

Chun Wo Construction &
Engineering Co Ltd

Contract No HY/2005/06
Castle Peak Road
Improvement – West of
Tsing Lung Tau

Monthly Environmental
Monitoring and Audit
Report for Reclamation
Works (EP No EP-
219/2005)
August 2007

Second Issue

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Engineering Co Ltd

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Castle Peak Road
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Tsing Lung Tau**

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August 2007

September 2007

This report takes into account the particular
instructions and requirements of our client.
It is not intended for and should not be relied
upon by any third party and no responsibility
is undertaken to any third party

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Job number 24583

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By Fax (2492 6201) and PostMeinhardt Halcrow JV
4/F., Wah Ming Centre,
421 Queen's Road West,
Hong KongAttn : Mr. Michael S Harfoot

13 September 2007

Dear Sir,

Contract No. HY/2005/06**Castle Peak Road Improvement – West of Tsing Lung Tau****Monthly EM&A Report for Reclamation Works (EP No. EP-219/2005) – August 2007**

We refer to the Monthly EM&A Report for Reclamation Works (EP No. EP-219/2005) – August 2007 received via email on 12 September 2007 from Ove Arup & Partners Hong Kong Ltd., the Environmental Team (ET) of Castle Peak Road Improvement – West of Tsing Lung Tau (Remaining Contract).

Having addressed the IEC's comment on 12 September 2007, the Monthly EM&A Report for Reclamation Works (EP No. EP-219/2005) – August 2007 is verified to be acceptable for onward submission to the Engineer, HyD, EPD and AFCD.

Should you have any inquiry or comment, please do not hesitate to contact the undersigned or our Miss Connie Wong at 3105 8530.

Yours faithfully,
For and on behalf of
ENSR Asia (HK) Ltd.



Y T Tang
Independent Environmental Checker

cc	MHJV	-	Mr. Simon Illingworth	(Fax: 2559 1613)
	Arup	-	Mr. Sam T'soi / Mr. Samuel Chan	(Fax: 2268 3950)

Co-Chairmen: T C K Shum, R C Weber President: M Chan Managing Director: A Y Kwok.

Executive Directors: F C M Cheung, M C Ko, Y Y Tang Associate: J K W Lam

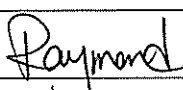
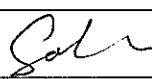
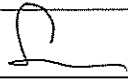
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Executive Summary

This is the eighteenth monthly environmental monitoring and audit (EM&A) report presenting the progress of environmental monitoring and audit works for the reporting period between 01 and 31 August 2007. Noise monitoring at Grand Bay Villa was temporarily suspended as the premises were vacant. Marine water monitoring and weekly environmental site audit were carried out during the reporting period.

Marine Water Quality Monitoring

Impact marine water quality monitoring was conducted during mid-ebb and mid-flood tidal cycles at 10 designated locations including 5 impact and 5 control stations. A baseline check was conducted on 27 February 2006 prior to the commencement of marine works and a compliance checking mechanism was established in accordance with the criteria specified in Baseline Monitoring Report.

Summary of Mid-Ebb Tide

The lowest DO level for surface & middle position of 5.45 mg/L was recorded at WWFCZ2 on 17 August 2007 and the lowest DO level for bottom position of 5.38 mg/L was recorded at WWFCZ1 on 15 August 2007. There was no exceedance of DO level during reporting period when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The highest depth-averaged Tby level of 8.0 Nephelometric Turbidity Unit (NTU) was recorded at WWA3 on 30 August 2007. There were 1 exceedance of Tby Action Level and 1 exceedance of Tby Limit Level on 30 August 2007 when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The highest SS level of 25.0 mg/L was recorded at WWA1 on 01 August 2007. There were 11 exceedances of SS Baseline Check Level on 01, 03, 28 and 30 August 2007 when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The exceedances of Tby and SS levels were likely attributed to construction works of the Project except for the SS level on 03 August 2007.

Summary of Mid-Flood Tide

The lowest DO level for surface & middle position of 5.41 mg/L was recorded at WWFCZ2 on 28 August 2007 and the lowest level for bottom position of 5.40 mg/L was recorded at WWA2 on 30 August 2007. There was no exceedance of DO level during reporting period when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The highest depth-averaged Tby level of 6.4 NTU was recorded at WWA2 and WWA3 on 30 August 2007 respectively. There was no exceedance of Tby Level during reporting period when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The highest SS level of 17.7 mg/L was recorded at WWFCZ1 on 03 August 2007. There were 2 exceedances of SS Baseline Check Criteria on 03 and 30 August 2007 when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The exceedances of SS Levels on 03 August 2007 was likely attributed to natural variation of marine water and that on 30 August 2007 was likely attributed to construction works of the Project.

Environmental Auditing

A total of 5 environmental site audits were conducted in August 2007 CT was recommended to improve in the following areas:

Air Quality: Frequent watering over unpaved area, covering stockpile and switching off all equipment while not in use;

Waste Management: Provision of drip trays to oil drums, clearing of the oil stain, provision of labels to chemical waste containers and clearing of C&D waste and general refuse frequently; and

Water Quality: Reinstating the silt curtain to its original size and removal of the remaining stockpile at Seawall B as soon as possible.

Waste Disposal

A total of 51.77 tonnes of Construction & Demolition (C&D) waste and 911.12 tonnes of C&D materials were disposed of at landfills and Public Filling Reception Facility at Tuen Mun Area 38 respectively during reporting period. No chemical waste was disposed of during the reporting period.

Complaint Records

There was no environmental complaint received in August 2007.

Exceedance

Exceedances of T_{by} and SS levels for marine water quality were recorded during reporting period when compared with A/L Levels and baseline check criteria.

Investigation has been conducted for the exceedances. The exceedances of SS level recorded on 03 August 2007 were likely attributed to natural variation of marine water and the exceedances of T_{by} and SS levels recorded on 01, 28 and 30 August 2007 were likely attributed to construction works of the Project. The exceedances of T_{by} and SS might be due to the reduced enclosed area of the silt curtain that was incapable to prevent dispersion of muddy water from the stockpile. The contractor is recommended to reinstate the silt curtain to its original position and remove the stockpile promptly. CT advised that the stockpile would be removed in early September and would closely monitor the function of silt curtain.

Notification of Summons and Successful Prosecution

No notification of summons and prosecution was received during the reporting period.

Environmental Licences

No new environmental licence was granted during the reporting period.

1 Introduction

Ove Arup & Partners Hong Kong Limited (Arup) was appointed by the Contractor (CT) – Chun Wo Construction & Engineering Co. Ltd as the Environmental Team (ET) for *Contract No. HY/2005/06 Castle Peak Road Improvements – West of Tsing Lung Tau* (hereafter called the “Project”). The reclamation at west of Tsing Lung Tau is covered by an Environmental Permit (EP) No. EP-219/2005 issued in June 2005 with reference to Section 6 of the Technical Memorandum on Environmental Impact Assessment Ordinance (TM-EIAO). The EP was issued following the approval of the application to apply directly for an EP based upon the Project Profile. In accordance with the EM&A Manual, environmental monitoring for construction noise and marine water quality will be required during the construction and operational phases. The construction phase of the Project commenced on 28 February 2006.

1.1 Project Background

The Castle Peak Road (CPR) Improvement works consist of upgrading the existing CPR to provide a dual two-lane carriageway of “Rural Road A” classification between Area 2 (Tusen Wan) and Ka Loon Tsuen. The CPR Improvement project is divided into three contracts, namely HY/99/18 (West Contract), HY/99/19 (Middle Contract) and HY/2000/02 (East Contract).

Prior to inviting tenders for Contract No. HY/99/18, a section of the proposed works, between Ch.1+800 and Ch.2+240, west of Tsing Lung Tau, was excised from the Project and entrusted to the Route 10 – North Lantau to Yuen Long Highway project. This 440m long section of CPR was located under the proposed Route 10 suspension bridge, and was to form part of the works area for the Route 10 project. The Route 10 project team revised the alignment of this section of CPR accordingly to suit the arrangement of the Route 10 suspension bridge.

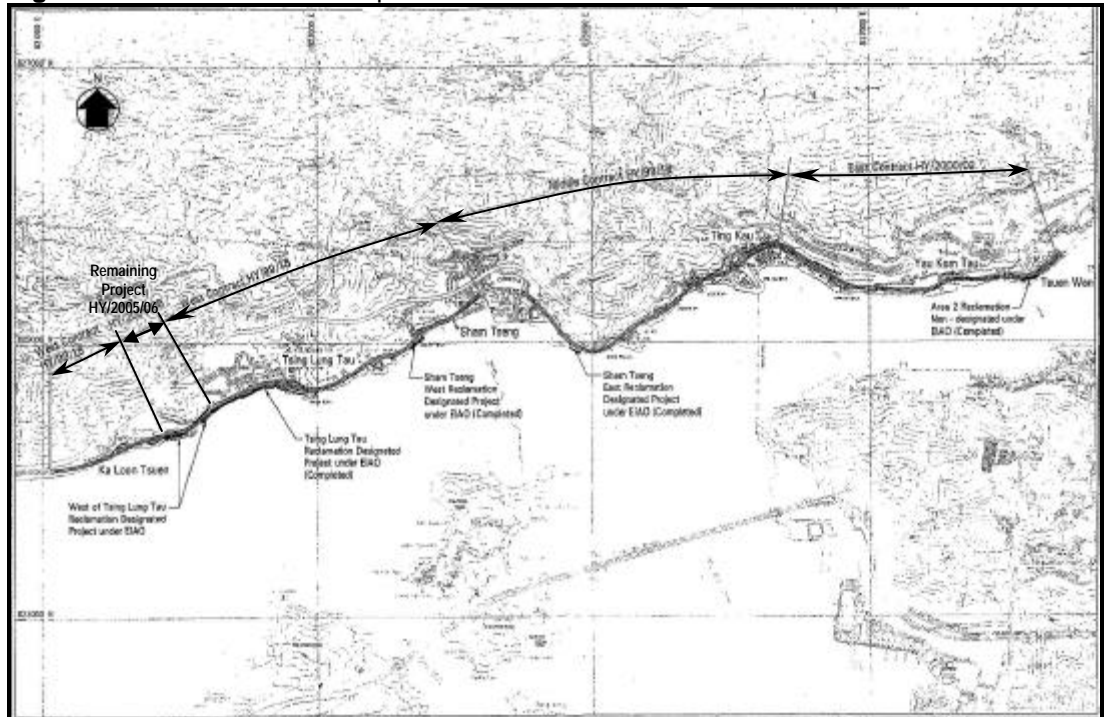
Following subsequent developments, the Route 10 project was placed under review, and Government therefore decided to implement the excised section of CPR (the Remaining Project) under the original CPR Improvement project. **Figure 1-1** shows the site location plan.

Additional reclamation (0.58 ha) at west of Tsing Lung Tau is required to support part of the remaining section of road improvement works and the additional reclamation works constitutes a material change to the reclamation works at Tsing Lung Tau.

The scope of the construction works covered by this Project is summarised as follows:

- The area of reclamation to the east of Grand Bay Villa is about 0.12 ha. The length of this part of the reclamation, measured parallel to the road, is about 107 m, and the maximum width, measured from the existing High Water Mark (HWM) to the proposed toe of the scour apron is about 16 m, of which about 13 m is sloping revetment;
- The area of reclamation west of Grand Bay Villa is about 0.46 ha. The length of this part of the reclamation, measured parallel to the road, is about 172 m, and the maximum width, measured from the existing High Water Mark (HWM) to the proposed toe of the scour apron is about 38 m, of which about 15 m is sloping revetment.

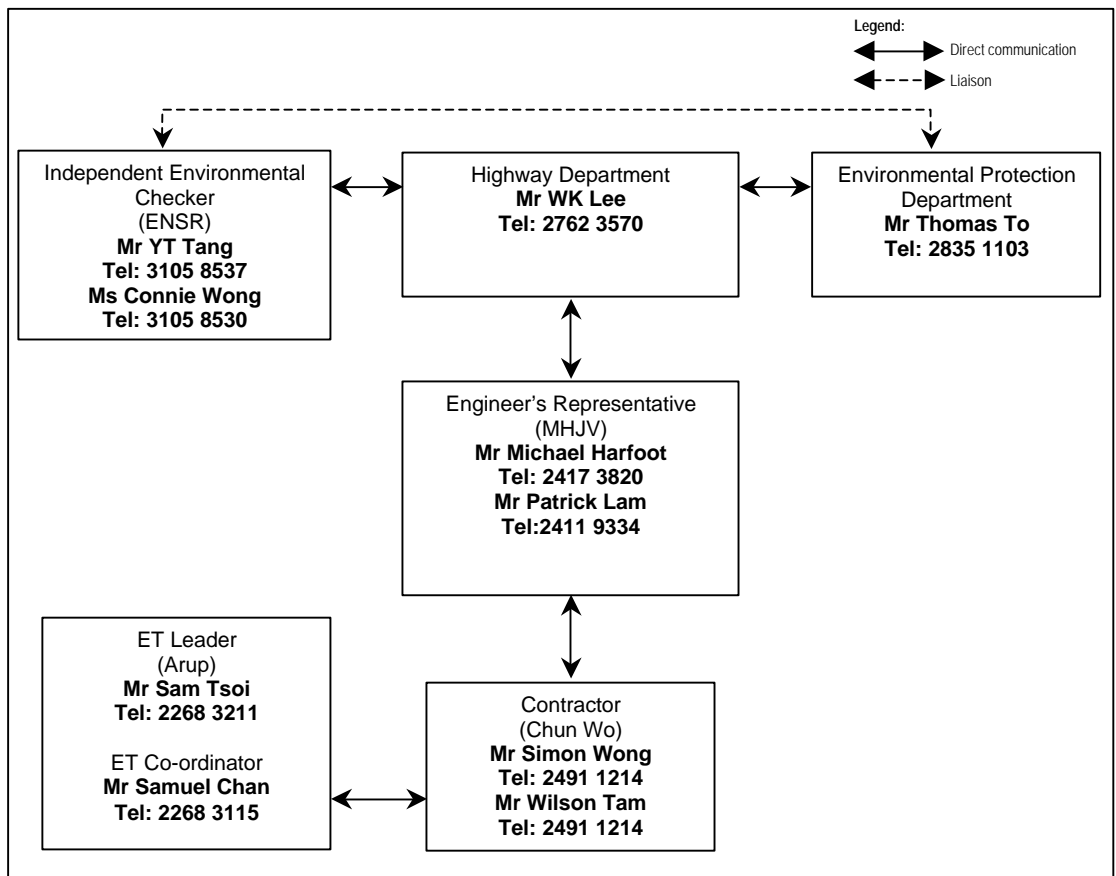
Figure 1-1: Site location plan



1.2 Project Organisation

The project organisation chart for environmental management is shown in **Figure 1.2**.

Figure 1-2: Project organisation chart



The Project Proponent is Highway Department; the Engineer's Representative (ER) is Meinhardt Halcrow Joint Venture (MHJV); the Contractor (CT) is Chun Wo Construction & Engineering Co. Ltd; the Independent Environmental Checker (IEC) is ENSR Asia (HK) Ltd (ENSR) and the ET leader is Ove Arup & Partners Hong Kong Ltd (Arup).

The overall duties of ET Leader and the team are as follows:

- sampling, analysis and statistical evaluation of monitoring parameters with reference to the EIA study and subsequent reviews recommendations and requirements in respect of noise, dust and water quality;
- environmental site surveillance;
- audit of compliance with environmental protection and pollution prevention and control regulations;
- monitor the implementation of environmental mitigation measures;
- monitor compliance with the environmental protection clauses/specifications in the Contract;
- review construction programme and comment as necessary;
- review construction methodology and comment as necessary;
- complaint investigation, evaluation and identification of corrective measures;
- audit of the effectiveness of mitigation measures and EMS (if applicable) and recommend and implement any changes as appropriate.
- liaison with IEC on all environmental performance matters;
- advice to the CT on environmental improvement, awareness, enhancement matter, etc., on site; and
- Timely submission of the EM&A reports to the ER, IEC and DEP.

