

Drainage Service Department

Monthly Environmental Monitoring & Auditing report for

Contract No.DC/2009/22

Drainage Improvement in Shuen Wan, Tai Po – Contract 1

July 2012

Environmental Pioneers & Solutions Limited

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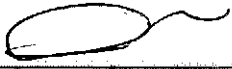
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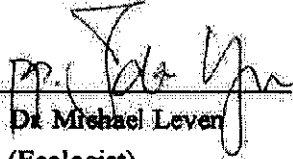
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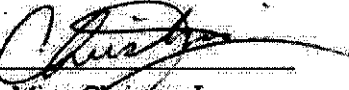
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EXECUTIVE SUMMARY

This is the seventeenth monthly Environmental Monitoring and Audit (EM&A) Report for the drainage improvement works in Shuen Wan, Tai Po under Drainage Services Department Contract No. DC/2009/22 entitled “Drainage Improvement Works in Shuen Wan, Tai Po – Contract 1”. This report concludes the impact monitoring for the activities undertaken during the period from 1st of July 2012 to 31st July 2012. The major site activities in this reporting period were mainly Internal finishing for the proposed Transformer room & Switchroom, concreting of the proposed discharge chamber at +3.0mPD, sheetpiles installation for the proposed the DN2100 storm relief drain at the proposed stormwater pumping station site and Excavation for construction of the proposed box culvert (CH156 to CH214).

The Environmental Team (ET) is responsible for the EM&A works required in the EM&A manual (revision 3). Site inspections were carried out on weekly basis to investigate and audit the equipment and work methodologies with respect to pollution control and environmental mitigation. The weekly inspections records and photos taken were kept.

In general, waste management was satisfactory during the reporting period.

Impact monitoring for construction noise was conducted in the reporting period. No exceedance of A/L level was reported.

Furthermore, impact monitoring for water quality was conducted. Total 13 abnormal incidents of water quality criteria were recorded in this reporting month. It was observed that the river was narrowed for construction of mechanical penstocks; and increases the speed of water current. During the reporting period, no construction works were carried out at the river bed. Proper mitigation measures were implemented by contractor to avoid site water release to the Wai Ha river and no particular observation of defective site activities were found causing water contamination; The exceedance of Turbidity and Total Suspended Solid were believed to be mainly attributed by high water flow rate and for the high level of turbidity and SS, it was also believed to be attributed by adverse weather. The exceedances of DO were believed to be mainly attributed by natural fluctuation. And, since the recorded

levels of DO at control station had also exceeded its baseline limit level, the exceedances recorded at W2 were unlikely to be related to the Project.

No exceedance of A/L level was reported for the monitoring of hydrological characteristics in the reporting period.

The ecological monitoring of the Ecological Compensatory Area (ECA) of the project is conducted. Details of the findings are referred to sections 6.2.

Visual and landscape monitoring has been conducted for the project. Details of the observations are referred to sections 7.3.

There was no complaint, notification of any summons and successful prosecutions against the project received during the reporting period.

Site works proposed to be carried out in the upcoming month at Area A, B & C are refer to section 2.2.

It is expected that noise, air and water quality impacts will be resulted from the works. ET has reminded the contractor to provide environmental pollution control measures wherever necessary and to keep a good environmental management at site practice. The recommended mitigation measures proposed for the project as well as implementation status are refer to section 12.3.

The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual (revision 3) and Environmental Permit requirement.

1 Introduction

This is the seventeenth monthly Environmental Monitoring and Audit (EM&A) Report for the drainage improvement works in Shuen Wan, Tai Po under Drainage Services Department Contract No. DC/2009/22 entitled “Drainage Improvement Works in Shuen Wan, Tai Po – Contract 1”. The site layout plan is shown in Appendix A. The Environmental Team, Environmental Pioneers & Solutions Limited was appointed by Kwan Lee – Kuly Joint Venture to prepare the report. The report is to be submitted to the Contractor, the Engineer and the IEC.

This report presents the results of the environmental monitoring of the project activities conducted within the reporting period from 1st July 2012 to 31st July 2012. This report included the noise monitoring, water quality monitoring, hydrological characteristics monitoring, ecological monitoring, visual and landscape monitoring, and regular site inspections once per week for verification of implementation of the mitigation measures as recommended in the Environmental Permit (EP-303/2008) (EP), EM&A Manual (revision 3) and the Contractor’s Environmental Management Plan (EMP).

2 Construction Stage

2.1 Construction activities in the reporting period

Major activities in the reporting period included the followings:

- Area A – Internal finishing for the proposed Transformer room & switchroom.
- Area A – Laying of E&M ducting for the proposed Transformer room & switchroom.
- Area A – Concreting of the proposed discharge chamber at +3.0mPD.
- Area A – Sheetpiles installation for the proposed DN1200 at the proposed Stormwater Pumping Station Site.
- Area A – Sheetpiles installation for the proposed DN2100 storm relief drain at the proposed Stormwater pumping Station Site.
- Area A – Excavation for construction of the proposed DN1200 drain at the proposed Stormwater Pumping Station Site.
- Area A – Sheetpiles installation for DN2100 storm relief drain (CH80 to 120) at Ting Kok Raod.
- Area A – Excavation for the proposed DN2100 Storm relief drain (CH80 to CH140) at Ting Kok Road.
- Area B – Excavation for construction of the proposed box culvert (CH 156 to CH214).
- Area B – Concreting for base slab for the proposed box culvert (CH186 to CH214)
- Area B – Drill cut for grouting for the proposed DN2800 twin pipe
- Area C – In Maintenance period.

2.2 Construction activities for the coming month

Proposed key construction works in the coming month will include:

Area A (Pumping Station)

1. Internal finishing for the proposed transformer room and switch room.
2. Construction of screen house and store room.
3. Construction of flowmeter chamber and DN1200 concrete pipe.

4. Construction of DN2100 Storm relief drains (CH80 to CH120) at Ting Kok Road.
5. Construction of receiving pit for cross road DN2800 twin pipe.
6. Construction of the proposed receiving pit.
7. Construction of the proposed discharge chamber

Area B (Tung Tsz Nursery)

1. Construction of box culvert CH156 to CH214.5.
2. Construction of jacking pit for cross road DN2800 twin pipe.

Area C (HCA)

1. In Maintenance Period

2.3 Environmental Status

Appendix A shows the drawing of the project area.

Locations of the monitoring and control stations with environmental sensitive receivers are presented in Section 3.3, 4.3, and 5.3 for noise, water quality, and hydrological characteristics respectively.

3 Noise Monitoring

3.1 Monitoring Parameters and Methodology

The construction noise level was measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}). $L_{eq(30minutes)}$ was used as the monitoring parameter for the impact monitoring in the time period between 0700 to 1900 hours on normal weekdays. For all other time period, $L_{eq(5minutes)}$ was employed for comparison with the Noise Control Ordinance (NCO) criteria.

Noise measurement results obtained from each monitoring location were recorded in the Construction Noise Monitoring Data Sheet (Appendix D) immediately after the measurement. As supplementary information for data auditing, statistical results L_{10} and L_{90} were also be recorded for reference.

In case of non-compliance with the construction noise criteria, more frequent monitoring, as specified in the Action plan in Table 3.5.2, shall be carried out. This additional monitoring shall be carried out until the recorded noise levels are rectified or proved to be irrelevant to the construction activities.

3.2 Monitoring Equipment

The sound level meters and calibrators comply with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications as referred to in the Technical Memorandum (TM) to the Noise Control Ordinance was deployed as monitoring equipment for noise measurement.

Noise measurement was not be made in the presence of fog, rain, wind with a steady speed exceeding 5ms^{-1} or wind with gust exceeding 10ms^{-1} . Thus wind speed was checked by the portable wind speed indicator capable of measuring the wind speed in m/s. Table 3.2.1 summarizes the equipment list for noise monitoring

Table 3.2.1 Equipment List for Noise Monitoring

Equipment	Manufacturer & Model No.	Precision Grade	Qty
Integrated sound level meter	SvanteK 949	IEC 651 Type 1 IEC 804 Type 1	1
Windscreen	Microtech gefell model W2	N/A	1
Acoustical calibrator	SvanteK SV30A	IEC 942 Type 1	1
Wind speed indicator	Kestrel K1000	N/A	1
Remarks: Calibration details of the sound level meter is given in Appendix C for reference			

3.3 Monitoring Locations

According to the Environmental Monitoring and Audit manual, impact noise monitoring for contract 1 was undertaken at two locations during the construction phase of the project. The proposed monitoring locations are summarized in Table 3.3.1. Figure 3.3.1 shows the Noise Monitoring Locations

Noise measurement at each monitoring location was taken at a point 1m from the exterior of the selected premises and at a height of 1.2m above ground with no disturbance to the dweller and least obstructed view.

Table 3.3.1 Noise Monitoring Locations during Construction Phase

Noise Monitoring Station	Location
M1	14, Shuen Wan Chim Uk
AL1	Joint Village Office for Villages in Shuen Wan, Tai Po

In accordance with the requirements in the EM&A manual (revision 3), weekly impact monitoring was conducted. For the time period between 0700 and 1900 hours on normal weekdays, and noise parameter of $L_{eq(30minutes)}$ was measured. As if the construction works were carried out during restricted period (i.e. 1900-2300, 2300-0700 of next day and Sundays / general holiday), impact monitoring that comprises 3 consecutive $L_{eq(5minutes)}$ would be carried out.

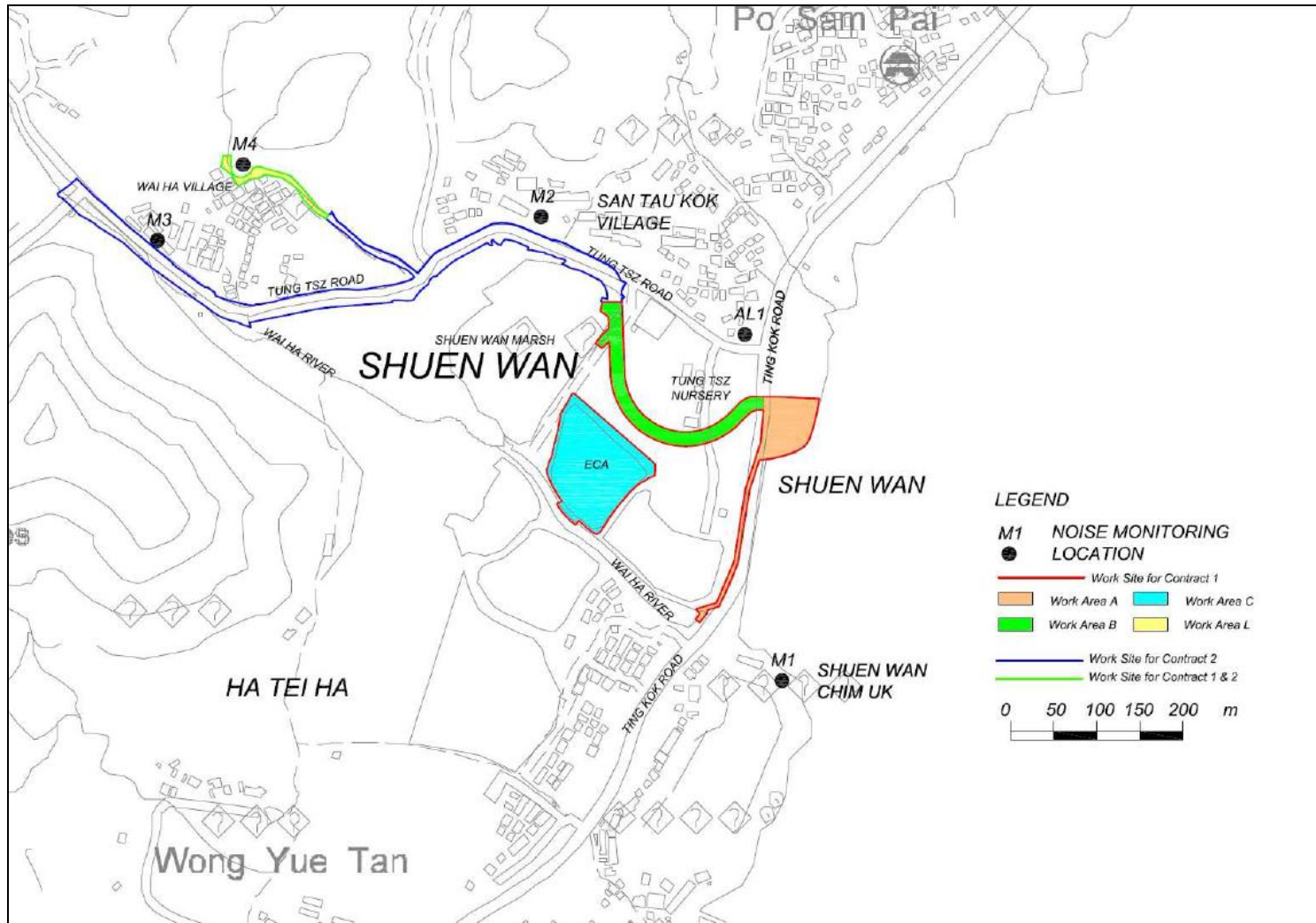


Figure 3.3.1 Impact noise monitoring locations

3.4 Monitoring Results and Interpretation

Relevant details of the noise monitoring results are presented in Table 3.4.1. The results of M1 ranged between 60.7dB (A) and 64.4dB (A), and AL1 ranged between 62.6dB (A) and 68.2dB (A), were within the limit levels and therefore, no exceedance was found.

Table 3.4.1 Noise Monitoring Results for the reporting period							
Location	Parameter	Date*	Time	L _{Aeq} dB(A)	Limit dB(A)	Exceedance	Weather
M1	L _{eq} 30mins	5-July-12	13:10	62.3	75	N	Sunny
M1	L _{eq} 30mins	11-July-12	10:45	60.7	75	N	Sunny
M1	L _{eq} 30mins	18-July-12	11:00	64.4	75	N	Sunny
M1	L _{eq} 30mins	25-July-12	11:45	62.1	75	N	Sunny
AL1	L _{eq} 30mins	5-July-12	13:50	62.6	75	N	Sunny
AL1	L _{eq} 30mins	11-July-12	11:25	64.2	75	N	Sunny
AL1	L _{eq} 30mins	18-July-12	11:35	67.2	75	N	Sunny
AL1	L _{eq} 30mins	25-July-12	13;10	68.2	75	N	Sunny

Remarks: Raw datasheet for noise monitoring are attached in Appendix D for reference.

3.5 Action and Limit level for Construction noise

The Action and Limit (A/L) levels for construction noise are defined in Table 3.5.1. Should non-compliance of the criteria occur, action in accordance with the Action Plan in Table 3.5.2 should be carried out.

There was no exceedance recorded in the reporting period.

Table 3.5.1 Action and Limit Levels for Construction noise

Time Period	Action Level	Limit Level
0700 – 1900 hours on normal weekdays	When one documented complaint is received	75dB(A)
Remarks: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.		

3.6 Monitoring Schedule for the next reporting period

Noise monitoring schedule is proposed to be carried out on 1st, 8th, 15th, 22nd and 29th of August 2012.

Table 3.5.2 Event / Action Plan for Construction Noise

EVENT				
	ET Leader	IEC	ER	CONTRACTOR
Action Level	1. Notify IEC and Contractor. 2. Carry out investigation. 3. Report the results of investigation to the IEC, ER and Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET. 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify Contractor. 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Check remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.

<p>Limit Level</p>	<ol style="list-style-type: none"> 1. Notify IEC, ER, EPD and Contractor. 2. Identify source. 3. Repeat measurements 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 and actions taken for the exceedances. 7. Assess effectiveness of 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, and Contractor on the potential remedial actions. 2. Review Contractor'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 2. Notify Contractor. 3. Require Contractor 4. Check remedial measures properly implemented. 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion 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 portion of works as determined by the ER until the exceedance is abated.
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4 Water Monitoring

4.1 Water Quality Monitoring Parameters and methodology

Turbidity in Nephelometric Turbidity Unit (NTU), and Dissolved Oxygen (DO) in mg/L, temperature, and pH measurements were in-situ measurements and suspended solids measurements were performed by a HOKLAS accredited laboratory using recommended reference method APHA 2540D.

4.2 Monitoring Equipment

Turbidity, DO, Salinity, pH and temperature was measured by an instrument complied with the following requirements:

The instrument is a portable as well as weatherproof multimeter complete with cable and uses a DC power source. It is capable of measuring:

- A turbidity between 0-800NTU;
- A dissolved Oxygen level in the range of 0-20mg/L and 0-200% saturation;
- A temperature of 0-50°C;
- Salinity in the range of 0-40ppt;
- pH in the range of 0-14.

The measurements were performed by a portable and weatherproof multi-meter, model TOA-DKK WQC-24. The equipment was calibrated and verified by certified laboratory every 3 months to ensure they perform to the same level of accuracy as stated in the manufacturer's specification. Detailed calibration records of the multi-meter were shown in Appendix C for reference

Suspended solids were determined by the water samples collected from the monitoring locations for further analysis in accredited HOKLAS laboratory. Water samples were contained by polythene bottles, packed in ice (cooled in 4°C without frozen) and delivered to the laboratory for analysis as soon as possible after collection.

4.3 Monitoring Locations

In accordance with the EM&A Manual (revision 3), monitoring stations for contract 1 were established at two locations, which are summarized in Table 4.3.1.

Table 4.3.1 – Water Quality Monitoring Stations

Monitoring Station	Location	Coordinates
W1	Between the Shuen Wan Marsh and ECA	E:839301 N:836386
W2	Between Tolo Harbour and Proposed Penstock	E:839542 N:836184

As illustrated in Figure 4.3.1, W1 served as the control station while W2 was the monitoring location of water quality.

According to the approved proposal of revision for Action/Limit Level Criteria of Water Quality Monitoring, two reference points (C1 & C2) were added.

Should the water quality parameters monitoring results at the monitoring station W2 exceed the water quality criteria, the water quality monitoring data of two reference points (C1 and C2) will be used as the supplementary information. The monitoring data of C1 should be used for comparison with the monitoring data of W2 that taken at flood tide; and the monitoring data of C2 should be used for comparison with the monitoring data of W2 that taken at ebb tide. The comparison of water quality between W2 and C1 at flood tide and between W2 and C2 at ebb tide is to prove whether influence of water quality is caused by the construction activities. The details of C1 and C2 are presented in **Appendix O**.

In accordance with the EM&A Manual (revision 3), measurements shall be taken at 3 water depths, namely, 1m below water surface, mid-depth and 1m above river bed, except where the water depth less than 6m, the mid-depth station may be omitted. Should the water depth be less than 3m, only the mid-depth station will be monitored.

As the depth of water was less than 3m, water samples were collected at mid-depth of each proposed monitoring stations for measurements and sample collection.

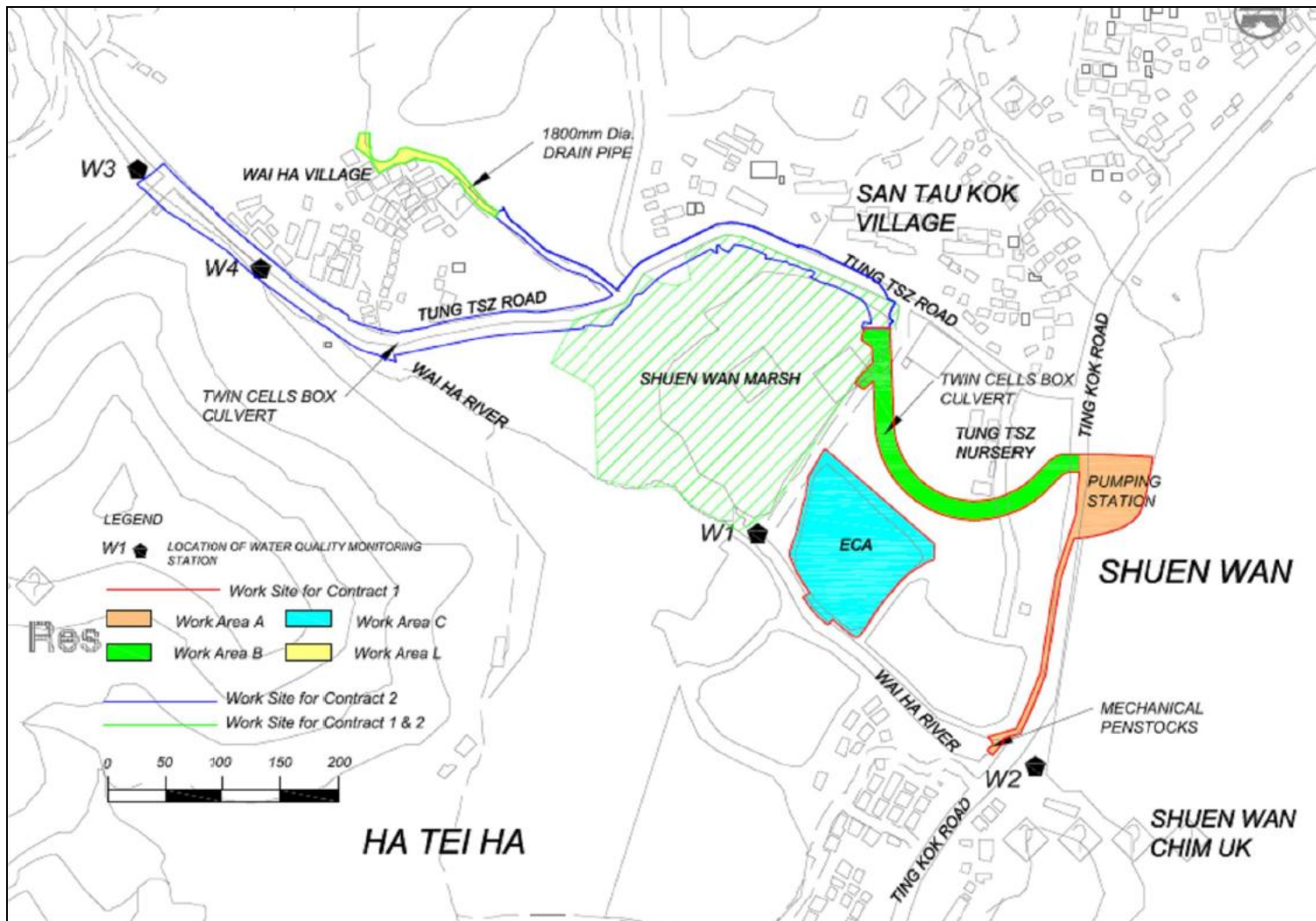


Figure 4.3.1 Water Quality Monitoring Locations

4.4 Monitoring Frequency

Impact water quality monitoring for each monitoring station were performed at mid-flood or mid-ebb tides for 3 days per week during the course of the construction river works.

Monitoring were carried out on 3rd, 5th, 7th, 9th, 11th, 13th, 16th, 18th, 20th, 23rd, 25th, 27th and 30th of July 2012.

4.5 Monitoring Results and Interpretation

Water quality monitoring was carried out thirteen times in this reporting month. Detailed on-site measurements are shown in Appendix E. Table 4.5.1 presents consolidated results throughout the reporting month.

There were 13 abnormal incidents of water quality limits (Dissolved Oxygen, Suspended Solid and Turbidity) were recorded in this reporting month according to the established action and limit levels. ET has arranged site investigations for the abnormal incidents and it was observed that the river was narrowed for construction of mechanical penstocks; and increases the speed of water current. No construction activities were carried out at the river bed during the reporting period. Proper mitigation measures were implemented by contractor to avoid site water release to the Wai Ha river and no particular observation of defective site activities were found causing water contamination; The exceedance of Turbidity and Total Suspended Solid were believed to be mainly attributed by high water flow rate and adverse weather. The exceedances of DO were believed to be mainly attributed by natural fluctuation, since the recorded levels of DO at control station had also exceeded its baseline limit level, the exceedances recorded at W2 were unlikely to be related to the Project.

The water condition of Wai Ha River is presented in photo attached in Appendix N.

Details information of these incidents was presented in Section 8.

Table 4.5.1 Summary of Water Quality Monitoring Results of this reporting month

	Average of Monitoring Results					
	<i>Temperature</i> (°C)	<i>Turbidity</i> (NTU)	<i>pH</i>	<i>Dissolved</i> <i>Oxygen</i> (mg/L)	<i>Dissolved</i> <i>Oxygen</i> (%)	<i>Suspended</i> <i>Solids</i> (mg/L)
W1	30.76	8.2	6.96	4.84	63.1	14.08
W2	29.8	40.5	7.33	7.17	89.5	33.28
C1	27.35	13.95	7.50	7.72	96.5	9.9
C2	31.63	7.6	8.13	4.77	63.8	11.55

Table 4.5.2 Interpretations of abnormal incidents recorded in the reporting month

Date	Tide	Parameter	Interpretations
3/7/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
5/7/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
7/7/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
9/7/2012	Ebb	Turbidity	Turbidity and SS exceedances were regarded as high river flow rate since river narrowed was observed. DO exceedance was caused by natural fluctuation.
		DO	
		Suspended Solids	
11/7/2012	Ebb	Turbidity	Turbidity exceedance was regarded as high river flow rate since river narrowed was observed. DO exceedance was caused by natural fluctuation.
		DO	
13/7/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
16/7/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
18/7/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
20/7/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
23/7/2012	Flood	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.

25/7/2012	Ebb	Turbidity	Exceedances were caused by adverse weather condition.
		SS	
27/7/2012	Flood	Turbidity	Exceedances were caused by adverse weather and natural fluctuation.
		DO	
		SS	
30/7/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	

The site activities of July 2012 were shown in **Appendix P**.

4.6 Action and limit level for Water Quality

Based on the criteria stipulated in EM&A manual (revision 3) and baseline water quality monitoring data obtained, the A/L levels are shown in Table 4.6.1, Table 4.6.2. The A/L levels for W1 were ignored since W1 functions as the control station for contract 1. If the water quality monitoring results at any impact stations exceeded the criteria, the actions in accordance with the Event and Action Plan in Table 4.6.3 should be taken.

Table 4.6.1 Action and Limit Levels for Water Quality at All Monitoring Stations

Parameters	Action	Limit
DO in mg/L	5 percentile of baseline data	4 mg/L
pH	N/A	6.0 – 9.0
SS in mg/L	95 percentile of baseline data or 120% of upstream control station's SS	99 percentile of baseline data or 130% of upstream control station's SS
Turbidity in NTU	95 percentile of baseline data or 120% of upstream control station's Turbidity	99 percentile of baseline data or 130% of upstream control station's Turbidity

Table 4.6.2 Action and Limit Levels for Water Quality at All Monitoring Stations

Parameters	Monitoring Stations (Flood Tide)				Monitoring Stations (Ebb Tide)			
	W1		W2		W1		W2	
	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
DO (mg/L)	8.07	8.07	7.81	7.69	7.12	7.02	6.77	6.31
pH	N/A	6.0-9.0	N/A	6.0-9.0	N/A	6.0-9.0	N/A	6.0-9.0
SS (mg/L)	7.7	8.1	7.7	8.6	10.5	10.9	9.4	9.9
Turbidity (NTU)	4.9	5.3	1.7	1.8	4.2	4.7	3.0	3.5

Remarks:

For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits

For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

Table 4.6.3 Event and action Plan for Water Quality

Event	ET Leader	IEC	ER	Contractor
ACTION LEVEL				
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat in-situ measurements to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform IEC, Contractor and Engineer; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, Engineer and Contractor; 6. Ensure mitigation measures are implemented. 7. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss mitigation measures with ET, Engineer and Contractor; 2. Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly; 3. Assess effectiveness of implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss proposed mitigation measures with IEC, ET and Contractor; 2. Make agreement on mitigation measures to be implemented; 3. Assess effectiveness of implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform Engineer and confirm in writing notification of the non-compliance; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes in working methods; 5. Discuss with ET, IEC and Engineer and propose mitigation measures to IEC and Engineer within three working days; 6. Implement agreed mitigation measures.

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

	<p>impact;</p> <p>3. Inform EPD, IEC, Contractor and Engineer;</p> <p>4. Check monitoring data, all plant, equipment and Contractor's working methods;</p> <p>5. Discuss mitigation measures with IEC, Engineer and Contractor;</p> <p>6. Ensure mitigation measures are implemented;</p> <p>7. Increase the monitoring frequency to daily until no exceedance of Limit level.</p>	<p>proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly;</p> <p>3. Assess effectiveness of implemented mitigation measures.</p>	<p>2. Request Contractor to critically review the working methods;</p> <p>3. Make agreement on mitigation measures to be implemented;</p> <p>4. Assess effectiveness of implemented mitigation measures.</p>	<p>unacceptable practice;</p> <p>3. Check all plant and equipment;</p> <p>4. Consider changes in working methods;</p> <p>5. Discuss with ET, IEC and Engineer and propose mitigation measures to IEC and Engineer within three working days;</p> <p>6. Implement agreed mitigation measures.</p>
<p>Limit level being exceeded by more than two consecutive sampling days</p>	<p>1. Repeat in-situ measurements to confirm findings;</p> <p>2. Identify reasons for non-compliance and source(s) of impact;</p> <p>3. Inform EPD, IEC, Contractor and Engineer;</p> <p>4. Check monitoring data, all plant, equipment and Contractor's working methods;</p> <p>5. Discuss mitigation measures with IEC,</p>	<p>1. Discuss mitigation measures with ET, Engineer and Contractor;</p> <p>2. Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly;</p> <p>3. Assess effectiveness of</p>	<p>1. Discuss proposed mitigation measures with IEC, ET and Contractor;</p> <p>2. Request Contractor to critically review the working methods;</p> <p>3. Make agreement on mitigation measures to</p>	<p>1. Inform Engineer and confirm in writing notification of the non-compliance;</p> <p>2. Rectify unacceptable practice;</p> <p>3. Check all plant and equipment;</p> <p>4. Consider changes in working methods;</p> <p>5. Discuss with ET, IEC and Engineer and propose</p>

	<p>Engineer and Contractor;</p> <p>6. Ensure mitigation measures are implemented.</p> <p>7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.</p>	<p>implemented mitigation measures.</p>	<p>be implemented;</p> <p>4. Assess effectiveness of implemented mitigation measures;</p> <p>5. Consider and if necessary instruct Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit Level.</p>	<p>mitigation measures to IEC and Engineer within three working days;</p> <p>6. Implement agreed mitigation measures;</p> <p>7. As directed by the Engineer, slow down or stop all or part of the construction activities until no exceedance of Limit level.</p>
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4.7 Monitoring Schedule for the next reporting period

Water quality monitoring schedule is proposed to be carried out on 1st, 3rd, 6th, 8th, 10^h, 13th, 15th, 17^h, 20th, 22nd, 24^h, 27th, 29th and 31st of August 2012.

5 Hydrological Characteristics Monitoring

5.1 Hydrological Characteristics Monitoring Parameters and methodology

Impact monitoring of hydrological characteristics was undertaken to establish hydrological characteristics of sections of Wai Ha River adjacent to Drainage Improvement Works in Shuen Wan, Tai Po.

The hydrological characteristics of sections of Wai Ha River were measured by water flow rate and depth.

5.2 Monitoring Equipment

Monitoring performed by a portable echo-sounder, model Greyline Stingray. The equipment was calibrated and verified by certified laboratory or manufacturer every year to ensure they perform to the same level of accuracy as stated in the manufacturer's specification.

Calibration Certificate of the multi-meter is given in Appendix C.

5.3 Monitoring Locations

In accordance with the EM&A Manual (revision 3), monitoring stations for contract 1 were established at two locations and summarized in Table 5.3.1.

Table 5.3.1 – Water Quality Monitoring Stations

Monitoring Station	Location	Coordinates
H1	Between the Shuen Wan Marsh and ECA	E:839301 N:836386
H2	Route to Sam Kung Temple	E:839163 N:836433

As illustrated in Figure 5.3.1, H2 served as the control station while H1 was the monitoring location of hydrological characteristics.

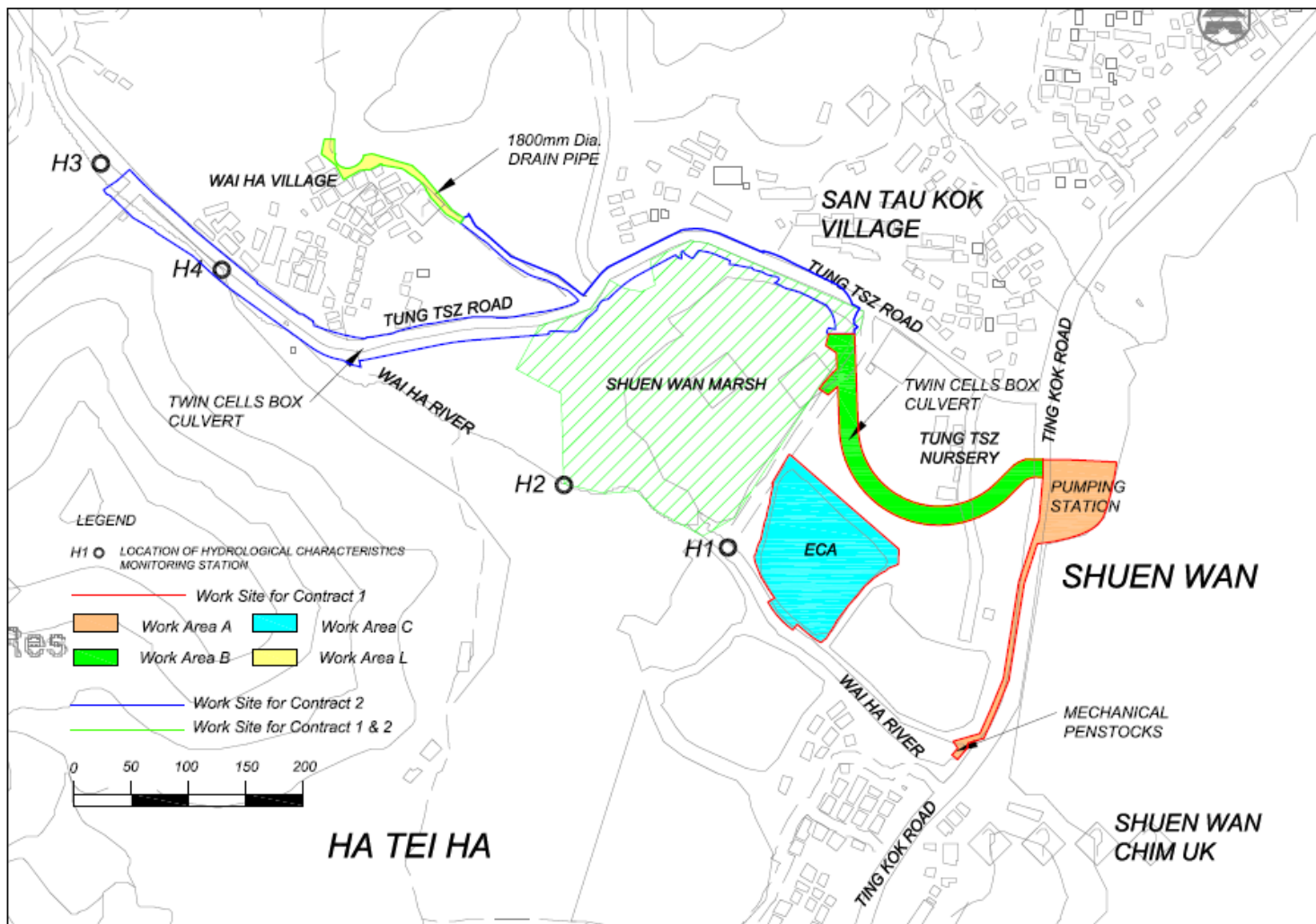


Figure 5.3.1 Hydrological Characteristics Monitoring Locations

5.4 Monitoring Frequency

Hydrological characteristics monitoring for each monitoring station were performed at mid-flood and mid-ebb tides for once per week during the course of the construction river works.

Monitoring was carried out on 7th, 13th, 20th and 27th of July 2012.

5.5 Monitoring Results and Interpretation

Hydrological characteristics monitoring was carried out five times in this reporting period. The monitoring results are summarized in Table 5.5. All results were within the action and limit levels, therefore, no exceedance was found.

Table 5.5 Summary of Water Quality Monitoring Results

	Average of Monitoring Results	
	Water Depth (m)	Water Flow Rate (m ³ /s)
H1(Floor)	~0.120*	0.200
H1(Ebb)	~0.263*	0.175
H2(Floor)	~0.140*	0.879
H2(Ebb)	~0.140*	0.703

*: Since the water levels were too low for the depth detector to determine, tape measure was instead adopted for estimation.

Details of the monitoring data were presented in Appendix F.

5.6 Action and limit level for Hydrological Characteristics

The Action and Limit levels for all monitoring stations are summarized in Table 5.6.1, which would be applied for compliance assessment of hydrological characteristics for this project. If the hydrological characteristics monitoring results at any impact stations exceeded the criteria, the actions in accordance with the Event and Action Plan in Table 5.6.2 should be taken.

Table 5.6.1 Action and Limit Levels for Hydrological Characteristics at All Monitoring Stations

Parameters	Action	Limit
Water Depth at Mid-flood (m)	0.08	0.06
Water Depth at Mid-ebb (m)	0.08	0.06
Water Flow Rate (m ³ /s)	120% of control station's water flow rate on the same day of measurement	140% of control station's water flow rate on the same day of measurement

Table 5.6.2 Event and action Plan for Hydrological Characteristics

Event	ET Leader	IEC	ER	Contractor
ACTION LEVEL				
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> Repeat in-situ measurements to confirm findings; Identify reasons for non-compliance and source(s) of impact; Inform IEC, Contractor and Engineer; Check monitoring data, Contractor's working methods and any excavation works or dewatering processes; Discuss mitigation measures with IEC, Engineer and Contractor; Ensure mitigation measures are 	<ol style="list-style-type: none"> Discuss mitigation measures with ET, Engineer and Contractor; Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly; Assess effectiveness of implemented mitigation measures. 	<ol style="list-style-type: none"> Discuss proposed mitigation measures with IEC, ET and Contractor; Make agreement on mitigation measures to be implemented; Assess effectiveness of implemented mitigation measures. 	<ol style="list-style-type: none"> Inform Engineer and confirm in writing notification of the non-compliance; Rectify unacceptable practice; Check working methods and any excavation works or dewatering processes; Consider changes in working methods and plans; Discuss with ET,

	<p>implemented.</p> <p>7. Repeat measurement on next day of exceedance.</p>			<p>IEC and Engineer and propose mitigation measures to IEC and Engineer within three working days;</p> <p>6. Implement agreed mitigation measures.</p>
<p>Action level being exceeded by more than two consecutive sampling days</p>	<p>1. Repeat in-situ measurements to confirm findings;</p> <p>2. Identify reasons for non-compliance and source(s) of impact;</p> <p>3. Inform IEC, Contractor and Engineer;</p> <p>4. Check monitoring data, Contractor's working methods and any excavation works or dewatering processes;</p> <p>5. Discuss mitigation measures with IEC, Engineer and Contractor;</p> <p>6. Ensure mitigation measures are implemented.</p> <p>7. Prepare to increase the monitoring frequency to daily;</p>	<p>1. Discuss mitigation measures with ET, Engineer and Contractor;</p> <p>2. Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly;</p> <p>3. Assess effectiveness of implemented mitigation measures.</p>	<p>1. Discuss proposed mitigation measures with IEC, ET and Contractor;</p> <p>2. Make agreement on mitigation measures to be implemented;</p> <p>3. Assess effectiveness of implemented mitigation measures.</p>	<p>1. Inform Engineer and confirm in writing notification of the non-compliance;</p> <p>2. Rectify unacceptable practice;</p> <p>3. Check working methods and any excavation works or dewatering processes;</p> <p>4. Consider changes in working methods and plans;</p> <p>5. Discuss with ET, IEC and Engineer and propose mitigation</p>

	8. Repeat measurement on next day of exceedance.			measures to IEC and Engineer within three working days; 6. Implement agreed mitigation measures.
LIMIT LEVEL				
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat in-situ measurements to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform AFCD, IEC, Contractor and Engineer; 4. Check monitoring data, and Contractor's working methods and any excavation works or dewatering processes; 5. Discuss mitigation measures with IEC, Engineer and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level. 	<ol style="list-style-type: none"> 1. Discuss mitigation measures with ET, Engineer and Contractor; 2. Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly; 3. Assess effectiveness of implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss proposed mitigation measures with IEC, ET and Contractor; 2. Request Contractor to critically review the working methods; 3. Make agreement on mitigation measures to be implemented; 4. Assess effectiveness of implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform Engineer and confirm in writing notification of the non-compliance; 2. Rectify unacceptable practice; 3. Check working methods and any excavation works or dewatering processes; 4. Consider changes in working methods and plans; 5. Discuss with ET, IEC and Engineer and propose mitigation measures to IEC and Engineer within three working days; 6. Implement agreed mitigation measures.

<p>Limit level being exceeded by more than two consecutive sampling days</p>	<ol style="list-style-type: none"> 1. Repeat in-situ measurements to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform AFCD, IEC, Contractor and Engineer; 4. Check monitoring data, and Contractor's working methods and any excavation works or dewatering processes; 5. Discuss mitigation measures with IEC, Engineer and Contractor; 6. Ensure mitigation measures are implemented. 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 mitigation measures with ET, Engineer and Contractor; 2. Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly; 3. Assess effectiveness of implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss proposed mitigation measures with IEC, ET and Contractor; 2. Request Contractor to critically review the working methods; 3. Make agreement on mitigation measures to be implemented; 4. Assess effectiveness of implemented mitigation measures; 5. Consider and if necessary instruct Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit 	<ol style="list-style-type: none"> 1. Inform Engineer and confirm in writing notification of the non-compliance; 2. Rectify unacceptable practice; 3. Check working methods and any excavation works or dewatering processes; 4. Consider changes in working methods and plans; 5. Discuss with ET, IEC and Engineer and propose mitigation measures to IEC and Engineer within three working days; 6. Implement agreed mitigation measures; 7. As directed by the Engineer, slow down or stop all or part of the construction activities until no exceedance of Limit level.
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			Level.	
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5.7 Monitoring Schedule for the next reporting period

Hydrological characteristics monitoring schedule is proposed to be carried out on 3rd, 10th, 17th, 24th and 31st of August 2012.

6 Ecological Monitoring of ECA

6.1 Introduction

The Ecological Monitoring of the Ecological Compensatory Area (ECA) of the Project is conducted to fulfill Clauses 5.2 and 5.4 of EP-303/2008 and the monitoring requirements in accordance with Section 6 of the approved updated EM&A Manual (approved by EPD on 7th November 2011) and the approved updated Habitat Creation Plan (HCP) (approved by EPD on 8th December 2011) of the Project.

This report documents monitoring findings on the site inspections in the ECA undertaken in July 2012.

6.2 Ecological Monitoring of ECA

6.2.1 Scope of Monitoring

A specific ecological monitoring programme and ecological monitoring requirements of the ECA are detailed in Section 7 of the approved Habitat Creation Plan (HCP) and Section 6.18 of the approved updated Environmental Monitoring & Audit (EM&A) Manual of the Project.

During the construction phase of the ECA, monthly monitoring of vegetation health (including the planted, retained and transplanted trees and shrubs, and the proposed planting) and weekly site inspections should be

undertaken. Monthly monitoring of in situ water quality will be carried out once the ECA is filled with water from the nearby Wai Ha River.

During the 12-month establishment phase of the ECA, monitoring of habitat types, vegetation cover, intertidal fauna and other fauna (including avifauna, herpetofauna, fish, odonates and butterflies) will be undertaken on a six-monthly basis, while the vegetation health and in situ water quality will be monitored monthly. Site inspections will be conducted twice per month.

6.2.2 Monitoring Methodology during the construction phase

Monitoring of vegetation health

Monthly monitoring of the health condition of the retained and transplanted trees and vegetation will be conducted. Following planting of vegetation in the ECA, monitoring of the growth and health conditions of the planted vegetation in the created habitats (i.e. brackish marsh, mangrove, woodland areas of planted trees and shrubs, and wooded areas with retained and (trans)planted trees) within the ECA is to be conducted during the construction and establishment phases. General health and growth status of the retained trees within the ECA are recorded and recommendation of appropriate tree care will be made to the maintenance party.

All planted, retained and transplanted trees and shrubs will be surveyed to update their growth and health status. Any signs of pests and/ or poor

growth of planted, retained and transplanted trees and shrubs will be recorded. Appropriate treatment or removal of pests will be implemented if necessary. Supplemental planting will be arranged if needed.

A fixed transect line will be run through the wetland habitats (including intertidal mudflat, brackish marsh and mangrove) and the general growth and health of the planted vegetation along both sides of the transect will be inspected and evaluated. Any adverse plant health, such as dieback of planted species, will be noted and supplemental planting will be arranged. Any signs of pests which cause adverse health problems to the plants will be identified and recorded.

Monitoring of water quality

Since there will be free movement of brackish river water in and out of the ECA, water quality in the ECA will be largely dependent on water quality in the river. In this open system it is not appropriate to set specific targets for water quality parameters. Nevertheless, baseline data on water quality, in particular seasonal patterns, would potentially be useful long term management of the ECA. Once the ECA is filled with water during the construction phase of the ECA, in-situ water quality will be measured once per month during both Construction and Establishment Phases. Parameters, including temperature, pH, salinity, turbidity and dissolved oxygen, will be monitored. Additional measurements of these parameters should also be made by the ecologist in response to unexpected events (e.g. algal blooms or

fish die-offs) in order to inform remedial management measures.

Site inspection

Weekly site inspection will be carried out by the Wetland Specialist to update the status and monitor the progress of the construction of the ECA. Any adverse ecological impact resulting from the construction should be identified and remedial action should be undertaken.

6.2.3 Monitoring Methodology during the establishment phase

Monitoring of vegetation health

Same monitoring methodology as in Section 7.2.2.

Monitoring of water quality

Same monitoring methodology as in Section 7.2.2.

Site inspection

Site inspection during the establishment phase of the ECA will be conducted twice per month for monitoring the health and condition of the wetland during the establishment period. Any unsatisfied health and habitat criteria of the wetland will be identified and remedial action should be recommended

Twice monthly establishment phase monitoring has been commenced in November 2011.

Monitoring of habitat types and vegetation cover

Monitoring of habitat types and vegetation cover will be conducted twice during the 12 month Establishment Phase of the ECA; specifically at the end of the dry season and the end of the subsequent wet season after completion of the planting work. The monitoring aims to determine the exact extent of the wetland habitats and vegetation cover (i.e. open water, intertidal mudflat, brackish marsh and mangrove) during the establishment period and control any excessive colonization of unwanted vegetation specific habitats.

Monitoring of intertidal fauna

As the ECA largely comprises an intertidal mudflat, monitoring for intertidal fauna will be conducted. Recolonisation will take time: accordingly monitoring will be tentatively conducted in February 2012 and August 2012. As the important aim of monitoring of intertidal fauna in the ECA is to examine the diversity of the colonising community, a qualitative manner by walk-through survey (i.e. walk through the site with species and relative abundance recorded) will be conducted. Core sampling will also be conducted at different levels to record infauna. Three samples at each level (low, middle and high) will be collected during each monitoring event and

the monitoring will be conducted at low tide.

Monitoring of other fauna

Monitoring of other faunal groups, including birds, herpetofauna, fish, odonate and butterflies, will be conducted. Monitoring of any aquatic invertebrates will be covered by the intertidal surveys. Since the site will be intertidal, it is considered unsuitable for local amphibian species. Therefore, no nighttime survey for detection of mating calls of amphibians is necessary and only daytime surveys are needed. Monitoring of these faunal groups will be conducted on a walk-through survey basis. The surveyor will walk through the site, recording and counting the fauna observed. Microhabitats for herpetofauna will be actively searched. This monitoring will be conducted twice within the establishment period (once in the dry season (tentatively in February 2012) and once in the wet season (tentatively in August 2012)).

Monitoring of wild mammals is not necessary in this case; however, if signs of wild mammals are observed (such as footprints) during any field surveys, these will be recorded.

6.2.4 Monitoring time and weather condition

Site inspection and monitoring of vegetation, fauna groups and water quality should be carried out during day-time with calm weather. Monitoring

of birds should commence within one hour of sunrise, when is the peak activity period for birds. Other fauna groups shall be undertaken during the warmer part of the monitoring day.

6.3 Monitoring Results

6.3.1 Description of vegetation monitoring in Ecological Compensatory Area

The vegetation health monitoring during the construction and establishment period required to be conducted on a monthly basis in the Ecological Compensatory Area (ECA). The growth and health of the recorded vegetation was inspected in 31 July 2012 and detail vegetation information was shown in (**Appendix L(A)**).

Monitoring of transplanted trees were carried out in 31 July 2012 and continued since the first transplantation (**Appendix L(B)**).

Three specimens of protected species *Pavetta hongkongensis* were transplanted to ECA. Weekly monitoring was carried out since transplantation on 20th December 2011.

