

Drainage Service Department

Monthly Environmental Monitoring & Auditing report for

Contract No.DC/2009/22

Drainage Improvement in Shuen Wan, Tai Po – Contract 1

August 2012

Environmental Pioneers & Solutions Limited

Flat A, 19/F, Chaiwan Industrial Building,
20 Lee Chung Street, Chai Wan, Hong Kong

Tel: 2556 9172

Fax: 2856 2010

APPROVAL SHEET

The Contents of this report have been


Certified by:

Signature: 

Miss. Goldie Fung
(Environmental Team Leader)

Date: 21-SEP-2012

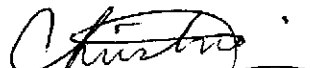
Ecologist (Asia Ecological Consultants Ltd.)

Signature: 

Dr. Michael Leven
(Ecologist)

Date: 7 September 2012

RLA (Environmental Resources Management)

Signature: 

Miss. Christina Ip
(RLA)

Date: 07 Sep 2012

and Verified by:

IEC (ENVIRON Hong Kong Limited)

Signature: 

Mr. Tony Cheng
(IEC)

Date: 21 Sept 2012

TABLE OF CONTENT

EXECUTIVE SUMMARY	vi
1 Introduction	1
2 Construction Stage	2
2.1 Construction activities in the reporting period	2
2.2 Construction activities for the coming month	2
2.3 Environmental Status	3
3 Noise Monitoring	4
3.1 Monitoring Parameters and Methodology	4
3.2 Monitoring Equipment	4
3.3 Monitoring Locations	5
3.4 Monitoring Results and Interpretation	7
3.5 Action and Limit level for Construction noise	7
3.6 Monitoring Schedule for the next reporting period	8
4 Water Monitoring	10
4.1 Water Quality Monitoring Parameters and methodology	10
4.2 Monitoring Equipment	10
4.3 Monitoring Locations	11
4.4 Monitoring Frequency	14
4.5 Monitoring Results and Interpretation	14
4.6 Action and limit level for Water Quality	16
4.7 Monitoring Schedule for the next reporting period	21
5 Hydrological Characteristics Monitoring	22
5.1 Hydrological Characteristics Monitoring Parameters and methodology	22
5.2 Monitoring Equipment	22
5.3 Monitoring Locations	22
5.4 Monitoring Frequency	24
5.5 Monitoring Results and Interpretation	24
5.6 Action and limit level for Hydrological Characteristics	24
5.7 Monitoring Schedule for the next reporting period	29
6 Ecological Monitoring of ECA	30
6.1 Introduction	30
6.2 Ecological Monitoring of ECA	30
6.3 Monitoring Results	36
6.4 Management Activities	41
6.5 Implication of the Survey Findings	42

6.6	Recommendations	42
7	Landscape and Visual	43
7.1	Introduction	43
7.2	Scope of Monitoring	43
7.3	Landscape and Visual Monitoring Results.....	45
7.4	Audit Schedule	55
8	Action taken in Event of Exceedance	56
9	Construction waste disposal	57
10	Status of Permits and Licenses obtained	59
11	Compliant Log	60
12	Site Environmental Audits	61
12.1	Site Inspection	61
12.2	Compliance with legal and Contractual requirement	63
12.3	Implementation status and effectiveness of the mitigation measures 63	
13	Future Key issues and recommendations	63
14	Conclusions	65

LIST OF APPENDIXES

Appendix A: Site Location

Appendix B: Key Personal Contact information chart

Appendix C: Calibration Certificates for measuring instruments

Appendix D: Construction Noise Monitoring Data

Appendix E: Water Quality Monitoring Data

Appendix F: Hydrological Characteristics Monitoring Data

Appendix G: Landscape and Visual Monitoring Photos

Appendix H: Implementation status of environmental protection and mitigation measures

Appendix I: Construction programme

Appendix J: Three month rolling programme

Appendix K: Graphical plots of trends of monitored parameters

Appendix L: List of recorded vegetation and relative abundance and list of transplanted trees in the Ecological Compensatory Area (ECA) during construction phase in June 2012

Appendix M: Photo Wai Ha River at August 2012

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

Appendix O: Site Diary

EXECUTIVE SUMMARY

This is the eighteenth 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 June 2012 to 31st August 2012. The major site activities in this reporting period were mainly internal finishing for the proposed transformer room & switch room, laying of E&M ducting for the proposed screen house and store room, concreting the roof slab at +11.85mPD and stairs, concreting floor slab for the proposed transformer room, concreting base slab for bay 13, 12, 11 & 10 and grouting for first layer of grout hole at the proposed DN2800 twin pipes.

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, the exceedances were also believed to be attributed by adverse weather. Besides, the recorded levels of turbidity at control station had also exceeded its baseline limit level, the exceedances recorded at W2 was

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 eighteenth 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 appointed by Kwan Lee – Kuly Joint Venture, prepares 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 August 2012 to 31st August 2012. This 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 & Switch room.
- Laying of E&M ducting for the proposed screen house and store room.
- Concreting the roof slab at +11.85mPD and stairs.
- Concreting floor slab for the proposed Transformer room .
- Excavation for receiving pit.
- Excavation for the proposed DN1200 concrete pipe trench.
- Heading excavation for the proposed DN225 sewer.
- Formwork erection for the proposed discharge chamber.
- Laying of DN2100 stormwater relief drain (CH80 – CH120) at Ting Kok Road.

Area B:

- Concreting base slab for Bay 13,12,11 & 10.
- Concreting top slab for Bay 13, 12 & 11.
- Grouting for first layer of grout hole at the proposed DN2800 twin pipes.

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 & CH0.0 – CH55
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	2
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 Station	Monitoring 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.