The duties of IEC include the followings:

- review and audit all aspects of the EM&A programme;
- validate and confirm the accuracy of monitoring results, monitoring equipment, monitoring locations, monitoring procedures and locations of sensitive receivers;
- carry out random sample check and audit on monitoring data and sampling procedures, etc;
- conduct random site inspection;
- audit the EIA, subsequent reviews and Environmental Permit recommendations and requirements against the status of implementation of environmental protection measures on site.
- review the effectiveness of environmental mitigation measures and project environmental performance;
- audit the CT's construction methodology and agree the least impact alternative in consultation with ET Leader and the CT;
- check compliant cases and the effectiveness of corrective measures;
- review EM&A report submitted by the ET Leader; and
- feedback audit results to ET Leader by signing off relevant EM&A proformas.

1.3 Impact EM&A Requirements

The impact environmental monitoring and audit for the Project included noise, marine water quality and environmental site audit.

1.4 Purpose of the Report

The purpose of the monthly EM&A report is to provide the information on monitoring methodology, monitoring results, environmental permit status, site audit findings, recommendations and conclusions for the scope of impact EM&A specified under EP No. EP-219/2005.

This is the eighteenth monthly EM&A report summarising the monitoring methodology, locations, periods, frequencies, results and any observation from the noise, marine water quality and environmental site audit from 01 August 2007 to 31 August 2007.

2 Scope of Construction Works

2.1 Construction Programme

The construction work was commenced on 28 February 2006. An up-to-date construction programme is attached in **Appendix A**.

2.2 Construction Activities of the Month

The major construction activities carried out by CT in August 2007 included:

- Hydroseeding for Seawall A; and
- Construction of U-Channel at Seawall A.

3 Summary of EM&A Requirements

Marine water quality and noise monitoring at Grand Bay Villa will be conducted by an ET at all specified monitoring locations during the construction stage. Environmental site audits will also be carried out.

The monitoring schedule for August 2007 and the tentative schedule for September 2007 are attached in **Appendix B**.

3.1 Construction Noise

3.1.1 Monitoring Parameters

Construction noise monitoring will be measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}). L_{10} and L_{90} will also be recorded as supplementary reference information for data auditing.

3.1.2 Monitoring Frequency

Noise measurements will be conducted on a weekly basis. The monitoring time periods, monitoring parameters and frequency are summarised in **Table 3-1**.

Table 3-1: Construction noise monitoring parameters and frequency

Time Period (when construction activity is found)	Parameters	Monitoring Frequency	No. of Measurements for Each Monitoring
Between 0700-1900 hours on normal weekdays	$L_{eq}(30 \text{ min})$	Once per week	1
Between 1900-2300 hours on normal weekdays	$L_{eq}(5 \text{ min})^*$		3 (consecutive)
Between 2300-0700 hours of next day			
Between 0700-1900 hours on holidays			

* The $L_{eq}(5 \text{ min})$ will only be measured if construction activities are conducted in holidays and between the period of 1900 and 0700 hours during normal weekdays.

3.1.3 Monitoring Location

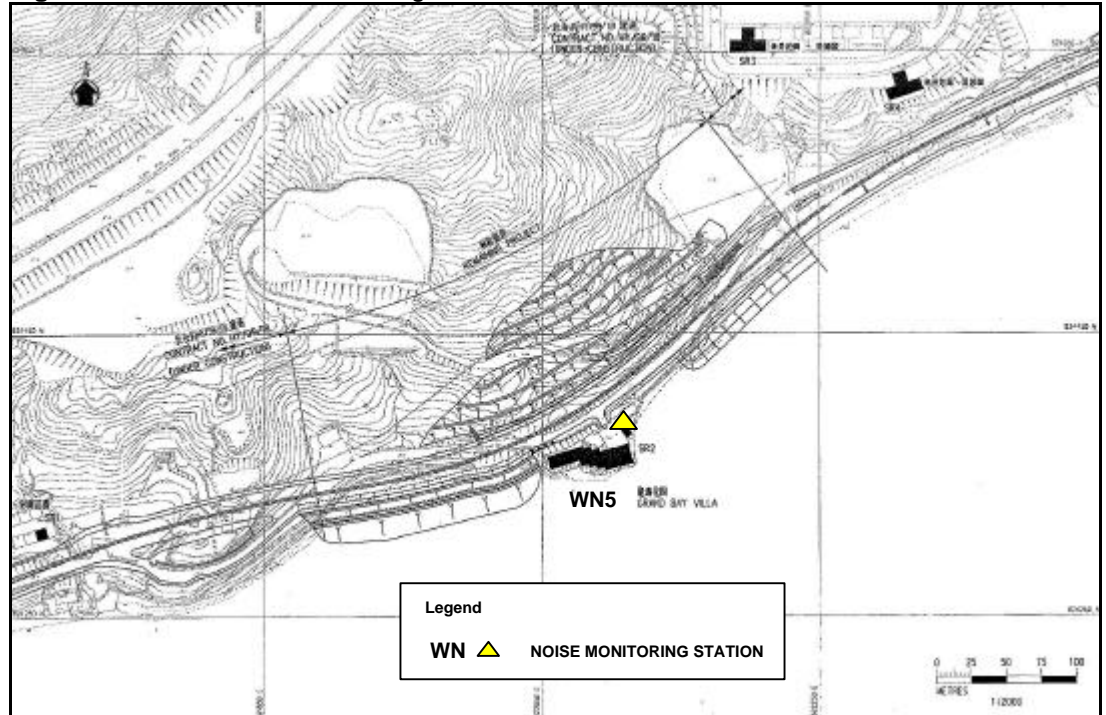
Noise monitoring will be conducted at one designated location as shown in **Figure 3-1**. The details of the noise monitoring location are given in **Table 3-2**. The measurements will be taken at a position 1m from the exterior of building façade and at a position of 1.2m above ground.

Table 3-2: Construction noise monitoring locations

Noise Monitoring Station No.	Location	Monitoring Point	Remarks
WN5	Grand Bay Villa	G/F, House 1	Monitoring temporarily suspended *

* Grand Bay Villa is currently vacant with no resident. Construction noise monitoring at WN5 temporarily suspended until the premises are occupied.

Figure 3-1: Noise monitoring station



3.2 Marine Water Quality

3.2.1 Monitoring Parameters

Marine water quality monitoring will include Turbidity (Tby) in the unit of NTU, Dissolved Oxygen (DO) in the unit of mg/L and Suspended Solids (SS) in the unit of mg/L. In addition to the water quality parameters, other relevant data such as monitoring location/position, time, water depth, water temperature, salinity, DO saturation, weather conditions, sea conditions, tidal stage will be recorded as far as practicable together with observations of any special phenomena, works underway at the construction site, etc.

3.2.2 Monitoring Frequency

Impact marine water quality monitoring will be conducted three times per week, at mid-flood and mid-ebb tides and at 10 designated monitoring locations. The interval between two sets of monitoring will not be less than 36 hours.

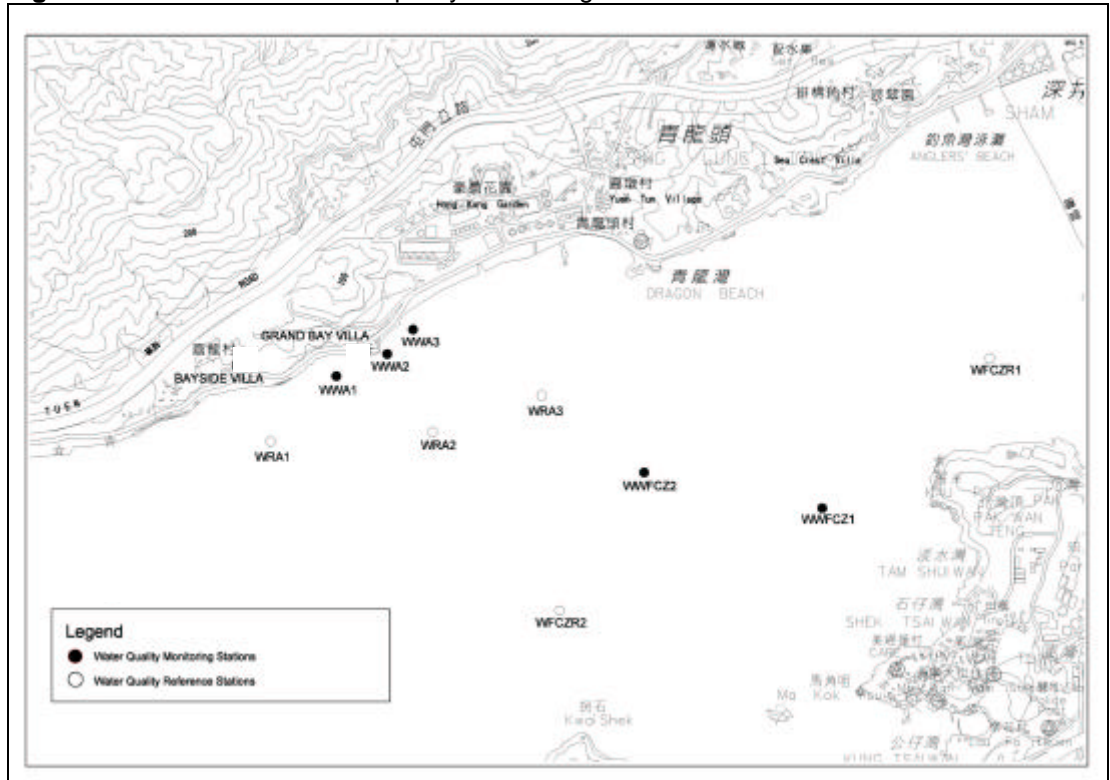
3.2.3 Monitoring Locations

A total of 10 locations, 5 for impact and 5 for control were specified for marine water quality monitoring in accordance with the EM&A Manual, which are summarised in **Table 3-3** and shown in **Figure 3-2**.

Table 3-3: Marine water quality monitoring locations

Marine Water Quality Monitoring Location No.		Location	
		Eastings	Northings
West of Grand Bay Villa	WWA1 (Impact Location)	821981	824282
	WRA1 (Control Location)	821776	824078
Grand Bay Villa	WWA2 (Impact Location)	822141	824352
	WRA2 (Control Location)	822283	824107
East of Grand Bay Villa	WWA3 (Impact Location)	822222	824429
	WRA3 (Control Location)	822625	824222
Ma Wan Fish Culture Zone	WWFCZ1 (Impact Location)	823500	823870
	WWFCZ2 (Impact Location)	822943	823983
	WFCZR1 (Control Location)	824024	824333
	WFCZR2 (Control Location)	822677	823547

Figure 3-2: Marine water quality monitoring locations



3.3 Performance Limits and Event and Action Plan

The monitoring results will be checked against appropriate standards and requirements. A two-tier system performance limits have been established in the Project specific EM&A Manual. The “Action Level” and the “Limit Level” (A/L) are established according to the EPD requirements. The ET, ER, IEC, and CT will take corresponding action in accordance with the Event-Action Plans if the monitoring results exceed the performance limits.

3.3.1 Construction Noise

The A/L Levels for the construction noise have been established during the baseline monitoring as summarised in **Table 3-4**.

Table 3-4: Action and Limit Levels of construction noise

Time Period	Action Level	Limit Level
0700 - 1900 hours on any day not being a Sunday or public holiday	When one documented complaint is received	75dB(A)

The action required to be taken by different parties in the case of exceedance of A/L Levels are summarised in the Event and Action Plan in **Table 3-5**.

Table 3-5: Event and Action Plan for construction noise

Event	Action			
	ET Leader	IEC	ER	CT
Action Level	<ol style="list-style-type: none"> 1. Notify IEC and the CT. 2. Carry out investigation. 3. Report the results of investigation to the IEC and the CT. 4. Discuss with the CT and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review with the analysed results submitted by ET. 2. Review the proposed remedial measures by the CT 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 CT. 3. Require the CT 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. Notify the IEC, the ER, the DEP and the CT. 2. Identify the source. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of CT's working procedures to determine possible mitigation to be implemented. 6. Inform the IEC, the ER, and the DEP the causes & actions taken for the exceedances. 7. Assess effectiveness of the CT's remedial actions and keep the IEC, the DEP and the ER informed of the results. 8. If exceedance stops, cease additional monitoring 	<ol style="list-style-type: none"> 1. Discuss amongst the ER, the ET Leader and the CT on the potential remedial actions. 2. Review the CT's remedial actions whenever necessary to assure their effectiveness and advise the 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 CT. 3. Require the CT 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 CT 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.

3.3.2 Marine Water Quality

Based on the baseline water quality monitoring data obtained. The A/L levels established using the baseline marine water quality monitoring data are shown in **Table 3-6**. If the water quality monitoring results at any impact stations exceeded the criteria, the actions in accordance with the Event-Action Plan in **Table 3-8** should be carried out.

As the baseline monitoring was conducted in September to October 2005, the established A/L Levels will be more representative to the marine water quality during summer months. To cope with any potential variation of baseline levels due to change in weather conditions, baseline check will be conducted in bi-annual basis in order to update any variation of the baseline water quality at the monitoring locations.

The first baseline check was conducted on 27 February 2006 prior to the commencement of marine works and the updated marine water quality monitoring data were summarised in **Table 3-7**. Compliance assessment for future impact monitoring data will be made against the updated baseline check criteria as follows:

- Tier 1 - Comparison of water quality monitoring data at Impact Stations with the A/L Levels (**Table 3-6**) established in the Baseline Monitoring Report. If the data comply with A/L Levels, go to Tier 2. Otherwise, non-compliance will be reported and Event and Action Plan will be triggered.
- Tier 2 - Comparison of water quality monitoring data at Impact Stations with the Baseline Check Level (80% of average values of baseline check data collected at 10 monitoring locations for DO and 120% of average values of baseline check data collected at 10 monitoring locations for Tby and SS) (**Table 3-7**). If the impact water quality is better than Baseline Check Level, compliance will be reported. Otherwise, go to Tier 3.
- Tier 3 - Comparison of water quality monitoring data at Impact Stations with the respective Control Stations. If the impact water quality is better than the respective Control Station, compliance will be reported. Otherwise, non-compliance will be reported and Event-Action Plan will be triggered for implementation of action based on exceedance of Action Level.

Table 3-6: Action and Limit Levels of marine water quality established in Baseline Monitoring Report #

Parameters		Monitoring locations									
		WWA1		WWA2		WWA3		WWFCZ1		WWFCZ2	
		Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
Mid-ebb											
DO (mg/L)	Surface & middle	3.5	3.5	3.5	3.4	3.4	3.3	5.0 *	5.0	5.0 *	5.0
	Bottom	3.4	3.4	3.4	3.3	3.4	3.2	3.7	2.0	3.6	2.0
Tby (NTU)		7.4	7.7	6.7	6.9	7.8	8.3	6.4	8.6	6.7	7.0
SS (mg/L)		25.3	26.0	22.2	23.1	24.6	25.2	26.3	30.3	22.6	22.9
Mid-flood											
DO (mg/L)	Surface & middle	3.3	3.3	3.4	3.3	3.5	3.3	5.0 *	5.0	5.0 *	5.0
	Bottom	3.2	3.2	3.2	3.2	3.2	3.2	3.3	2.0	3.5	2.0
Tby (NTU)		6.9	7.2	7.6	8.2	8.7	10.7	7.4	11.0	5.9	6.5
SS (mg/L)		24.1	24.3	23.5	23.6	22.3	23.5	24.4	25.8	27.4	28.0

Notes:

Action and Limit Level for marine water quality were extracted from Baseline Monitoring Report, April 2006.

* Based on the criteria in Table 4-6 of Baseline Monitoring Report, the originally established action levels of DO for fish culture zone at surface & middle level were all below the 5.0 mg/L.