All trees surveyed were evaluated according to the following criteria (Webb 1991)

- Trees of good form, moderate to large size and in good health are classified as **good**;

- Trees of reasonable form, with few or no visible defects or health problems are classified as being **fair**;
- Trees that are of poor form, badly damaged or clearly suffering from decay die back or the effects of very heavy vine growth are classified as **poor**.

6.3.2 Description of vegetations and remarks

Vegetation monitoring in the ECA was carried out on site and growth/health conditions were recorded.

A total of 23 plant species were retained or newly re-colonized within ECA in which 6 of them were retained plant species including Terminalia catappa, Cocculus orbiculatus, Mangifera indica, Dimocarpus longan, Michelia x alba and Macaranga tanarius. Some green algae, such as c.f. Ulothrix sp. and Enteromorpha sp. were re-colonized in the water body or attached to the substratum in the ECA. Those algae could attract algae feeding organisms and it also provide mirco-habitat for some marine or brackish water species especially juveniles. Detailed information of the recorded vegetation is given in (Appendix L(A)).

The general growth/health of the retained or newly re-colonized vegetations was in fair condition.

The trees transplanted from works area under Contract 1 and 2 to ECA,

including 13 Bombax ceiba, 2 Melaleuca quinquenervia and 1 Celtis sinensis, were in fair condition since the transplantation in June (Appendix L(B)). However, the trunk of Bombax ceiba (T152) were found to be broken after typhoon, moreover, Celtis sinensis (T250) were dead also, so that the removal & replacement of these trees are recommended.

A total of 370 trees were newly planted for amenity purpose within the ECA since September 2011. The 370 individual trees were randomly planted at different zones, except for zone F, as showed in **Figure 6.3.2.1**.

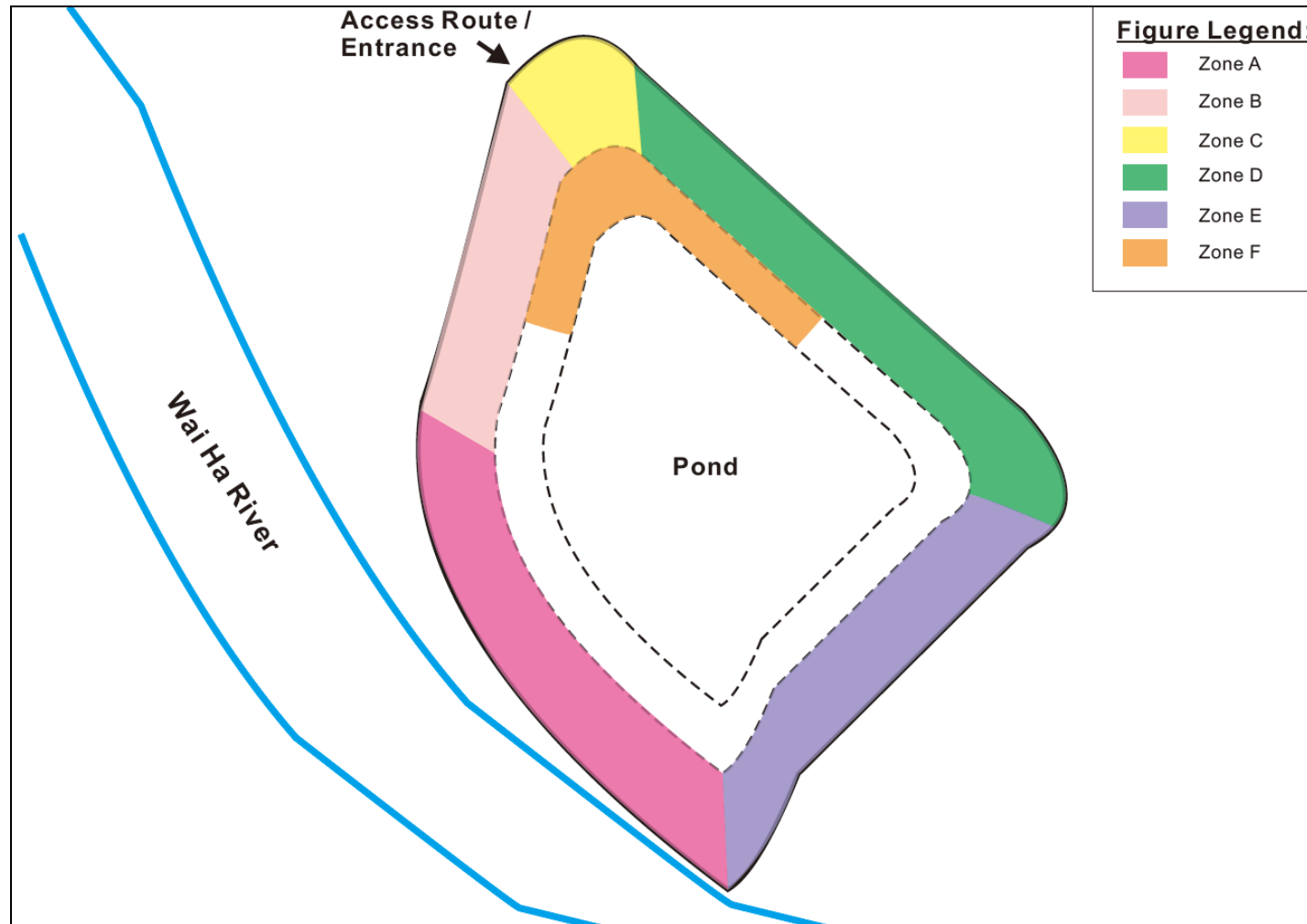


Figure 6.3.2.1 Landscape floor plan of ECA during establishment phase.

The newly planted trees included *Celtis sinensis* (95), *Hibiscus tiliaceus* (114), *Macaranga tanarius* (57), *Ficus superb var japonica* (28) and *Viburnum odoratissimum* (76).

Newly planted trees in Zone A, B and C were in fair condition, except for *Macaranga tanarius* (tag no 331, 337 & 340) & *Ficus superb var. japonica* (tag no.37) were in poor condition in terms of dehydrated crown, continuous monitoring of the health condition in growing season is suggested.

However, some trees in Zone D and E were in poor condition in terms of dehydrated crown or sparse crown. These are:

Dehydrated crown with no foliage

- *Celtis sinensis*: tag no. 8, 13, 28, 131

-

Replacement of these trees is suggested if the condition of the trees can no longer be improved.

Sparse Crown and yellow leaves

- *Celtis sinensis*: tag no. 208
- *Hibiscus tiliaceus* : tag no. 69, 244, 256, 268, 270, 272

Those planted tree poor condition were caused during trans-location or plantation. It is expect most of them would be recovered and the health condition would be improved in growing season.

Moreover, some trees in Zone D and E were dead or damaged, these trees is suggested to be removed & replaced. These are.

Trees suggested to be removed & replaced

- *Celtis sinensis*: tag no. 17 (trees found to be seriously leaning with root plate movement after typhoon)
- *Celtis sinensis*: tag no. 132 (dead tree)
- *Macaranga tanarius*: tag no. 153 (tree trunk broken after typhoon)
- *Viburnum odoratissimum*: tag no. 349 (tree trunk broken after typhoon)
-

Mangrove seedlings were planted in Zone F, but most of them were in poor to fair condition. It is expected they may grow better in wet season

Three specimens of protected species *Pavetta hongkongensis* were transplanted from work area under Contract 2 to ECA at Zone D on 20th December 2011. Monthly monitoring was carried out and their overall conditions are fair so far (**Appendix L(C)**). Representative photographs of the transplanted *P. hongkongensis* are showed on **Figure 6.3.2.2**.

A total of 66 trees, including 6 *Celtis Sinensis*, 4 *Ficus Superba Var. Japonica*, 52 *Hibiscus Tiliaceus*, 3 *Macaranga Tanarius* and 1 *Viburnum Odoratissimum*, were removed by contractor from ECA in June 2012, new trees has been transplanted to ECA for replacement in July 2012.

After the typhoon on 23 & 24 July, around 10% of trees were found leaning slightly, those trees were then be re-erected by contractors to resume it's tree forms.



Figure 2.2a. Specimens 1 & 2.



Figure 2.2b. Specimen 3.

Figure 6.3.2.2. Representative photographs of transplanted *Pavetta hongkongensis* in ECA since the first transplantation in May 2012.

Regular watering is recommended to improve the condition of the planted or transplanted plants during non-raining period. Relevant mitigation measures will be proposed when necessary.

There is no sign of pest outbreak or dieback took place in the current monitoring.

6.3.3 Summary

In total, 23 species of trees, shrubs, climbers and herbs were retained or naturally colonized in the ECA during initial establishment period. Starting in August 2011, a total of 16 tree and three specimens of protected species *Pavetta hongkongensis* were transplanted to ECA. Most of them were in fair condition. In addition, 370 trees, including *Celtis sinensis*, *Hibiscus tiliaceus*, *Macaranga tanarius*, *Ficus superb var japonica* and *Viburnum odoratissimum*, were newly planted in ECA since September 2011 for amenity purpose. A total of 66 trees were removed in June 2012 and has been replace by new trees in July 2012. Although there is no sign of pest outbreak or dieback, regular watering and close monitoring are still be recommended.

6.3.4 References

Webb, R (ed.) 1991, Tree Planting & Maintenance in Hong Kong, Hong Kong Government, Hong Kong

6.3.5 Monitoring of Water Quality

The point of linkage between the ECA and Wai Ha River at the southern pond bund of the wetland was completed on 30th August 2011. The constructed wetland habitats in the ECA have been filled with the tidal water from Wai Ha River. Monitoring of in situ water quality in the ECA was commenced in September 2011 by the IEC's ecologist. In addition, Ecological water quality monitoring at ECA was conducted on 18/7 with result: Turbidity: 7.24NTU; Temperature: 32.9°C; DO: 4.56mg/L; pH: 6.0.

6.3.6 Site Inspections

Twice monthly establishment phase monitoring has commenced in November 2011. Two site inspections were carried out on 10th and 26th July 2012. Table 1 summarizes the observations and recommendations for each site inspection.

Table 6-1. Observations and recommendations for each site inspection, May 2012.

Inspection Dates	Observation	Recommendations
10 th July 2012	<p>The created wetland was generally in good condition (Photos 1 and 2). About 44 planted compensatory trees of <i>Hibiscus tiliaceus</i> with unsatisfactory structural forms had been recently replaced by the appointed landscape contractor, while a few trees of other planted compensatory trees with unfavorable growth performance were also replaced. Among these replaced trees, about 14 individuals of newly planted <i>Hibiscus tiliaceus</i> had fallen down or with unstable root plates. The Main Contractor was informed immediately for arranging the landscape contractor to stabilize the trees with bamboo scaffolds. The remaining compensatory trees were generally in fair to good condition, with a few individuals showing unfavorable growth performance. Compensatory tree (N114) was found with broken trunk and replacement of this tree is necessary.</p> <p>Regeneration of the planted wetland herbs <i>Cyperus malaccensis</i> and <i>Bacopa monnieri</i> were recorded and they have established to colonize wider intertidal area. Replacement planting for poor mangrove seedlings and selected wetland plant species had not yet been carried out by the landscape contractor. As informed by the Main Contractor, the vegetation will be replaced in the week of 16th July 2012.</p> <p>The three transplanted shrubs of conservation interest, <i>Pavetta hongkongensis</i>, show satisfactory growth performance (Photos 3 and 4). However, manual weeding of the remaining terrestrial areas in the whole ECA has not been carried out.</p>	<p>The Contractor was reminded to replace the compensatory trees, mangrove seedlings and the selected wetland herbs showing poor growth performance as soon as possible. In particular, the replaced trees should be of structurally balanced form and they should not be planted too deep into the soil.</p> <p>Manual weeding of unwanted herbs (<i>Bidens alba</i> and <i>Mimosa pudica</i>) and seedlings/saplings of weedy tree <i>Leucaena leucocephala</i> should be carried out soon.</p>
26 th July	This is the site visit after the Typhoon Vicente	Any broken tree parts from the

<p>2012</p>	<p>(Signal No. 8 to 10 hoisted on 23rd and 24th July 2012). The water level of the created pond was high due to the overflow from the nearby Wai Ha River (Photo 5). Parts of the terrestrial bunds and root flares of some of the compensatory trees were overflowed by the rain and pond water (Photo 6). One newly planted tree was found fallen down on the bund, while trunks of a few newly planted compensatory trees were found broken.</p> <p>Majority of the existing trees was remained stable after the typhoon, but broken tree part was observed on a retained tree <i>Litsea monopetala</i> (C49). The transplanted trees were generally in good condition but broken tree parts were observed on a few individuals. The three transplanted shrubs of conservation interest, <i>Pavetta hongkongensis</i>, have remained in satisfactory condition after the typhoon.</p> <p>As informed by the Main Contractor, the replacement planting of the selected mangrove seedling and wetland herbs was completed by the landscape contractor in the week of 16th July 2012. However, conditions of these newly planted mangrove and wetland herbs could not be evaluated as they were submerged under water by the time of site visit.</p> <p>The requested weeding work along the terrestrial areas (mainly along the north and northeastern parts of the ECA) has not yet carried out by the appointed landscape contractor by the end of July 2012.</p>	<p>existing and compensatory trees should be removed. The Main Contractor should arrange the landscape contractor to replant the compensatory trees with unstable root balls after the typhoon and ensure that the trees were supported appropriately by the bamboo scaffold.</p> <p>Manual weeding of unwanted herbs (<i>Bidens alba</i> and <i>Mimosa pudica</i>) and seedlings/saplings of weedy tree <i>Leucaena leucocephala</i> should be carried out soon.</p>
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Photo 1. General view of the wetland as inspected on 10th July 2012.



Photo 2. General view of the wetland as inspected on 10th July 2012.



Photo 3. The transplanted shrubs of *Pavetta hongkongensis*, PH-01 and PH-02, have showed satisfactory growth condition.



Photo 4. The transplanted shrub of *Pavetta hongkongensis*, PH-03, has showed satisfactory growth condition. The metal can found next to the shrub should be removed.



Photo 5. The pond area was overflowed by the rain and adjacent Wai Ha River as inspected on 26th July 2012.



Photo 6. Some of the planted compensatory trees were overflowed by the pond water.



6.4 Management Activities

6.4.1 Ecological Issues/ Management Activities

No significant ecological issues were identified from the site inspection by the Wetland Specialist from the site inspections in July 2012.

The ECA has been maintained in basically good condition. The planted compensatory trees and shrubs have showed fair health condition. The requested replacement planting of selected compensatory trees, mangrove seedlings and wetland herbs which are of unsatisfactory growth performance were carried out by the appointed landscape contractor by mid-August 2012. However, a few of these newly planted compensatory trees were found with unstable root balls or broken tree parts after Typhoon Vicente hoisted on 23rd and 24th August 2012. As abovementioned, the Main Contractor was informed immediately for replanting the fallen trees or trees with unstable root plates. A joint site visit with the Main Contractor, landscape contractor and the Wetland Specialist is scheduled in early August 2012 to update the latest growth and structural conditions of these trees and wetland vegetation in the ECA.

The Contractor is advised to weed the unwanted herbs (especially herbs *Bidens alba*, *Mimosa pudica*, climber *Mikania micrantha*, and seedlings of weedy tree *Leucaena leucocephala*) along the northern to northeastern boundaries of the ECA soon. Manual

removal of the roots of these unwanted plant species is preferred.

6.5 Implication of the Survey Findings

6.5.1 Implication to the Wetland design of the ECA

No implication to the wetland design from these two site inspections in July 2012.

6.6 Recommendations

The Contractor should undertake regular monitoring, and maintain frequent and adequate watering of all planted, replaced and transplanted terrestrial trees (including the newly planted compensatory trees for the replacement) and shrubs (including the shrubs of conservation interest *Pavetta hongkongensis*) throughout the establishment period of the ECA. The unwanted plant species should be removed to prevent their colonization in the ECA. Any broken tree parts from the existing and compensatory trees should be removed. The Main Contractor should arrange the landscape contractor to replant the compensatory trees with unstable root balls after the typhoon and ensure that the trees were supported appropriately by the bamboo scaffold.

7 Landscape and Visual

7.1 Introduction

The Landscape and Visual Monitoring of the Project is conducted to fulfill Clauses 5.2 and 5.4 of EP-303/2008 and the monitoring requirements in accordance with Section 7 of the approved updated EM&A Manual (approved by EPD on 7th November 2011) of the Project. A Baseline Review on updating the landscape and visual condition, and the mitigation measures of the Project (including Contracts 1 and 2 of the Project) was undertaken before the commencement of the Project. The review findings were updated in the Baseline Environmental Monitoring Report submitted to the EPD on 14th February 2011.

This monthly monitoring report will detail the scope of landscape and visual monitoring work, monitoring findings and observations, and any recommendations and advice on proper implementation of the landscape mitigation measures in the works areas under Contract 1 of the Project.

7.2 Scope of Monitoring

7.2.1 Monitoring Objectives

Landscape and Visual Monitoring of the Project should be conducted in a bi-weekly basis for checking the design, implementation and maintenance of the landscape and visual mitigation measures throughout the construction phase and in a quarterly basis during operational phase of the Project. Observations of any potential conflicts between the proposed mitigation measures and the project works carried out by the Contractors should be recorded. Recommendation and advice on proper implementation of the landscape mitigation measures should be provided to the Contractor for minimizing any potential impacts on the landscape and visual elements.

7.2.2 Monitoring during Construction Phase

The following landscape and visual mitigation measure should be implemented during the construction phase of the project to minimize the potential impacts:

- Visual Screen – Use of hoardings as visual screens for the construction in the works areas;
- Contaminant/ Sediment Control – Use of temporary barriers, covers and drainage provision around the construction works as contaminant/ sediment control to prevent the contaminants and sediments from entering the sensitive water-based habitats;
- Pollution Control – Implementation of pollution control measures to minimize any adverse environmental impacts to the surrounding habitats;
- Liaison with Nursery – Liaison with the nursery operator as necessary to minimize any adverse impact to the daily operation and plant holding capacity of the nursery;
- Existing Trees within Works Area – Maintenance and protection of the existing trees, especially their crowns, trunks and roots, within work sites; and
- Construction Light – Provision of construction light should be controlled at night to avoid excessive glare to the surrounding villages and to Plover Cove.

7.2.3 Monitoring during Operational Phase

The following landscape and visual mitigation measure should be implemented during the operational phase of the project to minimize the potential impacts:

- Viewing area formation by planting with shrubs, grasses and benches along the area;
- Architectural design of the pump house will help it fit into the existing suburban, natural to semi-natural surroundings;
- Landscape design of pump house by providing sufficient planting around its boundary fence;
- Enhancement planting along Tung Tsz Road with shrubs/ trees of suitable species to help protect the stream and marshes;
- Construction of box culvert should be with at least 1.0m soil depth for enhancement planting;
- Transplanting of existing affected trees to adjacent locations should be carried out;
- Preparation for transplanting is needed to allow sufficient time for root pruning and rootball preparation prior to transplanting; and
- Reinstatement of affected area should be carried out to check that the works areas are properly reinstated.

7.3 Landscape and Visual Monitoring Results

7.3.1 Monitoring Date(s)

This monthly Landscape and Visual Monitoring (July 2012) was conducted to cover only Areas A, B and C of Contract 1 of the Project. The bi-weekly monitoring was conducted on 10th and 26th July 2012.

All photos stated in this section are recorded in Appendix G.

The bi-weekly monitoring for Contract 2 was also undertaken on 10th and 26th July 2012. The monitoring findings and recommendation will be submitted in a separate Monthly EM&A Report under Contract DC/2010/02.

7.3.2 Visual Screen

No follow-up action by the Contractor is required as from the *Monthly EM&A Report for June 2012*.

Observation

Construction hoardings have been erected in Area A along the entire site boundary. Temporary construction hoardings have been erected around Wai Ha River estuary since the commenced work for building an automatic mechanical penstock at the area (**Photo 1**).

A section of temporary hoarding has been erected from northwest to southwest parts (i.e. Phase I construction works) of Tung Tsz Nursery in Area B (approximately along the works boundary from Trees U42 to U62) (**Photo 2**). Another section of temporary hoarding has been erected from southwest to eastern parts of the Nursery (**Photo 3**) since May 2012 and connected with the Phase I construction works area. An open section with no construction work has been maintained as a major road access inside Tung Tsz Nursery for their daily operations.

After the severe Typhoon ‘Vicente’ (Signal No. 8 to 10 hoisted on 23rd and 24th July 2012), a number of section of the erected site hoarding was found collapsed in Area B (**Photo 4**)

A line of chain link fence has been maintained around the boundary of Area C since the onset of its establishment period.

Recommendation

The collapsed site hoarding for the works area in Area B should be reinstated as soon as possible to prevent affecting the daily operations of the Nursery.

7.3.3 Contaminant/ Sediment Control

No follow-up action by the Contractor is required as from the *Monthly EM&A Report for June 2012*.

Observation

Area A

Provision of dust control measure (such as vehicle wheel washing facilities) was observed at the exit point of Area A.

Used water for washing vehicle wheel and groundwater from the excavated sites were pumped into the silt/sand removal facilities for filtration before discharging into the manhole adjacent to Area A. No unauthorized discharge of contaminated water/ sewerage was observed during the monitoring.

Area B

Used water and groundwater from the built box culvert were collected and drained directly to the sedimentation tank placed adjacent to the fenced Area C. The water was further filtered through the silt/sand removal facilities in the tank before discharging into the manhole adjacent to Area C..

Area C

The establishment phase of the Ecological Compensatory Area (ECA) has commenced and the pond of the ECA is connected with the Wai Ha River directly. No water resulting from normal wetland maintenance practice was pumped out from the ECA. Due to the recent heavy rainfall during and after the Typhoon ‘Vicente’, muddy water caused by the soil runoff from the upper stream of Wai Ha River was found drained in the created pond of the ECA. However, this does not cause significant deterioration of the pond water quality.

Recommendation

No specific recommendation is required.

7.3.4 Pollution Control

All used water for washing vehicle wheel and construction works was filtered and drained to the manholes, as following the recommendation stated in *Monthly EM&A Report for June 2012*.

Observation

Area A

Provision of vehicle wheel washing facilities was observed at the exit point of Area A to reduce the contamination to the surrounding habitats in Plover Cove. Used water for washing vehicle wheel and groundwater from the excavated sites were pumped into the silt/sand removal facilities for filtration before discharging into the manhole adjacent to Area A. The drainage pipes were maintained appropriately to discharge the used water to the manhole at Ting Kok Road. No direct discharge of polluted water into the adjacent Wai Ha River was observed from the works area for building the automatic mechanical penstock at Wai Ha River estuary.

Area B

As observed during the monitoring on 26th July 2012, no more used water resulting from

vehicle washing and site cleaning from Area B were found released across the access road located to the northwest of Area B.

All used water was collected and drained directly to the sedimentation tank placed adjacent to the fenced Area C. This water was further filtered through the silt/sand removal facilities in the tank before discharging into the manhole adjacent to Area C

Area C

The pond of the ECA was observed to be connected to Wai Ha River directly as following the scheme design of Habitat Compensatory Plan. No direct discharge of turbid water into the adjacent Wai Ha River was observed. However, as shown in **Photo 5**, muddy water caused by the soil runoff from the upper stream of Wai Ha River was observed. This was due to the massive rainfall during the typhoon.

Recommendation

No specific recommendation is required for Areas A, B and C. As a reminder, the Contractor should regularly check the condition of the drainage pipe and ensure that the used water should be appropriately filtered and discharged to the manhole/other discharge point agreed by the Engineer and EPD. This is to avoid any potential contamination to the vegetation in Shuen Wan marsh and other vegetated/marinated areas adjacent to the active works area.

7.3.5 Liaison with Nursery

Active construction works within Tung Tsz Nursery has been extended to the east of the nursery in connection with Ting Kok Road since May 2012.

The health condition of the *Grevillea robusta* (U58) has been closely monitored on a bi-weekly basis and regular watering of the retained trees and transplanted trees was anticipated. New leaves were observed on its branches and along the trunk.

The works practice and maintenance of trees within the nursery generally follow the

recommendation as stated in *Monthly EM&A Report for June 2012*. Any observed issues related to the liaison with the nursery are highlighted in this section.

Observation

As abovementioned in Section “Visual Screen”, the temporary hoarding has been erected from northwest to southwest parts of Tung Tsz Nursery in Area B since April 2011. The major construction work within Area B has been extended to the east of the nursery in connection with Ting Kok Road with the establishment of temporary hoarding. The major road access within the Nursery has been maintained to minimize the impact on the nursery’s daily operation resulting from the construction works.

Regular monitoring for the transplanted tree U58 *Grevillea robusta* was conducted bi-weekly. After the severe Typhoon ‘Vicente’ (Signal No. 8 to 10 hoisted on 23rd and 24th July 2012), a scaffold branch of the tree was found broken. New leaves were still observed on the tree branches but with smaller sizes. Poor physiological performance was still found. Health condition of this transplanted tree has remained fairly poor in July 2012 (**Photo 6**) and close monitoring has to be continued to update its health and structural condition.

After the severe Typhoon ‘Vicente’ (Signal No. 8 to 10 hoisted on 23rd and 24th July 2012), the retained tree U50 (*Ficus elastica*) was found having a large broken branch hanging on the scaffold (**Photo 7**). The relocated tree U55 (*Pterocarpus indicus*) was found fallen on the ground with its planter (**Photo 8**). A tree to be retained U68 was found fallen and with its trunk leaning against the hoarding (**Photo 9**). As mentioned in Section “Visual Screen”, many site hoarding was found collapsed in Area B after the severe typhoon.

Waterlogged areas were observed in the active works area within the Nursery. Small quantity of muddy water was found leaking out through the temporary hoarding. There would be a potential to affect the nursery’s daily operation

Recommendation

The works area and the construction works should be properly managed and implemented

without influencing the daily operation of the nursery (i.e. provide enough access road and works area for the nursery operation).

All transplanted trees should be watered regularly (e.g. at least every two days) by the appointed landscape contractor. Meanwhile, the Contractor should prevent forming waterlogged areas or leakage of used water from the active construction works area into the Nursery. This is to prevent causing any nuisance to the nursery's daily operation.

Regular monitoring and watering of *Grevillea robusta* (U58) are still recommended to be the major treatment to the tree. The appointed landscape contractor and the Contractor should closely monitor the health conditions throughout the establishment period, especially any further deterioration of the wounds at the broken tree part after the typhoon.

The overhanging branch of U50 should be removed to prevent potential hazard to the workers in the Nursery or in the works area. The fallen tree should be restored to its proper positions with a stable planter by the Nursery Operator or other relevant parties as soon as possible.

7.3.6 Existing Trees within Works Areas

Tree Protection Zones (TPZs) in Areas A and B were demarcated within the construction sites as following the recommendation stated in the *Monthly EM&A Report for June 2012*, no piling of construction materials within or close to the TPZs were observed in Area A (see details in the following section). The shading net tied on the trunk of U57 in Area B has still remained since the tree transplantation in May 2011.

Regular watering of the retained trees, transplanted trees and the compensatory planting was anticipated. Maintenance of the existing trees within the works areas generally follows the recommendation as stated in *Monthly EM&A Report for June 2012*, except the observations as highlighted in the following sections.

Observation

Area A

TPZs with temporary storage of construction materials were not observed for trees to be transplanted (E16 to E20) at the southwestern part of Area A (**Photos 10-11**) during the monitoring on 26th July 2012.

The tree health of the three relocated *Melaleuca cajuputi* subsp. *cumingiana* (E22, E33 and E34) on the eastern side of Area A next to the site hoarding was regularly monitored. No new leaves or buds were observed on these relocated trees. Health condition of these trees has remained very poor as a result of the transplantation shock and poor transplantation skill in planting them too deep in the soil.

As observed on 26th July, 2012, the tree to be transplanted E16 (*Bombax ceiba*) was relocated to the southern side of Area A next to the site hoarding. A TPZ was set up at the base.

No other significant damages on the crowns, trunks and roots of the remaining trees were observed during the monitoring in July 2012 in Area A.

Area B

Trees, including retained and transplanted specimens, within the nursery were maintained generally in fair condition, with no significant damages on tree crowns, trunks and roots observed during the monitoring in July 2012. Small watersprouts and new leaves were observed on the trunk and branches of the transplanted tree U58 (*Grevillea robusta*) but its physiological condition has still remained fairly poor after the transplant. One of its scaffold branches was found broken after the severe typhoon in July 2012.

The health conditions of U34 (**Photo 12**), U35 (**Photo 13**) and U37 (**Photo 14**) were found to be very poor, with no leaves in the canopies and dried, loose tree bark.

With the extended construction area within the Nursery, it was unable to inspect the latest

tree condition of some relocated trees due to the ongoing construction of the box culvert in July 2012. These inaccessible trees were A42, U74, U72, U70, U69, A43, U62 and an untagged *Terminalia catappa* (**Photos 15-16**). Their health could be assessed only by their overall canopies' and upper trunks' conditions.

The areas around the trunk bases of U76, U77, U78 and U79 were waterlogged. This would potentially damage the roots of those relocated trees (**Photos 17-20**).

All of the translocated trees were not guyed and only a few of these trees were protected within orange construction nets established as temporary TPZs.

Broken planters for 3 trees (U54 and two existing trees with no tag next to U54) were observed at their temporary receptor sites within the active works area to the northwest of the nursery. All of them have been surrounded by the orange construction nets to prevent further damage to the remained planters during the monitoring on 26th July 2012.

No significant damages on the crowns, trunks and roots of the remaining trees were observed during the monitoring in July 2012 in Area B.

Area C

The existing trees were maintained generally in fair health condition, except that a very few planted compensatory trees showing poor health conditions. No branch pruning and tree felling were observed in the monitoring. No significant damages on the crowns, trunks and roots on trees within Area C were observed during the monitoring in July 2012.

Some planted compensatory trees with poor tree form or growth performance were replaced with new compensatory trees by the landscape contractor by mid-July 2012. However, some compensatory trees were found fallen or with broken tree parts after the typhoon.

No leaves were observed on the transplanted tree T152 and its trunk was found broken during the monitoring on 26th July 2012. New leaves were observed on the transplanted trees T153 (**Photo 21**). No foliage was observed on T250. The untagged transplanted tree (*Bombax ceiba*) (possibly T149) was relocated within Area C and new leaves were found

on it (**Photo 22**).

A tree to be retained C49 (*Litsea monopetala*) was found broken at its trunk after the typhoon (**Photo 23**).

The three transplanted specimens (Tree No.: PH01, PH02 and PH03) of the protected shrub species of conservation interest *Pavetta hongkongensis* have remained in fair health condition (**Photos 24-25**). Newly regenerated leaves were observed on these three specimens

Recommendations

Area A

Maintenance of proper TPZs with no temporarily stored construction materials, excessive stockpiled soil and waterlogged condition around the tree trunk flares have been the major tree management issues in Areas A and B. The Contractor should continue notifying the on-site workers not to stockpile soil/construction materials or place construction equipment within and close to the TPZs or lower trunk/trunk flare. Any temporarily stored construction materials/ equipment and excessive water around the trunk flares should be removed or drained immediately. These are particularly important for the relocated trees (E16, E22, and suspected E33 and E34 in Area A) as they perform poor in health due to the result of the transplantation shock. Operators of the construction machines should be aware of the presence of these relocated and retained trees nearby their works.

All retained trees or trees to be transplanted should be watered regularly (e.g. at least every two days) by the landscape contractor. The Contractor should conduct regular inspection on the health condition and protection measures of each existing trees within the Area A. In particular, regular watering should be applied on the four recently relocated trees (i.e. E16, E22 and suspected E33 and E34) with regard to their poor health condition.

Area B

All transplanted trees should be watered regularly (e.g. at least every two days) by the

landscape contractor. This is a necessary maintenance practice to improve the survival rates and growth for trees showing poor health conditions as a result of the transplantation shock. Regular check of the tree health should be conducted. Proper protective measures such as guying and TPZs are recommended especially for the newly transplanted trees. Waterlogged areas should be avoided and excessive water around the tree trunk flares should be drained immediately.

Regular inspection on the tree health of U58, U34, U35 and U37 should be undertaken to update their health conditions and any tree defects. If these trees are found to be dead specimens for a prolonged period in the wet season, the Contractor should replace these specimens for compensation.

Any broken tree parts from the existing, transplanted or compensatory trees should be removed.

The Contractor has to repair the planters or establish proper TPZs for the tree U54 and the two untagged trees adjacent to U54 as soon as possible. In addition, the Contractor should ensure that all planters have been properly maintained. Manual weeding of overgrowth vegetation within the tree planters is recommended.

The Contractor is recommended to re-tag the translocated trees and regularly check the condition of the tags. All tree tags on the trees should be managed properly by the Contractor throughout the construction and establishment phases. A good tree tag system is important for the Contractor, subcontractor and the auditor to undertake routine maintenance, monitoring and rapid remedial actions (if any)

The shading net tied on the trunk of U57 in Area B should be removed as soon as possible. The Contractor should have regular site check on the conditions of the trees and tree tags within the Project Area.

Area C

All transplanted trees, planted compensatory trees and the three transplanted individuals of *Pavetta hongkongensis* should be watered regularly (e.g. at least every two days) by the

appointed landscape contractor. Regular check of the health conditions of these trees should be conducted. If any of these trees are found to be dead specimens for a prolonged period in the wet season, the Contractor should replace these specimens for compensation. Any broken tree parts from the existing and compensatory trees should be removed. The Contractor should arrange the landscape contractor to replant the compensatory trees which have unstable root balls after the typhoon and ensure that the trees were supported appropriately by the bamboo scaffold.

7.3.7 Construction Lights

No follow-up action on maintenance of construction light is required as from the *Monthly EM&A Report for June 2012*.

Observation

No construction light impact to the surrounding villages and to Plover Cove as all construction activities and construction sites are halted at 1800. No construction light at night is provided by the Contractor.

Recommendation

No specific recommendation is required.

7.4 Audit Schedule

The next bi-weekly Landscape & Visual Monitoring in August 2012 is scheduled to be conducted in the weeks of 6th and 20th August 2012.

8 Action taken in Event of Exceedance

If the measurements (Noise, Water, Hydrological Characteristics, and Ecology) exceed the action / limit level, exceedance details will be reported and follow-up actions will be taken by relevant parties involved.

During the reporting month there was no exceedance for noise, hydrological characteristics, and ecological measurements recorded; therefore, no actions were taken.

For water quality monitoring, total 13 abnormal incidents of water quality limits (Dissolved Oxygen, Suspended solids and Turbidity) were recorded in this reporting month according to the established level. ET has arranged site investigations for the abnormal incidents and it was observed that the river was narrowed for construction of mechanical penstocks; and increases the speed of water current. No construction activities were carried out at the river bed during the reporting period. Proper mitigation measures were implemented by contractor to avoid site water release to the Wai Ha river and no particular observation of defective site activities were found causing water contamination; The exceedance of Turbidity and Total Suspended Solid were believed to be mainly attributed by high water flow rate and adverse weather. The exceedances of DO were believed to be mainly attributed by natural fluctuation, since the recorded levels of DO at control station had also exceeded its baseline limit level, the exceedances recorded at W2 were unlikely to be related to the Project.

The water condition of Wai Ha River is presented in photo attached in **Appendix N**.

9 Construction waste disposal

It is the contractor's responsibility to ensure that all wastes produced during the construction phase for the drainage improvement works are handled, stored and disposed of in accordance with good waste management practices and EPD's regulation and requirement. Waste materials generated during construction activities, such as construction and demolition (C&D) material, chemical wastes and general refuse, are recommended to be audited at regular intervals to ensure that proper storage, transportation and disposal practices are being implemented.

Table 9.1 is a summary of figures of the construction wastes disposal provided by Contractor.

Table 9.1 Summary of Construction Waste Disposal

Month	Actual Quantities of Inert C & D Materials Generated Monthly						Actual Quantities of C & D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/cardboard packaging	Plastics (see note3)	Chemical Waste	Others, e.g. general refuse
	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)
Year2011	11.758	0.00	9.703	0.665	0.750	0.556	0.00	0.00	0.00	0.00	0.165
Jan-12	0.010	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.005
Feb-12	0.130	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar-12	0.125	0.00	0.125	0.00	0.00	0.00	2.37	0.00	0.00	0.00	0.01
Apr-12	0.265	0.00	0.26	0.00	0.005	0.00	0.00	0.00	0.00	0.00	0.01
May-12	0.705	0.00	0.705	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
June-12	1.395	0.00	1.395	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
July-12	3.310	0.00	2.93	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Total	18.393	0.00	16.082	1.045	0.71	0.556	2.37	0.00	0.00	0.00	0.25
Forecast of Total Quantities of C & D Materials to be Generated from the Contract											
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/cardboard packaging	Plastics (see note3)	Chemical Waste	Others, e.g. general refuse
	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000m3)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)	(in'000kg)
	37.37	8.27	12.09	0.00	25.28	2.1	10	2	0.5	1	1

Notes (1) The Performance targets are given in PS Clause 26.23 (14)

(2) The waste flow table shall also include C & D materials that are specified in the Contract to be imported for used at the sites

(3) Plastics refer to plastics bottles/containers, plastic sheets/foam from packaging materials.

(4) The summary table shall be submitted to the Engineer's Representative monthly together with the Waste Flow Table for review and monitoring in accordance with the PS Clause 25.20A(4)

10 Status of Permits and Licenses obtained

Table 10.1 is the updated status of environmental related permits/ license obtained for the construction activities

Table 10.1 Status of Permits and Licenses Obtained

Description	License / Permit No.#	Date of Issue	Site	Date of expiry	Status
Environmental Permit	EP-303/2008	2008/2/25	Area A, B & C	not applicable	Valid
Discharge Licence	WT00006448-2010	2010/6/15	Area A, B & C	30/6/2015	Valid
Registration as a Chemical Waste Producer	316597	2010/4/26	Area A, B & C	not applicable	Valid
Waste Disposal	7010348	2010/3/2	Area A, B & C	not applicable	Valid

11 Compliant Log

There was no formal complaint received during the reporting period. Therefore, follow up actions for the environmental complaint is not required.

Table 11.1 Summary of Formal Complaints received

	Noise	Water	Ecology	Others
Year 2011	0	0	0	0
January 2012	0	0	0	0
February 2012	0	0	0	0
March 2012	0	0	0	0
April 2012	0	0	0	0
May 2012	0	0	0	0
June 2012	0	0	0	0
July 2012	0	0	0	0
Total	0	0	0	0

12 Site Environmental Audits

12.1 Site Inspection

Site inspections were undertaken weekly to inspect the construction activities in active site areas to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented.

Within this reporting period, site inspections were conducted on 5rd, 12th, 19th and 25th of July 2012. A detailed checklist of each site inspection together with comments and relevant photos have been filed and kept. The findings from inspection were summarized in Table 12.1.

Table 12.1 Summary results of site inspections findings

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
22 & 28 Jun 12 5, 12, 19 & 25 Jul 12	Damaged tree protection fence was observed at Area B	Observation	Contractor was reminded to repair or replace the damaged tree protection fence	Outstanding		
5, 12, 19 & 25 Jul 12	Open stockpile was observed at Area B	Observation	Contractor was reminded that stockpile should be covered with tarpaulin to prevent surface run off and soil erosion.	Outstanding		
5, 12 & 19 Jul 12	Tree protection zone was not set up at Area A.	Observation	Contractor was reminded that tree protective fencings should be provided after the completion of sheetpiles erection at Area A.	Tree protection zone was set up by contractor.	25 July 12	

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
19 & 25 Jul 12	Chemical materials without drip tray were observed at area A.	Observation	Contractor was reminded that chemical materials should be placed inside the drip tray to prevent chemical leakage.	Outstanding		

12.2 Compliance with legal and Contractual requirement

There was no non-compliance recorded for the month of July 2012.

12.3 Implementation status and effectiveness of the mitigation measures

Contractor has implemented mitigation measures to address those problems as advised by ER and ET. Some of the measures taken by the contractor were considered as effective to minimize negative impact to the environment. Ongoing investigation will be carried out to observe performance and effectiveness of those measures. Outstanding environmental items will be inspected in next month.

As there were some ongoing follow up practices, contractor was reminded to regularly review and rectify the discrepancy once found and maintain good site condition. The contractor implemented various environmental mitigation measures as recommended in the Environmental Permit and Final Mitigation Measures Report.

The recommend mitigation measures of EM&A manual (revision 3) are presented in Appendix H (A).

The implemented statuses of mitigation measures are presented in Appendix H (B)

13 Future Key issues and recommendations

According to the forecasted site activities, key environmental issues to be considered should at least include:

- Site water control and relevant protective measures.
- Quality of effluent discharge from Area A.
- Control and disposal for construction wastes generated from works.

Tree protective measure for tree planting and transplanting, such as tree protection zone and regular watering.

14 Conclusions

Pumping station construction, Concreting works for box culvert and pumping station and plant maintenance were major site activities being carried out within this reporting period.

Regular site meetings and inspection audits led by the seniors for discussing site environmental matters were held among Project Proponent, Contractor and the ET on weekly basis. Also monthly site meeting and inspection audits with the above parties and IEC were carried out on 25th of July 2012.

For noise level monitoring, all results were within the established A/L limits.

For water quality monitoring, total 13 abnormal accidents of water quality limits (Dissolved Oxygen, Suspended solids and Turbidity) were recorded in this reporting month according to the established level. ET has arranged site investigations for the abnormal incidents and it was observed that the river was redirected and narrowed for construction of mechanical penstocks; and increases the speed of water current. No construction activities were carried out at the river bed during the reporting period. Proper mitigation measures was implemented by contractor to avoid site water release to the Wai Ha river and No particular observation of defective site activities were found causing water contamination; The exceedance of Turbidity and Total Suspended Solid were believed to be mainly attributed by high water flow rate and adverse weather. The exceedance of DO were believed to be mainly attributed by natural fluctuation, since the recorded levels of DO at control station had also exceeded its baseline limit level, the exceedances recorded at were unlikely to be related to the Project.

For ecological monitoring survey, all vegetations recorded were in fair condition, with no significance sign of health deterioration for the retained trees. In addition, Ecological water quality monitoring at ECA was conducted on 30/5 with result: Turbidity: 7.245NTU; Temperature: 32.9 °C ; DO: 4.56mg/L and pH: 6.0.

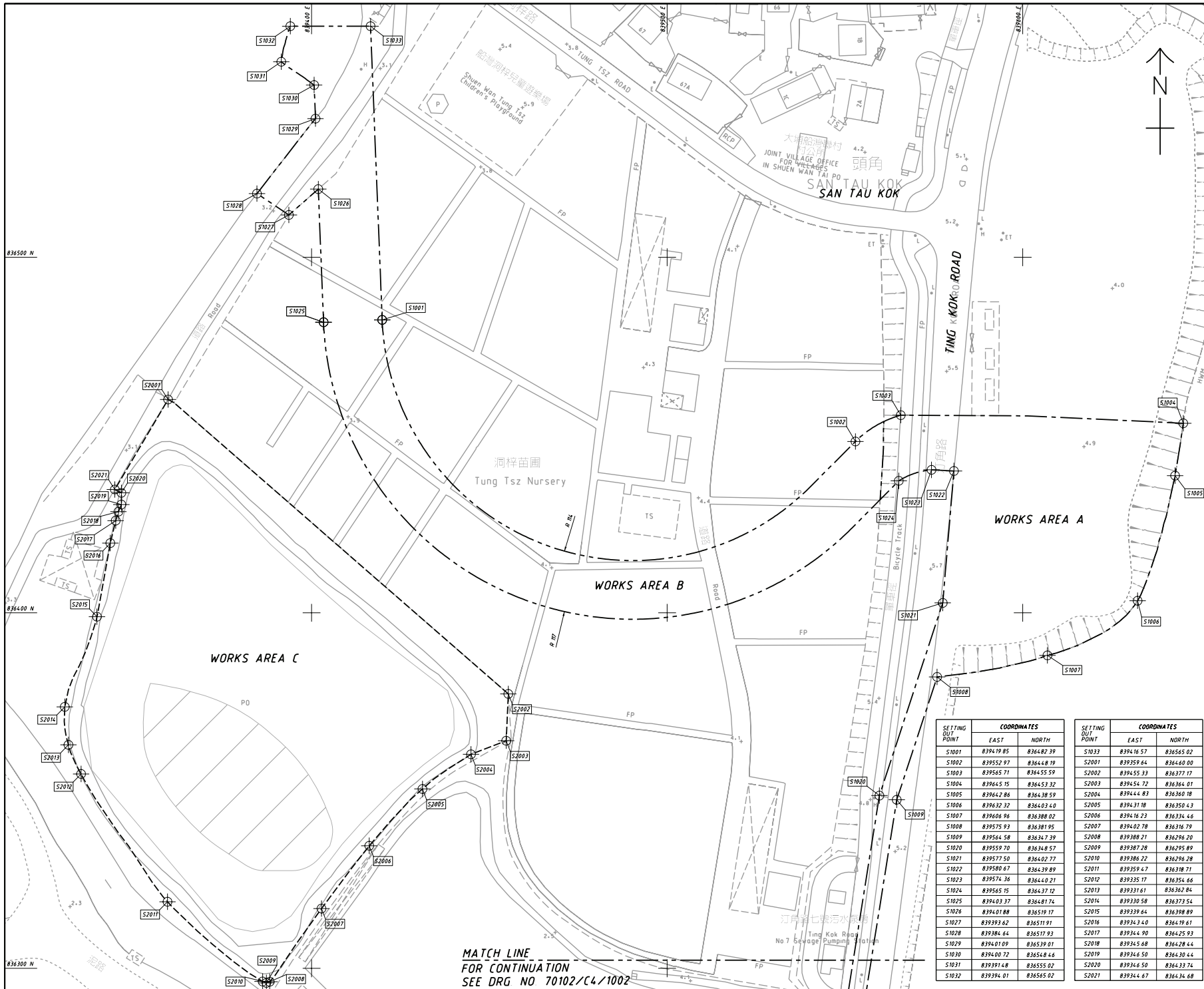
Also, there were not any notifications of summons recorded during the reporting period. Furthermore, there were not any formal prosecution and

complaints recorded.

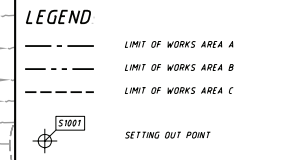
ET has reminded the contractor to provide environmental pollution control measures wherever necessary, and to keep a good environmental management at site practice.

The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual (revision 3) and Environmental Permit requirement.

