.30	5.50	8.2	8.1	8.4			
						30.0		6.19		86.6		5.32			8.0					
			Middle	8.6	25.3	30.8	30.9	6.02	6.04	84.2	84.5	5.46	5.50		5.46	5.48		8.5	8.4	8.5
						30.9		6.05		84.7		5.50			8.2					
			Bottom	16.2	24.4	31.8	31.9	5.83	5.86	81.6	82.0	5.71	5.76		5.71	5.74		9.0	8.8	9.0
						31.9		5.88		82.3		5.76			8.6					
21/07/11	1626-1637	29/Fine	Surface	1.0	25.1	30.1	30.2	6.12	6.11	85.7	84.1	5.03	5.06	5.15	8.2	8.1	8.3			
						30.2		6.10		82.4		5.09			8.0					
			Middle	8.8	24.6	30.5	30.5	5.96	5.95	82.2	82.1	5.21	5.25		5.21	5.23		8.6	8.6	8.6
						30.4		5.94		81.9		5.25			8.5					
			Bottom	16.6	23.9	31.6	31.6	5.78	5.74	79.8	79.3	5.18	5.14		5.18	5.16		8.1	8.2	8.2
						31.5		5.70		78.7		5.14			8.2					
23/07/11	1722-1733	30/Sunny	Surface	1.0	27.1	31.3	31.3	6.13	6.15	85.2	85.5	4.99	5.02	5.13	8.0	8.0	8.3			
						31.2		6.17		85.7		5.05			8.0					
			Middle	8.9	26.1	32.2	32.2	5.92	5.94	81.6	81.9	5.07	5.12		5.07	5.10		8.1	8.3	8.3
						32.1		5.95		82.1		5.12			8.4					
			Bottom	16.8	25.3	32.5	32.5	5.97	5.95	82.3	82.0	5.25	5.32		5.25	5.29		8.7	8.7	8.7
						32.5		5.92		81.6		5.32			8.6					
26/07/11	1205-1217	30/Sunny	Surface	1.0	27.4	31.5	31.5	6.17	6.16	85.1	84.9	4.99	5.02	5.16	7.8	7.7	8.1			
						31.5		6.14		84.7		5.05			7.6					
			Middle	8.7	26.6	32.1	32.2	5.96	5.99	82.2	82.6	5.19	5.23		5.19	5.21		8.0	8.1	8.0
						32.2		6.01		82.9		5.23			7.6					
			Bottom	16.4	25.3	32.6	32.6	5.89	5.88	81.3	81.1	5.21	5.28		5.21	5.25		8.4	8.4	8.4
						32.5		5.86		80.9		5.28			8.3					
28/07/11	1235-1247	31/Sunny	Surface	1.0	27.5	30.1	30.2	6.36	6.34	90.3	90.0	5.03	5.01	5.08	7.9	8.0	8.2			
						30.2		6.32		89.7		4.98			8.0					
			Middle	8.6	26.3	30.8	30.8	6.25	6.23	88.8	88.4	5.06	5.09		5.06	5.08		8.1	8.2	8.1
						30.8		6.20		88.0		5.09			8.3					
			Bottom	16.2	25.7	31.6	31.7	6.13	6.12	87.0	86.8	5.16	5.17		5.16	5.17		8.4	8.3	8.4
						31.7		6.10		86.6		5.17			8.2					
30/07/11	1335-1347	30/Cloudy	Surface	1.0	26.4	29.3	29.4	6.18	6.19	85.9	86.1	5.22	5.25	5.40	8.2	8.3	8.8			
						29.4		6.20		86.2		5.27			8.4					
			Middle	8.7	25.7	30.8	30.8	6.08	6.09	84.5	84.6	5.42	5.39		5.42	5.41		9.0	8.9	9.0
						30.8		6.09		84.7		5.39			8.7					
			Bottom	16.4	25.1	31.7	31.7	6.01	5.99	83.5	83.2	5.52	5.59		5.52	5.56		9.4	9.3	9.4
						31.6		5.96		82.8		5.59			9.1					

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
02/07/11	1424-1436	31/Fine	Surface	1.0	27.3	30.8	30.9	6.42	6.41	90.5	90.4	5.09	5.08	5.19	8.0	8.0	8.3
				6.2		26.6		31.4		6.28		88.5			5.21		
			11.4	25.8	32.1	6.15	86.7	5.26	8.4								
05/07/11	1630-1641	30/Fine	Surface	1.0	27.3	30.4	30.5	5.97	5.98	83.6	83.8	4.87	4.84	5.01	7.6	7.6	8.0
				6.0		26.3		31.7		5.90		82.6			5.05		
			11.0	25.2	32.1	5.86	82.0	5.13	8.1								
07/07/11	1754-1806	33/Fine	Surface	1.0	27.9	30.7	30.8	6.29	6.32	89.3	89.7	5.02	5.04	5.14	8.1	8.1	8.0
				6.2		26.8		31.4		6.24		88.6			5.11		
			11.4	25.8	31.8	6.16	87.5	5.23	8.5								
09/07/11	2026-2039	30/Fine	Surface	1.0	26.8	31.1	31.1	6.19	6.20	86.7	86.8	4.84	4.83	4.99	7.6	7.8	8.0
				6.2		26.2		31.6		6.03		84.4			5.09		
			11.4	25.3	32.1	6.05	84.7	5.06	8.0								
12/07/11	1214-1226	27/Rainy	Surface	1.0	26.2	29.3	29.4	6.31	6.33	88.3	88.6	5.04	5.08	5.21	7.8	7.8	8.1
				6.2		25.6		30.3		6.27		87.8			5.19		
			11.4	25.1	31.7	6.14	86.0	5.37	8.6								
14/07/11	1354-1406	29/Cloudy	Surface	1.0	26.5	30.1	30.2	6.27	6.30	88.4	88.9	4.93	4.94	5.03	8.7	8.8	8.3
				6.2		25.6		30.7		6.22		87.7			5.01		
			11.4	24.9	31.8	6.12	86.3	5.12	8.0								
16/07/11	1437-1449	27/Showers	Surface	1.0	26.5	29.5	29.6	6.25	6.27	89.4	89.7	4.98	5.00	5.10	7.7	7.8	8.0
				6.2		25.6		30.6		6.19		87.9			5.08		
			11.4	24.9	31.5	6.03	86.2	5.21	8.2								
19/07/11	1530-1545	29/Cloudy	Surface	1.0	26.1	30.0	30.0	6.24	6.27	87.3	87.7	5.15	5.17	5.32	8.1	8.1	8.4
				6.2		25.6		30.3		6.18		86.5			5.28		
			11.4	25.0	30.4	6.15	86.1	5.33	8.4								
21/07/11	1649-1659	29/Fine	Surface	1.0	25.0	30.0	30.0	6.02	6.06	83.1	83.6	5.05	5.04	5.13	8.0	8.0	8.3
				6.1		24.7		29.9		6.09		84.0			5.02		
			11.2	23.9	30.6	6.05	81.7	5.16	8.2								
23/07/11	1740-1750	30/Sunny	Surface	1.0	27.0	31.3	31.3	6.07	6.06	84.3	84.1	5.01	5.05	5.28	7.6	7.6	8.5
				6.4		26.0		32.1		5.91		81.5			5.29		
			11.8	25.4	32.4	5.83	80.4	5.50	9.2								
26/07/11	1224-1236	31/Sunny	Surface	1.0	27.3	31.7	31.7	6.23	6.21	86.0	85.7	4.91	4.93	5.06	7.6	7.4	8.0
				6.3		26.7		32.1		6.04		83.4			5.08		
			11.6	25.6	32.5	5.97	82.4	5.15	8.4								
28/07/11	1254-1306	32/Sunny	Surface	1.0	27.6	30.1	30.1	6.26	6.29	88.9	89.3	4.99	5.01	5.10	8.0	7.8	8.1
				6.2		26.5		30.7		6.21		88.2			5.08		
			11.4	25.8	31.6	6.13	87.0	5.16	8.1								
30/07/11	1354-1406	31/Fine	Surface	1.0	26.4	29.5	29.5	6.10	6.12	85.4	85.6	5.32	5.28	5.45	8.5	8.4	8.7
				6.1		25.8		30.8		5.99		83.9			5.45		
			11.2	25.3	31.5	5.93	83.0	5.62	9.1								

Mid-Ebb Tide



Monitoring Station : R15

Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
02/07/11	1134-1145	30/Fine	Surface	1.0	27.3	30.9	30.9	6.23	6.21	88.5	88.2	5.04	5.07	5.16	8.1	8.1	8.3
			Middle	5.4	26.4	31.4	31.5	6.11	6.12	86.8	86.9	5.14			8.2		
			Bottom	9.8	25.7	32.1	32.1	6.06	6.04	86.1	85.8	5.29			8.6		
05/07/11	1358-1409	31/Fine	Surface	1.0	27.4	30.6	30.6	6.01	5.99	84.1	83.9	5.13	5.12	5.19	8.2	8.2	8.4
			Middle	5.3	26.4	31.6	31.6	5.89	5.87	82.5	82.2	5.22			8.6		
			Bottom	9.6	25.2	32.0	32.0	5.80	5.79	81.2	81.1	5.28			8.5		
07/07/11	1504-1512	33/Fine	Surface	1.0	27.8	30.7	30.8	6.21	6.22	88.8	89.0	5.12	5.14	5.24	8.0	8.2	8.3
			Middle	5.6	26.9	31.3	31.3	6.14	6.12	87.8	87.5	5.21			8.1		
			Bottom	10.2	25.8	31.7	31.7	6.01	6.03	85.9	86.2	5.32			8.6		
09/07/11	1745-1758	32/Fine	Surface	1.0	27.1	31.1	31.1	6.05	6.07	84.7	84.9	5.12	5.11	5.21	8.3	8.4	8.3
			Middle	5.7	26.3	31.5	31.5	6.02	5.99	84.3	83.9	5.15			8.5		
			Bottom	10.4	25.3	31.9	31.9	5.83	5.86	81.6	82.1	5.37			8.3		
12/07/11	0924-0935	28/Cloudy	Surface	1.0	26.3	29.3	29.3	6.27	6.25	88.4	88.1	5.20	5.24	5.34	8.2	8.3	8.5
			Middle	5.4	25.7	30.3	30.4	6.14	6.11	86.6	86.2	5.32			8.4		
			Bottom	9.8	25.2	31.7	31.7	5.92	5.94	83.5	83.7	5.48			8.9		
14/07/11	1104-1115	29/Cloudy	Surface	1.0	26.5	30.3	30.3	6.16	6.18	86.9	87.2	5.17	5.19	5.29	8.2	8.3	8.5
			Middle	5.6	25.5	30.8	30.8	6.10	6.09	86.0	85.8	5.26			8.4		
			Bottom	10.2	24.9	31.8	31.8	6.00	5.98	84.6	84.3	5.36			8.9		
16/07/11	1204-1216	27/Showers	Surface	1.0	26.5	29.6	29.6	6.20	6.18	88.7	88.4	5.13	5.15	5.24	8.1	8.1	8.4
			Middle	5.6	25.7	30.6	30.6	6.10	6.08	86.6	86.4	5.22			8.5		
			Bottom	10.2	25.0	31.6	31.6	5.95	5.97	85.1	85.3	5.31			8.7		
19/07/11	1305-1320	30/Cloudy	Surface	1.0	25.9	29.8	29.8	6.03	6.06	84.4	84.8	5.36	5.38	5.60	8.7	8.7	9.1
			Middle	5.6	25.6	30.4	30.4	6.04	6.02	84.5	84.2	5.50			9.3		
			Bottom	10.2	25.0	31.1	31.2	5.73	5.75	80.2	80.5	5.86			9.4		
21/07/11	1411-1423	30/Cloudy	Surface	1.0	25.0	30.2	30.2	6.06	6.07	81.8	82.8	5.09	5.07	5.16	8.3	8.2	8.3
			Middle	5.3	24.5	30.6	30.7	5.87	5.88	79.2	80.3	5.13			8.2		
			Bottom	9.6	24.0	31.4	31.4	5.85	5.90	78.9	80.4	5.23			8.5		
23/07/11	1507-1518	30/Sunny	Surface	1.0	27.0	31.2	31.2	6.14	6.12	85.3	85.0	4.30	4.34	4.82	7.0	7.1	7.7
			Middle	5.4	26.1	32.0	32.0	6.01	6.03	83.5	83.7	5.07			7.8		
			Bottom	9.8	25.2	32.5	32.5	5.95	5.97	82.7	83.0	4.99			7.9		
26/07/11	0934-0945	29/Sunny	Surface	1.0	27.3	31.7	31.7	6.02	6.05	83.7	84.1	5.07	5.09	5.20	8.1	8.1	8.4
			Middle	5.5	26.5	32.1	32.1	5.87	5.89	81.6	81.9	5.24			8.7		
			Bottom	10.0	25.5	32.4	32.4	5.83	5.82	81.0	80.9	5.29			8.5		
28/07/11	1004-1015	31/Sunny	Surface	1.0	27.5	30.2	30.2	6.17	6.15	87.6	87.3	5.07	5.09	5.18	8.2	8.2	8.4
			Middle	5.6	26.4	30.7	30.7	6.09	6.07	86.5	86.2	5.16			8.6		
			Bottom	10.2	25.8	31.7	31.7	5.94	5.96	84.3	84.6	5.26			8.7		
30/07/11	1104-1115	29/Fine	Surface	1.0	26.3	29.5	29.5	6.01	6.02	84.1	84.3	5.37	5.35	5.47	8.9	8.7	9.0
			Middle	5.4	25.5	30.7	30.8	5.97	5.95	83.6	83.3	5.45			9.1		
			Bottom	9.8	25.2	31.6	31.6	5.92	5.84	82.9	81.8	5.51			9.0		

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
02/07/11	1115-1126	30/Fine	Surface	1.0	27.2	30.9	30.9	6.43	6.40	90.7	90.3	4.95	4.99	5.10	7.7	7.9	8.2
						30.9		6.37		89.8		5.02			8.0		
			Middle	6.1	26.4	31.4	31.4	6.21	6.23	87.6	87.9	5.08	5.10		8.2		
						31.4		6.25		88.1		5.11			8.2		
			Bottom	11.2	25.7	32.0	32.0	6.14	6.12	86.6	86.3	5.24	5.22		8.5		
						32.0		6.09		85.9		5.19			8.4		
05/07/11	1337-1350	31/Fine	Surface	1.0	27.3	30.3	30.4	6.12	6.11	85.7	85.6	5.01	5.03	5.15	8.1	8.1	8.3
						30.4		6.10		85.4		5.04			8.0		
			Middle	6.1	26.2	31.5	31.5	5.98	6.02	83.7	84.3	5.17	5.19		8.3		
						31.4		6.06		84.8		5.20			8.3		
			Bottom	11.2	25.2	32.0	32.1	5.76	5.78	80.6	80.9	5.25	5.24		8.6		
						32.1		5.79		81.1		5.22			8.4		
07/07/11	1445-1456	33/Fine	Surface	1.0	27.8	30.6	30.7	6.34	6.36	90.7	90.9	5.08	5.07	5.16	8.0	8.1	8.1
						30.7		6.37		91.1		5.05			8.2		
			Middle	6.3	26.8	31.3	31.4	6.28	6.27	89.8	89.7	5.17	5.15		8.4		
						31.4		6.26		89.5		5.13			8.3		
			Bottom	11.6	25.7	31.7	31.8	6.19	6.18	88.5	88.3	5.27	5.26		7.9		
						31.8		6.16		88.1		5.24			8.0		
09/07/11	1724-1736	32/Fine	Surface	1.0	27.2	31.0	31.0	6.25	6.27	87.5	87.8	5.03	5.07	5.14	8.0	8.1	8.3
						31.0		6.29		88.1		5.10			8.2		
			Middle	6.1	26.4	31.7	31.7	6.02	6.04	84.3	84.6	5.13	5.12		8.1		
						31.6		6.06		84.8		5.11			8.1		
			Bottom	11.2	25.3	31.9	32.0	6.13	6.12	85.8	85.6	5.26	5.25		8.5		
						32.0		6.10		85.4		5.23			8.7		
12/07/11	0905-0916	28/Cloudy	Surface	1.0	26.3	29.4	29.4	6.24	6.27	87.3	87.8	5.11	5.09	5.21	8.0	8.0	8.2
						29.3		6.30		88.2		5.06			7.9		
			Middle	6.2	25.7	30.4	30.4	6.16	6.17	86.2	86.4	5.19	5.21		8.1		
						30.4		6.18		86.5		5.23			8.0		
			Bottom	11.4	25.2	31.6	31.6	6.04	6.01	84.6	84.1	5.37	5.33		8.5		
						31.6		5.97		83.6		5.29			8.8		
14/07/11	1045-1056	29/Cloudy	Surface	1.0	26.4	30.1	30.2	6.31	6.30	89.0	88.8	4.98	4.97	5.06	7.5	7.5	7.8
						30.2		6.28		88.5		4.98			7.5		
			Middle	6.3	25.6	30.7	30.8	6.22	6.21	87.7	87.6	5.04	5.06		7.8		
						30.8		6.20		87.4		5.07			8.0		
			Bottom	11.6	24.8	31.7	31.7	6.12	6.14	86.3	86.5	5.13	5.15		8.1		
						31.7		6.15		86.7		5.17			8.0		
16/07/11	1146-1157	27/Showers	Surface	1.0	26.4	29.5	29.6	6.32	6.33	90.4	90.6	4.96	4.99	5.07	8.0	7.8	8.1
						29.6		6.34		90.7		5.01			7.6		
			Middle	6.3	25.8	30.7	30.7	6.25	6.24	88.8	88.6	5.06	5.07		8.2		
						30.6		6.22		88.3		5.08			8.4		
			Bottom	11.6	25.0	31.7	31.7	6.15	6.14	87.9	87.8	5.15	5.17		8.1		
						31.6		6.13		87.7		5.18			8.0		
19/07/11	1246-1259	30/Cloudy	Surface	1.0	25.8	29.9	29.9	6.25	6.23	87.5	87.2	5.22	5.25	5.39	8.2	8.3	8.7
						29.9		6.20		86.8		5.27			8.4		
			Middle	6.2	25.5	30.6	30.6	6.14	6.12	85.9	85.7	5.33	5.36		8.6		
						30.6		6.10		85.4		5.38			8.9		
			Bottom	11.4	25.0	31.3	31.4	5.86	5.88	82.0	82.3	5.53	5.56		9.0		
						31.4		5.90		82.6		5.58			9.2		
21/07/11	1352-1405	30/Cloudy	Surface	1.0	24.9	30.2	30.2	6.16	6.17	85.0	85.2	4.96	4.99	5.07	7.9	8.0	8.0
						30.1		6.18		85.3		5.02			8.0		
			Middle	6.1	24.6	30.7	30.8	6.05	6.09	83.5	84.0	5.11	5.13		8.2		
						30.8		6.12		84.5		5.14			8.2		
			Bottom	11.2	24.1	31.6	31.6	5.93	5.92	81.8	80.8	5.08	5.10		8.1		
						31.5		5.91		79.8		5.12			7.8		
23/07/11	1444-1455	30/Sunny	Surface	1.0	26.9	31.0	31.1	6.17	6.16	85.7	85.5	4.47	4.44	4.74	7.4	7.5	7.7
						31.1		6.14		85.3		4.41			7.5		
			Middle	6.1	26.0	31.9	32.0	5.97	5.96	82.9	82.7	4.80	4.84		7.9		
						32.0		5.94		82.5		4.87			8.0		
			Bottom	11.2	25.1	32.4	32.4	5.82	5.80	80.3	80.0	4.93	4.96		7.7		
						32.4		5.78		79.7		4.98			7.6		
26/07/11	0915-0926	29/Sunny	Surface	1.0	27.2	31.6	31.6	6.20	6.19	85.6	85.4	4.96	4.94	5.09	7.6	7.7	8.1
						31.6		6.17		85.1		4.92			7.8		
			Middle	6.3	26.5	32.1	32.1	6.05	6.04	83.5	83.4	5.09	5.11		8.2		
						32.1		6.03		83.2		5.13			8.0		
			Bottom	11.6	25.5	32.5	32.5	5.89	5.92	81.3	81.7	5.27	5.23		8.5		
						32.4		5.94		82.0		5.19			8.6		
28/07/11	0945-0956	31/Sunny	Surface	1.0	27.4	30.1	30.1	6.26	6.28	88.9	89.2	4.93	4.95	5.03	7.6	7.7	8.0
						30.1		6.30		89.5		4.96			7.8		
			Middle	6.3	26.4	30.7	30.8	6.20	6.18	88.0	87.8	5.02	5.04		8.1		
						30.8		6.16		87.5		5.06			8.0		
			Bottom	11.6	25.8	31.8	31.8	6.09	6.08	86.5	86.3	5.13	5.12		8.2		
						31.7		6.06		86.1		5.10			8.2		
30/07/11	1045-1056	29/Fine	Surface	1.0	26.3	29.5	29.5	6.13	6.15	85.8	86.0	5.21	5.25	5.38	8.6	8.7	9.1
						29.5		6.16		86.2		5.29			8.8		
			Middle	6.2	25.6	30.8	30.8	6.05	6.07	84.7	85.0	5.40	5.38		9.0		
						30.7		6.09		85.3		5.36			8.9		
			Bottom	11.4	25.1	31.5	31.6	5.94	5.95	83.2	83.3	5.48	5.50		9.6		
						31.6		5.96		83.4		5.52			9.4		

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				
02/07/11	1100-1112	30/Fine	Surface	1.0	27.3	30.9	30.9	6.41	6.43	90.4	90.7	4.98	4.96	5.09	7.6	7.8	8.3				
						30.8		6.45		90.9		4.93			8.0						
			Middle	5.9	26.4	31.5	31.5	6.22	6.25	87.7	88.1	5.13	5.10		8.2						
05/07/11	1315-1328	31/Fine	Surface	1.0	27.4	30.4	30.5	6.20	6.22	86.8	87.1	5.06	5.01		5.08	8.1		8.1	8.1		
						30.5		6.24		87.4		4.96				8.0					
			Middle	5.5	26.4	31.6	31.6	6.08	6.11	85.1	85.5	5.02	5.07			8.1					
07/07/11	1430-1442	33/Fine	Surface	1.0	27.8	30.6	30.6	6.40	6.38	91.5	91.2	5.03	5.05			5.13		8.2		8.2	8.5
						30.5		6.36		90.9		5.06						8.2			
			Middle	6.2	26.9	31.4	31.4	6.30	6.29	90.1	89.9	5.10	5.13					8.8			
09/07/11	1700-1715	32/Fine	Surface	1.0	27.1	31.1	31.1	6.20	6.19	86.8	86.6	4.93	4.95	5.07			7.8	7.9		8.2	
						31.0		6.17		86.4		4.96					8.0				
			Middle	5.5	26.3	31.6	31.7	6.09	6.11	85.3	85.4	5.03	5.06				8.1				
12/07/11	0850-0902	28/Cloudy	Surface	1.0	26.3	29.4	29.4	6.33	6.31	89.3	88.9	5.09	5.06		5.20		7.8	7.7	7.9		
						29.4		6.28		88.5		5.03					7.6				
			Middle	6.0	25.6	30.4	30.4	6.12	6.14	86.3	86.5	5.25	5.21				8.3				
14/07/11	1030-1042	29/Cloudy	Surface	1.0	26.4	30.1	30.2	6.32	6.34	89.1	89.4	4.99	5.01			5.11	8.0	7.9			8.1
						30.2		6.36		89.7		5.03					7.7				
			Middle	6.2	25.6	30.8	30.8	6.26	6.27	88.3	88.4	5.09	5.11				8.2				
16/07/11	1130-1142	27/Showers	Surface	1.0	26.4	29.6	29.7	6.37	6.35	91.1	90.8	4.99	5.01	5.10			8.0	7.9		8.2	
						29.7		6.33		90.5		5.03					7.8				
			Middle	6.2	25.8	30.6	30.7	6.27	6.26	89.0	88.8	5.08	5.10				8.4				
19/07/11	1230-1243	30/Cloudy	Surface	1.0	25.9	29.9	30.0	6.18	6.16	86.5	86.2	5.29	5.32		5.52		8.5	8.4	8.7		
						30.0		6.13		85.8		5.35					8.2				
			Middle	6.1	25.4	30.5	30.6	6.04	6.03	84.5	84.3	5.48	5.51				8.4				
21/07/11	1330-1343	30/Cloudy	Surface	1.0	24.9	30.1	30.2	6.03	6.06	83.2	83.6	4.72	4.79			4.97	7.6	7.7			7.9
						30.2		6.09		84.0		5.75					7.8				
			Middle	5.5	24.6	30.8	30.8	5.90	5.88	81.4	81.1	4.96	5.00				8.0				
23/07/11	1430-1441	30/Sunny	Surface	1.0	26.7	30.9	31.0	6.10	6.12	84.7	85.0	4.24	4.27	4.57			7.1	7.1		7.5	
						31.0		6.14		85.3		4.30					7.0				
			Middle	5.7	25.9	31.8	31.9	5.98	5.97	83.1	82.9	4.74	4.76				7.9				
26/07/11	0900-0912	29/Sunny	Surface	1.0	27.3	31.7	31.7	6.13	6.12	85.2	85.1	4.97	5.01		5.19		7.9	7.7	8.3		
						31.6		6.11		84.9		5.04					7.5				
			Middle	5.9	26.4	32.0	32.1	6.02	6.05	83.7	84.1	5.22	5.20				8.4				
28/07/11	0930-0942	31/Sunny	Surface	1.0	27.3	30.1	30.2	6.32	6.35	89.7	90.1	4.92	4.90			4.99	7.9	7.8			7.9
						30.2		6.37		90.5		4.88					7.6				
			Middle	6.2	26.3	30.8	30.8	6.22	6.24	88.3	88.6	4.97	4.99				8.0				
30/07/11	1030-1042	29/Fine	Surface	1.0	26.2	29.4	29.5	6.19	6.17	86.0	85.7	5.31	5.29	5.44			8.3	8.4		8.9	
						29.5		6.14		85.3		5.26					8.5				
			Middle	5.8	25.6	30.7	30.7	6.03	6.05	83.8	84.1	5.43	5.45				9.1				
			30.7	6.07	84.4	5.47	9.0														
Bottom	10.6	25.2	31.5	31.5	5.98	5.95	83.1	82.7	5.62	5.58	9.0										
			31.5	5.92	82.3	5.54	9.5														

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
02/07/11	1311-1322	30/Fine	Surface	1.0	27.4	30.8	30.8	6.30	6.29	88.8	88.6	5.07	5.04	5.16	8.1	8.1	8.3
				5.5	26.6	31.5	31.5	6.17	6.20	87.0	87.4	5.13			8.0		
			Bottom	10.0	25.7	32.1	32.1	6.05	6.07	85.3	85.6	5.28	5.27		8.2		
05/07/11	1523-1535	30/Fine	Surface	1.0	27.4	30.6	30.6	6.21	6.20	86.9	86.8	5.07	5.09	5.13	8.0	8.0	8.2
				5.2	26.3	31.5	31.6	6.06	6.04	84.8	84.6	5.18			8.2		
			Bottom	9.4	25.1	32.1	32.1	5.98	5.94	83.7	83.2	5.13	5.14		8.4		
07/07/11	1641-1652	33/Fine	Surface	1.0	27.9	30.6	30.7	6.37	6.39	91.1	91.4	5.02	5.04	5.12	7.9	8.0	8.1
				5.6	26.9	31.3	31.4	6.31	6.30	90.2	90.0	5.11			5.13		
			Bottom	10.2	25.8	31.7	31.8	6.20	6.22	88.7	88.9	5.18	5.20		8.4		
09/07/11	1915-1927	32/Fine	Surface	1.0	26.9	31.1	31.1	6.06	6.05	84.8	84.6	4.93	4.96	5.08	7.7	7.9	8.3
				5.5	26.4	31.6	31.6	6.01	5.97	84.1	83.5	5.07			5.05		
			Bottom	10.0	25.7	32.0	32.1	5.99	5.98	83.9	83.7	5.26	5.24		8.2		
12/07/11	1101-1112	27/Drizzle	Surface	1.0	26.1	29.3	29.3	6.31	6.30	88.3	88.2	5.12	5.14	5.25	8.3	8.2	8.5
				5.6	25.7	30.4	30.4	6.20	6.18	86.8	86.5	5.28			5.25		
			Bottom	10.2	25.2	31.6	31.6	6.03	6.06	84.4	84.9	5.33	5.36		8.6		
14/07/11	1241-1252	29/Cloudy	Surface	1.0	26.5	30.3	30.3	6.26	6.24	88.3	88.0	5.02	5.00	5.07	8.0	8.2	8.2
				5.5	25.5	30.7	30.8	6.13	6.15	86.4	86.7	5.04			5.06		
			Bottom	10.0	24.8	31.7	31.8	6.09	6.07	85.9	85.6	5.14	5.15		8.2		
16/07/11	1318-1330	27/Showers	Surface	1.0	26.4	29.6	29.6	6.31	6.33	90.2	90.5	4.99	5.01	5.08	7.5	7.7	7.9
				5.8	25.7	30.6	30.7	6.27	6.26	89.0	88.8	5.06			5.08		
			Bottom	10.6	24.8	31.5	31.6	6.17	6.15	88.2	88.0	5.15	5.17		8.2		
19/07/11	1410-1423	29/Drizzle	Surface	1.0	26.0	30.0	30.0	6.23	6.20	87.2	86.8	5.26	5.28	5.43	8.4	8.3	8.7
				5.7	25.6	30.3	30.3	6.10	6.08	85.4	85.1	5.35			5.37		
			Bottom	10.4	25.0	31.3	31.4	5.83	5.85	81.6	81.8	5.62	5.65		8.5		
21/07/11	1540-1551	29/Fine	Surface	1.0	25.1	30.1	30.1	6.05	6.07	81.7	82.9	4.92	4.95	5.05	7.7	7.9	7.9
				5.4	24.7	30.7	30.7	5.96	6.00	82.2	82.8	5.07			5.05		
			Bottom	9.8	24.2	31.5	31.6	5.92	5.92	81.7	81.7	5.16	5.15		7.5		
23/07/11	1637-1647	30/Sunny	Surface	1.0	27.2	31.2	31.3	6.11	6.10	84.9	84.7	5.09	5.12	5.20	8.1	8.2	8.3
				5.6	26.2	32.0	32.1	6.08	5.95	84.5	82.7	5.15			5.06		
			Bottom	10.2	25.6	32.1	32.4	5.97	5.71	82.9	78.7	5.07	5.41		8.0		
26/07/11	1111-1122	30/Sunny	Surface	1.0	27.3	31.6	31.6	6.15	6.14	84.9	84.8	4.98	5.00	5.17	8.0	8.1	8.2
				5.6	26.7	32.0	32.0	6.04	6.07	83.4	83.7	5.16			5.19		
			Bottom	10.2	25.6	32.0	32.5	6.09	5.94	84.0	81.9	5.21	5.33		8.2		
28/07/11	1141-1152	31/Sunny	Surface	1.0	27.5	30.1	30.1	6.33	6.31	89.9	89.6	4.93	4.95	5.02	7.6	7.5	7.8
				5.5	26.4	30.7	30.7	6.23	6.22	88.5	88.3	5.00			5.02		
			Bottom	10.0	25.8	30.7	31.6	6.20	6.15	86.0	87.3	5.03	5.10		8.0		
30/07/11	1241-1252	30/Cloudy	Surface	1.0	26.3	29.5	29.5	6.13	6.15	85.2	85.5	5.34	5.31	5.43	8.3	8.4	8.6
				5.5	25.8	30.8	30.8	6.08	6.06	84.5	84.3	5.47			5.44		
			Bottom	10.0	25.3	31.6	31.6	6.04	5.91	84.0	82.2	5.40	5.55		8.4		