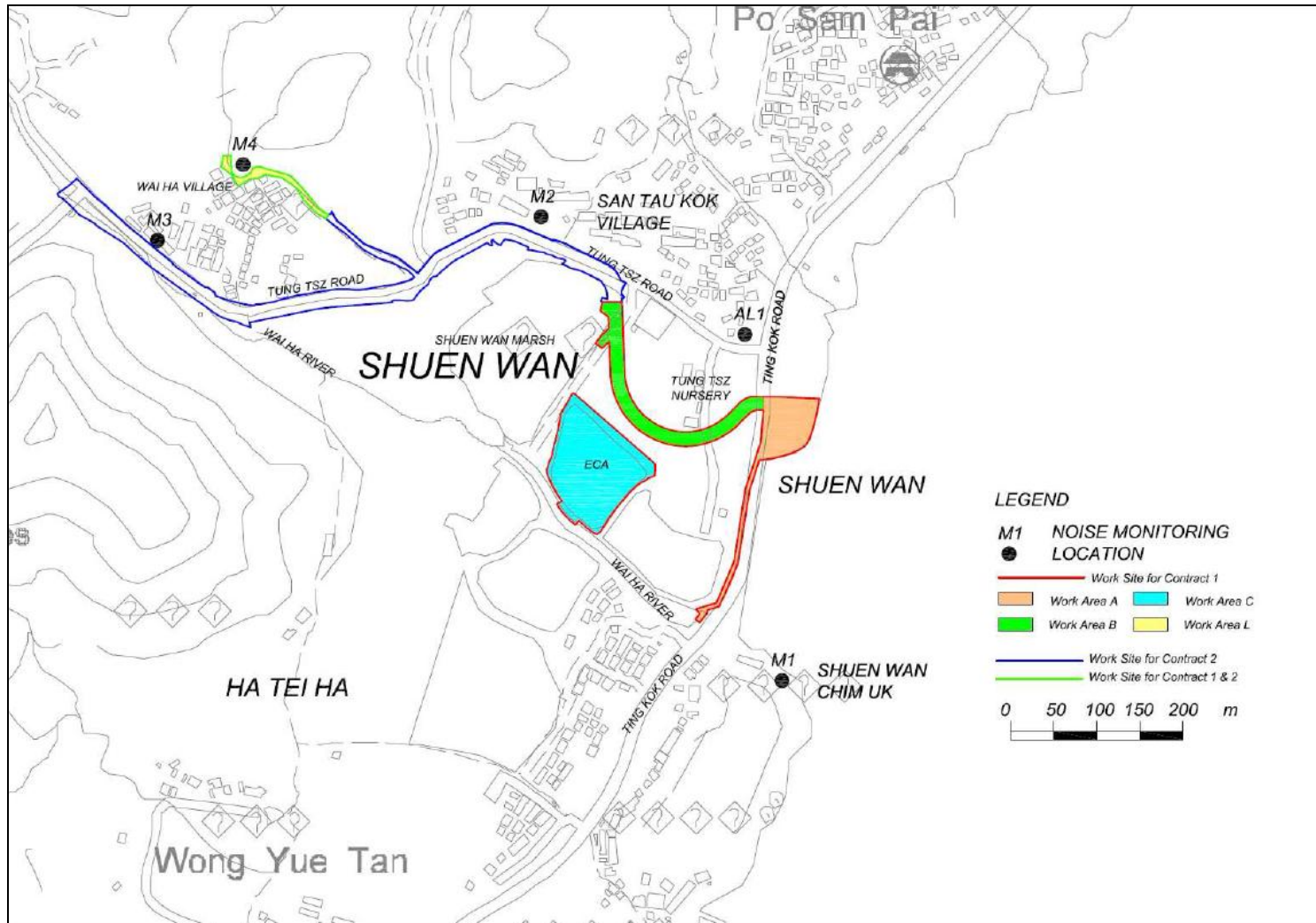


Figure 3.3.1 Impact noise monitoring locations

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 58.8dB (A) and 64.3dB (A), and AL1, ranged between 62.3dB (A) and 67.8dB (A), were within the limit levels and therefore, no exceedance was found.

Location	Parameter	Date*	Time	L _{Aeq} dB(A)	Limit dB(A)	Exceedance	Weather
M1	L _{eq} 30mins	1-Aug-12	13:10	63.4	75	N	Sunny
M1	L _{eq} 30mins	8-Aug-12	11:05	64.3	75	N	Sunny
M1	L _{eq} 30mins	15-Aug-12	11:00	62.1	75	N	Sunny
M1	L _{eq} 30mins	22-Aug-12	11:00	60.9	75	N	Sunny
M1	L _{eq} 30mins	29-Aug-12	11:50	58.8	75	N	Sunny
AL1	L _{eq} 30mins	1-Aug-12	13:45	66.1	75	N	Sunny
AL1	L _{eq} 30mins	8-Aug-12	11:40	64.9	75	N	Sunny
AL1	L _{eq} 30mins	15-Aug-12	11:35	65.3	75	N	Sunny
AL1	L _{eq} 30mins	22-Aug-12	11:35	67.8	75	N	Sunny
AL1	L _{eq} 30mins	29-Aug-12	12:25	62.3	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 5th, 12th, 19th and 26th of September 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.
--------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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 N**.

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.