Appendix A: Site Location



- NOTES**
- 1 ALL LEVELS ARE IN METRE ABOVE PRINCIPAL DATUM
 - 2 ALL CO-ORDINATES GIVEN ARE IN METRE AND ARE IN ACCORDANCE WITH HK1980 COORDINATES SYSTEM
 - 3 ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED
 - 4 THE PUBLIC CLEANING AREA SHALL BE THE AREAS WITHIN 2.50 BEYOND THE LIMIT OF WORKS AREAS EXCLUDING PRIVATE AREAS



SETTING OUT POINT	COORDINATES		SETTING OUT POINT	COORDINATES	
	EAST	NORTH		EAST	NORTH
S1001	8394.19 85	8364.87 39	S1033	8394.16 57	836565 02
S1002	839552 87	836448 19	S2001	839359 64	836440 00
S1003	839565 71	836455 59	S2002	839455 33	836377 17
S1004	839645 15	836453 32	S2003	839454 72	836364 01
S1005	839642 86	836438 59	S2004	839444 83	836360 18
S1006	839632 32	836403 40	S2005	839431 18	836350 43
S1007	839606 96	836388 02	S2006	839416 23	836334 46
S1008	839575 93	836381 95	S2007	839402 78	836316 79
S1009	839564 58	836347 39	S2008	839388 21	836294 20
S1020	839559 70	836348 57	S2009	839387 28	836295 89
S1021	839577 50	836402 77	S2010	839386 22	836296 28
S1022	839580 67	836439 89	S2011	839359 47	836318 71
S1023	839574 36	836440 21	S2012	839335 17	836354 66
S1024	839565 15	836437 12	S2013	839331 61	836362 84
S1025	839403 37	836481 74	S2014	839330 58	836373 54
S1026	839401 88	836519 17	S2015	839339 64	836398 89
S1027	839393 62	836517 93	S2016	839344 90	836419 61
S1028	839384 64	836517 93	S2017	839344 90	836425 93
S1029	839401 09	836539 01	S2018	839345 68	836428 44
S1030	839400 72	836540 44	S2019	839346 50	836430 44
S1031	839391 48	836555 02	S2020	839346 50	836433 74
S1032	839394 01	836565 02	S2021	839347 67	836434 68

MATCH LINE
FOR CONTINUATION
SEE DRG NO 70102/C4/1002

A	TENDER ADDENDUM NO 2	ECYPREYM	10-09
-	TENDER DRAWING	ECYPREYM	09-09

D DRAINAGE SERVICES DEPARTMENT,
THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

**DRAINAGE IMPROVEMENT
WORKS IN SHUEN WAN TAI PO - CONTRACT 1**

SETTING OUT PLAN FOR
WORKS AREA A, B AND C

SHEET 1 OF 2

AECOM

DRG.NQ. 70102/C4/1001A
圖紙編號

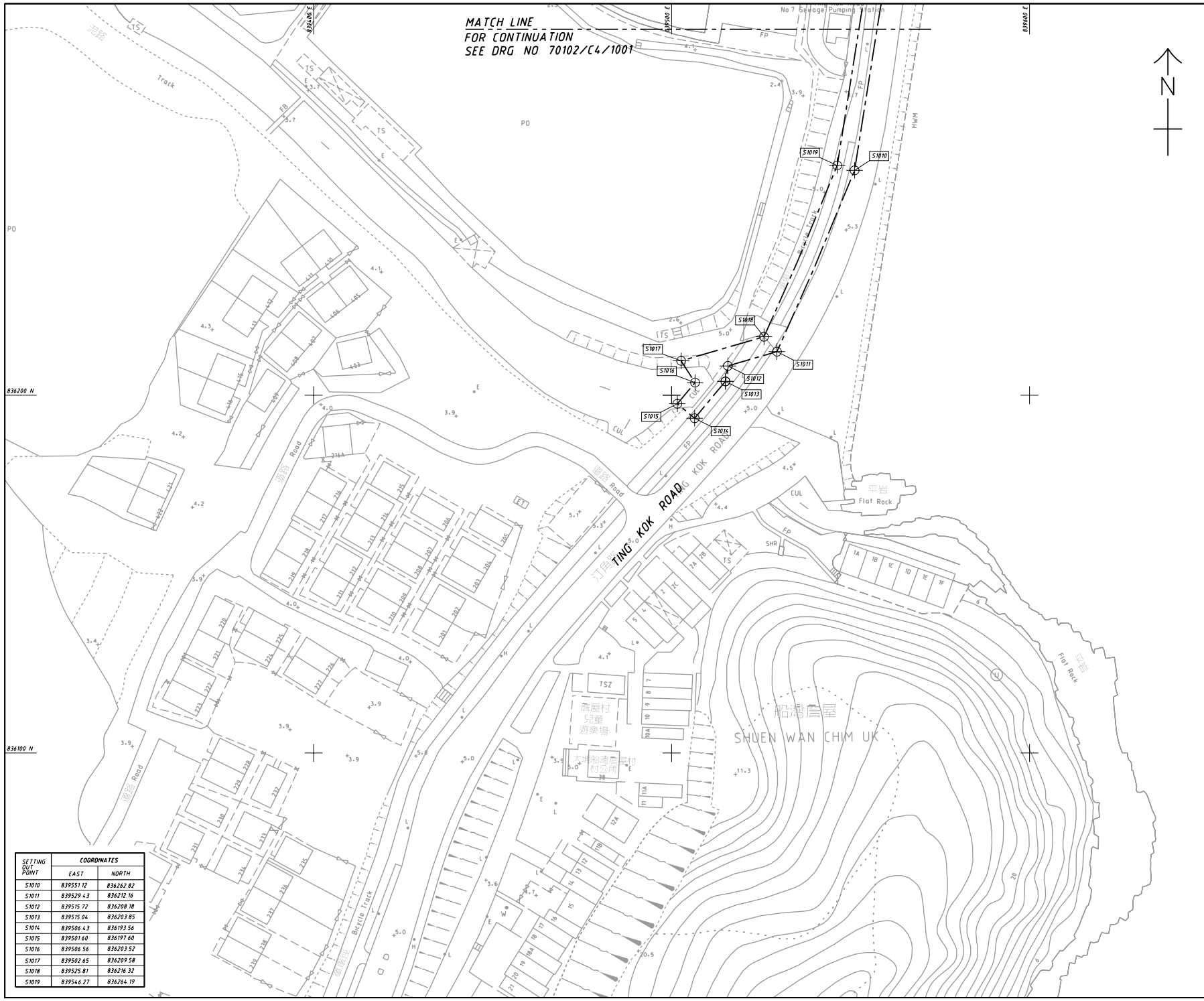
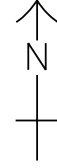
DESIGNED BY CPWU	CONTRACT NO. DC/2009/22	P. BY: APPROVED DML
DRAWN BY LWL	STATUS ISSUED	
SCALE A1 : 1 500	DIMENSIONS ARE IN METRES	

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836500 N
836400 N
836300 N
2010-2-5 11:54:09
p:\projects\70102\1000\TENDER ADDENDUM NO 2\1001A.dgn

MATCH LINE
FOR CONTINUATION
SEE DRG. NO 70102/C4/1001

NOTE
1. FOR NOTES AND LEGEND SEE DRAWING
NO. 70102/C4/1001



836200 N

836100 N

2010-2-5 13:32:23

SETTING OUT POINT	COORDINATES	
	EAST	NORTH
S1010	839551.12	836262.82
S1011	839529.43	836212.16
S1012	839515.72	836208.18
S1013	839515.04	836203.85
S1014	839506.43	836193.56
S1015	839501.60	836197.60
S1016	839506.56	836203.52
S1017	839502.65	836209.58
S1018	839525.81	836216.32
S1019	839546.27	836264.19

TENDER DRAWING	ECYPRC14	09-09
NO.	DATE	SCALE

D DRAINAGE SERVICES DEPARTMENT,
THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

DRAINAGE IMPROVEMENT
WORKS IN SHUEN WAN, TAI PO - CONTRACT 1

SETTING OUT PLAN FOR
WORKS AREA A, B AND C
SHEET 2 OF 2

AECOM

DRG. NO. 70102/C4/1002
圖紙編號

DESIGNED BY 設計	CP/WU	CONTRACT NO. 合約編號	DC/2009/22	APPROVED BY 核准人	DML
DRAWN BY 繪圖	LWL	STATUS 狀態			
SCALE 比例	A1:1 500				
DIMENSIONS ARE IN 尺寸單位	METRES				

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Appendix B: Key Personal Contact information chart

Post	Name	Contact No.	Contact Fax	e-mail
Project Manager	Mr. W. K. Chan	6821 1136	2674 6688	dc200922jv_pmcwk@yahoo.com.hk
Site Agent	Mr. C. L. Wong	9280 0166	2674 6688	dc200922jv_sa@yahoo.com.hk
Environmental Officer / Sub-agent	Mr. K. M. Ma	9552 1734	2674 6688	dc200922jv_suba@yahoo.com.hk
Environmental Supervisor	Mr. Anthony Chan	9179 2092	2674 6688	anthony277@hotmail.com
Asia Ecological Consultants Ltd. (Wetland Specialist)	Dr. Mike Leven	2486 2885	2471 8389	mrleven@asiaecol.com.hk
Environmental Pioneers & Solutions Limited (Environmental Team)	Miss. Goldie Fung	2556 9172	2856 2010	goldiefung@fseng.com.hk

Appendix C: Calibration Certificates for measuring instruments



Calibration Certificate

Certificate No. 21289

Page 1 of 3 Pages

Customer : Environmental Pioneers and Solutions Limited

Address : Flat A, 19/F., Chai Wan Industrial Centre Building, 21 Lee Chung Street, Chai Wan, HK.

Order No. : Q20468

Date of receipt : 2-Mar-12

Item Tested

Description : Digital Sound Level Meter

Manufacturer : SVAN

Model : 949

Serial No. : 8571

Test Conditions

Date of Test : 5-Mar-12

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: Z01.

Test Results

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

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

Main Test equipment used:


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

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

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

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

Calibrated by : 
P. F. Wong

Approved by : 
Dorothy Cheuk

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: 7-Mar-12



Calibration Certificate

Certificate No. 21289

Page 2 of 3 Pages

Results :

1. SPL Accuracy

Level Range	UUT Setting			Applied Value (dB)	UUT Reading (dB)	
	Octave Filter	Weight	Response		Before adjust	After adjust
105 dB	OFF	A	Fast	94.0	*92.0	94.0
			Slow		--	94.0
		C	Fast		--	94.0
130 dB	OFF	A	Fast	94.0	--	94.0
			Slow		--	94.0
		C	Fast		--	94.0
	OFF	A	Fast	114.0	--	114.1
			Slow		--	114.1
		C	Fast		--	114.1

IEC 651 Type 1 Spec. : ± 0.7 dB

Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB

Uncertainty : ± 0.01 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (inside Primary)
130	114.0	114.0	0.0	± 0.7 dB
	104.0	104.0	0.0	
	94.0	94.0 (Ref.)	--	
105	84.0	84.0	0.0	
	74.0	74.0	0.0	
	64.0	64.0	0.0	
	54.0	54.0	0.0	

Uncertainty : ± 0.1 dB



Calibration Certificate

Certificate No. 21289

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.
130	84.0	84.0	0.0	± 0.4 dB
	94.0	94.0 (Ref.)	0.0	
	95.0	95.0	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-40.4	- 39.4 dB, ± 1.5 dB
63 Hz	-27.2	- 26.2 dB, ± 1.5 dB
125 Hz	-17.0	- 16.1 dB, ± 1 dB
250 Hz	-9.4	- 8.6 dB, ± 1 dB
500 Hz	-2.6	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref)	0 dB, ± 1 dB
2 kHz	+1.8	+ 1.2 dB, ± 1 dB
4 kHz	+1.8	+ 1.0 dB, ± 1 dB
8 kHz	-0.4	- 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	50.0	--	--
1/10	50.0	50.2	± 0.5 dB
1/10 ²	50.0	49.8	
1/10 ³	50.0	50.1	± 1.0 dB
1/10 ⁴	50.0	49.9	

Uncertainty : ± 0.1 dB

Remarks : 1. UUT : Unit-Under-Test

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

3. Atmospheric Pressure : 1 001 hPa.

4. *Out of specification.

----- END -----



Calibration Certificate

Certificate No. 21290

Page 1 of 2 Pages

Customer : Environmental Pioneers and Solutions Limited

Address : Flat A, 19/F., Chai Wan Industrial Centre Building, 21 Lee Chung Street, Chai Wan, HK.

Order No. : Q20468

Date of receipt : 2-Mar-12

Item Tested

Description : Sound Level Calibrator

Manufacturer : Svantek

Model : SV30A

Serial No. : 7908

Test Conditions

Date of Test : 5-Mar-12

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 IEC 942 Class 1 specification.

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

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	13535	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR
S041	Universal Counter	15610	SCL-HKSAR
S206	Sound Level Meter	16338	SCL-HKSAR

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

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

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

Calibrated by : 

P. F. Wong

Approved by : 

Dorothy Cheuk

Date: 7-Mar-12

This Certificate is issued by:
Hong Kong Calibration Ltd.

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



Calibration Certificate

Certificate No. 21290

Page 2 of 2 Pages

Results :

1. Level Accuracy

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	94.10	± 0.3 dB
114	114.18	

Uncertainty : ± 0.1 dB

2. Frequency

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

Uncertainty : ± 3.6 x 10⁻⁶

3. Level Stability : 0.0 dB

IEC 942 Class 1 Spec. : ± 0.1 dB

Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.8 %

IEC 942 Class 1 Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

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

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

4. Atmospheric Pressure : 1001 hPa.

----- END -----



ALS Technichem (HK) Pty Ltd

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: MR CHI HANG LAI
CLIENT: ENVIRONMENTAL PIONEERS & SOLUTIONS LTD
ADDRESS: FLAT 19A, CHAI WAN INDUSTRIAL CENTRE BUILDING,
20 LEE CHUNG STREET,
CHAI WAN,
HONG KONG.

WORK ORDER: HK1213902
LABORATORY: HONG KONG
DATE RECEIVED: 29/05/2012
DATE OF ISSUE: 15/06/2012

PROJECT: --

COMMENTS

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.
Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of ALS will be followed.

Scope of Test: Conductivity, Dissolved Oxygen, pH, Temperature and Turbidity
Description: Multi-meter
Brand Name: DKK-TOA
Model No.: WQC-24, WMS-24
Serial No.: 682337
Equipment No.: --
Date of Calibration: 04/06/2012 and 13/06/2012

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.
Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd
11/F Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung
HONG KONG

Phone: 852-2610 1044
Fax: 852-2610 2021
Email: hongkong@alsglobal.com


Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

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Page 1 of 3

ADDRESS 11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong PHONE +852 2610 1044 FAX +852 2610 2021
ALS TECHNICHEM (HK) PTY LTD Part of the ALS Laboratory Group A Campbell Brothers Limited Company

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1213902
Date of Issue: 15/06/2012
Client: ENVIRONMENTAL PIONEERS & SOLUTIONS LTD



Description: Multi-meter
Brand Name: DKK-TOA
Model No.: WQC-24, WMS-24
Serial No.: 682337
Equipment No.: --
Date of Calibration: 04 June, 2012

Date of next Calibration: 04 September, 2012

Parameters:

Conductivity

Method Ref: APHA (21st edition), 2510B

Expected Reading (uS/cm)	Displayed Reading (uS/cm)	Tolerance (%)
142.6	143.0	0.3
6667	6510	-2.4
12890	13900	7.8
58670	57900	-1.3
	Tolerance Limit (%)	10.0

pH Value

Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	3.95	-0.05
7.0	6.94	-0.06
10.0	9.95	-0.05
	Tolerance Limit (±unit)	0.20

Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
11.0	11.9	0.9
21.0	20.9	-0.1
41.0	40.5	-0.5
	Tolerance Limit (°C)	2.0


 Mr Chan Kwok Fai, Godfrey
 Laboratory Manager - Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1213902
 Date of Issue: 15/06/2012
 Client: ENVIRONMENTAL PIONEERS & SOLUTIONS LTD



Description: Multi-meter
 Brand Name: DKK-TOA
 Model No.: WQC-24, WMS-24
 Serial No.: 682337
 Equipment No.: --
 Date of Calibration: 13 June, 2012

Date of next Calibration: 04 September, 2012

Parameters:

Turbidity

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.00	--
4	3.80	-5.0
40	42.4	6.0
80	80.1	0.1
400	436.8	9.2
800	868.7	8.6
	Tolerance Limit ($\pm\%$)	10.0

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.75	2.86	0.11
4.12	4.17	0.05
8.38	8.20	-0.18
	Tolerance Limit (\pm mg/L)	0.20



Calibration Certificate

Certificate No. 17082

Page 1 of 2 Pages

Customer : Environmental Pioneers and Solutions Limited

Address : Flat A, 19/F., Chai Wan Industrial Centre Building, 21 Lee Chung Street, Chai Wan, HK.

Order No. : Q12881

Date of receipt : 28-Nov-11

Item Tested

Description : Protobal Level-Velocity Logger

Manufacturer : Greyline

Model : Stingray

Serial No. : 45525

Test Conditions

Date of Test : 6-Dec-11

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : V12, T03, M07.

Test Results

All results were within the tolerance(s).

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

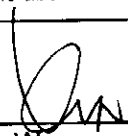
Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S179	Std. Tape	10789	NIM-PRC
S136A	Stop Watch	07481	SCL-HKSAR
S223	Std. Thermometer	13173	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 :


Y. K. Wong

Approved by :


Dorothy Cheuk

Date: 7-Dec-11

This Certificate is issued by:

Hong Kong Calibration Ltd.

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

Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. 17082

Page 2 of 2 Pages

Results :

1. Flow Rate

Applied Value (Ft/s)	UUT Reading (Ft/s)	Tolerance	Uncertainty
1.67	1.6	$\pm 5\%$	$\pm 1\%$

2. Level

Applied Value (Ft)	UUT Reading (Ft)	Tolerance	Uncertainty
1.00	1.00	$\pm 5\%$	$\pm 0.1\%$
1.75	1.75		
3.00	3.00		

3. Temperature

Applied Value (°C)	UUT Reading (°C)	Tolerance	Uncertainty
23.0	24	$\pm 2\text{ }^{\circ}\text{C}$	$\pm 0.2\text{ }^{\circ}\text{C}$

Remarks : 1. UUT : Unit-Under-Test

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

3. Sensor Used : Model : QZ02L-UT-01-PS

S/N : 10D18289

----- END -----

Appendix D: Construction Noise Monitoring Data

大成環境科技拓展有限公司
Environmental Pioneers and Solutions Limited

Noise Monitoring Data Sheet

Monitoring Location		M1	AL1
Monitoring Method		Façade	Façade
Date of Monitoring		5/7/2012	5/7/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		13:10	13:50
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 27302	
Wind Speed (m/s)		0.4	0.3
Measurement Results	L _{eq} (dB(A))	62.3	62.6
	L ₁₀ (dB(A))	65.2	65.5
	L ₉₀ (dB(A))	55.0	52.7
Major Construction Noise Source(s) During Monitoring		The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities
Other Noise Source(s) During Monitoring		– Background Noise – Traffic Noise	– Background Noise – Traffic Noise

Name

Signature

Date

Prepared by: Lau kai chung

Lau kai chung

5/7/2012

大成環境科技拓展有限公司
Environmental Pioneers and Solutions Limited

Noise Monitoring Data Sheet

Monitoring Location		M1	AL1
Monitoring Method		Façade	Façade
Date of Monitoring		11/7/2012	11/7/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		10:45	11:25
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 27302	
Wind Speed (m/s)		0.3	0.3
Measurement Results	L _{eq} (dB(A))	60.7	64.2
	L ₁₀ (dB(A))	62.7	67.8
	L ₉₀ (dB(A))	46.9	50.8
Major Construction Noise Source(s) During Monitoring		The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities
Other Noise Source(s) During Monitoring		– Background Noise – Traffic Noise	– Background Noise – Traffic Noise

Name

Signature

Date

Perpared by: Lau Kai Chung

Lau kai chung

11/7/2012

大成環境科技拓展有限公司
Environmental Pioneers and Solutions Limited

Noise Monitoring Data Sheet

Monitoring Location		M1	AL1
Monitoring Method		Façade	Façade
Date of Monitoring		18/7/2012	18/7/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		11:00	11:35
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 27302	
Wind Speed (m/s)		0.2	0.2
Measurement Results	L _{eq} (dB(A))	64.4	67.2
	L ₁₀ (dB(A))	66.1	69.9
	L ₉₀ (dB(A))	54.7	60.0
Major Construction Noise Source(s) During Monitoring		The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities
Other Noise Source(s) During Monitoring		– Background Noise – Traffic Noise	– Background Noise – Traffic Noise

Name

Signature

Date

Perpared by: Lau Kai Chung

Lau kai chung

18/7/2012

大成環境科技拓展有限公司
Environmental Pioneers and Solutions Limited

Noise Monitoring Data Sheet

Monitoring Location		M1	AL1
Monitoring Method		Façade	Façade
Date of Monitoring		25/7/2012	25/7/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		11:45	13:10
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 27302	
Wind Speed (m/s)		0.3	0.3
Measurement Results	L _{eq} (dB(A))	62.1	68.2
	L ₁₀ (dB(A))	64.5	69.3
	L ₉₀ (dB(A))	55.7	60.1
Major Construction Noise Source(s) During Monitoring		The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities
Other Noise Source(s) During Monitoring		– Background Noise – Traffic Noise	– Background Noise – Traffic Noise

Name

Signature

Date

Perpared by: Lau Kai Chung

Lau kai chung

25/7/2012

Appendix E: Water Quality Monitoring Data

Remark:

Red highlighting: The value is exceeding limit level.

Yellow highlighting: The value is exceeding action level but within limit level.

Environmental Pioneers and Solutions Limited

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 3/7/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	12:30	13:20	10:30
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.70	7.42	8.50
Temperature (°C)	33.7	31.7	32.9
Turbidity (NTU)	3.1	6.7	2.1
DO (mg/L)	4.20	7.02	4.30
DO Saturation (%)	59%	92%	59%
Suspended Solids (mg/L)	6.0	13.0	4.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

3/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 5/7/2012

Weather : Overcast

Monitoring Location	W1	W2	C2
Time (hhmm)	14:00	12:30	
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.80	7.44	8.40
Temperature (°C)	28.9	28.9	28.9
Turbidity (NTU)	28.6	12.7	11.6
DO (mg/L)	4.60	6.94	4.80
DO Saturation (%)	59%	92%	62%
Suspended Solids (mg/L)	35.0	13.0	10.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

5/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 7/7/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	15:00	14:30	11:15
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.10	7.75	8.90
Temperature (°C)	33.1	31.1	4.6
Turbidity (NTU)	4.30	5.5	2.20
DO (mg/L)	4.60	6.78	4.60
DO Saturation (%)	65%	87%	66%
Suspended Solids (mg/L)	7.0	8.2	4.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

7/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 9/7/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	16:45	15:30	10:45
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.50	7.42	8.80
Temperature (°C)	33.9	32.7	4.8
Turbidity (NTU)	7.5	6.9	8.4
DO (mg/L)	4.50	6.43	4.80
DO Saturation (%)	63%	76%	68%
Suspended Solids (mg/L)	33.0	9.4	4.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

9/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 11/7/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	16:00	15:30	10:05
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.70	7.19	7.80
Temperature (°C)	32	30.3	32.8
Turbidity (NTU)	8.4	10.1	1.7
DO (mg/L)	4.50	6.50	4.40
DO Saturation (%)	62%	74%	61%
Suspended Solids (mg/L)	6.0	7.6	2.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

11/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 13/7/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	9:45	10:15	10:00
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.40	7.16	7.70
Temperature (°C)	34.7	28.6	34.6
Turbidity (NTU)	3.6	11.3	3.1
DO (mg/L)	4.50	7.17	4.60
DO Saturation (%)	60%	70%	54%
Suspended Solids (mg/L)	10.0	5.0	5.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

13/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 16/7/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	12:00	12:05	10:30
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.30	7.25	8.10
Temperature (°C)	30.6	31.2	30
Turbidity (NTU)	5.5	7.2	12.1
DO (mg/L)	4.60	7.24	4.20
DO Saturation (%)	61%	94%	56%
Suspended Solids (mg/L)	4.0	9.4	3.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

16/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 18/7/2012

Weather : Cloudy

Monitoring Location	W1	W2	C2
Time (hhmm)	11:30	11:00	11:45
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.30	7.12	6.70
Temperature (°C)	30.4	29.6	29.5
Turbidity (NTU)	9.2	6.1	22.8
DO (mg/L)	4.20	7.20	4.60
DO Saturation (%)	56%	94%	62%
Suspended Solids (mg/L)	14.0	13.0	58.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

18/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 20/7/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	14:00	13:45	9:15
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	5.90	7.41	8.20
Temperature (°C)	30.9	31.5	31.6
Turbidity (NTU)	12.1	5.7	3.6
DO (mg/L)	6.10	7.14	6.00
DO Saturation (%)	66%	95%	80%
Suspended Solids (mg/L)	12.0	6.8	5.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

20/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 23/7/2012

Weather : Rainy

Monitoring Location	W1	W2	C1
Time (hhmm)	9:45	10:00	10:15
Tide Mode	Mid-flood		
Water Depth (m)	<1	<1	<1
pH value	7.00	7.98	8.05
Temperature (°C)	23.8	28.4	28.5
Turbidity (NTU)	9.7	1.0	0.7
DO (mg/L)	4.90	7.52	7.56
DO Saturation (%)	59%	96%	96%
Suspended Solids (mg/L)	16.0	4.2	4.8

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

23/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 25/7/2012

Weather : Rainy

Monitoring Location	W1	W2	C2
Time (hhmm)	16:45	11:10	10:00
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.40	6.90	8.20
Temperature (°C)	25.8	25.2	26.4
Turbidity (NTU)	8.5	450.1	12.7
DO (mg/L)	4.90	8.09	5.30
DO Saturation (%)	61%	100%	66%
Suspended Solids (mg/L)	10.0	320.0	26.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

25/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 27/7/2012

Weather : Rainy

Monitoring Location	W1	W2	C1
Time (hhmm)	9:00	13:15	13:25
Tide Mode	Mid-flood		
Water Depth (m)	<1	<1	<1
pH value	7.80	6.97	6.95
Temperature (°C)	27.3	26.2	26.2
Turbidity (NTU)	3.4	27.0	27.2
DO (mg/L)	7.10	7.81	7.88
DO Saturation (%)	90%	97%	97%
Suspended Solids (mg/L)	16.0	10.0	15.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

27/7/2012

Environmental Pioneers & Solutions Limited
Water Quality Monitoring - Summary of On-Site Measurement Results

Date of Sampling : 30/7/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	11:00	11:05	10:30
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.60	7.23	8.10
Temperature (°C)	34.8	32.1	34.2
Turbidity (NTU)	2.3	4.4	3.3
DO (mg/L)	4.20	7.35	4.90
DO Saturation (%)	60%	96%	69%
Suspended Solids (mg/L)	14.0	13.0	6.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

30/7/2012

Appendix F: Hydrological Characteristics Monitoring Data

Location	Position	Tide	Date**	Time	Weather	Water Depth (m)*	Water Flow (m/s)	Water Flow (m ³ /s)
H1	Mid	Flood	7-Jul-2012	9:30	Cloudy	0.12	0.18	0.225
H1	Mid	Flood	13-Jul-2012	15:25	Sunny	0.12	0.18	0.225
H1	Mid	Flood	20-Jul-2012					
H1	Mid	Flood	27-Jul-2012	14:05	Rainy	0.12	0.12	0.150
H2	Mid	Flood	7-Jul-2012	10:00	Cloudy	0.12	0.18	1.130
H2	Mid	Flood	13-Jul-2012	15:00	Sunny	0.12	0.12	0.754
H2	Mid	Flood	20-Jul-2012					
H2	Mid	Flood	27-Jul-2012	13:40	Rainy	0.18	0.12	0.754
H1	Mid	Ebb	7-Jul-2012	15:15	Sunny	0.55	0.12	0.150
H1	Mid	Ebb	13-Jul-2012	10:00	Sunny	0.12	0.12	0.150
H1	Mid	Ebb	20-Jul-2012	14:15	Sunny	0.12	0.18	0.225
H1	Mid	Ebb	27-Jul-2012					
H2	Mid	Ebb	7-Jul-2012	16:00	Sunny	0.12	0.18	0.225
H2	Mid	Ebb	13-Jul-2012	9:35	Sunny	0.12	0.06	0.377
H2	Mid	Ebb	20-Jul-2012	14:40	Sunny	0.18	0.24	1.507
H2	Mid	Ebb	27-Jul-2012					

* : Since the water levels were too low for the depth detector to determine, a tape measure was used for estimation.

** : Only one mid-tide is within working hours on 20, 27 Jul 2012.

Appendix G: Landscape and Visual Monitoring Photos



Photo 1 – A temporary hoarding was established to surround the works area at Wai Ha River estuary.



Photo 2 – A temporary hoarding was established to surround Area B within Tung Tsz Nursery.



Photo 3 – A new section of temporary hoarding has been erected from southwest to eastern parts of the Tung Tsz Nursery.



Photo 4 – Site hoarding was found collapsed in Area B.



Photo 5 – No polluted water was observed in the pond of the ECA and the adjacent Wai Ha River. Muddy water was caused by the soil runoff from the upper stream of Wai Ha River due to the massive rainfall during the typhoon.

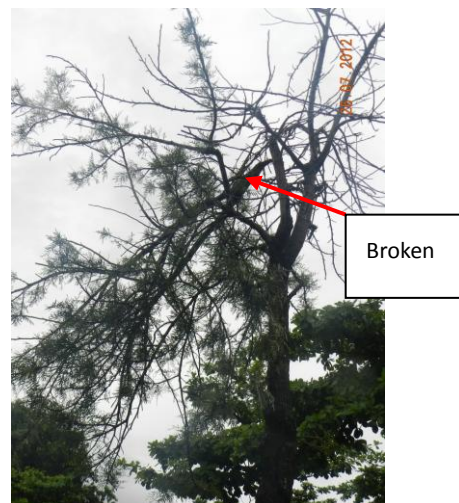


Photo 6 – Condition of the transplanted tree U58 *Grevillea robusta*. New leaves were observed on the tree branches and trunk.



Photo 7 – A large broken branch hanging on the scaffold the retained tree U50 (*Ficus elastica*).



Photo 8 – The relocated tree U55 (*Pterocarpus indicus*) was found fallen on the ground with its planter.



Photo 9 – The retained tree U68 was found fallen and with its laying against the hoarding.



Photo 10 – Temporarily stored construction materials was not observed within the TPZs during the monitoring on 26th July 2012.



Photo 11 – Temporarily stored construction materials were no longer observed within the TPZs in Area A.



Photo 12 – Declining health condition of U34 in Area B.



Photo 13 – Declining health condition of U35 in Area B.



Photo 14 – Declining health condition of U37 in Area B.



Photo 15 – Relocated trees were unable to be assessed closely due to the construction of the box culvert.



Photo 16 – Relocated trees were unable to be assessed closely due to the construction of the box culvert.



Photo 17 – Waterlogged area was observed at the base of U76.



Photo 18 – Waterlogged area was observed at the base of U77.



Photo 19 – Waterlogged area was observed at the base of U78.



Photo 20 – Waterlogged area was observed at the base of U79.



Photo 21 – New leaves were found on the transplanted tree T153 in Area C.



Photo 22 – New leaves were found on the transplanted, untagged tree (possibly T149) in Area C.



Photo 23 – The retained tree C49 (*Litsea monopetala*) was found broken at its trunk after the typhoon.



Photo 24 – The protected shrubs *Pavetta hongkongensis* (PH01 and PH02) showed fair health condition in Area C.



Photo 25 – The protected shrub *Pavetta hongkongensis* (PH03) showed fair health condition in Area C.

Appendix H:

A)

The recommended mitigation measures of EM&A manual (revision 3)

B)

Implementation status of environmental protection and mitigation measures

A) The recommended mitigation measures of EM&A manual (revision 3)

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
A <i>Noise Impact</i>							
S 3.30	2.18	Good Site Practice: <ul style="list-style-type: none"> ▪ Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program ▪ Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program ▪ Mobile plant, if any, shall be sited as far from NSRs as possible ▪ Machines and plant (such as 	To minimize construction noise impacts	Contractor	Works areas	Construction phase	EIAO-TM NCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		trucks) that may be in intermittent use shall be shut down between work periods or shall be throttled down to a minimum <ul style="list-style-type: none"> ▪ Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs ▪ Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities. 					
S 3.31 - 3.32	2.19	Use of quieter PME	To minimize construction noise impacts	Contractor	Works areas	Construction phase	EIAO-TM NCO
S 3.33 – 3.34	2.20-2.21	Use of temporary noise barrier	To minimize construction noise impacts	Contractor	Works areas as shown in Figure	Construction phase	EIAO-TM NCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
3.36-3.38	2.23-2.24				3.5		
S 3.35 and Table 3.6	2.22	Use of alternative quieter construction method (the Low Impact Method)	To minimize construction noise impacts	Contractor	Part of the works area for pipe laying in Wai Ha (refer to Figure 3.5)	Construction phase	EIAO-TM NCO
3.36-3.38	2.23-2.24	Use of noise enclosure	To minimize construction noise impacts	Contractor	Part of the works area for pipe laying in Wai Ha (refer to Figure 3.5)	Construction phase	EIAO-TM NCO
B Air Quality Impact							
S4.16	3.5	Implementation of mitigation measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices including but not limited to the following:	To minimize construction dust impacts	Contractor	Construction Sites	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<ul style="list-style-type: none"> ▪ Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved road, with complete coverage, particularly during dry weather; ▪ Use of frequent watering for particularly dusty static construction areas and areas close to ASRs; ▪ Tarpaulin covering of all dusty vehicle loads transported to, from and between site location; ▪ Establishment and use of vehicle wheel and body washing facilities at the exit points of the site; ▪ Routing of vehicles and 					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		positioning of construction plant should be at the maximum possible distance from ASRs. ■ Stockpiled excavated materials should be covered with tarpaulin, and should be removed off-site within 24 hours to avoid any odour nuisance arising.					
C <i>Water Quality Impact</i>							
S5.29	4.5	Construction Site Run-off and Drainage: ■ Before commencing any site formation work, all sewer and drainage connections shall be sealed to prevent debris, soil, sand etc. from entering public	To minimize water quality impacts	Contractor	Works sites	Construction phase	ProPECC PN 1/94 Construction Site Drainage

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<p>sewers/drains.</p> <ul style="list-style-type: none"> ▪ Temporary ditches shall be provided to facilitate run-off discharge into appropriate watercourses, via a silt retention pond. No site run-off shall enter the fishponds at Shuen Wan. ▪ Sand/silt removal facilities such as sand traps, silt traps and sediment basins shall be provided to remove sand/silt particles from runoff to meet the requirements of the Technical Memorandum standard under the Water Pollution Control Ordinance. The design of silt removal facilities shall be based on the guidelines provided in ProPECC PN 1/94. All drainage 					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<p>facilities and erosion and sediment control structures shall be inspected monthly and maintained to ensure proper and efficient operation at all times and particularly during rainstorms.</p> <ul style="list-style-type: none"> ▪ Water pumped out from excavated pits shall be discharged into silt removal facilities. ▪ During rainstorms, exposed slope/soil surfaces shall be covered by a tarpaulin or other means. <p>Other measures that need to be implemented before, during, and after rainstorms as summarized in ProPECC PN 1/94 shall be followed.</p>					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<ul style="list-style-type: none"> ▪ Exposed soil areas shall be minimized to reduce potential for increased siltation and contamination of runoff. ▪ Earthwork final surfaces shall be well compacted and subsequent permanent work or surface protection shall be immediately performed to reduce the potential of soil erosion. ▪ Open stockpiles of construction materials or construction wastes on-site shall be covered with tarpaulin or similar fabric during rainstorms. 					
S5.30	4.7	Further precautionary measures during rainy season:	To minimize water quality impacts to the designated Conservation Area	Contractor	Works areas near the Conservation Area	Rainy seasons during construction	EIAO-TM Water Pollution Control Ordinance

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<ul style="list-style-type: none"> ▪ For the construction of the box culvert next to the existing channel of the Wai Ha River, sand bags should be deployed around the boundary of the works trench to prevent muddy water ingress into the adjacent CA or Wai Ha River. Sand bags should also be used to surround the excavated trench. Generally, the sand bags will be placed up to a height of 300mm to provide adequate allowance for the built-up water level during rainstorm event. With sand bags in place, surface runoff will be intercepted and flow to Wai Ha River or collected by the existing drainage system as usual. ▪ For the construction of the box 				phase	(WPCO)

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<p>culvert in the extreme northeast corner of Shuen Wan Marsh</p> <p>Conservation Area sand bags should be deployed along the limit of the works area to prevent muddy water ingress into the CA. Sand bags should be placed to a height of at least 300mm from ground level and +2.5 mPD (whichever is greater) to provide adequate allowance for the built-up water level during rainstorm events.</p> <p>Unpolluted surface runoff within the works area should then be collected and directed into the existing drainage system.</p> <ul style="list-style-type: none"> ▪ Sheet-piles, which would be installed around the works trench near the Conservation Area, would 					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<p>be extended above ground level for about 2m to serve as hoardings to isolate the works site.</p> <ul style="list-style-type: none"> ▪ Tarpulin sheets would be used to cover the excavation areas during heavy rainstorms. This would prevent the ingress of rainwater into the trench minimising the risk of muddy water getting into Wai Ha River and the adjacent Conservation Area. ▪ Any concrete washing water would be contained inside the works site surrounded by the extended sheet piles. A pump sump at the bottom of the trench would be provided to pump any excess water during concrete washing. 					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<ul style="list-style-type: none"> ▪ Stockpiling the excavated materials adjacent to the Conservation Area would not be allowed. The excavated materials would be either removed off site immediately after excavation, or stockpile at location(s) away from the Conservation Area. The stockpile locations shall be approved by the site engineer. 					
S5.31-S5.32	4.8-4.9	General Construction Activities: <ul style="list-style-type: none"> ▪ Debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering the Wa Ha River and fish ponds at Shuen Wan. Stockpiles of cement and other construction materials should be kept covered 	To minimize water quality impacts	Contractor	Works sites	Construction phase	EIAO-TM WPCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		when not being used. <ul style="list-style-type: none"> ▪ Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to nearby water bodies, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event. 					
S5.33	4.10	Sewage from Construction workforce: <ul style="list-style-type: none"> ▪ Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site. A 	To minimize water quality impacts	Contractor	Works sites	Construction phase	EIAO-TM WPCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		licensed contractor would be responsible for appropriate disposal and maintenance of these facilities.					
S5.34	4.11	River Channel Excavation Works: <ul style="list-style-type: none"> ▪ The excavation works within the upstream end of the existing river channel of the Wai Ha River for the construction of the proposed box culvert shall be carried out in dry condition. Containment measures such as bunds and barriers shall be used within the affected length of the river channel and the excavation works restricted to within an enclosed dry section of the channel. The excavation works within Wai Ha River shall be restricted to the period from October 	To minimize water quality impacts	Contractor	Works sites	Construction phase	EIAO-TM WPCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		to April.					
D Waste Management Implications							
S6.20 – 6.22	5.5	Good site practices: <ul style="list-style-type: none"> ▪ Nomination of approved personnel, such as a site manager, to be responsible for good site practices and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility. ▪ Training of site personnel in proper waste management and chemical waste handling procedures. ▪ Provision of sufficient waste disposal points and regular 	To reduce waste management impacts	Contractor	Works sites	Construction phase	ETWB TCW No.19/2005 ETWB TCW No.31/2004

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<p>collection for disposal.</p> <ul style="list-style-type: none"> ▪ Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. ▪ Separation of chemical waste for special handling and appropriate treatment at the Chemical Waste Treatment Facility. ▪ Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. ▪ A Waste Management Plan 					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		should be prepared and submitted to the Engineer for approval. One may make reference to ETWB TCW No. 15/2003 for details. <ul style="list-style-type: none"> ▪ A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed. 					
S6.23-6.24	5.7	Waste reduction measures: <ul style="list-style-type: none"> ▪ 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. ▪ To encourage collection of aluminium cans by individual collectors, separate labelled bins 	To achieve waste reduction	Contractor	Works sites	Construction phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<p>shall be provided to segregate this waste from other general refuse generated by the work force.</p> <ul style="list-style-type: none"> ▪ Any unused chemicals or those with remaining functional capacity shall be recycled. ▪ Maximising the use of reusable steel formwork to reduce the amount of C&D material. ▪ 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 					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		avoid unnecessary generation of waste.					
S6.25-6.26		<p>Construction & Demolition (C&D) Material:</p> <ul style="list-style-type: none"> ▪ Excavated material with suitable characteristics/size should be reused on-site as fill material as far as practicable, such as for backfilling of the box culvert and drainage pipe works. ▪ Suitable areas should be designated within the works site boundaries for temporary stockpiling of C&D material. ▪ Within stockpile areas, the following measures should be taken to control potential environmental 	<p>To minimize off-site disposal of C&D material</p> <p>To minimize environmental impacts during the handling of C&D material</p>	Contractor	Works sites	Construction phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		impacts or nuisance: <ul style="list-style-type: none"> - covering material during heavy rainfall; - locating stockpiles to minimize potential visual impacts; and - minimizing land intake of stockpile areas as far as possible. <ul style="list-style-type: none"> ▪ When disposing C&D material at a public filling area, the material shall only consist of soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt. The material shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered to be 					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		unsuitable by the Filling Supervisor.					
S6.27		Chemical waste: <ul style="list-style-type: none"> ▪ Contractor should register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. ▪ 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 	To minimize environmental impacts during the handling, transportation and disposal of chemical waste	Contractor	Works sites	Construction phase	EIAO-TM Waste Disposal (Chemical Waste) (General) Regulation

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		corresponding chemical characteristics of the chemical waste, such as explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. <ul style="list-style-type: none"> ▪ The Contractor should use a licensed collector to transport and dispose of the chemical wastes generated at the Chemical Waste Treatment Centre at Tsing Yi, or other licenced facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. 					
S6.28		General refuse: <ul style="list-style-type: none"> ▪ It should be stored in enclosed bins or compaction units separate from C&D material. ▪ A reputable waste collector 	To minimize environmental impacts during the handling and transportation of general refuse	Contractor	Works sites	Construction phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		should be employed by the contractor to remove general refuse from the site, separately from C&D material. <ul style="list-style-type: none"> ▪ An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material. 					
E Ecological Impact							
S. 7.95	6.6	<ul style="list-style-type: none"> ▪ Sheet-pilings, which will be installed around the trench of excavation, should be extended above ground level for ~2m to act as hoarding to isolate the works site. ▪ The trenching works for the construction of the proposed box culvert should be carried out in phases, with a trench length of not 	To minimize the impacts on the stream and natural river bank	Contractor	Whole site	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		more than 120m in each phase. The trench should be backfilled and compacted with suitable materials upon completion of each phase of the construction works.					
S7.117	6.6	<ul style="list-style-type: none"> ▪ The construction of intercept point of twin cell box culvert at the upstream of Wai Ha River should be confined to only one side of the river bank. ▪ To restore and enhance the ecological value of the stream, the affected river bank should be reinstated to its original condition or lined with rock-filled gabion. ▪ Planting pits should be provided in the gabion bank to allow the re-establishment of riparian vegetation. 	To minimize the impacts on the stream and natural river bank	Contractor	Whole site	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<ul style="list-style-type: none"> ▪ The existing natural riverbed and substrates should be retained and the natural pool-riffle sequence should be re-created in the new channel bed. 					
S 7.118	6.7	<ul style="list-style-type: none"> ▪ All works carried out within the the river channel of Wai Ha River should be carried out from October to April, with construction carried out by land-based plant. ▪ Works within river/stream channels should be restricted to an enclosed dry section of the river, with containment measures such as bunds and barriers used within the river to minimize the impacts upon the downstream water body. 	To minimise sedimentation/ water quality impacts	Contractor	Whole Site	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<ul style="list-style-type: none"> ▪ Site runoff should be directed towards regularly cleaned and maintained silt traps and oil/grease separators to minimize the risk of sedimentation and pollution of river water. ▪ The silt and oil/grease separators should be appropriately designed for the local drainage and ground conditions. ▪ To minimize leakage and loss of sediments during excavation in narrow channels, tightly sealed closed grab excavators should be deployed where material to be handled is wet. 					
S 7.119	6.8	<ul style="list-style-type: none"> ▪ The construction of the proposed box-culvert would have the potential to directly impact a few 	To protect plant species of conservation interest	Contractor/ qualified botanist/horticu	Whole site	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<p>individual of a plant species of conservation interest (Hong Kong Pavetta, <i>Pavetta hongkongensis</i>). The affected individuals should be transplanted to a suitable nearby habitats prior to the construction phase.</p> <ul style="list-style-type: none"> ▪ A detailed vegetation survey of the affected species of conservation interest should be conducted by a suitably qualified botanist/ecologist to identify the affected individuals in order to provide details for transplantation scheme. ▪ Transplantation should be supervised by a suitably qualified botanist/horticulturalist. A detailed transplantation methodology should be formulated during the detailed design stage of this Project. 		Horticulturalist			

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
S 7.120	6.9	<ul style="list-style-type: none"> ▪ Noise mitigation measures such as the use of quieter construction plant and temporary noise barriers should be implemented to minimize disturbance to habitats adjacent to the works areas. ▪ Temporary noise barriers should be used during the construction of the box-culvert along Tung Tsz Road, the floodwater pumping station, the mechanical gate, and drainage pipe to minimize potential construction phase disturbance to ardeids and avifauna foraging in marsh habitat. ▪ Noise generating construction works near the Shuen Wan Egrettry SSSI should be avoided as far as practicable during the breeding season (March to June) of the 	To minimise disturbance impacts.	Contractor	Whole site	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		ardeids. <ul style="list-style-type: none"> ▪ Works near the SSSI (i.e. installation of mechanical gate) should be restricted to be executed outside the breeding season by provision of special conditions in the contract document. ▪ Hoardings with minimum height of 2m should be set up along the south side of the proposed box culvert works area adjacent to the marsh, extending at least 20m at both ends, throughout the construction period. 					
S 7.121	6.10	<ul style="list-style-type: none"> ▪ Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural or 	To minimise disturbance to habitats.	Contractor	Whole site	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		moderate-high ecological value habitats.					
S 7.121	6.10	<ul style="list-style-type: none"> ▪ Construction activities should be restricted to work areas that would be clearly demarcated. The work areas should be reinstated after completion of the works. 	To minimise disturbance to natural habitats outside works area.	Contractor	Whole site	Construction Phase	EIAO-TM
S 7.121	6.10	<ul style="list-style-type: none"> ▪ Waste skips should be provided to collect general refuse and construction wastes. The wastes would be disposed of timely and properly off-site. 	To minimise disturbance to habitats.	Contractor	Whole site	Construction Phase	EIAO-TM
S 7.121	6.10	<ul style="list-style-type: none"> ▪ General drainage arrangements should include sediment and oil traps to collect and control construction site run-off. 	To minimise sedimentation/ water quality impacts	Contractor	Whole site	Construction Phase	EIAO-TM
S 7.121	6.10	<ul style="list-style-type: none"> ▪ Open burning on works sites is illegal, and should be strictly prohibited. 	To prevent accidental hill-fires.	Contractor	Whole site	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
S 7.122	6.11	<ul style="list-style-type: none"> ▪ De-silting should be limited to the dry season. 	To minimise sedimentation/ water quality impacts	Maintenance parties of the channel	Whole site	Operation Phase	EIAO-TM
S 7.122	6.11	<ul style="list-style-type: none"> ▪ Waste material produced during de-silting should be disposed of in a timely and appropriate manner. 	To minimise sedimentation/ water quality impacts	Maintenance parties of the channel	Whole site	Operation Phase	EIAO-TM
S 7.123	6.12	<ul style="list-style-type: none"> ▪ Planting of trees should be provided within the project area to compensate for the unavoidable loss of approximately 0.08ha secondary woodland habitat due to the Project. ▪ Planting of trees and other vegetation within project area along the banks of Wai Ha River and Tung Tsz Road should be carried out to provide compensation for unavoidable tree-felling and loss of riparian vegetation resulting from the 	To compensate the loss of vegetation	Contractor	Whole site	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		Project. <ul style="list-style-type: none"> ▪ The compensatory planting should make use of native plant species with flowers/fruits attractive to wildlife. 					
S 7.124	6.13	<ul style="list-style-type: none"> ▪ Compensation would be required for the loss of a small area of marsh habitat (about 0.30ha) within the CA resulting from the construction of the box-culvert. ▪ An existing low ecological value recreational fishpond on government land adjacent to the marsh would be used as a proposed area (about 0.8ha) for the compensation for the marsh as well as secondary woodland habitats loss (0.08ha). ▪ The pond should be enhanced by removing boardwalks around the 	To compensate the loss of marsh habitat and enhance the quality compensatory habitat	Contractor / qualified ecologist	The recreational fish pond located to the southwest of the existing Tung Tsz Nursery	Construction Phase	EIAO-TM

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		<p>existing pond, and restoring vegetation along the pond bunds, and it would be re-profiled to provide areas of shallow water (approximately 15-50cm deep), creating a suitable foraging habitat for avifauna, particularly ardeids and other waders.</p> <ul style="list-style-type: none"> ▪ Screen planting of shrubs and trees along the south-eastern bund of the pond should be implemented to minimise disturbance to avifauna and other wildlife from the adjacent recreational fishpond. The enhanced pond is expected to provide a moderate-high ecological value wetland habitat. 					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concern to Address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
F		<i>Landscape and Visual</i>					
Table 8.4	7.6	Visual screen, contaminant/ liaison with nursery, protection of existing trees with works area and construction light are used or practiced to mitigate the impacts during construction phase.	To mitigate the landscape	Contractor	Whole site	Construction	EIAO-TM
Table 8.4	7.7	Viewing area formation, architectural design for pump house, landscape design for pump house, enhancement planting along Tung Tsz Road, sufficient soil depth for enhancement planting, transplanting of trees to adjacent locations, preparation for transplanting and reinstatement of affected area are practiced to mitigate the impacts during operational phase.	To mitigate the landscape and visual impacts during the operational phase.	Contractor	Whole site	Detail Design / Operational Phase	EIAO-TM

Appendix H:

A)

The recommend mitigation measures of EM&A manual (revision 3)

B)

Implementation status of environmental protection and mitigation measures

B) Implementation status of environmental protection and mitigation

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
2.18	Use well maintained construction plant	To minimize construction noise impact	Works areas	Construction phase	EIAO-TM NCO	Implemented
	Shut down plants between work periods					Implemented
	Install silencers on construction equipment					Implemented
	Locate mobile plant far away from NSRs					Implemented
	Quiet plants should be used					Implemented
2.19	Use of quieter PME					Not applicable
2.20 - 2.21	Use of temporary noise barrier		Pipe laying in Wai Ha			Not applicable
2.22	Use of alternative quieter construction method		Part of the Works Pipe laying in Wai Ha			Not applicable
2.23 – 2.24	Use of noise enclosure		Pipe laying in Wai Ha			Not applicable

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
3.5	Implement regular watering and vehicle washing facilities	To minimize construction dust impact	Construction Site	Construction phase	EIAO-TM	Outstanding
	Cover excavated or stockpile of dusty material by impervious sheeting or sprayed with water					Implemented
	Use tarpaulin to cover dusty materials on vehicles					Implemented
4.5	Provide silt trap and oil interceptor to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before pumped to the public storm water drainage system	To minimize water quality impact	Construction Site	Construction phase	EIAO-TM WPCO	Implemented
4.5	During rainstorms, exposed slope/soil surfaces shall be covered by a tarpaulin or other means. Others measures that need to be implemented before, during, and after rainstorms as summarized in ProPECC PN 1/94 shall be followed					Not applicable