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				
02/07/11	1336-1347	30/Fine	Surface	1.0	27.4	30.8	30.8	6.19	6.22	87.9	88.4	5.09	5.13	5.27	8.1	8.1	8.4				
						6.25		88.8		5.16		8.0									
			Middle	8.4	26.5	31.6	31.6	6.08	6.10	86.3	86.6	5.31	5.29		8.5						
05/07/11	1538-1550	30/Fine	Surface	1.0	27.4	30.5	30.5	6.09	6.11	85.3	85.5	4.82	4.85		4.96	7.7		7.7	7.9		
						6.12		85.7		4.88		7.6									
			Middle	8.5	26.3	31.6	31.6	5.94	5.92	83.2	82.9	4.96	4.98			7.9					
07/07/11	1706-1717	33/Fine	Surface	1.0	27.8	30.7	30.7	6.33	6.35	90.5	90.7	5.00	5.02			5.13		7.8		7.8	8.1
						6.36		90.9		5.04		7.8									
			Middle	8.8	26.8	31.5	31.5	6.22	6.24	88.9	89.2	5.10	5.13					8.2			
09/07/11	1930-1942	32/Fine	Surface	1.0	26.9	31.1	31.1	6.17	6.16	86.4	86.2	4.76	4.76	4.95			7.9	7.7		8.0	
						6.14		85.9		4.75		7.5									
			Middle	8.3	26.2	31.7	31.7	6.12	6.15	85.7	86.1	4.96	4.96				8.0				
12/07/11	1126-1137	27/Drizzle	Surface	1.0	26.2	29.2	29.3	6.21	6.24	86.9	87.3	5.29	5.27		5.39		8.2	8.1	8.7		
						6.26		87.6		5.24		8.0									
			Middle	8.4	25.5	30.4	30.4	6.14	6.11	86.0	85.5	5.37	5.39				8.7				
14/07/11	1306-1317	29/Cloudy	Surface	1.0	26.5	30.2	30.3	6.31	6.30	89.0	88.8	4.94	4.96			5.08	7.6	7.7			7.9
						6.28		88.5		4.97		7.8									
			Middle	8.7	25.7	31.0	31.0	6.20	6.19	87.4	87.2	5.07	5.10				8.0				
16/07/11	1334-1348	27/Showers	Surface	1.0	26.4	29.5	29.6	6.27	6.30	89.7	90.1	5.04	5.03	5.14			8.1	8.1		8.3	
						6.32		90.4		5.01		8.0									
			Middle	8.6	25.8	30.8	30.8	6.20	6.18	88.0	87.8	5.12	5.14				8.4				
19/07/11	1430-1445	29/Drizzle	Surface	1.0	26.0	30.0	30.0	6.09	6.08	85.2	85.0	5.40	5.43		5.65		8.6	8.6	9.0		
						6.06		84.8		5.45		8.6									
			Middle	8.7	25.3	30.8	30.9	5.81	5.84	81.3	81.7	5.60	5.63				9.0				
21/07/11	1554-1606	29/Fine	Surface	1.0	25.0	30.2	30.2	6.16	6.18	85.0	85.2	5.12	5.10			5.11	8.2	8.1			8.2
						6.19		85.4		5.08		8.0									
			Middle	8.5	24.6	30.8	30.8	6.08	6.08	83.9	82.9	5.10	5.08				8.4				
23/07/11	1650-1701	30/Sunny	Surface	1.0	27.2	31.3	31.3	6.20	6.22	86.1	86.4	4.94	4.97	5.14			7.8	7.9		8.2	
						6.24		86.7		4.99		8.0									
			Middle	8.7	26.1	32.1	32.1	6.04	6.06	83.9	84.1	5.17	5.14				8.2				
26/07/11	1136-1147	30/Sunny	Surface	1.0	27.4	31.5	31.6	6.06	6.05	84.2	84.0	5.09	5.07		5.27		8.2	8.2	8.6		
						6.03		83.8		5.04		8.2									
			Middle	8.5	26.5	32.2	32.2	5.98	5.96	83.1	82.9	5.30	5.27				8.7				
28/07/11	1206-1217	31/Sunny	Surface	1.0	27.5	30.1	30.2	6.26	6.28	88.9	89.2	4.92	4.93			5.03	7.6	7.7			8.0
						6.30		89.5		4.94		7.8									
			Middle	8.8	26.3	30.9	30.9	6.17	6.15	87.6	87.3	5.01	5.03				8.3				
30/07/11	1306-1317	30/Cloudy	Surface	1.0	26.4	29.3	29.3	5.96	5.99	83.4	83.9	5.44	5.40	5.53			8.7	8.8		9.1	
						6.02		84.3		5.36		8.8									
			Middle	8.3	25.6	30.8	30.9	5.89	5.88	82.5	82.3	5.52	5.55				9.3				

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
02/07/11	1200-1212	30/Fine	Surface	1.0	27.3	30.8	30.8	6.43	6.45	90.7	90.9	4.91	4.90	5.05	7.7	7.9	8.0
				6.8	26.3	31.5		6.26		88.3		5.10			8.0		
			Bottom	12.6	25.7	32.0	32.1	6.18	6.17	87.1	86.9	5.21	5.19		8.0		
05/07/11	1420-1432	31/Fine	Surface	1.0	27.5	30.5	30.5	6.15	6.16	86.1	86.3	4.96	4.98	4.98	7.8	7.7	7.8
				7.1	26.2	31.4		6.01		84.1		4.87			7.6		
			Bottom	13.2	25.3	31.9	31.9	5.77	5.76	80.8	80.7	5.05	5.06		8.3		
07/07/11	1530-1542	33/Fine	Surface	1.0	27.9	30.8	30.8	6.31	6.33	90.2	90.5	5.05	5.04	5.12	8.2	8.2	8.0
				7.2	26.7	31.3		6.25		89.4		5.09			7.6		
			Bottom	13.4	25.7	31.9	31.9	6.12	6.14	87.5	87.8	5.22	5.21		8.3		
09/07/11	1808-1820	32/Fine	Surface	1.0	27.2	31.0	31.0	6.19	6.18	86.7	86.6	4.87	4.87	4.98	7.5	7.6	7.8
				6.9	26.3	31.6		6.16		86.2		4.96			8.0		
			Bottom	12.8	25.4	32.1	32.1	5.93	5.95	83.0	83.2	5.12	5.14		8.1		
12/07/11	0950-1002	28/Cloudy	Surface	1.0	26.2	29.4	29.4	6.42	6.41	90.5	90.3	5.09	5.07	5.19	8.2	8.1	8.2
				6.9	25.6	30.4		6.29		88.7		5.15			8.0		
			Bottom	12.8	25.2	31.7	31.7	6.17	6.14	87.0	86.6	5.28	5.32		8.5		
14/07/11	1130-1142	29/Cloudy	Surface	1.0	26.4	30.2	30.2	6.27	6.29	88.4	88.6	4.93	4.95	5.04	7.6	8.1	8.2
				7.1	25.7	30.9		6.16		86.9		5.05			8.0		
			Bottom	13.2	25.0	31.9	31.9	6.08	6.06	85.7	85.5	5.11	5.13		8.9		
16/07/11	1223-1234	27/Showers	Surface	1.0	26.5	29.7	29.7	6.27	6.26	89.7	89.5	5.04	5.02	5.13	8.0	8.0	8.2
				7.2	25.8	30.8		6.15		87.3		5.12			7.9		
			Bottom	13.4	24.9	31.7	31.8	6.02	6.05	86.1	86.5	5.27	5.25		8.5		
19/07/11	1308-1321	30/Cloudy	Surface	1.0	25.9	30.0	30.0	6.10	6.13	85.4	85.8	5.18	5.22	5.42	8.1	8.3	8.5
				6.8	25.4	30.6		6.06		84.8		5.36			8.5		
			Bottom	12.6	24.9	31.5	31.6	5.82	5.85	81.4	81.8	5.63	5.66		8.7		
21/07/11	1430-1442	30/Cloudy	Surface	1.0	25.1	30.2	30.2	5.93	5.92	80.1	80.8	4.87	4.84	5.03	7.5	8.1	8.0
				7.2	24.6	30.9		5.96		82.2		5.08			8.2		
			Bottom	13.4	24.1	31.7	31.7	5.80	5.84	78.3	79.7	5.18	5.19		8.5		
23/07/11	1533-1543	30/Sunny	Surface	1.0	26.9	31.1	31.2	6.09	6.07	84.6	84.3	4.92	4.90	4.86	7.7	7.8	7.8
				7.3	26.1	32.0		6.04		83.9		4.87			7.8		
			Bottom	13.6	25.4	32.5	32.5	5.92	5.95	82.2	82.6	4.84	4.82		7.9		
26/07/11	1000-1012	29/Sunny	Surface	1.0	27.3	31.6	31.7	6.12	6.12	84.5	84.4	4.99	4.96	5.13	7.6	7.7	8.2
				6.8	26.5	32.0		6.01		82.9		5.12			8.3		
			Bottom	12.6	25.5	32.4	32.5	5.92	5.95	83.4	83.2	5.18	5.15		8.2		
28/07/11	1030-1042	31/Sunny	Surface	1.0	27.4	30.3	30.3	6.24	6.25	88.6	88.8	5.01	4.99	5.07	7.9	8.0	8.2
				7.2	26.4	30.9		6.17		87.6		5.05			8.2		
			Bottom	13.4	25.6	31.8	31.8	6.05	6.03	85.9	85.6	5.14	5.16		8.5		
30/07/11	1130-1142	29/Fine	Surface	1.0	26.2	29.5	29.5	6.18	6.17	85.9	85.7	5.24	5.26	5.41	8.5	8.6	9.0
				6.7	25.6	30.7		6.05		83.3		5.35			9.0		
			Bottom	12.4	25.2	31.6	31.6	5.93	5.91	82.4	82.1	5.55	5.57		9.3		

Mid-Ebb Tide

Monitoring Station : C3

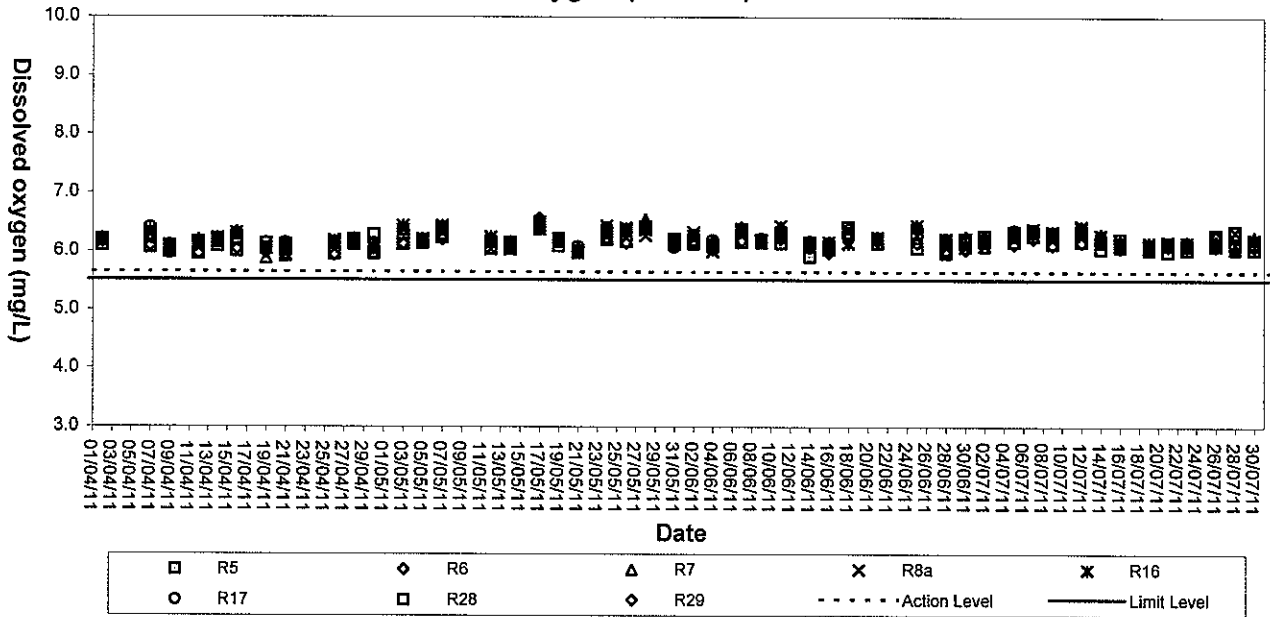
Date	Sampling Duration	Ambient Temp (°C) / Weather Condition	Monitoring Depth (m)		Temp (°C)	Salinity (ppt)		Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		Turbidity (NTU)			Suspended Solids (mg/L)		
						Value	Average	Value	Average	Value	Average	Value	Average	Depth-average	Value	Average	Depth-average
02/07/11	1225-1237	30/Fine	Surface	1.0	27.3	30.9	30.9	6.39	6.37	90.7	90.4	4.94	4.96	5.06	7.8	7.9	8.0
						30.9		6.34		90.0		4.98			8.0		
			Middle	6.2	26.4	31.4	31.5	6.24	6.26	88.6	88.9	5.07	5.06		8.1	8.1	
						31.5		6.28		89.2		5.04			8.1		
			Bottom	11.4	25.6	32.0	32.0	6.11	6.14	86.8	87.2	5.12	5.16		8.0	7.9	
						32.0		6.16		87.5		5.19			8.0		
05/07/11	1442-1454	31/Fine	Surface	1.0	27.4	30.4	30.5	6.23	6.26	87.2	87.6	4.85	4.87	5.01	7.5	7.6	7.9
						30.5		6.28		87.9		4.88			7.7		
			Middle	6.2	26.1	31.7	31.7	6.15	6.16	86.1	86.3	5.06	5.04		7.9	7.8	
						31.6		6.17		86.4		5.02			7.6		
			Bottom	11.4	25.3	31.9	32.0	6.03	6.03	84.4	84.4	5.16	5.14		8.2	8.3	
						32.0		6.02		84.3		5.11			8.3		
07/07/11	1555-1607	33/Fine	Surface	1.0	27.7	30.8	30.8	6.36	6.33	90.9	90.5	5.07	5.06	5.16	7.8	7.9	8.3
						30.8		6.30		90.1		5.04			8.0		
			Middle	6.4	26.8	31.4	31.4	6.22	6.24	88.9	89.2	5.11	5.14		8.2	8.3	
						31.3		6.26		89.5		5.17			8.4		
			Bottom	11.8	25.7	31.7	31.8	6.15	6.16	87.9	88.1	5.25	5.28		8.7	8.7	
						31.8		6.17		88.2		5.30			8.6		
09/07/11	1829-1843	32/Fine	Surface	1.0	27.0	31.1	31.1	6.29	6.31	88.1	88.3	4.95	4.95	5.06	7.8	8.0	8.1
						31.0		6.32		88.5		4.94			8.1		
			Middle	6.7	26.3	31.4	31.5	6.22	6.20	87.1	86.8	4.99	5.01		8.0	8.0	
						31.5		6.18		86.5		5.03			8.0		
			Bottom	12.4	25.4	32.2	32.2	6.01	5.99	84.1	83.9	5.20	5.22		8.4	8.5	
						32.1		5.97		83.6		5.24			8.5		
12/07/11	1015-1027	28/Cloudy	Surface	1.0	26.3	29.4	29.4	6.37	6.36	89.2	89.1	5.07	5.05	5.16	8.0	7.9	8.2
						29.4		6.35		88.9		5.02			7.8		
			Middle	6.3	25.7	30.3	30.3	6.23	6.26	87.2	87.6	5.19	5.16		8.2	8.2	
						30.3		6.28		87.9		5.12			8.2		
			Bottom	11.6	25.1	31.6	31.6	6.15	6.12	86.1	85.7	5.25	5.28		8.6	8.5	
						31.6		6.09		85.3		5.31			8.3		
14/07/11	1155-1207	29/Cloudy	Surface	1.0	26.5	30.1	30.1	6.32	6.31	89.1	88.9	5.00	4.98	5.08	8.3	8.3	8.2
						30.1		6.29		88.7		4.95			8.2		
			Middle	6.4	25.6	30.7	30.7	6.23	6.21	87.8	87.6	5.06	5.09		8.0	8.2	
						30.7		6.19		87.3		5.11			8.4		
			Bottom	11.8	24.9	31.7	31.8	6.10	6.09	86.0	85.8	5.16	5.18		8.1	8.1	
						31.8		6.07		85.6		5.20			8.0		
16/07/11	1240-1252	27/Showers	Surface	1.0	26.4	29.6	29.6	6.30	6.29	90.1	89.9	4.93	4.95	5.04	8.0	7.9	8.0
						29.5		6.27		89.7		4.96			7.8		
			Middle	6.4	25.8	30.7	30.8	6.20	6.19	88.0	87.9	5.02	5.04		8.1	8.1	
						30.8		6.18		87.8		5.05			8.0		
			Bottom	11.8	24.8	31.6	31.7	6.10	6.09	87.2	87.0	5.11	5.14		8.2	8.1	
						31.7		6.07		86.8		5.16			8.0		
19/07/11	1327-1341	30/Cloudy	Surface	1.0	26.0	30.0	30.0	6.19	6.22	86.6	87.0	5.24	5.27	5.43	8.2	8.1	8.6
						29.9		6.24		87.3		5.29			8.0		
			Middle	6.4	25.4	30.6	30.6	6.11	6.09	85.5	85.2	5.40	5.42		8.8	8.9	
						30.6		6.07		84.9		5.44			9.0		
			Bottom	11.8	24.9	31.5	31.5	5.85	5.87	81.9	82.1	5.59	5.61		8.9	8.9	
						31.5		5.88		82.3		5.62			8.8		
21/07/11	1452-1507	30/Cloudy	Surface	1.0	25.0	30.1	30.1	6.19	6.18	83.6	84.4	4.99	4.96	5.10	8.0	8.0	8.2
						30.0		6.17		85.1		4.93			8.0		
			Middle	6.4	24.5	30.7	30.8	6.09	6.10	85.3	84.8	5.09	5.11		8.1	8.3	
						30.8		6.11		84.3		5.13			8.5		
			Bottom	11.8	24.1	31.5	31.5	6.02	5.99	81.3	80.9	5.22	5.23		8.3	8.3	
						31.4		5.96		80.5		5.24			8.3		
23/07/11	1553-1603	30/Sunny	Surface	1.0	27.0	31.2	31.2	6.12	6.10	85.0	84.7	5.01	5.04	5.05	7.5	7.5	7.8
						31.2		6.07		84.3		5.06			7.4		
			Middle	6.4	26.1	32.1	32.1	6.04	6.06	83.9	84.1	5.12	5.15		7.8	7.8	
						32.0		6.07		84.3		5.17			7.8		
			Bottom	11.8	25.4	32.5	32.5	5.93	5.96	82.4	82.8	4.95	4.97		8.0	8.2	
						32.4		5.98		83.1		4.99			8.3		
26/07/11	1025-1037	29/Sunny	Surface	1.0	27.3	31.6	31.7	6.15	6.17	84.9	85.2	5.02	4.99	5.12	8.3	8.2	8.3
						31.7		6.19		85.4		4.96			8.0		
			Middle	6.2	26.5	32.0	32.1	6.08	6.07	83.9	83.8	5.09	5.13		8.2	8.2	
						32.1		6.06		83.6		5.16			8.2		
			Bottom	11.4	25.5	32.5	32.5	5.93	5.96	81.8	82.3	5.27	5.24		8.5	8.6	
						32.5		5.99		82.7		5.21			8.6		
28/07/11	1055-1107	31/Sunny	Surface	1.0	27.4	30.1	30.1	6.30	6.29	89.5	89.3	4.94	4.96	5.04	7.6	7.7	8.0
						30.1		6.27		89.0		4.97			7.7		
			Middle	6.4	26.4	30.7	30.8	6.21	6.20	88.2	88.0	5.02	5.04		8.2	8.1	
						30.8		6.18		87.8		5.05			8.0		
			Bottom	11.8	25.8	31.7	31.8	6.10	6.08	86.6	86.4	5.11	5.12		8.1	8.3	
						31.8		6.06		86.1		5.13			8.4		
30/07/11	1155-1207	29/Fine	Surface	1.0	26.3	29.4	29.4	6.09	6.10	84.7	84.8	5.34	5.32	5.40	8.6	8.7	8.7
						29.4		6.11		84.9		5.29			8.8		
			Middle	6.1	25.6	30.8	30.8	5.96	6.00	82.8	83.3	5.41	5.40		8.2	8.2	
						30.7		6.03		83.8		5.38			8.2		
			Bottom	11.2	25.2	31.5	31.5	5.85	5.88	81.3	81.7	5.46	5.49		9.1	9.1	
						31.5		5.91		82.1		5.52			9.0		

Appendix C3

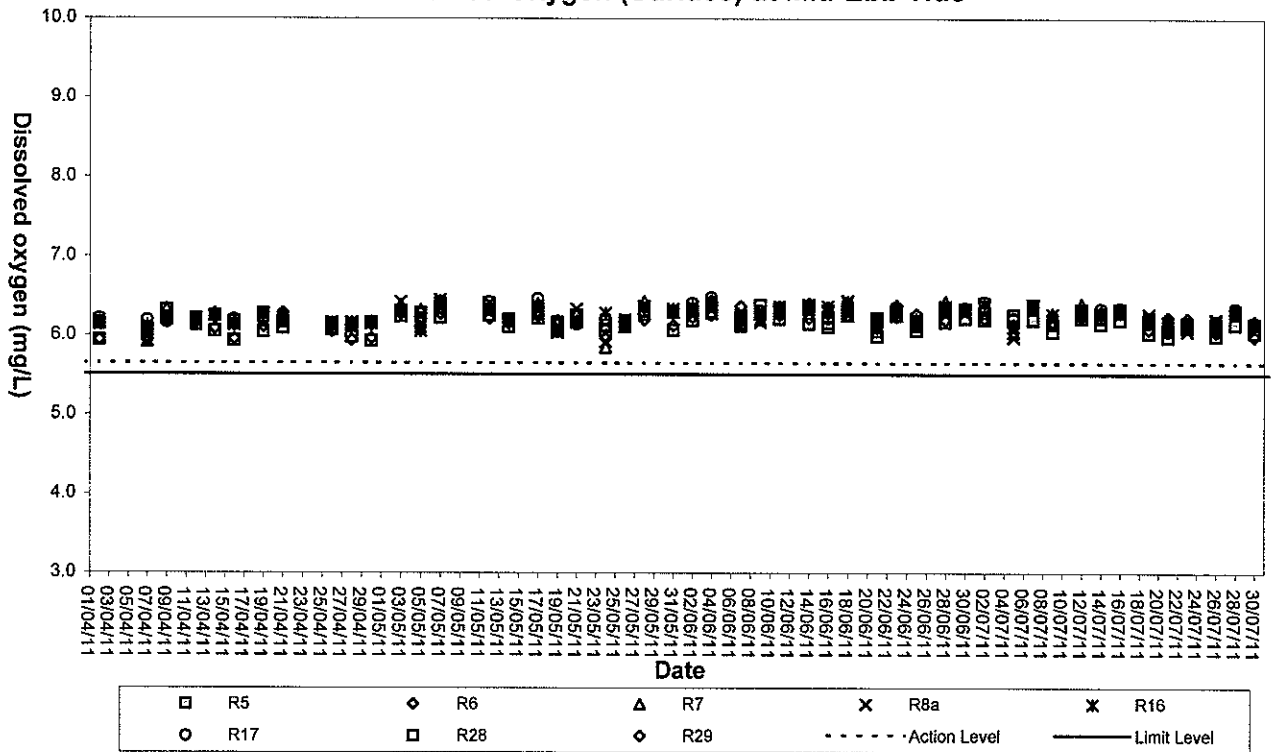
Graphical Plots of Impact Water Quality Monitoring Data