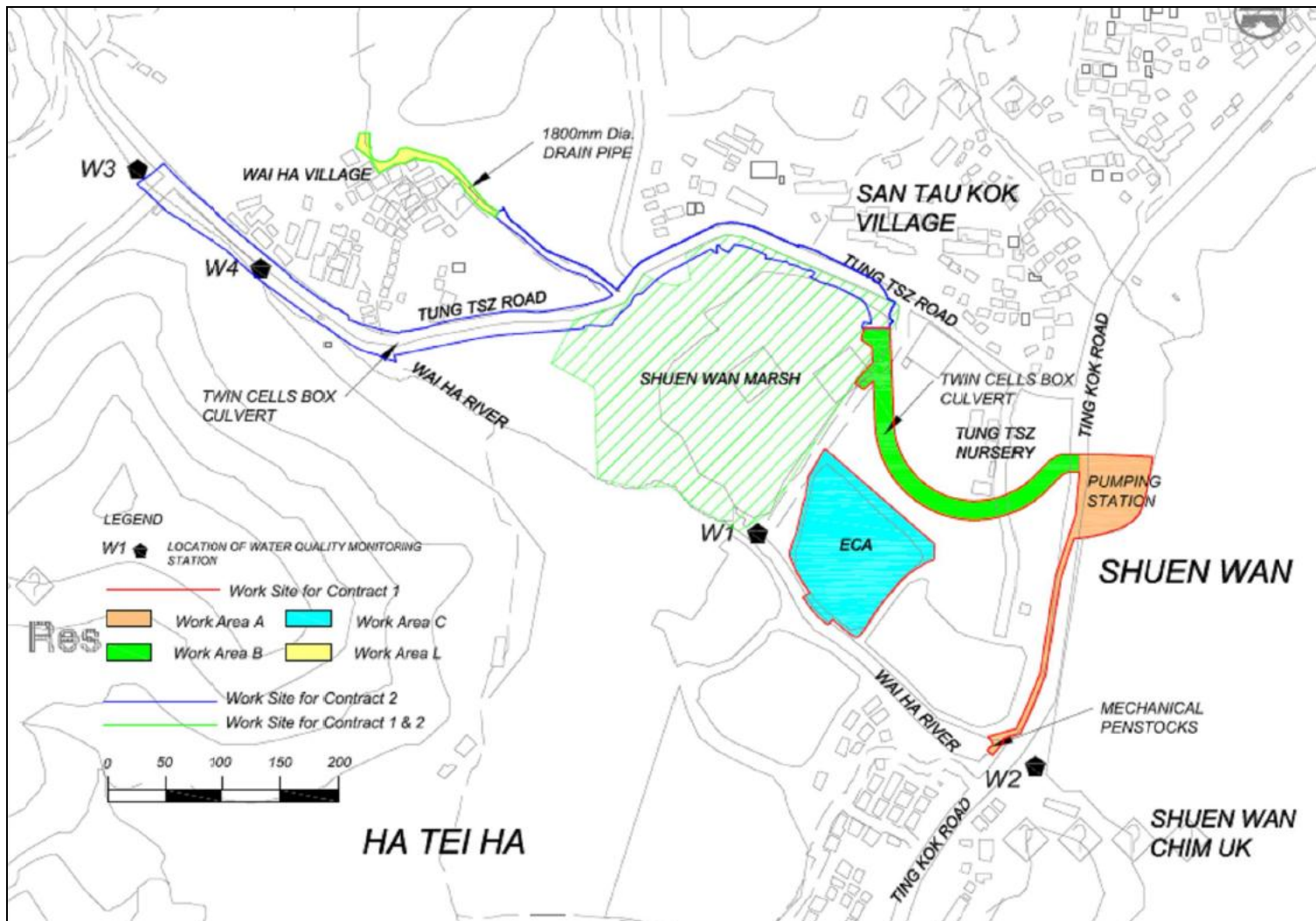


Figure 4.3.1 Water Quality Monitoring Locations

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 1st, 3rd, 6th, 8th, 10th, 13th, 15th, 17th, 20th, 22nd, 24th, 27th, 29th and 31st of August 2012.

4.5 Monitoring Results and Interpretation

Water quality monitoring was carried out fourteen 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 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. Besides, the recorded levels of turbidity at control station had also exceeded its baseline limit level. Therefore, 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

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	61.52	8.6	6.92	5.09	66.7	11.29
W2	30.2	15.2	7.41	7.18	90.6	10.79
C1	31.2	7.45	7.65	7.24	89.5	7.4
C2	32.5	3.0	7.91	5.0	67.0	11.02

Table 4.5.2 Interpretations of abnormal incidents recorded in the reporting month

Date	Tide	Parameter	Interpretations
1/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
3/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
6/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
8/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
10/8/2012	Flood	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
13/8/2012	Ebb	Turbidity	Adverse weather.
		SS	
15/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
17/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
20/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
22/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
24/8/2012	Flood	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.

29/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.
		SS	
31/8/2012	Ebb	Turbidity	Incident was regarded as high river flow rate since river narrowed was observed.

The site activities of August 2012 were shown in Appendix O.

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	4.0	7.81	4.0	7.12	4.0	6.77	4.0
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>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

4.7 Monitoring Schedule for the next reporting period

Water quality monitoring schedule is proposed to be carried out on 3rd, 5th, 7th, 10th, 12th, 14th, 17th, 19th, 21st, 24th, 26th and 28th of September 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.