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
4.10	Provide site toilet facilities	To minimize water quality impact	Construction Site	Construction phase	EIAO-TM WPCO	Implemented
4.7	<p>Further precautionary measures during rainy season:</p> <p>For the construction of the box culvert next to the existing channel of the Wai Ha River, sand bags should be deployed around the boundary of the works trench to prevent muddy water ingress into the adjacent CA or Wai Ha River. Sand bags should also be used to surround the excavated trench. Generally, the sand bags will be placed up to a height of 300mm to provide adequate allowance for the built-up water level during rainstorm event. With sand bags in place, surface runoff will be intercepted and flow to Wai Ha River or collected by the existing drainage system as usual.</p> <p>For the construction of the box culvert in the extreme northeast corner of Shuen Wan Marsh Conservation Area sand bags should be deployed along the limit of the works area to prevent muddy water ingress into the CA. Sand bags should be placed to a height of at least 300mm from round level and +2.5 mPD (whichever is greater) to provide adequate allowance</p>	To minimize water quality impact to the designated Conservation Area	Works areas near the Conservation Area	Rainy seasons during construction	EIAO-TM WPCO	Not applicable

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
	<p>for the built-up water level during rainstorm events. Unpolluted surface runoff within the works area should then be collected and directed into the existing drainage system.</p> <p>Sheet-piles, which would be installed around the works trench near the Conservation Area, would be extended above ground level for about 2m to serve as hoardings to isolate the works site.</p> <p>Tarpulin sheets would be used to cover the excavation areas during heavy rainstorms. This would prevent the ingress of rainwater into the trench minimising the risk of muddy water getting into Wai Ha River and the adjacent Conservation Area.</p> <p>Any concrete washing water would be contained inside the works site surrounded by the extended sheet piles. A pump sump at the bottom of the trench would be provided to pump any excess water during concrete</p>					
5.9	Reuse excavated material as much as possible					Implemented
5.7	Any unused chemicals or those with remaining functional capacity shall be recycled.	To achieve waste reduction	Works areas	Construction phase	EIAO-TM	Not applicable
	Recycle scrap metals or abandoned equipment					Implemented

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
5.5	A recording system for the amount of wastes generated, recycled and disposed should be proposed	To reduce waste management impacts	Works areas	Construction phase	ETWB TCW	Implemented
5.9	Adopt a trip ticket system for the disposal of C&D materials				No. 19/2005	Implemented
5.11	All general refuse should be segregated and stored in enclosed bins or compaction units				ETWB TCW NO. 31/2004	Implemented
5.10	Contractor should be a required to register with the EPD as a Chemical Waste Producer and to follow the guidelines states in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.	To minimize the environmental impacts associated with the handling, transportation and disposal of chemical waste.	Work site	Construction phase	EIAO-TM Waste Disposal (Chemical Waste)(General) Regulation	Implemented
	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 explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.					Not applicable

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
5.5	A recording system for the amount of wastes generated, recycled and disposed should be proposed	To reduce waste management impacts	Works areas	Construction phase	ETWB TCW No. 19/2005 ETWB TCW NO. 31/2004	Implemented
6.6	Sheet-pilings, which will be installed around the trench of excavation, should be extended above ground level for ~2m to act as hoarding to isolate the works site. The trenching works for the construction of the proposed box culvert should be carried out in phases, with a trench length of not more than 120m in each phase. The trench should be backfilled and compacted with suitable materials upon completion of each phase of the construction works.	To minimize the impacts on the stream and natural river bank.	Whole site	Construction phase	EIAO-TM	Implemented
6.6	The construction of intercept oint of twin cell box culvert at the upstream of Wai Ha River should be confined to only one side of the river bank. To restore and enhance the ecological value of the stream, the affected river bank should be reinstated to its original condition or lined with rock-filled gabion. Planting pits should be provided in the gabion bank to allow the re-establishment of riparian vegetation.	To minimize the impacts on the stream and natural river bank.	Whole site	Construction phase	EIAO-TM	No applicable

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
	<p>The existing natural riverbed and substrates should be retained and the natural pool-riffle sequence should be re-created in the new channel bed.</p>					
6.7	<p>All works carried out within the the river channel of Wai Ha River should be carried out from October to April, with construction carried out by land-based plant.</p> <p>Works within river/stream channels should be restricted to an enclosed dry section of the river, with containment measures such as bunds and barriers used within the river to minimize the impacts upon the downstream water body.</p> <p>Site runoff should be directed towards regularly cleaned and maintained silt traps and oil/grease separators to minimize the risk of sedimentation and pollution of river water.</p> <p>The silt and oil/grease separators should be appropriately designed for the local drainage and ground conditions.</p> <p>To minimize leakage and loss of sediments during excavation in narrow channels, tightly sealed closed grab excavators should be deployed where material to be handled is wet.</p>	<p>To minimize sedimentation/ water quality impacts</p>	<p>Whole site</p>	<p>Construction phase</p>	<p>EIAO-TM</p>	<p>No applicable</p>

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
6.8	<p>The construction of the proposed box-culvert would have the potential to directly impact a few individual of a plant species of conservation interest (Hong Kong Pavetta, Pavetta hongkongensis). The affected individuals should be transplanted to a suitable nearby habitats prior to the construction phase.</p> <p>A detailed vegetation survey of the affected species of conservation interest should be conducted by a suitably qualified botanist/ecologist to identify the affected individuals in order to provide details for transplantation scheme.</p> <p>Transplantation should be supervised by a suitably qualified botanist/horticulturalist. A detailed transplantation methodology should be formulated during the detailed design stage of this Project.</p>	To protect plant species of conservation interest	Whole site	Construction phase	EIAO-TM	No applicable
6.9	Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimize disturbance to natural or moderate-high ecological value habitats.	To minimise disturbance to habitats.	Whole site	Construction phase	EIAO-TM	No applicable
6.13	General drainage arrangements should include sediment and oil traps to collect and control construction site run-off.	To minimise sedimentation/ water quality impacts	Whole site	Construction phase	EIAO-TM	Implemented

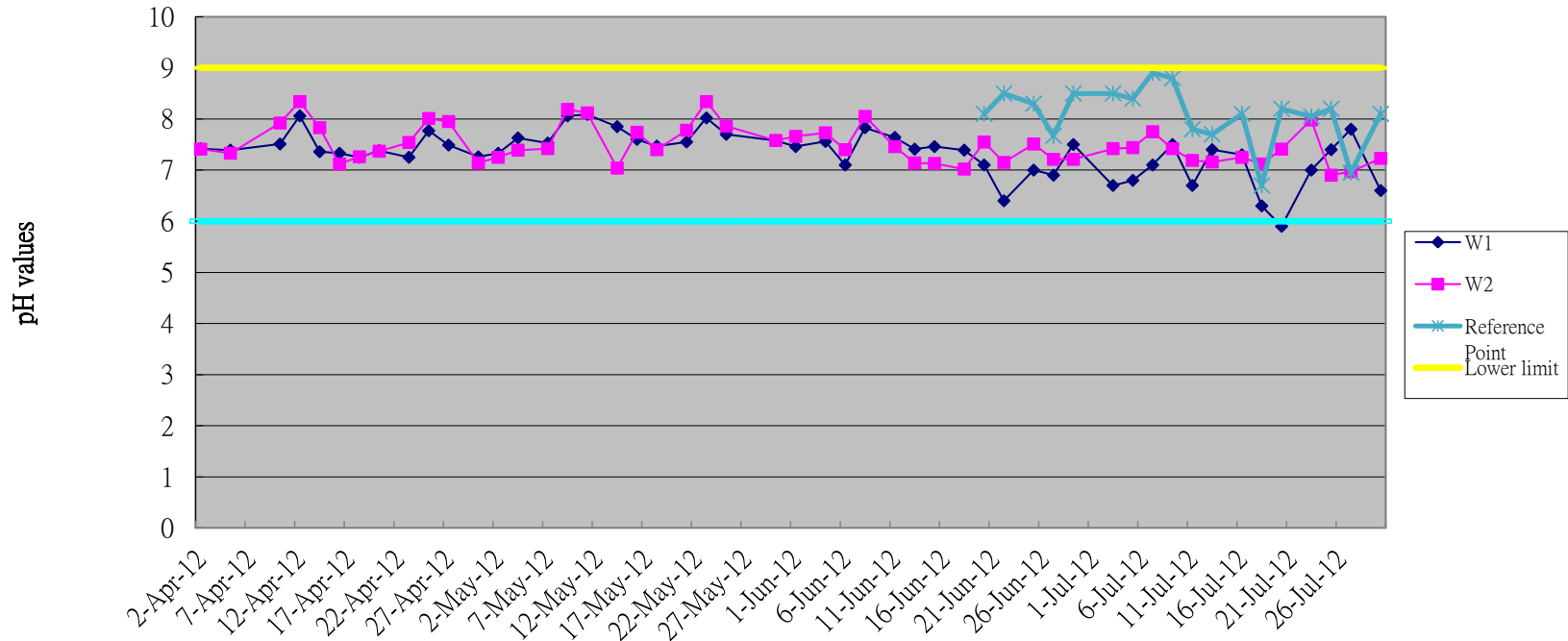
EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & main concern to Address	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?	Implementation status
6.13	Construction activities should be restricted to work areas that would be clearly demarcated. The work areas should be reinstated after completion of the works.	To minimise disturbance to natural habitats outside works area.	Whole site	Construction phase	EIAO-TM	Implemented
6.13	Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimize disturbance to natural or moderate-high ecological value habitats.	To minimise disturbance to natural habitats	Whole site	Construction phase	EIAO-TM	Implemented
7.6	Visual screen, contaminant/ liaison with nursery, protection of existing trees with works area and construction light are used or practiced to mitigate the impacts during construction phase	To mitigate the landscape and visual impacts during the Construction phase	Whole site	Construction phase	EIAO-TM	Implemented
7.7	Viewing area formation , architectural design for pump house, landscape design for pump hose, enhancement planting along Tung Tsz Road, sufficient soil depth for enhancement planting, transplanting of trees to adjacent locations preparation for transplanting and reinstatement of affected area are practiced to mitigate the impacts during operational phase.	To mitigate the landscape and visual impacts during the operational phase	Whole site	Detail Design / Operational Phase	EIAO-TM	Not Applicable

Appendix I: Construction programme

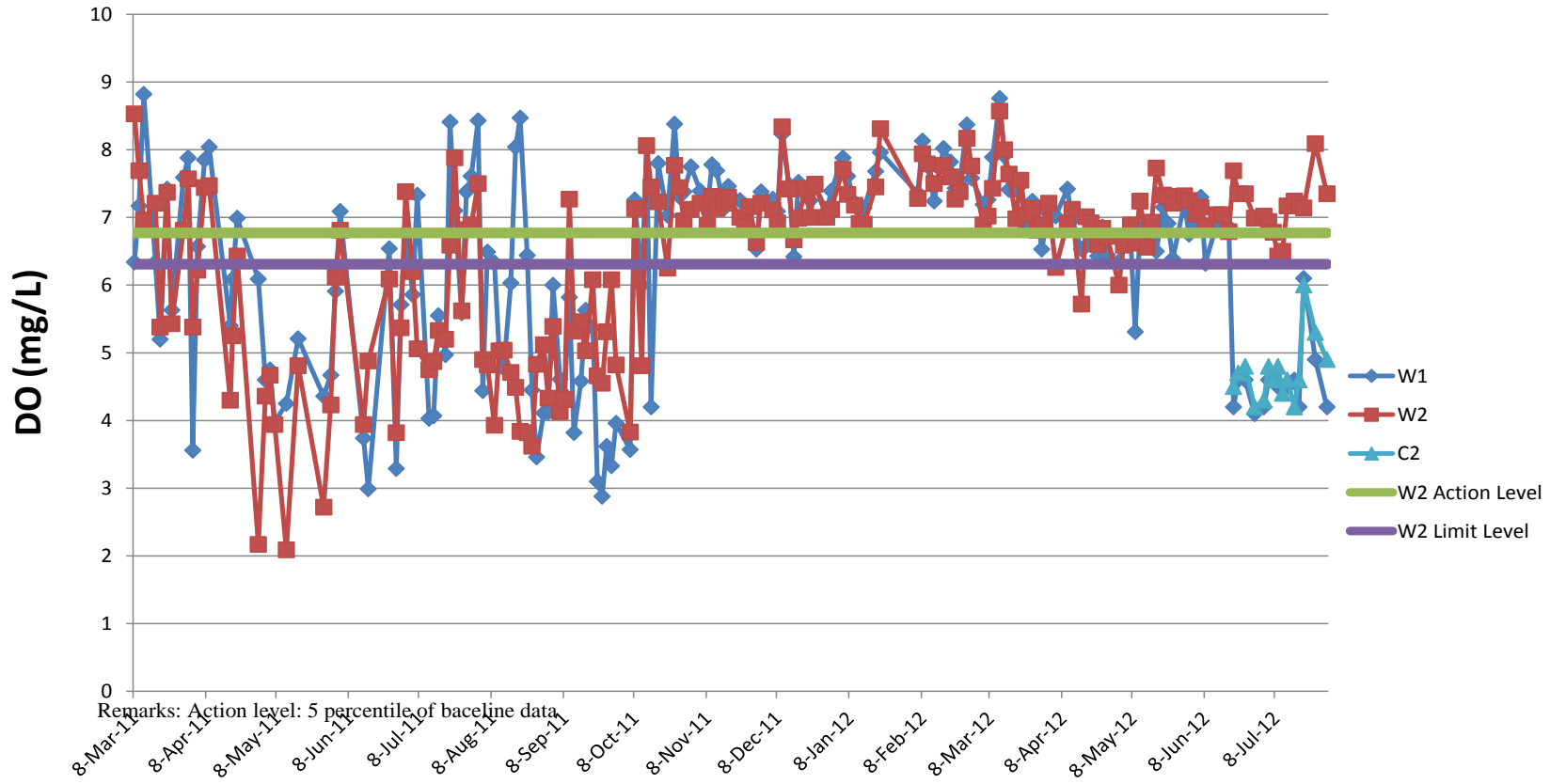
Appendix J: Three month rolling programme

Appendix K. Graphical plots of trends of monitored parameter

Graphical plots of pH values W1&W2



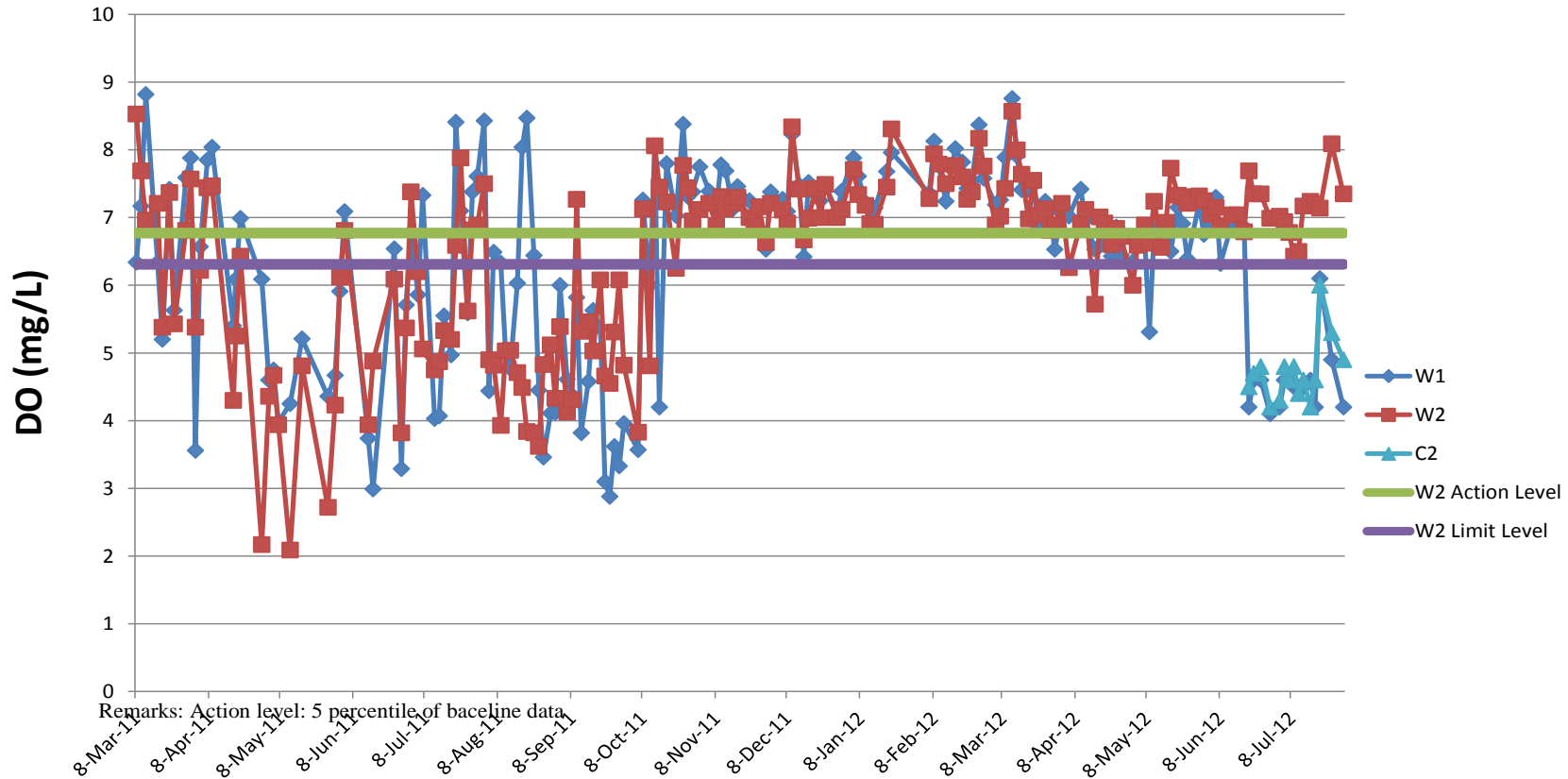
Graphical plots of DO (ebb tide) for W1&W2



Remarks: Action level: 5 percentile of baseline data

Limit level: 1 percentile of baseline

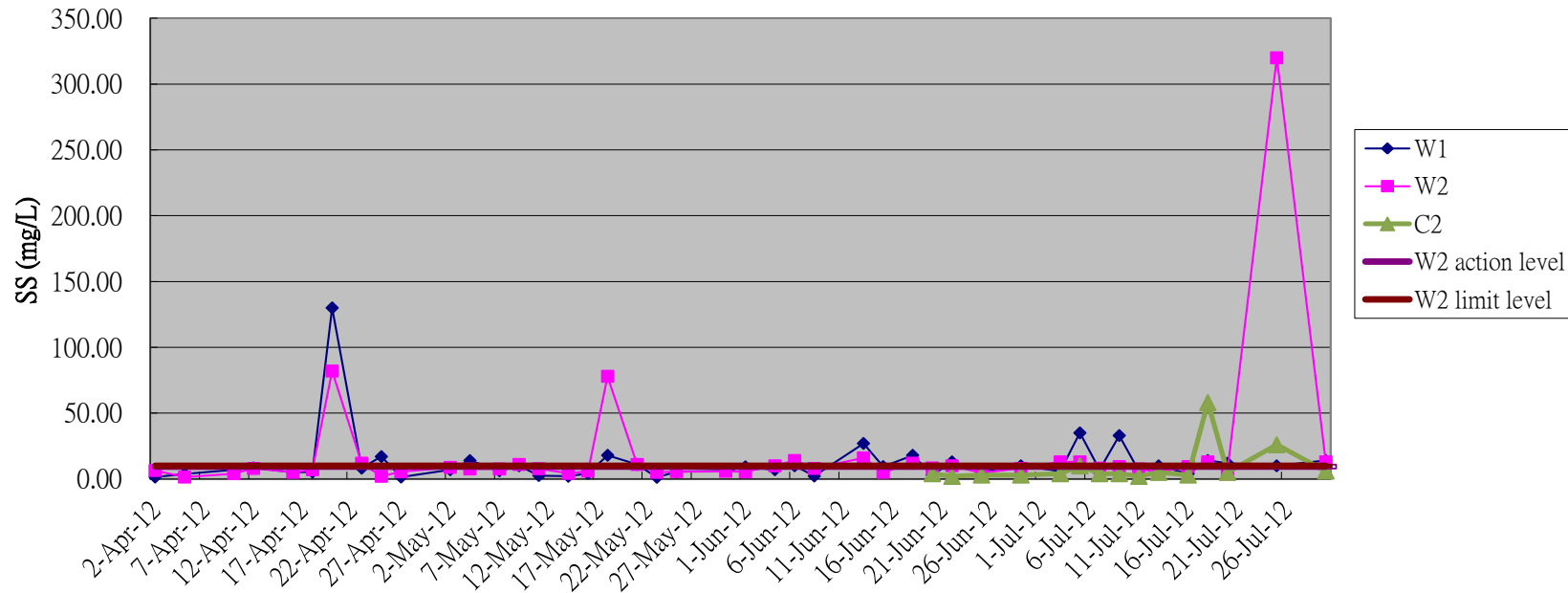
Graphical plots of DO (ebb tide) for W1&W2



Remarks: Action level: 5 percentile of baceline data

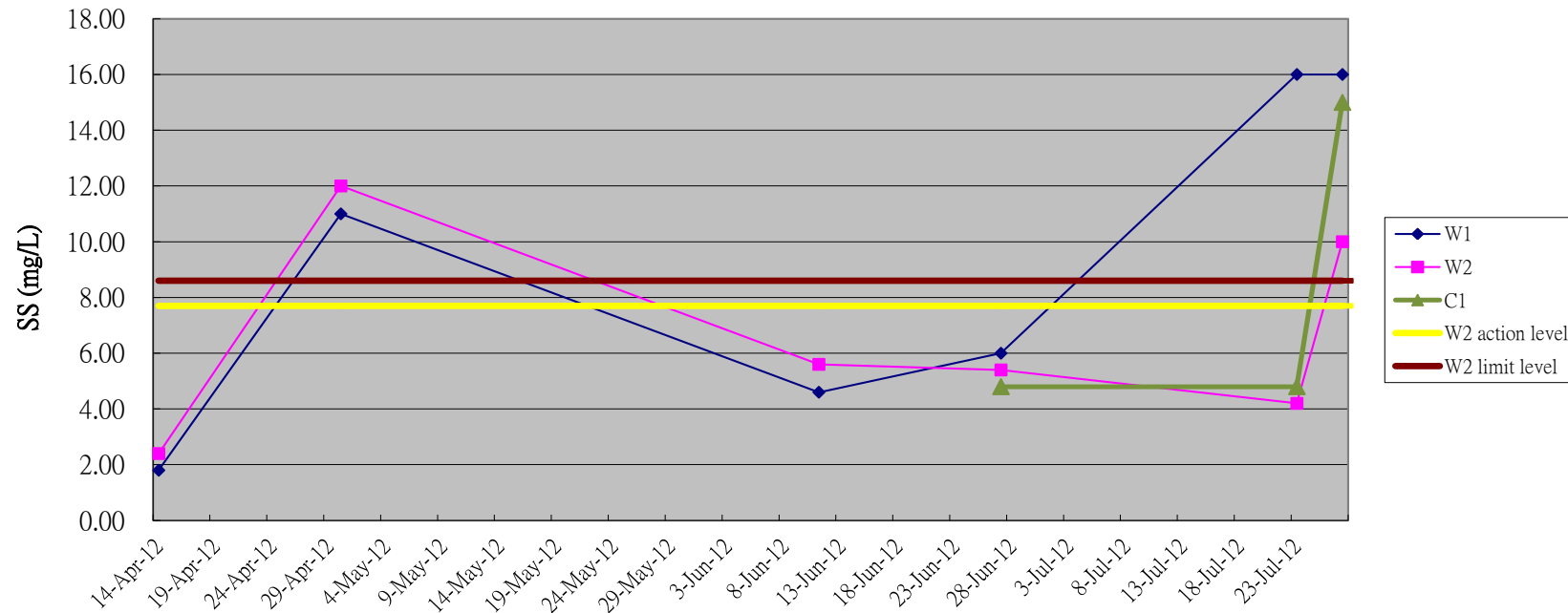
Limit level: 1 perente of baceline

Graphical plots of SS (ebb tide) for W1&W2



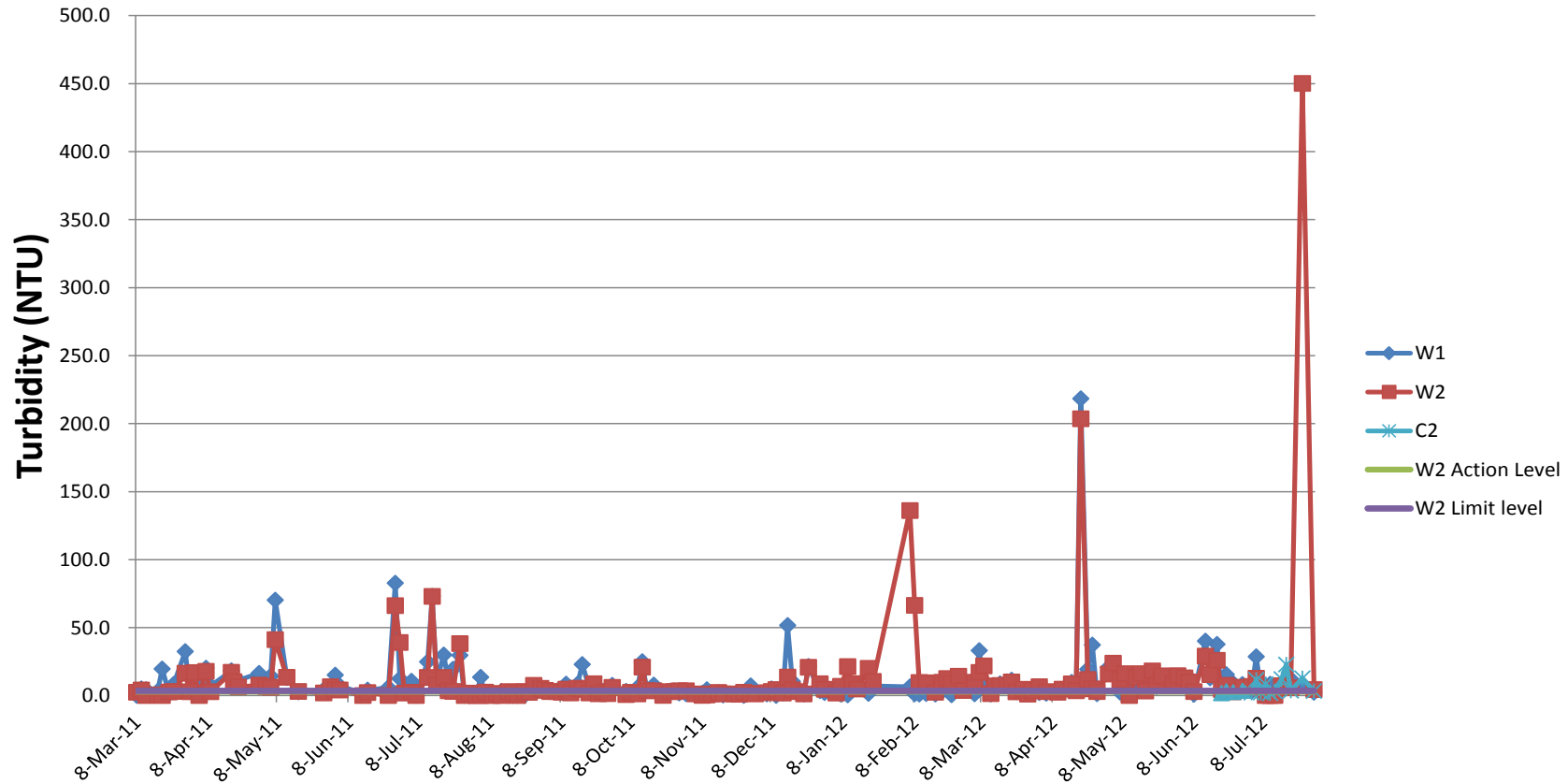
Remarks: Action limit is 95% of baseline data or 120% of upstream control station's SS
 Limit level is 99% of baseline data or 130% of upstream control station's SS

Graphical plots of SS (flood tide) for W1&W2



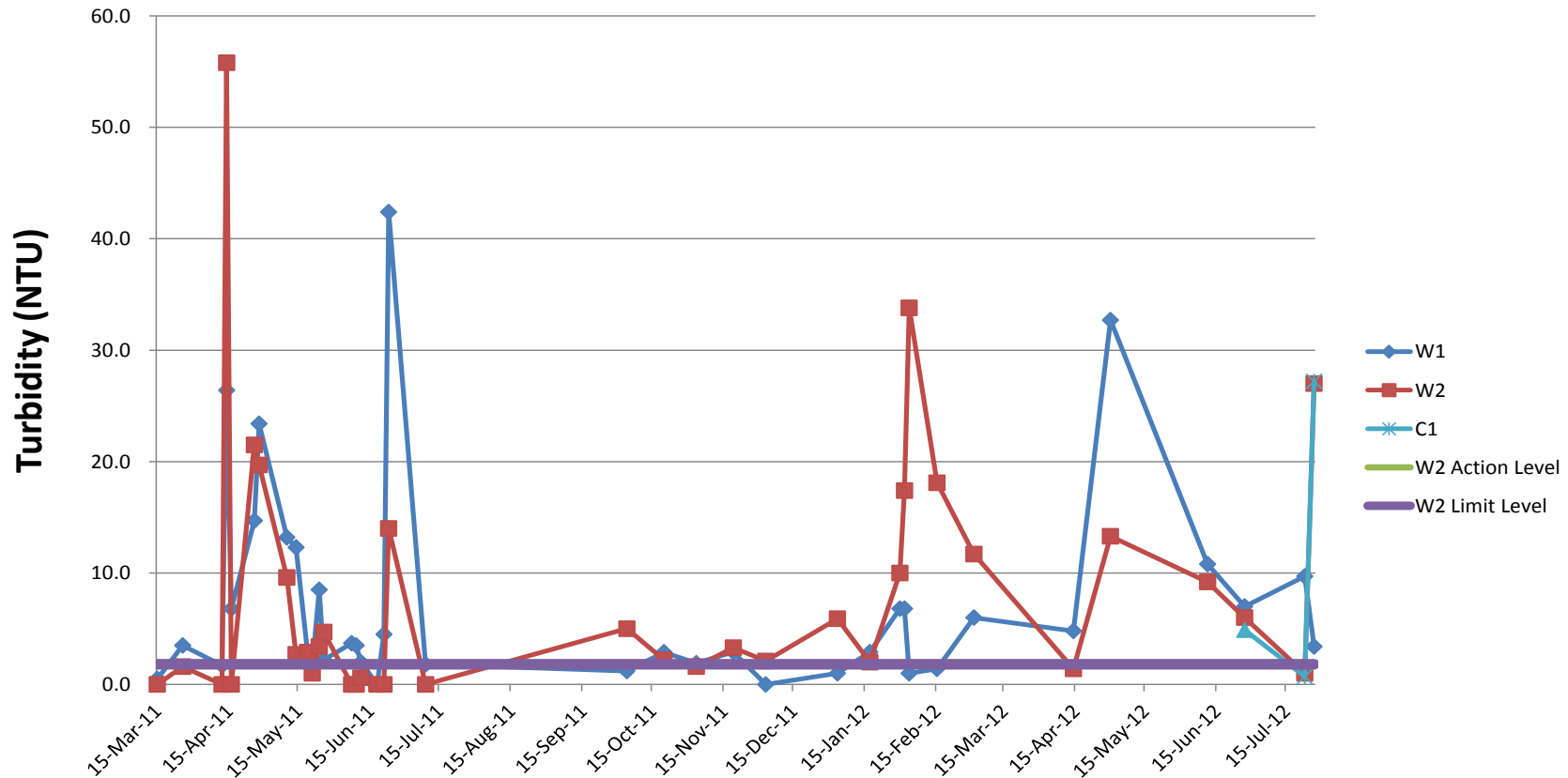
Remarks: Action limit is 95% of baseline data or 120% of upstream control station's SS
 Limit level is 99% of baseline data or 130% of upstream control station's SS

Graphical plots of Turbidity (ebb tide) for W1&W2



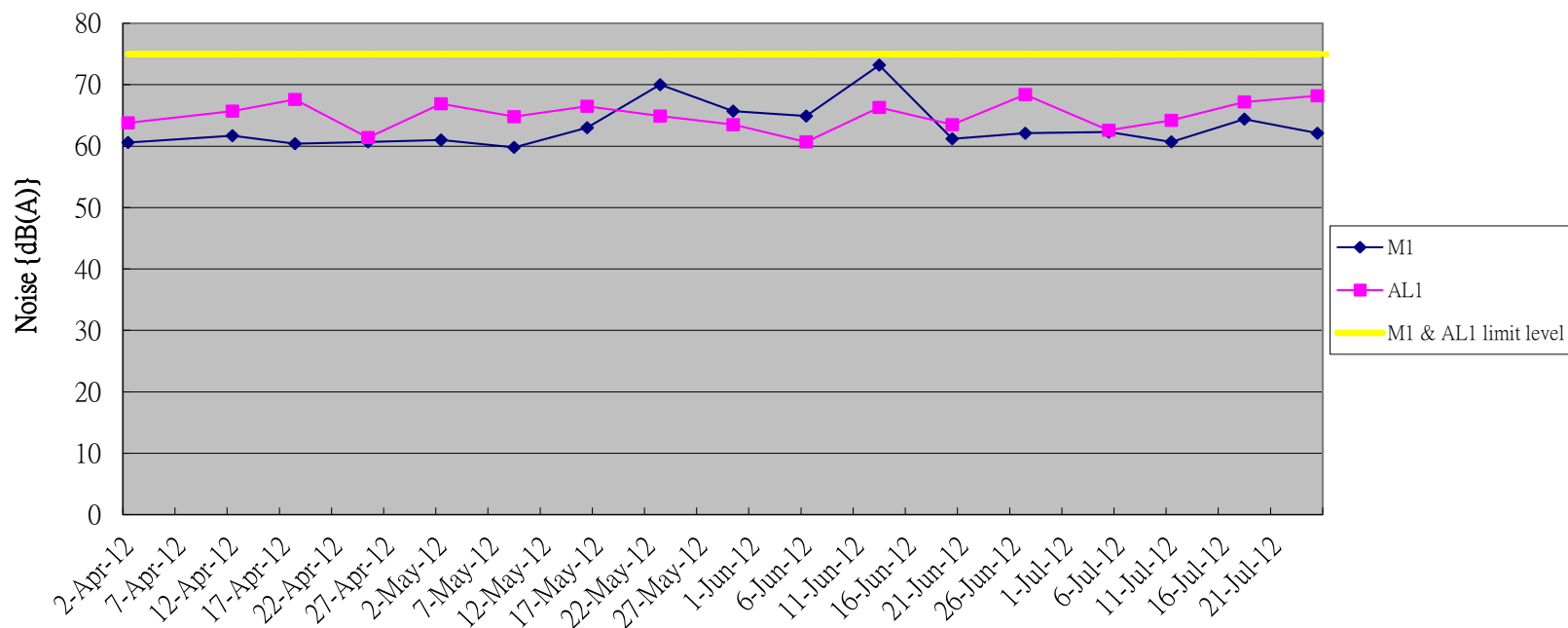
Remarks: Action limit is 95% of baseline data or 120% of upstream control station's Turbidity
Limit level is 99% of baseline data or 130% of upstream control station's Turb

Graphical plots of Turbidity (flood tide) for W1&W2



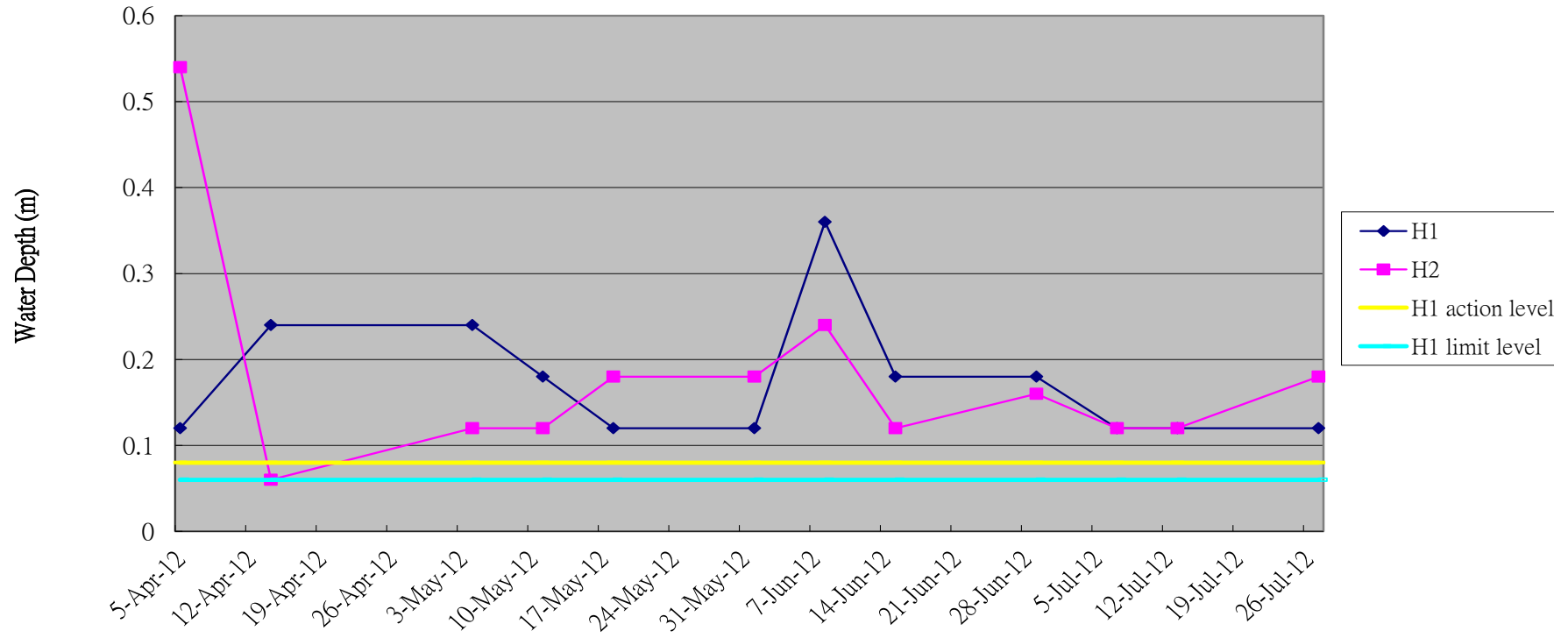
Remarks: Action limit is 95% of baseline data or 120% of upstream control station's Turbidity
 Limit level is 99% of baseline data or 130% of upstream control station's Turb

Graphical plots of Noise for M1 & AL1



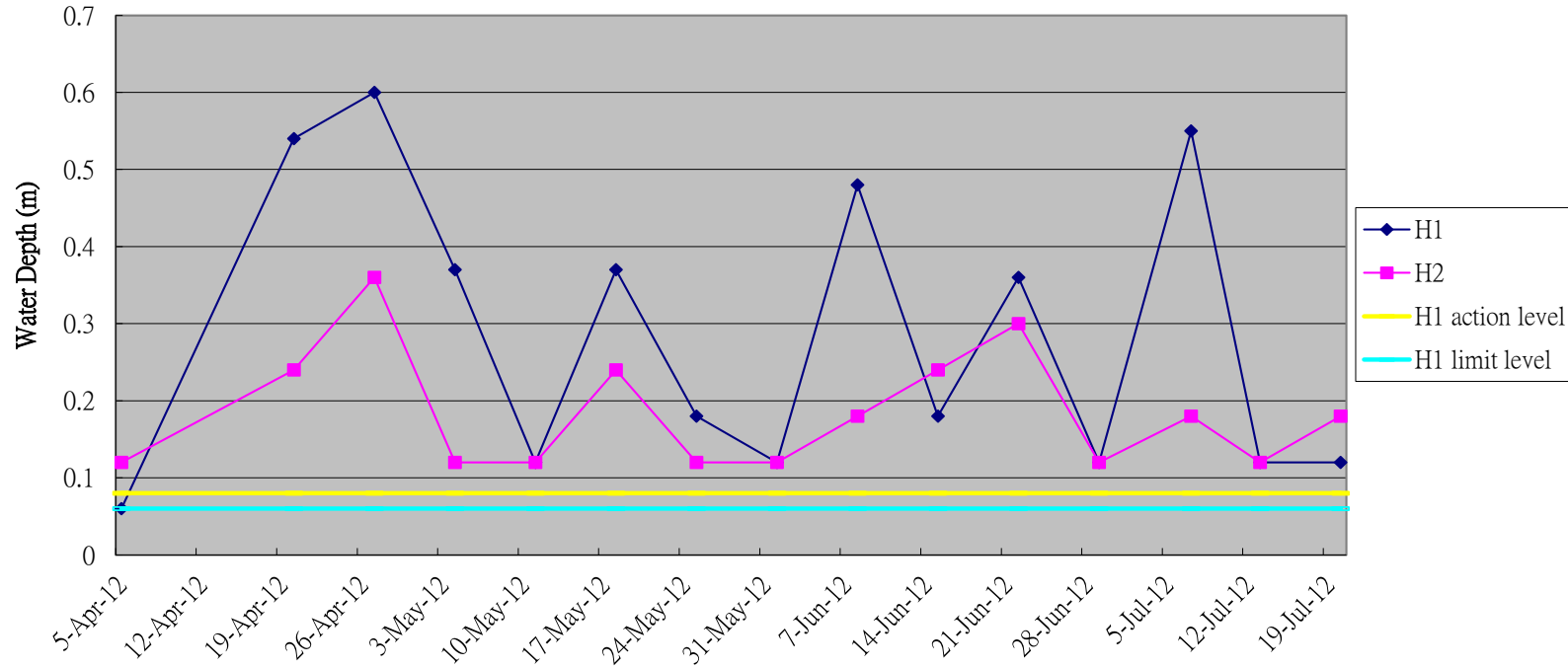
Remarks: Action limit is when one documented complaint is received

Graphical plots of Hydrological Monitoring(water depth at flood tide) for H1 & H2



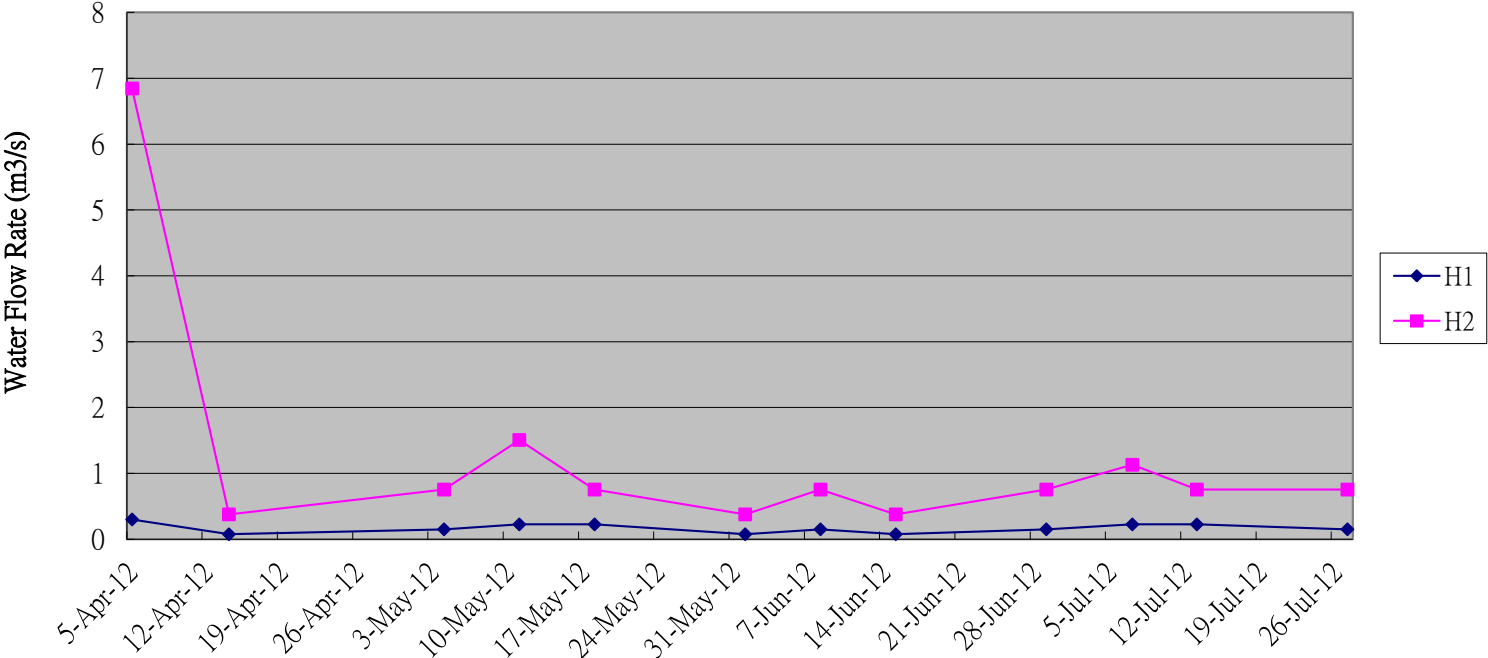
Remarks: Action level: 80% of baseline water depth.
 Limit level: 60% of baseline water depth.

Graphical plots of Hydrological Monitoring(water depth at ebb tide) for H1 & H2



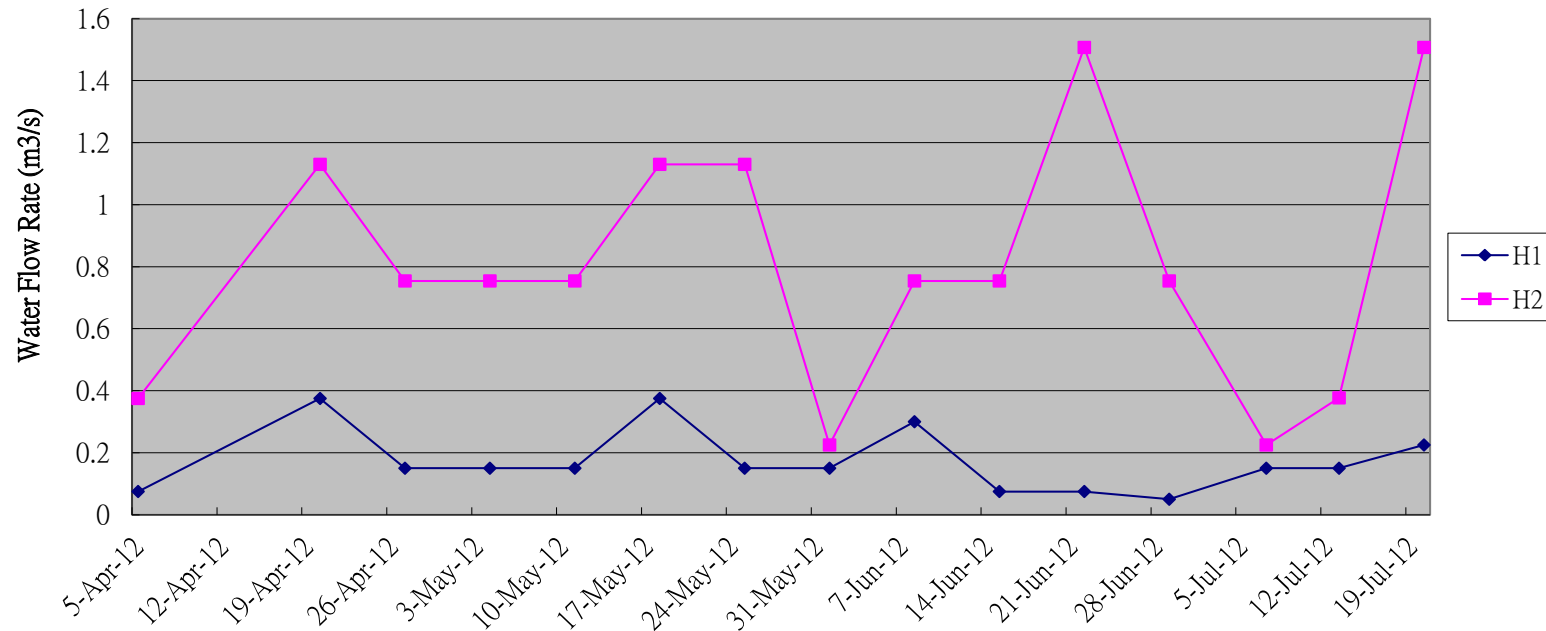
Remarks: Action level: 80% of baseline water depth.
Limit level: 60% of baseline water depth.

Graphical plots of Hydrological Monitoring(water flow rate at flood tide) for H1 & H2



Remarks: Action level: 120% of control station's water flow rate on the same day of measurement.
 Limit level: 140% of control station's water flow rate on the same day of measurement.