Table 3-7: Marine water quality data obtained in the baseline check on 27 February 2006

Parameters		Monitoring locations				
		WWA1	WWA2	WWA3	WWFCZ1	WWFCZ2
Mid-ebb						
DO (mg/L)	Surface & middle	5.4	5.4	5.4	5.4	5.4
	Bottom	5.4	5.4	5.4	5.4	5.4
Tby (NTU)		6.5	6.5	6.5	6.5	6.5
SS (mg/L)		13.0	13.0	13.0	13.0	13.0
Mid-flood						
DO (mg/L)	Surface & middle	5.3	5.3	5.3	5.3	5.3
	Bottom	5.3	5.3	5.3	5.3	5.3
Tby (NTU)		6.6	6.6	6.6	6.6	6.6
SS (mg/L)		17.0	17.0	17.0	17.0	17.0

Table 3-8: Event-Action plan for marine water quality

Event	Action			
	ET Leader	IEC	ER	CT
Action Level				
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> Repeat in-situ measurement to confirm findings. Identify source(s) of impact. Inform the IEC and the CT. Check monitoring data, all plant, equipment and the CT's working methods. Discuss mitigation measures with the IEC and the CT. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> Discuss with the ET Leader and the CT on the mitigation measures. Review proposals on mitigation measures submitted by the CT and advised the ER accordingly. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> Discuss with the IEC on the proposed mitigation measures. Make agreement on the mitigation measures to be implemented. 	<ol style="list-style-type: none"> Inform the ER and confirm notification of the non-compliance in writing. Rectify unacceptable practice. Check all plants and equipment. Consider changes of working methods. Discuss with the ET Leader and the IEC and propose mitigation measures to the IEC and the ER. Implement the agreed mitigation measures.
Action level being exceeded by more than one consecutive days	<ol style="list-style-type: none"> Repeat in-situ measurement to confirm findings. Identify source(s) of impact. Inform the IEC and the CT. Check monitoring data, all plant, equipment and the CT's working methods. Discuss mitigation measures with the IEC and the CT. Ensure mitigation measures are implemented. Prepare to increase the monitoring frequency to daily. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> Discuss with the ET Leader and the CT on the mitigation measures. Review proposals on mitigation measures submitted by the CT and advised the ER accordingly. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> Discuss with IEC on the proposed mitigation measures. Make agreement on the mitigation measures to be implemented. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> Inform the ER and confirm notification of the non-compliance in writing. Rectify unacceptable practice. Check all plants and equipment. Consider changes of working methods. Discuss with the ET Leader and the IEC and propose mitigation measures to the IEC and the ER within 3 working days. Implement the agreed mitigation measures.
Limit Level				
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> Repeat in-situ measurement to confirm findings. Identify source(s) of impact. Inform the IEC, the CT and the DEP. Check monitoring data, all plant, equipment and the CT's working methods. Discuss mitigation measures with the IEC, the ER and the CT. Ensure mitigation measures are implemented. Increase the monitoring frequency to daily until no exceedance of the Limit Level. 	<ol style="list-style-type: none"> Discuss with the ET Leader and the CT on the mitigation measures. Review proposals on mitigation measures submitted by the CT and advised the ER accordingly. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> Discuss with IEC, the ET Leader and the CT on the proposed mitigation measures. Request the CT to critically review the working methods. Make agreement on the mitigation measures to be implemented. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> Inform the ER and confirm notification of the non-compliance in writing. Rectify unacceptable practice. Check all plants and equipment. Consider changes of working methods. Discuss with the ET Leader, the IEC and the ER, and propose mitigation measures to the IEC and the ER within 3 working days. Implement the agreed mitigation measures.
Limit level being exceeded by more than one consecutive days	<ol style="list-style-type: none"> Repeat in-situ measurement to confirm findings. Identify source(s) of impact. Inform the IEC, the CT and the DEP. Check monitoring data, all plant, equipment and the CT's working methods. Discuss mitigation measures with the IEC, the ER and the CT. Ensure mitigation measures are implemented. Increase the monitoring frequency to daily until no exceedance of the Limit Level for two consecutive days. 	<ol style="list-style-type: none"> Discuss with the ET Leader and the CT on the mitigation measures. Review proposals on mitigation measures submitted by the CT and advised the ER accordingly. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> Discuss with IEC, the ET Leader and the CT on the proposed mitigation measures. Request the CT to critically review the working methods. Make agreement on the mitigation measures to be implemented. Assess the effectiveness of the implemented mitigation measures. Consider and instruct, if necessary, the CT 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"> Inform the ER and confirm notification of the non-compliance in writing. Rectify unacceptable practice. Check all plants and equipment. Consider changes of working methods. Discuss with the ET Leader, the IEC and the ER, and propose mitigation measures to the IEC and the ER within 3 working days. Implement the agreed mitigation measures. As directed by the ER, slow down or stop all or part of the construction activities.

3.4 Site Inspection and Environmental Complaint Handling

3.4.1 Site Inspection Frequency and Areas Covered

Regular site inspections will be carried out on a weekly basis. The areas of inspection cover the different environmental impacts, such as air, noise, water and waste, and their pollution controls and mitigation measures for both within and outside the site area.

Ad hoc site inspection will be carried out if significant environmental non-compliance is identified. Inspections may also be carried out subsequent to receipt of any environmental complaints, or as part of the investigation work, as specified in the Event and Action Plans.

3.4.2 Site Inspection Procedures

- a) The CT and/or ER will advise the Environmental Auditor (EA) of the ET for all information on any environmental related aspects.
- b) The EA will discuss with the CT and/or ER to sort out and forecast any potential environmental impact.
- c) The EA will conduct a site walk with the CT and/or ER, particularly the areas with extensive construction works.
- d) The EA will conduct inspection for the main environmental facilities and measures such as wheel washing facilities located at site exits, water spraying truck, temporary noise barrier, and internal noise-reducing measures of the heavy equipment etc, to ensure that these environmental facilities operate normally and effectively.
- e) The EA will fill up a site inspection checklist during the site inspection for recording any special observations.
- f) The EA will conduct post-discussion with the CT and/or ER for the establishment of additional/special measures if any non-conformance is found. The completion date for such additional measures will be confirmed during the post-discussion.
- g) The EA will propose a reasonable timeframe together with the CT and/or ER, for the preparation of the proposal for remediation of environmental non-compliance.
- h) The completed site inspection checklist will be signed by the EA, the CT and/or ER, for reference and for taking action in accordance with the agreed procedures, reporting systems and time frame.

3.4.3 Environmental Complaints

A 24-hour complaint hotline at 6277 7465 has been established for the Project. In accordance with the EM&A Manual, environmental complaints will be referred to the ET for initiation of the complaint investigation procedures. The ET will undertake the following procedures upon receipt of complaints:

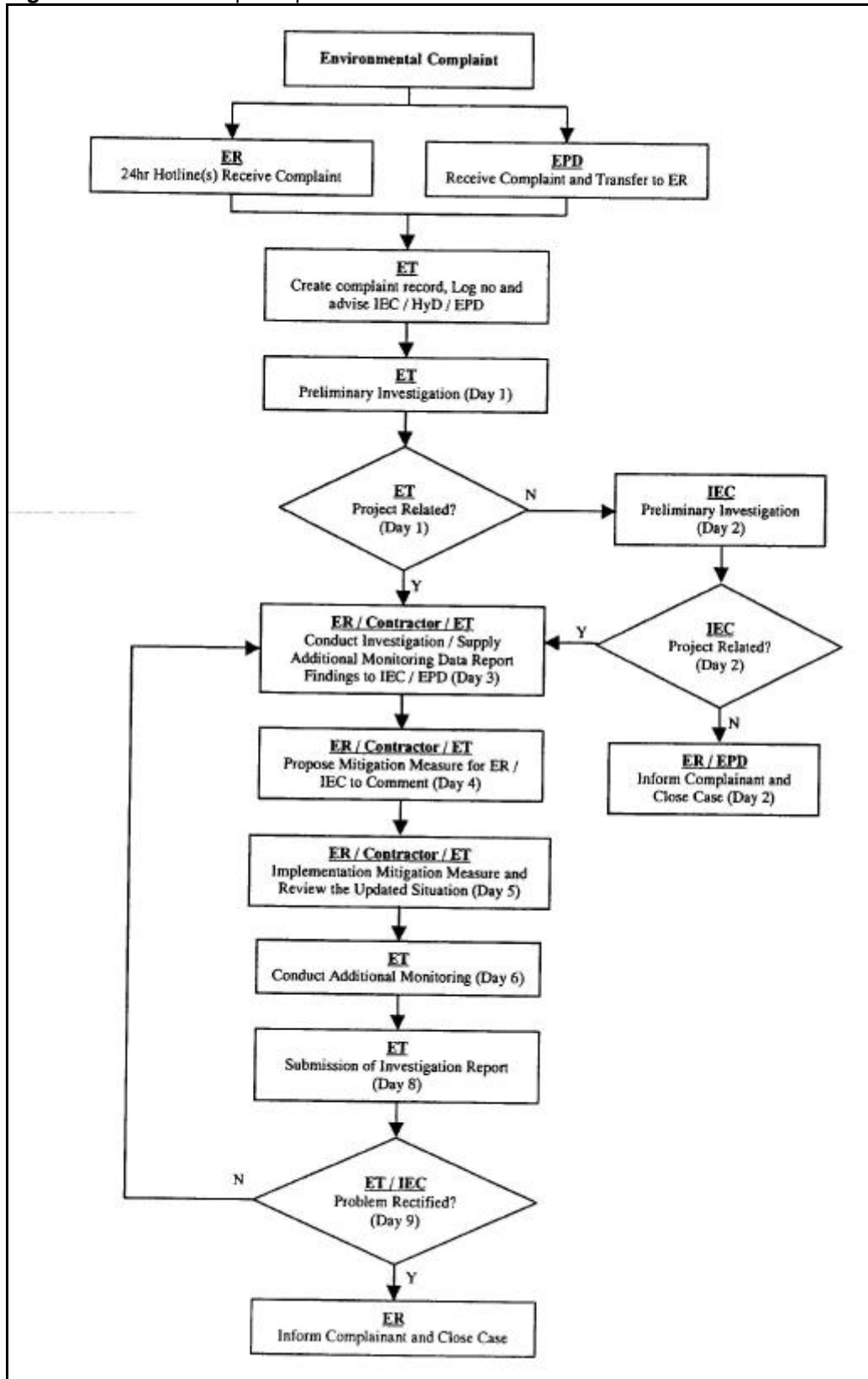
- a) The ET will record the details of the complaint and the date of receipt into the complaint database, and inform ER immediately.
- b) The ET will perform compliant investigation to determine its validity and to assess whether the source of the problem is due to work activities.
- c) The ER will instruct the CT to identify mitigation measures in consultation with the ET, if the compliant is valid and due to works.
- d) The ET will liaise with the CT on their mitigation measure proposals and implementation, if required.

- e) The ET will conduct review of the CT's response on the identified mitigation measures, and of the updated situation.
- f) The ET will submit interim report to EPD if the complaint is received via EPD. The interim report will clearly state the status of the complaint investigation and the follow-up action within the time frame assigned by EPD.
- g) The ET will undertake additional monitoring and audit to verify the situation if necessary, and ensure that any valid reason for complaint does not recur.
- h) The ET will report on the investigation results and the subsequent actions to the source of complaint for responding to the complainant. If the source of complaint is via EPD, the results will be reported within the time frame assigned by EPD.
- i) The ET will record the details of the complaint, investigation, subsequent actions and results in the monthly EM&A report.

During the complaint investigation work undertaken by the ET, the CT and ER should cooperate with the ET on providing all the necessary information and assistance for completion of the investigation. If mitigation measures are identified as necessary after the investigation, the CT should promptly carry out the required mitigation to the satisfaction of ET. The ER should ensure that the CT has carried out such identified measures.

A flow chart of the complaint response procedures is shown in **Figure 3-3** for reference.

Figure 3-3: Complaint procedure



4 Noise Monitoring

4.1 Monitoring Equipment

Details of the integrating sound level meters used in the noise monitoring are shown in **Table 5-1**.

Table 5-1: Equipment list for construction noise monitoring

Equipment	Manufacturer & Model No.	Precision Grade	Qty.
Integrating sound level meter	Rion NA-27	IEC 651 Type 1 IEC 804 Type 1	1
Windshield	Briel & Kjaer UA0237		1
Acoustical calibrator	Briel & Kjaer 4226		1
LCD wind speed indicator	Kestrel Vane Anemometer	--	1

4.2 Methodology

4.2.1 Occupancy Status of Grand Bay Villa

The property management company of Grand Bay Villa (WN5) will be coordinated a monthly basis within 10 working days of each month to confirm the occupancy status of these premises. Once this location is confirmed occupied, noise monitoring will be resumed within 1 week.

4.2.2 Field Measurement

- The sound level meter and battery were checked to ensure that they were in proper condition.
- The sound level meter was set on a tripod at 1.2m above ground and at 1m from the exterior of the building façade.
- Before conducting the measurement, the sound level meter was calibrated by an acoustical calibrator.
- The measurement parameter was set to A-weighted sound pressure level. The time weighting was set in fast response and the time period of measurement at 30 minutes.
- The wind speed was checked during noise monitoring to ensure the steady wind speed did not exceed 5m/s, or wind with gusts did not exceed 10m/s.
- Any abnormal conditions that generated intrusive noise during the measurement were recorded on the field record sheet.
- After each measurement, the equivalent continuous sound pressure level (L_{eq}), L_{10} and L_{90} were recorded on the field record sheet.
- The sound level meter was re-calibrated by the acoustical calibrator to confirm that there was no significant drift of reading.

4.2.3 Equipment Maintenance and Calibration

All sound level meters comply with the standards of IEC 651 (Fast, Slow, Impulse RMS detector tests) and IEC 804 (L_{eq} functions). The acoustical calibrator model no. 4226 complies with IEC 942.

4.3 Results and Observations

4.3.1 Occupancy Status of Grand Bay Villa

In the reporting period, Grand Bay Villa (WN5) was vacant with no resident and noise monitoring was temporarily suspended.

5 Marine Water Quality Monitoring

5.1 Marine Water Quality Monitoring Equipment

Monitoring of Turbidity (Tby) in NTU, Dissolved Oxygen (DO) in mg/L and Suspended Solids (SS) in mg/L was carried to ensure that any deteriorating water quality would be readily detected and timely action would be taken to rectify the situation. Tby and DO were measured in-situ while SS was determined in the laboratory. A list of the marine water quality monitoring equipment is summarised in **Table 5-1**.

Table 5-1: Marine water quality monitoring equipment

Equipment	Manufacturer & Model No.	Qty
Handheld DO, Temperature & Salinity Meter	YSI Model 85	1
pH meter	Hanna	1
Turbidimeter	HACH 2100P	1

5.2 Methodology

5.2.1 DO, Temperature and Salinity Measuring Equipment

The equipment to measure DO, temperature and salinity complied with the following:

- i. The instrument was a portable, weatherproof dissolved oxygen measuring instrument complete with cable and used a DC power source. It was capable of measuring:
 - A dissolved oxygen level in the range of 0-20 mg/L and 0-200% saturation;
 - A temperature of 0-45°C; and
 - A salinity level in the range of 0-40 ppt.
- ii. It had a membrane electrode with automatic temperature compensation complete with a cable.

5.2.2 Tby Measurement Instrument

The instrument was a portable, weatherproof turbidity-measuring instrument complete with comprehensive operations manual. The equipment used a DC power source. It had a photoelectric sensor capable of measuring turbidity between 0-1000 NTU and was complete with a cable.

5.2.3 SS

The following equipment was used to monitor the SS:

- (1) A water sampler comprised a transparent PVC cylinder, with a capacity of not less than 2 litres and which can be effectively sealed with latex cups at both ends. The sampler had a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler was at the selected water depth.
- (2) Water samples for SS measurement were collected in high density polythene bottles, packed in ice (cooled at 4°C without being frozen) and delivered to the laboratory as soon as possible after collection.