Dissolved Oxygen (Surface) at Mid-Flood Tide

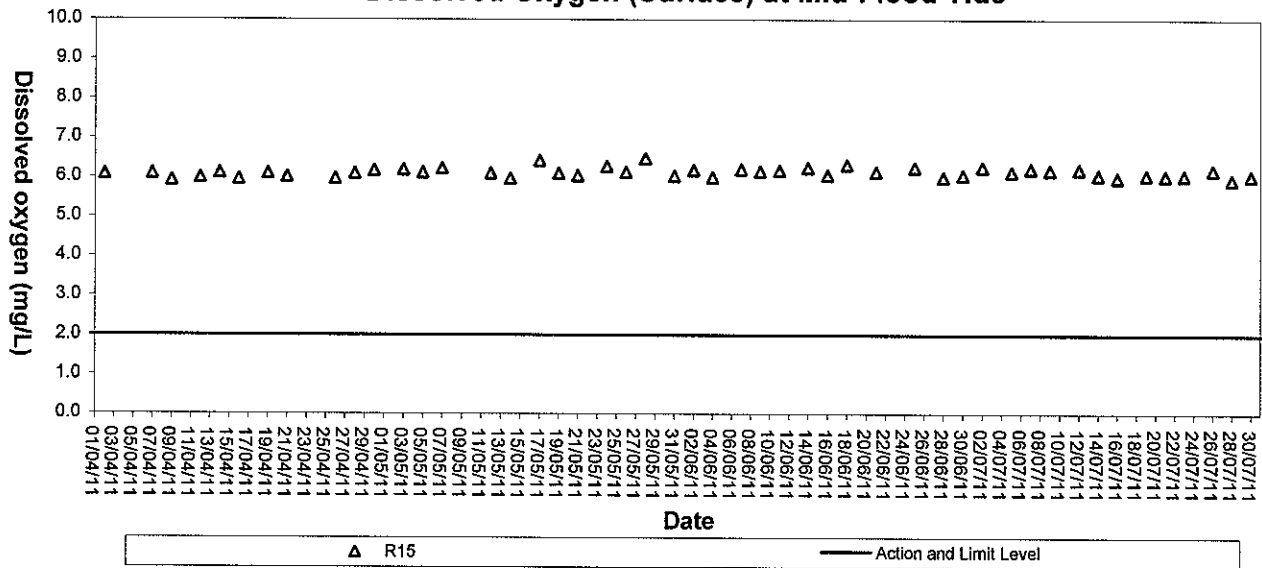


Dissolved Oxygen (Surface) at Mid-Ebb Tide

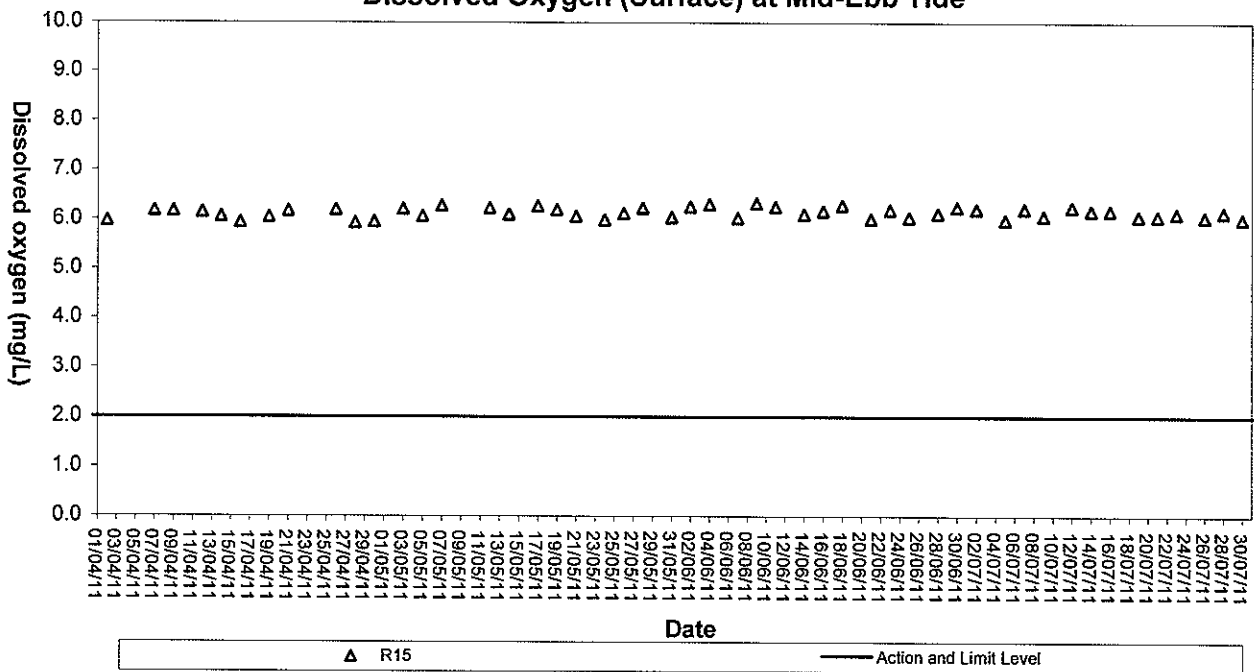




Dissolved Oxygen (Surface) at Mid-Flood Tide

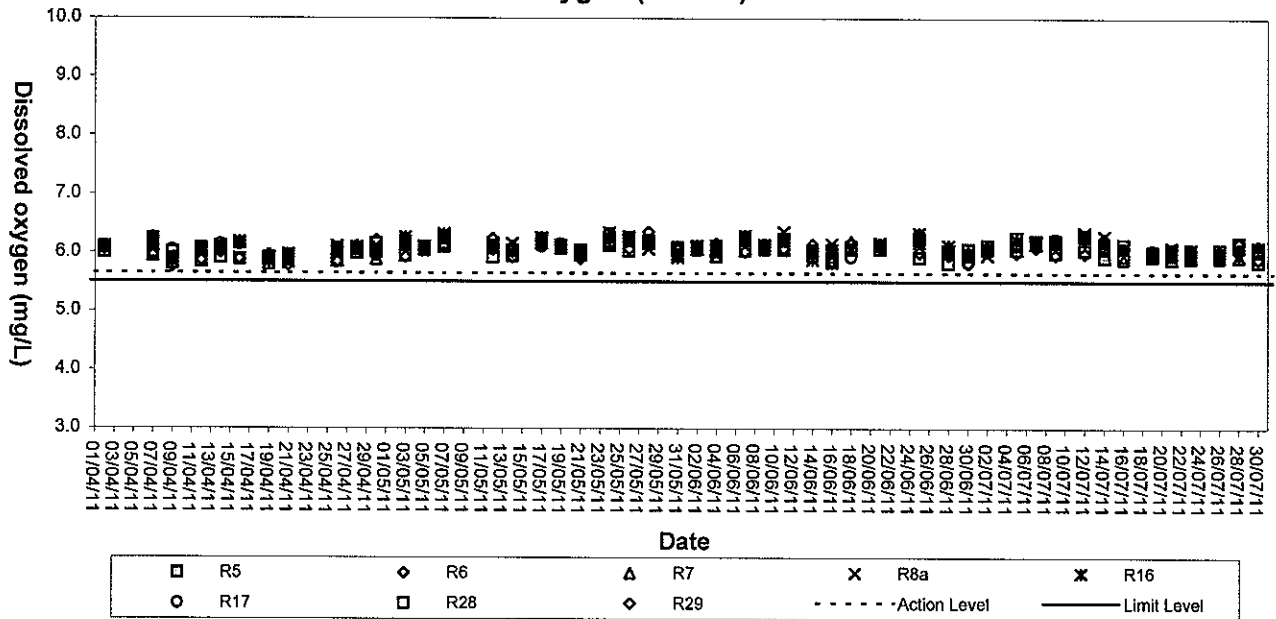


Dissolved Oxygen (Surface) at Mid-Ebb Tide

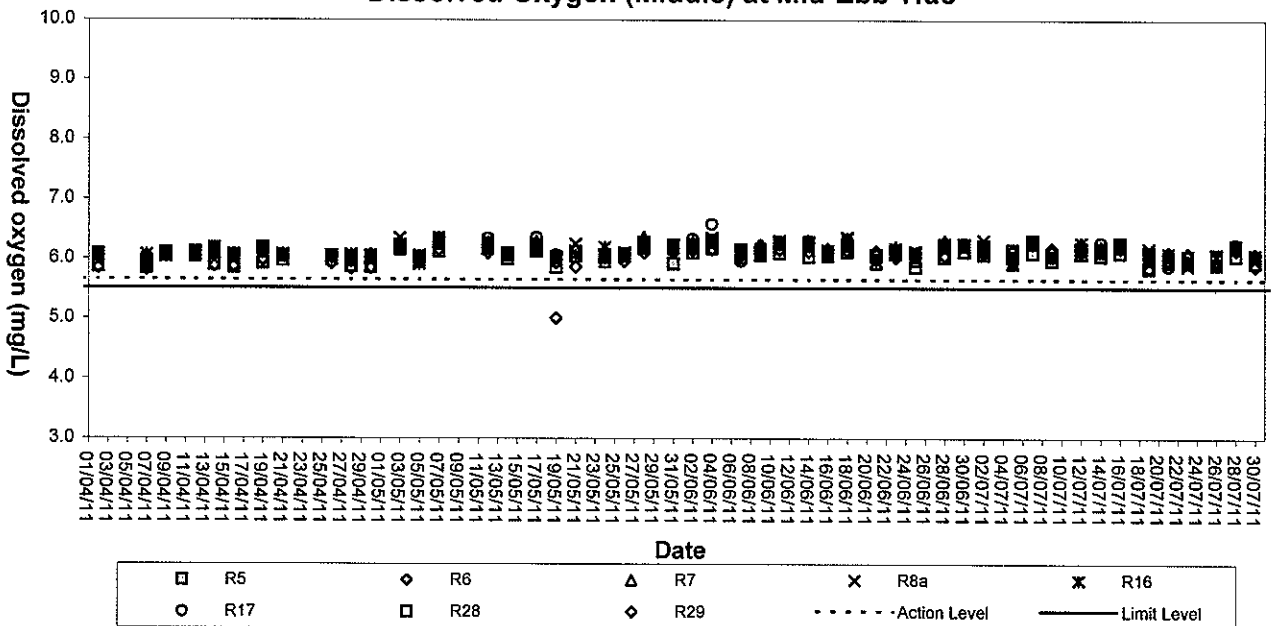




Dissolved Oxygen (Middle) at Mid-Flood Tide

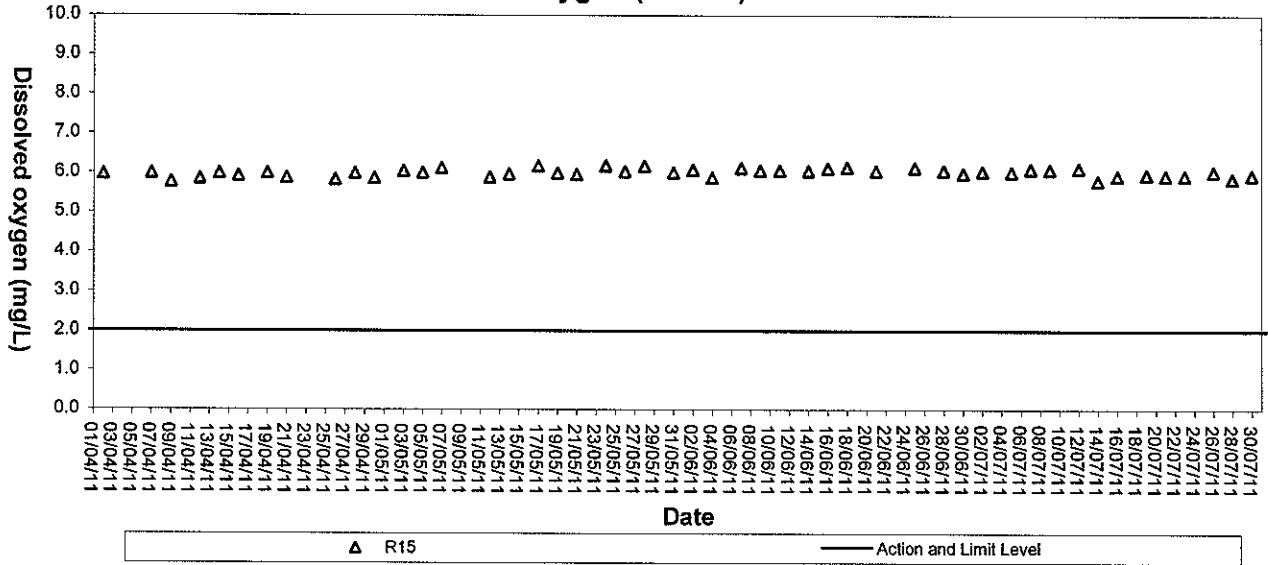


Dissolved Oxygen (Middle) at Mid-Ebb Tide

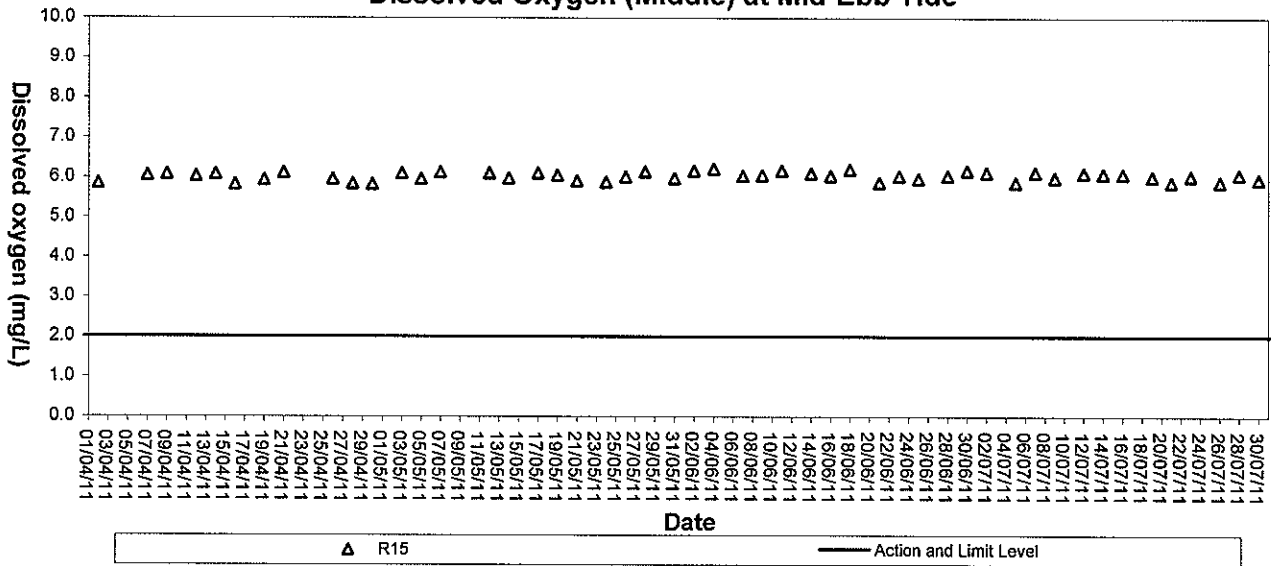




Dissolved Oxygen (Middle) at Mid-Flood Tide

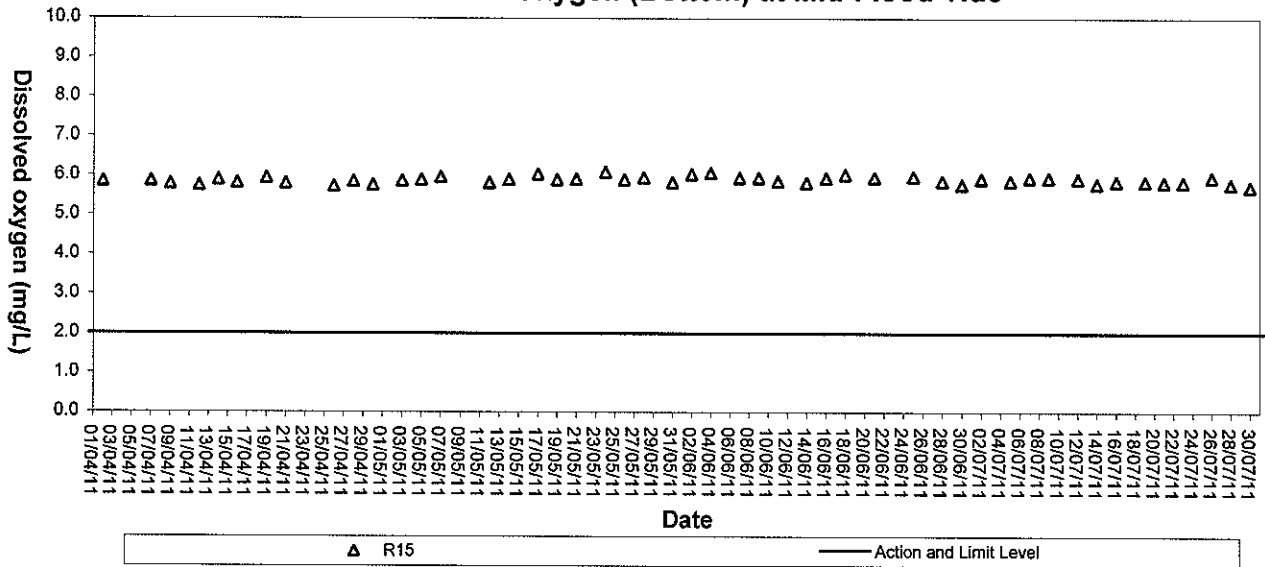


Dissolved Oxygen (Middle) at Mid-Ebb Tide





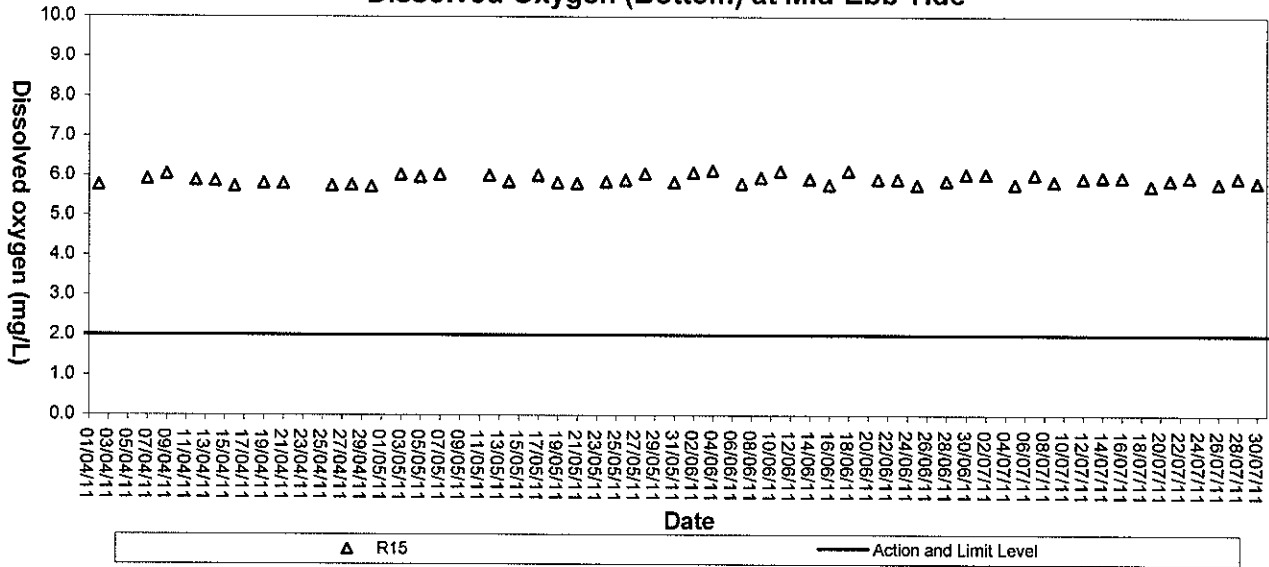
Dissolved Oxygen (Bottom) at Mid-Flood Tide



▲ R15

— Action and Limit Level

Dissolved Oxygen (Bottom) at Mid-Ebb Tide

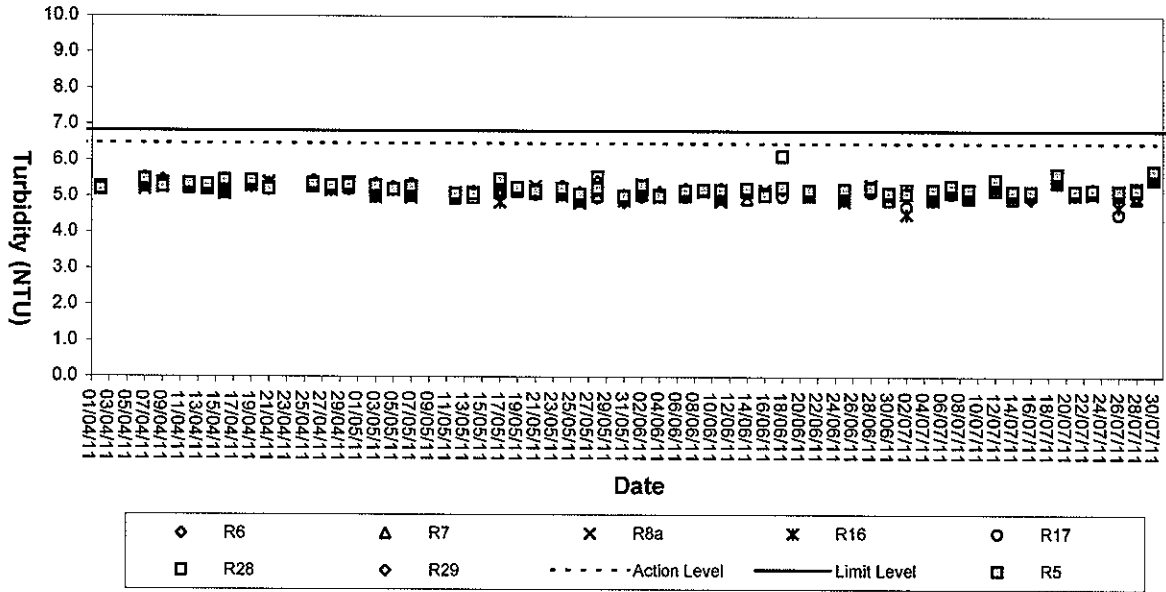


▲ R15

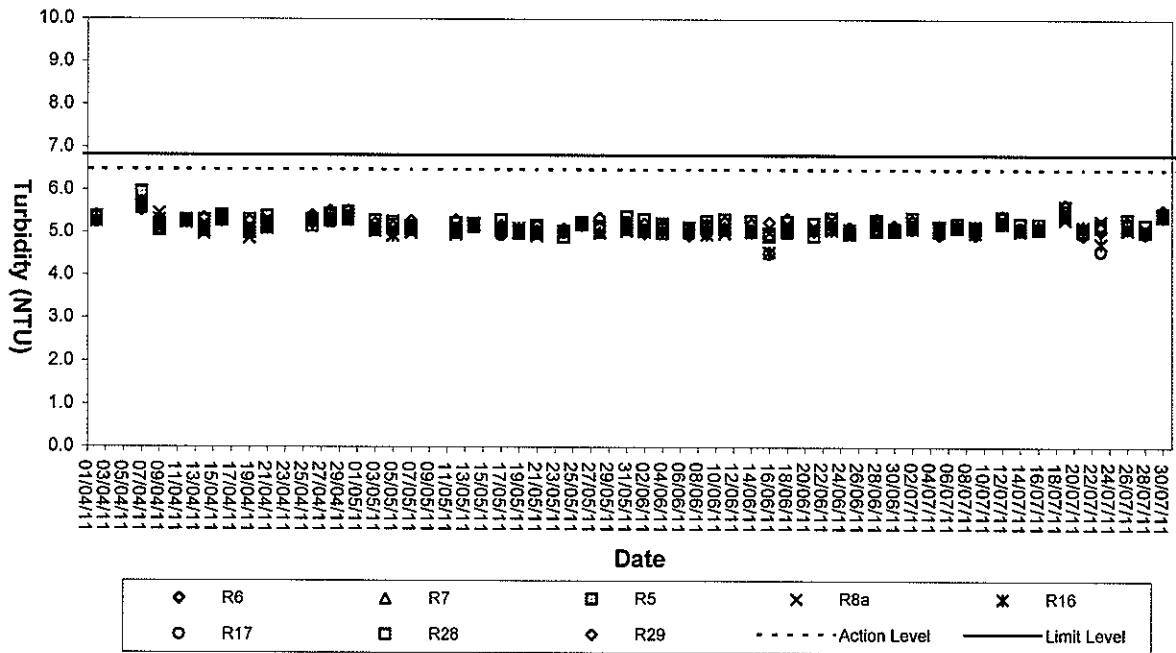
— Action and Limit Level



Turbidity (Depth-average) at Mid-Flood Tide

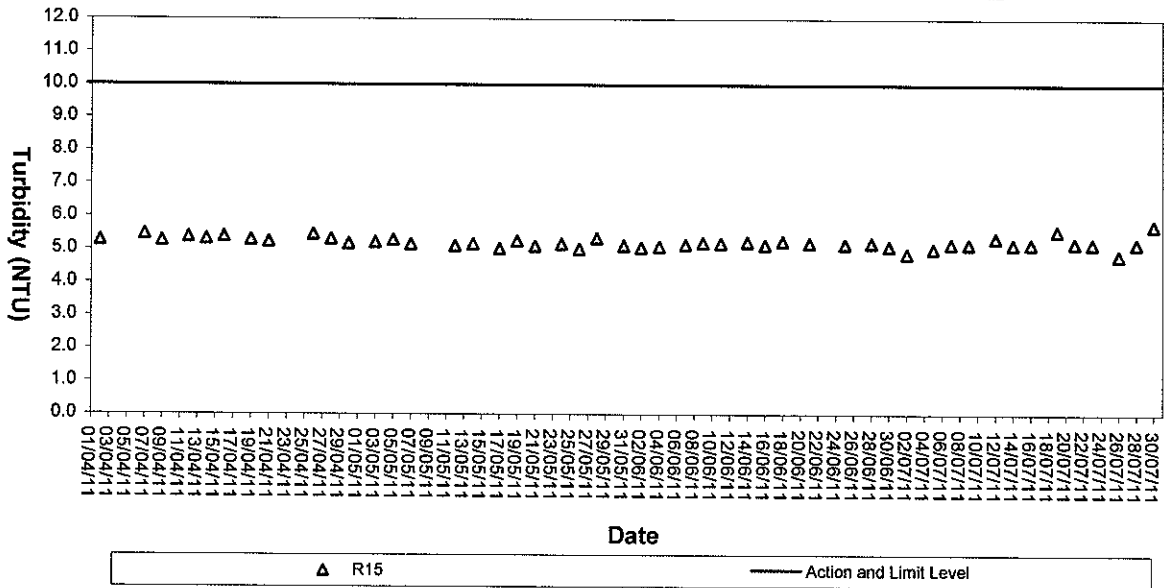


Turbidity (Depth-average) at Mid-Ebb Tide

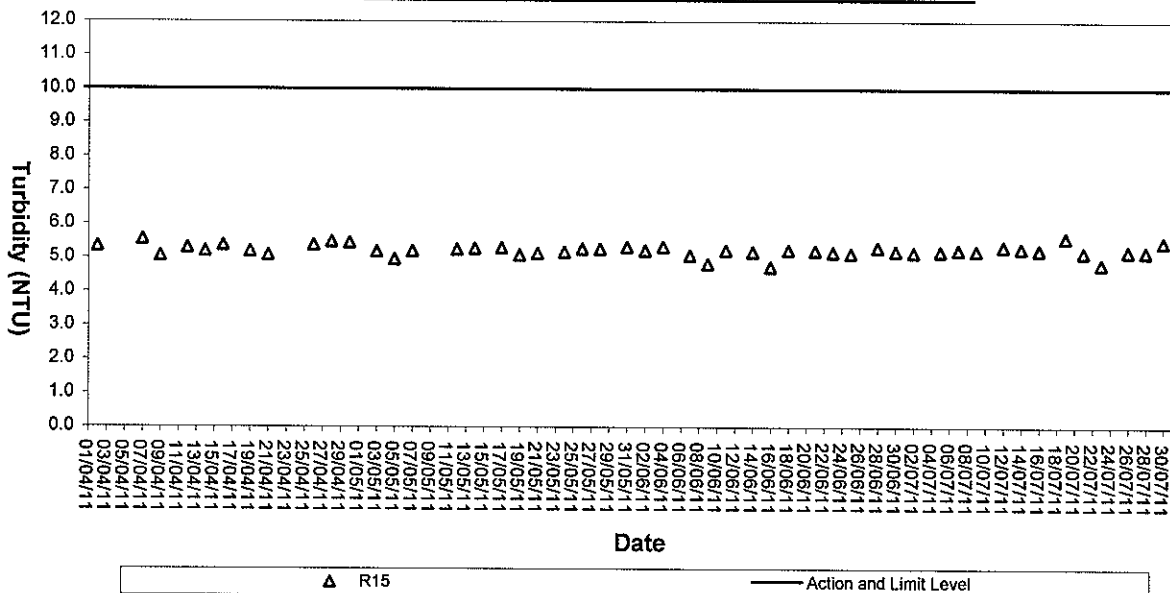




Turbidity (Depth-average) of R15 at Mid-Flood Tide

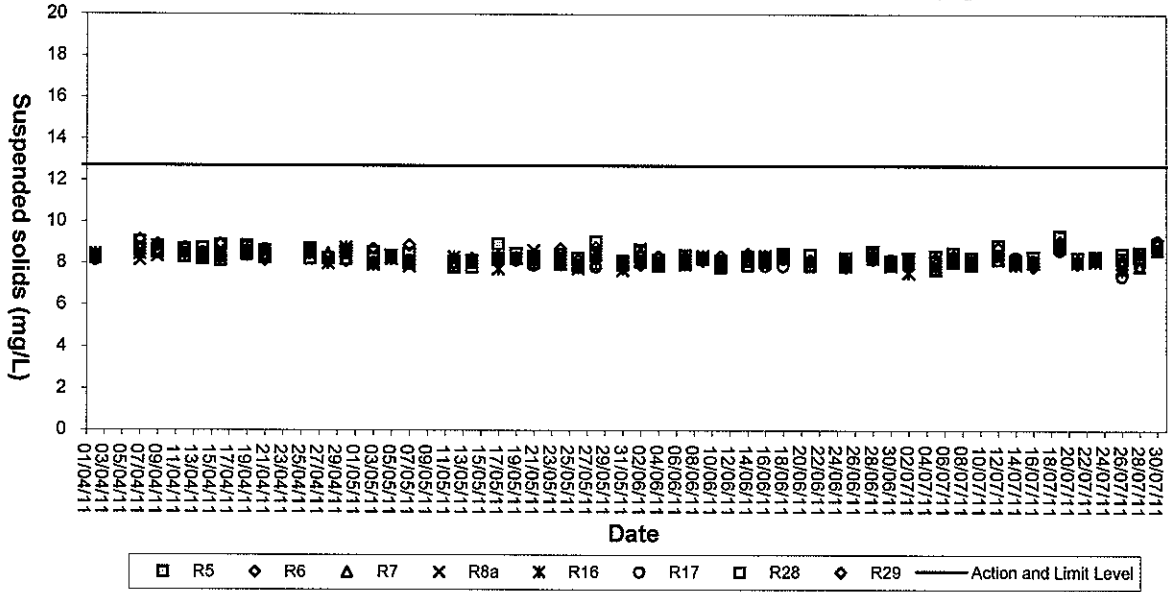


Turbidity (Depth-average) of R15 at Mid-Ebb Tide

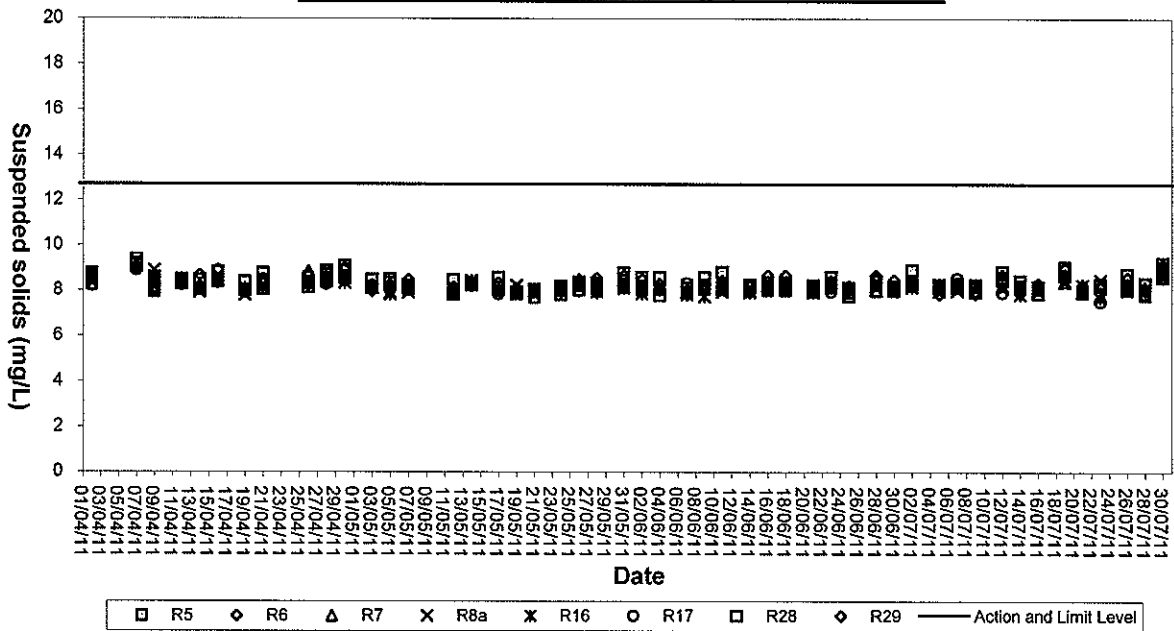




Suspended solids (Depth-average) at Mid-Flood Tide

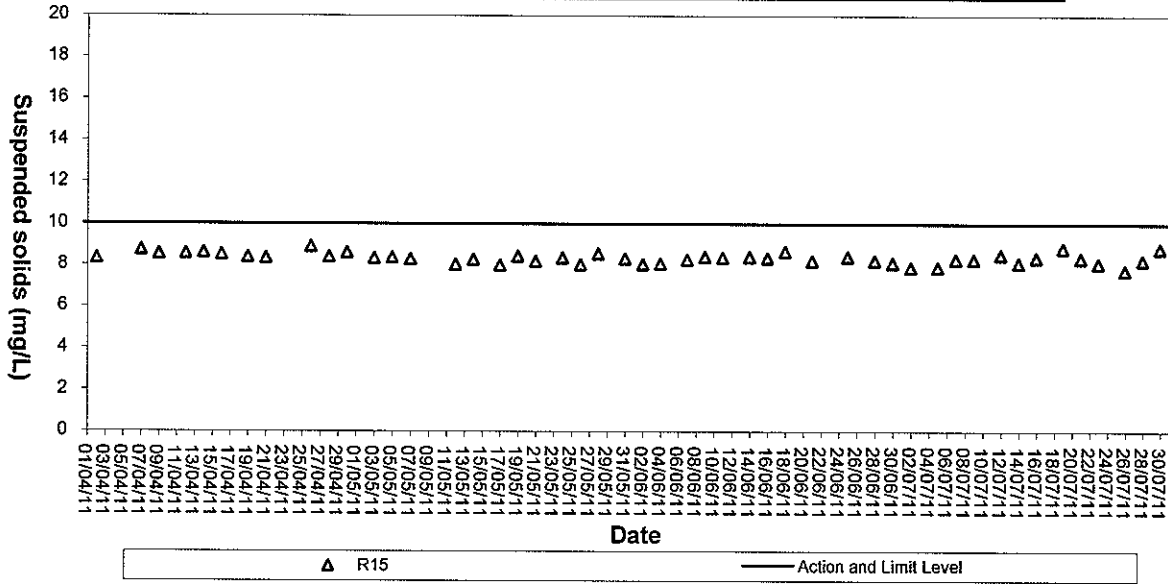


Suspended Solids (Depth-average) at Mid-Ebb Tide

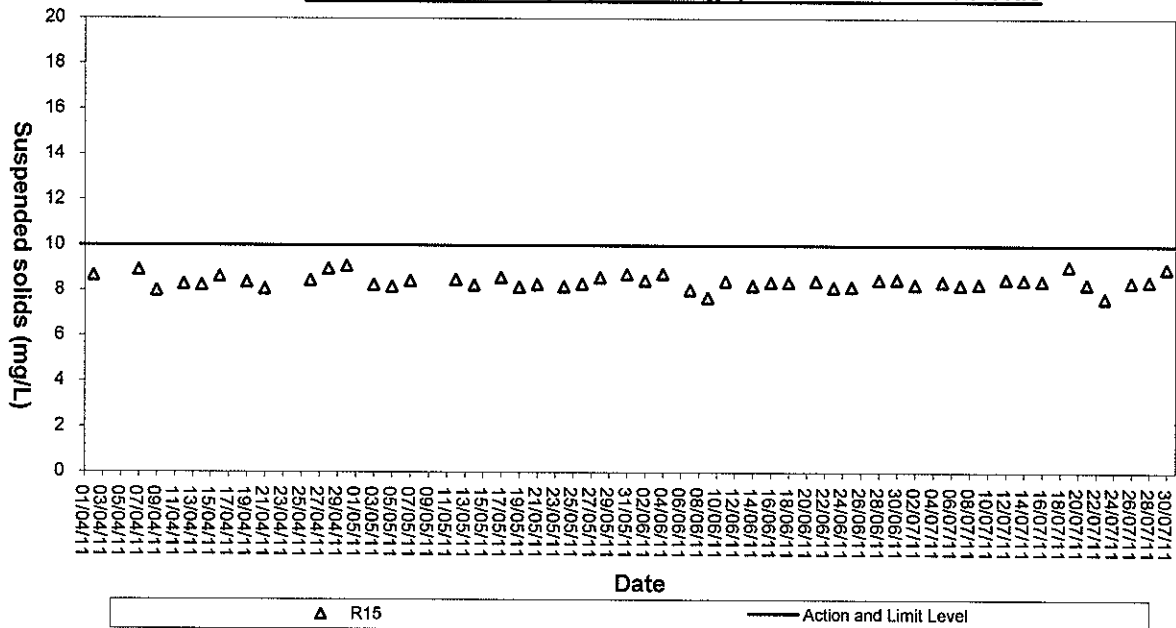




Suspended solids (Depth-average) of R15 at Mid-Flood Tide



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 @
02/07/11	95.9	R5FS	6.3	R8FS	90.4
	100.0	R8FM	3.2	R17FM	96.2
	107.0	R17FB	6.1	C1FB	108.0
	106.7	C2FS	3.1	C4FB	103.8
	96.9	R5ES	2.9	R8ES	92.3
	99.8	R8EM	3.0	R17EM	110.2
	100.2	R17EB	5.9	C1EB	109.6
	99.4	C2ES	3.2	C4EB	98.1
05/07/11	102.2	R5FS	3.1	R8FS	98.0
	105.4	R8FM	3.3	R17FM	94.1
	101.4	R17FB	6.5	C1FB	94.2
	103.9	C2FS	3.3	C4FB	95.9
	106.0	R5ES	3.2	R8ES	102.0
	97.6	R8EM	3.0	R17EM	107.7
	94.7	R17EB	6.1	C1EB	105.9
	96.7	C2ES	3.4	C4EB	98.1
07/07/11	105.3	R5FS	2.9	R8FS	92.3
	96.6	R8FM	0.0	R17FM	96.2
	95.8	R17FB	6.1	C1FB	100.0
	104.2	C2FS	3.3	C4FB	100.0
	97.1	R5ES	6.3	R8ES	92.3
	96.3	R8EM	3.3	R17EM	103.8
	100.4	R17EB	2.9	C1EB	105.9
	97.7	C2ES	3.2	C4EB	102.0
09/07/11	100.0	R5FS	6.5	R8FS	100.0
	102.0	R8FM	3.1	R17FM	102.0
	98.8	R17FB	6.1	C1FB	102.0
	106.2	C2FS	3.2	C4FB	104.3
	100.4	R5ES	0.0	R8ES	102.1
	93.9	R8EM	3.0	R17EM	116.7
	96.7	R17EB	2.9	C1EB	114.3
	101.2	C2ES	3.2	C4EB	108.3
12/07/11	95.8	R5FS	2.9	R8FS	92.3
	100.4	R8FM	3.0	R17FM	102.0
	99.0	R17FB	6.1	C1FB	96.2
	107.1	C2FS	3.2	C4FB	105.8
	96.2	R5ES	5.7	R8ES	98.0
	93.5	R8EM	6.3	R17EM	105.8
	102.9	R17EB	6.5	C1EB	105.9
	103.5	C2ES	3.2	C4EB	92.5
14/07/11	92.7	R5FS	6.3	R8FS	98.0
	93.3	R8FM	3.2	R17FM	100.0
	93.4	R17FB	6.1	C1FB	100.0
	98.0	C2FS	6.5	C4FB	106.2
	103.3	R5ES	3.1	R8ES	88.2
	98.8	R8EM	3.2	R17EM	110.0
	95.2	R17EB	3.0	C1EB	106.1
	95.2	C2ES	3.0	C4EB	106.1

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



QA/QC Results of Laboratory Analysis of Total Suspended Solids

Sampling Date	QC Sample	Sample Duplicate		Sample Spike	
	% Recovery *	Sample ID	% Error #	Sample ID	% Recovery @
16/07/11	94.5	R5FS	3.1	R8FS	91.8
	100.8	R8FM	6.1	R17FM	105.9
	104.0	R17FB	2.9	C1FB	103.8
	106.1	C2FS	3.3	C4FB	103.8
	95.3	R5ES	6.5	R8ES	96.1
	93.0	R8EM	3.3	R17EM	116.7
	96.0	R17EB	2.9	C1EB	105.9
	98.4	C2ES	6.1	C4EB	104.2
19/07/11	98.1	R5FS	2.7	R8FS	100.0
	94.3	R8FM	2.7	R17FM	100.0
	93.8	R17FB	5.6	C1FB	108.2
	96.1	C2FS	3.0	C4FB	100.0
	102.7	R5ES	2.9	R8ES	94.1
	99.0	R8EM	3.1	R17EM	112.2
	98.2	R17EB	5.4	C1EB	108.0
	94.7	C2ES	6.1	C4EB	97.9
21/07/11	95.0	R5FS	3.2	R8FS	98.0
	95.2	R8FM	6.3	R17FM	100.0
	94.4	R17FB	2.9	C1FB	104.0
	99.8	C2FS	6.5	C4FB	92.3
	103.8	R5ES	0.0	R8ES	100.0
	101.5	R8EM	3.1	R17EM	112.2
	99.8	R17EB	3.2	C1EB	114.9
	96.9	C2ES	3.3	C4EB	98.1
23/07/11	94.6	R5FS	6.1	R8FS	104.3
	105.3	R8FM	3.1	R17FM	96.0
	94.0	R17FB	2.9	C1FB	107.5
	93.9	C2FS	3.2	C4FB	107.7
	103.3	R5ES	3.2	R8ES	104.2
	100.8	R8EM	2.8	R17EM	107.7
	102.9	R17EB	3.4	C1EB	109.4
	98.2	C2ES	0.0	C4EB	106.0
26/07/11	102.6	R5FS	3.3	R8FS	98.0
	107.7	R8FM	3.2	R17FM	106.1
	93.4	R17FB	6.3	C1FB	95.8
	102.9	C2FS	6.1	C4FB	102.0
	100.4	R5ES	3.0	R8ES	100.0
	100.8	R8EM	3.1	R17EM	103.8
	102.9	R17EB	2.8	C1EB	106.0
	101.0	C2ES	6.5	C4EB	100.0
28/07/11	104.2	R5FS	6.1	R8FS	86.5
	96.6	R8FM	3.1	R17FM	104.2
	102.1	R17FB	2.8	C1FB	104.1
	97.8	C2FS	3.2	C4FB	92.2
	101.2	R5ES	3.0	R8ES	98.0
	96.1	R8EM	2.9	R17EM	119.1
	100.4	R17EB	6.3	C1EB	103.8
	94.7	C2ES	3.3	C4EB	104.3

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 @
30/07/11	97.9	R5FS	5.9	R8FS	98.0
	93.1	R8FM	2.8	R17FM	103.9
	98.8	R17FB	2.7	C1FB	100.0
	96.9	C2FS	3.0	C4FB	96.0
	95.5	R5ES	2.8	R8ES	95.9
	107.2	R8EM	2.9	R17EM	108.0
	95.1	R17EB	2.7	C1EB	100.0
	98.6	C2ES	2.9	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%.