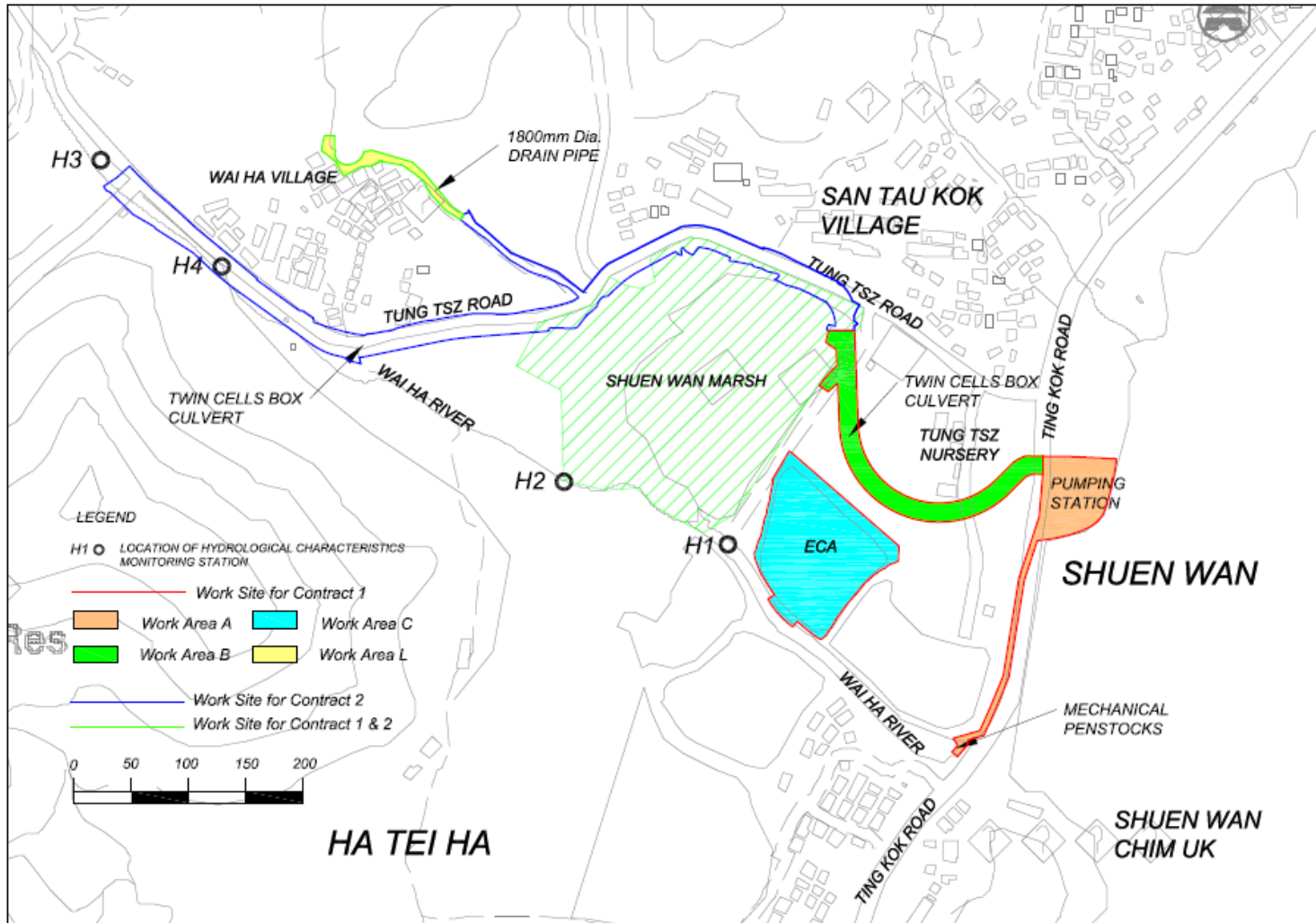


Figure 5.3.1 Hydrological Characteristics Monitoring Locations

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 3rd, 10th, 17th, 24nd and 31th of August 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)	~0.27*	0.045
H1(Ebb)	~0.14*	0.06
H2(Floor)	~0.18*	0.226
H2(Ebb)	~0.18*	0.271

*: 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.
------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

			Level.	
--	--	--	--------	--

5.7 Monitoring Schedule for the next reporting period

Hydrological characteristics monitoring schedule is proposed to be carried out on 7th, 14th, 21st and 28th of September 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 31st May 2012) 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 August 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 2.2.

Monitoring of water quality

Same monitoring methodology as in Section 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 30 August 2012 and detail vegetation information was shown in **Appendix L**.

Monitoring of transplanted trees were carried out in 30 August 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.

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, Melaleuca quinquenervia (T165) is in poor condition with dehydrated crown, moreover, Celtis sinensis (T250) were dead also, so that the removal & replacement of T250 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**.