5.2.4 Water Depth Detector

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

5.2.5 Location of the Monitoring Site

A hand-held Global Positioning System (GPS) was used during monitoring to ensure the monitoring vessel was at the correct location before taking measurements.

5.2.6 Calibration and Accuracy of Instrumentation

All *in-situ* monitoring instruments were checked, calibrated and certified by a HOKLAS accredited laboratory or any other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring. Response of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring location. The calibration certificates are attached in **Appendix C**. For the on site calibration of field equipment, the BS 1427:1993, "Guide to Field and on-site test methods for the analysis of waters" was followed.

5.3 Results and Observations

5.3.1 Weather Conditions and Other Factors

Typhoon signal was issued from 08 to 11 August 2007 and amber rainstorm warning was issued on 06 and 22 August 2007.

5.3.2 Summary of Results

Impact marine water quality monitoring was undertaken during mid-ebb and mid-flood tidal cycles at 10 designated locations including 5 impact and 5 control stations. A baseline check was conducted on 27 February 2006 prior to the commencement of marine works and a compliance checking mechanism was established in accordance with the Baseline Monitoring Report. Detailed water quality monitoring results are given in **Appendix D**. Graphical presentation of the monitoring results are illustrated in **Figures 5-1 to 5-8**.

Summary of Mid-Ebb Tide

The lowest DO level for surface & middle position of 5.45 mg/L was recorded at WWFCZ2 on 17 August 2007 and the lowest DO level for bottom position of 5.38 mg/L was recorded at WWFCZ1 on 15 August 2007. There was no exceedance of DO level during reporting period when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The highest depth-averaged Tby level of 8.0 Nephelometric Turbidity Unit (NTU) was recorded at WWA3 on 30 August 2007. There were 1 exceedance of Tby Action Level and 1 exceedance of Tby Limit Level on 30 August 2007 when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The highest SS level of 25.0 mg/L was recorded at WWA1 on 01 August 2007. There were 11 exceedances of SS Baseline Check Level on 01, 03, 28 and 30 August 2007 when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The exceedances of Tby and SS levels were likely attributed to construction works of the Project except for the SS level on 03 August 2007.

Summary of Mid-Flood Tide

The lowest DO level for surface & middle position of 5.41 mg/L was recorded at WWFCZ2 on 28 August 2007 and the lowest level for bottom position of 5.40 mg/L was recorded at WWA2 on 30 August 2007. There was no exceedance of DO level during reporting period

when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The highest depth-averaged Tby level of 6.4 NTU was recorded at WWA2 and WWA3 on 30 August 2007 respectively. There was no exceedance of Tby Level during reporting period when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The highest SS level of 17.7 mg/L was recorded at WWFCZ1 on 03 August 2007. There were 2 exceedances of SS Baseline Check Criteria on 03 and 30 August 2007 when compared with the established A/L Levels and baseline check criteria in Section 3.3 of this report.

The exceedances of SS Levels on 03 August 2007 was likely attributed to natural variation of marine water and that on 30 August 2007 was likely attributed to construction works of the Project.

Figure 5-1: DO levels (surface and middle level) at mid-ebb tide in August 2007

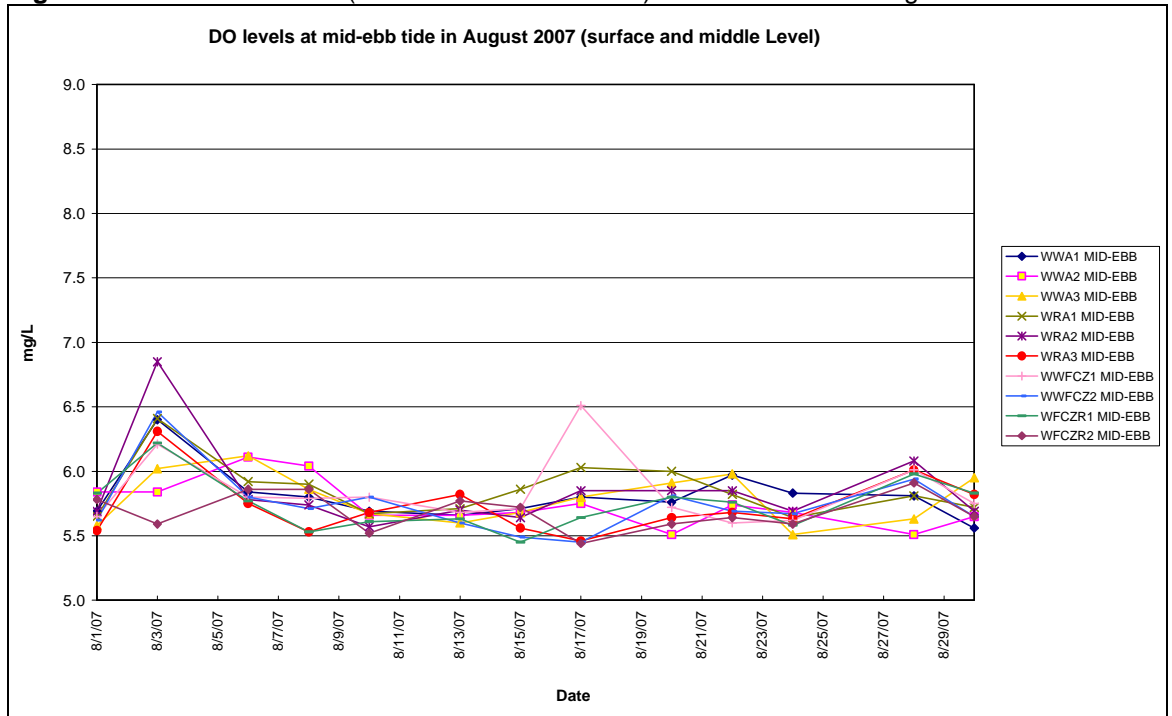


Figure 5-2: DO levels (bottom level) at mid-ebb tide in August 2007

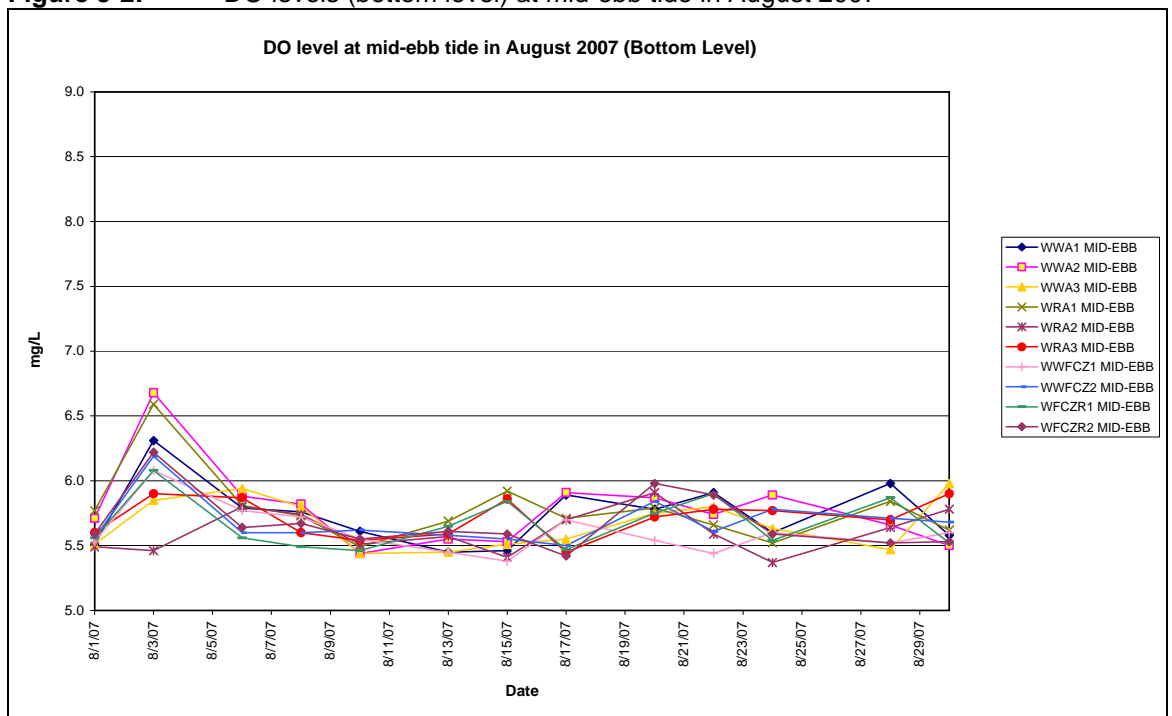


Figure 5-3: DO levels (surface and middle level) at mid-flood tide in August 2007