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

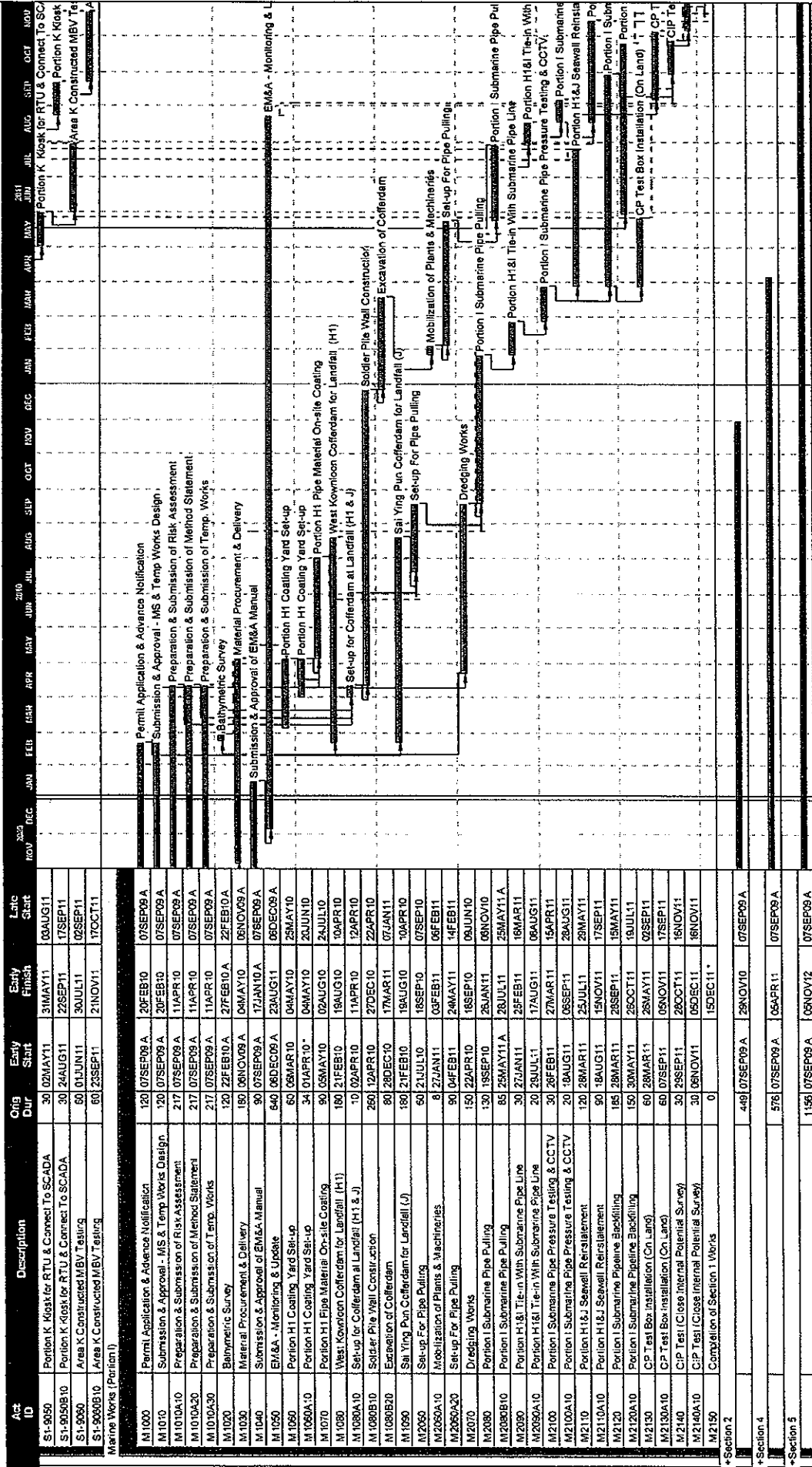
Event	Action			
	ET Leader	IEC	ER	Contractor
Limit Level				
Exceedance for one sample	<ol style="list-style-type: none"> 1. Repeat in-situ measurement to confirm finding; 2. Identify source(s) of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's 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.



東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Appendix E

Work Programme



3 Months Rolling Program (July 2011)

Start date: 07SEP09
 Finish date: 05NOV12
 Data date: 02JAN10
 Run date: 27JUN11
 Page number: 6A
 c. Primavera Systems, Inc.

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

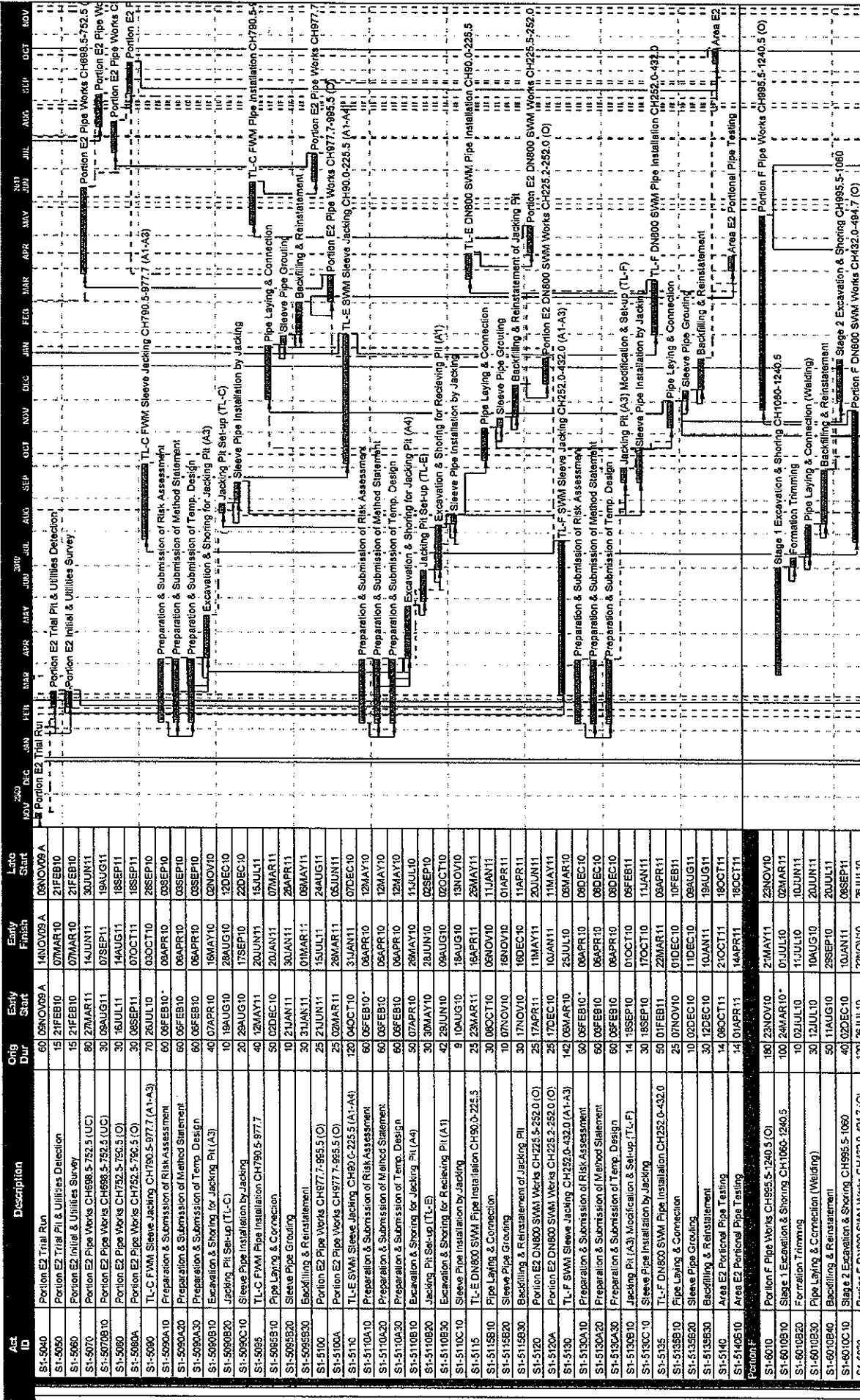
Contract No. SWS0308
Laying of Western Cross Harbour Main & Associated Land Marks from West Kowloon to Sai Ying Pun

Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish
S1-6020A10	Portion F DN800 SWM Works CH432.0-494	120	12NOV10	11MAR11	20JUN11	20JUN11
S1-6030	Area F Portional Pipe Testing	14	22MAY11	04JUN11	18OCT11	18OCT11
Section H1						
S1-7010	Portion H1 Temporary Assess Road	80	26DEC09A	31JAN10	26DEC09A	26DEC09A
S1-7020	Portion H1 Pipe Works CH1485.5-1516.0 (O)	40	20JUL11	28AUG11	20JUL11	20JUL11
S1-7030	Portion H1 Pipe Works CH1516.5-1544.7 (O-S wall)	50	29AUG11	17OCT11	29AUG11	29AUG11
S1-7040	Area H1 Portional Pipe Testing	14	18OCT11	31OCT11	18OCT11	18OCT11
Portion J						
S1-8010	Portion J Pipe Works CH0.0-48.0 (O-S Wall)	40	23JUL11	06SEP11	06SEP11	06SEP11
S1-8020	Portion J Pipe Works CH48.0-339.0 (C)	300	02OCT10	28JUL11	12NOV10	12NOV10
S1-8020B10	Stage 1 Excavation & Shoring CH250-290 S1	55	22JUN10*	15AUG10	29AUG10	29AUG10
S1-8020B20	Pipe Laying & Connection (Welding)	20	16AUG10	06SEP10	23OCT10	23OCT10
S1-8020B30	Associated Chamber Construction	30	05SEP10	04OCT10	12NOV10	12NOV10
S1-8020B40	Backfilling & Reinstatement	15	05OCT10	19OCT10	12DEC10	12DEC10
S1-8020B50	Stage 1 Excavation & Shoring CH250-290 S2	20	27FEB11	18MAR11	06MAY11	06MAY11
S1-8020B60	Associated Chamber Construction	30	18MAR11	17APR11	26MAY11	26MAY11
S1-8020B70	Backfilling & Reinstatement	15	18APR11	02MAY11	25JUN11	25JUN11
S1-8020C10	Stage 2 Excavation & Shoring CH180-250	55	20OCT10	13DEC10	27DEC10	27DEC10
S1-8020C20	Pipe Laying & Connection (Welding)	30	14DEC10	12JAN11	20FEB11	20FEB11
S1-8020C30	Associated Chamber Construction	30	13JAN11	11FEB11	22MAY11	22MAY11
S1-8020C40	Backfilling & Reinstatement	15	12FEB11	25FEB11	14NOV10	10JUL11
S1-8020D10	Stage 3 Excavation & Shoring CH140-180	35	11OCT10*	14NOV10	04DEC10	14AUG11
S1-8020D20	Pipe Laying & Connection (Welding)	20	15NOV10	03DEC10	10JAN11	03OCT11
S1-8020D30	Associated Chamber Construction	30	05DEC10	03JAN11	18JAN11	10JUL11
S1-8020D40	Backfilling & Reinstatement	15	04JAN11	18JAN11	18JUL11	18JUL11
S1-8020E10	Stage 4 Excavation & Shoring CH48-CH140	50	30MAY11	18JUL11	29AUG11	29AUG11
S1-8020E20	Pipe Laying & Connection (Welding)	20	18JUL11	27AUG11	18SEP11	18SEP11
S1-8020E30	Associated Chamber Construction	20	09AUG11	08SEP11	08OCT11	08OCT11
S1-8020E40	Backfilling & Reinstatement	10	29AUG11	21JUN11	10JUL11	10JUL11
S1-8020F10	Stage 5 Excavation & Shoring CH250-340	50	03MAY11	23JUL11	26AUG11	26AUG11
S1-8020F20	Pipe Laying & Connection (Welding)	30	22JUL11	10AUG11	28SEP11	28SEP11
S1-8020F30	Backfilling & Reinstatement	20	22JUL11	30OCT10	18NOV10	18SEP11
S1-8030B10	Portion J Kiosk for RTU & Connect To SCADA	30	20OCT10	18NOV10	18SEP11	18SEP11
S1-8040	Portion J Pipe Works CH339.0-386.4 (TL-D)	209	17MAR10	11OCT10	27APR10	27APR10
S1-8040A10	Preparation & Submission of Risk Assessment	28	03MAR10	05OCT10	05OCT10	05OCT10
S1-8040A20	Preparation & Submission of Method Statement	28	03MAR10	30MAR10	30MAR10	30MAR10
S1-8040A30	Preparation & Submission of Temp. Works	28	03MAR10	30MAR10	30MAR10	30MAR10
S1-8040A40	Granting of Excavation Permit	0	01SEP10*	26OCT10	26OCT10	26OCT10
S1-8040B10	TTA, UD & Trial Pit Excavation	25	08SEP10	02OCT10	02NOV10	02NOV10
S1-8040B20	Access Shaft Fabrication	65	23OCT10	28DEC10	17DEC10	17DEC10
S1-8040B30	Heading Tunnel Excavation (Hard Shield)	70	27DEC10	06MAR11	20FEB11	20FEB11
S1-8040B40	Pipe Installation Inside Heading Tunnel	40	07MAR11	15APR11	01MAY11	01MAY11
S1-8040B50	Backfilling & Reinstatement	10	18APR11	25APR11	10JUN11	10JUN11
S1-8050	Portion J Pipe Works CH386.4-396.4 (O)	40	26APR11	04JUN11	20JUN11	20JUN11
S1-8060	Portion J Pipe Works DN1000 CH0.0-22.7 (C)	80	05JUN11	23AUG11	30JUL11	30JUL11
S1-8070	Area J Portional Pipe Testing	14	07SEP11	20SEP11	18OCT11	18OCT11
Portion K						
S1-9010	Within 365 Days Commencement of Portion K	365	07SEP09A	06SEP10	07SEP09A	07SEP09A
S1-9020	Portion K Initial Survey	15	08SEP10	23SEP10	11DEC10	11DEC10
S1-9030	Portion K Utilities Detection & Trial Pit	20	24SEP10	13OCT10	28DEC10	28DEC10
S1-9030B10	Portion K Utilities Detection & Trial Pit	10	16MAY11*	23MAY11	16MAY11*	16MAY11*
S1-9040	Portion K Pipe Works (Construction of MBV)	200	14OCT10	01MAY11	15JAN11	15JAN11
S1-9040B10	MBV Installation & Associated Duct Works	90	26MAY11	23AUG11	19JUN11	19JUN11

Start date: 07SEP09
Finish date: 05NOV12
Data date: 04JUN10
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3 Months Rolling Program (July 2011)

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



Act ID	Description	Orig Dur	Early Start	Early Finish	Late Start	Late Finish
S1-5040	Portion E2 Trial Run	60	08NOV09	14NOV09	08NOV09	14NOV09
S1-5050	Portion E2 Trial Pit & Utilities Detection	15	21FEB10	07MAR10	21FEB10	21FEB10
S1-5060	Portion E2 Initial & Utilities Survey	15	21FEB10	07MAR10	21FEB10	21FEB10
S1-5070	Portion E2 Pipe Works CH895.5-752.5 (UC)	80	27MAR11	14JUN11	30JUN11	30JUN11
S1-5070B10	Portion E2 Pipe Works CH895.5-752.5 (UC)	30	09AUG11	07SEP11	19AUG11	19AUG11
S1-5080	Portion E2 Pipe Works CH752.5-756.5 (O)	30	16JUL11	14AUG11	18SEP11	18SEP11
S1-5080A	Portion E2 Pipe Works CH752.5-756.5 (O)	30	08SEP11	07OCT11	18SEP11	18SEP11
S1-5090	TL-C FVM Sleeve Jacking CH790.5-977.7 (A1-A3)	70	26JUL10	03OCT10	26SEP10	26SEP10
S1-5090A10	Preparation & Submission of Risk Assessment	60	08FEB10	08APR10	08SEP10	08SEP10
S1-5090A20	Preparation & Submission of Method Statement	60	08FEB10	08APR10	08SEP10	08SEP10
S1-5090A30	Preparation & Submission of Temp. Design	60	08FEB10	08APR10	08SEP10	08SEP10
S1-5090B10	Excavation & Shoring for Jacking Pit (A3)	40	07APR10	16MAY10	02NOV10	02NOV10
S1-5090B20	Jacking Pit Set-up (TL-C)	10	19AUG10	28AUG10	12DEC10	12DEC10
S1-5090C10	Sleeve Pipe Installation by Jacking	20	29AUG10	17SEP10	20DEC10	20DEC10
S1-5095	TL-C FVM Pipe Installation CH790.5-977.7	40	12MAY11	20JUN11	20JUN11	20JUN11
S1-5095B10	Pipe Laying & Connection	50	02DEC10	20JAN11	07MAR11	07MAR11
S1-5095B20	Sleeve Pipe Grouting	10	21JAN11	30JAN11	26APR11	26APR11
S1-5095B30	Backfilling & Reinstatement	30	31JAN11	09MAY11	09MAY11	09MAY11
S1-5100	Portion E2 Pipe Works CH877.7-955.5 (O)	25	21JUN11	15JUL11	24AUG11	24AUG11
S1-5100A	Portion E2 Pipe Works CH877.7-955.5 (O)	25	02MAR11	28MAR11	05JUN11	05JUN11
S1-5110	TL-E SWM Sleeve Jacking CH420.0-225.5 (A1-A4)	120	04OCT10	31JAN11	07DEC10	07DEC10
S1-5110A10	Preparation & Submission of Risk Assessment	60	08FEB10	08APR10	12MAY10	12MAY10
S1-5110A20	Preparation & Submission of Method Statement	60	08FEB10	08APR10	12MAY10	12MAY10
S1-5110A30	Preparation & Submission of Temp. Design	60	08FEB10	08APR10	12MAY10	12MAY10
S1-5110B10	Excavation & Shoring for Jacking Pit (A4)	60	08FEB10	08APR10	12MAY10	12MAY10
S1-5110B20	Jacking Pit Set-up (TL-E)	50	07APR10	28MAY10	13JUL10	13JUL10
S1-5110B30	Excavation & Shoring for Receiving Pit (A1)	30	30MAY10	28JUN10	02SEP10	02SEP10
S1-5110C10	Sleeve Pipe Installation by Jacking	42	28JUN10	09AUG10	02OCT10	02OCT10
S1-5115	TL-E DN800 SWM Pipe Installation CH90.0-225.5	9	10AUG10	18AUG10	13NOV10	13NOV10
S1-5115B10	Pipe Laying & Connection	25	23MAR11	16APR11	20MAY11	20MAY11
S1-5115B20	Sleeve Pipe Grouting	30	08OCT10	06NOV10	11JAN11	11JAN11
S1-5115B30	Backfilling & Reinstatement	30	08OCT10	06NOV10	11JAN11	11JAN11
S1-5120	Portion E2 DN800 SWM Works CH225.5-252.0 (O)	25	17APR11	11MAY11	11MAY11	11MAY11
S1-5120A	Portion E2 DN800 SWM Works CH225.5-252.0 (O)	25	17OCT10	10JAN11	11MAY11	11MAY11
S1-5130	TL-F SWM Sleeve Jacking CH252.0-432.0 (A1-A3)	142	08MAR10	25JUL10	08MAR10	08MAR10
S1-5130A10	Preparation & Submission of Risk Assessment	60	08FEB10	08APR10	08DEC10	08DEC10
S1-5130A20	Preparation & Submission of Method Statement	60	08FEB10	08APR10	08DEC10	08DEC10
S1-5130A30	Preparation & Submission of Temp. Design	60	08FEB10	08APR10	08DEC10	08DEC10
S1-5130B10	Jacking Pit (A3) Modification & Set-up (TL-F)	14	19SEP10	07OCT10	08FEB11	08FEB11
S1-5130C10	Sleeve Pipe Installation by Jacking	30	18SEP10	17OCT10	11JAN11	11JAN11
S1-5135	TL-F DN800 SWM Pipe Installation CH252.0-432.0	50	01FEB11	22MAR11	06APR11	06APR11
S1-5135B10	Pipe Laying & Connection	25	07NOV10	01DEC10	10FEB11	10FEB11
S1-5135B20	Sleeve Pipe Grouting	10	02DEC10	11DEC10	09AUG11	09AUG11
S1-5135B30	Backfilling & Reinstatement	30	12DEC10	10JAN11	19AUG11	19AUG11
S1-5140	Area E2 Portional Pipe Testing	14	08OCT11	21OCT11	18OCT11	18OCT11
S1-5145	Area E2 Portional Pipe Testing	14	01APR11	14APR11	18OCT11	18OCT11
Portion F						
S1-6010	Portion F Pipe Works CH955.5-1240.5 (O)	180	23NOV10	27MAY11	23NOV10	23NOV10
S1-6010B10	Stage 1 Excavation & Shoring CH1060.5-1240.5	100	24MAR10	07JUL10	02MAR11	02MAR11
S1-6010B20	Formation Trimming	10	02JUL10	13JUL10	10JUN11	10JUN11
S1-6010B30	Pipe Laying & Connection (Welding)	30	12JUL10	10AUG10	20JUN11	20JUN11
S1-6010B40	Backfilling & Reinstatement	50	11AUG10	28SEP10	20JUL11	20JUL11
S1-6010C10	Stage 2 Excavation & Shoring CH955.5-1060	40	02DEC10	10JAN11	08SEP11	08SEP11
S1-6020	Portion F DN800 SWM Works CH432.0-494.7 (O)	120	26JUL10	22NOV10	26JUL10	26JUL10

3 Months Rolling Program (July 2011)

Start date	07SEP09
Finish date	05NOV12
Draw date	04JAN10
Run date	27JUN11
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ACT ID	Description	Orig Dur	Early Start	Early Finish	Start	2010	2011	2011	2011	2011	2011	2011	2011	2011	2011	
					Start	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	
S1-4410020	Support & Fixing Of DN600A SWM	3	22FEB11	24FEB11	03JUL11											
S1-4420	Portion E1B DN600A SWM Works CH0.0-7.1 (O)	30	24APR10	23MAY10	23OCT10											
S1-4420B10	Excavation & Shoring	8	25FEB11	02MAR11	31OCT12											
S1-4420B20	Main Laying & Connection With Trough Portion	8	25FEB11	04MAR11	06JUL11											
S1-4430	Portion E2 DN600A SWM Works CH63.7-67.9 (O)	30	24MAY10	22JUN10	22NOV10											
S1-4430B10	Excavation & Shoring	8	05MAR11	12MAR11	14JUL11											
S1-4430B20	Main Laying & Connection With Trough Portion	4	13MAR11	18MAR11	22JUL11											
S1-4440	E1B Existing DN600 SWM Diversion & Demolition	30	23JUN10	22JUL10	22DEC10											
S1-4440B10	Issuance Of Temp. Water Supply Suspension Notice	14	03MAR11	16MAR11	12AUG11											
S1-4440B20	Shut Off Of Existing DN600 SWM	2	17MAR11	17JUL11	26JUL11											
S1-4440B30	DN600A Diversion Main Connect To Existing	6	18JUL11	23JUL11	26JUL11											
S1-4445	Portion E1B Trough Construction Under Pierler	60	24JUN10	22AUG10	10FEB11											
S1-4445B10	Excavation & Shoring For Pipe Trough (Stage 2)	40	23DEC10	31JAN11	11MAY11											
S1-4445B20	Fwk & Reinforcement for Pipe Trough	15	01FEB11	15FEB11	20JUN11											
S1-4450	Portion E1B Pipe Works CH960.5-977.4 (PT)	60	11OCT10	09DEC10	11APR11											
S1-4450B10	Pipe Laying & Support Casting	25	19FEB11	12MAR11	05JUL11											
S1-4450B20	Backfilling & Reinstatement	20	13MAR11	01APR11	30JUL11											
S1-4460	Portion E1B Pipe Works CH877.4-895.9 (O)	40	22FEB11	02APR11	08SEP11											
S1-4460B10	Portion E1B Pipe Works CH877.4-895.9 (O)	30	02MAY11	31MAY11	18SEP11											
S1-4470	Portion E1B Pipe Works CH895.9-898.5 (UC)	20	10DEC10	29DEC10	18JUN11											
S1-4470B10	Portion E1B Pipe Works CH895.9-898.5 (UC)	30	02APR11	01MAY11	19AUG11											
S1-4480B10	Portion E1B DN600B SWM Works CH0.0-7.1 (O)	6	01AUG11	08AUG11	10FEB11											
S1-4480	Portion E2 DN600B SWM Works CH7.1-63.7 (UC)	50	23JUL10	10SEP10	21JAN11											
S1-4510	Area E1B+E2 SWM Portional Pipe Testing	30	11SEP10	19OCT10	12MAR11											
S1-4520B10	Portion E2 DN600B SWM Works 63.7-67.9 (O)	8	01AUG11	08AUG11	11AUG11											
S1-4510B10	Area E1B+E2 SWM Portional Pipe Testing	14	03APR11	16APR11	18OCT11											
S1-4510B20	Area E1B+E2 SWM Portional Pipe Testing	14	08AUG11	22AUG11	18OCT11											
Portion E1C+E2																
S1-4710	Portion E1C DN300 FWM Works CH0.0-50.0 (UC)	60	03MAR10	23APR10	27SEP10											
S1-4710A10	Submission & Approval Of Risk Assessment	28	19FEB10	18MAR10	13SEP10											
S1-4710B20	Submission & Approval Of Method Statement	28	19FEB10	18MAR10	13SEP10											
S1-4710A30	Submission & Approval Of Temp. Work	28	19FEB10	18MAR10	13SEP10											
S1-4710B10	Installation & Connection Of DN300 FWM	50	17MAY10	05JUL10	11OCT10											
S1-4710B20	Support & Fixing Of DN300 FWM	40	08JUL10	14AUG10	30NOV10											
S1-4720	E1C DN300 FWM Diversion Main Testing	8	24APR10	01MAY10	03APR11											
S1-4720B10	E1C Exist. DN300 FWM Diversion & Demolition	8	15AUG10	22AUG10	05JAN11											
S1-4730	E1C Exist. DN300 FWM Diversion & Demolition	30	02MAY10	31MAY10	11APR11											
S1-4730A10	Issuance Of Temp. Water Supply Suspension Notice	14	22SEP10	05OCT10	19FEB11											
S1-4730A20	Shut Off Existing DN300 FWM	2	06OCT10	07OCT10	02MAR11											
S1-4730A30	DN300 Diversion Main Connect To Existing	2	06OCT10	07OCT10	02MAR11											
S1-4730A40	Removal Of Existing DN300 FWM	28	08OCT10	04NOV10	04MAR11											
S1-4740B10	Portion E1C DN800 SWM Works CH0.0-52.0 (UC)	120	05NOV10	23JAN11	11MAY11											
S1-4750	Portion E1C DN800 SWM Works CH52.0-90.0 (O)	80	01FEB11	21APR11	30JUL11											
S1-4750B10	Portion E1C DN800 SWM Works CH52.0-90.0 (O)	80	05MAR11	23MAY11	30JUL11											
S1-4760	Area E1C Portional Pipe Testing	14	22APR11	09MAY11	18OCT11											
S1-4760B10	Area E1C Portional Pipe Testing	14	24MAY11	06JUN11	18OCT11											
Portion E2																
S1-5010	Portion E2 Marine Dept Advance Notice	60	07OCT09 A	20FEB10	07OCT09 A											
S1-5020	WHOTL Consent For Works Within Tunnel Area	120	07SEP09 A	20FEB10	07SEP09 A											
S1-5030	Chamber Modification - 180 Days of Portion E2	65	07JAN10 A	14MAR10 A	07JAN10 A											

Legend:

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

3 Months Rolling Program (July 2011)

Start date: 07SEP09
 Finish date: 06NOV12
 Data date: 04JAN10
 Run date: 27JUN11
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Act ID	Description	Orig	Start	Early	Finish	Late	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
S1-3040B5Q	Concreting Of Pipe Trough	3	13OCT10		15OCT10		28APR11											
S1-3040C10	Excavation & Shoring For Watermain	15	16OCT10		30OCT10		02MAY11											
S1-3050	Portion C1 Pipe Works CH237.5-290 (FT)	10	03MAY10		23JUN10		22DEC10											
S1-3050B1C	Pipe Laying & Connection (Welding)	10	03OCT10		09NOV10		17MAY11											
S1-3050B2C	Concrete Surround for Installed Watermain	6	10NOV10		15NOV10		27MAY11											
S1-3050B3Q	Backfilling Of Pipe Trough	5	18NOV10		20NOV10		02JUN11											
S1-3050B4Q	Backfilling & Reinstatement	10	21NOV10		30NOV10		07JUN11											
S1-3060	Portion C1 Pipe Works CH290.0-325.5 (C)	83	01DEC10		21FEB11		17JUN11											
S1-3070	Area C1 Portional Pipe Testing	30	22FEB11		23MAR11		02OCT11											
Portion E1A																		
S1-4020	Portion E1A Pipe Works CH387.5-576.9 (C)	180	17MAR10		13SEP10		24AUG10											
S1-4020A30	Preparation & Submission Of Risk Assessment	40	03MAR10		11APR10		10AUG10											
S1-4020A40	Preparation & Submission Of Method Statement	40	03MAR10		11APR10		10AUG10											
S1-4020A40	Preparation & Submission Of Temp. Works	40	03MAR10		11APR10		10AUG10											
S1-4020B20	Stage 1 U/D & Trial Pit (CH380-420)	50	03MAY10		23JUN10		10OCT10											
S1-4020B20	Fabrication of Access Shaft	30	12SEP10		11OCT10		19FEB11											
S1-4020B30	Excavation & Support for Trenchless Works	45	12OCT10		25NOV10		21MAR11											
S1-4020B40	Pipe Laying & Joint Connection	7	16DEC10		22DEC10		29MAY11											
S1-4020C05	Existing Trees Relocation	4	18AUG10		22AUG10		03JUN11											
S1-4020C10	Stage 2 U/D & Trial Pit (CH420-C-480)	10	23AUG10		01SEP10		07JUN11											
S1-4020C20	Excavation & Shoring	50	02SEP10		21OCT10		17JUN11											
S1-4020C30	Pipe Laying & Connection (Welding)	25	22OCT10		15NOV10		08AUG11											
S1-4020C40	Backfilling & Reinstatement	7	18NOV10		22NOV10		01AUG11											
S1-4020D10	Stage 3 U/D & Trial Pit (CH480-576.9)	6	01JUN11		06JUN11		07JUN11											
S1-4020D20	Excavation & Shoring	92	07JUN11		06SEP11		07JUN11											
S1-4020D30	Pipe Laying & Connection (Welding)	25	07SEP11		01OCT11		07SEP11											
S1-4020D40	Backfilling & Reinstatement	18	02OCT11		17OCT11		02OCT11											
S1-4030	Portion E1A Pipe Works CH576.9-585.9 (TL-B)	108	23FEB11		10JUN11		02JUL11											
S1-4030B1C	Fabrication of Access Shaft	50	27SEP10		28NOV10		02MAY11											
S1-4030B20	Excavation & Support for Trenchless Works	50	21NOV10		08JAN11		05MAY11											
S1-4030B30	Pipe Laying & Joint Connection	15	10JAN11		24JAN11		25JUN11											
S1-4030B40	Backfilling & Reinstatement	8	25JAN11		01FEB11		10OCT11											
S1-4050	Area E1A Portional Pipe Testing	14	18OCT11		31OCT11		18OCT11											
Portion E1B & E2 SWM																		
S1-4010	Portion E1B Diversion of Existing Storm Drain	50	13SEP10		01NOV10		06MAY11											
S1-4010A10	Trees Transplanting (LCD Consent Required)	5	08SEP10		13SEP10		26JAN11											
S1-4010A20	Temporary Relocation of Irrigation Pipe	60	14SEP10		12NOV10		31JAN11											
S1-4010A30	Temporary Relocation of Existing Storm Drain	60	14SEP10		12NOV10		31JAN11											
S1-4010A40	Excavation for Irrigation Pipe Perm. Diversion	20	11MAR11		09APR11		24AUG11											
S1-4010A60	Irrigation Pipe Installation	10	31MAR11		30MAR11		28SEP11											
S1-4010A70	Excavation for Storm Drain Diversion	20	11MAR11		30MAR11		24AUG11											
S1-4010A80	Pipe Laying & MH Construction	20	31MAR11		24APR11		13SEP11											
S1-4010A90	Backfilling & Reinstatement	10	25APR11		06MAY11		06OCT11											
S1-4010	Portion E1B Pipe Works CH585.9-660.5 (C)	115	02NOV10		24FEB11		20JUN11											
S1-4010B10	Excavation & Shoring For Pipe Trough (Stage 1)	40	13NOV10		22DEC10		01APR11											
S1-4010B20	F.w. & Reinforcement for Pipe Trough	15	23DEC10		06JAN11		10JUL11											
S1-4010B30	Pipe Laying & Support Casting	25	25JAN11		18FEB11		10AUG11											
S1-4010B40	Backfilling & Reinstatement	20	19FEB11		10MAR11		04AUG11											
S1-4410	Portion E2 DN600A SWM Works CH7.1-63.7 (UC)	50	03MAR10		23APR10		28MAY11											
S1-4410A10	Preparation & Submission Of Risk Assessment	20	18FEB10		18MAR10		28MAY11											
S1-4410A20	Preparation & Submission Of Method Statement	20	18FEB10		18MAR10		28MAY11											
S1-4410A30	Submission & Approval Of Temp. Work	20	18FEB10		18MAR10		28MAY11											
S1-4410B10	Installation & Connection Of DN600A SWM	8	14FEB11		21FEB11		25JUN11											

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

3 Months Rolling Program (July 2011)

Wo Hing - Penta-Ocean Joint Venture

Start date: 07SEP08
 Finish date: 05NOV12
 Data date: 04JAN10
 Run date: 27JUN11
 Page number: 2A
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Act ID	Description	Org Dur	Early Start	Early Finish	Late Start	Late Finish
1158	07SEP09 A	08NOV12	07SEP09 A	08NOV12	07SEP09 A	07SEP09 A
Key Dates						
KD-1010	Contract Commencement Date	01	07SEP09 A	08NOV12*	07SEP09 A	07SEP09 A
KD-1020	Contract Completion	0	07SEP09 A	08NOV11	07SEP09 A	07SEP09 A
KD-1030	Works Period of Section 1 Works (791Days)	830	07SEP09 A	08NOV10	07SEP09 A	07SEP09 A
KD-1040	Works Period of Section 2 Works (428Days)	449	07SEP09 A	08NOV11	07SEP09 A	07SEP09 A
KD-1050	Works Period of Section 3 Works (540Days)	575	07SEP09 A	08MAR11	07SEP09 A	07SEP09 A
KD-1060	Works Period of Section 4 Works (1155Days)	1155	07SEP09 A	08NOV12	07SEP09 A	07SEP09 A
Preliminaries						
B1-1000	Mobilization	90	07SEP09 A	06DEC09 A	07SEP09 A	07SEP09 A
B1-1100	Site Office	60	16NOV09 A	16JAN10	16NOV09 A	16NOV09 A
B1-1120	Maintenance/Service of Preliminary Items	938	17JAN10	09AUG12	17JAN10	17JAN10
B1-1130	Clearance & Demobilisation	88	10AUG12	09NOV12	10AUG12	10AUG12
B1-1140	Environmental Monitoring	1028	28DEC09 A	18OCT12	28DEC09 A	28DEC09 A
B1-1150	Material Approval For Water Mains & Accessories	100	07SEP09 A	19FEB10	07SEP09 A	07SEP09 A
B1-1160	Material Procurement & Delivery Start	60	28DEC09 A	01FEB10	28DEC09 A	28DEC09 A
B1-1160B	Delivery of Valve, Actuators, Flow Meter & EAM	400	14JUN10	18JUL11*	14JUN10	14JUN10
B1-1170	CCTV & Monitoring Of Existing OSD Drainage	610	18JAN10	19SEP11	15APR10	15APR10
B1-1180	Monitoring of H/D Structure	610	08MAR10	08NOV11	08NOV11	08NOV11
Section 1						
B1-1180	Monitoring of H/D Structure	830	07SEP09 A	15DEC11	07SEP09 A	07SEP09 A
Lane 2 Works						
General						
S1-1010	Approval & Consent - XP, TTA, MS & Temp Works	180	07SEP09 A	03MAR10	07SEP09 A	07SEP09 A
S1-1020	Trial Pit & Utilities Detection (Except E2 & K)	120	01DEC09 A	19MAR10	01DEC09 A	01DEC09 A
S1-1030	Portion H2 Cycle Track & Footpath Proposal	40	07SEP09 A	08OCT09 A	07SEP09 A	07SEP09 A
S1-1040	Portion H2 Diversion Route For Cycle Track	60	07OCT09 A	28NOV09 A	07OCT09 A	07OCT09 A
S1-1050	Portion H2 Submission For Hoarding Mural Design	60	07SEP09 A	17FEB10	07SEP09 A	07SEP09 A
S1-1060	Portion H2 Set Up For Hoarding Approved Design	30	18FEB10	19MAR10	07OCT12	07OCT12
S1-1080	Initial & Utilities Survey (Except E2 & K)	120	03OCT09 A	04MAR10	03OCT09 A	03OCT09 A
S1-2010	Final Pipe Testing & Reinstatement	45	01NOV11	15DEC11*	01NOV11	01NOV11
S1-2020	Completion of Section 1 Works	0	15DEC11*	15DEC11*	01NOV11	01NOV11
Portion C1						
S1-3010	MTRCL Consent For Works Commencement	180	07SEP09 A	08MAR10	07SEP09 A	07SEP09 A
S1-3020	MTRCL Structure Stability Monitoring	270	28MAY10	21FEB11	05JAN11	05JAN11
S1-3030	Portion C1 Pipe Works CH195.0-237.5 (O)	90	24JUN10	21SEP10	19MAR11	19MAR11
S1-3030A-10	Preparation & Submission of Risk Assessment	40	22FEB10*	02APR10	02NOV10	02NOV10
S1-3030A-30	Preparation & Submission of Method Statement	40	22FEB10	02APR10	02NOV10	02NOV10
S1-3030B-10	Excavation & Shoring	80	28MAY10	15AUG10	12DEC10	12DEC10
S1-3030B-20	Pipe Laying & Welding	90	17JUL10	04SEP10	31JAN11	31JAN11
S1-3030B-30	Backfilling & Reinstatement	10	05SEP10	14SEP10	23MAR11	23MAR11
S1-3040	Portion C1 Trough Construction CH237.5-290.0	60	08MAR10	04MAY10	15APR10	15APR10
S1-3040A-20	Preparation & Submission of Risk Assessment	28	17JUL10	13AUG10	19MAR11	19MAR11
S1-3040A-30	Preparation & Submission of Method Statement	28	17JUL10	13AUG10	15MAR11	15MAR11
S1-3040A-40	Preparation & Submission of Temp. Works	28	17JUL10	13AUG10	15MAR11	15MAR11
S1-3040B-10	Installation of Settlement Marker	3	31JUL10	02AUG10	29MAR11	29MAR11
S1-3040B-20	Excavation & Shoring For Pipe Trough (Stage 1)	15	15SEP10	29SEP10	01APR11	01APR11
S1-3040B-30	Formation & Blinding For Trough	3	30SEP10	02OCT10	19APR11	19APR11
S1-3040B-40	Formwork & Reinforcement For Trough	10	03OCT10	12OCT10	19APR11	19APR11

Start date: 07SEP09
Finish date: 08NOV12
Run date: 22JUN11
Page number: 1A
© Primavera Systems, Inc.

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

3 Months Rolling Program (July 2011)

Wong Hing - Penta-Ocean Joint Venture



Appendix F

ET Weekly Site Inspection Records

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

Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs	
Waste Management					
General Refuse					
	General refuse should be stored in enclosed bins or compaction units separate from C&D material.	√			
	A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.	√			
	An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	√			
Marine Dredged Sediment (During transportation and disposal)					
	Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and dredgers before the vessel is moved			√	No dredging work was observed.
	Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the EPD			√	No dredging work was observed.
	Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.			√	No dredging work was observed.
Site Practices					
	Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	√			
	Training of site personnel in proper waste management and chemical handling procedures	√			
	Provision of sufficient waste disposal points and regular collection of waste	√			
	Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.		√		Item 2
	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
Environmental Checklist			
Marine Ecology			
Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.	√		No dredging work was observed.
Deployment of frame type silt curtain to fully enclose the grab while dredging works are in progress.	√		No dredging work was observed.
Deployment of silt screen at the sea water intake at Kowloon South Salt Water Pumping Station while dredging works are in progress.	√		
Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	√		
Good Site Practices			
The Environmental Permit should be displaced conspicuously on site.	√		
Construction noise permits should be posted at site entrance or available for site inspection.	√		
Chemical storage area provided with lock and located on sealed areas.	√		
All chemicals should be placed at the banded area with adequate band capacity (> 110% of largest tank).	√		
Any unused chemicals or those with remaining functional capacity should be recycled.	√		
All generators, fuel and oil storage are within bundle areas.	√		
Oil leakage from machinery, vehicle and plant should be prevented.	√		
Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√		
A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be bunded and all the polluted surface run-off collected within this area should be diverted into wastewater treatment system.	√		

Summary of the Weekly Site Inspection:

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date
1	Follow-up action to item 1 on 28/06/2011, standing water noted in most drip trays during raining were cleaned.	Closed	--	110708_001	--
2	Follow-up action to item 2 on 28/06/2011, rubbish noted on the marine water surface inside the silt curtain was collected.	Closed	-	110708_002	---

Remark

No new item was found during the site inspection and audit this week.

Inspected by	Name	Signature	Date
	C. L. Lau		08 July 2011

Photos

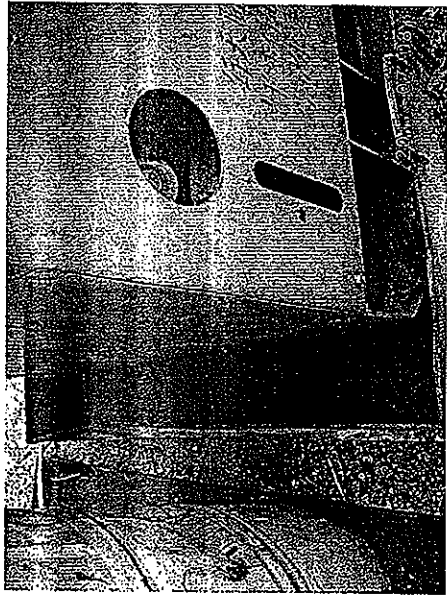


Photo 110708_001 (Standing water in drip tray due to raining was cleaned)

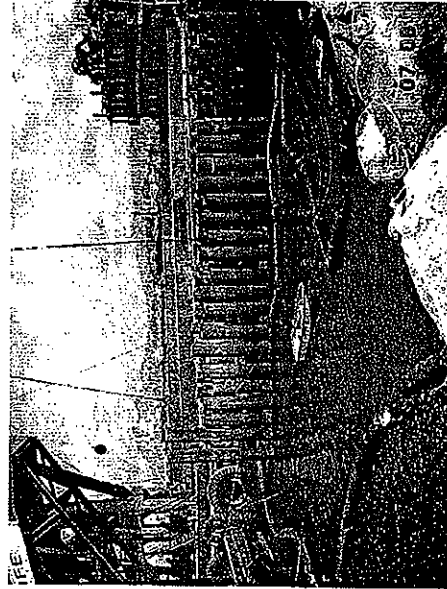


Photo 110708_002 (Rubbish inside the silt curtain was collected)

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	12 July 2011	Inspected by	RE <i>[Signature]</i>	IEC	Contractor	ET
Time	09:30	Name	<i>[Signature]</i>			

Weather Condition : Sunny / Fine / Cloudy / Drizzle / Rain / Storm / Hazy
 Wind : Calm / Light / Breeze / Strong
 Temperature : 28°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	
Water Quality				
Mitigation Measures for other Construction Activities				
<ul style="list-style-type: none"> Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the storm runoff being directed into foul sewers Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds. Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour 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. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains 	√			
Waste Management				
C&D Materials				
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	√		√	
Chemical Waste				
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	√			

Implementation Stages*	Remark		
	Yes	No	Not Obs N/A
Environmental Checklist			
Waste Management			
General Refuse			
General refuse should be stored in enclosed bins or compaction units separate from C&D material.	√		
A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.	√		
An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	√		
Marine Dredged Sediment (During transportation and disposal)			
Bottom opening of barges shall be fitted with tight fitting seals to prevent leakage of material. Excess material shall be cleaned from the decks and exposed fittings of barges and dredgers before the vessel is moved			√ No dredging work was observed.
Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the EPD			√ No dredging work was observed.
Barges or hopper barges shall not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation.			√ No dredging work was observed.
Site Practices			
Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	√		
Training of site personnel in proper waste management and chemical handling procedures	√		
Provision of sufficient waste disposal points and regular collection of waste	√		
Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.		√	Item 1
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	√		

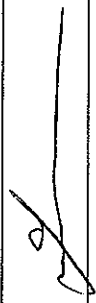
Implementation Stages*	Remark		
	Yes	No	Not Obs N/A
Environmental Checklist			
Marine Ecology			
Use of one grab dredger only with a maximum production rate of 4,000m ³ per day for dredging.	√		No dredging work was observed.
Deployment of frame type silt curtain to fully enclose the grab while dredging 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 bund 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 bund areas.	√		
Oil leakage from machinery, vehicle and plant should be prevented.	√		
Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	√		
A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be 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:


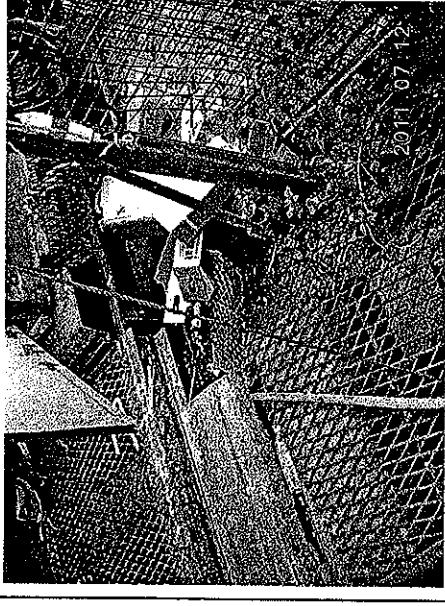

Item	Details of defective works or observations	Status of the item (closed / continue follow-up)	Proposed Follow Up Action (if required)	Photo Ref.	Target Completion Date
1	Rubbish was noted at some working areas in Portion H.	Follow-up	To collect the rubbish properly and provide rubbish pockets near the site working area for collecting the drinking containers and rubbish.	110712_001 and 002	19/07/11

Remark

The Contractor was reminded to clean up the drip trays and site areas with standing water after raining to prevent mosquito breeding.

Inspected by	Name	Signature	Date
	C. L. Lau		12 July 2011

Photos

	<p>Photo 110712_001 (Rubbish noted in Portion H)</p>
	<p>Photo 110712_002 (Rubbish noted in Portion H)</p>
	

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	20 July 2011	Inspected by	ABE Yip Ekin Yip	IEC	Contractor	JMC	ET	C. L. Lau
Time	14:00	Name	Sy			Carson Chan		

Weather Condition : Sunny / Fine / Cloudy / Drizzle (Rain) Storm / Hazy
 Wind : (Calm) Light / Breeze / Strong Temperature : 28°C
 Humidity : (High) Moderate / Low

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, boarding 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*	Implementation Stages*			Remark
	Yes	No	Not Obs	

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 Silt 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 waterfront grabs must be used.	✓			
▪ All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash	✓			
▪ The decks of all vessels should be kept tidy and free of oil or other substances that might be accidentally or otherwise washed overboard	✓			
▪ Adequate free board shall be maintained on barges to ensure that decks are not washed by wave action.	✓			
▪ All barges used for the transport of dredged materials should be fitted with tight bottom seals to prevent leakage of material during loading and transport	✓			
▪ Dredging activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds			✓	No dredging work was observed.
▪ Loading of barges should be controlled to prevent splashing of material into the surrounding waters. Barges should not be filled to a level that would cause the overflow of materials or sediment laden water during loading or transportation	✓			
▪ The speed of vessels should be controlled within the works area to prevent propeller wash from stirring up the seabed sediments	✓			

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



Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs	
Waste Management					
General Refuse					
<input checked="" type="checkbox"/>	General refuse should be stored in enclosed bins or compaction units separate from C&D material.				
<input checked="" type="checkbox"/>	A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material.				
<input checked="" type="checkbox"/>	An enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.				
Marine Dredged Sediment (During transportation and disposal)					
<input checked="" type="checkbox"/>	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			<input checked="" type="checkbox"/>	No dredging work was observed.
<input checked="" type="checkbox"/>	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			<input checked="" type="checkbox"/>	No dredging work was observed.
<input checked="" type="checkbox"/>	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.			<input checked="" type="checkbox"/>	No dredging work was observed.
Site Practices					
<input checked="" type="checkbox"/>	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				
<input checked="" type="checkbox"/>	Training of site personnel in proper waste management and chemical handling procedures				
<input checked="" type="checkbox"/>	Provision of sufficient waste disposal points and regular collection of waste				
<input checked="" type="checkbox"/>	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.				
<input checked="" type="checkbox"/>	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					
<input checked="" type="checkbox"/>	Sort C&D material from demolition and decommissioning of the existing facilities to recover recyclable portions such as metals				
<input checked="" type="checkbox"/>	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				
<input checked="" type="checkbox"/>	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				
<input checked="" type="checkbox"/>	Proper storage and site practices to minimise the potential for damage or contamination of construction materials				
<input checked="" type="checkbox"/>	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 Silt Water Pumping Station while dredging works are in progress.	✓			
Good site practices to avoid silt runoff from construction works associated with the construction of the submarine watermain.	✓			
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 bund 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 bund areas.	✓			
Oil leakage from machinery, vehicle and plant should be prevented.	✓			
Regular cleaning and maintenance programme for waste storage area, drainage systems, silt traps, sumps and oil interceptors.	✓			
A collection area should be provided where waste can be stored and loaded prior to removal from site. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. If an open area is unavoidable for the storage or loading/unloading of wastes, then the area should be 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	Rubbish noted at some working areas in Portion H was collected.	Closed	---	110720_001	---

Remark

The Contractor was reminded to clean up the drip trays and site areas with standing water after raining to prevent mosquito breeding.
 The Contractor was also reminded to clean up the rubbish in site areas regularly.

Inspected by	Name	Signature	Date
	C. L. Lau		20 July 2011

Contract No. 9/WSD/08

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

Photos

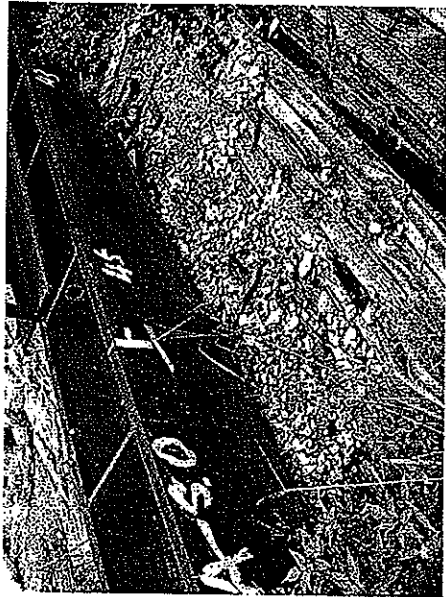


Photo 110720_001 (Rubbish was collected in Portion H)

WEEKLY SITE INSPECTION CHECKLIST

Inspection Date	26 July 2011	Inspected by	RE	IEC	Contractor	ET
Time	09:30	Name	Wai Yung Kwok		ENG	C. L. Lam

Weather

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

Temperature : 30°C
Humidity : High / Moderate / Low

Environmental Checklist	Implementation Stages*			Remark
	Yes	No	Not Obs	
Fugitive Dust Emission				
<ul style="list-style-type: none"> 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	✓			
▪ 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				
▪ 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	✓			No dredging work was observed.
▪ The speed of vessels should be controlled within the works area to prevent propeller wash from stirring up the seabed sediments	✓			

Environmental Checklist		Implementation Stages*			Remark
		Yes	No	Not Obs N/A	
Water Quality					
Mitigation Measures for other Construction Activities					
<ul style="list-style-type: none"> Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8 m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity should be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the storm runoff being directed into foul sewers Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present in the water within the site or dumping grounds Fuel tanks and storage areas should be provided with locks and be located on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank, to prevent spilled fuel oils from reaching the coastal waters of the Victoria Harbour and Western Harbour WQZs 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 1794). All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the Victoria Harbour WQZ under the TM-DSS. Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding. An adequately designed and located wheel washing bay should be provided at every site exit, and wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains 	√				
Waste Management					
C&D Materials					
<ul style="list-style-type: none"> Excavated materials should be reused on-site as backfilling material and for landscaping works as far as practicable. C&D material generated from excavation works should be disposed of at public fill reception facilities for other beneficial uses. A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be used, e.g. trip ticket system for chemical waste disposal. Quantities could be determined by weighing each load or other suitable methods. 	√			√	
Chemical Waste					
<ul style="list-style-type: none"> Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the approved Chemical Waste Treatment Centre, or another licensed facility. 	√			√	

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

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

Remark

No new item was found during the site inspection and audit in this week.

Inspected by	Name C. L. Lau	Signature 	Date 26 July 2011
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Appendix G

Implementation Schedule of Mitigation Measures

Environmental Mitigation Implementation Schedule

Environmental Protection Measures		Location	Implementation Status			
			Implemented	Partially Implemented	Not Implemented	Not Applicable
Air Quality						
	Dust control / mitigation measures shall be provided to prevent dust nuisance.	All areas	√			
	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.	All areas	√			
	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.	All areas	√			
	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	All areas	√			
	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.	All areas	√			
	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.	Site Egress				√
	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.	All haul roads	√			
	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 areas	√			
	All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet.	All areas	√			
	Vehicle speed should be limited to 10 kph except on completed access roads.	All areas	√			
	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.	All areas	√			
	The public road around the site entrance should be kept clean and free from dust.	All areas	√			
	Vehicle and equipment should be switched off while not in use.	All areas	√			
	All plant and equipment should be well maintained e.g. without black smoke emission.	All areas	√			
	Open burning should be prohibited.	All areas	√			
Noise Impact						
	The approved method of working, equipment and sound-reducing measures (e.g. use of silenced type of equipment, etc.) shall be adapted.	All areas	√			
	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.	All areas	√			
	Noisy equipment and mobile plant shall always be site away from NSRs.	All areas	√			
	Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	All areas	√			
	Powered mechanical equipment (PME) should be covered or shielded by appropriate acoustic materials.	All areas	√			
	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.	All areas	√			
	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.	All areas	√			



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



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

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



Appendix H

Site General Layout plan

NOTES:
 1. THIS DRAWING SHALL BE READ IN CONNECTION WITH DRAWING NOS. 241239/G/02/2 TO 02/4.

- LEGEND:
- PROPOSED FRESH WATER MAIN
 - PROPOSED SANITARY MAIN
 - PROPOSED WORKS LANE
 - DA / ST
 - SECTION 1 (SECTION 2)
 - SECTION 2
 - SECTION 3
 - SECTION 4
 - SECTION 5
 - SECTION 6
 - SECTION 7
 - SECTION 8
 - SECTION 9
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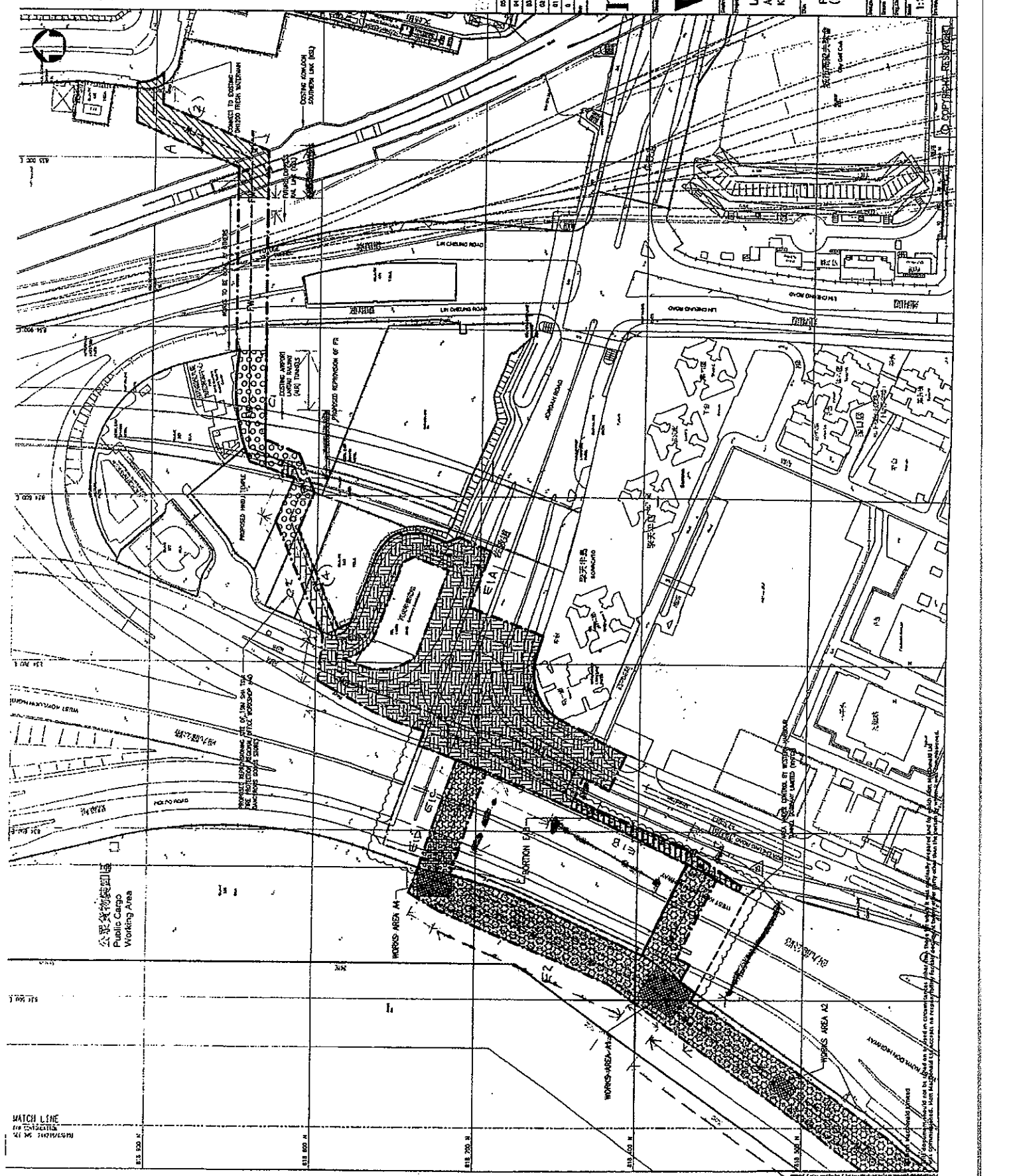
NOTES:
 1. THIS DRAWING SHALL BE READ IN CONNECTION WITH DRAWING NOS. 241239/G/02/2 TO 02/4.

NOTES:
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NOTES:
 1. THIS DRAWING SHALL BE READ IN CONNECTION WITH DRAWING NOS. 241239/G/02/2 TO 02/4.