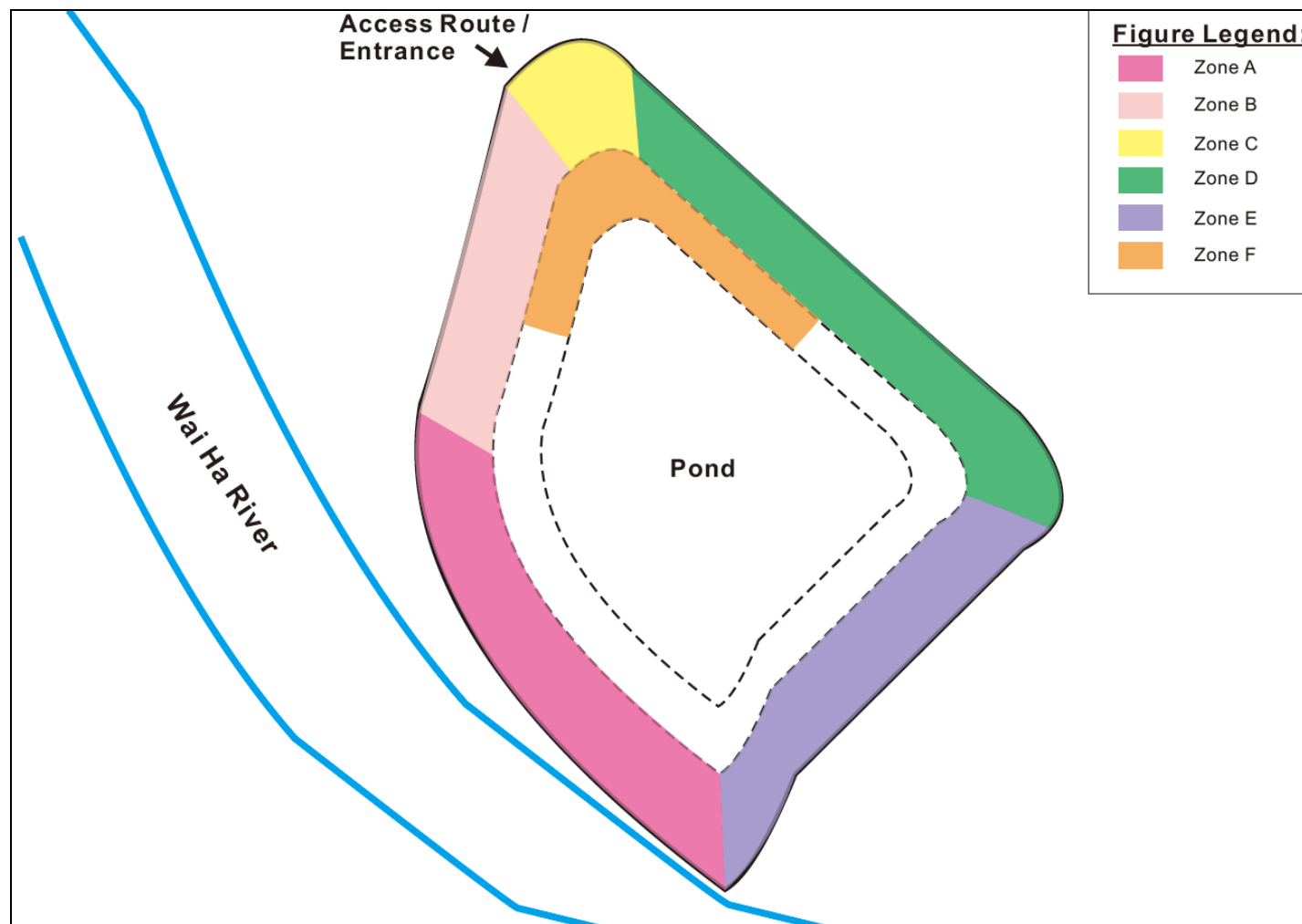


Figure 6.3.2.1 Landscape floor plan of ECA during establishment phase.

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, but some trees were dead, these trees are suggested to be removed or replanted. These are.

Trees suggested to be removed & replaced

- *Celtis sinensis*: tag no. 198, 210, 222
- *Macaranga tanarius*: tag no. 331, 337, 340, 345
- *Hibiscus tiliaceus* : tag no. 29, 307, 310

Moreover, *Viburnum odoratissimum* (tag no 47, 94) & *Hibiscus tiliaceus* (tag no 288, 304, 318) were in poor condition in terms of sparse crown, application of fertilizer and continuous monitoring of the health condition 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. 6, 33

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

Sparse Crown and yellow leaves

- *Hibiscus tiliaceus* : tag no. 244

Those planted tree poor condition were caused during trans-location or plantation, application of fertilizer and continuous monitoring of the health condition is suggested.

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

Trees suggested to be removed & replaced

- *Celtis sinensis*: tag no. 8, 9, 13, 17, 22, 28, 35, 130, 131, 132
- *Hibiscus tiliaceus*: tag no. 255, 256, 262, 268, 270, 272
- *Macaranga tanarius*: tag no. 158

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 6.3.2.2. Representative photographs of transplanted *Pavetta hongkongensis* in ECA since the first transplantation in 26 June, 2012.



Figure 6.3.2.2a. Specimens 1 & 2.



Figure 6.3.2.2b. Specimen 3.

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 superba* 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 replaced by new trees in July 2012. However, there are some trees in Zone A-E were dead, these trees are suggested to be removed & replaced, Although there is no sign of pest outbreak, application of fertilizer or mulch, regular watering and close monitoring are still 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 15th August 2012. 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 30/4 with result: Turbidity: 6.95NTU; Temperature: 34.8°C; DO: 4.68mg/L; pH: 6.3.

6.3.6 Site Inspections

Twice monthly establishment phase monitoring has commenced in November 2011. Two site inspections were carried out on 7th and 21st August 2012, while a joint site meeting with AFCD and the Project Team was undertaken on 29th August 2012. Table 1 summarizes the observations and recommendations for each site inspection.

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

Inspection Dates	Observation	Recommendations
7 th August 2012	<p>A routine site inspection and a joint site meeting with the Main Contractor, landscape contractor and the engineering consultant. The created wetland has been maintained in good condition (Photo 1). All planted and replaced compensatory trees were inspected and the overall growth performance of these trees was satisfactory and trees were in fair condition. As informed by the Contractor, 5 compensatory trees will be replanted in the week of 13th August 2012.</p> <p>The mangrove seedlings of unsatisfactory growth performance were now replaced with new seedlings. Growth performance of some of the replaced wetland herbs (such as <i>Philydrum lanuginosum</i> and <i>Scirpus mucronatus</i>) were inevitably affected by the overflow resulting from the Typhoon “Vicente” in late July 2012. However, the overflow did not affect other established wetland herbs (such as <i>Bacopa monnieri</i> and <i>Cyperus malaccensis</i>), together with other naturally established wetland vegetation (such as <i>Alternanthera</i> spp.), to form a marshy habitat progressively.</p> <p>The three transplanted shrubs of conservation interest, <i>Pavetta hongkongensis</i>, show satisfactory growth performance. Recent weeding of unwanted herbs and climbers along the terrestrial areas (mainly along the north and northeastern parts of the ECA) was noted. A few broken branches, twigs, cut grass/herbs/plant debris and rubbish were noted on-site. Surplus soil was</p>	<p>The Contractor was reminded to (1) replant 5 compensatory trees and those fallen trees or trees with unstable root plates, (2) remove the broken branches, twigs, cut grass/herbs/plant debris, rubbish, unwanted climbers (<i>Mikania micrantha</i>) and trees (<i>Leucaena leucocephala</i>) as a proper site maintenance practice and (3) remove the surplus soil, especially those around the tree trunk base.</p>