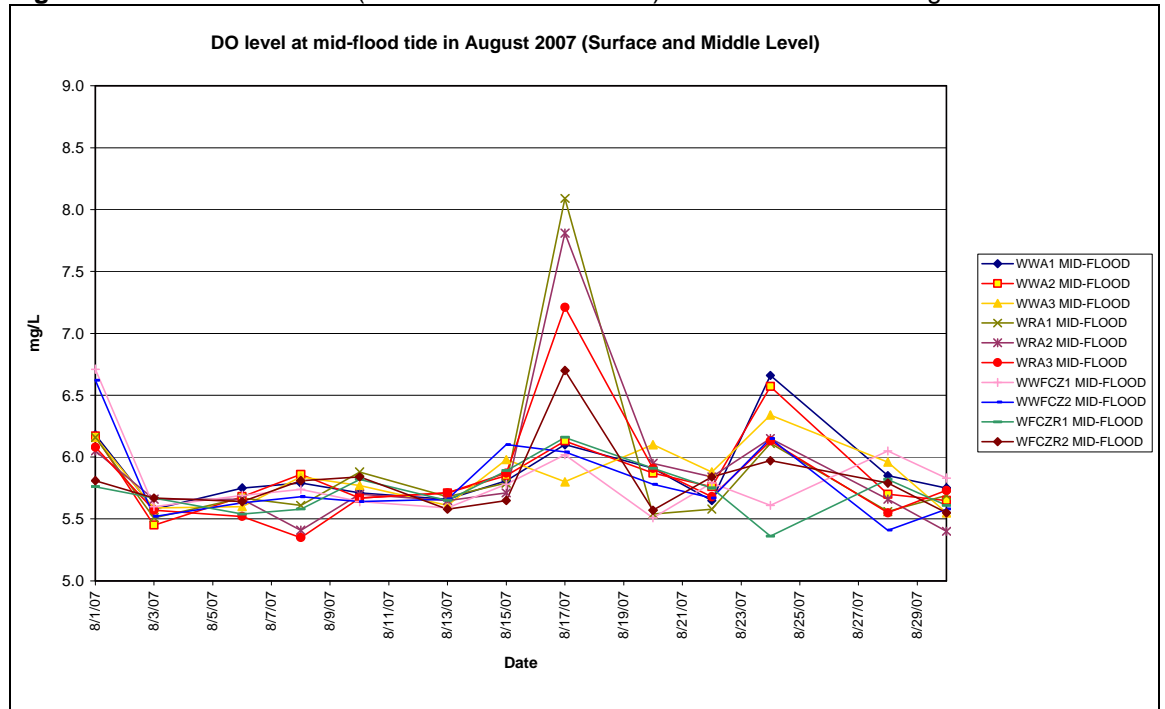


Figure 5-4: DO levels (bottom level) at mid-flood tide in August 2007

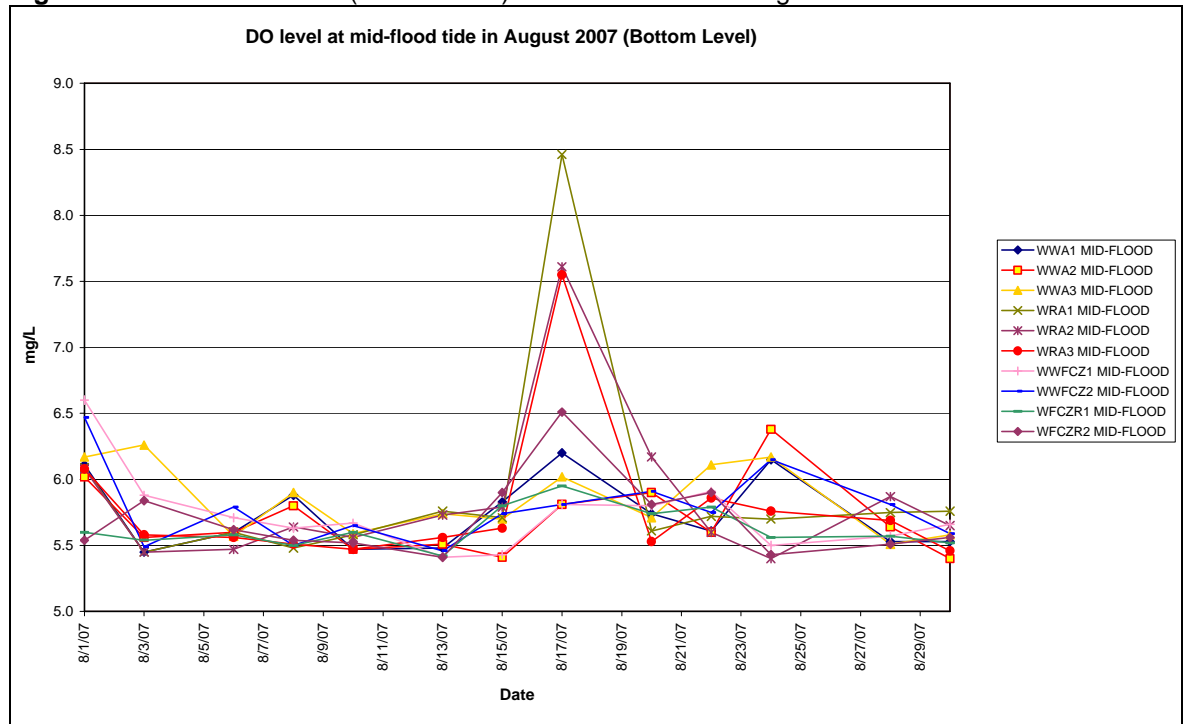


Figure 5-5: Turbidity levels at mid-ebb tide in August 2007

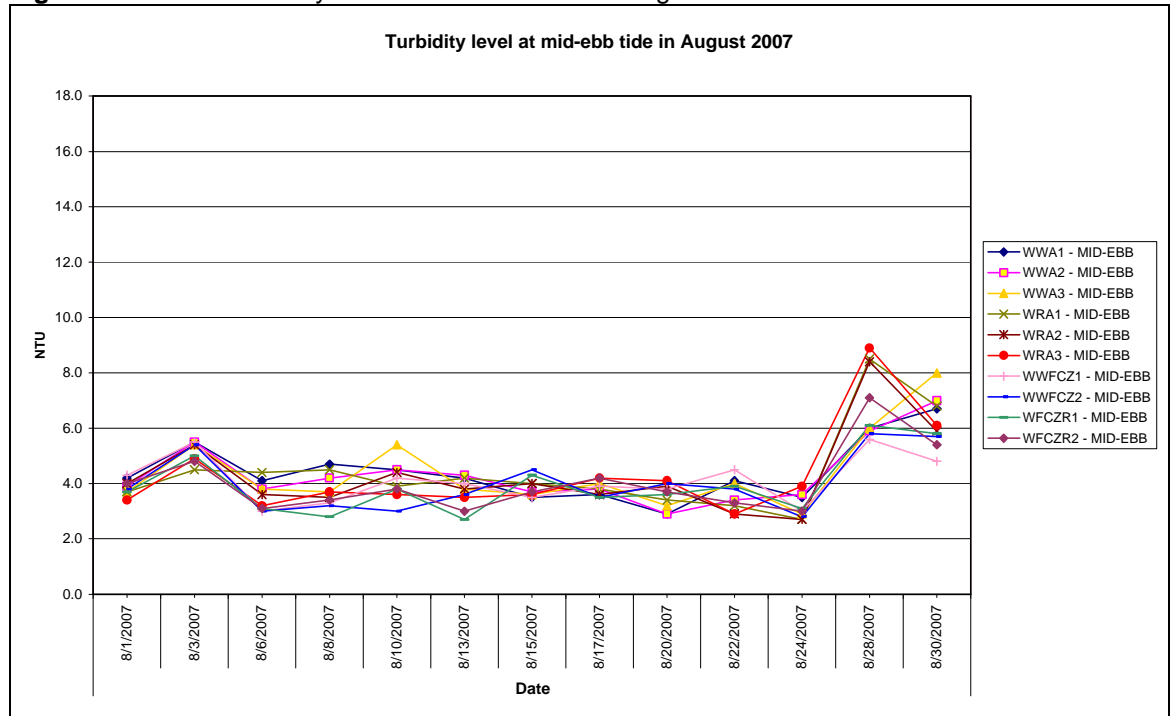


Figure 5-6: Turbidity levels at mid-flood tide in August 2007

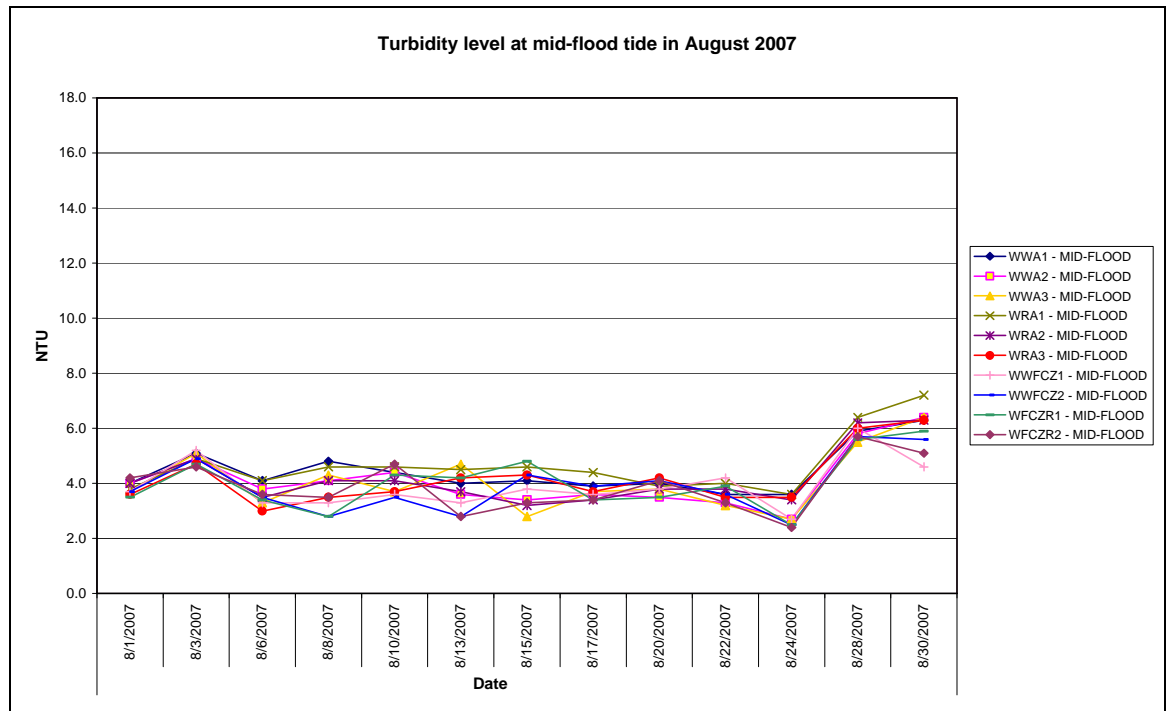


Figure 5-7: SS levels at mid-ebb tide in August 2007

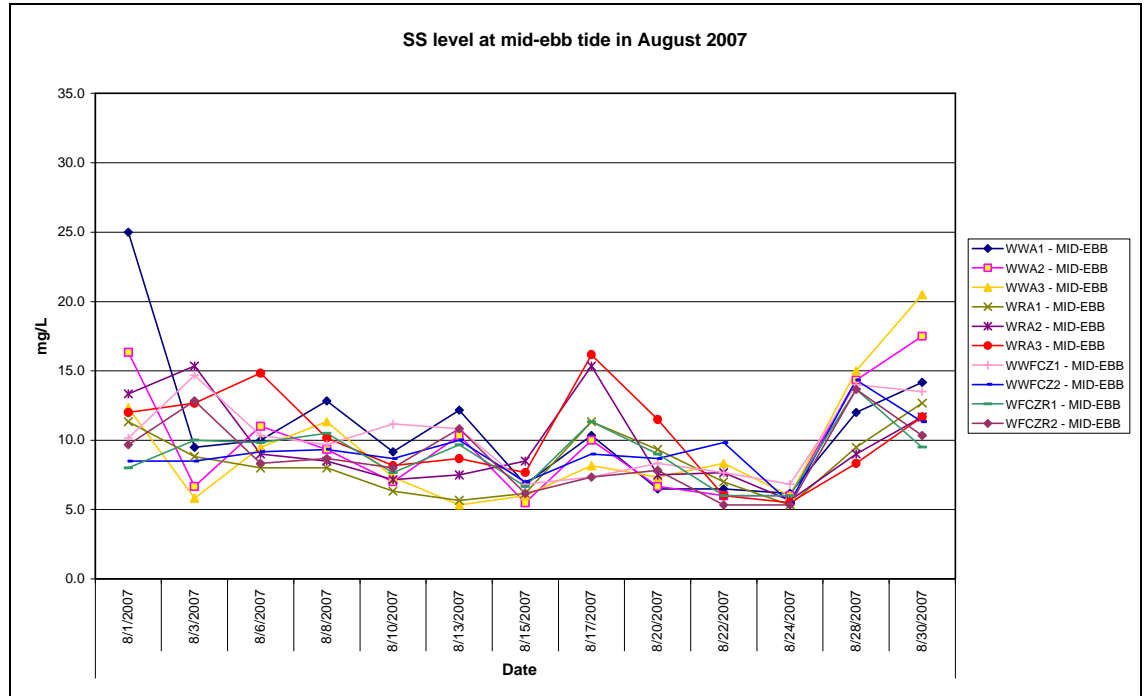
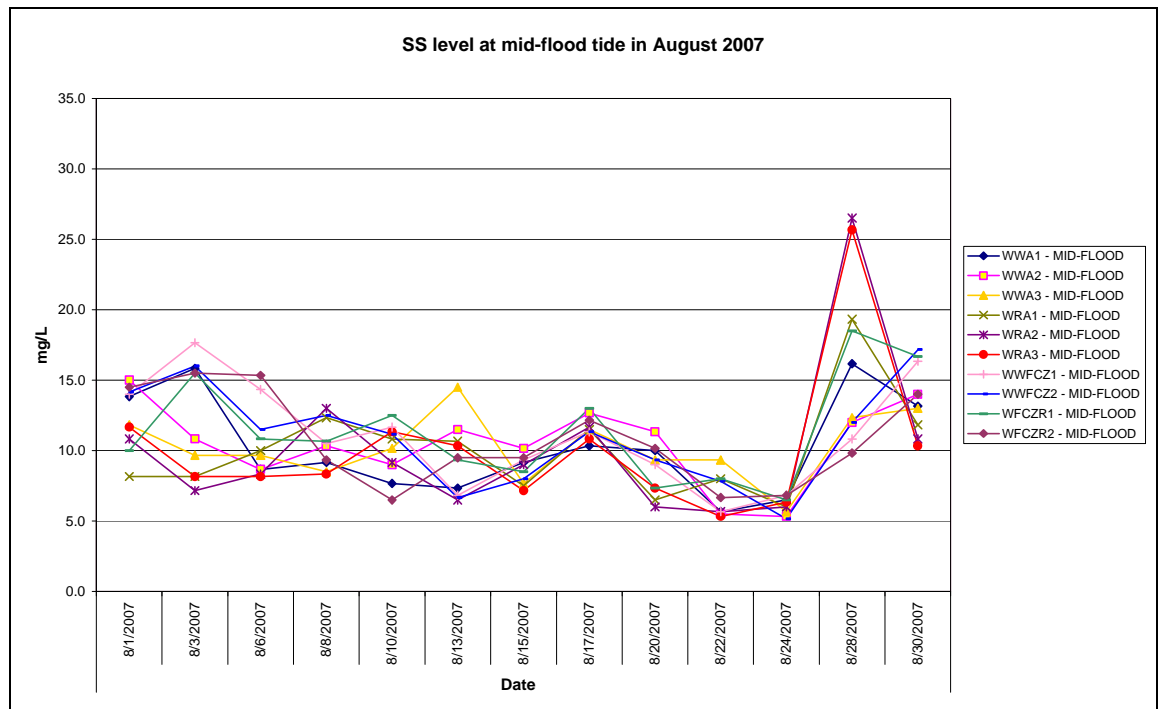


Figure 5-8: SS levels at mid-flood tide in August 2007



6 Site Inspection, Waste Disposal, environmental complaints, environmental licenses and non-compliance records

6.1 Site Audit Findings

Five weekly environmental site audits were carried out on 01, 10, 17, 24 and 31 August 2007. The findings of the site audits are summarised in **Table 6-1**.

Table 6-1: Findings of weekly environmental site audit in August 2007

Date of Issue Raised	Observation	Advice from EA	CT's Response / Action	Closing Date
01 August 2007 (WTLT 079)	1. Drip trays were not provided to the chemical waste containers.	CT was reminded to provide drip trays to all chemical waste containers.	Agreed with the ET's advice. CT had provided drip trays to chemical waste containers.	07 September 2007
	2. Stockpile was not covered at Chun Wo site office.	CT was reminded to cover the stockpile.	Agreed with the ET's advice. CT had provided covers to the stockpile and CT advised the stockpile would be opened for drying during daytime.	24 August 2007
	3. Black smoke was emitted from an air compressor.	CT was reminded to conduct maintenance of the air compressor.	Agreed with the ET's advice. CT had removed the air compressor from the site.	10 August 2007
	4. Haul road towards site office was observed dry and dusty.	CT was reminded to provide water spraying frequently.	Agreed with the ET's advice. CT had cleared dusty materials on the road surface.	24 August 2007
	5. Oil leakage was observed from an excavator at Castle Peak Road.	CT was reminded to repair the excavator promptly.	Agreed with ET's advice. CT had removed the excavator away from the site.	10 August 2007
	6. Stagnant water was observed at Slope D.	CT was reminded to clear the stagnant water.	Agreed with ET's advice. CT had installed pumps to remove the stagnant water in some areas.	On-going
	7. Cover for exposed slope at Seawall A was broken.	CT was reminded to reinstate the cover.	Agreed with ET's advice. CT had reinstated the cover.	17 August 2007
	8. Minor seepage of muddy water was observed from the silt curtain.	CT was reminded to repair the silt curtain promptly.	Agreed with ET's advice. CT advised the silt curtain was repaired on 02 Aug 2007. Seepage of muddy water was not observed in subsequent site audit.	10 August 2007

Date of Issue Raised	Observation	Advice from EA	CT's Response / Action	Closing Date
10 August 2007 (WTLT 080)	1. C&D waste and general refuse was observed within the site.	CT was reminded to clear the waste as soon as possible.	Removal of C&D waste was in progress in the reporting period.	On-going
	2. Muddy surface runoff was observed along haul road towards site office.	CT was reminded to cover the stockpile promptly and divert all surface run-off to a de-silting tank.	Agreed with the ET's advice. A de-silting was installed near site office and majority of stockpile was covered. CT advised the stockpile would be opened for drying during daytime.	17 August 2007
17 August 2007 (WTLT 081)	1. C&D waste was observed at Seawall A near GrandBay Villa.	CT was reminded to clear the waste.	Agreed with ET's advice. CT had cleared the C&D waste at Seawall A.	07 September 2007
	2. Wheel-washing was provided near Maeda site office and wash water was observed running onto vehicular road.	CT was reminded to divert all the wash water within the site boundary.	Agreed with ET's advice. The concerned area was paved and wash water was diverted back to the site.	31 August 2007
	3. An oil drum was observed without drip tray near western end of the site. Oil stain was observed on the ground around the oil drum.	CT was reminded to provide drip tray to the oil drum and clear the oil stain.	Agreed with ET's advice. The oil drum was removed from the site and oil stain was cleared.	24 August 2007
24 August 2007 (WTLT 082)	1. Seepage of muddy water was observed outside the silt curtain at Seawall B.	The exceedances of Tby and SS might be due to the reduced enclosed area of the silt curtain that may not sufficient to prevent dispersion of muddy water from the stockpile. The contractor is recommended to reinstate the silt curtain to its original position and remove the stockpile promptly.	CT advised that the stockpile would be removed in early September and they would closely monitor the function of silt curtain.	On-going
31 August 2007 (WTLT 083)	1. Chemical waste labels were not provided to chemical waste containers.	CT was reminded to provide chemical waste labels to each chemical waste storage containers.	Agreed with ET's advice. CT had provided labels to the chemical waste containers.	07 September 2007
	2. A backhoe was observed idling outside Chun Wo site office.	CT was reminded to switch off all equipment while not in use.	Agreed with ET's advice. CT had removed the backhoe from the site.	07 September 2007

Date of Issue Raised	Observation	Advice from EA	CT's Response / Action	Closing Date
	3. Haul road towards site office was observed dry and dusty.	CT was reminded to provide water spraying frequently.	Agreed with ET's advice. CT had provided water spraying over part of the haul road in subsequent site audit.	On-going
	4. Diesel oil was contained in a plastic bag which was fastened to the inlet of fuel tank of an air compressor on the slope towards Chun Wo site office.	CT was reminded to remove the plastic bag and repair the compressor to prevent oil leakage.	Agreed with ET's advice. CT had replaced the lid of the fuel tank.	07 September 2007

6.2 Waste Disposal

Disposal of waste material in the reporting period generally complied with the corresponding waste disposal requirements. The waste disposal quantity in the reporting period is summarised in **Table 6-2**. CT transported C&D material to Public Filling Reception Facility in Tuen Mun Area 38 by truck during reporting period.

Table 6-2: Waste disposal quantity in August 2007

Type of waste or material	Disposal at	No. of loads or quantities
C&D waste	WENT Landfill	51.77 tonnes
C&D material	By barge	0
	By truck	911.12 tonnes
Chemical waste	Collected by licensed collector	0

6.3 Complaint Record

There was no environmental complaint received in August 2007.

6.4 Exceedance

Exceedances of Tby and SS levels for marine water quality were recorded during reporting period when compared with A/L Levels and baseline check criteria.

Investigation has been conducted for the exceedances. The exceedances of SS level recorded on 03 August 2007 were likely attributed to natural variation of marine water and the exceedances of Tby and SS levels recorded on 01, 28 and 30 August 2007 were likely attributed to construction works of the Project. The exceedances of Tby and SS might be due to the reduced enclosed area of the silt curtain that was incapable to prevent dispersion of muddy water from the stockpile. The contractor has been recommended to reinstate the silt curtain to its original position and to remove the stockpile promptly. CT advised that the stockpile would be removed in early September and would closely monitor the function of silt curtain.

These exceedances are summarised in **Tables 6-3 and 6-4**. The details of the investigation was summarised in **Appendix E**. The details of the silt curtain inspection record were given in **Appendix F**.