Section 4

NO.	DESCRIPTION	SCALE	DATE
01	PROPOSED WORKS LANE	1:1000	10/10/08
02	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
03	PROPOSED SANITARY MAIN	1:1000	10/10/08
04	PROPOSED WORKS LANE	1:1000	10/10/08
05	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
06	PROPOSED SANITARY MAIN	1:1000	10/10/08
07	PROPOSED WORKS LANE	1:1000	10/10/08
08	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
09	PROPOSED SANITARY MAIN	1:1000	10/10/08
10	PROPOSED WORKS LANE	1:1000	10/10/08
11	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
12	PROPOSED SANITARY MAIN	1:1000	10/10/08
13	PROPOSED WORKS LANE	1:1000	10/10/08
14	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
15	PROPOSED SANITARY MAIN	1:1000	10/10/08
16	PROPOSED WORKS LANE	1:1000	10/10/08
17	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
18	PROPOSED SANITARY MAIN	1:1000	10/10/08
19	PROPOSED WORKS LANE	1:1000	10/10/08
20	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
21	PROPOSED SANITARY MAIN	1:1000	10/10/08
22	PROPOSED WORKS LANE	1:1000	10/10/08
23	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
24	PROPOSED SANITARY MAIN	1:1000	10/10/08
25	PROPOSED WORKS LANE	1:1000	10/10/08
26	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
27	PROPOSED SANITARY MAIN	1:1000	10/10/08
28	PROPOSED WORKS LANE	1:1000	10/10/08
29	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
30	PROPOSED SANITARY MAIN	1:1000	10/10/08
31	PROPOSED WORKS LANE	1:1000	10/10/08
32	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
33	PROPOSED SANITARY MAIN	1:1000	10/10/08
34	PROPOSED WORKS LANE	1:1000	10/10/08
35	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
36	PROPOSED SANITARY MAIN	1:1000	10/10/08
37	PROPOSED WORKS LANE	1:1000	10/10/08
38	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
39	PROPOSED SANITARY MAIN	1:1000	10/10/08
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41	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
42	PROPOSED SANITARY MAIN	1:1000	10/10/08
43	PROPOSED WORKS LANE	1:1000	10/10/08
44	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
45	PROPOSED SANITARY MAIN	1:1000	10/10/08
46	PROPOSED WORKS LANE	1:1000	10/10/08
47	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
48	PROPOSED SANITARY MAIN	1:1000	10/10/08
49	PROPOSED WORKS LANE	1:1000	10/10/08
50	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
51	PROPOSED SANITARY MAIN	1:1000	10/10/08
52	PROPOSED WORKS LANE	1:1000	10/10/08
53	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
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55	PROPOSED WORKS LANE	1:1000	10/10/08
56	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
57	PROPOSED SANITARY MAIN	1:1000	10/10/08
58	PROPOSED WORKS LANE	1:1000	10/10/08
59	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
60	PROPOSED SANITARY MAIN	1:1000	10/10/08
61	PROPOSED WORKS LANE	1:1000	10/10/08
62	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
63	PROPOSED SANITARY MAIN	1:1000	10/10/08
64	PROPOSED WORKS LANE	1:1000	10/10/08
65	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
66	PROPOSED SANITARY MAIN	1:1000	10/10/08
67	PROPOSED WORKS LANE	1:1000	10/10/08
68	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
69	PROPOSED SANITARY MAIN	1:1000	10/10/08
70	PROPOSED WORKS LANE	1:1000	10/10/08
71	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
72	PROPOSED SANITARY MAIN	1:1000	10/10/08
73	PROPOSED WORKS LANE	1:1000	10/10/08
74	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
75	PROPOSED SANITARY MAIN	1:1000	10/10/08
76	PROPOSED WORKS LANE	1:1000	10/10/08
77	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
78	PROPOSED SANITARY MAIN	1:1000	10/10/08
79	PROPOSED WORKS LANE	1:1000	10/10/08
80	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
81	PROPOSED SANITARY MAIN	1:1000	10/10/08
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85	PROPOSED WORKS LANE	1:1000	10/10/08
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87	PROPOSED SANITARY MAIN	1:1000	10/10/08
88	PROPOSED WORKS LANE	1:1000	10/10/08
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91	PROPOSED WORKS LANE	1:1000	10/10/08
92	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
93	PROPOSED SANITARY MAIN	1:1000	10/10/08
94	PROPOSED WORKS LANE	1:1000	10/10/08
95	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
96	PROPOSED SANITARY MAIN	1:1000	10/10/08
97	PROPOSED WORKS LANE	1:1000	10/10/08
98	PROPOSED FRESH WATER MAIN	1:1000	10/10/08
99	PROPOSED SANITARY MAIN	1:1000	10/10/08
100	PROPOSED WORKS LANE	1:1000	10/10/08

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

PROJECT NO. S/MSD/08
 LAYING OF WESTERN CROSS HARBOUR MAIN
 AND ASSOCIATED LAND MAINS FROM WEST
 KOWLOON TO SA TUNG PUN

POSSESSION OF SITE
 (SHEET 1 OF 5)

SCALE: 1:1000 (A1)
 DATE: 10/10/08
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]
 PROJECT NO. 241239/G/03/01
 SHEET NO. 05

NOTES
 1. THE DRAWING SHALL BE READ IN CONNECTION WITH DRAWING NOS. 24123/6/0301 AND 24123/6/0302.
 2. THE LEGEND SHALL REFER TO DRAWING NO. 24123/6/0303.

CD	1/16" = 1' (1:30.48)	1/8" = 1' (1:30.48)	1/4" = 1' (1:30.48)	1/2" = 1' (1:30.48)	3/4" = 1' (1:30.48)	1" = 1' (1:30.48)
DL	1/16" = 1' (1:30.48)	1/8" = 1' (1:30.48)	1/4" = 1' (1:30.48)	1/2" = 1' (1:30.48)	3/4" = 1' (1:30.48)	1" = 1' (1:30.48)
DL	1/16" = 1' (1:30.48)	1/8" = 1' (1:30.48)	1/4" = 1' (1:30.48)	1/2" = 1' (1:30.48)	3/4" = 1' (1:30.48)	1" = 1' (1:30.48)
DL	1/16" = 1' (1:30.48)	1/8" = 1' (1:30.48)	1/4" = 1' (1:30.48)	1/2" = 1' (1:30.48)	3/4" = 1' (1:30.48)	1" = 1' (1:30.48)
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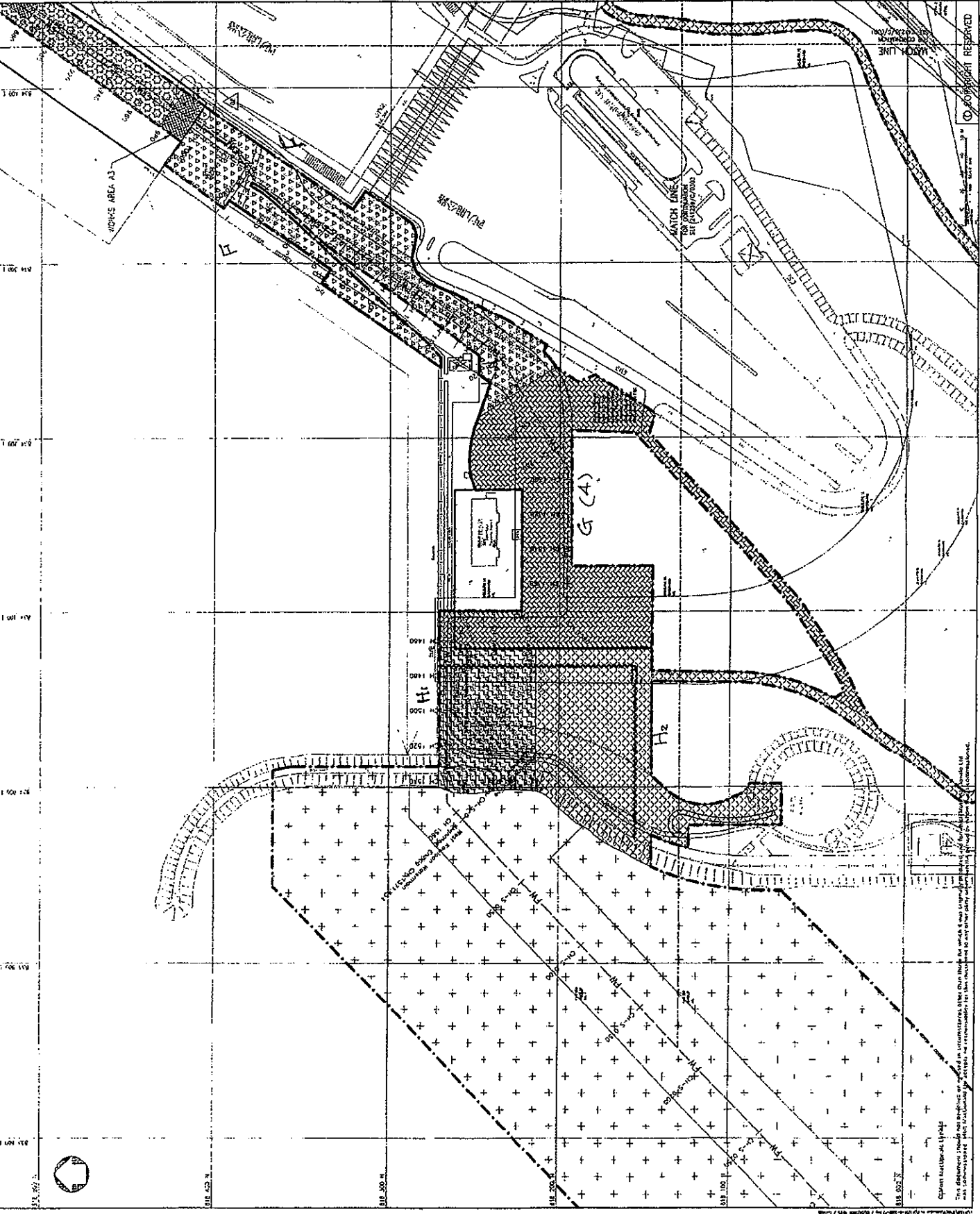
Mott MacDonald
 THE CONSULTING ENGINEERING COMPANY
 11/F, 110 HONG KONG STREET
 HONG KONG
 TEL: 2500 8888
 FAX: 2500 1111
 WWW.MOTTMACDONALD.COM

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

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

POSSESSION OF SITE
 (SHEET 2 OF 5)

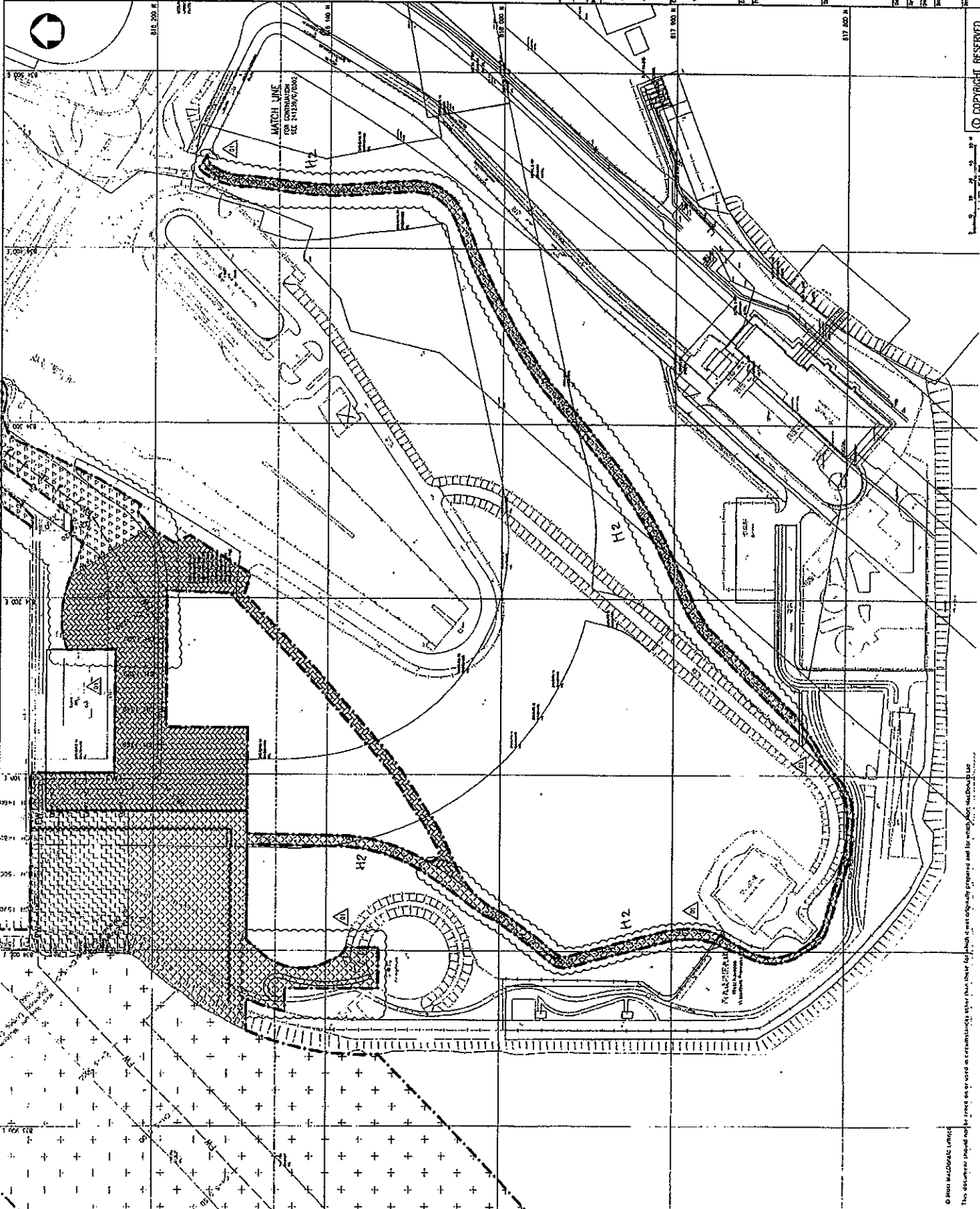
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Client	Water Supplies Department	Drawn by	WSD/08/001	Checked by	WSD/08/001
Design No.	24123/6/0301	Date	24/12/07	Revision	1
Drawn by	WSD/08/001	Scale	1:1000	Sheet No.	02
Checked by	WSD/08/001	Date	24/12/07	Revision	1



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NOTES :

1. THIS DRAWING SHALL BE READ IN CONNECTION WITH DRAWING NOS. 241236/G/0301 TO 0303 AND 0304 TO 0305.
2. THE LEGEND SHALL REFER TO DRAWING NO. 241236/G/0301.



DATE	09	2012
BY	PK	PK
CHECKED	PK	PK
SCALE	AS SHOWN	
PROJECT	Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Sai Ying Pui	

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THE GOVERNMENT OF THE HONG KONG
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 WATER SUPPLIES DEPARTMENT

9/MSD/03

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

POSSESSION OF SITE
 (SHEET 3 OF 5)

DESIGN	PK	PK	PK	PK	PK
CHECKED	PK	PK	PK	PK	PK
DATE	1:1000	09A1	241236	TEN	01

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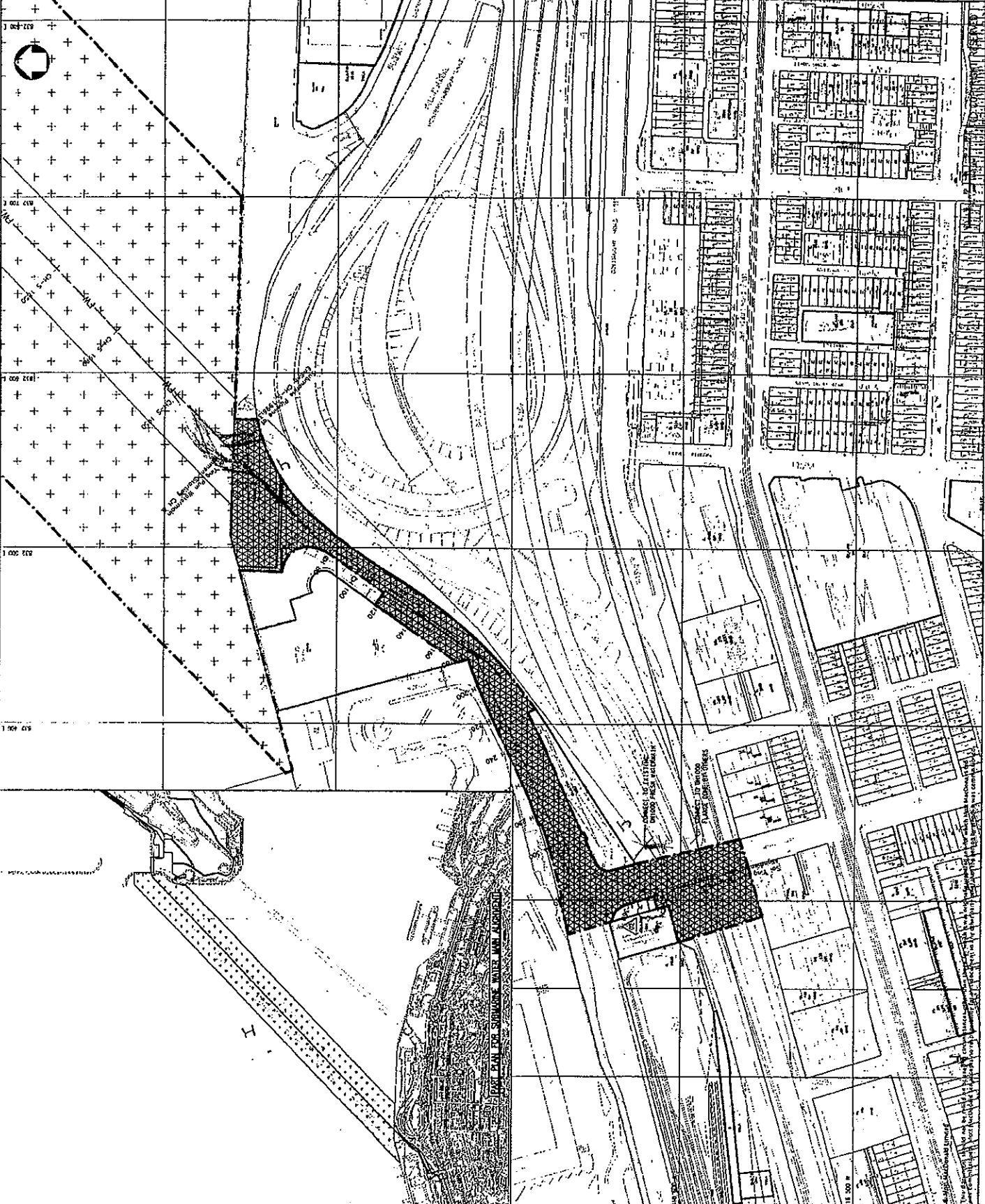
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241236/G/0303

01

NOTES :

1. THIS DRAWING SHALL BE MADE IN CONJUNCTION WITH DRAWING NOS. 241239/6/0301, 241239/6/0302.
2. THE LEGEND SHALL REFER TO DRAWING NO. 241239/6/0301.



DATE OF ISSUE	24-11-1992
BY	TECHNICAL SUPERVISOR NO. 4
DATE OF ISSUE	24-11-1992
BY	TECHNICAL SUPERVISOR NO. 3
DATE OF ISSUE	24-11-1992
BY	TECHNICAL SUPERVISOR NO. 2
DATE OF ISSUE	24-11-1992
BY	TECHNICAL SUPERVISOR NO. 1

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

9/MSD/08

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

POSSESSION OF SITE
 (SHEET 4 OF 5)

NO.	DATE	BY	REVISION
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2	24-11-92	TECHNICAL SUPERVISOR NO. 3	ISSUE FOR TENDER
3	24-11-92	TECHNICAL SUPERVISOR NO. 2	ISSUE FOR TENDER
4	24-11-92	TECHNICAL SUPERVISOR NO. 1	ISSUE FOR TENDER

1:1000 0/41

241239

TEN

02

241239/6/0304

NOTES

- 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 241239/00/01 TO 03/01
- 2. THE SECOND SHALL REFER TO DRAWING NO. 241239/02/00/01.

NO.	DATE	BY	REVISION
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2	03/12/2017	mm	ISSUE FOR TENDER



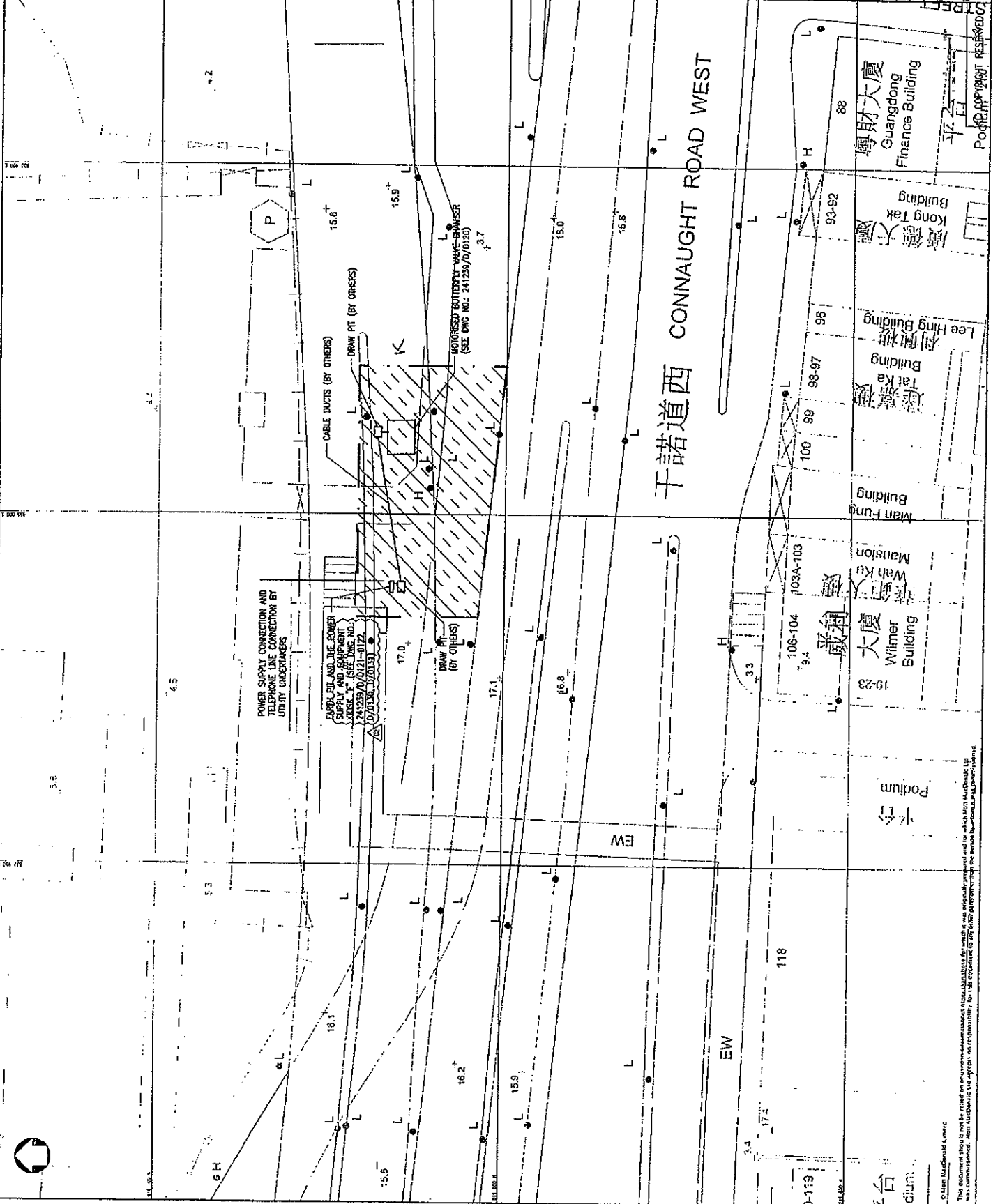
THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
WATER SUPPLIES DEPARTMENT

Project: 9/NSD/08

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

POSSESSION OF SITE (SHEET 5 OF 5)

Scale:	1:250	Sheet No.:	5
Date:	21/10/2017	Drawn by:	mm
Checked by:	mm	Scale:	1:250
Project No.:	241239/02/0305	Revision:	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)
 July 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
03-Jul	04-Jul	05-Jul	06-Jul	07-Jul	08-Jul	09-Jul
NM Holiday (West Kowloon) (Sai Ying Pun)		WQM Mid-Flood 07:45 - 11:45 Mid-Ebb 13:15 - 17:15	NM (SYP-Daytime)	WQM Mid-Flood 09:00 - 13:00 Mid-Ebb 14:30 - 18:30	NM (WK-Daytime)	WQM Mid-Ebb 11:00 - 15:00 Mid-Flood 17:00 - 21:00 NM Evening-time (West Kowloon) (Sai Ying Pun) NM Night-time (West Kowloon)
10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul
NM Night-time (West Kowloon) NM Holiday (West Kowloon) (Sai Ying Pun)	NM (WK-Daytime)	WQM Mid-Ebb 08:30 - 12:30 Mid-Flood 14:00 - 18:00 SI		WQM Mid-Ebb 10:30 - 14:30 Mid-Flood 16:00 - 20:00	NM (SYP-Daytime)	WQM Mid-Ebb 11:30 - 15:30 Mid-Flood 17:00 - 21:00
17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul
NM Holiday (West Kowloon) (Sai Ying Pun)	NM (SYP-Daytime)	WQM Mid-Flood 07:00 - 11:00 Mid-Ebb 12:30 - 16:30	NM (WK-Daytime)	WQM Mid-Flood 08:00 - 12:00 Mid-Ebb 13:30 - 17:30		WQM Mid-Flood 09:00 - 13:00 Mid-Ebb 14:30 - 18:30
24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul
NM Holiday (West Kowloon) (Sai Ying Pun)	NM (SYP-Daytime)	WQM Mid-Ebb 09:00 - 13:00 Mid-Flood 14:30 - 18:30 SI	NM (WK-Daytime)	WQM Mid-Ebb 09:30 - 13:30 Mid-Flood 15:00 - 19:00		WQM Mid-Ebb 10:30 - 14:30 Mid-Flood 16:00 - 20:00
31-Jul						
NM Holiday (West Kowloon) (Sai Ying Pun)						

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)
 August 2011

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



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 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	9,420	EP/MD/10-086
17-May-2010	1,200	2	10,620	EP/MD/10-086
18-May-2010	700	1	11,320	EP/MD/10-086
19-May-2010	2,000	3	13,320	EP/MD/10-086
20-May-2010	1,400	2	14,720	EP/MD/10-086
21-May-2010	1,400	2	16,120	EP/MD/10-086
22-May-2010	2,100	3	18,220	EP/MD/10-086
23-May-2010	1,400	2	19,620	EP/MD/10-086
24-May-2010	1,400	2	21,020	EP/MD/10-086
25-May-2010	1,300	2	22,320	EP/MD/10-086
26-May-2010	1,400	2	23,720	EP/MD/10-086
27-May-2010	1,300	2	25,020	EP/MD/10-086
28-May-2010	1,400	2	26,420	EP/MD/10-086
29-May-2010	600	1	27,020	EP/MD/10-086
30-May-2010	2,100	3	29,120	EP/MD/11-012
31-May-2010	700	1	29,820	EP/MD/11-012
01-Jun-2010	1,900	3	31,720	EP/MD/11-012
02-Jun-2010	1,220	2	32,940	EP/MD/11-012
03-Jun-2010	1,300	2	34,240	EP/MD/11-012
04-Jun-2010	1,200	2	35,440	EP/MD/11-012
05-Jun-2010	1,400	2	36,840	EP/MD/11-012
06-Jun-2010	600	1	37,440	EP/MD/11-012
07-Jun-2010	0	0	37,440	EP/MD/11-012
08-Jun-2010	500	1	37,940	EP/MD/11-012
09-Jun-2010	0	0	37,940	EP/MD/11-012
10-Jun-2010	600	1	38,540	EP/MD/11-012
11-Jun-2010	1,200	2	39,740	EP/MD/11-012
12-Jun-2010	1,400	2	41,140	EP/MD/11-012
13-Jun-2010	1,400	2	42,540	EP/MD/11-012
14-Jun-2010	0	0	42,540	EP/MD/11-012
15-Jun-2010	0	0	42,540	EP/MD/11-012
16-Jun-2010	0	0	42,540	EP/MD/11-012
17-Jun-2010	0	0	42,540	EP/MD/11-012
18-Jun-2010	0	0	42,540	EP/MD/11-012
19-Jun-2010	0	0	42,540	EP/MD/11-012

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)	
20-Jun-2010	0	0	42,540	EP/MD/11-012
21-Jun-2010	0	0	42,540	EP/MD/11-012
22-Jun-2010	0	0	42,540	EP/MD/11-012
23-Jun-2010	0	0	42,540	EP/MD/11-012
24-Jun-2010	0	0	42,540	EP/MD/11-012
25-Jun-2010	0	0	42,540	EP/MD/11-012
26-Jun-2010	0	0	42,540	EP/MD/11-012
27-Jun-2010	0	0	42,540	EP/MD/11-012
28-Jun-2010	0	0	42,540	EP/MD/11-012
29-Jun-2010	0	0	42,540	EP/MD/11-012
30-Jun-2010	1,200	2	43,740	EP/MD/11-024
01-Jul-2010	2,600	4	46,340	EP/MD/11-024
02-Jul-2010	2,800	4	49,140	EP/MD/11-024
03-Jul-2010	1,400	2	50,540	EP/MD/11-024
04-Jul-2010	2,100	3	52,640	EP/MD/11-024
05-Jul-2010	2,850	4	55,490	EP/MD/11-024
06-Jul-2010	1,400	2	56,890	EP/MD/11-024
07-Jul-2010	1,400	2	58,290	EP/MD/11-024
08-Jul-2010	2,700	4	60,990	EP/MD/11-024
09-Jul-2010	2,100	3	63,090	EP/MD/11-024
10-Jul-2010	2,100	3	65,190	EP/MD/11-024
11-Jul-2010	1,400	2	66,590	EP/MD/11-024
12-Jul-2010	2,150	3	68,740	EP/MD/11-024
13-Jul-2010	2,100	3	70,840	EP/MD/11-024
14-Jul-2010	700	1	71,540	EP/MD/11-024
15-Jul-2010	2,100	3	73,640	EP/MD/11-024
16-Jul-2010	2,100	3	75,740	EP/MD/11-024
17-Jul-2010	700	1	76,440	EP/MD/11-024
18-Jul-2010	700	1	77,140	EP/MD/11-024
19-Jul-2010	2,100	3	79,240	EP/MD/11-024
20-Jul-2010 (18 July 2010)	2,100	3	81,340	EP/MD/11-024
21-Jul-2010	700	1	82,040	EP/MD/11-024
22-Jul-2010	600	1	82,640	EP/MD/11-024
23-Jul-2010	1,400	2	84,040	EP/MD/11-024
24-Jul-2010	1,400	2	85,440	EP/MD/11-024
25-Jul-2010	1,400	2	86,840	EP/MD/11-024
26-Jul-2010	1,450	2	88,290	EP/MD/11-024
27-Jul-2010	2,200	3	90,490	EP/MD/11-024
28-Jul-2010	1,450	2	91,940	EP/MD/11-024
29-Jul-2010	1,500	2	93,440	EP/MD/11-024
30-Jul-2010	0	0	93,440	--
31-Jul-2010	0	0	93,440	--
01-Aug-2010	0	0	93,440	--
02-Aug-2010	0	0	93,440	--

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)	
03-Aug-2010	0	0	95,440	
04-Aug-2010	0	0	96,440	
05-Aug-2010	700	1	97,140	
(dump on 06-Aug-10)				
06-Aug-2010	1,500	2	98,640	EP/MD/11-053
07-Aug-2010	700	1	99,340	EP/MD/11-053
08-Aug-2010	2,100	3	101,440	EP/MD/11-053
09-Aug-2010	1,500	2	102,940	EP/MD/11-053
10-Aug-2010	1,500	2	104,440	EP/MD/11-053
11-Aug-2010	700	1	105,140	EP/MD/11-053
12-Aug-2010	0	0	105,140	EP/MD/11-053
13-Aug-2010	0	0	105,140	EP/MD/11-053
14-Aug-2010	0	0	105,140	EP/MD/11-053
15-Aug-2010	0	0	105,140	EP/MD/11-053
16-Aug-2010	0	0	105,140	EP/MD/11-053
17-Aug-2010	0	0	105,140	EP/MD/11-053
18-Aug-2010	0	0	105,140	EP/MD/11-053
19-Aug-2010	0	0	105,140	EP/MD/11-053
20-Aug-2010	0	0	105,140	EP/MD/11-053
21-Aug-2010	0	0	105,140	EP/MD/11-053
22-Aug-2010	0	0	105,140	EP/MD/11-053
23-Aug-2010	0	0	105,140	EP/MD/11-053
24-Aug-2010	0	0	105,140	EP/MD/11-053
25-Aug-2010	0	0	105,140	EP/MD/11-053
26-Aug-2010	0	0	105,140	EP/MD/11-053
27-Aug-2010	0	0	105,140	EP/MD/11-053
28-Aug-2010	1,400	2	106,540	EP/MD/11-053
29-Aug-2010	700	1	107,240	EP/MD/11-053
30-Aug-2010	0	0	107,240	EP/MD/11-053
31-Aug-2010	750	1	107,990	EP/MD/11-053
01-Sep-2010	0	0	107,990	EP/MD/11-053
02-Sep-2010	0	0	107,990	EP/MD/11-053
03-Sep-2010	0	0	107,990	EP/MD/11-053
04-Sep-2010	0	0	107,990	EP/MD/11-053
05-Sep-2010	0	0	107,990	EP/MD/11-053
TOTAL =	104,990	155		