	<p>observed around a few compensatory trees close to the village house to the west of the ECA.</p>	
<p>21st August 2012</p>	<p>This is the second site visit in August 2012. The overall ecological function provided by the ECA has been satisfactory (Photo 2). The five compensatory trees were replanted but 1 of these replanted trees had fallen down with unstable root plate. A few compensatory trees with poor growth performance (e.g. dry leaves and tree bark) were noted. The overall growth condition of other planted compensatory trees, transplanted trees and shrubs was fair to good (Photo 3).</p> <p>The surplus soil around some tree trunk bases, as recorded on 7th August 2012, had been removed, but a few unused pipes were still observed in the nearby soil ground. The broken branches, twigs, cut grass/herbs/plant debris, rubbish, and unwanted climbers and trees had not yet been removed. Additional grass cutting along the terrestrial bund at the eastern and southeastern parts of the ECA is required by the Wetland Specialist.</p>	<p>The Contractor should remove the broken branches, twigs, cut grass/ herbs/plant debris, rubbish, unwanted climbers (<i>Mikania micrantha</i>) and trees (<i>Leucaena leucocephala</i>), and perform grass cutting at the eastern and southeastern parts as soon as possible.</p>
<p>29th August 2012 (Joint site meeting with AFCD and the Project Team)</p>	<p>A joint site meeting with AFCD, landscape contractor and the Project Team prior to the completion of the establishment period of the ECA. Representatives from AFCD were generally satisfied with the overall ecological function and performance of the ECA and noted that the five items, as requested by AFCD during the pre-handover meeting on 25th October 2012, had been completed by the Main Contractor. These items included (1) formation of a proper access path from the future access gate adjacent to Tung Tsz Nursery, (2) removal of rubbish found in the ECA, (3) replacement of planted trees <i>Hibiscus tiliaceus</i> with poor performance following inspection in early wet season 2012, (4) review of the health condition of the suspected dead, planted trees and wetland herbs in early wet season in 2012 and replace them if necessary, and (5) additional hydroseeding of the upper 2/3 of the pond bank in the ECA.</p> <p>The overall growth performance of the compensatory trees, transplanted trees, shrubs and wetland herbs satisfied AFCD, but additional replacement of compensatory</p>	<p>The Contractor should replace the compensatory trees with poor growth performance and reinstate the wire mesh fence. Both works should be completed by mid-October 2012.</p>

	trees with poor growth performance (e.g. dry leaves and tree bark) was necessary. The Main Contractor was also required to reinstate the wire mesh fence at the main entrance of the ECA prior to the formal handover to AFCD.	
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Photo 1. General view of the wetland as inspected on 7th August 2012.



Photo 2. General view of the wetland as inspected on 21st August 2012.



Photo 3. The planted compensatory trees, shrubs and mangrove seedlings have remained in fair to good condition throughout the establishment period.



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 August 2012.

The ECA has been maintained in satisfactory condition. The planted and replaced compensatory trees, shrubs and mangrove seedlings have showed fair health condition. By the end of August 2012, the requested management activities, including removal of rubbish, broken tree parts, unwanted climbers and trees, and surplus soil, were completed by the Main Contractor.

Representatives from AFCD were generally satisfied with the overall ecological function and performance of the ECA. As requested by AFCD during the joint site meeting on 29th August 2012, the Contractor should replace the compensatory trees with poor growth performance (e.g. dry leaves and tree bark) and reinstate the wire mesh fence at the main entrance of the ECA prior to the formal handover in mid-October 2012.

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 August 2012.

6.6 Recommendations

The Contractor should continue the 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 for the landscape contractor to replant the compensatory trees with poor growth performance and reinstate the wire mesh fence at the main entrance of the ECA prior to the formal handover in mid-October 2012.

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 31st May 2012) 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 (August 2012) was conducted to cover only Areas A, B and C of Contract 1 of the Project. The bi-weekly monitoring was conducted on 7th and 21st August 2012 (partly). Due to the heavy rainstorm in Shuen Wan area on 21st August 2012, the bi-weekly monitoring was resumed on 24th August 2012.

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

The bi-weekly monitoring for Contract 2 was also undertaken on 7th, 21st and 24th August 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

The collapsed site hoardings resulting from the severe strike of the Typhoon “Vicente” in late-July 2012 were reinstated in accordance with the recommendation stated in the *Monthly EM&A Report for July 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**). Since February 2012, temporary construction hoardings have also been erected to surround the works area for constructing a drain pipe along Ting Kok Road (**Photo 2**).

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). 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.

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

Recommendation

No specific recommendation is required.

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 and the construction site within the Nursery 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. Muddy water caused by the soil runoff from the upstream of Wai Ha River, as reported in the *Monthly EM&A Report for July 2012*, was not observed during the monitoring in August 2012.

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 July 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

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 (**Photo 4**).

Recommendation

No specific recommendation is required for Areas A, B and C. As a reminder, the Contractor should regularly check the condition and locations of the drainage pipes and ensure that all used water should be appropriately filtered and discharged to the manhole/other discharge points 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. All of these active construction works area were demarcated with construction hoardings.

The health condition and stability of the tree *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 along the trunk. The overhanging branch on the canopy of the retained tree U50 (*Ficus elastica*) was removed but no proper clean cut to prune the branch was observed.

The works practice and maintenance of trees within the nursery generally follow the recommendation as stated in *Monthly EM&A Report for July 2012*. Any observed issues related to the liaison with the nursery are highlighted in this section.

Observation

The temporary hoarding has been erected from northwest to southwest parts of Tung Tsz Nursery in Area B since April 2011. Phase 2 construction work (i.e. from the eastern part of the nursery in connection with Ting Kok Road and finally connects with Phase 1 construction area at the southwest part) has commenced and temporary hoardings have been erected since May 2012. 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 all transplanted trees within the nursery was conducted on a bi-weekly basis. For tree U58 (*Grevillea robusta*) (**Photo 5**), a scaffold branch has broken and overhung in the canopy (**Photo 6**). New but small leaves were observed along the branches (**Photo 6**) and a few watersprouts have developed along the tree trunk (**Photo 7**). The physiological condition of U58 has remained fairly poor in August 2012 and close monitoring has to be continued to update its health and structural conditions.