Table 6-3: Summary of exceedances of marine water quality monitoring (not related to construction works of the Project) in August 2007

Date	Tide	Location	Exceedances of monitoring data					
			Tby (NTU)			SS (mg/L)		
			Control Station	Impact Station	Exceedance of	Control Station	Impact Station	Exceedance of
03-Aug	Mid-ebb	WWFCZ1	-	-	-	10.0	14.7	Baseline Check
03-Aug	Mid-flood	WWFCZ1	-	-	-	15.5	17.7	Baseline Check

Table 6-4: Summary of exceedances of marine water quality monitoring (related to construction works of the Project) in August 2007

Date	Tide	Location	Exceedances of monitoring data					
			Tby (NTU)			SS (mg/L)		
			Control Station	Impact Station	Exceedance of	Control Station	Impact Station	Exceedance of
01-Aug	Mid-ebb	WWA1	-	-	-	11.3	25.0	Baseline Check
01-Aug	Mid-ebb	WWA2	-	-	-	13.3	16.3	Baseline Check
28-Aug	Mid-ebb	WWA2	-	-	-	9.0	14.3	Baseline Check
28-Aug	Mid-ebb	WWA3	-	-	-	8.3	15.0	Baseline Check
28-Aug	Mid-ebb	WWFCZ1	-	-	-	13.7	14.0	Baseline Check
28-Aug	Mid-ebb	WWFCZ2	-	-	-	13.7	14.3	Baseline Check
30-Aug	Mid-ebb	WWA1	-	-	-	12.7	14.2	Baseline Check
30-Aug	Mid-ebb	WWA2	5.9	7.0	Limit Level	11.7	17.5	Baseline Check
30-Aug	Mid-ebb	WWA3	6.1	8.0	Action Level	11.7	20.5	Baseline Check
30-Aug	Mid-ebb	WWFCZ1	-	-	-	9.5	13.5	Baseline Check
30-Aug	Mid-flood	WWFCZ2	-	-	-	14.0	17.2	Baseline Check

6.5 Notification of Summons and Successful Prosecution

No notification of summons and prosecution was received in August 2007.

6.6 Environmental Licenses

No new environmental licence was granted in the reporting period. A summary of the valid environmental licences is given in **Table 6-5**.

Table 6-5: Summary of valid environmental licences in August 2007

Type of Licence	Reference No.	Valid from	Valid to
Environmental Permit	EP-219/2005	20 Jun 2005	Not applicable
Registration of Chemical Waste Producer	5111-336-C2869-49	16 Feb 2006	Not applicable

Water Discharge Licence	EP760/336/011348 I	31 Mar 2006	31 Mar 2011
Construction Noise Permit	GW-RW 0155-07	04 Apr 2007	15 Aug 2007

7 Conclusions

The construction phase of the Project was commenced on 28 February 2006. The EM&A programme has been implemented since then, including marine water quality monitoring and environmental site audits. Noise monitoring at Grand Bay Villa was temporarily suspended as these premises were vacant with no resident.

The exceedances of SS level recorded on 03 August 2007 were likely attributed to natural variation of marine water and the exceedances of Tby and SS levels recorded on 01, 28 and 30 August 2007 were likely attributed to construction works of the Project. The exceedances of Tby and SS might be due to the reduced enclosed area of the silt curtain that was incapable to prevent dispersion of muddy water from the stockpile. The contractor has been recommended to reinstate the silt curtain to its original position and to remove the stockpile promptly. CT advised that the stockpile would be removed in early September and would closely monitor the function of silt curtain.

No complaint, summons or prosecution related to environmental issues was received during the reporting month.

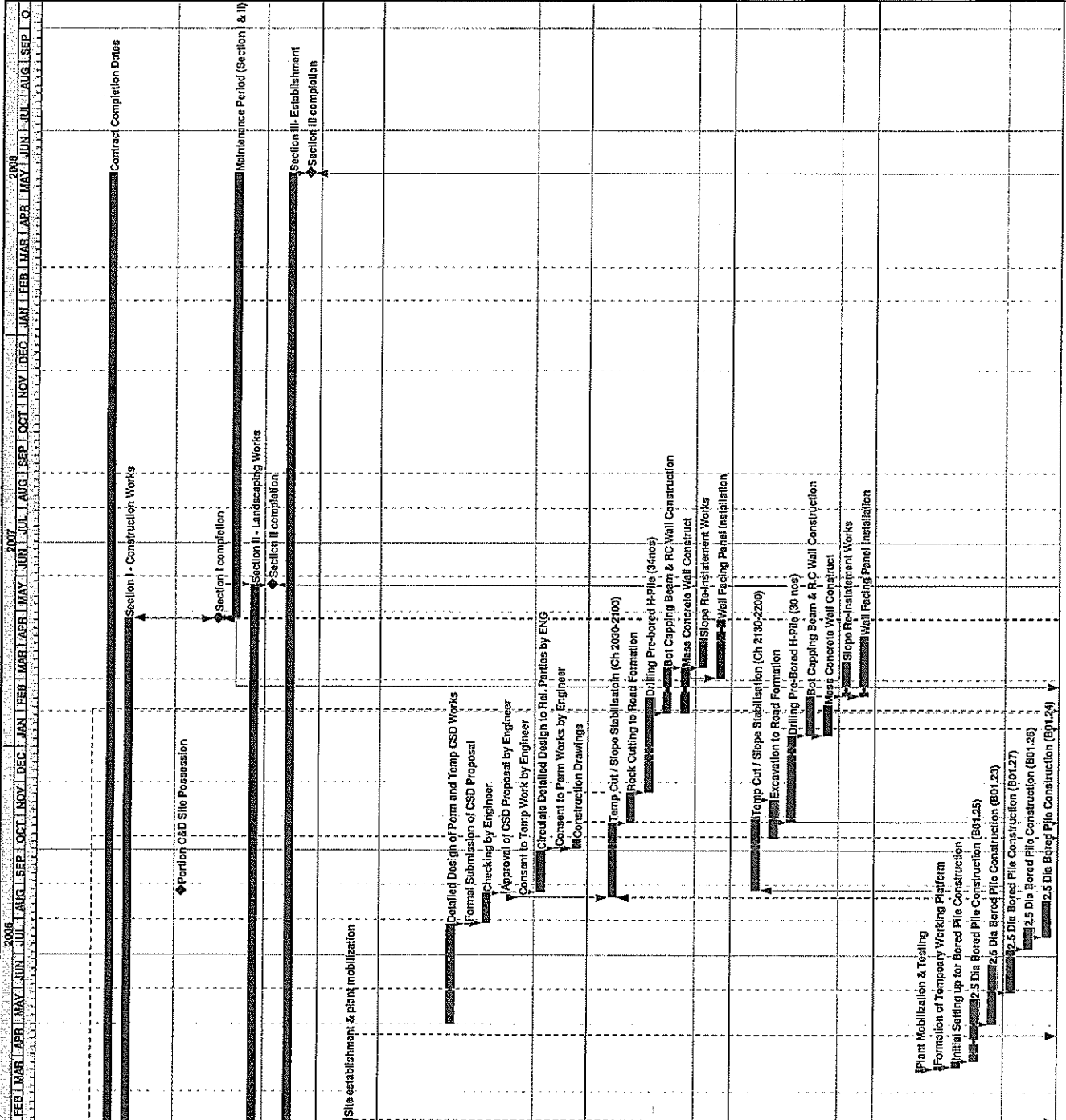
Weekly environmental site audit was carried out during the reporting month. Environmental mitigation measures on air quality, water quality and waste management have been recommended.

C&D materials were transported to PFRF at Tuen Mun Area 38 by truck during the reporting period.

8 References

- [1] Mouchel Halcrow Joint Venture. January 2006. Supplementary Agreement No.1 – Remaining Project EM&A Manual for Construction of Reclamation West of Tsing Lung Tau.
- [2] Ove Arup & Partners Hong Kong Limited. April 2006. Contract No.HY2005/06 Castle Peak Road Improvement – West of Tsing Lung Tau. Environmental Baseline Monitoring Report for Reclamation Works (EP No. EP-219/2005) (Second Issue)

Appendix A
**Construction
programme**

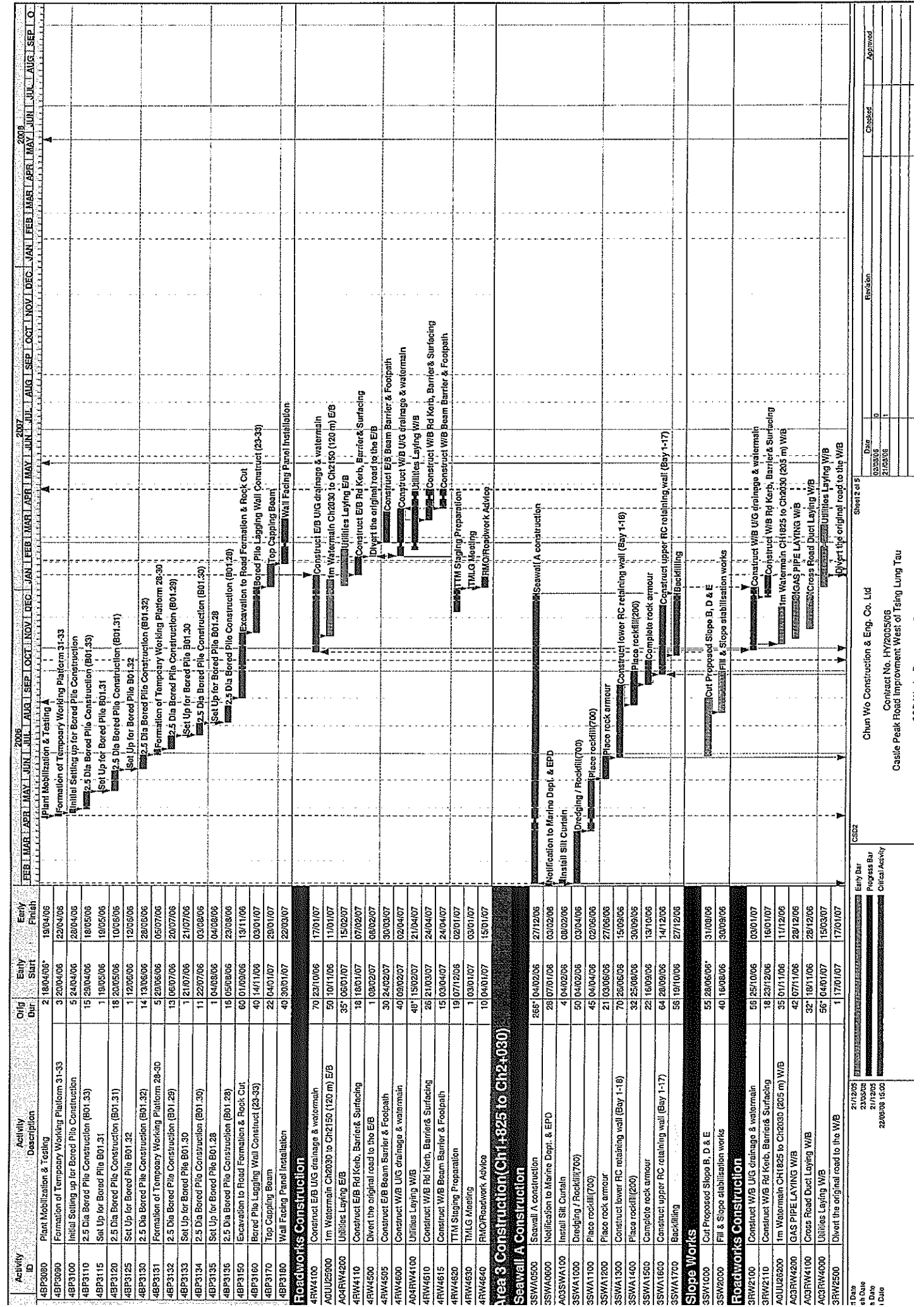


Activity ID	Activity Description	Orig Dur	Early Start	Early Finish
GENERAL KEY DATES				
KD0500	Commencement of Works	0	21/12/05	23/05/06
KD1000	Contract Completion Dates	885	21/12/05	23/05/06
KD1100	Section I - Construction Works	490	21/12/05	24/04/07
KD1110	Portion A Site Possession	0	21/12/05	
KD1120	Portion B Site Possession	0	21/12/05	
KD1130	Portion C&D Site Possession	0	27/08/06*	
KD1140	Portion E Site Possession	0	21/12/05	
KD1200	Section I completion	0		24/04/07
KD1300	Maintenance Period (Section I & II)	335	25/04/07	23/05/08
KD1400	Section II - Landscaping Works	520	21/12/05	24/05/07
KD1500	Section II completion	0		24/05/07
KD1600	Section III - Establishment	885	21/12/05	23/05/08
KD1700	Section III completion	0		23/05/08
PRELIMINARIES				
P1000	Site establishment & plant mobilization	40	21/12/05	02/02/06
P1010	Submit TTM Schematic Drawing (FS1.15S(16))	0		20/12/05
Area 4 Construction (Ch2+030 to Ch2+150)				
Pre-Bored H-Pile Wall at Both Ends at GL				
Pre-Construction				
4PP0100	Detailed Design of Perm and Temp CSD Works	72	02/05/06*	27/07/06
4PP0110	Formal Submission of CSD Proposal	1	28/07/06	28/07/06
4PP0120	Checking by Engineer	23	29/07/06	24/08/06
4PP0130	Approval of CSD Proposal by Engineer	1	25/08/06	25/08/06
4PP0135	Consent to Temp Work by Engineer	1	21/08/06	21/08/06
4PP0150	Circulate Detailed Design to Ref. Parties by ENG	31	26/08/06	30/09/06
4PP0155	Consent to Perm Works by Engineer	1	03/10/06	03/10/06
4PP0160	Construction Drawings	7	03/10/06	11/10/06
Construction - West Side				
A04PP1022	Temp Cut / Slope Stabilization (Ch 2030-2100)	53	21/08/06	25/10/06
A04PP1025	Rock Cutting to Road Formation	22	26/10/06	21/11/06
4PP1030	Drilling Pre-bored H-Pile (34nos)	68	22/11/06	19/02/07
4PP1040	Bot Capping Beam & RC Wall Construction	30	31/01/07	12/03/07
4PP1050	Mass Concrete Wall Construct	30	31/01/07	12/03/07
4PP1060	Slope Re-instatement Works	22	13/03/07	07/04/07
4PP1070	Wall Facing Panel Installation	40	03/03/07	23/04/07
Construction - East Side				
4PP2000	Temp Cut / Slope Stabilization (Ch 2130-2200)	53	28/08/06	31/10/06
4PP2020	Excavation to Road Formation	28	13/10/06	15/11/06
4PP2030	Drilling Pre-Bored H-Pile (30 nos)	60	27/10/06	10/01/07
4PP2040	Bot Capping Beam & RC Wall Construction	30	11/01/07	14/02/07
4PP2100	Mass Concrete Wall Construct	24	11/01/07	07/02/07
4PP2110	Slope Re-instatement Works	22	15/02/07	17/03/07
4PP2120	Wall Facing Panel Installation	40	15/02/07	08/04/07
Bored Pile Retaining Wall Construction				
Bored Pile Construction - B01.23 - B01.23				
4BP3000	Plant Mobilization & Testing	2	29/03/06*	21/03/06
4BP3010	Formation of Temporary Working Platform	3	22/03/06	24/03/06
4BP3020	Initial Setting up for Bored Pile Construction	5	24/03/06	29/03/06
4BP3030	2.5 Dia Bored Pile Construction (B01.23)	41	30/03/06	23/05/06
4BP3040	2.5 Dia Bored Pile Construction (B01.23)	43	02/05/06	22/06/06
4BP3050	2.5 Dia Bored Pile Construction (B01.27)	31	30/05/06	06/07/06
4BP3060	2.5 Dia Bored Pile Construction (B01.26)	15	08/07/06	25/07/06
4BP3070	2.5 Dia Bored Pile Construction (B01.24)	28	18/07/06	18/08/06

Start Date: 21/12/05
 Finish Date: 23/05/06
 Date: 21/10/05
 Run Date: 22/09/05 15:00