Graphical plots of Hydrological Monitoring(water flow rate at ebb tide) for H1 & H2



Remarks: Action level: 120% of control station's water flow rate on the same day of measurement.
Limit level: 140% of control station's water flow rate on the same day of measurement.

Appendix L.

A). List of recorded vegetation and relative abundance in the Ecological Compensatory Area (ECA) during construction phase in May 2012.

B). List of transplanted trees in the Ecological Compensatory Area (ECA) during construction phase in May 2012.

C). Condition of transplanted species *Pavetta hongkongensis* in ECA since 20 th Dec 2011

Appendix L (A). List of recorded vegetations and relative abundance in the ECA during establishment phase in June 2012.

Species	*Status in Hong Kong	Growth form	¹Status in ECA	²Relative abundance	Condition
<i>Bidens bipinnata</i>	E	Herbs	S	+	Fair
<i>Panicum maximum</i>	E	Herbs	S	+	Fair
<i>Celtis sinensis</i>	N	Trees	S	+	Fair
<i>Terminalia catappa</i>	E	Trees	R	+	Fair
<i>Cocculus orbiculatus</i>	N	Climbers	R	+	Fair
<i>Mangifera indica</i>	E	Trees	R	+	Fair
<i>Dimocarpus longan</i>	E	Trees	R	+	Fair
<i>Michelia x alba</i>	E	Trees	R	+	Fair
<i>Oxalis corniculata</i>	N	Herbs	S	+	Fair
<i>Stephania longa</i>	N	Climbers	S	+	Fair
<i>Leucaena leucocephala</i>	E	Shrubs	S	+	Fair
<i>Amaranthus viridis</i>	N	Herbs	S	+	Fair
<i>Solanum nigrum</i>	N	Herbs	S	+	Fair
<i>Paspalum dialatum</i>	E	Perennial Herb	S	+	Fair
<i>Mikania micrantha</i>	E	Climbing Herb	S	+	Fair
<i>Macaranga tanarius</i>	N	Tree	R	+	Fair
<i>Cassia surattensis</i>	E	Shrub or Small Tree	S	+	Fair
<i>Conyza sumatrensis</i>	E	Herb	S	+	Fair

<i>Sansevieria trifasciata</i> <i>Prain</i>	E	Perennial Herb	S	+	Fair
<i>Alocasia odora</i>	N	Perennial Herb	S	+	Fair
<i>Livistona chinensis</i>	E	Tree Palm	S	+	Fair
<i>c.f. Ulothrix</i> sp.	N	Algae	S	+	Fair
<i>Enteromorpha</i> sp.	N	Algae	S	+	Fair
Total number of species	23				

Key:

*Status in Hong Kong

E = Exotic

N = Native

¹Status in ECA:

R = retained

S = naturally colonized

²Relative abundance:

+ = Present

++ = Common

+++ = Abundant

Appendix L (B). List of trees transplanted from Work Areas of Contract 1 & 2 to ECA during establishment phase in June 2012.

Tree No.	Species Name	*Status in Hong Kong	Growth form	Date of transplantation	Condition	Remarks
T150	<i>Bombax ceiba</i>	E	Tree	22/6/2011	Fair	
T151	<i>Bombax ceiba</i>	E	Tree	22/6/2011	Fair	
T152	<i>Bombax ceiba</i>	E	Tree	22/6/2011	Poor	Trunk Broken
T153	<i>Bombax ceiba</i>	E	Tree	22/6/2011	Fair	
T154	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T155	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T156	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T157	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T158	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T159	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T160	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T161	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T162	<i>Bombax ceiba</i>	E	Tree	14/6/2011	Fair	
T250	<i>Celtis sinensis</i>	N	Tree	22/6/2011	Dead	Dead
T165	<i>Melaleuca quinquenervia</i>	E	Tree	22/6/2011	Fair	
T168	<i>Melaleuca quinquenervia</i>	E	Tree	Nov 2011	Fair	

Appendix L (C). Condition of transplanted species *Pavetta hongkongensis* in ECA since 20th Dec 2011.

Specimen No.	Species Name	Growth Form	Height (m)	Date of transplantation	Condition	Remarks
PH01	<i>Pavetta hongkongensis</i>	Tree / Shrub	2.2	20 th Dec 2011	Fair	
PH02	<i>Pavetta hongkongensis</i>	Tree / Shrub	2	20 th Dec 2011	Fair	
PH03	<i>Pavetta hongkongensis</i>	Tree / Shrub	1.5	20 th Dec 2011	Fair	

Date of weekly monitoring: 4 Jan, 13 Jan, 17 Jan, 28 Jan, 3 Feb, 6 Feb, 15 Feb, 22 Feb, 1 Mar, 6 Mar, 12 Mar, 18 Mar, 29 Mar, 27 Apr, 31 May, 26 Jun, 31 July 2012.

Appendix M: Ecological monitoring report

Agreement No. DP/01/2010
Drainage Improvement Works in Shatin and Tai Po:
Ecological Monitoring in area under Contract 1
(Report 9a for July 2012)

Prepared for:
Drainage Services Department

Prepared by:
ENVIRON Hong Kong Limited

Date:
Aug 2011

Reference Number:
R2667_V1.0

Agreement No. DP/01/2010
Drainage Improvement Works in Shatin and Tai Po:
Ecological Monitoring in area under Contract 1
(Report 9a for July 2012)

Prepared by:



Max Lee
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Approved by:



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Report\201207\9a*

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1. Introduction

1.1 Project description

The Drainage Improvement Works in Shuen Wan was undertaken to minimize the potential flooding impacts in Sha Tin and Tai Po area. Although the Ecological Impact Assessment in the EIA Report identified that ecological impacts resulting from the proposed drainage improvement works at Shuen Wan were anticipated to be very minor in scale, ecological mitigation and ecological monitoring were recommended in the EM&A Manual (http://env-shuenwan.com/pdf/review_note_em&a_rev.3.pdf) as stipulated under Environment Permit No. EP-303/2008.

Scope of ecological impact monitoring was described in the Particular Specifications and EM & A Manual of the projects. In brief, the monitoring tasks include regular check on the retained and transplanted trees and shrubs, monitoring on fauna groups and aquatic fauna within the works area and any ecologically sensitive area within 100 m of the works boundary.

China-Hong Kong Ecology Consultants Co. was commissioned by ENVIRON Hong Kong Limited to perform the ecological impact monitoring survey for areas under Contract 1 starting from March 2011.

The outline of this ecological monitoring report was as follow:

- Highlights of this report
- Summary of construction activities for the month
- Monitoring methodology
- Monitoring data
- Remedial measures adopted to the adverse condition
- Record of complains and remedial measures
- Review of monitoring results
- Forecast of works programme and monitoring requirements
- Comments and brief summary

This is the report No. 9 ecological monitoring conducted on 31th July 2012 within the works boundary under Contract 1 and area within 100 m from the works boundary.

2. Highlights of this report

- Field survey was conducted on 31th March 2012
- Construction activities of Contract 1 was continued since March 2011
- Lower number of species was observed within the works area under Contract 1, in particular stream ecological monitoring point 2 (SEMP 2) due to recent river diversion for Ecological Compensatory Area (ECA) construction.
- Habitats in the 100 m buffer area retain its natural condition.

3. Summary of construction activities for the month

Major construction activities carried out in Contract 1 by the contractor during the present monitoring period (March 2012) includes:

- **Pumping station (Area A):**
 - Construction of superstructure of pumping station
 - Construction of 2100 drainage pipe along Ting Kok Road
 - Construction of Flow Measurement Chamber in Pumping Station
- **Tung Tsz Nursery Community Garden (Area B)**
 - Construction of Box Culvert in Tung Tsz Nursery
 - Construction of Jacking Pit in Tung Tsz Nursery
- **ECA (Area C)**
 - Hydroseeding, In maintenance stage

4. Monitoring Methodology

Ecological monitoring methods were generally followed those described in the baseline ecological surveys (DC/2009/22). However, sampling area maybe reduced because of habitat change, for instance, deforestation and channel modification due to drainage works, where sampling was not applicable. Survey data and evaluation are detailed in the following sections.

4.1 Vegetation survey

Vegetation survey was performed along the designated transects (**Figure 1**) for ecological monitoring as described in the project specifications to monitor the vegetation health which could be adversely influenced by any bad site practice. Qualitative data of plants within the works boundary and wetland vegetation in the 100 m buffer area of Contract 1 adjacent to construction site and wetland was recorded. Riparian vegetation including aquatic and emergent at 4 stream ecological monitoring points (hereinafter referred to as "SEMP") under Contract 1 (i.e. SEPM 1 & 2; **Figure 2 & 3**) along the affected stream channel and riparian habitat was recorded in terms of species, relative abundance and average heights. Any signs of damages and adverse health problems directly caused the works were recorded and reported. Nomenclature and protection status of the species followed those documented in the AFCD website (www.hkbiobiodiversity.net) and Hong Kong Herbarium (2004).

4.2 Avifauna

Bird survey was conducted by following the proposed transects which cover the major ecologically sensitive areas of the Project (**Figure 1**). All bird species were recorded with

special attention paid on the species of conservation importance and wetland-dependent species. List of bird species recorded and the relative abundance was provided.

4.3 Herpetofauna

Herpetofauna survey was conducted via direct observation and active searching along the survey transects with a focus in the work areas (**Figure 1**). All reptiles and amphibians encountered or heard were recorded. Nomenclature and conservation status of herpetofauna species follows AFCD website (www.hkbiodiversity.net).

4.4 Butterflies and Odonata

Odonates and butterfly survey of different habitats within the Study Area was conducted along the proposed transect (**Figure 1**). All butterflies and odonata were identified and relative abundance was recorded. Nomenclature and status of conservation of butterflies follows Lo & Hui (2005) while that of odonata follows AFCD websites (www.hkbiodiversity.net).

4.5 Mammals

As the monitoring site was situated near traffics, plant nursery and residential buildings, mammals were unlikely inhabited at the site except rodents, domestic dogs and cats. Detailed mammal monitoring was not conducted. However, any sighting, tracks and signs of mammals encountered during survey of other faunal groups was recorded. Bat was surveyed by search for potential colony habitat, such as palm trees, which are often used by fruit bats as nesting sites.

4.6 Aquatic fauna

Monitoring of aquatic fauna was carried out mainly by bank-side observation, sometimes with the aid of binoculars, at two stream ecological monitoring points under Contract 1 (i.e. SEMP 1 & 2). These points are selected for covering representative sections of Wai Ha River and are shown in Figure 1. Netting and fish traps were also deployed at these points to collect supplementary data. Aquatic fauna seen/collected was identified in situ to the lowest possible taxon and relative abundance was presented.

5. Monitoring data

5.1 Vegetation survey

The habitats identified in area under Contract 1 are marine, recreational fish pond, river course, wooded area, mangrove, marsh and developed area (including village). Vegetation

were found in wooded area, mangrove, marsh, develop area and river bank. During the current monitoring period, some riparian climbers (*Cocculus orbiculatus*) at SEMP 2 was removed due to direct conflict with the construction of ECA. The riparian vegetations were dominated by *Leucaena leucocephala* and *Plantago* major with average coverage ranged from 15% to 40% (**Table 1**). A list of plant species recorded from different habitats within the assessment area under Contract 1 is presented on Table 2. A total of 130 species were recorded within the assessment boundary of Contract 1 in which 121 species were recorded within the buffer area, while 52 species recorded within the work areas under Contract 1. No protected species were recorded.

5.2 Birds watch

A total of 15 bird species were recorded in the current survey under Contract 1 (**Table 3**). In the work area under Contract 1, 7 bird species were recorded in which none are considered to be of conservation concern. A total of 15 bird species were recorded in the 100m buffer area in which one wetland dependent species *Ardeola bacchus* is recognized as being regional conservation concern, though it is common in suitable habitats in Hong Kong (Viney et al., 2005).

5.3 Herpetofauna

No reptile was recorded within the assessment area. Mating call of Gunter's Frog, Asiatic Painted and Paddy Frog were heard from the water of pools, ditches and river bank within the 100m buffer zone. Eggs of Brown Tree Frog were seen in the buffer zone of the site. The species recorded belongs to common species in Hong Kong. (**Table 4**)

5.4 Butterflies

A total of 9 butterfly species were recorded during surveys (**Table 5**). However, none of the species are of the conservation concern..

5.5 Odonata

Only 1 odonata species were recorded during the surveys (**Table 6**). The species Wandering glider (*Pantala flavescens*) was found within the work boundaries under Contract 2 & along the river bank in the 100m buffer area.

5.6 Mammal

No mammals or trace of mammals was observed within the assessment area.

5.7 Aquatic fauna

Under Contract 1 (i.e. SEMP 1 & 2), a total of 9 fish species, 2 crustaceans, 1 bivalve and 1 snail were recorded and most of them were residing in brackish environments (**Table 7**). Some river works were carried out in SEMP 1 as showed in Figure 2. Overall, no protected or rare species were recorded.

6. Remedial measures adopted to the adverse condition

There was no non-compliance event recorded within this reporting month.

7. Record of complains and remedial measures

There was no complaint in relation to environmental issue recorded in this reporting month.

8. Review of the monitoring results

During the present survey period, construction activities were carried out at works area under Contract 1, while 100 m buffer area remains natural. Much of the construction activities are carried out at Tung Tsz Nursery and pumping station under Contract 1. In general, lower numbers of species were recorded within the works area under Contract 1 than that of 100 m buffer area because of the associated constructions and urbanized in nature. It is noted that the diversity of aquatic fauna in SEMP 2 under Contract 1 is relatively lower because of the recent river works at SEMP 1 where has been regarded as the corridor for aquatic fauna to move between Wai Ha River and the marine area outside the assessment area. However, most of the construction activities are restricted in the developed area with low ecological significance. As mitigation measures recommended in the EM&A Manual were properly implemented during the current survey, and hence the residual environmental impacts would be minimized.

9. Forecast of works programme and monitoring requirements

The tentative construction activities undertaken by the contractor in the coming months are as follows:

Area A (Pumping Station)

- External finishing works for main structure of pumping station
- Plumbing & E&M Works
- Final testing works of E&M
- Outfall structure of Tide level monitoring chamber
- External Misc. Works such as Boundary wall & fencing, construction of sewer across Ting Kok Road and connection to existing manholes.

Area B (Tung Tsz Nursery)

- Excavation for the construction of box culvert in Tung Tsz Nursery

- Construction of box culvert Chainage 0-25
- Erection of hoarding for stage 2.
- Construction of 1200mm dia. Drainage Pipe

Area C (ECA)

- In Maintenance Period

The monitoring programme described in EM&A will strictly follow to verify compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

10. Comments and summary

The bi-monthly ecological impact monitoring under Contracts 1 (excluding the ECA) was conducted in May 2012 and relevant flora and fauna data were collected according to project specification and EM & A Manual. As indicated by the low diversity and abundance of species recorded within the work areas, habitats within the work boundary under Contracts 1 offer few ecological opportunities for inhabitation of fauna and flora. Given that the construction activities are restricted in the developed area with proper mitigation measures being implemented, disturbances associated with the current construction activities are largely affecting area with low ecological significance. On the other hand, the natural habitats in the 100 m buffer area are retained at acceptable condition, and hence the 100 m buffer area has not been significantly affected by the construction works.

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Figure

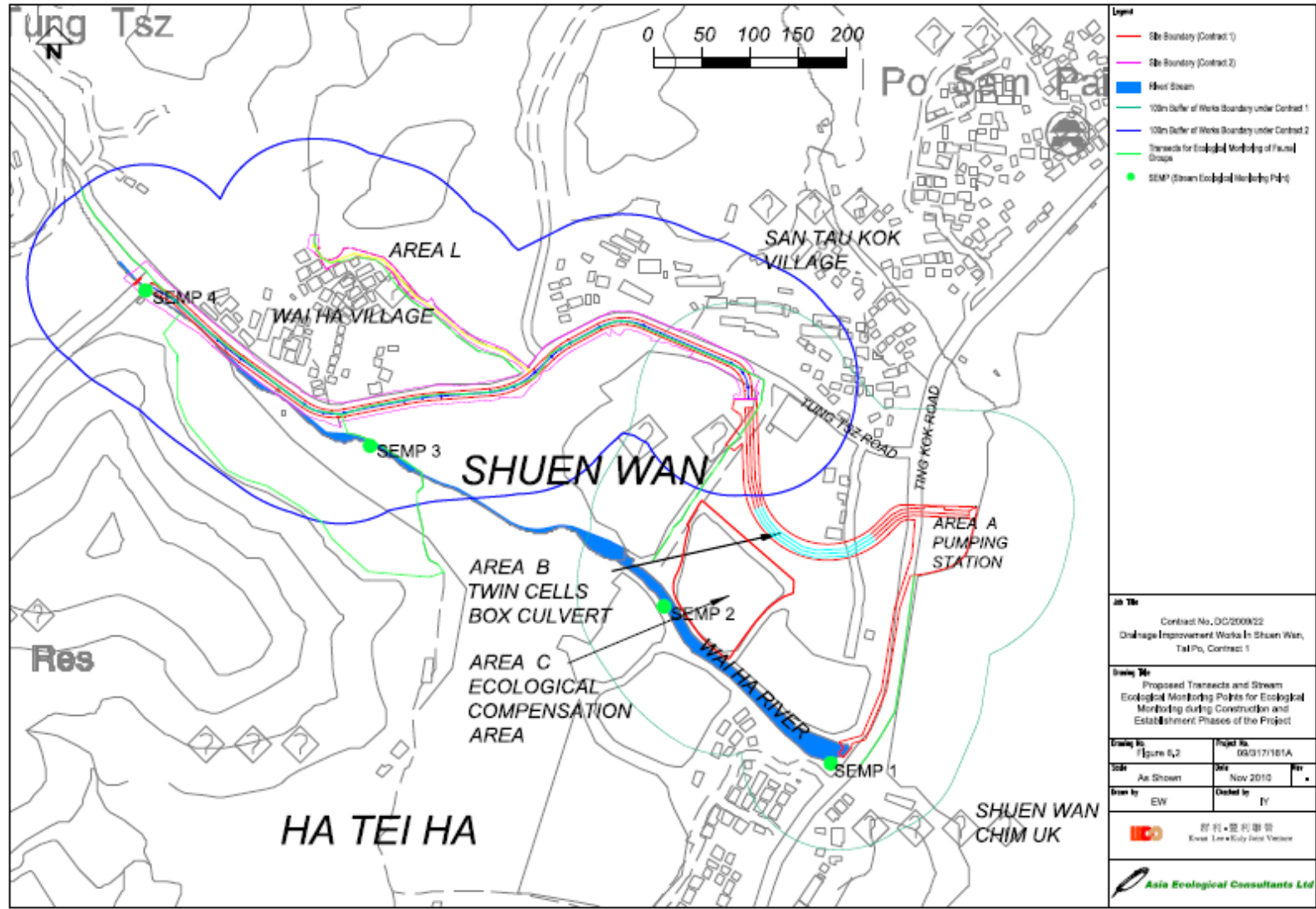


Figure: 1

Title: Map showing the ecological monitoring transect and the boundary of assessment area.

Project: Agreement No. DP/01/2010 Drainage Improvement Works in Shatin and Tai Po: Ecological Monitoring in area under Contract 1 (July 2012, Report 9a)

ENVIRON

Drawn by: IT

Checked by: ML

Rev.: 1.0

Date: July 2012



Figure: 2

Title: SEMP 1, the first sampling point of Wai Ha River under Contract 1.

Project: Agreement No. DP/01/2010 Drainage Improvement Works in Shatin and Tai Po: Ecological Monitoring in area under Contract 1 (July 2012, Report 9a)

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Rev.: 1.0

Date: July 2012



Figure: 3

Title: SEMP 2, the second sampling point along Wai Ha River under Contract 1.

Project: Agreement No. DP/01/2010 Drainage Improvement Works in Shatin and Tai Po: Ecological Monitoring in area under Contract 1 (July 2012, Report 9a)

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Table

Table 1. List of riparian vegetation and coverage (%) recorded from two stream sampling points under Contract 1 (i.e. SEMP 1, 2).

Species	Family	Growth form	Sampling point	SEMP 1		SEMP 2	
			Status in Hong Kong	Height (cm)	%	Height (cm)	%
<i>Albizia lebeck</i>	MIMOSACEAE	Tree	E			400	10
<i>Amaranthus viridis</i>	AMARANTHACEAE	Herb	N	30	1		
<i>Arundinella nepalensis</i>	POACEAE	Perennial Herb	N			150	2
<i>Bidens alba</i>	ASTERACEAE	Herb	E	30	10		
<i>Celtis sinensis</i>	ULMACEAE	Tree	N			500	10
<i>Digitaria ciliaris</i>	POACEAE	Herb	N	20	1		
<i>Eclipta prostrata</i>	ASTERACEAE	Perennial herb	N	30	1		
<i>Ficus virens</i>	MORACEAE	Tree	N	100	1		
<i>Kandelia obovata</i>	RHIZOPHORACEAE	Shrub or Small Tree	N			150	4
<i>Leucaena leucocephala</i>	MIMOSACEAE	Small Tree	E			600	40
<i>Macaranga tanarius</i>	EUPHORBIACEAE	Tree	N			100	1
<i>Mikania micrantha</i>	ASTERACEAE	Climbing Herb	E	10	1		
<i>Pennisetum alopecuroides</i>	POACEAE	Perennial Herb	N	250	10		
<i>Plantago major</i>	PLANTAGINACEAE	Perennial herb	N	30	15		
Bare	n/a	n/a	n/a	n/a	60	n/a	33

*Key:

E = Exotic

N = Native

n/a = not available

Table 2. List of vegetation recorded from works area under Contracts 1 and 100 m buffer area in the impact monitoring survey conducted in July 2012. Vegetation species presents in the identified location was indicated by “V”.

Habitat	Species name	Family	Growth form	*Status in Hong Kong	Work Area under Contract 1	100 m buffer area under Contract 1
Stream	<i>Chrysalidocarpus lutescens</i>	ARECACEAE	Shrub Palm	E		V
	<i>Melia azedarach</i>	MELIACEAE	Tree	E		V
	<i>Murraya paniculata</i>	RUTACEAE	Small Tree	E		V
	<i>Lantana camara</i>	VERBENACEAE	Shrub	E		V
	<i>Ficus hispida</i>	MORACEAE	Tree	N		V
	<i>Ficus virens</i>	MORACEAE	Tree	N		V
	<i>Chrysopogon aciculatus</i>	POACEAE	Perennial Herb	N		V
	<i>Microstegium ciliatum</i>	POACEAE	Perennial Procumbent Herb	N		V
	<i>Mucuna birdwoodiana</i>	FABACEAE (PAPILIONACEAE)	Climber: Vine	N		V
	<i>Pistia stratiotes</i>	ARACEAE	Floating Aquatic Herb	N		V
	<i>Cyperus flabelliformis</i>	CYPERACEAE	Herb	E		V
	<i>Acanthopanax gracilistylus</i>	ARALIACEAE	Shrub	E		V
	<i>Ficus triangularis</i>	MORACEAE	Tree	E		V
	<i>Spirodela polyrrhiza</i>	LEMNACEAE	Floating Small Herb	N		V
	<i>Glochidion zeylanicum</i>	EUPHORBIACEAE	Shrub or Small Tree	N		V
	<i>Sterculia lanceolata</i>	STERCULIACEAE	Semi-deciduous Tree	N		V

Habitat	Species name	Family	Growth form	*Status in Hong Kong	Work Area under Contract 1	100 m buffer area under Contract 1
	<i>Albizia lebbbeck</i>	MIMOSACEAE	Tree	E		V
	<i>Arundinella nepalensis</i>	POACEAE	Perennial Herb	N		V
	<i>Bidens alba</i>	ASTERACEAE	Herb	E		V
	<i>Clerodendrum inerme</i>	VERBENACEAE	Shrub	N		V
	<i>Coculus orbiculatus</i>	MENISPERMACEAE	Climber: Vine	N		V
	<i>Hibiscus tiliaceus</i>	MALVACEAE	Tree or Shrub	N		V
	<i>Leucaena leucocephala</i>	MIMOSACEAE	Small Tree	E		V
	<i>Manilkara zapota</i>	SAPOTACEAE	Tree	E		V
	<i>Sapium discolor</i>	EUPHORBIACEAE	Tree	N		V
Developed area	<i>Pericampylus glaucus</i>	MENISPERMACEAE	Woody Vine	N		V
	<i>Ficus variegata</i> var. <i>chlorocarpa</i>	MORACEAE	Tree or Shrub	N	V	V
	<i>Citrus reticulata</i> Blanco	RUTACEAE	Small Tree	E		V
	<i>Salvia japonica</i>	LAMIACEAE (LABIATAE)	Herb	N		V
	<i>Morus alba</i>	MORACEAE	Tree or Shrub	N		V
	<i>Emilia sonchifolia</i>	ASTERACEAE	Herb	N		V
	<i>Clausena lansium</i>	RUTACEAE	Small Tree	E		V
	<i>Pyrostegia venusta</i>	BIGNONIACEAE	Climber: Vine	E		V
	<i>Psidium guajava</i>	MYRTACEAE	Tree	E		V
	<i>Catharanthus roseus</i>	APOCYNACEAE	Subshrub	N		V
	<i>Archontophoenix alexandrae</i>	ARECACEAE	Tree Palm	E		V
	<i>Desmodium heterocarpon</i>	FABACEAE (PAPILIONACEAE)	Shrub	N		V
	<i>Rhinacanthus nasutus</i>	ACANTHACEAE	Herb	E		V
	<i>Acacia confusa</i>	MIMOSACEAE	Tree	E	V	V
	<i>Artocarpus macrocarpon</i>	MORACEAE	Tree	E	V	V

Habitat	Species name	Family	Growth form	*Status in Hong Kong	Work Area under Contract 1	100 m buffer area under Contract 1
	<i>Averrhoa carambola</i>	OXALIDACEAE	Small Tree	E	V	V
	<i>Bauhinia blakeana</i>	CAESALPINIACEAE	Tree or Shrub	N	V	V
	<i>Bauhinia variegata</i>	CAESALPINIACEAE	Tree	E	V	V
	<i>Bridelia tomentosa</i>	EUPHORBIACEAE	Shrub or Small Tree	N	V	V
	<i>Calliandra haematocephala</i>	MIMOSACEAE	Shrub	E	V	V
	<i>Caryota ochlandra</i>	ARECACEAE	Tree palm	E	V	V
	<i>Cassia spectabilis</i>	CAESALPINIACEAE	Small Tree	E	V	V
	<i>Casuarina equisetifolia</i>	CASUARINACEAE	Tree	E	V	V
	<i>Citrus grandis</i>	CASUARINACEAE	Tree	E	V	V
	<i>Cordyline fruticosa</i>	AGAVACEAE	Shrub	E	V	V
	<i>Cynodon dactylon</i>	POACEAE	Perennial Herb	N	V	V
	<i>Dracaena draco</i>	AGAVACEAE	Tree	E	V	V
	<i>Elaeocapus haminanensis</i>	ELAEOCARPACEAE	Small Tree	E	V	V
	<i>Eleusine indica</i>	POACEAE	Herb	N	V	V
	<i>Eriobotrya japonica</i>	ROSACEAE	Small Tree	E	V	V
	<i>Ficus benjamina</i>	MORACEAE	Tree	E	V	V
	<i>Ficus elastica</i>	MORACEAE	Tree	E	V	V
	<i>Ficus simplicissima</i>	MORACEAE	Shrub	N	V	V
	<i>Hibiscus rosa-sinensis</i>	MALVACEAE	Shrub	E	V	V
	<i>Lantana camara</i>	VERBENACEAE	Shrub	E	V	V
	<i>Litchi chinensis</i>	SAPINDACEAE	Tree	E	V	V
	<i>Lumnitzera racemosa</i>	COMBRETACEAE	Shrub or Small Tree	N	V	V
	<i>Lygodium japonicum</i>	LYGODIACEAE	Climbing Herb	N	V	V
	<i>Melaleuca quinquenervia</i>	MYRTACEAE	Tree	E	V	V
	<i>Oxalis corniculata</i>	OXALIDACEAE	Perennial Herb	N	V	V

Habitat	Species name	Family	Growth form	*Status in Hong Kong	Work Area under Contract 1	100 m buffer area under Contract 1
	<i>Phoenix roebelenii</i>	ARECACEAE	Small Tree Palm	E	V	V
	<i>Polygonum hydropiper</i>	POLYGONACEAE	Herb	N	V	V
	<i>Psychotria serpens</i>	RUBIACEAE	Climber: Vine	N	V	
	<i>Pterocypsela indica</i>	ASTERACEAE	Herb	N	V	V
	<i>Rhapis excelsa</i>	ARECACEAE	Shrub Palm	N	V	V
	<i>Sansevieria trifasciata</i>	AGAVACEAE	Perennial Herb	E	V	V
	<i>Schefflera actinophylla</i>	ARALIACEAE	Climbing Shrub	E	V	V
	<i>Schefflera heptaphylla</i>	ARALIACEAE	Tree	N	V	V
	<i>Sesbania cannabina</i>	FABACEAE	Herb	E	V	V
	<i>Terminalia catappa</i>	COMBRETACEAE	Large Tree	E	V	V
	<i>Thuja orientalis</i>	CUPRESSACEAE	Tree	E	V	V
	<i>Tradescantia spathacea</i>	COMMELINACEAE	Herb	E	V	V
	<i>Youngia japonica</i>	ASTERACEAE	Herb	N	V	V
	<i>Acanthus ilicifolius</i>	ACANTHACEAE	Shrub	N		V
	<i>Acrostichum aureum</i>	ACROSTICHACEAE	Herb	N		V
	<i>Aegiceras corniculatum</i>	MYRSINACEAE	Shrub	N		V
	<i>Alocasia odora</i>	ARACEAE	Perennial Herb	N		V
	<i>Avicennia marina</i>	VERBENACEAE	Shrub	N		V
	<i>Digitaria ciliaris</i>	POACEAE	Herb	N		V
	<i>Panicum repens L.</i>	POACEAE	Perennial Herb	N		V
	<i>Pennisetum alopecuroides</i>	POACEAE	Perennial Herb	N		V
	<i>Phragmites australis</i>	POACEAE	Perennial Herb	N		V
	<i>Plantago major</i>	PLANTAGINACEAE	Perennial herb	N		V
	<i>Solanum nigrum</i>	SOLANACEAE	Herb	N		V
	<i>Bombax ceiba</i>	BOMBACACEAE	Tree	E	V	
	<i>Bidens alba</i>	ASTERACEAE	Herb	E	V	
	<i>Panicum maximum</i>	GRAMINEAE	Herb	E	V	

Habitat	Species name	Family	Growth form	*Status in Hong Kong	Work Area under Contract 1	100 m buffer area under Contract 1
	<i>Microstegium ciliatum</i>	POACEAE	Perennial Procumbent Herb	N	V	
	<i>Leucaena leucocephala</i>	MIMOSACEAE	Small Tree	E	V	
Plantation	<i>Bischofia javanica</i>	EUPHORBIACEAE	Tree	N		V
	<i>Scolopia chinensis</i>	FLACOURTIACEAE	Tree or Large Shrub	N		V
	<i>Piper hancei</i>	PIPERACEAE	Climber: Vine	N		V
	<i>Dimocarpus longan</i>	SAPINDACEAE	Tree	E		V
	<i>Paederia scandens</i>	RUBIACEAE	Climber: Vine	N		V
	<i>Cleistocalyx operculatus</i>	MYRTACEAE	Tree	N		V
	<i>Antidesma bunius</i>	EUPHORBIACEAE	Tree	N		V
	<i>Litsea monopetala</i>	LAURACEAE	Small Tree	N		V
	<i>Microcos paniculata</i>	TILIACEAE	Shrub or Small Tree	N		V
	<i>Maesa perlaris</i>	MYRSINACEAE	Shrub	N		V
	<i>Boehmeria nivea (L.) Gaudich.</i>	URTICACEAE	Subshrub or shrub	E		V
	<i>Mallotus apelta</i>	EUPHORBIACEAE	Shrub or Small Tree	N		V
	<i>Sapindus saponaria</i>	SAPINDACEAE	Tree	N		V
	<i>Aporosa dioica</i>	EUPHORBIACEAE	Tree	N		V
	<i>Wedelia chinensis</i>	ASTERACEAE	Perennial Herb	N		V
	<i>Carica papaya</i>	CARICACEAE	Tree	E		V
	<i>Rubus reflexus</i>	ROSACEAE	Climbing Shrub	N		V
	<i>Brassica rapa</i>	BRASSICACEAE (CRUCIFERAE)	Biennial Herb	E		V

Habitat	Species name	Family	Growth form	*Status in Hong Kong	Work Area under Contract 1	100 m buffer area under Contract 1
	<i>Mucuna championii</i> Benth.	FABACEAE	Climbing Vine	N		V
	<i>Pinus massoniana</i>	PINACEAE	Tree	N		V
Ting Kok Nursery Community Garden	<i>Bauhinia purpurea</i>	CAESALPINIACEAE	Tree	E	V	
	<i>Callistemon viminalis</i>	MYRTACEAE	Tree	E	V	
	<i>Dillenia indica</i>	DILLENIACEAE	Tree	E	V	
	<i>Lonicera japonica</i>	CAPRIFOLIACEAE	Climber: Vine	N	V	
	<i>Tabebuia chrysantha</i>	BIGNONIACEAE	Small Tree	E	V	
	<i>Wisteria sinensis</i>	FABACEAE	Climber: Vine	E	V	
Wooded area	<i>Celtis sinensis</i>	ULMACEAE	Tree	N		V
	<i>Ligustrum sinensis</i>	OLEACEAE	Tree or Shrub	N		V
	<i>Macaranga tanarius</i>	EUPHORBIACEAE	Tree	N		V
	<i>Pandanus tectorius</i>	PANDANACEAE	Shrub or Small Tree	N		V
	<i>Excoecaria agallocha</i>	EUPHORBIACEAE	Tree	N		V
	<i>Kandelia obovata</i>	RHIZOPHORACEAE	Shrub or Small Tree	N		V
	<i>Thespesia populnea</i>	MALVACEAE	Tree or Shrub	N		V
	<i>Zoysia sinica</i>	POACEAE	Perennial Herb	N		V
Marsh	<i>Acanthus ilicifolius</i>	ACANTHACEAE	Shrub	N		V
	<i>Acrostichum aureum</i>	ACROSTICHACEAE	Herb	N		V
	<i>Aegiceras corniculatum</i>	MYRSINACEAE	Shrub	N		V
	<i>Alocasia odora</i>	ARACEAE	Perennial Herb	N		V
	<i>Avicennia marina</i>	VERBENACEAE	Shrub	N		V
	<i>Digitaria ciliaris</i>	POACEAE	Herb	N		V
	<i>Ficus hispida</i>	MORACEAE	Tree	N		V

Habitat	Species name	Family	Growth form	*Status in Hong Kong	Work Area under Contract 1	100 m buffer area under Contract 1
	<i>Hibiscus tiliaceus</i>	MALVACEAE	Tree or Shrub	N		V
	<i>Ipomea cairica</i>	CONVOLVULACEAE	Climber: Twining Herb	E		V
	<i>Kandelia obovata</i>	RHIZOPHORACEAE	Shrub or Small Tree	N		V
	<i>Macaranga tanarius</i>	EUPHORBIACEAE	Tree	N		V
	<i>Mikania micrantha</i>	ASTERACEAE	Climbing Herb	E		V
	<i>Panicum repens L.</i>	POACEAE	Perennial Herb	N		V
	<i>Pennisetum alopecuroides</i>	POACEAE	Perennial Herb	N		V
	<i>Phragmites australis</i>	POACEAE	Perennial Herb	N		V
	<i>Plantago major</i>	PLANTAGINACEAE	Perennial herb	N		V
	<i>Polygonum lapathifolium</i>	POLYGONACEAE	Herb	N		V
	<i>Pueraria lobata</i>	FABACEAE	Climber: Vine	N		V
	<i>Schefflera heptaphylla</i>	ARALIACEAE	Tree	N		V
	<i>Solanum nigrum</i>	SOLANACEAE	Herb	N		V
	<i>Solanum torvum</i>	SOLANACEAE	Shrub	E		V

***Key:**

E = Exotic

N = Native

Table 3. List of avifauna species and maximum counts recorded from the impact monitoring survey in July 2012 at work area under Contracts 1 and 100 m buffer area.

Species	Common name	Habitat	Conservation status in Hong Kong	Work area: Contract 2	100m buffer area
<i>Acridotheres cristatellus</i>	Crested Myna			2	3
<i>Ardea cinerea</i>	Grey Heron	W			1
<i>Ardeola bacchus</i>	Chinese Pond Heron	W	RC		1
<i>Casmerodius alba</i>	Great Egret	W			1
<i>Copsychus saularis</i>	Oriental Magpie Robin			1	2
<i>Egretta garzetta</i>	Little Egret	W			2
<i>Garrulax perspicillatus</i>	Masked Laughing thrush				2
<i>Motacilla alba</i>	White Wagtail				1
<i>Orthotomus sutorius</i>	Common Tailorbird				1
<i>Passer montanus</i>	Eurasian Tree Sparrow			2	5
<i>Prinia flaviventris</i>	Yellow-bellied Prinia				1
<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul				2
<i>Pycnonotus sinensis</i>	Chinese Bulbul				1
<i>Streptopelia chinensis</i>	Spotted Dove			2	2
<i>Sturnus nigricollis</i>	Black-collared Starling				2
Total number of species:				4	15

* **Key:**

W = Wetland dependent species ; **RC** = Regional Concern

Table 4. List of herpetofauna and maximum counts recorded from the impact monitoring survey in July 2012 at work area under Contracts 1 and 100 m buffer area..

Species	Common name	Conservation status in Hong Kong	Work area: Contract 1	100m Buffer area of Contract 1
<i>Rana guentheri</i>	Gunther's Frog	Common		1@
<i>Kaloula pulchra pulchra</i>	Asiatic Painted Frog	Common		2@
<i>Fejervarya limnocharis</i>	Paddy Frog	Common		1@
<i>Polypedates megacephalus</i>	Brown Tree Frog	Common		2*
<i>Bufo melanostictus</i>	Common Toad	Common	1	1

Key:

@-Calling heard,

*-Egg founded

Table 5. Relative abundance of butterfly species recorded under Contracts 1 in impact monitoring survey during July 2012.

Species	Common name	Conservation status in Hong Kong	Work area: Contract 1	100m Buffer area of Contract 1
<i>Abisara echerius</i>	Plum judy	Very Common		+
<i>Eurema hecabe</i>	Common Grass Yellow	Very Common	+	++
<i>Mycalesis mineus</i>	Dark-brand Bush Brown	Very Common	+	++
<i>Papilio bianor</i>	Chinese Peacock	Common		+
<i>Papilio memnon agenor</i>	Great Mormon	Very Common		+
<i>Papilio polytes</i>	Common mormon	Very Common	+	+
<i>Papilio protenor</i>	Spangle	Very Common		+
<i>Parantica aglea</i>	Glassy Tiger	Common		+
<i>Pieris canidia canidia</i>	Indian Cabbage White	Very Common		+
<i>Ypthima baldus</i>	Common Five-ring	Very Common		+
<i>Zizeeria maha</i>	Pale Grass Blue	Very Common		+

Key:

+ : Species exists in the survey area

++ : Species common in the survey area

+++ : Species abundant in the survey area

Table 6. Relative abundance of odonata species recorded under Contracts 1 in impact monitoring survey during July 2012.

Species	Common name	Conservation status in Hong Kong	Work area: Contract 1	100m Buffer area of Contract 1
<i>Pantala flavescens</i>	Wandering Glider	Common	+	+
<i>Ictinogomphus pertinax</i>	Common Flangetail	Common		+

Key:

+ : Species exists in the survey area

++ : Species common in the survey area

+++ : Species abundant in the survey area

Table 7. Relative abundance of aquatic species recorded in Wai Ha River within the 100 m buffer of works boundary under Contracts 1 in the impact monitoring survey during July 2012.

Species	Common name	¹ Life-cycle characteristics	² Origin	SEMP 1	SEMP 2
<i>Ambassis gymnocephalus</i>	Glassperch	M	N	+	
<i>Cyprinus carpio</i>	Common Carp	F	I		+
<i>Gerres macracanthus</i>	Longspine Silverbidy	M	N	+	
<i>Mugil cephalus</i>	Flatehead Grey Mullet	M	N	+	
<i>Opsariichthys evolans</i>	Minnnow	F	N	+	
<i>Oreochromis mossambicus</i>	Mozambique Tilapa	F	I	++	+
<i>Oreochromis niloticus</i>	Nile Tilapa	F	I	++	+
<i>Poecilia reticulata</i>	Guppy	F	I		+
<i>Tilapia zillii</i>	Redbelly Tilapa	F	I	+	
<i>Sesarma (Perisesarma) bidens</i>	Sesarmine crab	M	N		+
<i>Uca arcuata</i>	Fiddler Crab	M	N		+
<i>Saccostrea cucullata</i>	Rock Oyster	M	N	++	+
<i>Cerithidea cingulata</i>	Mud snail	M	N	+	
Total number of species:	13			9	7

Key:

Relative abundance:

+ : Species exists in the survey area

++ : Species common in the survey area

+++ : Species abundant in the survey area

¹ Life-cycle characteristics:

M = Marine vagrant

F = Freshwater species

²Origin:

N = Native

I = Introduced; / = not available

Appendix N. Photo of Wai Ha River in July 2012



Photo 1. Wai Ha River at W2



Photo 2. Wai Ha River at W2



Photo 3. Wai Ha River at W2



Photo 4. Wai Ha River at W2



Photo5. Wai Ha River at W2



Photo6. Wai Ha River at W2



Photo7. Wai Ha River at W2



Photo8. Wai Ha River at W2

Appendix O
Approved Proposal of Revision for Action/Limit Level Criteria of Water Quality
Monitoring

本署檢號

OUR REF:

(2) in Ax (1) to EP2/G/I/117 Pt.4

來函編號

YOUR REF:

2835 1581

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TEL. NO.:

2802 4511

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31 May 2012

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5 Gloucester Road, Wan Chai, Hong Kong
(Attn: Mr. SO Chi Ho)

Dear Mr. So,

Drainage Improvement Works in Sha Tin and Tai Po
Environmental Permit No. EP-303/2008
Revised Water Quality Monitoring

I refer to the letter from Environmental Pioneers & Solution Ltd (ET Leader) of 17 May 2012 proposing changes to water quality monitoring under the EM&A Programme for the captioned project.

Based on the justifications provided and pursuant to Condition 5.1 of the Environmental Permit No. EP-303/2008, I hereby approve the proposed changes to water quality monitoring.

Yours faithfully,

(Maurice YENN)

Principal Environmental Protection Officer
for Director of Environmental Protection

c.c.


Internal (w/cncl. proposal enclosed in the letter from Environmental Pioneers & Solutions Ltd. of 17.5.2012)

S(RN)1

EIAO Register Office

EP-303/2008

Enquiry of Revision for Action/Limit Level Criteria of Water Quality Monitoring

	Prepared By:	Verified By:	Submitted By:
Parties:	Environmental Team Leader (Environmental Pioneers & Solutions Limited)	IEC (Environ Hong Kong Limited)	Contractor (Kwan Lee – Kuly Joint Venture)
Name:	Ms. Goldie Fung	Mr. Tony Cheng	Mr. C.L. Wong
Signature:			
Date:	16-5-2012	16 May 2012	16/5/2012

Rev. 6

Submitted by: 16-May-2012

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Appendix I

1. Introduction

Environmental Pioneers and Solutions Limited (EPSL) has been appointed to work as the Environmental Team (ET) for the Contract No. DC/2009/22 Drainage Improvement Works in Shuen Wan, Tai Po (Contract no. 1) to implement the Environmental Monitoring and Audit (EM&A) programme.

The scope of the Project includes the following works:-

- (1) Construction of a 1000m long, 3m x 2.5m twin-cell box culvert along Tung Tsz Road;
- (2) Replacement of existing gates by automatic mechanical gates at the mouth of Wai Ha River;
- (3) Construction of a 280m long, 1200 dia. Drainage pipe near Wai Ha Village;
- (4) Construction of a 260m long, 2100 dia. Flood relief drain along Ting Kok Road; and
- (5) Construction of a floodwater pumping station at Shuen Wan.

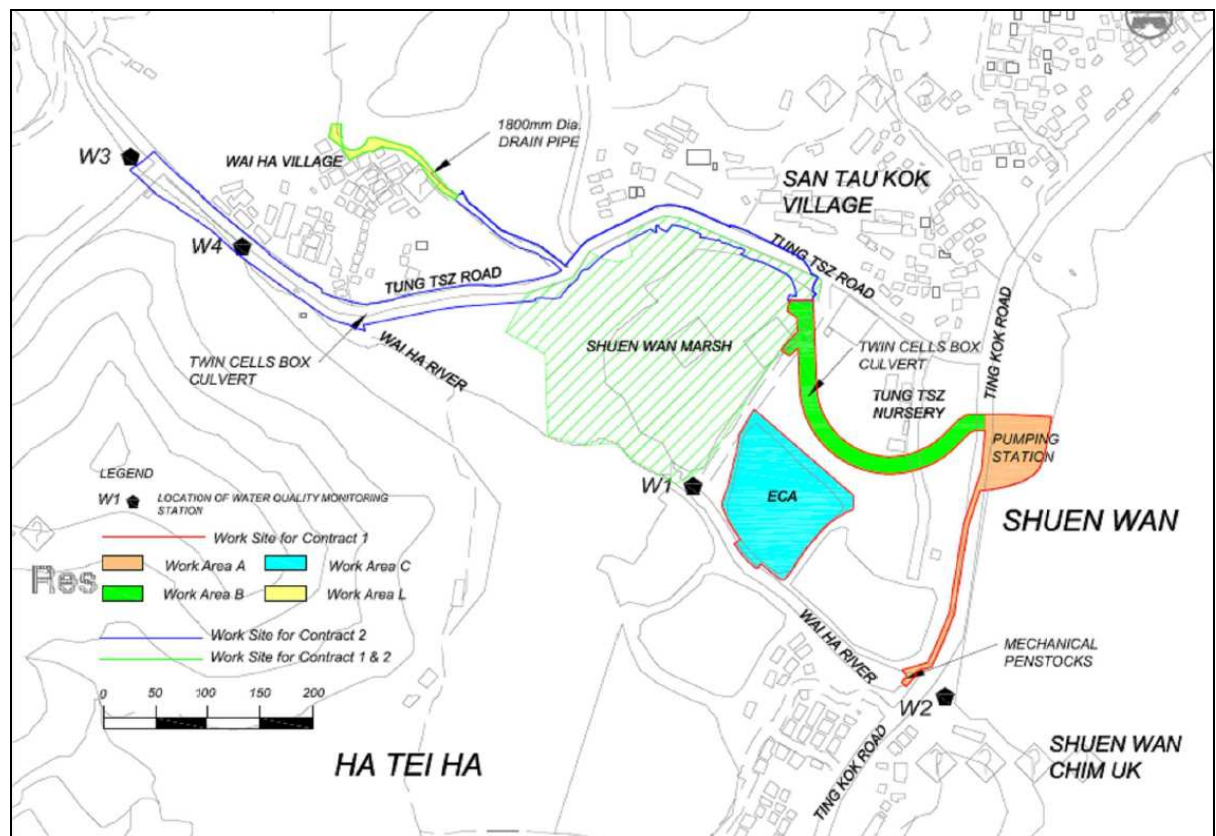
The construction period of the project was commenced on February 26th, 2010 and anticipated to complete in August 2013.

2. Water Quality Monitoring

2.1 Monitoring Locations

There are two separate contracts covered by the Environmental Permit EP-303/2008, including contract no. DC/2009/22 (contract no. 1) and contract no. DC/2010/02 (contract no. 2). There are totally 4 monitoring stations (W1, W2 and W4 for impact monitoring station and W3 for control station) selected for the water quality monitoring. With reference to the Clause 4.25 of EM&A Manual (Rev. 3), the water samples are collected at mid-depth of each proposed monitoring stations for measuring due to the water depth is less than 3m. The Location Plan is shown in Figure 2.1 for reference.