The relocated tree U55 (*Pterocarpus indicus*) was found fallen on the ground with its planter as reported in the *Monthly EM&A Report for July 2012*. This tree was found being planted directly to the soil ground by the Nursery as observed on 7th August 2012 (**Photo 8**). The fallen tree U68 (*Gmelina arborea*), which was collapsed under the severe strike of the Typhoon “Vicente”, was found to be pruned and removed by the Nursery for safety reason, leaving a stump within the planter (**Photo 9**). A scaffold branch of a retained tree U67 (*Cassia fistula*) was recently pruned, possibly as horticultural maintenance by the

Nursery (**Photos 10-11**).

More severe leaning tree trunk of the transplanted tree U61 (*Lysidice rhodostegia*) was observed (**Photo 12**), while the crack on the planter of U75 (*Dolichandrone cauda-felina*) became more obvious (**Photo 13**). There is a concern on the long-term stability on both trees.

No muddy water was found leaking out through the temporary hoarding into the nursery

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.

The leaning tree *Lysidice rhodostegia* (U61) should be restored to its proper position or guyed appropriately to prevent its further hazard to the targets. The planter of *Dolichandrone cauda-felina* (U75) should be rebuilt to provide better support and protection of its root ball. Both mitigation measures should be carried out 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 July 2012*,

no piling of construction materials within or close to the TPZs were observed in Area A (see details in the following section).

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 July 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 (E17 to E20) at the southwestern part of Area A (**Photo 14**) during the monitoring in August 2012.

As observed since 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 August 2012 in Area A.

Area B

As highlighted in the Section “Liaison with Nursery”, 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 still found overhanging in the canopy.

As mentioned in the above Section “Liaison with Nursery”, immediate tree hazard abatements were undertaken by the Nursery Operator on the two collapsed trees (U55 and U68) under the influence of the severe Typhoon “Vicente” in July 2012. The relocated

tree U55 was planted directly to the soil ground (Photo 8), while the fallen tree U68 was found to be pruned and removed by the Nursery Operator for safety reason (Photo 9). A scaffold branch of a retained tree U67 (*Cassia fistula*) was recently pruned by the Nursery Operator (Photos 10-11). More severe leaning tree trunk of the transplanted tree U61 (*Lysidice rhodostegia*) was observed (Photo 12), while the crack on the planter of U75 (*Dolichandrone cauda-felina*) became more obvious (Photo 13).

A broken scaffold branch of the tree to be transplanted T102 (*Melaleuca cajuputi* subsp. *cumingiana*) was observed (**Photo 15-16**).

No recovery signs have been observed on the relocated trees U34 (**Photo 17**), U35 (**Photo 18**) and U37 (**Photo 19**).

With the extended construction area within the Nursery, it was not possible to inspect the latest tree condition of some relocated trees due to the ongoing construction of the box culvert in August 2012. These inaccessible trees were A42, U74, U72, U70, U69, A43, U62 and an untagged *Terminalia catappa* (**Photos 20-21**). Their health could be assessed only by their overall canopies' and upper trunks' conditions.

The areas around the trunk bases of three relocated trees (U76, U77 and U78) were waterlogged. Irrigation water from the Nursery could be retained around the trunk bases of these trees, which were planted too deep previously. This would potentially damage the roots of those relocated trees (**Photos 22-23**). The relocated tree U77 (*Terminalia catappa*) showed poor condition as shown in **Photo 24**.

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 (**Photos 25-26**).

Area C

The existing trees were maintained generally in fair health condition, except that a very few planted compensatory trees showing poor health condition. No significant damage on the crowns, trunks and roots on trees within Area C were observed during the monitoring in August 2012. Fallen tree parts resulting from the severe strike of the typhoon in July 2012 had not yet been removed by 24th August 2012.

The transplanted tree T152 has recovered after the typhoon (**Photo 27**), while the transplanted trees T153 (**Photos 28**) and the untagged transplanted tree (*Bombax ceiba*) (possibly T149) have remained in fair condition. No foliage was observed on T250.

No leaves were observed on the transplanted tree T152 (**Photo 28**). New leaves were observed on the transplanted trees T153 (**Photo 29**) and T250 while some new leaves on T250 appeared to be dry. The untagged transplanted tree (*Bombax ceiba*) (possibly T149) was relocated within Area C and new leaves were found on it (**Photo 30**).

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 29-30**).

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. 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 those recently relocated trees 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 condition 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 (e.g. around trunk bases of U76, U77 and U78) should be avoided and excessive water around the tree trunk flares should be drained immediately.

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

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.

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 leaning tree *Lysidice rhodostegia* (U61) should be restored to its proper position or guyed appropriately to prevent its further hazard to the targets. The planter of *Dolichandrone cauda-felina* (U75) should be rebuilt to provide better support and protection of its root ball. Both mitigation measures should be carried out by the Nursery Operator or other relevant parties as soon as possible.

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.

7.3.7 Construction Lights

No follow-up action on maintenance of construction light is required as from the *Monthly EM&A Report for July 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 September 2012 is scheduled to be conducted in the weeks of 3rd and 17th September 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 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. Besides, the levels of Turbidity at W1 had been also exceeded its baseline limit level. Therefore, the exceedances recorded at 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	1.375	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
July-12	1.870	0.00	1.72	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Aug-12	1.83	0.00	0.895	0.935	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Total	18.783	0.00	15.767	1.75	0.71	0.556	2.37	0.00	0.00	0.00	0.27
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
August 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 2nd, 9th, 16th, 23rd and 30th of August 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 2 & 9 Aug 12	Damaged tree protection fence was observed at Area B	Observation	Contractor was reminded to repair or replace the damaged tree protection fence	Damaged tree protection fence was repaired by contractor	16 Aug 12	
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.	Open stockpile was covered with tarpaulin at Area B.	2 August 12	
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.	Chemical materials were covered with tarpaulin by contractor	2 August 12	