Sheet of 3
 Date: 12/03/05
 Revision: 1
 Checked: Approved

Chun Wo Construction & Eng. Co. Ltd
 Contract No. HW/2005/06
 Causee Peak Road Improvement West of Teing Lung Tau
 CSD Works Programme Rev.1



Activity ID	Description	Orig Dur	Early Start	Early Finish
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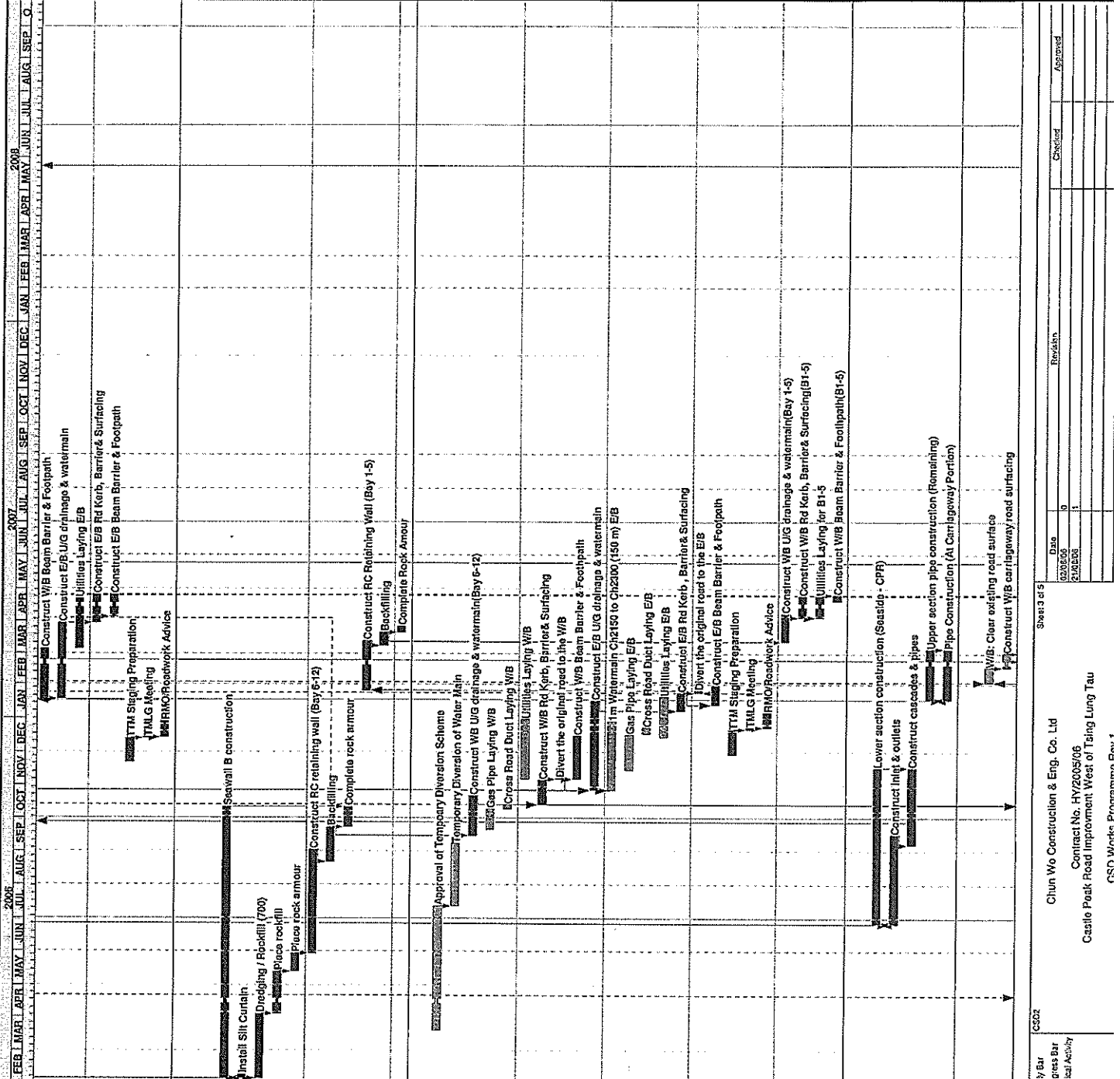
4BP3090	Plant Mobilization & Testing	3	18/04/05*	19/04/05
4BP3090	Formation of Temporary Working Platform 31-33	2	20/04/05	20/04/05
4BP3100	Initial Setting up for Bored Pile Construction	5	24/04/05	28/04/05
4BP3110	2.5 Dia Bored Pile Construction (B01.33)	15	29/04/05	18/05/05
4BP3115	Set Up for Bored Pile B01.31	1	19/05/05	19/05/05
4BP3120	2.5 Dia Bored Pile Construction (B01.31)	18	20/05/05	10/06/05
4BP3125	Set Up for Bored Pile B01.32	1	12/06/05	12/06/05
4BP3130	2.5 Dia Bored Pile Construction (B01.32)	14	13/06/05	28/06/05
4BP3131	Formation of Temporary Working Platform 28-30	5	29/06/05	05/07/05
4BP3132	2.5 Dia Bored Pile Construction (B01.29)	13	06/07/05	20/07/05
4BP3133	Set Up for Bored Pile B01.30	1	21/07/05	21/07/05
4BP3134	2.5 Dia Bored Pile Construction (B01.30)	11	22/07/05	03/08/05
4BP3135	Set Up for Bored Pile B01.28	1	04/08/05	04/08/05
4BP3136	2.5 Dia Bored Pile Construction (B01.28)	16	05/08/05	23/08/05
4BP3150	Excavation to Road Formation & Rock Cut	60	01/09/05	13/11/05
4BP3160	Bored Pile Lagging Wall Construct (23-33)	40	14/11/05	03/01/07
4BP3170	Top Capping Beam	28	04/01/07	28/01/07
4BP3180	Wall Facing Panel Installation	49	30/01/07	28/03/07

4RW4100	Construct E/B U/G drainage & watermain	70	23/10/06	17/01/07
AQUJ25000	1m Watermain Ch2030 to Ch2150 (120 m) E/B	50	10/11/06	11/01/07
AQ3RW4200	Utilities Laying E/B	35*	06/01/07	15/02/07
4RW4110	Construct E/B Rd Kerb, Barrier & Surfacing	18	16/01/07	07/02/07
4RW4500	Divert the original road to the E/B	1	08/02/07	08/02/07
4RW4505	Construct E/B Beam Barrier & Footpath	30	24/02/07	30/03/07
4RW4600	Construct W/B U/G drainage & watermain	40	03/02/07	02/04/07
AQ3RW4100	Utilities Laying W/B	48*	15/02/07	21/04/07
4RW4610	Construct W/B Rd Kerb, Barrier & Surfacing	26	21/03/07	24/04/07
4RW4615	Construct W/B Beam Barrier & Footpath	15	03/04/07	24/04/07
4RW4820	TTM Staging Preparation	19	07/12/06	02/01/07
4RW4630	TMLG Meeting	1	03/01/07	03/01/07
4RW4640	RMC/Roadwork Advice	10	04/01/07	15/01/07

3SWA0500	Seawall A construction	265*	04/02/06	27/12/06
3SWA0600	Notification to Marine Dept. & EPD	28	07/01/06	03/02/06
AQ3SWA100	Install Silt Curtain	4	04/02/06	08/02/06
3SWA1000	Dredging / Rockfill(700)	50	04/02/06	03/04/06
3SWA1100	Place rockfill(700)	45	04/04/06	02/06/06
3SWA1200	Place rock armour	21	03/06/06	27/06/06
3SWA1300	Construct lower RC retaining wall (Bay 1-18)	70	26/06/06	15/09/06
3SWA1400	Place rockfill(200)	32	25/08/06	30/09/06
3SWA1500	Complete rock armour	22	16/09/06	13/10/06
3SWA1600	Construct upper RC retaining wall (Bay 1-17)	64	28/09/06	14/12/06
3SWA1700	Backfilling	58	19/10/06	27/12/06

3SW1000	Cut Proposed Slope B, D & E	55	28/06/05*	31/08/05
3SW2000	Fill & Slope stabilisation works	40	16/08/06	30/09/06

3RW2100	Construct W/B U/G drainage & watermain	59	25/10/06	03/01/07
3RW2110	Construct W/B Rd Kerb, Barrier & Surfacing	18	23/12/06	16/01/07
AQUJ26200	1m Watermain Ch1825 to Ch2030 (205 m) W/B	35	01/11/06	11/12/06
AQ3RW4200	GAS PIPE LAYING W/B	42	07/11/06	29/12/06
AQ3RW4100	Grate Road Duct Laying W/B	32*	18/11/06	28/12/06
3RW2500	Utilities Laying W/B	56*	04/01/07	15/03/07
3RW2500	Divert the original road to the W/B	1	17/01/07	17/01/07



Activity ID	Activity Description	Orig Dur	Early Start	Early Finish
3RW2505	Construct WB Beam Barrier & Footpath	35	18/01/07	05/03/07
3RW2600	Construct E/B U/G drainage & watermain	56	18/01/07	29/03/07
A03RW4500	Utilities Laying E/B	36	06/03/07	20/04/07
3RW2605	Construct E/B Rd Kerb, Barrier & Surfacing	18	30/03/07	24/04/07
3RW2608	Construct E/B Beam Barrier & Footpath	14	04/04/07	24/04/07
3RW2610	TTM Staging Preparation	19	21/11/06	12/12/06
3RW2620	TMLG Meeting	1	13/12/06	13/12/06
3RW2630	RMO/Roadwork Advice	10	14/12/06	29/12/06
Area 5 Construction (Ch2-150 to Ch2-300)				
Seawall B Construction				
2SWB0500	Seawall B construction	204*	04/02/06	11/10/06
A02SWB100	Install Silt Curtain	3	04/02/06	07/02/06
2SWB1000	Dredging / Rockfill (700)	50	04/02/06	03/04/06
2SWB1100	Place rockfill	28	04/04/06	12/05/06
2SWB1200	Place rock armour	14	13/05/06	29/05/06
2SWB1300	Construct RC retaining wall (Bay 6-12)	80	30/05/06	01/09/06
2SWB1400	Backfilling	28	22/09/06	22/09/06
2SWB1500	Complete rock armour	14	23/09/06	11/10/06
A02SWB0500	Construct RC Retaining Wall (Bay 1-5)	35	26/01/07	13/03/07
A02SWB1000	Backfilling	10	09/03/07	20/03/07
A02SWB1100	Complete Rock Armour	5	21/03/07	26/03/07
Roadworks Construction				
A02RW0100	Approval of Temporary Diversion Scheme	90	20/03/06*	11/07/06
A02RW0500	Temporary Diversion of Water Main	50	12/07/06	07/09/06
2RW3000	Construct WB U/G drainage & watermain (Bay 6-12)	30	15/09/06	21/10/06
A02RW1900	Gas Pipe Laying WB	14	21/09/06	09/10/06
A02RW1800	Gross Road Duct Laying WB	4	10/10/06	13/10/06
A02RW1600	Utilities Laying WB	45	06/11/06	30/12/06
2RW3010	Construct WB Rd Kerb, Barrier & Surfacing	18	14/10/06	04/11/06
2RW3501	Divert the original road to the WB	1	06/11/06	06/11/06
2RW3510	Construct WB Beam Barrier & Footpath	35	06/11/06	15/12/06
2RW3600	Construct E/B U/G drainage & watermain	65	27/10/06	16/01/07
A02RW26000	1m Watermain Ch2150 to Ch2300 (150 m) E/B	50	27/10/06	28/12/06
A02RW2100	Gas Pipe Laying E/B	28	15/11/06	16/12/06
A02RW2000	Gross Road Duct Laying E/B	4	18/12/06	22/12/06
A02RW1700	Utilities Laying E/B	28	15/12/06	28/01/07
2RW3610	Construct E/B Rd Kerb, Barrier & Surfacing	15	09/01/07	24/01/07
2RW3500	Divert the original road to the E/B	1	25/01/07	25/01/07
2RW3620	Construct E/B Beam Barrier & Footpath	15	13/01/07	30/01/07
2RW3700	TTM Staging Preparation	19	29/11/06	21/12/06
2RW3710	TMLG Meeting	1	22/12/06	22/12/06
2RW3720	RMO/Roadwork Advice	10	23/12/06	02/01/07
A02RW1100	Construct WB U/G drainage & watermain (Bay 1-5)	22	13/03/07	07/04/07
A02RW1300	Construct WB Rd Kerb, Barrier & Surfacing (B1-5)	13	04/04/07	23/04/07
A02RW1200	Utilities Laying for B1-5	13	04/04/07	23/04/07
A02RW1400	Construct WB Beam Barrier & Footpath (B1-5)	5	19/04/07	24/04/07
OUTFALL EA & EB CONSTRUCTION				
3OF1000	Lower section construction (Seastop - CPP)	120*	26/05/06	16/11/06
3OF1100	Construct inlet & outlets	70	26/06/06	15/09/06
3OF1200	Construct cascades & pipes	59	07/09/06	16/11/06
3OF2000	Upper section pipe construction (Remaining)	35*	18/01/07	05/03/07
3OF2100	Pipe construction (At Carriageway Portion)	35	18/01/07	05/03/07
Area 1 Construction (Ch1-600 to Ch1-705)				
5RW0500	WB: Clear existing road surface	12	03/02/07	16/02/07
5RW1500	Construct WB carriageway road surfacing	6	17/02/07	01/03/07

Activity ID	Activity Description	Orig. Dur.	Early Start	Early Finish
RW2000	Divert the original road to the new road (WB)	1	02/03/07	02/03/07
RW2500	E/B: clear existing road surface	12	03/03/07	16/03/07
RW3500	Construct E/B carriageway road surfacing	6	17/03/07	23/03/07
RW3510	TTM Staging Preparation	19	03/01/07	24/01/07
RW3520	TMLG Meeting	1	25/01/07	25/01/07
RW3530	RMO/Roadwork Advice	10	26/01/07	05/02/07
Area 6 Construction (Ch2-300 to Ch2-400)				
RW0500	WB: clear existing road surface, 1 lane	12	14/10/06	27/10/06
RW1500	Construct WB carriageway road surfacing, 1 lane	6	28/10/06	04/11/06
RW2000	Divert the original road to the new lane	1	06/11/06	06/11/06
RW2100	WB: clear existing road surface, 1 lane	12	07/11/06	20/11/06
RW2200	Construct WB carriageway road surfacing, 1 lane	6	21/11/06	27/11/06
RW2500	E/B: Clear existing road surface, 1 lane	12	28/11/06	11/12/06
RW3500	Construct E/B carriageway road surfacing, 1 lane	6	12/12/06	18/12/06
RW3501	E/B: clear existing road surface, 1 lane	12	21/12/06	06/01/07
RW3502	Construct E/B carriageway road surfacing, 1 lane	6	08/01/07	13/01/07
RW3510	TTM Staging Preparation	19	11/09/06	03/10/06
RW3511	Divert the original road to the new lane	1	18/12/06	19/12/06
RW3520	TMLG Meeting	1	04/10/06	04/10/06
RW3530	RMO/Roadwork Advice	10	05/10/06	17/10/06
Area 2 Construction (Ch1-705 to Ch1-825)				
RW0500	WB: Excavation & demolish existing road surface	12	21/04/06*	06/05/06
OUU25700	1m Watermain Connection to CH1825 (25 m) E/B	80	25/05/06	20/09/06
OUU30000	Cross Road Duct Laying E/W/B	8	23/09/06	03/10/06
OUU30000	Utilities Laying E/B	42	17/02/07	13/04/07
OUU28100	1m Watermain Connection to CH1825 (25 m) WB	80	25/05/06	20/09/06
OUU30700	Utilities Laying WB	14	06/02/07	27/02/07
RW1000	Construct WB, E/B: U/G drain, watermain, etc	115	06/05/06	20/09/06
RW1500	Construct WB, E/B Kerb/Barriers/road surfacing	19	21/09/06	14/10/06
RW2000	Divert the original road to the new road (E/W/B)	1	16/10/06	16/10/06
RW2010	Construct WB, E/B Beam Barrier & Footpath	24	17/10/06	14/11/06
RW2500	Slip Rd: Excav & demolish duct road surface	12	17/10/06	31/10/06
RW3000	Slip Rd: U/G drainage & utilities	82	01/11/06	08/02/07
RW3300	Construct Slip Rd surfacing work	18	09/02/07	07/03/07
OUU05000	Construction of Car Park	50	21/09/06	21/11/06
RW3510	TTM Staging Preparation	15	26/09/06	12/09/06
RW3520	TMLG Meeting	1	13/09/06	13/09/06
RW3530	RMO/Roadwork Advice	10	14/09/06	25/09/06
Slope Remedial Works				
Remedial Work 6SW-D/C170				
RW3000	Remedial works to Slope No. 6SW-D/C170	57	30/01/07	12/04/07
Remedial Work 6SW-D/FR286				
RW3500	Remedial works to Slope No. 6SW-D/FR286	167	08/04/06	31/10/06
Remedial Work 6SW-D/FR89				
SW4000	Remedial works to Slope No. 6SW-D/FR89	100	13/06/06	10/10/06
Remedial Work 6SW-D/FR83				
SW6000	Remedial works to Slope No. 6SW-D/FR83	83	16/10/06	22/04/07
Remedial Work 6SW-D/FR2				
SW6500	Remedial works to Slope No. 6SW-D/FR2	120	15/06/06	06/11/06
Remedial Work 6SW-D/R1				
SW6000	Remedial works to Slope No. 6SW-D/R1	87	12/12/06	09/04/07
Section 11 - Landscaping Works				
OUU10000	Tree Transplant	200	06/02/06*	06/10/06
W10000	Landscaping Work	90	24/02/07	24/05/07