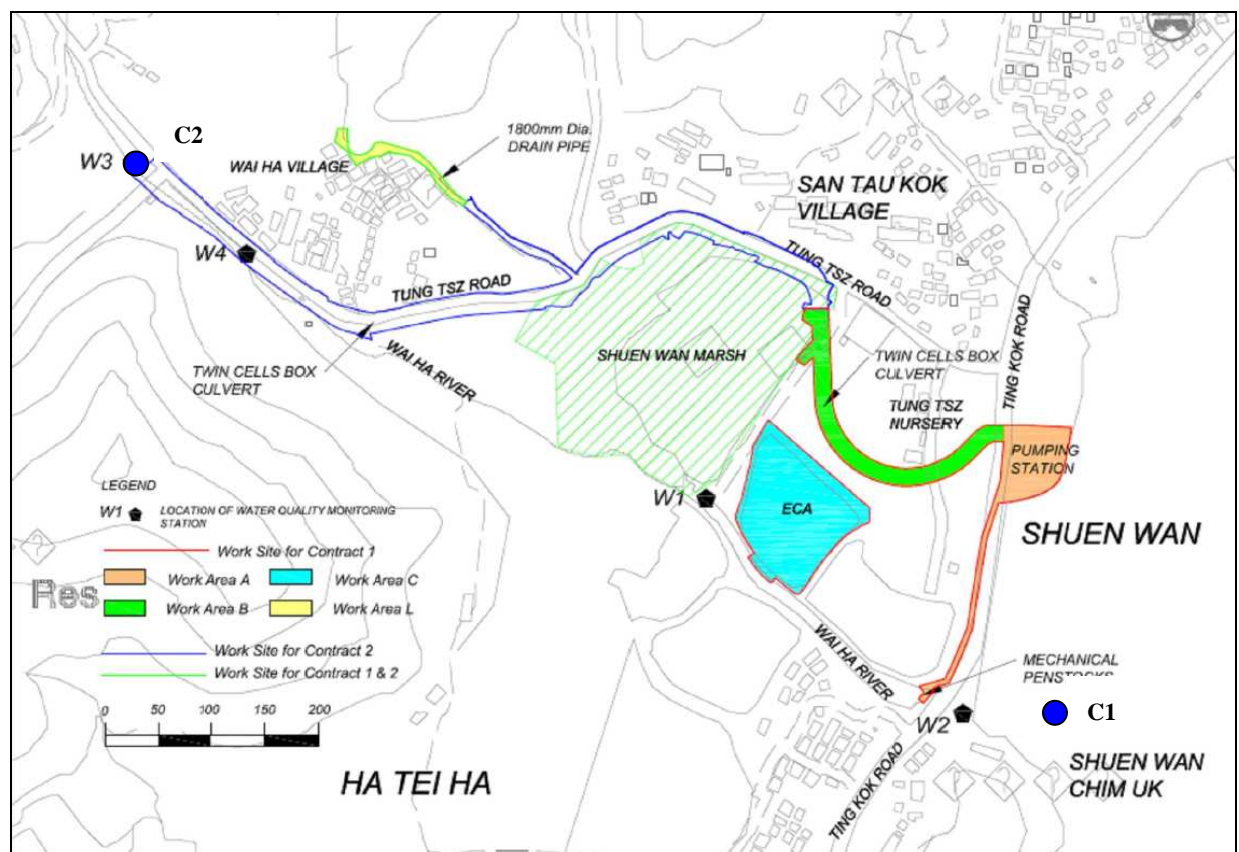
Figure 2.1 Water Quality Monitoring Locations



2.2 Reference Points for Contract No. 1

The construction activities of contract no. 1 were commenced on 9 March 2011 and anticipated to be completed in February 2013 and those of contract no. 2 were commenced on 29 April 2011 and anticipated to be completed on 27 October 2013. According to the current site situation of the project, there are construction activities carrying out for contract no. 1 and no. 2. The water quality of control station W1 may be affected by the construction activities of contract no. 2. Under this circumstance, 2 additional reference points (C1 and C2) are proposed for the water quality monitoring of contract no. 1. The water quality of both C1 and C2 will not be affected by any construction activities of this project. The location of C1 and C2 can refer to the Fig. 2.2. Reference point C1 is located at 20m apart from the estuary of Wai Ha River. The water quality of C1 will not be affected by the construction activities at flood tide and is free from contamination. The water quality parameter of C1; W1 and W2 are listed in Appendix A for reference. Reference point C2 is the same monitoring location of W3 which is approximate 70m apart from the site boundary and will not be affected by the construction activities.

Figure 2.2 Reference Points C1 and C2 Locations



The monitoring parameters of C1 and C2 are same as those of W1, and the monitoring data of C1 and C2 will be reported as the supplementary information. When the water quality of W2 exceed the Action/Limit levels criteria, the monitoring data of C1 will be used for comparison when the monitoring of W2 is taken at flood tide; and the monitoring data of C2 will be used for comparison when the monitoring of W2 is taken at ebb tide. The comparison of water quality between W2 and C1 at flood tide and between W2 and C2 at ebb tide can help to prove whether influence of water quality is caused by the construction activities. The water quality monitoring of W1 will continuously be carried out and the collected data will be submitted for reference as well.

2.3 Data Analysis

With reference to the Location Plan shown in Figure 2.1, control station W3 is at the upstream location of the Wai Ha River for this project. According to the location, the water quality of W3 can be considered to be not affected by any construction activities of the project. Besides, the level of W3 should be +5.08mPD and its water quality can be considered to be not undergone any tidal influence. Based on these criteria, the Dissolved Oxygen (DO) of control station W3 were used for the analysis in the following sections. In order to indicate the current situation of DO level of the river, the DO level of W3 measured from August 2011 to January 2012 were selected to compare with baseline data.

a. Baseline Monitoring Data

The baseline data of DO of W3 are shown in Appendix B. The baseline monitoring data were collected before the commencement of any construction activities in dry season from 7th January, 2011 to 2nd February 2011. According to the submitted Baseline Environmental Monitoring Report, the Action/Limit level for monitoring station W3 are indicated in Table 2.1.

Table 2.1 Action and Limit Levels for Water Quality at Monitoring Stations W3

Parameters	Monitoring Stations (Flood Tide)		Monitoring Stations (Ebb Tide)	
	Action Level	Limit Level	Action Level	Limit Level
DO (mg/L)	8.66	8.00	8.71	8.61

b. Impact Monitoring Data

Water quality monitoring (WQM) for control station W3 was carried out 13 times in August 2011; 14 times in September 2011; 12 times in October 2011; 13 times in November 2011; 13 times in December 2011; 12 times in January 2012. The collected DO data of W3 in these 77 times monitoring are shown in Appendix C. Average DO monitoring result of each month at W3 are summarized in Table 2.2.

Table 2.2 Water quality monitoring results of Dissolved Oxygen at W3

Month	Average Dissolved Oxygen (DO) in mg/L (Range)
August 2011	6.44 (7.31 – 4.44)
September 2011	6.08 (7.32 – 4.49)
October 2011	5.91 (6.86 – 5.09)
November 2011	5.79 (6.72 – 4.62)
December 2011	6.50 (7.91 – 5.09)
January 2012	7.14 (8.89 – 5.10)

By comparing the WQM results from August 2011 to January 2012 and Action/Limit level (Ebb Tide) of W3 in Table 2.1, it is observed that only one WQM result has not exceeded the Action/Limit level and all other WQM results have exceeded the Limit Level. The result is highlighted in Appendix D for reference. As mentioned before, the water quality of W3 will not be affected by any construction activities of the project, so that the cause of exceedance may due to the natural fluctuation such as temperature and seasonal change.

c. Variation between Dry and Wet Seasons

As the cause of exceedance may due to the seasonal change, the variation between dry and wet season is calculated as below for the compensation of seasonal change. As the water quality in the Wai Ha River (also referred to as Tung Tze Stream) is monitored under the Environmental Protection Department (EPD) routine river water quality monitoring programme. Ten years (Year 2001 to 2010) of river water quality data at station TR6 Tung Tze Stream are extracted from EPD database for the calculation of DO variation between Dry and Wet seasons. TR6 is located near the estuary of Tung

Tze Stream and the location can refer to the map in Appendix E. The raw data are listed in Appendix F for reference. After analyzed the distribution of the ten years data (refer to Appendix G), median of DO for dry and wet seasons are used to calculated the DO variation to eliminate the effect of the lowest and the highest values. The DO variation between Dry and Wet seasons variation is calculated by equation (eqt. 2-1).

$$\text{Variation} = (\text{Dry Season}_{\text{median}} - \text{Wet Season}_{\text{median}}) / \text{Dry Season}_{\text{median}} \quad (\text{eqt. 2-1})$$

According to the condition 3.7 of the Environmental Permit EP-303/2008, dry season should be defined from October to April; and the wet season should be defined from May to September. The data from October to April are used for the calculation of Dry Season; the data from April to October are used for the calculation of Wet Season. Total 6 sets of result for 3 different time period are calculated for comparison. Both median and mean of the DO have been calculated for time periods including 1) Recent year - Year 2010; 2) Four years data – from Year 2007 to 2010; and 3) Ten years data – from Year 2001 to 2010. The results can refer to Table 2.3.

Table 2.3 DO variation between dry and wet season from 2007 to 2010 at station TR6, Tung Tze Stream

Collected Data	DO(mg/l)	Wet season	Dry season	Variation
Year 2010	Median	6.50	6.50	0%
Year 2007-2010	Median	5.65	6.55	13.74%
Year 2001-2010	Median	5.80	6.40	9.37%
Year 2010	Mean	6.16	6.36	3.14%
Year 2007-2010	Mean	5.81	6.28	7.48%
Year 2001-2010	Mean	5.85	6.38	8.31%

From the results in Table 2.3, the highest variation value 13.74% is used to enhance the effect of applying the variation. By applying the variation (13.74%) to the baseline data, a new set of Action/Limit level is calculated by equation (eqt. 2-2) and the result are shown in Table 2.4.

$$\text{Revised Level} = \text{Original Level} \times (1-13.74\%) \quad (\text{eqt. 2-2})$$

Table 2.4 New set of Action/Limit Level, using the calculated variation (13.74%)

Parameters		Monitoring Stations (Flood Tide)		Monitoring Stations (Ebb Tide)	
		Action Level	Limit Level	Action Level	Limit Level
Original Level	DO (mg/L)	8.66	8.00	8.71	8.61
Revised level	DO (mg/L)	7.47	6.90	7.51	7.43

With reference to the new set of Action/Limit level in Table 2.4, the higher DO level (Ebb tide) were used to compare with the WQM results from August 2011 to January 2012, it is observed that there were only five times of WQM results have not exceeded the Action/Limit level and all other 72 times of WQM results have exceeded the Limit Level. The result is highlighted in Appendix H for reference. Since W3 functions as the control station of this project, its water quality should not be affected by the construction works of this project. From the comparison results with the original and revised Action/Limit level, it was observed that both sets of Action/Limit level cannot reflect the actual river condition.

3. Conclusion

After the consideration of seasonal change which may affect the DO of W3 in section 2.3, the DO of W3 will also exceed the Limit level in almost all the measurement day in both dry and wet seasons. After the consideration of seasonal change and applied the DO variation between wet and dry season to amend the Action/Limit level, the DO of W3 will also exceed the Limit level in both dry and wet seasons. Both the original and revised Action/Limit level could not reflect the actual condition of Wai Ha River. The Action/Limit level criteria should be revised so as to reflect the actual condition of Wai Ha River and to monitor the water quality.

With reference to other EM&A projects of river work in Hong Kong (refer to Appendix I), the limit level for DO is 4 mg/L and without the comparison of the percentile of baseline data. Suggest that the Action Level criteria remain unchanged which is DO exceedance occur when impact monitoring data is lower than 5

percentile of baseline data; and the Limit Level criteria should be revised to DO exceedance occur when impact monitoring data is lower than 4 mg/L.

Parameter	Original Limit Level	Revised Limit Level
DO in mg/L	4 mg/L or 1%-ile of baseline data	4 mg/L

Appendix A

EP-303/2008

Water Quality Baseline Monitoring of Reference Point C1 - Flood

Position	Tide	Weather	Date	Time	Location	pH value	Salinity (ppt)	Temperature (°C)	Turbidity (NTU)	DO (mg/L)
Mid	Flood	Cloudy	2/3/2012	8:45	C1	8.5	28.1	18	0.1	9.21
				8:57	W2	7.16	4	18.1	11.7	7.16
				9:23	W1	7.12	0.1	19.3	6	7.47
Mid	Flood	Cloudy	5/3/2012	15:35	C1	8.59	28.3	20.8	0.1	9.5
				15:18	W2	7.14	6.6	21	7.2	6.97
				15:00	W1	7.1	0.4	21.4	3.4	6.91
Mid	Flood	Cloudy	7/3/2012	16:45	C1	8.51	29	20.5	0.1	9.32
				16:30	W2	7.78	16.4	20.8	14.4	7.51
				16:00	W1	7.3	3.8	20.4	27.3	7.39
Mid	Flood	Rainy	12/3/2012	9:40	C1	8.55	28.2	16.7	0.1	9.53
				9:55	W2	8.18	26.3	16.9	1.2	7.86
				10:25	W1	7.94	21.5	16.9	5.3	8.27

Appendix B

EP-303/2008

Water Quality Baseline Monitoring of Control Point W3 - Flood

Location	Position	Tide	Date	Time	Weather	DO (mg/L)		Average	DO (%)		Average
						Data 1	Data 2		Data 1	Data 2	
W3	Mid	Flood	7/1/2011	9:20	Cloudy	9.55	9.46	9.51	88	89	89
W3	Mid	Flood	10/1/2011	12:00	Cloudy	10.12	10.13	10.13	113	110	112
W3	Mid	Flood	12/1/2011	12:50	Cloudy	7.83	7.86	7.85	95	96	96
W3	Mid	Flood	14/1/2011	13:00	Cloudy	9.67	9.52	9.60	98	96	97
W3	Mid	Flood	17/1/2011	15:40	Cloudy	9.92	9.81	9.87	105	104	105
W3	Mid	Flood	19/1/2011	17:45	Sunny	9.25	9.41	9.33	98	101	100
W3	Mid	Flood	21/1/2011	7:40	Sunny	10.86	10.52	10.69	103	104	104
W3	Mid	Flood	24/1/2011	9:15	Cloudy	9.56	9.71	9.64	101	106	104
W3	Mid	Flood	26/1/2011	11:00	Sunny	11.10	10.69	10.90	111	108	110
W3	Mid	Flood	28/1/2011	13:05	Sunny	10.21	9.89	10.05	103	99	101
W3	Mid	Flood	31/1/2011	16:10	Sunny	10.54	10.72	10.63	116	112	114
W3	Mid	Flood	2/2/2011	7:00	Cloudy	10.78	10.66	10.72	109	103	106
5 percentile	DO Action					8.07	8.66				
1 percentile	DO Limit					7.84	8.00				

Appendix B

EP-303/2008

Water Quality Baseline Monitoring of Control Point W3 - Ebb

Location	Position	Tide	Date	Time	Weather	DO (mg/L)		Average	DO (%)		Average
						Data 1	Data 2		Data 1	Data 2	
W3	Mid	Ebb	7/1/2011	14:10	Cloudy	8.91	9.00	8.96	97	99	98
W3	Mid	Ebb	10/1/2011	17:10	Cloudy	9.00	8.85	8.93	94	91	93
W3	Mid	Ebb	12/1/2011	18:40	Cloudy	9.84	9.61	9.73	96	95	96
W3	Mid	Ebb	14/1/2011	7:50	Cloudy	9.98	9.77	9.88	101	95	98
W3	Mid	Ebb	17/1/2011	10:30	Cloudy	10.92	10.63	10.78	104	104	104
W3	Mid	Ebb	19/1/2011	11:25	Sunny	8.77	8.41	8.59	96	97	97
W3	Mid	Ebb	21/1/2011	13:10	Sunny	10.08	9.97	10.03	106	101	104
W3	Mid	Ebb	24/1/2011	15:30	Cloudy	8.93	8.67	8.80	96	94	95
W3	Mid	Ebb	26/1/2011	17:35	Sunny	10.71	10.24	10.48	109	103	106
W3	Mid	Ebb	28/1/2011	7:50	Sunny	9.58	9.55	9.57	97	84	91
W3	Mid	Ebb	31/1/2011	10:45	Sunny	11.33	10.76	11.05	113	106	110
W3	Mid	Ebb	2/2/2011	12:15	Cloudy	9.96	9.59	9.78	102	96	99
5 percentile	DO Action					8.69	8.71				
1 percentile	DO Limit					8.47	8.61				

Appendix C – W3 Monitoring data of dissolved oxygen from August 2011 to January 2012

Monitoring Date	DO mg/L	Monitoring Date	DO mg/L	Monitoring Date	DO mg/L
1-Aug-2011	6.93	30-Sep-2011	5.52	1-Dec-2011	5.68
3-Aug-2011	7.31	4-Oct-2011	5.09	3-Dec-2011	5.09
6-Aug-2011	6.89	6-Oct-2011	5.12	6-Dec-2011	6.17
8-Aug-2011	7.26	8-Oct-2011	5.89	8-Dec-2011	5.59
11-Aug-2011	6.01	11-Oct-2011	6.09	10-Dec-2011	6.58
13-Aug-2011	6.76	13-Oct-2011	6.53	13-Dec-2011	6.44
15-Aug-2011	7.03	15-Oct-2011	5.19	15-Dec-2011	7.15
17-Aug-2011	6.40	18-Oct-2011	5.21	17-Dec-2011	6.60
19-Aug-2011	6.74	20-Oct-2011	6.04	20-Dec-2011	6.68
23-Aug-2011	6.21	22-Oct-2011	6.86	22-Dec-2011	7.14
25-Aug-2011	5.07	25-Oct-2011	6.58	24-Dec-2011	7.91
27-Aug-2011	4.44	27-Oct-2011	6.39	29-Dec-2011	6.90
30-Aug-2011	6.71	29-Oct-2011	5.92	31-Dec-2011	6.63
1-Sep-2011	7.18	1-Nov-2011	5.66	3-Jan-2012	6.22
3-Sep-2011	7.32	3-Nov-2011	6.64	5-Jan-2012	6.90
6-Sep-2011	5.86	5-Nov-2011	6.58	7-Jan-2012	5.10
8-Sep-2011	5.66	8-Nov-2011	5.47	10-Jan-2012	7.10
10-Sep-2011	6.88	10-Nov-2011	6.72	12-Jan-2012	7.25
12-Sep-2011	6.44	12-Nov-2011	6.53	14-Jan-2012	6.90
15-Sep-2011	6.09	15-Nov-2011	6.51	17-Jan-2012	7.60
17-Sep-2011	5.73	17-Nov-2011	4.74	19-Jan-2012	6.50
20-Sep-2011	6.26	19-Nov-2011	4.62	21-Jan-2012	8.41
22-Sep-2011	4.49	22-Nov-2011	5.09	26-Jan-2012	8.89
24-Sep-2011	6.43	24-Nov-2011	5.70	28-Jan-2012	7.62
26-Sep-2011	5.36	26-Nov-2011	5.69	31-Jan-2012	7.18
28-Sep-2011	5.91	29-Nov-2011	5.38		

Appendix D - Exceedance records from August 2011 to January 2012 for Existing Criteria

Monitoring Date	DO mg/L	Monitoring Date	DO mg/L	Monitoring Date	DO mg/L
1-Aug-2011	6.93	30-Sep-2011	5.52	1-Dec-2011	5.68
3-Aug-2011	7.31	4-Oct-2011	5.09	3-Dec-2011	5.09
6-Aug-2011	6.89	6-Oct-2011	5.12	6-Dec-2011	6.17
8-Aug-2011	7.26	8-Oct-2011	5.89	8-Dec-2011	5.59
11-Aug-2011	6.01	11-Oct-2011	6.09	10-Dec-2011	6.58
13-Aug-2011	6.76	13-Oct-2011	6.53	13-Dec-2011	6.44
15-Aug-2011	7.03	15-Oct-2011	5.19	15-Dec-2011	7.15
17-Aug-2011	6.40	18-Oct-2011	5.21	17-Dec-2011	6.60
19-Aug-2011	6.74	20-Oct-2011	6.04	20-Dec-2011	6.68
23-Aug-2011	6.21	22-Oct-2011	6.86	22-Dec-2011	7.14
25-Aug-2011	5.07	25-Oct-2011	6.58	24-Dec-2011	7.91
27-Aug-2011	4.44	27-Oct-2011	6.39	29-Dec-2011	6.90
30-Aug-2011	6.71	29-Oct-2011	5.92	31-Dec-2011	6.63
1-Sep-2011	7.18	1-Nov-2011	5.66	3-Jan-2012	6.22
3-Sep-2011	7.32	3-Nov-2011	6.64	5-Jan-2012	6.90
6-Sep-2011	5.86	5-Nov-2011	6.58	7-Jan-2012	5.10
8-Sep-2011	5.66	8-Nov-2011	5.47	10-Jan-2012	7.10
10-Sep-2011	6.88	10-Nov-2011	6.72	12-Jan-2012	7.25
12-Sep-2011	6.44	12-Nov-2011	6.53	14-Jan-2012	6.90
15-Sep-2011	6.09	15-Nov-2011	6.51	17-Jan-2012	7.60
17-Sep-2011	5.73	17-Nov-2011	4.74	19-Jan-2012	6.50
20-Sep-2011	6.26	19-Nov-2011	4.62	21-Jan-2012	8.41
22-Sep-2011	4.49	22-Nov-2011	5.09	26-Jan-2012	8.89
24-Sep-2011	6.43	24-Nov-2011	5.70	28-Jan-2012	7.62
26-Sep-2011	5.36	26-Nov-2011	5.69	31-Jan-2012	7.18
28-Sep-2011	5.91	29-Nov-2011	5.38		

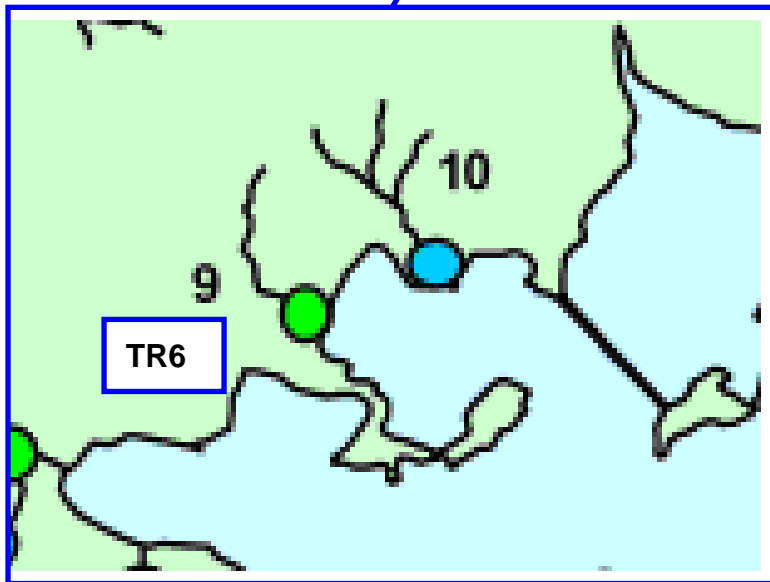
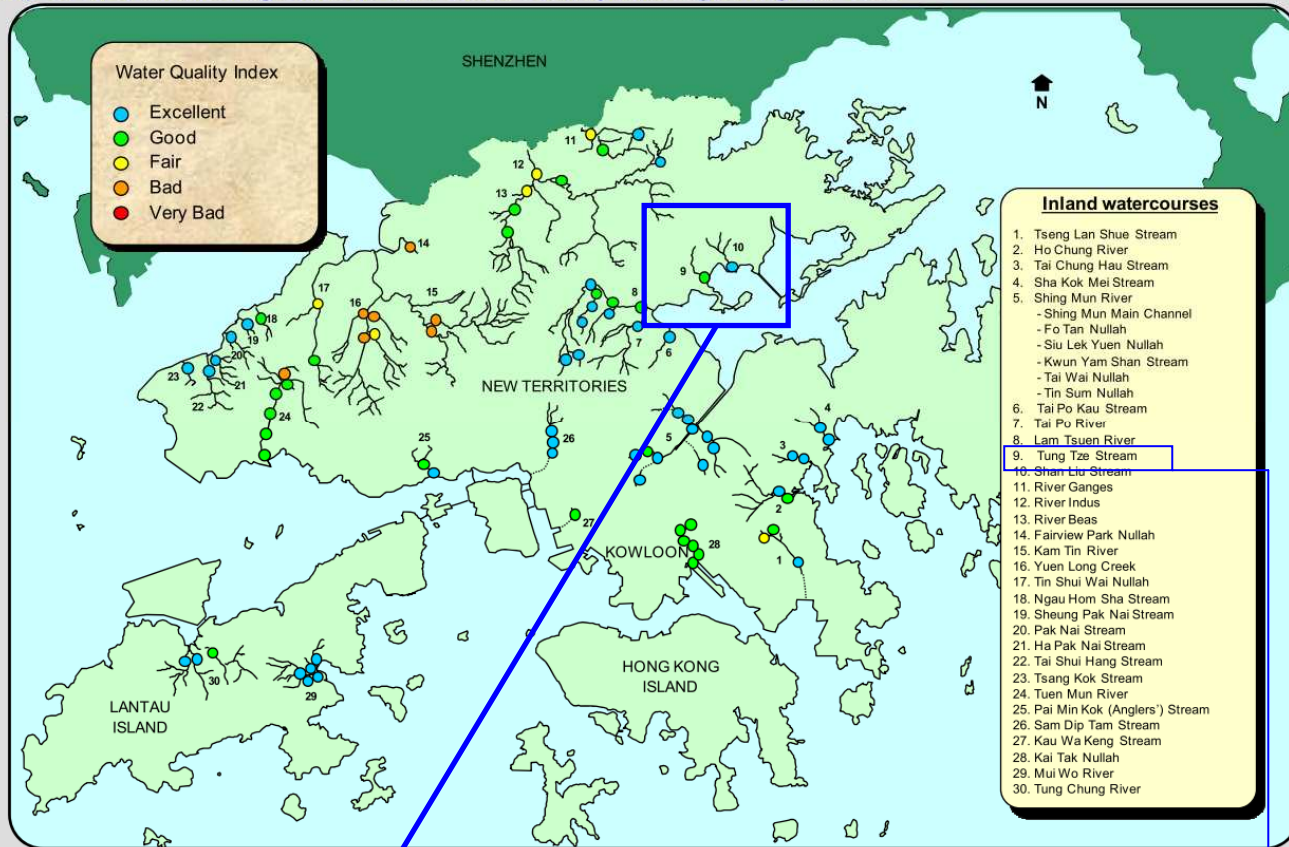
Remarks:

Red highlight: The value is exceeded Limit Level (<**8.61**)

Yellow highlight: The value is exceeded Action Level (<**8.71**)

Appendix E – Location of TR6 at Tung Tze Stream

Map of river monitoring stations and Water Quality Index gradings in 2010



9. Tung Tze Stream

Appendix F

EP-303/2008

Dissolved Oxygen Level at Tung Tze Stream

Dry Season

				DO (mg/l)	
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/1/2001	8.1	
Tolo Harbour And Channel	Tung Tze Stream	TR6	12/2/2001	10.2	
Tolo Harbour And Channel	Tung Tze Stream	TR6	16/3/2001	5	
Tolo Harbour And Channel	Tung Tze Stream	TR6	19/4/2001	6.6	
Tolo Harbour And Channel	Tung Tze Stream	TR6	12/10/2001	6.1	
Tolo Harbour And Channel	Tung Tze Stream	TR6	16/11/2001	7.2	
Tolo Harbour And Channel	Tung Tze Stream	TR6	17/12/2001	6.2	
Tolo Harbour And Channel	Tung Tze Stream	TR6	18/1/2002	6.2	
Tolo Harbour And Channel	Tung Tze Stream	TR6	20/2/2002	7.3	
Tolo Harbour And Channel	Tung Tze Stream	TR6	18/3/2002	6.6	
Tolo Harbour And Channel	Tung Tze Stream	TR6	18/4/2002	6.8	
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/10/2002	4.9	
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/11/2002	6.9	
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/12/2002	5.4	
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/1/2003	7.3	
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/2/2003	7.4	
Tolo Harbour And Channel	Tung Tze Stream	TR6	6/3/2003	6.4	
Tolo Harbour And Channel	Tung Tze Stream	TR6	10/4/2003	7.1	
Tolo Harbour And Channel	Tung Tze Stream	TR6	8/10/2003	4.8	
Tolo Harbour And Channel	Tung Tze Stream	TR6	6/11/2003	5.9	
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/12/2003	7.5	
Tolo Harbour And Channel	Tung Tze Stream	TR6	9/1/2004	6.1	
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/2/2004	8.3	
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/3/2004	6	
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/4/2004	7.2	
Tolo Harbour And Channel	Tung Tze Stream	TR6	8/10/2004	4.9	
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/11/2004	5.9	
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/12/2004	5.1	
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/1/2005	7.8	
Tolo Harbour And Channel	Tung Tze Stream	TR6	1/2/2005	5.2	
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/3/2005	8.2	
Tolo Harbour And Channel	Tung Tze Stream	TR6	8/4/2005	5.1	
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/10/2005	5.4	
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/11/2005	5.7	
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/12/2005	5.1	
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/1/2006	5.3	
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/2/2006	6	
Tolo Harbour And Channel	Tung Tze Stream	TR6	8/3/2006	5.5	
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/4/2006	8.4	
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/10/2006	6.6	
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/11/2006	5.5	
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/12/2006	7.4	

Appendix F

EP-303/2008

Dissolved Oxygen Level at Tung Tze Stream

Dry Season

				DO (mg/l)
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/1/2007	5.9
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/2/2007	7.3
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/3/2007	5.2
Tolo Harbour And Channel	Tung Tze Stream	TR6	13/4/2007	5.3
Tolo Harbour And Channel	Tung Tze Stream	TR7	4/10/2007	5.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/11/2007	5
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/12/2007	7.3
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/1/2008	6.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	13/2/2008	6.9
Tolo Harbour And Channel	Tung Tze Stream	TR6	6/3/2008	6.1
Tolo Harbour And Channel	Tung Tze Stream	TR6	10/4/2008	6.6
Tolo Harbour And Channel	Tung Tze Stream	TR6	20/10/2008	5.6
Tolo Harbour And Channel	Tung Tze Stream	TR6	13/11/2008	6.3
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/12/2008	7
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/1/2009	7.3
Tolo Harbour And Channel	Tung Tze Stream	TR6	6/2/2009	6.9
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/3/2009	6.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	20/4/2009	5.2
Tolo Harbour And Channel	Tung Tze Stream	TR6	16/10/2009	4.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	16/11/2009	6.9
Tolo Harbour And Channel	Tung Tze Stream	TR6	16/12/2009	7
Tolo Harbour And Channel	Tung Tze Stream	TR6	6/1/2010	6.6
Tolo Harbour And Channel	Tung Tze Stream	TR6	18/2/2010	7.4
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/3/2010	5.4
Tolo Harbour And Channel	Tung Tze Stream	TR6	8/4/2010	6.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	20/10/2010	6.4
Tolo Harbour And Channel	Tung Tze Stream	TR6	17/11/2010	6.6
Tolo Harbour And Channel	Tung Tze Stream	TR6	15/12/2010	5.6

Appendix F

EP-303/2008

Dissolved Oxygen Level at Tung Tze Stream Wet Season

				DO (mg/l)
Tolo Harbour And Channel	Tung Tze Stream	TR6	24/5/2001	6.1
Tolo Harbour And Channel	Tung Tze Stream	TR6	15/6/2001	5.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	11/7/2001	7.9
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/8/2001	6.6
Tolo Harbour And Channel	Tung Tze Stream	TR6	19/9/2001	5.2
Tolo Harbour And Channel	Tung Tze Stream	TR6	22/5/2002	4.1
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/6/2002	5
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/7/2002	5.4
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/8/2002	5.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/9/2002	5.8
Tolo Harbour And Channel	Tung Tze Stream	TR6	14/5/2003	5.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	9/6/2003	4.9
Tolo Harbour And Channel	Tung Tze Stream	TR6	11/7/2003	6.2
Tolo Harbour And Channel	Tung Tze Stream	TR6	8/8/2003	5.8
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/9/2003	5.6
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/5/2004	6.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	4/6/2004	5.8
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/7/2004	5.2
Tolo Harbour And Channel	Tung Tze Stream	TR6	9/8/2004	6.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/9/2004	6.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	6/5/2005	6
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/6/2005	5.8
Tolo Harbour And Channel	Tung Tze Stream	TR6	8/7/2005	6.4
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/8/2005	5.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/9/2005	6.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	11/5/2006	5.2
Tolo Harbour And Channel	Tung Tze Stream	TR6	16/6/2006	7
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/7/2006	5.6
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/8/2006	6.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	6/9/2006	5

Appendix F

EP-303/2008

Dissolved Oxygen Level at Tung Tze Stream Wet Season

				DO (mg/l)
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/5/2007	6.3
Tolo Harbour And Channel	Tung Tze Stream	TR6	1/6/2007	5.1
Tolo Harbour And Channel	Tung Tze Stream	TR6	5/7/2007	7.3
Tolo Harbour And Channel	Tung Tze Stream	TR6	2/8/2007	6.9
Tolo Harbour And Channel	Tung Tze Stream	TR6	10/9/2007	6.1
Tolo Harbour And Channel	Tung Tze Stream	TR6	16/5/2008	5.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	18/6/2008	5.4
Tolo Harbour And Channel	Tung Tze Stream	TR6	18/7/2008	5.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	25/8/2008	6.1
Tolo Harbour And Channel	Tung Tze Stream	TR6	18/9/2008	4.1
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/5/2009	6
Tolo Harbour And Channel	Tung Tze Stream	TR6	3/6/2009	5.4
Tolo Harbour And Channel	Tung Tze Stream	TR6	17/7/2009	5.5
Tolo Harbour And Channel	Tung Tze Stream	TR6	7/8/2009	4.9
Tolo Harbour And Channel	Tung Tze Stream	TR6	17/9/2009	5.3
Tolo Harbour And Channel	Tung Tze Stream	TR6	27/5/2010	5.8
Tolo Harbour And Channel	Tung Tze Stream	TR6	30/6/2010	6.8
Tolo Harbour And Channel	Tung Tze Stream	TR6	19/7/2010	5
Tolo Harbour And Channel	Tung Tze Stream	TR6	13/8/2010	6.7
Tolo Harbour And Channel	Tung Tze Stream	TR6	9/9/2010	6.5

Appendix G

EP-303/2008

Dissolved Oxygen Level at Tung Tze Stream

Median of Dry Season

Date	DO(mg/l)
3/1/2001	8.1
12/2/2001	10.2
16/3/2001	5
19/4/2001	6.6
12/10/2001	6.1
16/11/2001	7.2
17/12/2001	6.2
18/1/2002	6.2
20/2/2002	7.3
18/3/2002	6.6
18/4/2002	6.8
3/10/2002	4.9
4/11/2002	6.9
5/12/2002	5.4
3/1/2003	7.3
7/2/2003	7.4
6/3/2003	6.4
10/4/2003	7.1
8/10/2003	4.8
6/11/2003	5.9
4/12/2003	7.5
9/1/2004	6.1
4/2/2004	8.3
3/3/2004	6
2/4/2004	7.2
8/10/2004	4.9
4/11/2004	5.9
2/12/2004	5.1
7/1/2005	7.8
1/2/2005	5.2
4/3/2005	8.2
8/4/2005	5.1
7/10/2005	5.4
3/11/2005	5.7
5/12/2005	5.1

For 2001 to 2010	
Minimum	4.7
Median	6.40
Maximum	10.2
Mean	6.38

Appendix G

EP-303/2008

Dissolved Oxygen Level at Tung Tze Stream Median of Dry Season

Date	DO(mg/l)
5/1/2006	5.3
3/2/2006	6
8/3/2006	5.5
3/4/2006	8.4
5/10/2006	6.6
3/11/2006	5.5
5/12/2006	7.4
5/1/2007	5.9
2/2/2007	7.3
2/3/2007	5.2
13/4/2007	5.3
4/10/2007	5.5
2/11/2007	5
4/12/2007	7.3
7/1/2008	6.7
13/2/2008	6.9
6/3/2008	6.1
10/4/2008	6.6
20/10/2008	5.6
13/11/2008	6.3
2/12/2008	7
7/1/2009	7.3
6/2/2009	6.9
5/3/2009	6.7
20/4/2009	5.2
16/10/2009	4.7
16/11/2009	6.9
16/12/2009	7
6/1/2010	6.6
18/2/2010	7.4
3/3/2010	5.4
8/4/2010	6.5
20/10/2010	6.4
17/11/2010	6.6
15/12/2010	5.6

For 2007 to 2010	
Minimum	4.7
Median	6.55
Maximum	7.4
Mean	6.28

For 2010	
Minimum	5.4
Median	6.50
Maximum	7.4
Mean	6.36

Appendix G

EP-303/2008

Dissolved Oxygen Level at Tung Tze Stream Median of Wet Season

Date	DO(mg/l)
24/5/2001	6.1
15/6/2001	5.7
11/7/2001	7.9
3/8/2001	6.6
19/9/2001	5.2
22/5/2002	4.1
7/6/2002	5
4/7/2002	5.4
2/8/2002	5.7
4/9/2002	5.8
14/5/2003	5.7
9/6/2003	4.9
11/7/2003	6.2
8/8/2003	5.8
5/9/2003	5.6
7/5/2004	6.5
4/6/2004	5.8
7/7/2004	5.2
9/8/2004	6.5
2/9/2004	6.7
6/5/2005	6
3/6/2005	5.8
8/7/2005	6.4
3/8/2005	5.5
2/9/2005	6.5
11/5/2006	5.2
16/6/2006	7
5/7/2006	5.6
2/8/2006	6.7
6/9/2006	5
3/5/2007	6.3
1/6/2007	5.1
5/7/2007	7.3
2/8/2007	6.9
10/9/2007	6.1
16/5/2008	5.5
18/6/2008	5.4
18/7/2008	5.5
25/8/2008	6.1
18/9/2008	4.1

For 2001 to 2010	
Minimum	4.1
Median	5.80
Maximum	7.9
Mean	5.85

For 2007 to 2010	
Minimum	4.1
Median	5.65
Maximum	7.3
Mean	5.81

Appendix G

EP-303/2008

Dissolved Oxygen Level at Tung Tze Stream Median of Wet Season

Date	DO(mg/l)
7/5/2009	6
3/6/2009	5.4
17/7/2009	5.5
7/8/2009	4.9
17/9/2009	5.3
27/5/2010	5.8
30/6/2010	6.8
19/7/2010	5
13/8/2010	6.7
9/9/2010	6.5

For 2010	
Minimum	5.0
Median	6.50
Maximum	6.8
Mean	6.16

Appendix H – W3 Monitoring data of dissolved oxygen from August 2011 to January 2012 with applying 13.74% variation

Monitoring Date	DO mg/L	Monitoring Date	DO mg/L	Monitoring Date	DO mg/L		
1-Aug-2011	6.93	30-Sep-2011	5.52	1-Dec-2011	5.68		
3-Aug-2011	7.31	4-Oct-2011	5.09	3-Dec-2011	5.09		
6-Aug-2011	6.89	6-Oct-2011	5.12	6-Dec-2011	6.17		
8-Aug-2011	7.26	8-Oct-2011	5.89	8-Dec-2011	5.59		
11-Aug-2011	6.01	11-Oct-2011	6.09	10-Dec-2011	6.58		
13-Aug-2011	6.76	13-Oct-2011	6.53	13-Dec-2011	6.44		
15-Aug-2011	7.03	15-Oct-2011	5.19	15-Dec-2011	7.15		
17-Aug-2011	6.40	18-Oct-2011	5.21	17-Dec-2011	6.60		
19-Aug-2011	6.74	20-Oct-2011	6.04	20-Dec-2011	6.68		
23-Aug-2011	6.21	22-Oct-2011	6.86	22-Dec-2011	7.14		
25-Aug-2011	5.07	25-Oct-2011	6.58	24-Dec-2011	7.91		
27-Aug-2011	4.44	27-Oct-2011	6.39	29-Dec-2011	6.90		
30-Aug-2011	6.71	29-Oct-2011	5.92	31-Dec-2011	6.63		
1-Sep-2011	7.18	1-Nov-2011	5.66	3-Jan-2012	6.22		
3-Sep-2011	7.32	3-Nov-2011	6.64	5-Jan-2012	6.90		
6-Sep-2011	5.86	5-Nov-2011	6.58	7-Jan-2012	5.10		
8-Sep-2011	5.66	8-Nov-2011	5.47	10-Jan-2012	7.10		
10-Sep-2011	6.88	10-Nov-2011	6.72	12-Jan-2012	7.25		
12-Sep-2011	6.44	12-Nov-2011	6.53	14-Jan-2012	6.90		
15-Sep-2011	6.09	15-Nov-2011	6.51	17-Jan-2012	7.60		
17-Sep-2011	5.73	17-Nov-2011	4.74	19-Jan-2012	6.50		
20-Sep-2011	6.26	19-Nov-2011	4.62	21-Jan-2012	8.41		
22-Sep-2011	4.49	22-Nov-2011	5.09	26-Jan-2012	8.89		
24-Sep-2011	6.43	24-Nov-2011	5.70	28-Jan-2012	7.62		
26-Sep-2011	5.36	26-Nov-2011	5.69	31-Jan-2012	7.18		
28-Sep-2011	5.91	29-Nov-2011	5.38				

Remarks:

Red highlight: The value is exceeded Limit Level (<**7.43**)

Yellow highlight: The value is exceeded Action Level (<**7.51**)

Appendix I

EP-303/2008

Enquiry of Revision for Action/Limit Level Criteria of Water Quality Monitoring

Reference Cases

Case	Environmental Permit No.	Project Title	EM&A Manual	EIA Report	Limit Level for Water Quality - DO
1.	EP-434/2012	Drainage Improvements in Southern Lantau	Section 4.8.1, Table 4.1		4mg/L
2.	EP-429/2012	Development of the Integrated Waste Management Facilities Phase 1	Section 4a.7.12, Table 4a.4		4mg/L
3.	EP-413/2011	Integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works	Section 4.7.8, Table 4.2		4mg/L
4.	EP-334/2009	Sludge Treatment Facilities	Section 5.8.1.1, Table 5.3		4mg/L
5.	EP-224/2005	Proposed Extension of Public Golf Course at Kau Sai Chau, Sai Kung	Section 3.9.1, Table 3.8		4mg/L
6.	EP-217/2005	Drainage Improvements in Sai Kung		Section 4.7.3, Table 4.2	4mg/L
7.	EP-190/2004	Improvements to San Tin Interchange	Section 4.25, Table 4.1		4mg/L

Appendix P Site Diary

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 01/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
	Area A - Pump Station	No activity as per KLKJV arrangement				Backhoe			1	EX28	i		
						Backhoe			1	EX47	i		
						Backhoe			1	EX50	i		
						Steel Bending Machine			3		i		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 23:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 M/lab. from Area I)	Labourer (female)	C406	3	Backhoe			1	EX36	i		
						Backhoe			1	EX39	i		
						Backhoe with Vibrating Hammer			1	EX48	i		
						Water Pump 50mm	2						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH130-CH280)	No activity as per KLKJV arrangement				Backhoe			1	EX25	i		
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Backhoe			1	EX46	i		
						Generator			1		i		
						Water Pump 50mm			1		i		
						Water Pump 75mm			1		i		
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area E - Siu Lek Yuen Rd. Playground	No activity as per KLKJV arrangement				Backhoe			1	EX21	i		
						Generator			1		i		

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 3/7/2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 01/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered			
						Trade	Code	No.	Type	Working			Idling	
			No.	ID	No.					ID	Code	Description	Quantity	
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement												
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement												
08:00 - 18:00	Area I - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	1									

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

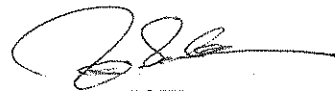
Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 3/7/2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
Fine Fine ST 0.5, TP 0

Typhoon / Warning Signal:
Nil

Contract No.: DC/2009/22 Date: 02/07/2012
Day: Monday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff No.	Labour Code No.	Labour Code No.	Plant Type	No. Working	No. Idle
Comments by Engineer's / Contractor's Representative		Asphalter (Other Construction)	C301	Chainman	C401	
		Asphalter (Roadworks)	C302	Concreting Labourer	C402	
		Bamboo Scaffolder	C303	Diver's Linesman / Dredger Crew / Barge Crew	C403	
		Bar Bender & Fixer	C304	Excavator	C404	
		Bricklayer	C305	Heavy Load Labourer	C405	
		Carpenter (Fender)	C306	Labourer (male / female) / Lorry checker / Watchman Office attendant	C406	4
		Carpenter (Formwork)	C307	Sewermain	C407	
		Concrete Repairer	C308	Automation Equipment Mechanic	E301	
		Concretor	C309	Building Services Mechanic	E302	
		Construction Plant Mechanic	C310	Cable Joints (Power)	E303	
		Curtain Wall Installer	C311	Carpenter	E304	
		Demolition Worker	C312	Electrician/Electrical Fitter	E305	
		Diver	C313	Fire Services Mechanic	E306	
		Drainlayer	C314	Instrument Mechanic	E307	
		Electrician (Main Contractor's)	C315	Lift Electrician	E308	
		Floor Layer	C316	Lift Mechanic	E309	
		Gas Plumber	C317	Mechanical Fitter	E310	
		General Welder	C318	Overhead Linesman	E311	
		Glazier	C319	Painter	E312	
		Ground Investigation Operator/Driller/Borer	C320	Plumber and Pipe Fitter	E313	
	Grouting Worker	C321	Refrigeration/AC/Ventilation Mechanic	E314		
	Joiner	C322	Sheet Metal Worker	E315		
	Leveller	C323	Sign Fabricator	E316		
	Marble Worker	C324	Sign Installer	E317		
	Marine Construction Plant Operator	C325	Thermal Insulation Craftsman	E318		
	Mason	C326	Welder	E319		
	Metal Scaffolder	C327	Labourer	E401		
	Metal Worker	C328	Semi-skilled Worker	E402		
	Painter & Decorator	C329	Technician	T		
	Piling Operative	C330				
	Pipelayer	C331				
	Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332				
	Plant & Equipment Operator (Earthmoving Machinery)	C333				
	Plant and Equipment Operator (Hoist and Crane)	C334				
	Plant and Equipment Operator (Piling)	C335				
	Plant and Equipment Operator (Tunnelling)	C336				
	Plasterer	C337				
	Plumber	C338				
	Pneumatic Driller	C339				
	Prestressing Operative	C340				
	Rigger/Metal Formwork Erector	C341				
	Shotcretor	C342				
	Shotfirer	C343				
	Slope Maintenance Worker	C344				
	Structural Steel Erector	C345				
	Structural Steel Welder	C346				
	Tiler	C347				
	Trackworker	C348				
	Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349				
	Window Frame Installer	C350				
	Total					
	Assistance to Engineer	No.				
	Driver	1				
	Watchman	1				
	Total	2				
			(To be continued)			
			Total Labour		4	
						Total
					7	16

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: *Andrew Lau*
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date: _____

Signed: *Wong Ching Lung*
Contractor's Representative
Wong Ching Lung / Site Agent
Date: _____

Signed: *Tso Sai Kuen*
IOW
Tso Sai Kuen / Inspector of Works
Date: 3-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 02/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
	Area A - Pump Station	No activity as per KLKJV arrangement				Backhoe			1	EX28	i		
						Backhoe			1	EX47	i		
						Backhoe			1	EX50	i		
						Steel Bending Machine			3		i		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 23:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 M/Lab. from area I)	Labourer (female)	C406	3	Backhoe			1	EX36	i		
						Backhoe			1	EX39	i		
						Backhoe with Vibrating Hammer			1	EX48	i		
						Water Pump 50mm	2						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH130-CH280)	No activity as per KLKJV arrangement				Backhoe			1	EX25	i		
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Backhoe			1	EX46	i		
						Generator			1		i		
						Water Pump 50mm			1		i		
						Water Pump 75mm			1		i		
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area E - Siu Lek Yuen Rd. Playground	No activity as per KLKJV arrangement				Backhoe			1	EX21	i		
						Generator			1		i		

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 3-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 02/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 3-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Fine Fine ST 0, TP 0

Typhoon / Warning Signal:
Very Hot Weather Warning - 13:45~24:00

Contract No.: DC/2009/22 Date: 03/07/2012
Day: Tuesday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Backhoe	5	1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe with Vibrating Hammer	2	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Blower	1	
	CEG	1	Bar Bender & Fixer	C304	5	Excavator	C404		Dump Truck	4	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	30	Grab Lorry	1	
	Environmental Officer	1	Carpenter (Formwork)	C307		Sewerman	C407		Oxy-Acetylene	3	1
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Steel Bending Machine	3	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Water Pump 50mm	8	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Water Pump 75mm	3	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Welding Set	3	1
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305				
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5						
			Plant and Equipment Operator (Hoist and Crane)	C334	2						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337	2						
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	5						
			Window Frame Installer	C350							
	Total	20									
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									
			(To be continued)								
						Total Labour		52	Total	35	3

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:
IOW

Tso Sai Kuen / Inspector of Works

Date: 4-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 03/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Rendering and plastering to walls inside transformer room Welding the hoarding frameworks to sheetpile post & removing PC block footings Modification of access gate Laying G.I concealed conduits to wall formwork of store room General housekeeping Cutting & bending reinforcement bars for beams and roof of store room at bending yard	Bar Bender & Fixer	C304	5	Backhoe	1	EX28					
			Labourer (female)	C406	3	Backhoe with Vibrating Hammer	1	EX47					
			Labourer (male)	C406	4	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Steel Bending Machine	3						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	2						
			Plasterer	C337	2	Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 90-95 Fabricating temporary working platform over Ø2100 pipe trench at road level Excavation of Ø2100 pipe trench at Ch. 115-120 and cart away excavated materials to temporary stockpiling area at D.D.12, Tung Tsz road (8 truckloads)	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (female)	C406	1	Backhoe			1	EX39	h		
			Labourer (male)	C406	2	Backhoe with Vibrating Hammer	1	EX48					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Grab Lorry	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
			Truck Driver	C349	1	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Excavating for box culvert and fabricating 2nd layer I-beam walings & struts for shoring Bay 12 & 13 - Excavating for box culvert to formation level Cart away excavated material to temporary stockpiling area at D.D. 12, Tung Tsz Road (18 truckloads) Cart away excavated material to contract 2 DC/2010/02 (10 truckloads)	General Welder	C318	2	Backhoe	1	EX36					

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 4-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 03/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered	
						Type	Working		Idling			
			Trade	Code	No.		No.	ID	No.	ID	Code	Description
			Labourer (male)	C406	4	Backhoe	1	EX42				
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Dump Truck	3					
			Truck Driver	C349	3	Generator	1					
						Oxy-Acetylene	1					
						Welding Set	1					
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Cleaning up sediments from wheel washing bay General housekeeping	Labourer (male)	C406	1	Water Pump 50mm	1					
						Water Pump 75mm	1					
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Water Pump 50mm	1					
08:00 - 18:00	Area C - Shallow Marshy Area	Tree planting to replace topping trees at ECA (Total :63 nos)	Labourer (female)	C406	6							
			Labourer (male)	C406	2							
08:00 - 18:00	Area E - Siu Lek Yuen Rd.Playground	PL 1603.1 - Driving sheetpiles for shoring and excavating for pipe trench at Ch. 11~16 Cart away excavated materials to area B (5 Truckloads)	Labourer (male)	C406	2	Backhoe	1	EX21				
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1					
			Truck Driver	C349	1	Dump Truck	1					
						Generator	1					
						Oxy-Acetylene			1		h	
						Water Pump 50mm	1					
						Water Pump 75mm	1					
						Welding Set			1		h	
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement										
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement										
08:00 - 18:00	Area I - Contractor Office	Office cleaning	Labourer (male)	C406	2							

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 4-7-2012

AECOM ASIA COMPANY LTD.

ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
 Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
 Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
 Fine Fine ST 0, TP 0

Typhoon / Warning Signal:
 Very Hot Weather Warning - 00:00~19:45

Contract No.: DC/2009/22 Date: 04/07/2012
 Day: Wednesday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Backhoe
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Dump Truck
	CEG	1	Bar Bender & Fixer	C304	5	Excavator	C404		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Grab Lorry
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	25	
	Environmental Officer	1	Carpenter (Formwork)	C307	2	Sewerman	C407		Steel Bending Machine
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Water Pump 75mm
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308		
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309		
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310		
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311		
			Glazier	C319		Painter	E312		
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313		
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314		
			Joiner	C322		Sheet Metal Worker	E315		
			Leveller	C323		Sign Fabricator	E316		
			Marble Worker	C324		Sign Installer	E317		
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318		
			Mason	C326		Welder	E319		
			Metal Scaffolder	C327		Labourer	E401		
			Metal Worker	C328		Semi-skilled Worker	E402		
			Painter & Decorator	C329		Technician	T		
			Piling Operative	C330					
			Pipelayer	C331					
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5				
			Plant and Equipment Operator (Hoist and Crane)	C334	2				
			Plant and Equipment Operator (Piling)	C335					
			Plant and Equipment Operator (Tunnelling)	C336					
			Plasterer	C337	1				
			Plumber	C338					
			Pneumatic Driller	C339					
			Prestressing Operative	C340					
			Rigger/Metal Formwork Erector	C341					
			Shotcretor	C342					
			Shotfirer	C343					
			Slope Maintenance Worker	C344					
			Structural Steel Erector	C345					
			Structural Steel Welder	C346					
			Tiler	C347					
			Trackworker	C348					
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	4				
			Window Frame Installer	C350					
	Total	20							
	Assistance to Engineer	No.							
	Amah	1							
	Coordinate Engineer	1							
	Drafting Assistant	1							
	Driver	2							
	Field Assistant	3							
	Office Assistant	1							
	Watchman	1							
	Total	10							
			(To be continued)						
						Total Labour		47	
									Total
									33
									6

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:

 IOW

Tso Sai Kuen / Inspector of Works

Date: 5-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 04/07/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Rendering and plastering to walls and ceiling at transformer room Forming haul road and modification of hoarding to facilitate construction of 1200Ø drain pipe Laying G.I. concealed conduits at wall formwork of store room Rebar fixing for ground beams AB1-AB4 & AB11-AB13 of discharge chamber Formwork shuttering for walls of store room Cleaning up sediments from wheel washing bay and general housekeeping	Bar Bender & Fixer	C304	5	Backhoe	1	EX28					
			Carpenter (Formwork)	C307	2	Backhoe with Vibrating Hammer			1	EX47	h		
			Labourer (female)	C406	3	Oxy-Acetylene	1						
			Labourer (male)	C406	8	Steel Bending Machine			3		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
			Plasterer	C337	1	Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 90-95 Fabricating M.S. brackets to support the existing watermain Excavating for Ø2100 pipe trench at Ch.115-120 and cart away excavated materials to temporary stockpiling area at D.D. 12, Tung Tsz Road. (5 truckloads)	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	Backhoe			1	EX39	h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Backhoe with Vibrating Hammer	1	EX48					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Grab Lorry	1						
			Truck Driver	C349	1	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Excavating for box culvert and fabricating 2nd layer I-beam struts & walings for shoring Bay 12 & 13 - Excavating for box culvert to formation level Cart away excavated material to temporary stockpiling area at D.D.12, Tung Tsz Road (18 truckloads) Cart away excavated material to contract 2 DC/2010/02 (10 truckloads)	General Welder	C318	2	Backhoe	1	EX36					

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 5-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 04/07/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
			Labourer (male)	C406	4	Backhoe	1	EX42					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Dump Truck	3						
			Truck Driver	C349	3	Generator	1						
						Oxy-Acetylene	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 6 - Extracting sheetpiles from shoring General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	2	Backhoe with Vibrating Hammer	1	EX23					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PI. 1603.1 - Trench excavation to formation and placing blinding concrete at Ch. 11~16	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 5-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Shower Shower ST 30, TP 30

Typhoon / Warning Signal:
Thunderstorm Warning - 02:50~04:00, 04:25~06:30 & 07:25~1600
Amber - 09:20~10:20

Contract No.: DC/2009/22 Date: 05/07/2012
Day: Thursday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Backhoe	5	1	
	Chairman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe with Vibrating Hammer	3		
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Crane Lorry	1		
	CEG	1	Bar Bender & Fixer	C304	5	Excavator	C404		Dump Truck	3		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	25	Oxy-Acetylene	5	1	
	Environmental Officer	1	Carpenter (Formwork)	C307	2	Sewermain	C407		Steel Bending Machine		3	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Water Pump 50mm	8		
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Water Pump 75mm	3		
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Welding Set	4		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304					
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305					
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306					
	Project Quantity Surveyor	1	Drainlayer	C314	1	Instrument Mechanic	E307					
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5							
			Plant and Equipment Operator (Hoist and Crane)	C334	4							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337	2							
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	3							
			Window Frame Installer	C350								
	Total	20				Total Labour		50	Total	34	5	
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant	1										
	Watchman	1										
	Total	10										

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date:

Signed:
Contractor's Representative
Name/Post: Wong Ching Lung / Site Agent
Date:

Signed:
IOW
Name/Post: Tso Sai Kuen / Inspector of Works
Date: 6-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 05/07/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Rebar fixing for ground beams AB1~AB4 & AB11~AB13 of discharge chamber Formwork shuttering for walls (W16 & W17) of store room Laying G.I. concealed conduit at wall formwork of store room Driving sheetpiles shoring for construction of manhole MH06 Cleaning up sediments from wheel washing bay and general housekeeping	Bar Bender & Fixer	C304	5	Backhoe	1	EX28					
			Carpenter (Formwork)	C307	2	Backhoe			1	EX39	h		
			Labourer (female)	C406	2	Backhoe with Vibrating Hammer	1	EX47					
			Labourer (male)	C406	4	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Steel Bending Machine			3		h		
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Rendering and plastering to walls and ceiling at transformer room Painting bonding agent to walls at switchroom	Labourer (female)	C406	1								
			Labourer (male)	C406	2								
			Plasterer	C337	2								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for Ø2100 pipe trench shoring at Ch. 85~90 Excavating for Ø2100 pipe trench at Ch. 115~120 and fabricating 1st layer I-beam walings & struts for shoring	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX48					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						

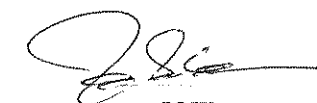
Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
 Name/Post: Andrew Lau/Resident Engineer
 Date: _____

Signed: _____
Contractor's Representative
 Name/Post: Wong Ching Lung / Site Agent
 Date: _____

Signed: 
IOW
 Name/Post: Tso Sai Kuen / Inspector of Works
 Date: 6-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 05/07/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Excavating for box culvert and fabricating 2nd layer I-beam walings & struts for shoring Bay 12 & 13 - Excavating for box culvert to formation level, laying geotextile membrane and rubble mound Cart away excavated materials to temporary stockpiling area at D.D. 12, Tung Tsz Road (27 truckloads)	General Welder	C318	2	Backhoe	1	EX36					
			Labourer (male)	C406	3	Backhoe	1	EX42					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Dump Truck	3						
			Truck Driver	C349	3	Generator	1						
						Oxy-Acetylene	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 6 -Extracting sheetpiles from trench shoring General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	2	Backhoe with Vibrating Hammer	1	EX23					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
13:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Erecting tubular scaffolding as working platform for pipe jacking operation	Labourer (male)	C406	2	Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Laying and jointing 1650Ø concrete pipes at Ch.10-15	Drainlayer	C314	1	Backhoe	1	EX21					
			Labourer (male)	C406	3	Crane Lorry	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
			Water Pump 75mm	1									
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 6-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: AM PM Rainfall (mm)
Fine Fine ST 5, TP 10

Typhoon / Warning Signal:
Nil

Contract No.: DC/2009/22 Date: 06/07/2012
Day: Friday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Backhoe	5	1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe with Vibrating Hammer	3	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Dump Truck	2	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Generator	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Oxy-Acetylene	5	1
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	30	Steel Bending Machine		3
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Sewerman	C407		Water Pump 50mm	8	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Water Pump 75mm	3	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Welding Set	4	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303				
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304				
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305				
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5						
			Plant and Equipment Operator (Hoist and Crane)	C334	3						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337	2						
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347	1						
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	2						
			Window Frame Installer	C350							
	Total	20									
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									
			(To be continued)								
						Total Labour		50	Total	32	5

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: *Andrew Lau*
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date: _____

Signed: *Wong Ching Lung*
Contractor's Representative
Name/Post: Wong Ching Lung / Site Agent
Date: _____

Signed: *Tso Sai Kuen*
IOW
Name/Post: Tso Sai Kuen / Inspector of Works
Date: 9-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 06/07/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Formwork shuttering for ground beams AB1-AB4 & AB11-AB13 of discharge chamber Formwork shuttering for walls (W16 & W17) of store room Laying G.I concealed conduits at wall formwork of store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06~ box culvert bay 20 Forming haul road and general housekeeping	Carpenter (Formwork)	C307	4	Backhoe	1	EX28					
			Labourer (female)	C406	2	Backhoe			1	EX39	h		
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX47					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Rendering and plastering to walls and ceiling, laying wall tiles at transformer room Rendering to walls and ceiling at switchroom	Labourer (female)	C406	1								
			Labourer (male)	C406	5								
			Plasterer	C337	2								
			Tiler	C347	1								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 85~90 Excavating for Ø2100 pipe trench at Ch. 110~120 and fabricating 1st layer I-beam waling & struts for shoring	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX48					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 8-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 06/07/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Excavating for box culvert and fabricating 2nd layer I-beam struts and walings for shoring Bay 13 - Laying geotextile membrane and rubble mound, then placing blinding concrete Cart away excavated material to temporary stockpiling area at D.D.12, Tung Tsz Road (15 truckloads)	General Welder	C318	2	Backhoe	1	EX36					
			Labourer (male)	C406	5	Backhoe	0.5	EX42					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1.5	Dump Truck	2						
			Truck Driver	C349	2	Generator	1						
						Oxy-Acetylene	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 6 - Extracting sheetpiles from trench shoring Bay 5 - Backfilling box culvert trench General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	2	Backhoe	0.5	EX42					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	0.5	Backhoe with Vibrating Hammer	1	EX23					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Erecting tubular scaffolding as working platform for pipe jacking operation	Labourer (male)	C406	3	Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Backfilling type A & type B granular materials to surround 1650Ø PC pipes at Ch.10~15	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
			Water Pump 75mm	1									
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 9-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Fine Fine ST 0.5, TP 10

Typhoon / Warning Signal:
Very Hot Weather Warning - 14:55~24:00

Contract No.: DC/2009/22 Date: 07/07/2012
Day: Saturday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	4	2
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	3	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Dump Truck	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	28	Oxy-Acetylene	5	1
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Sewerman	C407		Steel Bending Machine		3
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Water Pump 50mm	8	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Water Pump 75mm	3	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Welding Set	4	1
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304				
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305				
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	4						
			Plant and Equipment Operator (Hoist and Crane)	C334	3						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337	2						
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347	1						
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	2						
			Window Frame Installer	C350							
	Total	20	(To be continued)			Total Labour		47	Total	31	8
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 9-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 07/07/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered			
						Type	Working		Idling					
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity	
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement												
08:00 - 18:00	Area A - Pump Station	Formwork shuttering for ground beams AB1-AB4 & AB11-AB13 of discharge chamber Formwork shuttering for walls (W16 & W17) at store room Laying G.I concealed conduits on wall formwork of store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06-box culvert bay 20 Cleaning up sediments from wheel washing bay Cleaning up cable trenches at switchroom	Carpenter (Formwork)	C307	4	Backhoe			i	EX28	h			
			Labourer (female)	C406	2	Backhoe			1	EX39	h			
			Labourer (male)	C406	4	Backhoe with Vibrating Hammer	1	EX47						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1							
						Steel Bending Machine			3		h			
						Water Pump 50mm	2							
						Water Pump 75mm	1							
						Welding Set	1							
08:00 - 18:00	Area A - Pump Station	Plastering to walls and ceiling at transformer room and switchroom Laying wall tiles at transformer room	Labourer (female)	C406	1									
			Labourer (male)	C406	3									
			Plasterer	C337	2									
			Tiler	C347	1									
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement												
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/lab.)	Labourer (female)	C406	3									
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 85-90 Excavating for Ø2100 pipe trench at Ch. 110-120 and fabricating 1st layer I-beam walings & struts	General Welder	C318	1	Backhoe	1	EX50						
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX48						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1							
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	2							
						Welding Set	1							
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1							


Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
 Name/Post: Andrew Lau/Resident Engineer
 Date: _____

Signed: _____
Contractor's Representative
 Wong Ching Lung / Site Agent
 Date: _____

Signed: 
IOW
 Tso Sai Kuen / Inspector of Works
 Date: 9-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

Contract No.: DC/2009/22 Date: 07/07/2012

a Breakdown

e Bad Weather

b Standby

f Task Completed

c Awaiting Instruction

g No Operator

d Assemble/Disassemble

h Not Required

i Sunday/Public Holiday

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
			Trade	Code	No.	Type	Working		Idling			Description	Quantity
							No.	ID	No.	ID	Code		
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Excavating for box culvert and fabricating 2nd layer I-beam struts and walings for shoring Bay 12 - Excavating for box culvert to formation Cart away excavated materials to temporary stockpile area at D.D. 12, Tung Tsz Road (20 truckloads)	General Welder	C318	2	Backhoe	1	EX36					
			Labourer (male)	C406	5	Backhoe	1	EX42					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Dump Truck	2						
			Truck Driver	C349	2	Generator	1						
						Oxy-Acetylene	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 5 & 6 - Extracting sheetpiles from shoring General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	2	Backhoe with Vibrating Hammer	1	EX23					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Erecting tubular scaffolding as working platform for grouting operation	Labourer (male)	C406	3	Air Compressor			1		h		
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Backfilling to pipe trench at Ch. 10~15 Footpath diversion at Ch. 19 to facilitate trench excavation	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
			Welding Set				1		h				
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 8-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Fine Shower ST 2, TP 10

Typhoon / Warning Signal:
Thunderstorm Warning - 12:32~14:45
Very Hot Weather Warning - 00:00~24:00

Contract No.: DC/2009/22 Date: 08/07/2012
Day: Sunday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant
			Asphalter (Other Construction)	C301		Chainman	C401		Backhoe
			Asphalter (Roadworks)	C302		Concreting Labourer	C402		
			Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Generator
			Bar Bender & Fixer	C304		Excavator	C404		
			Bricklayer	C305		Heavy Load Labourer	C405		Water Pump 50mm
			Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	4	
			Carpenter (Formwork)	C307		Sewerman	C407		
			Concrete Repairer	C308		Automation Equipment Mechanic	E301		
			Concretor	C309		Building Services Mechanic	E302		
			Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		
			Curtain Wall Installer	C311		Carpenter	E304		
			Demolition Worker	C312		Electrician/Electrical Fitter	E305		
			Diver	C313		Fire Services Mechanic	E306		
			Drainlayer	C314		Instrument Mechanic	E307		
			Electrician (Main Contractor's)	C315		Lift Electrician	E308		
			Floor Layer	C316		Lift Mechanic	E309		
			Gas Plumber	C317		Mechanical Fitter	E310		
			General Welder	C318		Overhead Linesman	E311		
			Glazier	C319		Painter	E312		
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313		
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314		
			Joiner	C322		Sheet Metal Worker	E315		
			Leveller	C323		Sign Fabricator	E316		
			Marble Worker	C324		Sign Installer	E317		
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318		
			Mason	C326		Welder	E319		
			Metal Scaffolder	C327		Labourer	E401		
			Metal Worker	C328		Semi-skilled Worker	E402		
			Painter & Decorator	C329		Technician	T		
			Piling Operative	C330					
			Pipelayer	C331					
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332					
			Plant & Equipment Operator (Earthmoving Machinery)	C333					
			Plant and Equipment Operator (Hoist and Crane)	C334					
			Plant and Equipment Operator (Piling)	C335					
			Plant and Equipment Operator (Tunnelling)	C336					
			Plasterer	C337					
			Plumber	C338					
			Pneumatic Driller	C339					
			Prestressing Operative	C340					
			Rigger/Metal Formwork Erector	C341					
			Shotcretor	C342					
			Shotfirer	C343					
			Slope Maintenance Worker	C344					
			Structural Steel Erector	C345					
			Structural Steel Welder	C346					
			Tiler	C347					
			Trackworker	C348					
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349					
			Window Frame Installer	C350					
			Total			Total Labour		4	Total
			Assistance to Engineer	No.					
			Driver	1					
			Watchman	1					
			Total	2		(To be continued)			7

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date:

Signed:
Contractor's Representative
Name/Post: Wong Ching Lung / Site Agent
Date:

Signed:
IOW
Name/Post: Tso Sai Kuen / Inspector of Works
Date: 9-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 08/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
	Area A - Pump Station	No activity as per KLKJV arrangement				Backhoe			1	EX28	i		
						Backhoe			1	EX39	i		
						Backhoe with Vibrating Hammer			1	EX47	i		
						Steel Bending Machine			3		i		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/lab.)	Labourer (female)	C406	3	Backhoe			1	EX50	i		
18:00 - 20:00		Manual control of temporary traffic light for traffic flow regulation (1 M/Lab. from Area I)				Backhoe with Vibrating Hammer			1	EX48	i		
						Water Pump 50mm	2						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH130-CH280)	No activity as per KLKJV arrangement				Backhoe			1	EX36	i		
						Backhoe			1	EX42	i		
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Backhoe with Vibrating Hammer			1	EX23	i		
						Generator			1		i		
						Water Pump 50mm			1		i		
						Water Pump 75mm			1		i		
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area E - Siu Lek Yuen Rd. Playground	No activity as per KLKJV arrangement				Backhoe			1	EX21	i		
						Generator			1		i		

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 9-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 08/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 9-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
Fine Fine ST 0, TP 0

Typhoon / Warning Signal:
Very Hot Weather Warning - 00:00~24:00

Contract No.: DC/2009/22 Date: 09/07/2012
Day: Monday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	4	2	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	3		
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Blower	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Crane Lorry	1		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	33	Dump Truck	2		
	Environmental Officer	1	Carpenter (Formwork)	C307	6	Sewermain	C407		Generator	2		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Oxy-Acetylene	5	1	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Steel Bending Machine		3	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Water Pump 50mm	8		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 75mm	3		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	4		
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306					
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311					
			Glazier	C319		Painter	E312	1				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	4							
			Plant and Equipment Operator (Hoist and Crane)	C334	4							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337	1							
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347	1							
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	2							
			Window Frame Installer	C350								
	Total	20										
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant	1										
	Watchman	1										
	Total	10										
			(To be continued)									
						Total Labour		55				
										Total	33	7

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

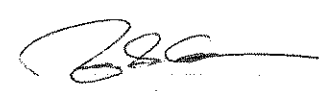
Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Wong Ching Lung / Site Agent
Date: _____

Signed: 
IOW
Tso Sai Kuen / Inspector of Works
Date: 10-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 09/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Formwork shuttering for ground beams AB1-AB4 & AB11-AB13 of discharge chamber Formwork shuttering for walls (W16 & W17) at store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06~box culvert bay 20 Scabbling C.J at roof slab Cleaning up cable trenches at switchroom	Carpenter (Formwork)	C307	4	Backhoe			1	EX28	h		
			Labourer (female)	C406	3	Backhoe			1	EX39	h		
			Labourer (male)	C406	4	Backhoe with Vibrating Hammer	1	EX47					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Plastering to walls and ceiling, laying wall tiles at transformer room Sanding plastered wall surface and ceiling at switchroom for painting	Labourer (female)	C406	1								
			Labourer (male)	C406	4								
			Painter	E312	1								
			Plasterer	C337	1								
			Tiler	C347	1								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 80~85 Excavating for box culvert at Ch. 100~120 and fabricating 1st layer I-beam struts & walings for shoring	General Welder	C318	1	Backhoe	1	EX50					
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX48					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 10-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 09/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Excavating for box culvert and fabricating 2nd layer I-beam struts & walings for shoring Bay 12 - Excavating for box culvert to formation level Cart away excavated materials to temporary stockpile area at D.D.12, Tung Tsz Road (16 truckloads) Bay 13 - Formwork shuttering for base slab	Carpenter (Formwork)	C307	2	Backhoe	1	EX36					
			General Welder	C318	2	Backhoe	1	EX42					
			Labourer (male)	C406	5	Dump Truck	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Generator	1						
			Truck Driver	C349	2	Oxy-Acetylene	2						
								Welding Set	2				
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 5 - Extracting sheetpiles from shoring General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	2	Backhoe with Vibrating Hammer	1	EX23					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Erecting tubular scaffolding as working platform for grouting operation Preparation works for pipe jacking	Labourer (male)	C406	3	Air Compressor			1		h		
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Trench excavation to expose underground utilities and driving sheetpiles for shoring at Ch.15-21	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Site Accommodation	Deliver construction materials from storage areas to various working areas	Labourer (male)	C406	3	Crane Lorry	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 10-7-2012

AECOM ASIA COMPANY LTD.

ENGINEER'S SITE DIARY

Client Department: Drainage Services Department

Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1

Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:

AM **PM** **Rainfall (mm)**
 Fine Fine ST 0, TP 0

Typhoon / Warning Signal:

Very Hot Weather Warning - 00:00~24:00

Contract No.: DC/2009/22 Date: 10/07/2012

Day: Tuesday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	5	1
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	3	
	CEG	1	Bar Bender & Fixer	C304	4	Excavator	C404		Blower	1	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	3	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	31	Generator	2	
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Sewermain	C407		Oxy-Acetylene	5	1
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Steel Bending Machine		3
	General Foreman	1	Concretor	C309	1	Building Services Mechanic	E302		Vibrating Prob	2	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Water Pump 50mm	8	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 75mm	3	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	5	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311				
			Glazier	C319		Painter	E312	1			
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5						
			Plant and Equipment Operator (Hoist and Crane)	C334	3						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337	1						
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347	1						
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	3						
			Window Frame Installer	C350							
	Total	20	(To be continued)			Total Labour		57	Total	37	6
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:

Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date:

Signed:

Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:

Tso Sai Kuen
IOW

Tso Sai Kuen / Inspector of Works

Date:

11-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 10/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Concreting for ground beams AB1-AB4 & AB11-AB13 of discharge chamber (Total:48 cuM) Formwork shuttering for walls (W16 & W17) of store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06-box culvert bay 20 General housekeeping	Carpenter (Formwork)	C307	4	Backhoe	1	EX28					
			Concretor	C309	1	Backhoe			1	EX39	h		
			Labourer (female)	C406	3	Backhoe with Vibrating Hammer	1	EX47					
			Labourer (male)	C406	5	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Steel Bending Machine			3		h		
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Vibrating Prob	2						
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Plastering to walls and ceiling, laying wall tiles at transformer room Painting sealer to walls and ceiling at switchroom	Labourer (female)	C406	1								
			Labourer (male)	C406	3								
			Painter	E312	1								
			Plasterer	C337	1								
			Tiler	C347	1								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 80-85 Excavating for Ø2100 pipe trench at Ch. 100-110 and fabricating 1st layer I-beam struts and walings for shoring Cart away excavated materials to temporary stockpile area at D.D.12, Tung Tsz Road (5 truckloads)	General Welder	C318	1	Backhoe	1	EX50					
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX48					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
			Truck Driver	C349	1	Water Pump 50mm	2						
						Welding Set	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 11-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 10/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Excavating for box culvert and fabricating 2nd layer I-beam struts and walings for shoring Bay 12 - Excavating for box culvert to formation level Cart away excavated materials to temporary stockpiling area at D.D. 12, Tung Tsz Road (17 truckloads) Bay 13 - Rebar fixing for base slab	Bar Bender & Fixer	C304	4	Backhoe	1	EX36					
			General Welder	C318	1.5	Backhoe	1	EX42					
			Labourer (male)	C406	5	Dump Truck	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Generator	1						
			Truck Driver	C349	2	Oxy-Acetylene	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 5 - Extracting sheetpiles from shoring and erecting temporary sheetpile decking over trench bay 4/5 junction General housekeeping & cleaning up sediments from wheel washing bay	General Welder	C318	0.5	Backhoe with Vibrating Hammer	1	EX23					
			Labourer (male)	C406	3	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Erecting tubular scaffolding as working platform for grouting	Labourer (male)	C406	3	Air Compressor			1		h		
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Trench excavation at Ch. 16~21 and fabricating walings & struts for shoring	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 11-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
Fine Fine ST 0, TP 0

Typhoon / Warning Signal:
Very Hot Weather Warning - 00:00~24:00

Contract No.: DC/2009/22 Date: 11/07/2012
Day: Wednesday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	4	2
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	3	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Blower	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	3	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman/Office attendant	C406	30	Generator	2	
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Sewerman	C407		Mini Generator	1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Oxy-Acetylene	5	1
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Steel Bending Machine		3
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Water Pump 50mm	8	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304	2	Water Pump 75mm	3	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	5	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	4						
			Plant and Equipment Operator (Hoist and Crane)	C334	3						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337	1						
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcrete	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	1						
			Window Frame Installer	C350							
	Total	20				Total Labour		48	Total	36	7
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date:

Signed:
Contractor's Representative
Name/Post: Wong Ching Lung / Site Agent
Date:

Signed:
IOW
Name/Post: Tso Sai Kuen / Inspector of Works
Date:

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 11/07/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Plastering to walls and ceiling at switch room	Labourer (male)	C406	2								
			Plasterer	C337	1								
08:00 - 18:00	Area A - Pump Station	Stripping off formwork from ground beams AB1-AB4 & AB11-AB13 of discharge chamber Formwork shuttering for walls (W16 & W17) of store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06~box culvert bay 20 General housekeeping	Carpenter (Formwork)	C307	4	Backhoe			1	EX28	h		
			Labourer (female)	C406	1	Backhoe			1	EX39	h		
			Labourer (male)	C406	6	Backhoe with Vibrating Hammer	1	EX47					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 80~85 Excavating for Ø2100 pipe trench at Ch. 100~110 and fabricating 1st layer I-beam struts & walings for shoring Cart away excavated materials to contract 2's temporary stockpile area at Tai Po Industrial Estate (4 truckloads)	General Welder	C318	1	Backhoe	1	EX50					
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX48					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
			Truck Driver	C349	1	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: _____
IOW

Tso Sai Kuen / Inspector of Works

Date: _____

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 11/07/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Excavating for box culvert and fabricating 2nd layer I-beam struts & walings for shoring Bay 12 - Excavating for box culvert to formation Bay 13 - Formwork shuttering for kickers at base slab Bay 10 - Driving sheetpiles for shoring Cart away excavated materials to Contract 2's temporary stockpiling area at Tai Po Industrial Estate (7 truckloads)	Carpenter	E304	2	Backhoe	1	EX36					
			General Welder	C318	1	Backhoe with Vibrating Hammer	1	EX23					
			Labourer (male)	C406	4	Dump Truck	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 5 - Erecting temporary sheetpile decking over trench at bay 4/5 junction General housekeeping & cleaning up sediments from wheel washing bay	General Welder	C318	1	Backhoe	1	EX42					
			Labourer (male)	C406	3	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Erecting tubular scaffolding as working platform for grouting	Labourer (male)	C406	3	Air Compressor			1		h		
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Trench excavation to formation level at Ch. 16~21	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area F - Lek Yuen Street Rest Garden	Concreting for 225 U-channel for reinstatement Installation of PVC feed pipe at upstream manhole for placing foam concrete into existing 1200Ø pipe	Labourer (male)	C406	3	Blower	1						
						Mini Generator	1						
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
 Name/Post: Andrew Lau/Resident Engineer
 Date: _____

Signed: _____
Contractor's Representative
 Wong Ching Lung / Site Agent
 Date: _____

Signed: _____
IOW
 Tso Sai Kuen / Inspector of Works
 Date: _____

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
Fine Fine ST 0, TP 0

Typhoon / Warning Signal:
Very Hot weather Warning - 00:00~19:45

Contract No.: DC/2009/22 Date: 12/07/2012
Day: Thursday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	6	1	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	3		
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Blower	2		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Coring Machine		1	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman/Office attendan	C406	33	Dump Truck	3		
	Environmental Officer	1	Carpenter (Formwork)	C307	2	Sewerman	C407		Generator	2		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Grout Machine		1	
	General Foreman	1	Concretor	C309	1	Building Services Mechanic	E302		Mini Generator	1		
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Oxy-Acetylene	6	1	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Steel Bending Machine		3	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Vibrating Prob	2		
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Water Pump 50mm	8		
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		Water Pump 75mm	3		
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308		Welding Set	4		
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	4	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	6							
			Plant and Equipment Operator (Hoist and Crane)	C334	3							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337	1							
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	3							
			Window Frame Installer	C350								
	Total	20				Total Labour		53	Total	40	8	
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant	1										
	Watchman	1										
	Total	10										

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 12/07/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Patching up tie bolt hole, backfilling between ground beams AB1-AB4 & AB11-AB13 for slab construction of discharge chamber Laying blinding concrete for base slab of discharge chamber Formwork shuttering for walls (W16 & W17) and erecting flamework for roof construction at store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06-box culvert bay 20 General housekeeping	Carpenter (Formwork)	C307	2	Backhoe	1	EX28					
			Labourer (female)	C406	3	Backhoe			1	EX39	h		
			Labourer (male)	C406	5	Backhoe with Vibrating Hammer	1	EX47					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Plastering to walls and ceiling at transformer room	Labourer (male)	C406	2								
			Plasterer	C337	1								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 75-80 Excavating for Ø2100 pipe trench at Ch. 100-110 and fabricating first layer I-beam walings & struts for shoring Cart away excavated materials to temporary stockpile area at D.D. 12, Tung Tsz Road (5 truckloads)	General Welder	C318	1	Backhoe	1	EX50					
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX48					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
			Truck Driver	C349	1	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 12/07/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
			Trade	Code	No.	Type	Working		Idling			Description	Quantity
							No.	ID	No.	ID	Code		
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 - Excavating for box culvert and fabricating 1st layer l-beam walings & struts for shoring Bay 11 - Excavating for box culvert to formation level Bay 12 - Excavating for box culvert to formation level, laying geotextile membrane and rubble mound Bay 13 - Concreting base slab of box culvert (Total:37.5cuM) Cart away excavated materials to temporary stockpile area at D.D.12 Tung Tsz Road (6 truckloads) Cart away excavated materials to pump station at Area A (8 truckloads)	Concretor	C309	1	Backhoe	1						
			General Welder	C318	2	Backhoe	1	EX36					
			Labourer (male)	C406	7	Backhoe	1	EX42					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	3	Dump Truck	2						
			Truck Driver	C349	2	Generator	1						
						Oxy-Acetylene	2						
						Vibrating Prob	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 5 - Extracting sheetpiles from shoring General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	2	Backhoe with Vibrating Hammer	1	EX23					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Flame cutting holes on sheetpile shoring for grouting	General Welder	C318	1	Air Compressor			1	AC04	h		
			Labourer (male)	C406	2	Coring Machine			1		h		
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PI 1603.1 - Trimming trench formation and placing blinding concrete at Ch. 16~21	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area F - Lek Yuen Street Rest Garden	Placing foam concrete into abandoned 1200Ø drainage pipe	Labourer (male)	C406	4	Blower	1						
						Mini Generator	1						
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 12/07/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area 1 - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

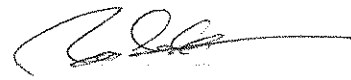
Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Fine Fine ST 10, TP 0.5

Typhoon / Warning Signal:
Nil

Contract No.: DC/2009/22 Date: 13/07/2012
Day: Friday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	6	2	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	3		
	CEG	1	Bar Bender & Fixer	C304	2	Excavator	C404		Blower	2		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Coring Machine	1		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	30	Crane Lorry	1		
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewerman	C407		Dump Truck	1		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Generator	2		
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Grout Machine		1	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joinder (Power)	E303		Mini Generator	1		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Oxy-Acetylene	6	1	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Steel Bending Machine		3	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Water Pump 50mm	8		
	Project Quantity Surveyor	1	Drainlayer	C314	1	Instrument Mechanic	E307		Water Pump 75mm	3		
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308		Welding Set	4	1	
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator: Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5							
			Plant and Equipment Operator (Hoist and Crane)	C334	4							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337	1							
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	1							
			Window Frame Installer	C350								
	Total	20										
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant											
	Watchman	1										
	Total	9										
			(To be continued)									
						Total Labour		50	Total	38	9	

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: _____
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 13/07/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Plastering to walls and ceiling at transformer room	Labourer (male)	C406	1								
			Plasterer	C337	1								
08:00 - 18:00	Area A - Pump Station	Rebar fixing for base slab of discharge chamber Erecting flasework and formwork shuttering for soffit of roof slab and beam of store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06~box culvert, bay 20 Cleaning up cable trenches and floor slab at transformer room General housekeeping	Bar Bender & Fixer	C304	2	Backhoe			1	EX28	h		
			Carpenter (Formwork)	C307	3	Backhoe	1	EX50					
			Labourer (female)	C406	3	Backhoe with Vibrating Hammer	1	EX47					
			Labourer (male)	C406	3	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Steel Bending Machine			3		h		
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating trench along shoring line to remove boulders and driving sheetpiles for Ø2100 pipe trench shoring at Ch. 70~75 Excavating for Ø2100 pipe trench at Ch. 100~110 and fabricating top layer I-beam walings & struts Cart away excavated materials to temporary stockpile area at D.D. 12, Tung Tsz Road (4 truckloads)	General Welder	C318	1	Backhoe	1	EX39					
			Labourer (male)	C406	3	Backhoe	1	EX51					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Backhoe with Vibrating Hammer	1	EX48					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Dump Truck	1						
			Truck Driver	C349	1	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 13/07/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 - Excavating for box culvert and fabricating 1st layer I-beam waling & struts for shoring Bay 11 - Excavating for box culvert to formation level Bay 12 - Laying geotextile membrane and rubble mound Bay 13 - Stripping off formwork from base slab Cart away excavated materials to Contract 2's temporary stockpile area at Tai Po Industrial Estate (15 truckloads)	General Welder	C318	2	Backhoe	1						
			Labourer (male)	C406	5	Backhoe	1	EX36					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Backhoe	1	EX42					
						Generator	1						
						Oxy-Acetylene	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	Bay 5 - Extracting sheetpiles from shoring General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	2	Backhoe with Vibrating Hammer	1	EX23					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting to pipe jacking route	Labourer (male)	C406	3	Air Compressor			1	AC04	h		
						Coring Machine	1						
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Laying and jointing 1650Ø concrete pipes at Ch. 15~20	Drainlayer	C314	1	Backhoe			1	EX21	h		
			Labourer (male)	C406	3	Blower	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Crane Lorry	1						
						Generator	1						
						Oxy-Acetylene			1				
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area F - Lek Yuen Street Rest Garden	Stripping off plug end formwork from abandoned 1200Ø drain pipe ends, making good the manhole wall surface Rendering to reinstate the 225 U-channel next to manhole cover	Labourer (male)	C406	4	Blower	1						
						Mini Generator	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 13/07/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
Shower Fine ST 10, TP 10

Typhoon / Warning Signal:
Thunderstorm Warning - 04:55-06:00 & 07:20-09:30

Contract No.: DC/2009/22 Date: 14/07/2012
Day: Saturday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	6	2	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	2		
	CEG	1	Bar Bender & Fixer	C304	3	Excavator	C404		Coring Machine	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Crane Lorry	1		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	23	Dump Truck	3		
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Sewermain	C407		Generator	2		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Grout Machine		1	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Oxy-Acetylene	5	1	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Steel Bending Machine		3	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 50mm	8		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 75mm	3		
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Welding Set	4		
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311					
			Glazier	C319		Painter	E312	2				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328	2	Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	6							
			Plant and Equipment Operator (Hoist and Crane)	C334	3							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337								
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	3							
			Window Frame Installer	C350								
	Total	20										
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	2										
	Office Assistant	1										
	Watchman	1										
	Total	9										
			(To be continued)									
						Total Labour		49	Total	35	8	

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: *Andrew Lau*
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Wong Ching Lung / Site Agent
Date: _____

Signed: *Tso Sai Kuen*
IOW
Tso Sai Kuen / Inspector of Works
Date: 16-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 14/07/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Rebar fixing for base slab and walls of discharge chamber Erecting flasework and formwork shuttering for soffit of roof slab and beams of store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06~box culvert bay 20 Cleaning up cable trenches and floor slab at transformer room General housekeeping Fixing 2 Nos. stainless steel doors at transformer room	Bar Bender & Fixer	C304	3	Backhoe			1	EX28	h		
			Carpenter (Formwork)	C307	4	Backhoe			1	EX39	h		
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	4	Backhoe with Vibrating Hammer	1	EX47					
			Metal Worker	C328	2	Crane Lorry	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	2	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Sanding the plastered wall face and painting sealer to walls and ceiling at transformer room	Labourer (male)	C406	1								
			Painter	E312	2								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 70~75 Excavating for Ø2100 pipe trench at Ch. 95~110 and fabricating 1st layer I-beam struts & walings for shoring Cart away excavated materials to temporary stockpiling area at D.D.12, Tung Tsz Road (5 truckloads)	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	Backhoe	1	EX51					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Backhoe with Vibrating Hammer	1	EX48					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Dump Truck	1						
			Truck Driver	C349	1	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 14/07/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 - Excavating for box culvert and fabricating 1st layer I-beam struts & walings for shoring Bay 11 - Excavating for box culvert to formation level Bay 12 - Laying geotextile membrane and rubble mound, then placing blinding concrete Cart away excavated materials to temporary stockpile area at D.D.12, Tung Tsz Road (16 truckloads)	General Welder	C318	2	Backhoe	1	EX25					
			Labourer (male)	C406	4	Backhoe	1	EX42					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Dump Truck	2						
			Truck Driver	C349	2	Generator	1						
						Oxy-Acetylene	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting General housekeeping	Labourer (male)	C406	3	Air Compressor			1	AC04	h		
						Coring Machine	1						
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
08:00 - 17:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Backfilling type A & type B granular bedding to surround the 1650Ø drain pipe at Ch. 15~20	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 15/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
	Area A - Pump Station	No activity as per KLKJV arrangement				Backhoe			1	EX28	i		
						Backhoe			1	EX39	i		
						Backhoe			1	EX47	i		
						Backhoe			1	EX50	i		
						Steel Bending Machine			3		i		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 M/Lab. from Area I)	Labourer (female)	C406	3	Backhoe			1	EX36	i		
						Backhoe			1	EX51	i		
						Backhoe with Vibrating Hammer			1	EX48	i		
						Water Pump 50mm	2						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH130-CH280)	No activity as per KLKJV arrangement				Backhoe			1	EX25	i		
						Backhoe			1	EX42	i		
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Water Pump 50mm			1		i		
						Water Pump 75mm			1		i		
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Air Compressor			1	AC04	i		
						Water Pump 50mm	1						
	Area E - Siu Lek Yuen Rd. Playground	No activity as per KLKJV arrangement				Backhoe			1	EX21	i		
						Generator			1		i		

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
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- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 15/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Fine Fine ST 5, TP 2

Typhoon / Warning Signal:
Very Hot Weather Warning - 07:45~17:45
Thunderstorm Warning - 11:40~12:45 & 19:00~22:45

Contract No.: DC/2009/22 Date: 16/07/2012
Day: Monday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	6	1	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	2		
	CEG	1	Bar Bender & Fixer	C304	1	Excavator	C404		Coring Machine	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	3		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	32	Generator	2		
	Environmental Officer	1	Carpenter (Formwork)	C307	2	Sewermain	C407		Grout Machine		1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Oxy-Acetylene	5	1	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Steel Bending Machine		3	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Water Pump 50mm	8		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 75mm	3		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	4	1	
	Project Manager	1	Diver	C313		Fire Services Mechanic	E306					
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318		Overhead Linesman	E311					
			Glazier	C319		Painter	E312	1				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelay	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	6							
			Plant and Equipment Operator (Hoist and Crane)	C334	2							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337								
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	3							
			Window Frame Installer	C350								
	Total	19				Total Labour		47	Total	34	8	
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant	1										
	Watchman	1										
	Total	10										

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: _____
IOW

Tso Sai Kuen / Inspector of Works

Date: 17-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
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- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 16/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Formwork shuttering for base slab and wall kickers of discharge chamber Erecting falsework and formwork shuttering for soffit of roof slab and beams of store room Driving sheetpiles for shoring of Ø1200 pipe trench between manhole MH06-box culvert bay 20 Cleaning up cable trenches at transformer room General housekeeping Fixing GMS angles at cable trench top for covers at transformer room	Carpenter (Formwork)	C307	2	Backhoe			1	EX28	h		
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	6	Backhoe with Vibrating Hammer	1	EX47					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Painting sealer and top coat on walls and ceiling at transformer room	Labourer (male)	C406	1								
			Painter	E312	1								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Driving sheetpiles for shoring of Ø2100 pipe trench at Ch. 70-75 Excavating for Ø2100 concrete pipe trench at Ch. 110-120 and fabricating 1st layer I-beam walings & struts Cart away excavated materials to Contract 2's temporary stockpile area at Tai Po Industrial Estate (8 truckloads)	Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	4	Backhoe	1	EX51					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Backhoe with Vibrating Hammer	1	EX48					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Dump Truck	1						
			Truck Driver	C349	1	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 17-7-2012

AECOM ASIA COMPANY LTD.

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- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 16/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 - Excavating for box culvert and fabricating 2nd layer I-beam walings & struts for shoring Bay 11 - Excavating for box culvert to formation level Cart away excavated materials to Contract 2's temporary stockpile area at Tai Po Industrial Estate (12 truckloads) Bay 12 - Cutting & bending reinforcement bars for base slab and walls at bending yard at Tai Po Industrial Estate	Bar Bender & Fixer	C304	1	Backhoe	1	EX25					
			Labourer (male)	C406	9	Backhoe	1	EX42					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Dump Truck	2						
			Truck Driver	C349	2	Generator	1						
						Oxy-Acetylene	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting to pipe jacking route General housekeeping	Labourer (male)	C406	3	Air Compressor			1	AC04	h		
						Coring Machine	1						
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
08:00 - 17:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Backfilling to pipe trench and extracting sheetpiles from shoring	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			1		h		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 17-7-2012

AECOM ASIA COMPANY LTD.