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	1,400	2	1,400	EP/MD/10-085	East Ninepin Mud Disposal Ground
15-Jun-2010	1,400	2	2,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
16-Jun-2010	2,100	3	4,900	EP/MD/10-085	East Ninepin Mud Disposal Ground
17-Jun-2010	2,800	4	7,700	EP/MD/10-085	East Ninepin Mud Disposal Ground
18-Jun-2010	2,100	3	9,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
19-Jun-2010	2,700	4	12,500	EP/MD/10-085	East Ninepin Mud Disposal Ground
20-Jun-2010	2,800	4	15,300	EP/MD/10-085	East Ninepin Mud Disposal Ground
21-Jun-2010	2,100	3	17,400	EP/MD/10-085	East Ninepin Mud Disposal Ground
22-Jun-2010	2,800	4	20,200	EP/MD/10-085	East Ninepin Mud Disposal Ground
23-Jun-2010	2,100	3	22,300	EP/MD/10-085	East Ninepin Mud Disposal Ground
24-Jun-2010	2,100	3	24,400	EP/MD/10-085	East Ninepin Mud Disposal Ground
25-Jun-2010	2,100	3	26,500	EP/MD/10-085	East Ninepin Mud Disposal Ground
26-Jun-2010	2,100	3	28,600	EP/MD/10-085	East Ninepin Mud Disposal Ground
27-Jun-2010	700	1	29,300	EP/MD/10-085	East Ninepin Mud Disposal Ground
28-Jun-2010	2,100	3	31,400	EP/MD/10-085	East Ninepin Mud Disposal Ground
29-Jun-2010	1,400	2	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
30-Jun-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
01-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
02-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground
03-Jul-2010	0	0	32,800	EP/MD/10-085	East Ninepin Mud Disposal Ground

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)		
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	700	1	33,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
31-Jul-2010	1,400	2	34,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
01-Aug-2010	2,100	3	37,000	EP/MD/11-039	East Ninepin Mud Disposal Ground
02-Aug-2010	1,400	2	38,400	EP/MD/11-039	East Ninepin Mud Disposal Ground
03-Aug-2010	700	1	39,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
04-Aug-2010	700	1	39,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
05-Aug-2010	700	1	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
06-Aug-2010	0	0	40,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
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	1,400	2	41,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
13-Aug-2010	1,400	2	43,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
14-Aug-2010	2,100	3	45,400	EP/MD/11-039	East Ninepin Mud Disposal Ground
15-Aug-2010	2,100	3	47,500	EP/MD/11-039	East Ninepin Mud Disposal Ground
16-Aug-2010	2,100	3	49,600	EP/MD/11-039	East Ninepin Mud Disposal Ground
17-Aug-2010	700	1	50,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
18-Aug-2010	1,400	2	51,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
19-Aug-2010	1,400	2	53,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
20-Aug-2010	2,100	3	55,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
21-Aug-2010	1,400	2	56,600	EP/MD/11-039	East Ninepin Mud Disposal Ground
22-Aug-2010	700	1	57,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
23-Aug-2010	0	0	57,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
24-Aug-2010	1,400	2	58,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
25-Aug-2010	1,400	2	60,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
26-Aug-2010	2,100	3	62,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
27-Aug-2010	2,100	3	64,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
28-Aug-2010	0	0	64,300	EP/MD/11-039	East Ninepin Mud Disposal Ground
29-Aug-2010	1,400	2	65,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
30-Aug-2010	1,400	2	67,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
31-Aug-2010	2,100	3	69,200	EP/MD/11-039	East Ninepin Mud Disposal Ground
01-Sep-2010	1,400	2	70,600	EP/MD/11-039	East Ninepin Mud Disposal Ground
02-Sep-2010	2,100	3	72,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
03-Sep-2010	2,100	3	74,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
04-Sep-2010	2,800	4	77,600	EP/MD/11-039	East Ninepin Mud Disposal Ground

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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)		
05-Sep-2010	2,100	3	79,700	EP/MD/11-039	East Ninepin Mud Disposal Ground
06-Sep-2010	1,400	2	81,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
07-Sep-2010	0	0	81,100	EP/MD/11-039	East Ninepin Mud Disposal Ground
08-Sep-2010	700	1	81,800	EP/MD/11-039	East Ninepin Mud Disposal Ground
09-Sep-2010	1,400	2	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	700	1	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
23-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
24-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
25-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
26-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
27-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
28-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
29-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
30-Sep-2010	0	0	83,900	EP/MD/11-039	East Ninepin Mud Disposal Ground
01-Oct-2010	500	1	84,400	EP/MD/11-069	South Cheung Chau
02-Oct-2010	500	1	84,900	EP/MD/11-069	South Cheung Chau
03-Oct-2010	1,000	2	85,900	EP/MD/11-069	South Cheung Chau
04-Oct-2010	1,000	2	86,900	EP/MD/11-069	South Cheung Chau
05-Oct-2010	500	1	87,400	EP/MD/11-069	South Cheung Chau
06-Oct-2010	1,000	2	88,400	EP/MD/11-069	South Cheung Chau
07-Oct-2010	1,500	3	89,900	EP/MD/11-069	South Cheung Chau
08-Oct-2010	1,000	2	90,900	EP/MD/11-069	South Cheung Chau
09-Oct-2010	500	1	91,400	EP/MD/11-069	South Cheung Chau
10-Oct-2010	0	0	91,400	EP/MD/11-069	South Cheung Chau
11-Oct-2010	1,500	3	92,900	EP/MD/11-069	South Cheung Chau
12-Oct-2010	1,000	2	93,900	EP/MD/11-069	South Cheung Chau
13-Oct-2010	2,000	4	95,900	EP/MD/11-069	South Cheung Chau
14-Oct-2010	2,000	4	97,900	EP/MD/11-069	South Cheung Chau
15-Oct-2010	1,500	3	99,400	EP/MD/11-069	South Cheung Chau
16-Oct-2010	2,000	4	101,400	EP/MD/11-069	South Cheung Chau
17-Oct-2010	2,000	4	103,400	EP/MD/11-069	South Cheung Chau
18-Oct-2010	2,000	4	105,400	EP/MD/11-069	South Cheung Chau
19-Oct-2010	1,500	3	106,900	EP/MD/11-069	South Cheung Chau
20-Oct-2010	1,000	2	107,900	EP/MD/11-069	South Cheung Chau
21-Oct-2010	0	0	107,900	EP/MD/11-069	South Cheung Chau
22-Oct-2010	0	0	107,900	EP/MD/11-069	South Cheung Chau
23-Oct-2010	500	1	108,400	EP/MD/11-069	South Cheung Chau
24-Oct-2010	2,000	4	110,400	EP/MD/11-069	South Cheung Chau
25-Oct-2010	1,500	3	111,900	EP/MD/11-069	South Cheung Chau
26-Oct-2010	1,000	2	112,900	EP/MD/11-069	South Cheung Chau
27-Oct-2010	1,000	2	113,900	EP/MD/11-069	South Cheung Chau
28-Oct-2010	0	0	113,900	EP/MD/11-069	South Cheung Chau
29-Oct-2010	1,000	2	114,900	EP/MD/11-069	South Cheung Chau
30-Oct-2010	500	1	115,400	EP/MD/11-069	South Cheung Chau
31-Oct-2010	1,000	2	116,400	EP/MD/11-069	South Cheung Chau
01-Nov-2010	1,000	2	117,400	EP/MD/11-069	South Cheung Chau
02-Nov-2010	500	1	117,900	EP/MD/11-069	South Cheung Chau
03-Nov-2010	1,000	2	118,900	EP/MD/11-069	South Cheung Chau
04-Nov-2010	1,000	2	119,900	EP/MD/11-069	South Cheung Chau
05-Nov-2010	500	1	120,400	EP/MD/11-069	South Cheung Chau
06-Nov-2010	500	1	120,900	EP/MD/11-069	South Cheung Chau

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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)		
07-Nov-2010	500	1	121,400	EP/MD/11-069	South Cheung Chau
08-Nov-2010	0	0	121,400	EP/MD/11-069	South Cheung Chau
09-Nov-2010	500	1	121,900	EP/MD/11-069	South Cheung Chau
10-Nov-2010	300	1	122,200	EP/MD/11-069	South Cheung Chau
11-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
12-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
13-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
14-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
15-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
16-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
17-Nov-2010	0	0	122,200	EP/MD/11-069	South Cheung Chau
18-Nov-2010	1,500	3	123,700	EP/MD/11-069	South Cheung Chau
19-Nov-2010	1,000	2	124,700	EP/MD/11-069	South Cheung Chau
20-Nov-2010	1,500	3	126,200	EP/MD/11-069	South Cheung Chau
21-Nov-2010	1,000	2	127,200	EP/MD/11-069	South Cheung Chau
22-Nov-2010	1,500	3	128,700	EP/MD/11-069	South Cheung Chau
23-Nov-2010	1,000	2	129,700	EP/MD/11-069	South Cheung Chau
24-Nov-2010	2,000	4	131,700	EP/MD/11-069	South Cheung Chau
25-Nov-2010	1,000	2	132,700	EP/MD/11-069	South Cheung Chau
26-Nov-2010	1,800	4	134,500	EP/MD/11-069	South Cheung Chau
27-Nov-2010	1,000	2	135,500	EP/MD/11-069	South Cheung Chau
28-Nov-2010	1,500	3	137,000	EP/MD/11-069	South Cheung Chau
29-Nov-2010	2,000	4	139,000	EP/MD/11-069	South Cheung Chau
30-Nov-2010	1,500	3	140,500	EP/MD/11-069	South Cheung Chau
01-Dec-2010	1,000	2	141,500	EP/MD/11-069	South Cheung Chau
02-Dec-2010	1,500	3	143,000	EP/MD/11-069	South Cheung Chau
03-Dec-2010	1,000	2	144,000	EP/MD/11-069	South Cheung Chau
04-Dec-2010	1,500	3	145,500	EP/MD/11-069	South Cheung Chau
05-Dec-2010	1,000	2	146,500	EP/MD/11-069	South Cheung Chau
06-Dec-2010	500	1	147,000	EP/MD/11-069	South Cheung Chau
07-Dec-2010	1,500	3	148,500	EP/MD/11-069	South Cheung Chau
08-Dec-2010	1,000	2	149,500	EP/MD/11-069	South Cheung Chau
09-Dec-2010	1,000	2	150,500	EP/MD/11-069	South Cheung Chau
10-Dec-2010	1,500	3	152,000	EP/MD/11-069	South Cheung Chau
11-Dec-2010	500	1	152,500	EP/MD/11-069	South Cheung Chau
12-Dec-2010	1,000	2	153,500	EP/MD/11-069	South Cheung Chau
13-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
14-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
15-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
16-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
17-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
18-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
19-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
20-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
21-Dec-2010	0	0	153,500	EP/MD/11-069	South Cheung Chau
22-Dec-2010	500	1	154,000	EP/MD/11-069	South Cheung Chau
23-Dec-2010	0	0	154,000	EP/MD/11-069	South Cheung Chau
24-Dec-2010	0	0	154,000	EP/MD/11-069	South Cheung Chau
25-Dec-2010	500	1	154,500	EP/MD/11-069	South Cheung Chau
26-Dec-2010	0	0	154,500	EP/MD/11-069	South Cheung Chau
27-Dec-2010	500	1	155,000	EP/MD/11-069	South Cheung Chau
28-Dec-2010	500	1	155,500	EP/MD/11-069	South Cheung Chau
29-Dec-2010	500	1	156,000	EP/MD/11-069	South Cheung Chau
30-Dec-2010	500	1	156,500	EP/MD/11-069	South Cheung Chau
31-Dec-2010	500	1	157,000	EP/MD/11-069	South Cheung Chau
01-Jan-2011	500	1	157,500	EP/MD/11-069	South Cheung Chau
02-Jan-2011	500	1	158,000	EP/MD/11-069	South Cheung Chau
03-Jan-2011	1,000	2	159,000	EP/MD/11-069	South Cheung Chau
04-Jan-2011	0	0	159,000	EP/MD/11-069	South Cheung Chau
05-Jan-2011	500	1	159,500	EP/MD/11-069	South Cheung Chau
06-Jan-2011	500	1	160,000	EP/MD/11-069	South Cheung Chau
07-Jan-2011	0	0	160,000	EP/MD/11-069	South Cheung Chau
08-Jan-2011	500	1	160,500	EP/MD/11-069	South Cheung Chau

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Date	Dumping qty (m ³)	Barge Load per day	Accumulated Dumping Qty.	Permit No.	Mud Disposal Ground
	(bulk volume)		(bulk volume)		
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
19-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
20-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
21-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
22-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
23-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
24-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
25-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
26-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
27-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
28-Feb-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
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
06-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
07-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
08-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
09-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
10-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
11-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
12-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau

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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)		
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
20-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
21-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
22-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
23-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
24-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
25-Mar-2011	0	0	160,500	EP/MD/11-069	South Cheung Chau
26-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
01-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
02-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
03-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
04-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
05-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
06-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
07-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
08-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
09-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
10-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
11-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
12-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
13-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
14-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
15-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
16-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
17-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
18-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
19-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
20-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
21-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
22-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
23-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
24-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
25-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
26-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
27-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
28-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
29-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
30-Apr-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
01-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
02-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
03-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
04-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
05-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
06-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
07-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
08-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
09-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
10-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
11-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
12-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
13-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground
14-May-2011	0	0	160,500	EP/MD/11-160	East Ninepin Mud Disposal Ground

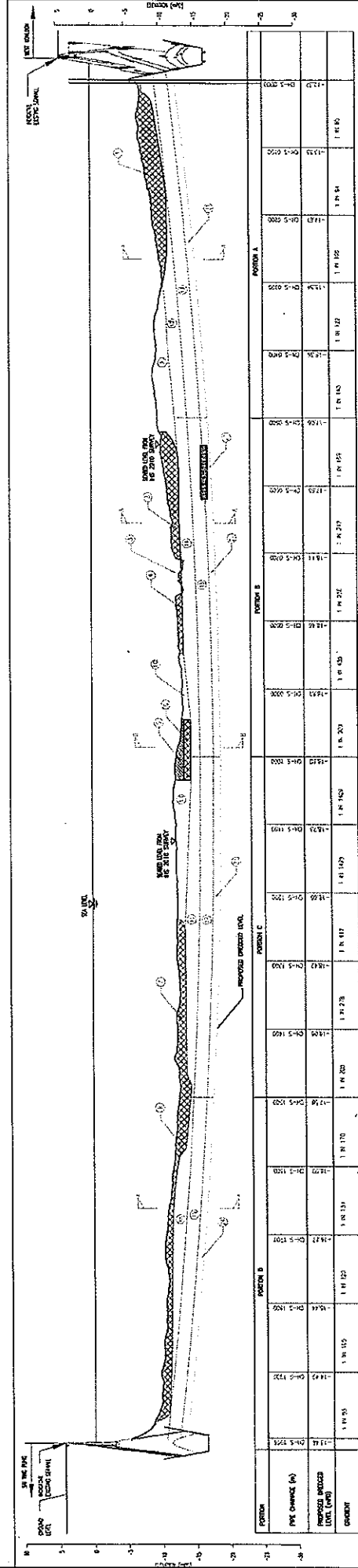
Wo Hing - Penta-Ocean Joint Venture					
Contract no. 9/WSD/08					
Laying of Western Cross Harbour Main & Associated Land Mains from West Kowloon to Sai Ying Pun					
Summary of Dumping Qty. of Type 1 Marine Sediment (Dispose to East Ninepin Mud Disposal Ground / South Cheung Chau)					
Date	Dumping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

NOTE:

LOGISTIC OF DREDGING

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

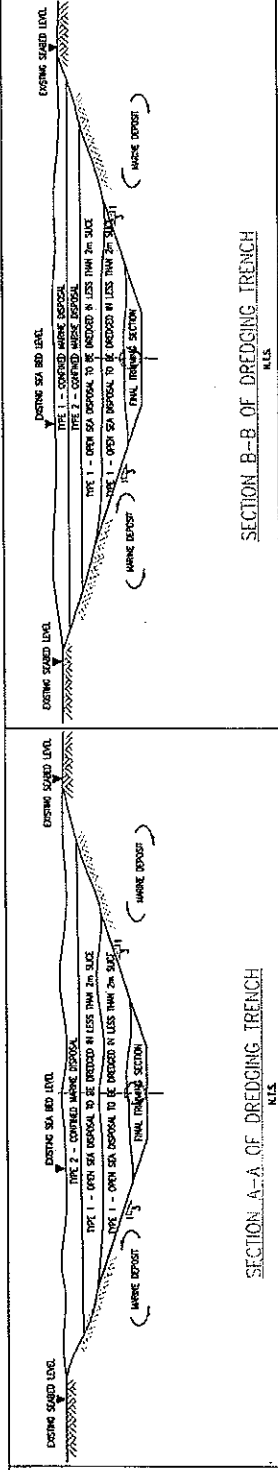
IF SIMILAR DISPOSAL SITE IS DEDICATED FOR TYPE 1D AND TYPE 1, MARINE SEDIMENT DREDGING LOGISTIC AT ㉑ WILL BE DELETED AND INCLUDED IN ⑮ AND ㉒



Sai Ying Pun

LONGITUDINAL SECTION OF DREDGING TRENCH

WEST KOWLOON



LEGEND:

- TYPE 1 - OPEN SEA DISPOSAL
- TYPE 1D - OPEN SEA DISPOSAL (DEDICATED SITES)
- TYPE 2 - CONFINED MARINE DISPOSAL
- TYPE 1 - CONFINED MARINE DISPOSAL

THE NUMBER INDICATE THE SEQUENCE OF DREDGING

<p>WO HING-PENTAOCEAN JOINT VENTURE 和興五洋聯合</p>	<p>CONTRACT NO. 91/WS/D/08 Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Sai Ying Pun</p>	<p>CONTRACTOR</p>	<p>91/WS/D/08 合約編號 敷設由西九龍至西營盤之西區過海海底水管及其相關的地下管</p>	<p>TONY TANG STANLEY LUNG</p>	<p>SCALE DWG No.</p>	<p>NTS SK-D-002</p>
	<p>DREDGING LOGISTIC</p>	<p>DATE 08 Apr 2010</p>	<p>CHECKED BY</p>	<p>REVISION D</p>	<p>DRAWN BY</p>	<p>OF DREDGING</p>

Wo Hing – Penta-Ocean Joint Venture

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

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

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)					
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to
03-05-2010	-	-	-	-	-	-	-	-	-	-	-	-
04-05-2010	7:00	23:00	1236	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	1846	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
			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. 9WSD/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		
26-06-2010	7:00	23:00	1206	1250	+8.5	-8.5	19:00	23:00	1206	1250	+8.5	-8.5		
			1306	1400	-7.5	-20.5			1380	1400	-7.5	-20.5		
			1412	1444	+7.5	-7.5			1412	1444	+7.5	-7.5		
			1362	1366	+5	+20			1362	1366	+5	+20		
27-06-2010	7:00	23:00	1326	1448	+7.5	+20.5	19:00	23:00	1400	1448	+7.5	+20.5		
			1400	1436	-7.5	-20.5			1400	1436	-7.5	-20.5		
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			1448	1468	+7.5	-7.5		
			1436	1456	-7.5	-20			1436	1456	-7.5	-20		
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			19:00	20:00	1496	1500	+7.5	-7.5
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	19:00	7:00	1064	1100
01-07-2010	7:00	7:00	1020	1064	0	+16	19:00	7:00	1020	1048	0	+16		
			1032	1048	0	-16			1032	1036	0	-16		
02-07-2010	7:00	7:00	1000	1032	0	16	19:00	7:00	1000	1008	0	16		
			992	1020	0	+16			992	1020	0	+16		
03-07-2010	7:00	18:00	968	992	0	+16	-	-						
			04-07-2010	7:00	7:00	944			968	0	+16			
05-07-2010	7:00	7:00	956	1000	0	-16	19:00	7:00	956	1000	0	-16		
			798	850	0	+17			19:00	7:00	798	832	0	+17
06-07-2010	7:00	7:00	838	850	0	-17	20:50	7:00	838	850	0	-17		
			07-07-2010	7:00	7:00	782			838	0	-17	19:00	7:00	782
08-07-2010	7:00	7:00	758	782	0	-16	19:00	7:00	758	774	0	-16		
			774	798	0	+16			774	798	0	+16		
09-07-2010	7:00	7:00	728	774	0	+17	19:00	7:00	696	750	0	-17		
			696	750	0	-17			19:00	7:00	666	670	0	+17
10-07-2010	7:00	7:00	682	710	0	-17	19:00	7:00	682	710	0	-17		
			654	682	0	-17			19:00	7:00	654	662	0	-17
11-07-2010	7:00	7:00	634	666	0	+17	20:55	1:10	634	666	0	+17		
			622	654	0	-17			622	642	0	-17		
12-07-2010	7:00	7:00	602	622	0	-17	19:00	7:00	602	626	0	+17		
			602	634	0	+17			19:00	7:00	570	588	0	+17
13-07-2010	7:00	7:00	570	602	0	+17	19:00	7:00	570	588	0	+17		
			574	602	0	-17			574	582	0	-17		
14-07-2010	7:00	7:00	558	570	0	+17	21:00	7:00	558	570	0	+17		
			562	574	0	-17			562	574	0	-17		
15-07-2010	7:00	7:00	546	562	0	-17	21:15	7:00	530	558	0	+17		
			530	558	0	+17			19:00	7:00	526	538	0	-17
16-07-2010	7:00	7:00	526	546	0	-17	19:00	7:00	526	530	0	+17		
			526	536	0	+17								
17-07-2010	7:00	19:00	-	-										
18-07-2010	7:00	23:00	260	300	0	-17	19:00	23:00	260	276	0	-17		
19-07-2010	7:00	23:00	248	300	0	+17	19:00	21:15	248	256	0	+17		
20-07-2010	7:00	23:00	232	260	0	-15	19:00	23:00	224	236	0	+16		
			224	248	0	+15								
21-07-2010	7:00	19:00	216	232	0	-15								
22-07-2010	7:00	19:00	-	-										
23-07-2010	07:00	23:00	200	216	0	-15	19:00	23:00	204	224	0	+15		
			208	224	0	+15			19:00	23:00	204	224	0	+15
			176	200	0	-15			19:00	20:50	176	184	0	-15
			172	184	0	-15			21:00	23:00	172	176	0	-15
24-07-2010	07:00	23:00	200	204	0	+15	21:00	23:00	200	204	0	+15		
			172	200	0	+15			19:00	22:40	172	192	0	+15
25-07-2010	07:00	23:00	172	192	0	+15	19:00	22:40	172	192	0	+15		
			168	172	0	+15			19:20	23:00	152	168	0	+15
26-07-2010	07:00	23:00	148	172	0	-15	19:00	21:00	128	136	0	+15		
			152	168	0	+15			21:45	23:00	124	128	0	+15
27-07-2010	07:00	23:00	128	136	0	+15	19:00	20:20	124	136	0	-15		
			124	128	0	+15			20:30	23:00	116	124	0	-15
28-07-2010	07:00	23:00	124	148	0	-15	19:00	20:45	88	100	0	-15		
			124	136	0	-15			19:00	20:45	1480	1528	+5	+20.5
29-07-2010	07:00	23:00	88	116	0	-15	19:00	22:45	1480	1528	+5	+20.5		
			88	100	0	-15			19:00	22:45	1500	1508	+7.5	-7.5
30-07-2010	07:00	23:00	1480	1528	+5	+20.5	19:00	22:45	1480	1528	+5	+20.5		
			1500	1508	+7.5	-7.5			1500	1508	+7.5	-7.5		
31-07-2010	7:00	23:00	1500	1548	-5	-20.5	19:00	23:00	1516	1540	+7.5	-7.5		
			1508	1516	+7.5	-7.5			1516	1540	+7.5	-7.5		
			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
01-08-2010	7:00	23:00	1528	1572	+5	+20.5	19:00	23:00	1548	1568	-5	-20.5		
			1548	1568	-5	-20.5			1548	1556	+7.5	-7.5		
			1548	1556	+7.5	-7.5								

Wo Hing – Penta-Ocean Joint Venture

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

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

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

Wo Hing – Penta-Ocean Joint Venture

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

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

Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)							
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to		
31-08-2010	7:00	7:00	850	870	0	-17.5			850	870	0	-17.5		
			914	922	+7.5	-7.5	1:00	6:00	914	922	+7.5	-7.5		
			914	938	+5	+17.5	19:00	7:00	914	938	+5	+17.5		
			910	914	+5	+17.5			910	914	+5	+17.5		
			918	938	+7.5	-7.5			918	938	+7.5	-7.5		
01-09-2010	7:00	7:00	926	938	-5	-17.5			926	938	-5	-17.5		
			910	926	-5	-17.5	19:00	21:15	910	926	-5	-17.5		
			902	918	+7.5	-7.5	22:35	3:45	902	918	+7.5	-7.5		
			902	914	+5	-17.5	5:05	7:00	902	914	+5	-17.5		
			878	902	+5	+17.5								
02-09-2010	7:00	7:00	902	910	-5	-17.5			902	910	-5	-17.5		
			882	902	-5	-17.5	19:35	1:15	882	902	-5	-17.5		
			894	902	+7.5	-7.5	4:25	7:00	894	902	+7.5	-7.5		
			870	894	+7.5	-7.5								
			850	878	+5	+17.5	19:35	7:00	850	878	+5	+17.5		
03-09-2010	7:00	7:00	858	882	-5	-17.5			858	882	-5	-17.5		
			846	858	-6	-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		
04-09-2010	7:00	6:00	822	834	+5	+17.5								
			834	854	+7.5	-7.5	19:00	6:00	834	854	+7.5	-7.5		
			814	834	+7.5	-7.5			814	834	+7.5	-7.5		
			798	822	-5	-17.5			798	822	-5	-17.5		
			810	822	+5	+17.5								
05-09-2010	7:00	7:00	810	814	+5	+17.5	19:00	7:00	810	814	+5	+17.5		
			794	814	+7.5	-7.5			794	814	+7.5	-7.5		
			778	794	+7.5	-7.5			778	794	+7.5	-7.5		
			778	798	-5	-17.5			778	798	-5	-17.5		
			766	778	+7.5	-7.5								
06-09-2010	7:00	23:00	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								
03-10-2010	7:00	7:00	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		
			742	754	+5	+17.5	4:25	7:00	742	754	+5	+17.5		
04-10-2010	7:00	7:00	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		
			702	726	+5	+17.5			702	726	+5	+17.5		
05-10-2010	7:00	7:00	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		
			666	702	+17.5	+5			666	702	+17.5	+5		
06-10-2010	7:00	7:00	682	698	-5	-17.5			682	698	-5	-17.5		
			662	682	-5	-17.5								
			654	682	+7.5	-7.5	19:00	7:00	654	682	+7.5	-7.5		
			638	662	-5	-17.5			638	662	-5	-17.5		
			646	654	+7.5	-7.5			646	654	+7.5	-7.5		
07-10-2010	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		
08-10-2010	7:00	7:00	580	602	+5	+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		
12-10-2010	7:00	7:00	640	646	+7.5	-7.5								
			512	520	+5	+20								
			496	512	+5	+20		19:00	7:00	496	512	+5	+20	
			508	520	-5	-20				508	520	-5	-20	
			500	508	-5	-20								
			492	500	-5	-20		19:00	20:50	492	500	-5	-20	
13-10-2010	7:00	7:00	492	500	+7.5	-7.5								
			480	492	+7.5	-7.5		21:15	4:00	480	492	+7.5	-7.5	
			472	480	-5	-20		4:00	7:00	472	480	-5	-20	
			472	496	+5	+20								
			476	480	+7.5	-7.5		19:00	7:00	476	480	+7.5	-7.5	
			460	472	-5	-20				460	472	-5	-20	
14-10-2010	7:00	7:00	456	460	-5	-20								
			468	472	+5	+20				456	460	-5	-20	
			472	476	+7.5	-7.5								
			448	456	-5	-20		19:00	20:50	448	456	-5	-20	
			462	468	+5	+20				462	468	+5	+20	
			452	462	+5	+20		20:55	1:50	452	462	+5	+20	
15-10-2010	7:00	7:00	448	452	+5	+20		6:30	7:00	448	452	+5	+20	
			436	472	+7.5	-7.5								
			424	436	+7.5	-7.5		19:00	23:10	424	436	+7.5	-7.5	
			436	448	-5	-20		23:15	4:15	436	448	-5	-20	
			444	452	+5	+20		4:20	7:00	444	452	+5	+20	
			420	436	-5	-20								
16-10-2010	7:00	7:00	420	432	+20	+5								
			412	420	-5	-20		19:00	6:30	412	420	-5	-20	
			416	424	+7.5	-7.5				416	424	+7.5	-7.5	
			436	444	+20	+5				436	444	+20	+5	
			432	436	+20	+5				432	436	+20	+5	
			400	412	+7.5	-7.5								
17-10-2010	7:00	7:00	404	420	+5	+20								
			392	404	+5	+20		19:00	0:00	392	404	+5	+20	
			404	436	-5	-20				404	436	-5	-20	
			440	460	+7.5	-7.5		0:45	5:15	440	460	+7.5	-7.5	
			436	440	+7.5	-7.5		5:25	6:30	436	440	+7.5	-7.5	
			396	400	+7.5	-7.5		7:00	7:00	396	400	+7.5	-7.5	
18-10-2010	7:00	7:00	376	396	+7.5	-7.5								
			368	392	+20	+5								
			376	404	-5	-20		19:00	23:30	376	404	-5	-20	
			436	460	+5	+20		0:10	5:00	436	460	+5	+20	
			372	376	-5	-20		5:30	7:00	372	376	-5	-20	
			360	376	+7.5	-7.5								
19-10-2010	7:00	7:00	348	360	+7.5	-7.5								
			356	372	-5	-20		19:00	20:05	356	372	-5	-20	
			360	368	+5	+20		21:20	2:45	360	368	+5	+20	
			456	480	-5	-20				456	480	-5	-20	
			436	456	-5	-20		2:50	7:00	436	456	-5	-20	
			356	360	+5	+20				356	360	+5	+20	
20-10-2010	7:00	23:00	340	348	+7.5	-7.5								
			336	340	+7.5	-7.5		19:00	21:10	336	340	+7.5	-7.5	
			348	356	+5	+20				348	356	+5	+20	
			340	348	+5	+20		21:20	23:00	340	348	+5	+20	
			-	-	-	-		-	-	-	-	-	-	-
			-	-	-	-		-	-	-	-	-	-	-
21-10-2010	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								
			328	336	+7.5	-7.5								
			296	320	+20	+5								
			316	336	-5	-17.5		19:00	23:00	316	336	-5	-17.5	
22-10-2010	7:00	19:00	480	500	-5	-20		0:00	2:00	480	500	-5	-20	
			460	500	+5	+20		2:05	7:00	460	500	+5	+20	
			320	328	+7.5	-7.5				320	328	+7.5	-7.5	
			284	316	-5	-17.5								
			284	304	+7.5	-7.5		19:00	23:00	284	304	+7.5	-7.5	
			280	284	+7.5	-7.5				280	284	+7.5	-7.5	
23-10-2010	7:00	7:00	260	296	+5	+17.5								
			276	280	+5	+17.5								
			264	276	+7.5	-7.5		19:00	23:00	264	276	+7.5	-7.5	
			260	284	-5	-17.5				260	284	-5	-17.5	
			252	264	+7.5	-7.5				252	264	+7.5	-7.5	
			248	252	+7.5	-7.5				248	252	+7.5	-7.5	
24-10-2010	7:00	7:00	188	260	+5	+17.5								
			240	248	+7.5	-7.5								
			256	260	-5	-17.5								
			240	256	-5	-17.5		19:00	22:00	240	256	-5	-17.5	
			216	240	0	-12.5				216	240	0	-12.5	
			236	240	+12.5	0		22:45	23:00	236	240	+12.5	0	
25-10-2010	7:00	23:00	204	236	0	+12.5								
			180	216	0	-12.5		19:00	22:55	180	216	0	-12.5	
			176	204	+12.5	0		19:00	21:50	176	204	+12.5	0	
			172	180	0	-12.5				172	180	0	-12.5	