21/09/07 21/09/07 21/09/07 22/06/07 22/06/07 22/06/07

2006: FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT | OCT | NOV | DEC | 2007: JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT | OCT | NOV | DEC | 2008: JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT | OCT | NOV | DEC

Sheet 4 of 5

Chun Wo Construction & Eng. Co. Ltd
 Contract No. HY2005/06
 Castle Peak Road Improvement West of Tsing Lung Tau

Date	02/09/05	0
Revision	21/09/05	1
Checked		
Approved		

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish	2008																			
					FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
EP1000	Establishment works	365	25/05/07	23/05/08																				



Start Date	21/12/03	20/05/08	21/12/03	22/09/05 15:00
Finish Date	20/05/08	21/12/03		
Data Date				
Run Date				

Sheet 5 of 5	Date	03/08/07	Revision	
	Checked		Approved	

6382	Chun Wo Construction & Eng. Co. Ltd
	Contract No. HY/2005/06
	Cattle Peak Road Improvement West of Tising Lung Tau
	RCSB Works Department, Oct 04

Appendix B

**Monitoring schedule for
August 2007 and
September 2007**

Environmental Monitoring and Audit Schedule - August 2007

- Note 1: L30 denotes $L_{eq(30 \text{ min})}$ monitoring
- Note 2: TSP denotes Total Suspended Particulate monitoring
- Note 3: MV denotes marine water monitoring
- Note 4: L&V denotes Landscape and Visual audit and monitoring

Aug-2007

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

Tentative Environmental Monitoring and Audit Schedule - September 2007

- Note 1: L30 denotes L_{eq(30 min)} monitoring
- Note 2: TSP denotes Total Suspended Particulate monitoring
- Note 3: MV denotes marine water monitoring
- Note 4: L&V denotes Landscape and Visual audit and monitoring

Sep-2007						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1						1
2	3	4	5	6	7	8
					Site Inspection	MW
9	10	11	12	13	14	15
	MW			MW	Site Inspection	MW
16	17	18	19	20	21	22
		MW		MW	Site Inspection	MW
23	24	25	26	27	28	29
		MW		MW	Site Inspection	MW
30						
		MW		MW		MW

Appendix C

**Calibration certificates
of marine water
monitoring equipment**



Hong Kong Productivity Council
香港生產力促進局

Environmental Management Division

CALIBRATION REPORT

Client : OVEARUP & PARTNERS H.K. LTD.
Address : Level 5 Festival Walk,
80 Tat Chee Avenue,
Kowloon Tong,
Kowloon.

Report No. : CR 000079
Page No. : 1 of 5
Issue Date : 17/07/2007

Received Date : 10/07/2007
Approved Signatory : Fung Kam Wing
Remarks :

Completion Date : 17/07/2007

Calibration Results:

Item : YSI Model 85-10 FT Handheld Salinity, Conductivity & Temperature Instrument
Serial No. : 99 G0526 AJ
Calibration Method : APHA 18e 2520-A & B
Date of Calibration : 10/07/2007

Results :

Salinity	Expected Reading (ppt)	Recorded Reading (ppt)
	0	0
	7.4	7.2
	15	14.6
	35	33.2
	39.3	37.4

Approval Signatory:

Hong Kong Head Office
香港總部
TST P.O. Box 99027 Hong Kong • HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong
Tel: (852) 2788 5678 • Fax: (852) 2788 5500 • Telex: 32942 HKPC HX
香港尖沙咀彌敦道99027號 • 香港九龍德輔道中78號生產力大樓



Hong Kong Productivity Council
香港生產力促進局

Environmental Management Division

CALIBRATION REPORT

Client : OVE ARUP & PARTNERS H.K. LTD.
Address : Level 5 Festival Walk,
80 Tat Chee Avenue,
Kowloon Tong,
Kowloon.

Report No. : CR 000079
Page No. : 2 of 5
Issue Date : 17/07/2007

Received Date : 10/07/2007
Approved Signatory : Fung Kam Wing
Remarks :

Completion Date : 17/07/2007

Calibration Results:

Item : YSI Model 85-10 FT Handheld Salinity, Conductivity & Temperature Instrument
Serial No. : 99 G0526 AJ
Calibration Method : In house method
Date of Calibration : 10/07/2007

Results :

Temperature	Expected Reading (C)	Recorded Reading (C)
	10.0	11.0
	20.0	20.9
	30.0	31.0
	40.0	41.1

Approval Signatory:

Hong Kong Head Office
香港總部
TST P.O. Box 99027 Hong Kong • HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong
Tel: (852) 2788 5678 • Fax: (852) 2788 5500 • Telex: 32942 HKPC HX
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Calibration Results:

Item : YSI Model 85-10 FT Handheld Salinity, Conductivity & Temperature Instrument
Serial No. : 99 G0526 AJ
Calibration Method : APHA 18e 4500-O A, B, C & D
Date of Calibration : 17/07/2007

Expected Reading (mg/L)	Recorded Reading (mg/L)
2.80	3.39
4.15	4.65
6.50	7.04
7.80	7.96
8.70	8.67

Approval Signatory:



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Page No. : 4 of 5
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Remarks :

Calibration Results:

Item : HACH 2100P Turbidimeter
Serial No. : 011100024354
Calibration Method : APHA 18e 2130 B
Date of Calibration : 12/07/2007

Expected Reading (NTU)	Recorded Reading (NTU)
0	0.18
2	2.06
4	3.78
16	15.7
40	37.8
80	77.1

Approval Signatory:



**Hong Kong
Productivity Council**
香港生產力促進局

Environmental Management Division

CALIBRATION REPORT

Client : OVE ARUP & PARTNERS H.K. LTD. Report No. : CR 000079
Address : Level 5 Festival Walk, Page No. : 5 of 5
80 Tat Chee Avenue, Issue Date : 17/07/2007
Kowloon Tong, Kowloon.

Received Date : 10/07/2007 Completion Date : 17/07/2007
Approved Signatory : Fung Kam Wing

Remarks :

Calibration Results:

Item : HANNA instrument HI 1270 pH meter
Serial No. : S354547
Calibration Method : In house method
Date of Calibration : 17/07/2007

Results :

pH	Expected Reading (pH unit)	Recorded Reading (pH unit)
	4.01	4.01
	7.00	7.03
	10.0	10.03

Approval Signatory:

Appendix D

**Marine water quality
monitoring results**

Appendix E

**Investigation summary
on marine water quality
exceedances**

Date	Tide	Location	Exceedance of Monitoring Data												CTs action	Closing Date	Remark					
			DO (mg/L)						SS (mg/L)													
			Position	Baseline Check	Control Station	Level at Impact	Baseline Check	Control Station	Tby (NTU)	Level at Impact	Baseline Check	Control Station	Level at Impact Station									
1-Aug-07	Mid-ebb	WWA1	-	-	-	-	-	-	-	13.0	11.3	25.0	-	-	-	-	-	-	-	The Contractor has repaired the silt curtain on 02 August 2007. Exceedances were not recorded in subsequent monitoring on 03 August 2007 at WWA1, WWA2 and WWA3.	10-Aug-07	Refer to ET's field record & CT's daily records.
1-Aug-07	Mid-ebb	WWA2	-	-	-	-	-	-	13.0	13.3	16.3	-	-	-	-	-	-	-	-	Ditto	Ditto	Ditto
3-Aug-07	Mid-ebb	WWFCZ1	-	-	-	-	-	-	13.0	10.0	14.7	-	-	-	-	-	-	-	-	Exceedance was not recorded at the monitoring WWA1, WWA2 and WWA3, which are closer to the site, on the same tide and same day. The exceedances were not likely related to construction works of the Project and likely attributed to natural variation of marine water.	10-Aug-07	Refer to ET's field record & CT's daily records.
3-Aug-07	Mid-flood	WWFCZ1	-	-	-	-	-	-	17.0	15.5	17.7	-	-	-	-	-	-	-	-	Ditto	Ditto	Ditto
28-Aug-07	Mid-ebb	WWA2	-	-	-	-	-	-	13.0	9.0	14.3	-	-	-	-	-	-	-	-	Seepage of muddy water from silt curtain at Seawall B was observed by ET auditor on 24 August 2007. The exceedances were likely due to the reduced enclosed area of the silt curtain that was incapable to prevent dispersion of muddy water from the stockpile. The contractor is recommended to reinstate the silt curtain to its original position and to remove the stockpile at Seawall B promptly.	On-going	Refer to ET's field record & CT's daily records.
28-Aug-07	Mid-ebb	WWA3	-	-	-	-	-	-	13.0	8.3	15.0	-	-	-	-	-	-	-	-	Ditto	Ditto	Ditto
28-Aug-07	Mid-ebb	WWFCZ1	-	-	-	-	-	-	13.0	13.7	14.0	-	-	-	-	-	-	-	-	Ditto	Ditto	Ditto
28-Aug-07	Mid-ebb	WWFCZ2	-	-	-	-	-	-	13.0	13.7	14.3	-	-	-	-	-	-	-	-	Ditto	Ditto	Ditto

Date	Tide	Location	Exceedance of Monitoring Data												ET's investigation	CT's action	Closing Date	Remark
			DO (mg/L)				Tby (NTU)				SS (mg/L)							
			Position	Baseline Check	Control Station	Level at Impact	Baseline Check	Control Station	Level at Impact	Baseline Check	Control Station	Level at Impact Station						
30-Aug-07	Mid-ebb	WWA1	-	-	-	-	-	-	-	-	-	-	13.0	12.7	14.2	Ditto	Ditto	Ditto
30-Aug-07	Mid-ebb	WWA2	-	-	-	6.5	5.9	7.0	13.0	11.7	17.5	-	13.0	11.7	-	Ditto	Ditto	Ditto
30-Aug-07	Mid-ebb	WWA3	-	-	-	6.5	6.1	8.0	13.0	11.7	20.5	-	13.0	11.7	-	Ditto	Ditto	Ditto
30-Aug-07	Mid-ebb	WWFCZ1	-	-	-	-	-	-	13.0	9.5	13.5	-	13.0	9.5	-	Ditto	Ditto	Ditto
30-Aug-07	Mid-flood	WWFCZ2	-	-	-	-	-	-	17.0	14.0	17.2	-	17.0	14.0	-	Ditto	Ditto	Ditto

Appendix F
**Silt curtain daily
inspection record**



Project : Castle Peak Road Improvement

Seawall B Silt Curtain Daily Inspection Record

俊和
CHUN WO

(17)

Date	Condition	Action
30/7/2007 (Mon)	Little muddy water observed.	Arrange to fix the silt curtain on 02/08/2007.
31/7/2007 (Tue)	No muddy water observed.	N/A
01/8/2007 (Wed)	No muddy water observed.	N/A
02/8/2007 (Thu)	Muddy water was observed inside silt curtain.	Damaged silt curtain has been fixed.
03/8/2007 (Fri)	No muddy water observed.	Installation of silt curtain at Seawall A.
04/8/2007 (Sat)	No muddy water observed.	N/A
05/8/2007 (SUN)	Sunday	Sunday

Inspected by
Chun Wo

Gary Lam
Date: 01/08/07

Inspected by
MHJV

MR MOK
Date: 01/08/07



Project : Castle Peak Road Improvement

Seawall B Silt Curtain Daily Inspection Record

俊和
CHUN WO

(18)

Date	Condition	Action
06/8/2007 (Mon)	No muddy water observed.	N/A
07/8/2007 (Tue)	No muddy water observed.	N/A
08/8/2007 (Wed)	No muddy water observed.	N/A
09/8/2007 (Thu)	No muddy water observed.	N/A
10/8/2007 (Fri)	No muddy water observed.	N/A
11/8/2007 (Sat)	No muddy water observed.	N/A
12/8/2007 (SUN)	Sunday	Sunday

Inspected by
Chun Wo

Gary Lam
Date: 14/08/07

Inspected by
MHJV

MR MOK
Date: 14/08/07

(19)



Project : Castle Peak Road Improvement

Seawall B Silt Curtain Daily Inspection Record

Date	Condition	Action
13/8/2007 (Mon)	No muddy water observed.	N/A
14/8/2007 (Tue)	No muddy water observed.	N/A
15/8/2007 (Wed)	No muddy water observed.	N/A
16/8/2007 (Thu)	No muddy water observed.	N/A
17/8/2007 (Fri)	No muddy water observed.	N/A
18/8/2007 (Sat)	No muddy water observed.	N/A
19/8/2007 (SUN)	Sunday	Sunday

Inspected by
Chun Wo

Gary Lam

Date:

Inspected by
MHJV

MR MOK

Date:

Handwritten signature of MR MOK
12-9-07



Project : Castle Peak Road Improvement

Seawall B Silt Curtain Daily Inspection Record

Date	Condition	Action
20/8/2007 (Mon)	No muddy water observed.	N/A
21/8/2007 (Tue)	No muddy water observed.	N/A
22/8/2007 (Wed)	No muddy water observed.	N/A
23/8/2007 (Thu)	No muddy water observed.	N/A
24/8/2007 (Fri)	No muddy water observed.	N/A
25/8/2007 (Sat)	Little muddy water observed.	Arrange to fix the silt curtain on 27/08/2007.
26/8/2007 (SUN)	Sunday	Sunday

Inspected by
Chun Wo

Gary Lam

Date:

Inspected by
MHJV

MR MOK

Date:

Handwritten signature of MR MOK
12-9-07



Project : Castle Peak Road Improvement

Seawall B Silt Curtain Daily Inspection Record

Date	Condition	Action
27/8/2007 (Mon)	No muddy water observed.	N/A
28/8/2007 (Tue)	No muddy water observed.	N/A
29/8/2007 (Wed)	No muddy water observed.	N/A
30/8/2007 (Thu)	No muddy water observed.	N/A
31/8/2007 (Fri)	No muddy water observed.	N/A
01/9/2007 (Sat)	No muddy water observed..	N/A
02/9/2007 (SUN)	Sunday	Sunday

Inspected by
Chun Wo

Gary Lam

Date:

Inspected by
MHJV

MR MOK

Date:

[Signature]
12-9-07