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- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 16/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area 1 - Contractor Office	No activity as per KKKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 17-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
Cloudy Fine ST 0.5, TP 5

Typhoon / Warning Signal:
Thunderstorm Warning - 06:25-07:30

Contract No.: DC/2009/22 Date: 17/07/2012
Day: Tuesday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	6	1	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer		1	
	CEG	1	Bar Bender & Fixer	C304	5	Excavator	C404		Coring Machine	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	3		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	24	Generator	2		
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Sewermain	C407		Grout Machine		1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Oxy-Acetylene	5	1	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Steel Bending Machine		3	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Water Pump 50mm	8		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 75mm	3		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	4	1	
	Project Manager	1	Diver	C313		Fire Services Mechanic	E306					
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	3	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator: Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328	2	Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5							
			Plant and Equipment Operator (Hoist and Crane)	C334								
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337								
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	3							
			Window Frame Installer	C350								
	Total	19	(To be continued)			Total Labour		46	Total	32	9	
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer											
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant	1										
	Watchman	1										
	Total	9										

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)


Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Wong Ching Lung / Site Agent
Date: _____

Signed: 
10W
Tso Sai Kuen / Inspector of Works
Date: 18-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 17/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Formwork shuttering for base slab and wall kickers of discharge chamber Formwork shuttering for soffit of roof slab and beams of store room Saw cutting to made 2nos. Ø1500 concrete cut length pipe for fixing at wall of discharge chamber Fixing angle frame at cable trench top for GMS cover at transformer room Preparation works for fixing lighting and cable conduits at transformer room General housekeeping	Carpenter (Formwork)	C307	3	Backhoe			1	EX28	h		
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	4	Backhoe with Vibrating Hammer			1	EX47	h		
			Metal Worker	C328	2	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating for Ø2100 pipe trench at Ch. 100-120 and fabricating 1st & 2nd layer l-beam walings & struts for shoring Cart away excavated materials to Contract 2's temporary stockpile area at Tai Po Industrial Estate (14 truckloads) Excavating to expose existing utilities at Ø2100 pipe trench, Ch. 70-80	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (female)	C406	1	Backhoe	1	EX51					
			Labourer (male)	C406	4	Dump Truck	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Truck Driver	C349	2	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						

Da/s record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: *Andrew Lau*
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date:

Signed: *Wong Ching Lung*
Contractor's Representative

Name/Post: Wong Ching Lung / Site Agent

Date:

Signed: *Tso Sai Kuen*
IOW

Name/Post: Tso Sai Kuen / Inspector of Works

Date: 18-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 17/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 - Excavating for box culvert and fabricating 2nd layer I-beam walings & struts for shoring Bay 11 - Excavating for box culvert to formation level Cart away excavated materials to temporary stockpile area at D.D.12, Tung Tsz Road. (8 truckloads) Bay 12 - Cutting & bending reinforcement bars for base slab and walls of box culvert at bending yard at Tai Po Industrial Area Formwork shuttering for base slab	Bar Bender & Fixer	C304	2	Backhoe	1	EX25					
			Carpenter (Formwork)	C307	1	Backhoe	1	EX42					
			General Welder	C318	2	Dump Truck	1						
			Labourer (male)	C406	4	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	2						
			Truck Driver	C349	1	Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes and inserting grouting tube into cored hole General housekeeping Rebar fixing for thrust wall	Bar Bender & Fixer	C304	3	Air Compressor			1	AC04	h		
			Labourer (male)	C406	3	Coring Machine	1						
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
08:00 - 17:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Breaking up concrete ramp to facilitate trench excavation	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			1		h		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____

Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____

Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: _____

IOW

Tso Sai Kuen / Inspector of Works

Date: 18-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: AM PM Rainfall (mm)
Shower Fine ST 50, TP 10

Typhoon / Warning Signal:
Amber - 06:10~08:20
Thunderstorm Warning - 01:30~11:00, 12:45~14:00 & 19:45~20:30

Contract No.: DC/2009/22 Date: 18/07/2012
Day: Wednesday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	5	1
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	1	
	CEG	1	Bar Bender & Fixer	C304	5	Excavator	C404		Blower	1	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Coring Machine	1	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	33	Crane Lorry	1	
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewermain	C407		Dump Truck	1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Generator	2	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		GROUT Machine		1
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Oxy-Acetylene	5	1
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Steel Bending Machine		3
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 50mm	8	
	Project Manager	1	Diver	C313		Fire Services Mechanic	E306		Water Pump 75mm	3	
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		Welding Set	4	1
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	2	Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5						
			Plant and Equipment Operator (Hoist and Crane)	C334	2						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337							
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	1						
			Window Frame Installer	C350							
	Total	19				Total Labour		51	Total	32	8
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	2									
	Office Assistant	1									
	Watchman	1									
	Total	9									

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: _____

19-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 18/07/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Driving sheetpiles for shoring and excavating for Ø1200 pipe trench between manhole MH06~box culvert bay 20 Preparing Ø1200 PC cut length pipe for recirculation system Preparing works for installation of lighting and cable conduits at transformer room Cleaning up sediments from wheel washing bay and general housekeeping	Carpenter (Formwork)	C307	3	Backhoe			1	EX28	h		
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	6	Backhoe with Vibrating Hammer	1	EX47					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating for Ø2100 pipe trench at Ch. 100~120 and fabricating 1st & 2nd layer I-beam Walings & struts for shoring Breaking up existing manhole and drain pipes at Ch. 70~80	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (female)	C406	1	Backhoe	1	EX51					
			Labourer (male)	C406	4	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH00-CH40)	Placing precast concrete blocks for footings of site hoarding at Ch. 0~15	Labourer (male)	C406	2	Crane Lorry	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1								
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 - Excavating for box culvert and fabricating 2nd layer I-beam struts for shoring Bay 11 - Excavating for box culvert to formation level Cart away excavated materials to temporary stockpile area at D.D. 12, Tung Tsz Road (6 truckloads) Bay 12 - Rebar fixing of base slab and walls	Bar Bender & Fixer	C304	5	Backhoe	1	EX25					

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 17-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 18/07/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
			General Welder	C318	1	Dump Truck	1						
			Labourer (male)	C406	3	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	2						
			Truck Driver	C349	1	Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting at pipe jacking route General housekeeping	Labourer (male)	C406	3	Air Compressor			1	AC04	h		
						Coring Machine	1						
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
08:00 - 18:00	Area C - Shallow Marshy Area	Shrubs planting at ECA	Labourer (female)	C406	3								
			Labourer (male)	C406	3								
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Trench excavation to expose underground utilities at Ch. 21~25 and driving sheetpiles for shoring Cart away 3 truckloads of excavated materials to Area B	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			1		h		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 19-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Fine Shower ST 5, TP 0

Typhoon / Warning Signal:
Thunderstorm Warning - 02:25~07:45 & 13:55~15:00
Very Hot Weather Warning - 07:45~24:00

Contract No.: DC/2009/22 Date: 19/07/2012
Day: Thursday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	6		
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	1		
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Blower	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Coring Machine	1		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman/Office attendant	C406	29	Dump Truck	3		
	Environmental Officer	1	Carpenter (Formwork)	C307	5	Sewerman	C407		Generator	2		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Grout Machine		1	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Oxy-Acetylene	5	1	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Steel Bending Machine		3	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 50mm	8		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 75mm	3		
	Project Manager	1	Diver	C313		Fire Services Mechanic	E306		Welding Set	4		
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	2	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	6							
			Plant and Equipment Operator (Hoist and Crane)	C334	1							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337	1							
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	3							
			Window Frame Installer	C350								
	Total	19										
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant	1										
	Watchman	1										
	Total	10										
			(To be continued)									
						Total Labour		47	Total	34	6	

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 19/07/2012

Day: Thursday


Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Driving sheetpiles for shoring and excavating for Ø1200 pipe trench between manhole MH06-box culvert bay 20 Laying Ø1200 PC cut length pipe for recirculation system and 2nos. Ø1500 PC cut length pipe for discharge pipe Formwork shuttering for wall kickers at discharge chamber Formwork shuttering for soffit of roof slab and beams of store room Cleaning up sediments from wheel washing bay and general housekeeping	Carpenter (Formwork)	C307	3	Backhoe	1	EX28					
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	6	Backhoe with Vibrating Hammer	1	EX47					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Fixing surface mounted cable conduits on walls at transformer room Rendering to cable trenches at transformer room	Labourer (male)	C406	3								
			Plasterer	C337	1								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating for Ø2100 pipe trench at Ch. 70~120 and fabricating 1st & 2nd layer I-beam walings & struts for shoring Cart away excavated materials to temporary stockpile area at D.D.12, Tung Tsz Road(15 truckloads)	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (female)	C406	1	Backhoe	1	EX51					
			Labourer (male)	C406	4	Dump Truck	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
			Truck Driver	C349	2	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Andrew Lau/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Name/Post: Wong Ching Lung / Site Agent
Date: _____

Signed: 
IOW
Name/Post: Tso Sai Kuen / Inspector of Works
Date: 20-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 19/07/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 - Excavating for box culvert and fabricating 2nd layer I-beam walings & struts for shoring Bay 11 - Excavating for box culvert to formation level Cart away excavated materials to temporary stockpile area at D.D.12, Tung Tsz Road (9 truckloads) Bay 12 - Formwork shuttering for wall kickers	Carpenter (Formwork)	C307	2	Backhoe	1	EX25					
			General Welder	C318	1	Dump Truck	1						
			Labourer (male)	C406	4	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	2						
			Truck Driver	C349	1	Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting to pipe jacking route General housekeeping	Labourer (male)	C406	3	Air Compressor			1	AC04	h		
						Coring Machine	1						
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Trench excavation to expose underground utilities	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Fine Fine ST 0, TP 0

Typhoon / Warning Signal:
Very Hot Weather Warning - 00:00~24:00
Thunderstorm Warning - 07:05~07:45 & 14:30~15:30

Contract No.: DC/2009/22 Date: 20/07/2012
Day: Friday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor			
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	7		1
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	1		
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Blower	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Coring Machine	1		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	32	Dump Truck	1		
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewerman	C407		Generator	2		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Grout Machine			1
	General Foreman	1	Concretor	C309	1	Building Services Mechanic	E302		Oxy-Acetylene	5		1
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Steel Bending Machine			3
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Vibrating Prob	2		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 50mm	8		
	Project Manager	1	Diver	C313		Fire Services Mechanic	E306		Water Pump 75mm	3		
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		Welding Set	4		1
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	2	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	7							
			Plant and Equipment Operator (Hoist and Crane)	C334	1							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337	1							
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	1							
			Window Frame Installer	C350								
	Total	19										
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant	1										
	Watchman	1										
	Total	10										
			(To be continued)									
						Total Labour		48	Total		35	7

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Andrew Lau
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date:

Signed:
Wong Ching Lung
Contractor's Representative

Name/Post: Wong Ching Lung / Site Agent

Date:

Signed:
Tso Sai Kuen
IOW

Name/Post: Tso Sai Kuen / Inspector of Works

Date:

23-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 20/07/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Driving sheetpiles for shoring and excavating for Ø1200 pipe trench between manhole MH06~box culvert bay 20 Formwork shuttering for wall kickers on base slab of discharge chamber Backfilling to form works area and site access outside transformer room Pre-pour cleaning for soffit for of roof of screen house Cleaning up sediments from wheel washing bay and general housekeeping	Carpenter (Formwork)	C307	3	Backhoe	1	EX28					
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	5	Backhoe with Vibrating Hammer	1	EX47					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Fixing surface mount cable conduits on walls at transformer room Rendering to cable trench at transformer room	Labourer (male)	C406	3								
			Plasterer	C337	1								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 ~ 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating for Ø2100 pipe trench at Ch. 70~120 and fabricating 1st & 2nd layer I-beam walings & stuts for shoring	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (female)	C406	1	Backhoe	1	EX51					
			Labourer (male)	C406	4	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 23-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 20/07/2012

Day: Friday


Time	Location	Activity	Labour			Plant					Material Delivered		
			Trade	Code	No.	Type	Working		Idling			Description	Quantity
							No.	ID	No.	ID	Code		
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 - Excavating for box culvert and fabricating 2nd layer I-beam walings & struts for shoring Bay 11 - Excavating for box culvert to formation Cart away excavated materials to temporary stockpile area at D.D.12, Tung Tsz Road (5 truckloads) Bay 12 - Concreting for base slab (Total:45 cuM)	Concretor	C309	1	Backhoe	1	EX08					
			General Welder	C318	1	Backhoe	1	EX25					
			Labourer (male)	C406	5	Dump Truck	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Generator	1						
			Truck Driver	C349	1	Oxy-Acetylene	2						
						Vibrating Prob	2						
						Welding Set	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting to pipe jacking route General housekeeping Erecting working platform for thrust wall construction	Labourer (male)	C406	5	Air Compressor			1	AC04	h		
						Coring Machine	1						
						Grout Machine			1			h	
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd.Playground	PL 1603.1 - trench excavation to expose underground utilities and driving sheetpiles for shoring at Ch. 21~25	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1			h	
						Water Pump 50mm	1						
						Water Pump 75mm	1						
			Welding Set				1			h			
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Eddie Luk/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Wong Ching Lung / Site Agent
Date: _____

Signed: 
IOW
Tso Sai Kuen / Inspector of Works
Date: 23-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: AM PM Rainfall (mm)
Fine Shower ST 5, TP 5

Typhoon / Warning Signal:
T1 - 15:40~24:00
Amber - 17:35~18:40
Thunderstorm Warning - 14:45~19:15 & 21:25~24:00
Very Hot Weather Warning - 00:00~19:45

Contract No.: DC/2009/22 Date: 21/07/2012
Day: Saturday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	7	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	1	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Blower	1	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Coring Machine	1	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman Office attendant	C406	31	Dump Truck	2	
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewermain	C407		Generator	2	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Grout Machine		1
	General Foreman	1	Concretor	C309	2	Building Services Mechanic	E302		Oxy-Acetylene	4	2
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Steel Bending Machine		3
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Vibrating Prob	2	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 50mm	8	
	Project Manager	1	Diver	C313		Fire Services Mechanic	E306		Water Pump 75mm	3	
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		Welding Set	5	2
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	2	Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	7						
			Plant and Equipment Operator (Hoist and Crane)	C334	1						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337							
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	2						
			Window Frame Installer	C350							
	Total	19									
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									
			(To be continued)			Total Labour		48	Total	36	9

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: *Andrew Lau*
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: *Wong Ching Lung*
Contractor's Representative

Name/Post: Wong Ching Lung / Site Agent

Date: _____

Signed: *Tso Sai Kuen*
IOW

Name/Post: Tso Sai Kuen / Inspector of Works

Date: 23-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 21/07/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Driving sheetpiles for shoring and excavation of Ø1200 pipe trench between manhole MH06-box culvert bay 20 Concreting for base slab of discharge chamber (Total: 49.3 cuM) Backfilling to form platform outside transformer room Formwork shuttering for walls and fixing tubular brace for falsework of store room Cleaning up sediments from wheel washing bay and general housekeeping	Carpenter (Formwork)	C307	3	Backhoe	1	EX28					
			Concretor	C309	2	Backhoe	1	EX50					
			Labourer (female)	C406	3	Backhoe with Vibrating Hammer	1	EX47					
			Labourer (male)	C406	6	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Steel Bending Machine			3		h		
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Vibrating Prob	2						
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Fixing surface conduits at transformer room	Labourer (male)	C406	3								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating for Ø2100 pipe trench at Ch. 70-120 and fabricating 1st & 2nd layer of I-beam walings & struts for shoring	General Welder	C318	2	Backhoe	1	EX36					
			Labourer (male)	C406	4	Backhoe	1	EX51					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	2						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 23-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 21/07/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10 & 11 - Excavating for box culvert to formation level Cart away excavated materials to temporary storage area at D.D. 12, Tung Tsz Road (6 truckloads) Laying geotextile membrane and rubble mound, then placing blinding layer Bay 12 - Stripping off formwork from base slab	Labourer (male)	C406	5	Backhoe	1	EX25					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1						
			Truck Driver	C349	1	Generator	1						
						Oxy-Acetylene	1		1		h		
						Welding Set	1		1		h		
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay Backfilling to form haul road with rockfill materials	Labourer (male)	C406	1	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1						
			Truck Driver	C349	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting to pipe jacking route General housekeeping Welding tie bolts for thrust wall construction	Labourer (male)	C406	4	Air Compressor			1	AC04	h		
						Coring Machine	1						
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Welding Set	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Excavating to expose underground irrigation pipe PL 1603.1 & 1602.1 - Re-routing the irrigation pipe inside pipe trench for temporary diversion	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
			Welding Set				1		h				
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 23-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 21/07/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area 1 - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 23-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 22/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
	Area A - Pump Station	No activity as per KLKJV arrangement				Backhoe			1	EX28	i		
						Backhoe			1	EX47	i		
						Backhoe			1	EX50	i		
						Steel Bending Machine			3		i		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 M/Lab. from Area I)	Labourer (female)	C406	3	Backhoe			1		i		
						Backhoe			1	EX36	i		
						Backhoe with Vibrating Hammer			1	EX51	i		
						Water Pump 50mm	2						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH130-CH280)	No activity as per KLKJV arrangement				Backhoe			1	EX08	i		
						Backhoe			1	EX25	i		
	Area B - Tang Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Water Pump 50mm			1		i		
						Water Pump 75mm			1		i		
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Air Compressor			1	AC04	i		
						Water Pump 50mm	1						
08:00 - 18:00	Area C - Shallow Marshy Area	Planting shrubs at ECA	Labourer (female)	C406	2								
			Labourer (male)	C406	3								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 23-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 22/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area E - Siu Lek Yuen Rd. Playground	No activity as per KLKJV arrangement				Backhoe			1	EX21	i		
						Generator			1		i		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Andrew Lau/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 23-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
Rainy Rainy ST 100, TP 100
(Hong Kong Observatory's record)

Typhoon / Warning Signal:
T1 - 00:00~05:20
T3 - 05:20~17:40
T8 - 17:40~23:20
T9 - 23:20~24:00

Contract No.: DC/2009/22 Date: 23/07/2012
Day: Monday

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chairman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	6	1	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	1		
	CEG	1	Bar Bender & Fixer	C304	3	Excavator	C404		Blower	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Coring Machine	2		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	28	Dump Truck	1		
	Environmental Officer	1	Carpenter (Formwork)	C307		Sewerman	C407		Generator	2		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Grout Machine		1	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Mobile Crane	1		
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joints (Power)	E303		Oxy-Acetylene	4	2	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Steel Bending Machine		3	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 50mm	8		
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Water Pump 75mm	3		
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		Welding Set	4	2	
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	1	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	6							
			Plant and Equipment Operator (Hoist and Crane)	C334	2							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337	1							
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	1							
			Window Frame Installer	C350								
	Total	20										
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	3										
	Office Assistant	1										
	Watchman	1										
	Total	10										
			(To be continued)									
						Total Labour		42	Total	33	10	

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)


Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Eddie Luk/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Wong Ching Lung / Site Agent
Date: _____

Signed: 
IOW
Tso Sai Kuen / Inspector of Works
Date: 24-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 23/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Driving sheetpiles for shoring and excavation of Ø1200 pipe trench between manhole MH06-box culvert bay 20 Stripping off formwork from base slab of discharge chamber Forming site access and platform outside transformer room Delivery of reinforcement bars from bending yard for roof slab of store room Precautionary measures against typhoon and general housekeeping	Bar Bender & Fixer	C304	3	Backhoe			1	EX28	h		
			Labourer (female)	C406	3	Backhoe	1	EX50					
			Labourer (male)	C406	5	Backhoe with Vibrating Hammer	1	EX47					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Mobile Crane	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	2	Oxy-Acetylene	1						
						Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Fixing surface conduits and lighting at transformer room Rendering to cable trenches at transformer room	Labourer (male)	C406	4								
			Plasterer	C337	1								
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavation for Ø2100 pipe trench at Ch. 70-120 and fabricating fro I-beam walings & struts for shoring Precautionary measures against typhoon	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (male)	C406	2	Backhoe	1	EX51					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											

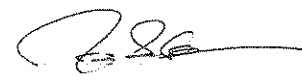
Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
 Name/Post: Eddie Luk/Resident Engineer
 Date: _____

Signed: _____
Contractor's Representative
 Wong Ching Lung / Site Agent
 Date: _____

Signed: 
IOW
 Tso Sai Kuen / Inspector of Works
 Date: 24-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 23/07/2012

Day: Monday

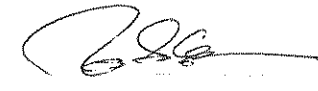
Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 12 & 13 - Backfilling between sheetpile shoring and base slab Precautionary measures against typhoon	Labourer (male)	C406	3	Backhoe	1	EX25					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene	1		1		h		
						Welding Set	1		1		h		
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay Forming site access with rockfill materials	Labourer (male)	C406	1	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1						
			Truck Driver	C349	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring hole for grouting to pipe jacking route Precaution measures against typhoon	Labourer (male)	C406	4	Air Compressor			1	AC04	h		
						Coring Machine	2						
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Welding Set	1						
08:00 - 12:00	Area E - Siu Lek Yuen Rd. Playground	Precautionary measures against typhoon and general site tidiness PL 1602.1 - PL 1603.1 - Re-routing the irrigation pipes inside pipe trench for temporary diversion	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Eddie Luk/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Wong Ching Lung / Site Agent
Date: _____

Signed: 
IOW
Tso Sai Kuen / Inspector of Works
Date: 24-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Contract No.: DC/2009/22 Date: 24/07/2012

Day: Tuesday

Weather:

AM	PM	Rainfall (mm)
Rainy	Shower	ST 100, TP 100

Typhoon / Warning Signal:

T9 - 00:00~00:45
T10 - 00:45~03:35
T8 - 03:35~10:10
T3 - 10:10~14:40
T1 - 14:40~23:15

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	Labour	Code	No.	Labour	Code	No.	Plant		
								Type	No. Working	No. Idle
	Assistant Surveyor	Asphalter (Other Construction)	C301	1	Chainman	C401	1	Air Compressor		1
	Chainman	Asphalter (Roadworks)	C302	3	Concreting Labourer	C402	7	Backhoe		7
	Community Liaison Officer	Bamboo Scaffolder	C303	1	Diver's Linesman / Dredger Crew / Barge Crew	C403	1	Backhoe with Vibrating Hammer		1
	CEG	Bar Bender & Fixer	C304	1	Excavator	C404	1	Blower		1
	Contract Manager	Bricklayer	C305	1	Heavy Load Labourer	C405	7	Generator		2
	Engineer	Carpenter (Fender)	C306	1	Labourer (male / female) / Lorry checker / Watchman/Office attendant	C406	1	Grout Machine		1
	Environmental Officer	Carpenter (Formwork)	C307	1	Sewermain	C407	5	Oxy-Acetylene		5
	Foreman Assistant Foreman	Concrete Repairer	C308	2	Automation Equipment Mechanic	E301	3	Steel Bending Machine		3
	General Foreman	Concretor	C309	1	Building Services Mechanic	E302	1	Water Pump 50mm	7	1
	Labour Officer	Construction Plant Mechanic	C310	1	Cable Joiner (Power)	E303	1	Water Pump 75mm	2	1
	Land Surveyor	Curtain Wall Installer	C311	1	Carpenter	E304	1	Welding Set		4
	Project Director	Demolition Worker	C312	1	Electrician/Electrical Fitter	E305				
	Project Manager	Diver	C313	2	Fire Services Mechanic	E306				
	Project Quantity Surveyor	Drainlayer	C314	1	Instrument Mechanic	E307				
	Quantity Surveyor	Electrician (Main Contractor's)	C315	1	Lift Electrician	E308				
	Safety Officer	Floor Layer	C316	1	Lift Mechanic	E309				
	Site Agent	Gas Plumber	C317	1	Mechanical Fitter	E310				
	Surveyor	General Welder	C318	1	Overhead Linesman	E311				
		Glazier	C319		Painter	E312				
		Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
		Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
		Joiner	C322		Sheet Metal Worker	E315				
		Leveller	C323		Sign Fabricator	E316				
		Marble Worker	C324		Sign Installer	E317				
		Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
		Mason	C326		Welder	E319				
		Metal Scaffolder	C327		Labourer	E401				
		Metal Worker	C328		Semi-skilled Worker	E402				
		Painter & Decorator	C329		Technician	T				
		Piling Operative	C330							
		Pipelayer	C331							
		Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
		Plant & Equipment Operator (Earthmoving Machinery)	C333							
		Plant and Equipment Operator (Hoist and Crane)	C334							
		Plant and Equipment Operator (Piling)	C335							
		Plant and Equipment Operator (Tunnelling)	C336							
		Plasterer	C337							
		Plumber	C338							
		Pneumatic Driller	C339							
		Prestressing Operative	C340							
		Rigger/Metal Formwork Erector	C341							
		Shotcretor	C342							
		Shotfirer	C343							
		Slope Maintenance Worker	C344							
		Structural Steel Erector	C345							
		Structural Steel Welder	C346							
		Tiler	C347							
		Trackworker	C348							
		Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349							
		Window Frame Installer	C350							
	Total			20			7	Total	9	27
	Assistance to Engineer			No.						
	Amah			1						
	Coordinate Engineer			1						
	Drafting Assistant			1						
	Driver			2						
	Field Assistant			3						
	Office Assistant			1						
	Watchman			1						
	Total			10						

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:

Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date:

Signed:

Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:

Tso Sai Kuen
IOW

Tso Sai Kuen / Inspector of Works

Date:

25-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 24/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
11:00 - 18:00	Area A - Pump Station	General housekeeping after typhoon	Labourer (male)	C406	3	Backhoe			i	EX28	e		
						Backhoe			1	EX50	e		
						Backhoe with Vibrating Hammer			1	EX47	e		
						Oxy-Acetylene			1		e		
						Steel Bending Machine			3		e		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set			1		e		
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
11:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
	Area A - Ting Kok Road (CH70-125)	No activity as per KLKJV arrangement				Backhoe			1	EX36	e		
						Backhoe			1	EX51	e		
						Oxy-Acetylene			1		e		
						Water Pump 50mm	2						
						Welding Set			1		e		
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											
	Area B - Tung Tsz Nursery (CH130-CH280)	No activity as per KLKJV arrangement				Backhoe			1	EX25	e		
						Generator			1		e		
						Oxy-Acetylene			2		e		
						Welding Set			2		e		
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Backhoe			1	EX08	e		

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 25-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 24/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Air Compressor			1	AC04	e		
						Grout Machine			1		e		
						Water Pump 50mm	1						
	Area E - Siu Lek Yuen Rd. Playground	No activity as per KLKJV arrangement				Backhoe			1	EX21	e		
						Blower			1		e		
						Generator			1		e		
						Oxy-Acetylene			1		e		
						Water Pump 50mm			1		e		
						Water Pump 75mm			1		e		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area 1 - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 25-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
Shower Rainy ST 70, TP 100

Typhoon / Warning Signal:
Thunderstorm Warning - 04:20-08:30, 10:30-15:30 & 17:55-20:30
Amber - 11:30-14:20
Special announcement of Flooding at NNT - 13:00-18:45

Contract No.: DC/2009/22 Date: 25/07/2012
Day: Wednesday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	3	4
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	1	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Blower	1	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Coring Machine	2	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman Office attendant	C406	29	Dump Truck	1	
	Environmental Officer	1	Carpenter (Formwork)	C307		Sewerman	C407		Electric Drill	2	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Generator	2	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Grout Machine		1
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joints (Power)	E303		Oxy-Acetylene	1	4
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Steel Bending Machine		3
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 50mm	9	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Water Pump 75mm	4	
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		Welding Set	2	4
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318		Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328	2	Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2						
			Plant and Equipment Operator (Hoist and Crane)	C334	1						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337							
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver - Coxswain / Barge Engineer / Working Ganger*	C349	1						
			Window Frame Installer	C350							
	Total	20	(To be continued)			Total Labour		35	Total	28	17
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)


Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Eddie Luk/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Name/Post: Wong Ching Lung / Site Agent
Date: _____

Signed: 
IOW
Name/Post: Tso Sai Kuen / Inspector of Works
Date: 26-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 25/07/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Driving sheetpiles for shoring and excavation of Ø1200 pipe trench between manhole MH06-box culvert bay20 Cleaning up sediments from wheel washing bay General housekeeping	Labourer (female)	C406	3	Backhoe			1	EX28	h		
			Labourer (male)	C406	3	Backhoe			1	EX50	h		
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Backhoe with Vibrating Hammer	1	EX47					
						Oxy-Acetylene			1		h		
						Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set			1		h		
08:00 - 18:00	Area A - Pump Station	Fixing surface conduits at transformer room Fabricating GMS angle frame for cable trench cover and installing 2nos. Louvre (L2) at transformer room	Labourer (male)	C406	5	Electric Drill	2						
			Metal Worker	C328	2	Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light fro traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	General housekeeping	Labourer (male)	C406	2	Backhoe	1	EX36					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Backhoe			1	EX51	h		
						Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____

Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

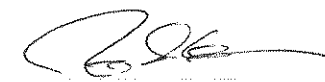
Signed: _____

Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: _____



IOW

Tso Sai Kuen / Inspector of Works

Date: 26-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:
 a Breakdown
 b Standby
 c Awaiting Instruction
 d Assemble/Disassemble

e Bad Weather
 f Task Completed
 g No Operator
 h Not Required
 i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 25/07/2012

Day: Wednesday


Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10~13 -General housekeeping and dewatering from box culvert trench	Labourer (male)	C406	2	Backhoe			1	EX25	h		
						Generator	1						
						Oxy-Acetylene			2		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			2		h		
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay Forming site access with rockfill materials	Labourer (male)	C406	1	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1						
			Truck Driver	C349	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 12:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring hole for grouting to pipe jacking route General housekeeping	Labourer (male)	C406	3	Air Compressor			1	AC04	h		
						Coring Machine	2						
						Grout Machine			1		h		
						Water Pump 50mm	1						
08:00 - 18:00	Area C - Shallow Marshy Area	Erecting bamboo support for leaning trees at ECA	Labourer (female)	C406	3								
			Labourer (male)	C406	2								
08:00 - 18:00	Area E - Siu Lek Yuen Rd.Playground	Saw cutting the broken branches of tree E16 & E18 and general site cleaning	Labourer (male)	C406	2	Backhoe	1	EX21					
						Blower	1						
						Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			1		h		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File
 Duplicate - Contractor

Signed: _____
Engineer's Representative
 Name/Post: Eddie Luk/Resident Engineer
 Date: _____

Signed: _____
Contractor's Representative
 Wong Ching Lung / Site Agent
 Date: _____

Signed: 
 IOW
 Tso Sai Kuen / Inspector of Works
 Date: 26-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 25/07/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area 1 - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 26-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Rainy Shower ST 100, TP 100

Typhoon / Warning Signal:
Thunderstorm Warning - 08:45~15:30

Contract No.: DC/2009/22 Date: 26/07/2012
Day: Thursday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	2	4
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	1	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Coring Machine	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	1	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	26	Electric Drill	2	
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewermain	C407		Generator	1	1
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Grout Machine		1
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Oxy-Acetylene	2	3
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Steel Bending Machine		3
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 50mm	8	1
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 75mm	3	1
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Welding Set	2	4
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	1	Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328	2	Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2						
			Plant and Equipment Operator (Hoist and Crane)	C334	1						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337							
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	1						
			Window Frame Installer	C350							
	Total	20									
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									
			(To be continued)								
						Total Labour		36	Total	24	19

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Eddie Luk
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date:

Signed:
Wong Ching Lung
Contractor's Representative

Name/Post: Wong Ching Lung / Site Agent

Date:

Signed:
Tso Sai Kuen
IOW

Name/Post: Tso Sai Kuen / Inspector of Works

Date: 27-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 26/07/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Driving sheetpiles for shoring and excavation of Ø1200 pipe trench between manhole MH06-box culvert bay 20 Formwork shuttering for walls and fixing tubular brace to falsework of store room General housekeeping and miscellaneous works Cleaning up sediments from wheel washing bay	Carpenter (Formwork)	C307	3	Backhoe			1	EX28	h		
			Labourer (female)	C406	3	Backhoe			1	EX50	h		
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX47					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
						Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set			1		h		
08:00 - 18:00	Area A - Pump Station	Installing lighting and fixing surface conduits at transformer room Fabrication GMS angle frame for cable trench cover and installing 2nos. Louvre (LA) at transformer room	Labourer (male)	C406	7	Electric Drill	2						
			Metal Worker	C328	2	Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	General housekeeping and miscellaneous works	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (male)	C406	2	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 26/07/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered			
						Type	Working		Idling					
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity	
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10~13 - General housekeeping and dewatering from box culvert trench	Labourer (male)	C406	1	Backhoe			1	EX25	h			
						Generator	1							
						Oxy-Acetylene			2			h		
						Water Pump 50mm			1					
						Water Pump 75mm			1					
								2		h				
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay Forming site access with granular materials	Labourer (male)	C406	1	Backhoe	1	EX08						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1							
			Truck Driver	C349	1	Water Pump 50mm	1							
						Water Pump 75mm	1							
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring hole for grouting to pipe jacking route General housekeeping	Labourer (male)	C406	3	Air Compressor			1	AC04	h			
						Coring Machine	2							
						Grout Machine			1		h			
						Water Pump 50mm			1					
08:00 - 12:00	Area E - Siu Lek Yuen Rd. Playground	Cleaning up the site areas after typhoon	Labourer (male)	C406	3	Backhoe			1	EX21	a			
						Generator			1		h			
						Oxy-Acetylene			1		h			
						Water Pump 50mm			1		h			
						Water Pump 75mm			1		h			
						Welding Set			1		h			
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement												
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement												
	Area I - Contractor Office	No activity as per KLKJV arrangement												

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Shower Shower ST 20, TP 30

Typhoon / Warning Signal:
Amber - 11:00~12:30
Thunderstorm Warning - 04:00~17:00

Contract No.: DC/2009/22 Date: 27/07/2012
Day: Friday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	3	3
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe with Vibrating Hammer	1	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Coring Machine		2
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Crane Lorry	1	
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	21	Dump Truck	2	
	Environmental Officer	1	Carpenter (Formwork)	C307		Sewerman	C407		Electric Drill	2	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Generator	2	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Grout Machine		1
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Oxy-Acetylene	2	4
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Steel Bending Machine		3
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Water Pump 50mm	9	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Water Pump 75mm	4	
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		Welding Set	1	5
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318		Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator: Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328	2	Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	3						
			Plant and Equipment Operator (Hoist and Crane)	C334	2						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337							
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	2						
			Window Frame Installer	C350							
	Total	20	(To be continued)			Total Labour		30	Total	27	19
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Eddie Luk
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date:

Signed:
Wong Ching Lung
Contractor's Representative

Name/Post: Wong Ching Lung / Site Agent

Date:

Signed:
Tso Sai Kuen
IOW

Name/Post: Tso Sai Kuen / Inspector of Works

Date: 30-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 27/07/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Driving sheetpiles for shoring and excavation of Ø1200 pipe trench between manhole MH06-box culvert bay 20 Backfilling between walls of pump station and discharge chamber along GL-B to formation level General housekeeping and miscellaneous works Cleaning up sediments from wheel washing bay	Labourer (female)	C406	3	Backhoe			1	EX28	h		
			Labourer (male)	C406	5	Backhoe	1	EX50					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Backhoe with Vibrating Hammer	1	EX47					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Dump Truck	1						
			Truck Driver	C349	1	Oxy-Acetylene	1						
						Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set			1		h		
08:00 - 18:00	Area A - Pump Station	Installing lighting and fixing surface mounted cable conduits at switchroom Fabricating GMS angle frame for cable trench cover at switchroom	Labourer (male)	C406	4	Electric Drill	2						
			Metal Worker	C328	2	Welding Set	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
	Area A - Ting Kok Road (CH70-125)	No activity as per KLKJV arrangement				Backhoe			1	EX36	h		
						Oxy-Acetylene			1		h		
						Water Pump 50mm	2						
						Welding Set			1		h		
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed:
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:

IOW

Tso Sai Kuen / Inspector of Works

Date: 30-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 27/07/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10~13 - General housekeeping and dewatering from box culvert trench	Labourer (male)	C406	1	Backhoe			1	EX25	h		
						Generator	1						
						Oxy-Acetylene			2		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			2		h		
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay Backfilling to form site access with rockfill materials	Labourer (male)	C406	1	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	1						
			Truck Driver	C349	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Setting up desilting tank for grouting operation General housekeeping	Labourer (male)	C406	2	Air Compressor			1	AC04	h		
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Coring Machine			2		h		
						Crane Lorry	1						
						Grout Machine			1		h		
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	Driving sheetpiles for shoring of launching pit	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene	1		1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			1		h		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 30-7-2012

AECOM ASIA COMPANY LTD.

ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
 Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
 Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: **AM** **PM** **Rainfall (mm)**
 Shower Fine ST2, TP 10

Typhoon / Warning Signal:
 Tunderstorm Warning - 11:00~13:30

Contract No.: DC/2009/22 Date: 28/07/2012
 Day: Saturday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	5	1
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine	2	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Dump Truck	1	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendan	C406	28	Grab Lorry	1	
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewerman	C407		Grout Machine		1
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Oxy-Acetylene	3	3
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Steel Bending Machine		3
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Water Pump 50mm	9	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 75mm	4	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	1	4
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor	1	Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	1	Gas Plumber	C317		Mechanical Fitter	E310				
	Surveyor	1	General Welder	C318	1	Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	5						
			Plant and Equipment Operator (Hoist and Crane)	C334	1						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337							
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	1						
			Window Frame Installer	C350							
	Total	20									
	Assistance to Engineer	No.									
	Amah	1									
	Coordinate Engineer	1									
	Drafting Assistant	1									
	Driver	2									
	Field Assistant	3									
	Office Assistant	1									
	Watchman	1									
	Total	10									
			(To be continued)								
						Total Labour		39	Total	28	13

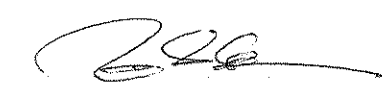
* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File
 Duplicate - Contractor

Signed: _____
Engineer's Representative
 Name/Post: Eddie Luk/Resident Engineer
 Date: _____

Signed: _____
Contractor's Representative
 Name/Post: Wong Ching Lung / Site Agent
 Date: _____

Signed: 
IOW
 Name/Post: Tso Sai Kuen / Inspector of Works
 Date: 30-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 28/07/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Drawing cables through surface conduits at transformer room	Labourer (male)	C406	3								
08:00 - 18:00	Area A - Pump Station	Formwork shuttering for roof slab, beams and parapet wall of store room Backfilling between walls of pump station and discharge chamber along GL-B to formation level General housekeeping and miscellaneous works Cleaning up sediments from wheel washing bay (2 M/Lab., 2 P/Opt., 1 Grab Lorry woking at P.M. only (from intake Structure))	Carpenter (Formwork)	C307	3	Backhoe			1	EX28	h		
			Labourer (female)	C406	3	Backhoe	1	EX50					
			Labourer (male)	C406	4	Dump Truck	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Truck Driver	C349	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set			1		h		
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 M/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating for Ø2100 pipe trench at Ch. 70-120 and fabricating 1st & 2nd layer I-beam walings & struts for shoring	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
						Welding Set	1						
08:00 - 12:00	Area A - Ting Kok Road (Intake Structure)	Removal of debris at bar screen of existing box culvert at Wai Ha River Estuary (VO#04)	Labourer (male)	C406	2	Backhoe	1	EX25					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Grab Lorry	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Water Pump 50mm	1						
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10~13 - General housekeeping and dewatering from box culvert trench	Labourer (male)	C406	1	Generator	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 30-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 28/07/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Oxy-Acetylene			2			h	
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			2			h	
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay Forming site access with rockfill materials	Labourer (male)	C406	2	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting to pipe jacking route Setting up grouting machine and general housekeeping	Labourer (male)	C406	5	Air Compressor			1	AC04		h	
						Coring Machine	2						
						Grout Machine			1			h	
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	Driving sheet piles for shoring of launching pit	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene	1		1			h	
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			1			h	
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
	Area I - Contractor Office	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 30-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: AM PM Rainfall (mm)
Fine Fine ST 0, TP 0

Typhoon / Warning Signal:
Very Hot Weather Warning - 15:05~24:00

Contract No.: DC/2009/22 Date: 29/07/2012
Day: Sunday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant		
									Type	No. Working	No. Idle
			Asphalter (Other Construction)	C301		Chainman	C401				
			Asphalter (Roadworks)	C302		Concreting Labourer	C402		Air Compressor		1
			Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe		6
			Bar Bender & Fixer	C304		Excavator	C404		Generator		1
			Bricklayer	C305		Heavy Load Labourer	C405		Steel Bending Machine		3
			Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	4	Water Pump 50mm	6	1
			Carpenter (Formwork)	C307		Sewerman	C407		Water Pump 75mm	1	1
			Concrete Repairer	C308		Automation Equipment Mechanic	E301				
			Concretor	C309		Building Services Mechanic	E302				
			Construction Plant Mechanic	C310		Cable Joiner (Power)	E303				
			Curtain Wall Installer	C311		Carpenter	E304				
			Demolition Worker	C312		Electrician/Electrical Fitter	E305				
			Diver	C313		Fire Services Mechanic	E306				
			Drainlayer	C314		Instrument Mechanic	E307				
			Electrician (Main Contractor's)	C315		Lift Electrician	E308				
			Floor Layer	C316		Lift Mechanic	E309				
			Gas Plumber	C317		Mechanical Fitter	E310				
			General Welder	C318		Overhead Linesman	E311				
			Glazier	C319		Painter	E312				
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313				
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314				
			Joiner	C322		Sheet Metal Worker	E315				
			Leveller	C323		Sign Fabricator	E316				
			Marble Worker	C324		Sign Installer	E317				
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318				
			Mason	C326		Welder	E319				
			Metal Scaffolder	C327		Labourer	E401				
			Metal Worker	C328		Semi-skilled Worker	E402				
			Painter & Decorator	C329		Technician	T				
			Piling Operative	C330							
			Pipelayer	C331							
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332							
			Plant & Equipment Operator (Earthmoving Machinery)	C333							
			Plant and Equipment Operator (Hoist and Crane)	C334							
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337							
			Plumber	C338							
			Pneumatic Driller	C339							
			Prestressing Operative	C340							
			Rigger/Metal Formwork Erector	C341							
			Shotcretor	C342							
			Shotfirer	C343							
			Slope Maintenance Worker	C344							
			Structural Steel Erector	C345							
			Structural Steel Welder	C346							
			Tiler	C347							
			Trackworker	C348							
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349							
			Window Frame Installer	C350							
			Total			Total Labour		4	Total	7	13
			Assistance to Engineer	No.							
			Driver	1							
			Watchman	1							
			Total	2		(To be continued)					

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 30-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 29/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
	Area A - Pump Station	No activity as per KLKJV arrangement				Backhoe			1	EX28	i		
						Backhoe			1	EX50	i		
						Steel Bending Machine			3		i		
						Water Pump 50mm		2					
						Water Pump 75mm		1					
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 M/Lab. from area I)	Labourer (female)	C406	3	Backhoe			1	EX25	i		
						Backhoe			1	EX36	i		
						Water Pump 50mm		2					
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement				Water Pump 50mm		1					
	Area B - Tung Tsz Nursery (CH130-CH280)	No activity as per KLKJV arrangement				Backhoe			1	EX08	i		
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Water Pump 50mm			1		i		
						Water Pump 75mm			1		i		
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Air Compressor			1	AC04	i		
						Water Pump 50mm		1					
	Area C - Shallow Marshy Area	No activity as per KLKJV arrangement											
	Area E - Siu Lek Yuen Rd. Playground	No activity as per KLKJV arrangement				Backhoe			1	EX21	i		
						Generator			1		i		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 30-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 29/07/2012

Day: Sunday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 30-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather: AM PM Rainfall (mm)
Fine Fine ST 0, TP 0

Typhoon / Warning Signal:
Very Hot Weather Warning - 00:00~24:00

Contract No.: DC/2009/22 Date: 30/07/2012
Day: Monday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	4	2	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine	2		
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Crane Lorry	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Electric Drill	2		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman/Office attendan	C406	29	Generator	2		
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Sewerian	C407		Grout Machine		1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Oxy-Acetylene	3	3	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Steel Bending Machine		3	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Water Pump 50mm	8		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 75mm	4		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	2	3	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306					
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent		Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	2	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328	2	Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	4							
			Plant and Equipment Operator (Hoist and Crane)	C334	1							
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337								
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349								
			Window Frame Installer	C350								
	Total	19										
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	2										
	Office Assistant	1										
	Watchman	1										
	Total	9										
			(To be continued)									
						Total Labour		42	Total	28	13	

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: *Eddie Luk*
Engineer's Representative
Name/Post: Eddie Luk/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Wong Ching Lung / Site Agent
Date: _____

Signed: *Tso Sai Kuen*
IOW
Tso Sai Kuen / Inspector of Works
Date: 31-7-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 30/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Drawing cables through surface conduits for electrical appliance at transformer room Fabricating angle frames for GMS cable trench cover and installing 2nos. Louvre (L1) at switchroom	General Welder	C318	1	Electric Drill	2						
			Labourer (male)	C406	3	Welding Set	1						
			Metal Worker	C328	2								
08:00 - 18:00	Area A - Pump Station	Formwork shuttering for walls and fixing tubular brace for falsework at store room Backfilling between walls along GL-B of pump station and discharge chamber to formation level Laying blinding concrete for +3.5mPD slab between pump station and discharge chamber General housekeeping and cleaning up sediments from wheel washing bay	Carpenter (Formwork)	C307	2	Backhoe			1	EX28	h		
			Labourer (female)	C406	3	Backhoe	1	EX50					
			Labourer (male)	C406	4	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set			1		h		
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating for Ø2100 pipe trench at Ch. 70~120, fabricating 1st layer I-beam eslingd & struts for shoring Forming working platform over the pipe trench at road level for deep excavation	General Welder	C318	1	Backhoe			1	EX25	h		
			Labourer (male)	C406	4	Backhoe	1	EX36					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement											
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10~13 - Dewatering from box culvert trench and general cleaning Repairing site hoarding damaged by typhoon	Labourer (male)	C406	4	Generator	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 31.7.2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 30/07/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Oxy-Acetylene			2			h	
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			2			h	
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay Backfilling to from haul road with rockfill materials	Labourer (male)	C406	1	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting to pipe jacking route Setting up working platform for grouting operation Fixing tie bolts and walings for thrust wall construction	Carpenter (Formwork)	C307	2	Air Compressor			1	AC04		h	
			Labourer (male)	C406	3	Coring Machine	2						
						Grout Machine			1			h	
						Water Pump 50mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	Excavating for launching pit and fabricating 1st layer walings & struts for shoring	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene	1		1			h	
						Water Pump 50mm	1						
						Water Pump 75mm	1						
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Site Accommodation	Delivery of construction materials between various works area	Labourer (male)	C406	2	Crane Lorry	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 31-7-2012

AECOM ASIA COMPANY LTD. ENGINEER'S SITE DIARY

Client Department: Drainage Services Department
Contract Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1
Contractor: KWAN LEE - KULY JOINT VENTURE

Weather:
AM **PM** **Rainfall (mm)**
Fine Shower ST 5, TP 10

Typhoon / Warning Signal:
Thunderstorm Warning - 16:05~18:50
Amber - 17:10~18:35
Very Hot Weather Warning - 00:00~17:10

Contract No.: DC/2009/22 Date: 31/07/2012
Day: Tuesday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	No.	Labour	Code	No.	Labour	Code	No.	Plant			
									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor		1	
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	4	3	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine	2		
	CEG	1	Bar Bender & Fixer	C304	3	Excavator	C404		Electric Drill	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2		
	Engineer		Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	25	Grout Machine		1	
	Environmental Officer	1	Carpenter (Formwork)	C307	6	Sewerman	C407		Oxy-Acetylene	2	4	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Steel Bending Machine		3	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Water Pump 50mm	8		
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		Water Pump 75mm	5		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Welding Set	1	1	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305					
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306					
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor		Electrician (Main Contractor's)	C315		Lift Electrician	E308					
	Safety Officer	1	Floor Layer	C316		Lift Mechanic	E309					
	Site Agent		Gas Plumber	C317		Mechanical Fitter	E310					
	Surveyor	1	General Welder	C318	1	Overhead Linesman	E311					
			Glazier	C319		Painter	E312					
			Ground Investigation Operator/Driller/Borer	C320		Plumber and Pipe Fitter	E313					
			Grouting Worker	C321		Refrigeration/AC/Ventilation Mechanic	E314					
			Joiner	C322		Sheet Metal Worker	E315					
			Leveller	C323		Sign Fabricator	E316					
			Marble Worker	C324		Sign Installer	E317					
			Marine Construction Plant Operator	C325		Thermal Insulation Craftsman	E318					
			Mason	C326		Welder	E319					
			Metal Scaffolder	C327		Labourer	E401					
			Metal Worker	C328		Semi-skilled Worker	E402					
			Painter & Decorator	C329		Technician	T					
			Piling Operative	C330								
			Pipelayer	C331								
			Plant and Equipment Operator (Builder's Lift and Other Machinery)	C332								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	4							
			Plant and Equipment Operator (Hoist and Crane)	C334								
			Plant and Equipment Operator (Piling)	C335								
			Plant and Equipment Operator (Tunnelling)	C336								
			Plasterer	C337								
			Plumber	C338								
			Pneumatic Driller	C339								
			Prestressing Operative	C340								
			Rigger/Metal Formwork Erector	C341								
			Shotcretor	C342								
			Shotfirer	C343								
			Slope Maintenance Worker	C344								
			Structural Steel Erector	C345								
			Structural Steel Welder	C346								
			Tiler	C347								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349								
			Window Frame Installer	C350								
	Total	19										
	Assistance to Engineer	No.										
	Amah	1										
	Coordinate Engineer	1										
	Drafting Assistant	1										
	Driver	2										
	Field Assistant	2										
	Office Assistant	1										
	Watchman	1										
	Total	9										
			(To be continued)									
						Total Labour		39	Total	25	13	

* Working ganger is equivalent to ordinary worker in the trade in which he is employed or, if the trade is not listed, truck driver (refer to GS Table 1.1)


Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Eddie Luk/Resident Engineer
Date: _____

Signed: _____
Contractor's Representative
Name/Post: Wong Ching Lung / Site Agent
Date: _____

Signed: 
IOW
Name/Post: Tso Sai Kuen / Inspector of Works
Date: 1-8-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 31/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement											
08:00 - 18:00	Area A - Pump Station	Drawing cables through surface conduits at transformer room for electrical appliance	Labourer (male)	C406	3	Electric Drill	1						
08:00 - 18:00	Area A - Pump Station	Excavating for Ø1200 pipe trench between manhole MH06-box culvert bay 20 Erecting working platform for wall construction of store room Rebar fixing for roof beams RB16, RB17, RB19 & RB21 of store room General housekeeping and cleaning up sediments from wheel washing bay	Bar Bender & Fixer	C304	3	Backhoe			1	EX28	h		
			Labourer (female)	C406	1	Backhoe	1	EX50					
			Labourer (male)	C406	3	Oxy-Acetylene			1		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Steel Bending Machine			3		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
	Area A - Pump Station - Box Culvert	No activity as per KLKJV arrangement											
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (3 F/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Excavating for Ø2100 pipe trench at Ch.70 ~120. fabricating 1st layer I-beam walings & struts for shoring Forming sheetpile working platform over the trench at road level for deep excavation	General Welder	C318	1	Backhoe			1	EX25	h		
			Labourer (male)	C406	4	Backhoe	1	EX36					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	1						
	Area A - Ting Kok Road (Intake Structure)	No activity as per KLKJV arrangement											
	Area B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 10~13 - General housekeeping and dewatering from box culvert trench Bay 11 - Formwork shuttering and fixing waterstop for base slab Bay 10 - Laying blinding concrete for box culvert Concreting for slab of site access Repairing site hoarding damaged by typhoon	Carpenter (Formwork)	C307	3	Backhoe	1	EX08					
			Labourer (male)	C406	3	Generator	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 1-8-2012

AECOM ASIA COMPANY LTD.

Idling Code:

- a Breakdown
- b Standby
- c Awaiting Instruction
- d Assemble/Disassemble

- e Bad Weather
- f Task Completed
- g No Operator
- h Not Required
- i Sunday/Public Holiday

Contract No.: DC/2009/22 Date: 31/07/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			2		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	Labourer (male)	C406	1	Backhoe			1	EX29	h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Coring holes for grouting to pipe jacking route Setting up working platform for grouting operation Formwork shuttering for thrust wall	Carpenter (Formwork)	C307	3	Air Compressor			1	AC04	h		
			Labourer (male)	C406	4	Coring Machine	2						
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - trench excavation for drain pipe and fabricating 1st layer walings & struts for shoring	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene	1		1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set			1		h		
	Area F - Lek Yuen Street Rest Garden	No activity as per KLKJV arrangement											
	Area G - Ngan Shing St.	No activity as per KLKJV arrangement											
08:00 - 18:00	Area I - Contractor Office	Office cleaning	Labourer (male)	C406	1								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk/Resident Engineer

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

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IOW

Tso Sai Kuen / Inspector of Works

Date: 1-8-2012