Wo Hing – Penta-Ocean Joint Venture

Contract No. 9/WSD/06
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
01-11-2010	7:00	23:00	128	136	0	+12.5			128	136	0	+12.5
			104	128	+12.5	0						
			116	140	0	-12.5	19:00	23:00	116	140	0	-12.5
02-11-2010	7:00	23:00	112	116	0	-12.5			112	116	0	-12.5
			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
			0	4	0	+12.5			0	4	0	+12.5
07-11-2010	7:00	20:00	0	-12	0	+16						
			-12	-18.5	0	+16	19:00	20:00	-12	-18.5	0	+16
			240	256	+5	-5	19:00	23:00	240	256	+5	-5
08-11-2010	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
18-11-2010	7:00	7:00	476	500	+5	-5			476	500	+5	-5
			444	476	+5	-5						
			396	444	+5	-5	19:00	23:40	396	444	+5	-5
19-11-2010	7:00	7:00	430	470	+15	+5	0:10	4:30	430	470	+15	+5
			392	396	+5	-5	5:55	8:00	392	396	+5	-5
			364	392	+5	-5						
20-11-2010	7:00	7:00	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
21-11-2010	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
22-11-2010	7:00	7:00	688	700	+5	-5						
			700	732	+5	-5	19:00	21:00	700	732	+5	-5
			732	760	+5	-5	21:50	3:00	732	760	+5	-5
23-11-2010	7:00	7:00	760	780	+5	-5	3:35	7:00	760	780	+5	-5
			780	788	+5	-5						
			788	824	+5	-5	19:00	21:40	788	824	+5	-5
24-11-2010	7:00	7:00	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						
25-11-2010	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
26-11-2010	7:00	7:00	952	988	-5	+15						
			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
27-11-2010	7:00	7:00	1044	1084	+7.5	-7.5						
			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
28-11-2010	7:00	7:00	1152	1156	+5	-12.5						
			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
29-11-2010	7:00	7:00	1204	1224	+10	-10	1:30	7:00	1204	1224	+10	-10
			1224	1244	+10	0						
			1244	1328	-12.5	+7.5	19:00	23:35	1244	1328	-12.5	+7.5
30-11-2010	7:00	7:00	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						
31-11-2010	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
01-12-2010	7:00	7:00	1150	1200	+10	0	2:40	7:00	1150	1200	+10	0
			1412	1420	0	+7.5						
			1420	1432	+7.5	0	19:00	7:00	1420	1432	+7.5	0
02-12-2010	7:00	7:00	1432	1452	+5	-5			1432	1452	+5	-5
			1452	1492	+5	-5			1452	1492	+5	-5
			1492	1500	+5	-5			1492	1500	+5	-5
03-12-2010	7:00	7:00	1492	1516	+5	-5						

Wo Hing – Penta-Ocean Joint Venture

Contract No. 9WSD/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		
01-12-2010	7:00	7:00	1516	1548	+5	-10	19:00	7:00	1516	1548	+5	-10		
			1548	1564	+5	-10			1548	1564	+5	-10		
			1564	1568	+5	-10			1564	1568	+5	-10		
			1564	1576	-10	+5								
			1576	1620	-10	+5								
			1620	1640	-12.5	-5			19:00	7:00	1620	1640	-12.5	-5
02-12-2010	7:00	7:00	1620	1640	0	+7.5	19:00	7:00	1620	1640	0	+7.5		
			1620	1632	+5	-5			1620	1632	+5	-5		
			1632	1636	+5	-5			1632	1636	+5	-5		
			1636	1640	+5	-5								
			1640	1644	+5	-5								
			1640	1664	+5	+12.5			19:00	7:00	1640	1644	+5	-5
03-12-2010	7:00	7:00	1640	1644	-5	-12.5	19:00	7:00	1640	1664	+5	+12.5		
			1644	1664	-5	-12.5			1640	1644	-5	-12.5		
			1644	1656	+5	-5								
			1656	1664	+5	-5								
			1664	1680	-16	-2.5								
			1664	1680	+2.5	+15			19:00	7:00	1664	1680	+2.5	+15
04-12-2010	7:00	7:00	1644	1680	-5	+5	19:00	7:00	1644	1680	-5	+5		
			1680	1688	+15	+2.5			1644	1680	-5	+5		
			1688	1700	+2.5	+12.5			1680	1688	+15	+2.5		
			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			19:00	7:00	1680	1696	+5	-5
05-12-2010	7:00	7:00	1696	1700	+5	-5	19:00	7:00	1696	1700	+5	-5		
			1700	1716	+2.5	+12.5			1696	1700	+5	-5		
			1700	1708	-2.5	-12.5			1700	1716	+2.5	+12.5		
			1708	1720	-2.5	-12.5			1700	1708	-2.5	-12.5		
			1700	1704	-5	+5								
			1704	1720	+5	-5								
06-12-2010	7:00	7:00	1720	1736	+2.5	+12.5	19:00	7:00	1736	1744	+2.5	+12.5		
			1736	1744	+2.5	+12.5			1720	1744	-12.5	-2.5		
			1720	1744	-12.5	-2.5			1720	1732	+5	-5		
			1720	1732	+5	-5			1732	1740	+5	-5		
			1732	1740	-5	+5			1740	1744	+5	-5		
			1740	1744	+5	-5			19:00	7:00	1740	1744	+5	-5
07-12-2010	7:00	7:00	1744	1752	0	+12.5	19:00	7:00	1744	1752	0	+12.5		
			1752	1756	0	+12.5			1744	1752	0	+12.5		
			1744	1748	0	-12.5			1752	1756	0	+12.5		
			1748	1776	-12.5	0			1744	1748	0	-12.5		
			1776	1796	0	+12.5			1776	1792	-12.5	0		
			1792	1796	-12.5	0			1792	1796	-12.5	0		
08-12-2010	7:00	7:00	1796	1808	0	-12.5	19:00	7:00	1756	1796	0	+12.5		
			1808	1828	0	-12.5			1776	1792	-12.5	0		
			1808	1840	0	+12.5			1792	1796	-12.5	0		
			1828	1836	0	-12.5								
			1836	1860	-12.5	0								
			1840	1860	0	+12.5			19:00	23:00	1808	1840	0	+12.5
09-12-2010	7:00	7:00	1860	1900	0	-12.5	19:00	7:00	1828	1836	0	-12.5		
			1860	1868	0	+12.5			1860	1900	0	-12.5		
			1868	1872	0	+12.5			1860	1868	0	+12.5		
			1872	1900	0	+12.5			1868	1872	0	+12.5		
			1900	1920	0	+12.5								
			1900	1916	0	-12.5			19:00	7:00	1900	1920	0	+12.5
10-12-2010	7:00	7:00	1916	1932	0	-12.5	19:00	7:00	1900	1916	0	-12.5		
			1920	1924	0	+12.5			1900	1916	0	-12.5		
			1924	1956	0	+12.5			1914	1932	0	-12.5		
			1932	1940	-12.5	0			1920	1924	0	+12.5		
			1900	1940	-12.5	0								
			1900	1924	0	+12.5			19:00	7:00	1932	1940	-12.5	0
11-12-2010	7:00	7:00	1924	1932	0	+12.5	19:00	7:00	1900	1940	-12.5	0		
			1932	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		
			1932	1944	0	+12.5								
			1900	1872	0	+12.5								
12-12-2010	7:00	19:00												
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	19:00	7:00	380	575	+10	-10		
			380	575	+10	-10								
22-12-2010	7:00	7:00	575	610	+10	-10	19:00	7:00	610	930	+10	-10		
			610	930	+10	-10								
23-12-2010	7:00	7:00	950	1200	+10	-10	19:00	7:00	950	1200	+10	-10		
24-12-2010	7:00	19:00	1200	1250	+10	-10	19:00	7:00						
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	19:00	7:00	1680	1720	+10	-10		
			1680	1720	+10	-10								

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)

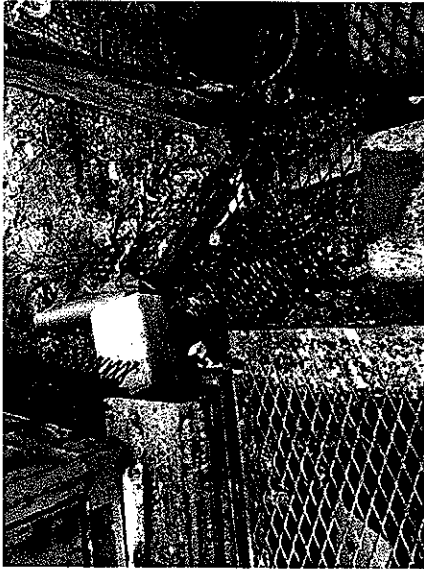
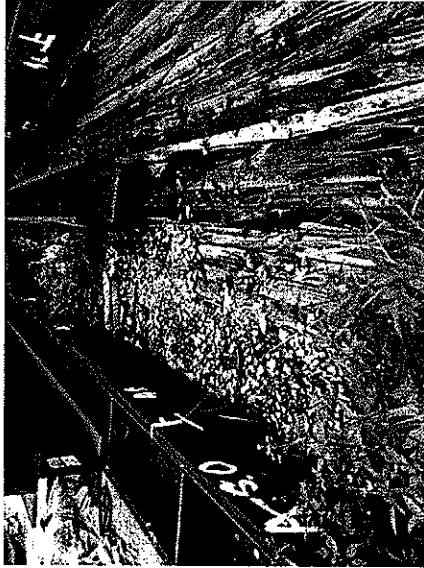
Date	Working Hour fm 07:00 to 23:00 or 07:00 to 07:00 (next day)						Working Hour for overtime fm 19:00 to 23:00 or 19:00 to 07:00 (next day)					
	W Hours fm	W Hours to	Chainage fm	Chainage to	Offset fm	Offset to	OT Hours fm	OT Hours to	Chainage fm	Chainage to	Offset fm	Offset to
28-12-2010	7:00	19:00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

Contractor's Follow up Actions to ET Weekly Site Inspections

Photo of Follow-up Action

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



Appendix L

Complaint Log

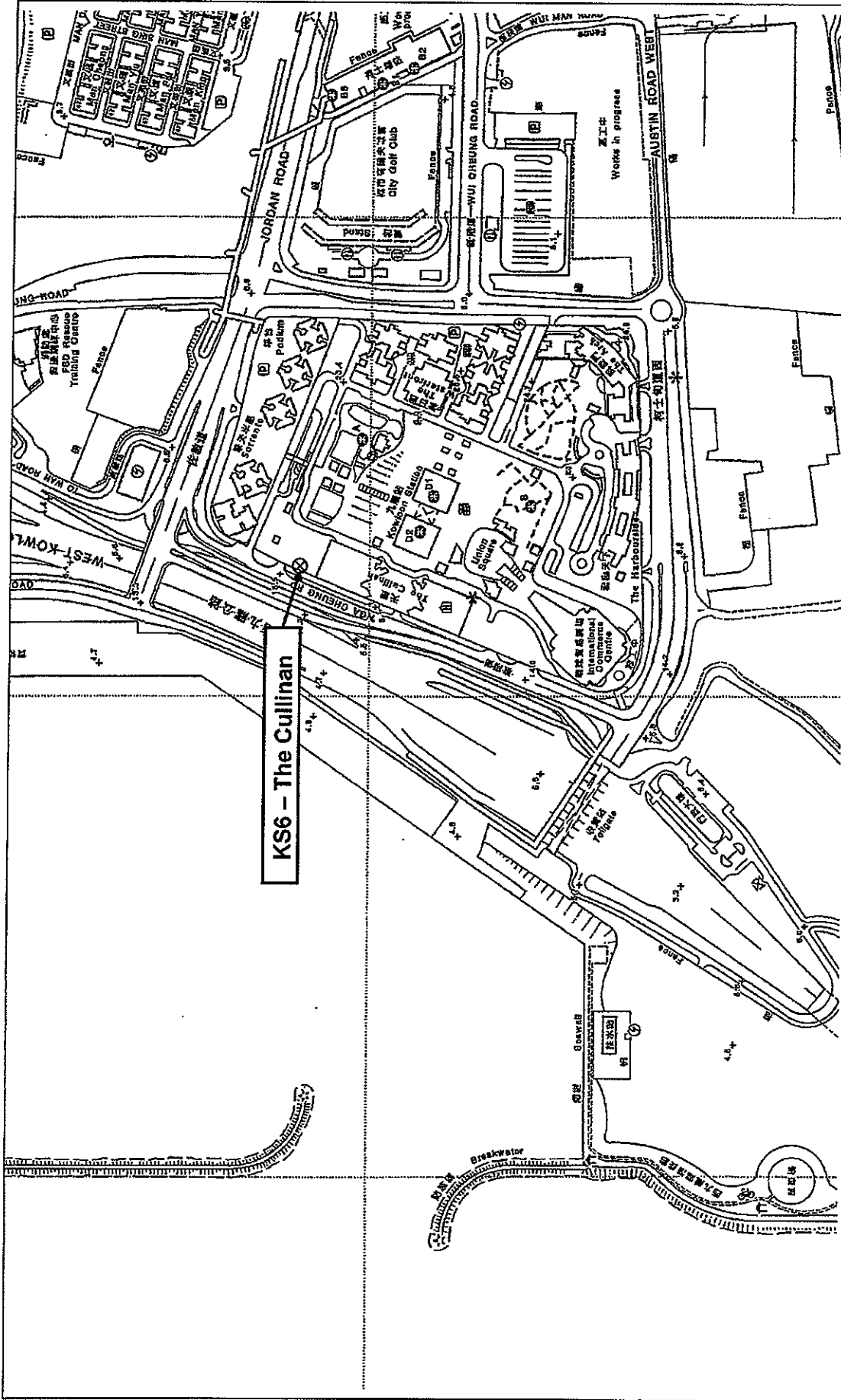


Complaint Log

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



Figures



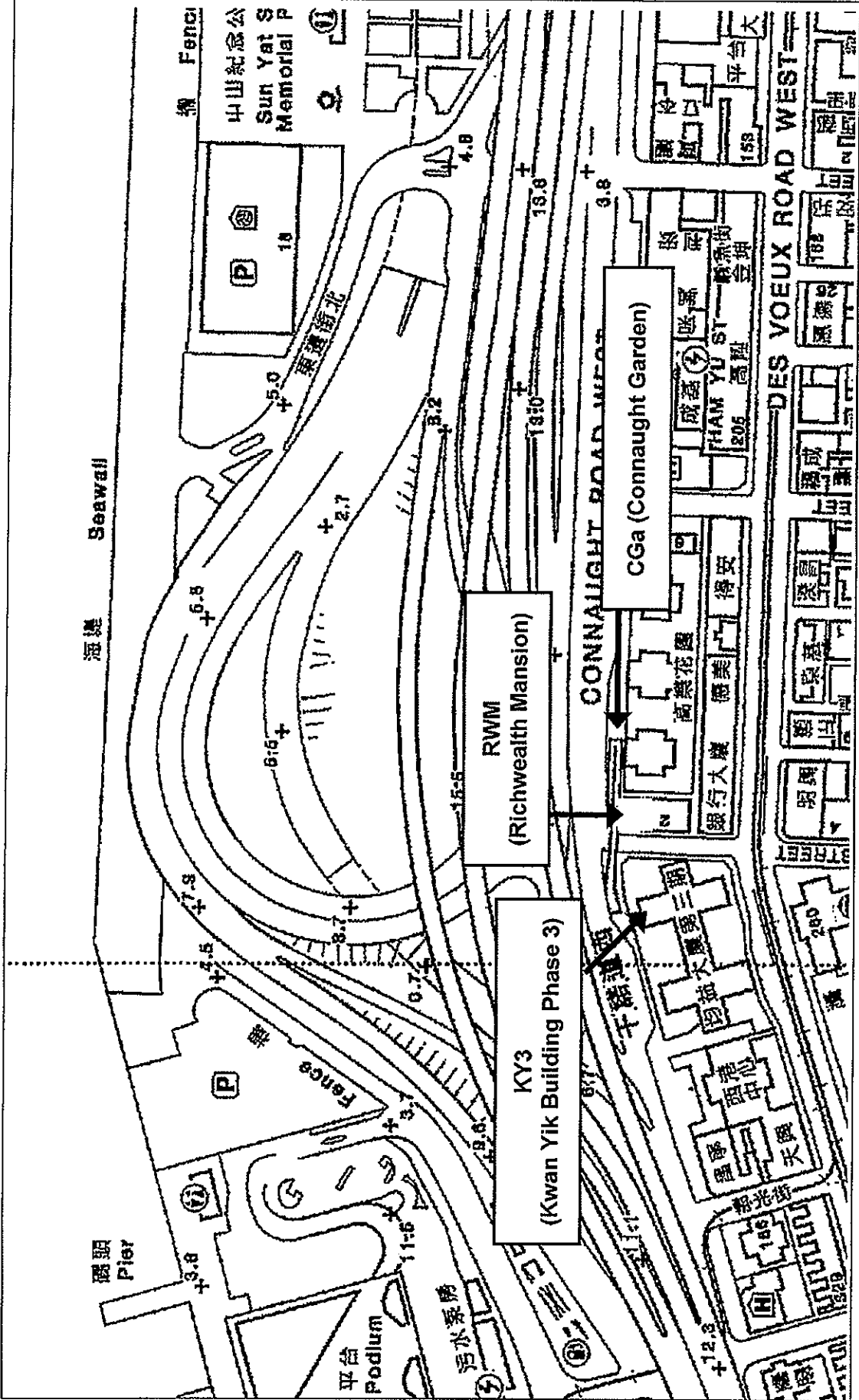
Contract No. 9/WSD/08 Laying of Western Cross Harbour Main and Associated Land Mains for West Kowloon to Sai Ying Pun

Figure 1

Location of Noise Monitoring Station at West Kowloon

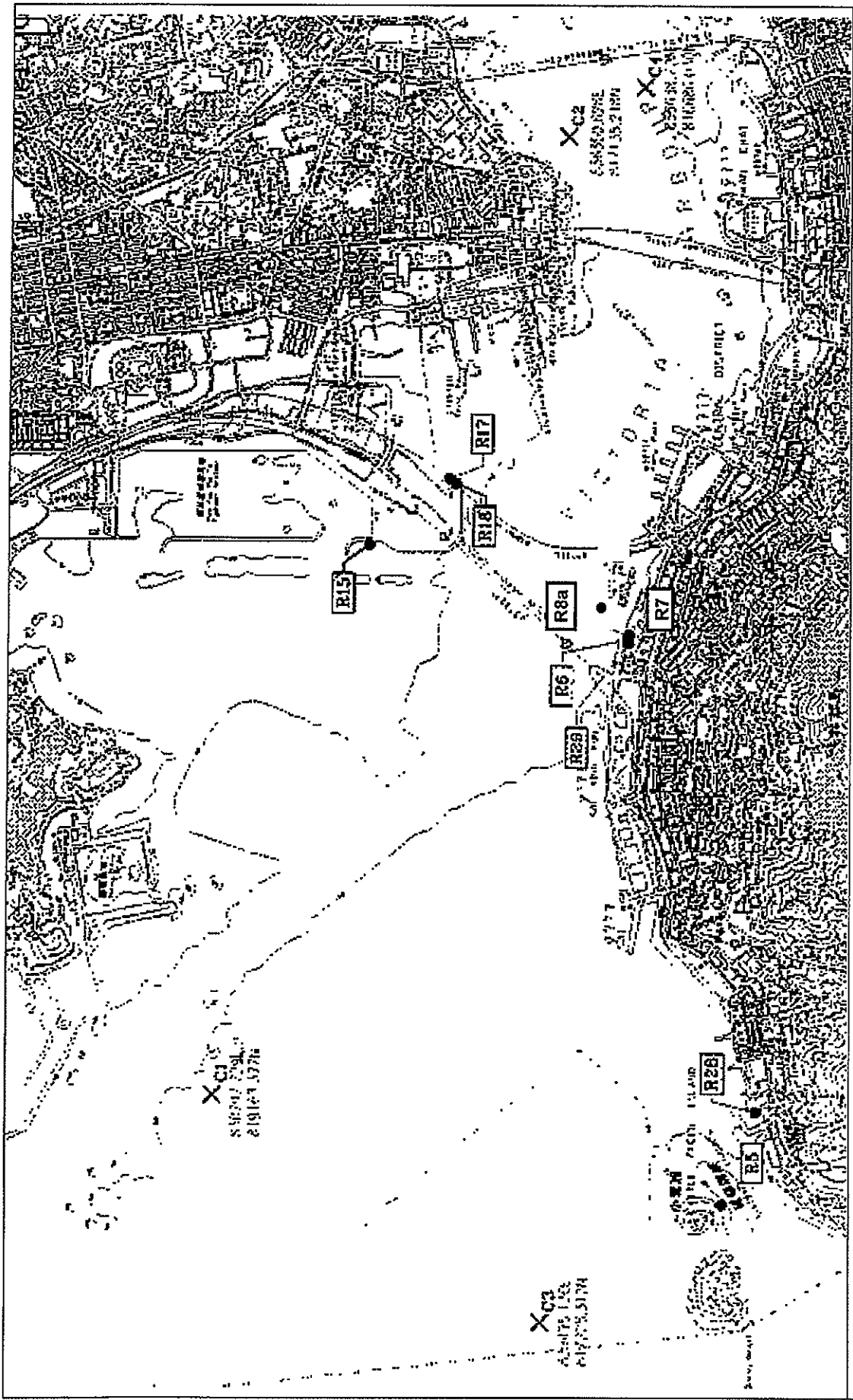


東榮國際測試顧問有限公司
ETS-TESTCONSULT LIMITED



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



Number	Location	Type	Remarks
R1	Victoria Harbour	Urban	
R2	Victoria Harbour	Urban	
R3	Victoria Harbour	Urban	
R4	Victoria Harbour	Urban	
R5	Victoria Harbour	Urban	
R6	Victoria Harbour	Urban	
R7	Victoria Harbour	Urban	
R8	Victoria Harbour	Urban	
R9	Victoria Harbour	Urban	
R10	Victoria Harbour	Urban	
R11	Victoria Harbour	Urban	
R12	Victoria Harbour	Urban	
R13	Victoria Harbour	Urban	
R14	Victoria Harbour	Urban	
R15	Victoria Harbour	Urban	
R16	Victoria Harbour	Urban	
R17	Victoria Harbour	Urban	
R18	Victoria Harbour	Urban	
R19	Victoria Harbour	Urban	
R20	Victoria Harbour	Urban	
R21	Victoria Harbour	Urban	
R22	Victoria Harbour	Urban	
R23	Victoria Harbour	Urban	
R24	Victoria Harbour	Urban	
R25	Victoria Harbour	Urban	
R26	Victoria Harbour	Urban	
R27	Victoria Harbour	Urban	
R28	Victoria Harbour	Urban	
R29	Victoria Harbour	Urban	
R30	Victoria Harbour	Urban	

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

CE42/2005/05
 LAYING OF WESTERN CROSS HARBOUR MAIN
 AND ASSOCIATED LAND MAINS FROM WEST
 HONGKONG TO SA YING PIN - INVESTIGATION

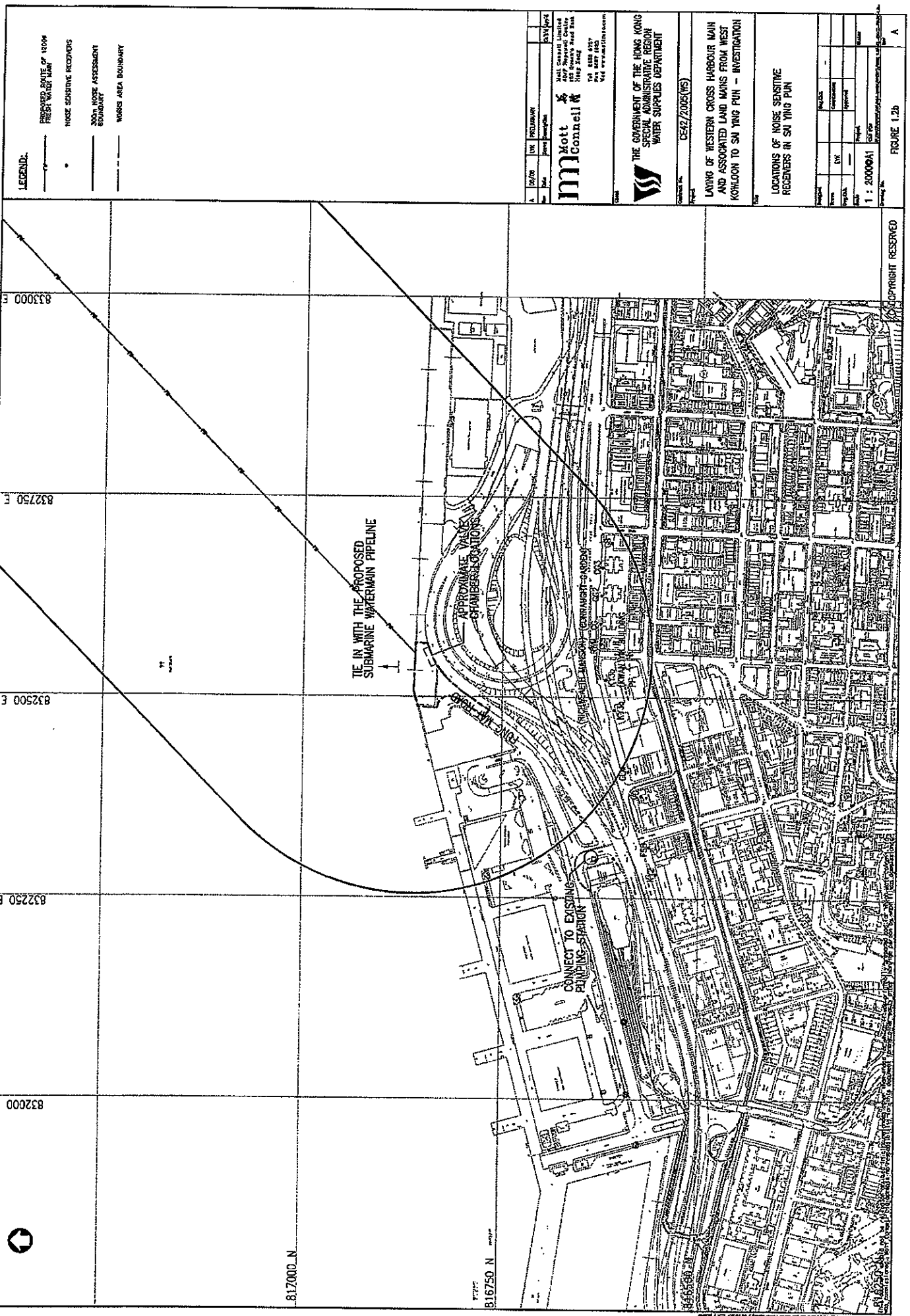
LOCATIONS OF WATER SENSITIVE RECEIVERS
 AND STORMWATER OUTFALLS
 AT WESTERN HARBOUR

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Project No.	CE42/2005/05
Sheet No.	1
Revision	
Author	
Checker	
Approver	
Date	

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FIGURE 1.2a

A



LEGEND:

- PROPOSED ROUTE OF 1200MM FRESH WATER MAIN
- NOISE SENSITIVE RECEIVERS
- 300M NOISE ASSESSMENT BOUNDARY
- NOISES AREA BOUNDARY

A	DATE	TITLE	PREPARED BY	DATE
			BY: [Signature]	03/10/04

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THE GOVERNMENT OF THE HONG KONG
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 WATER SUPPLIES DEPARTMENT

DESIGN NO. CS42/2005(NS)

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

LOCATIONS OF NOISE SENSITIVE
 RECEIVERS IN SU YING PUN


Scale	1 : 2000/0A1
Project No.	CS42/2005(NS)
Sheet No.	A


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FIGURE 1.2b

LEGEND:

- PROPOSED ROUTE OF 1300m FRESH WATER MAIN
- NOISE SENSITIVE RECEIVERS
- TEMPORARY PLATFORM
- 300m NOISE ASSESSMENT PERIMETER
- WORKS AREA BOUNDARY


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 WATER SUPPLIES DEPARTMENT

DATE: 2008 (NS)

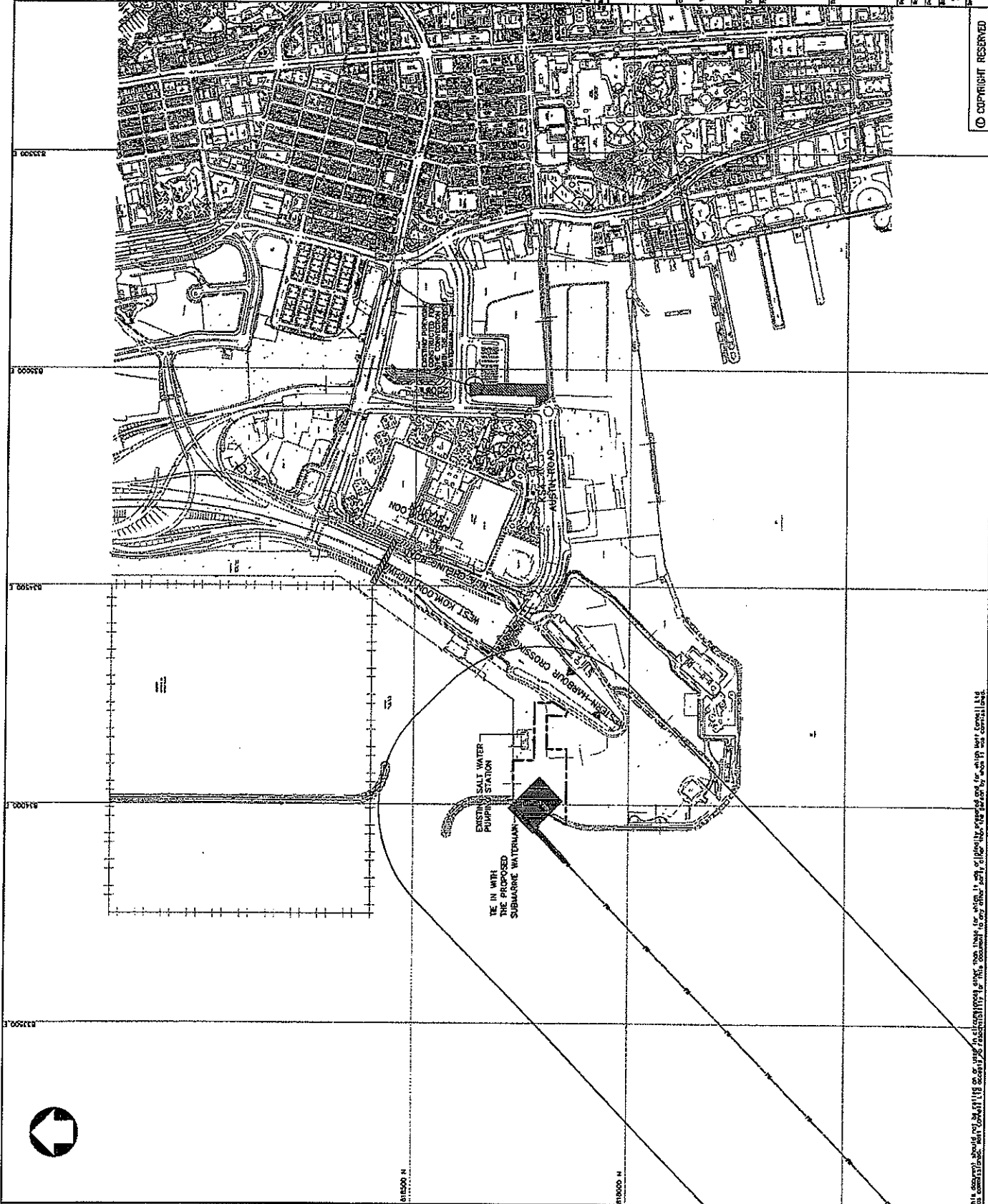
LAYING OF WESTERN CROSS HARBOUR MAIN
 AND ASSOCIATED LAND MAINS FROM WEST
 KOWLOON TO SHI YONG PUN - INVESTIGATION

LOCATION OF NOISE SENSITIVE RECEIVERS IN WEST KOWLOON

Project No.	4000001
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Sheet No.	A
Revision	
Author	
Checked	
Approved	

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FIGURE 12c



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