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
2 Aug 12	Accumulative general wastes were observed at Area A.	Observation	Contractor was reminded to replace or repair damaged tree protection zone.	Accumulative general waste was cleaned by contractor	9 August 12	
2 Aug 12	Stagnant water was observed after raining at Area B.	Observation	Contractor was reminded to remove the stagnant water as soon as possible to prevent mosquito breeding	Stagnant water was removed by contractor	9 August 12	
9 , 16, 23 & 30 Aug 12	Construction materials were observed inside the tree protection zone at Area A.	Observation	Contractor was reminded to remove the construction materials as soon as possible	Outstanding		
16 Aug 12	Collapsed tree protection fence was observed after heavy rain at Area A.	Observation	Contractor was reminded to repair the tree protection fence as soon as possible	Collapsed tree protection fence was repaired at Area A	23 Aug 12	
23 & 30 Aug 12	Drip tray was not provided for the power generator at Area A.	Observation	Contractor was reminded to provide a drip tray to prevent chemical leakage and land contamination.	Outstanding		
23 Aug 12	Unclear storage area was observed at Area A	Observation	Contractor was reminded that construction materials and general wastes should be separated and stored properly.	30 Aug 12		

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
30 Aug 12	Damaged tree protection zone was observed at Area A	Observation	Contractor was reminded to replace the tree protection fence immediately.	30 Aug 12		

12.2 Compliance with legal and Contractual requirement

There was no non-compliance recorded for the month of August 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 issued 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

Internal finishing for the proposed transformer room & switch room, laying of E&M ducting for the proposed screen house and store room, concreting the roof slab at +11.85mPD and stairs, concreting floor slab for the proposed transformer room, concreting base slab for bay 13, 12, 11 & 10 and grouting for first layer of grout hole at the proposed DN2800 twin pipes. 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 30th of August 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 narrowed for construction of mechanical penstocks; and increases the speed of water current. 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 turbidity was believed to be mainly attributed by natural fluctuation; , since the recorded levels of turbidity at control station had also exceeded its baseline limit level. It was believed that the exceedances recorded at were unlikely to be related to the Project.

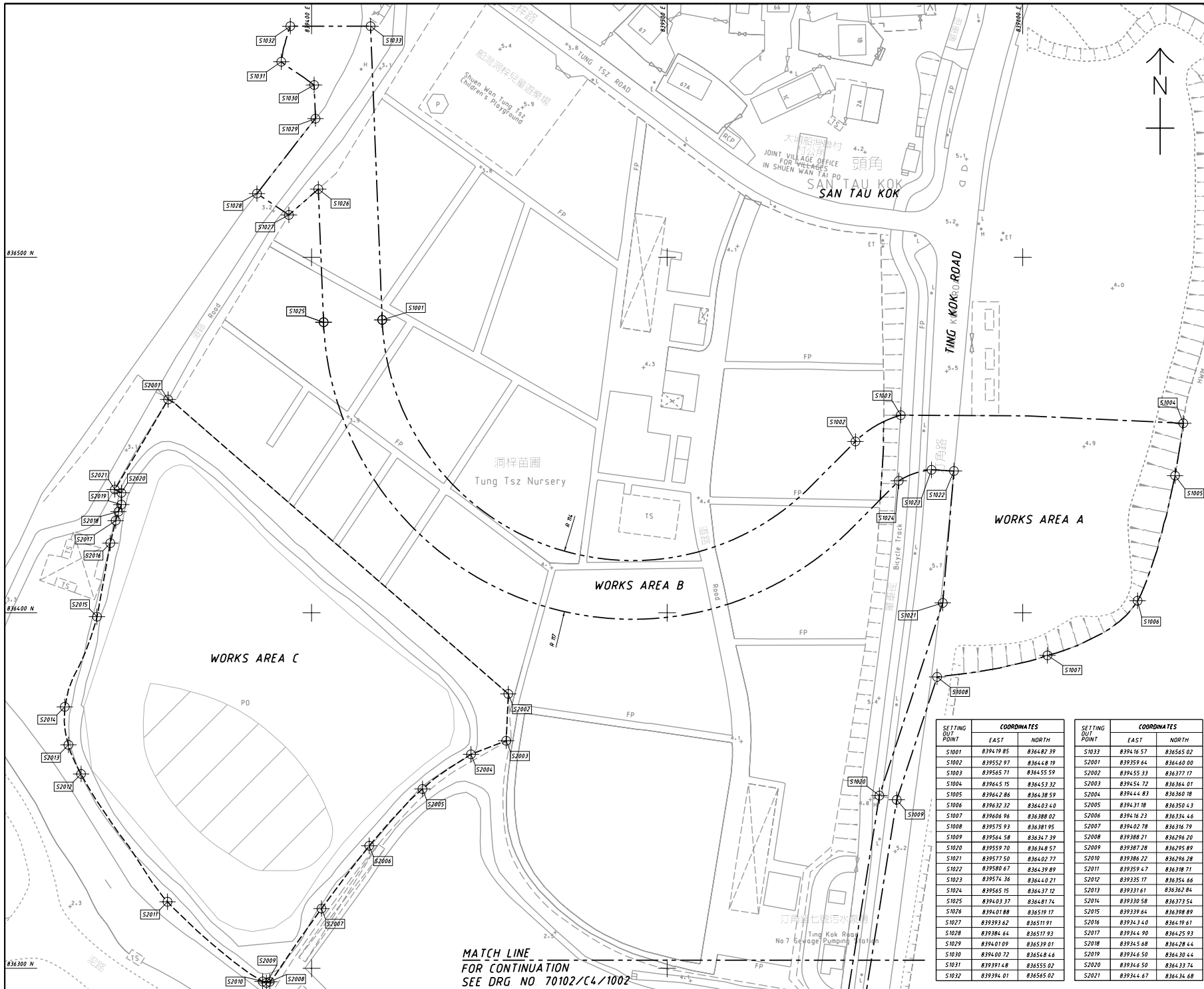
For ecological monitoring survey, all vegetations recorded were in fair condition, with no significance sign of health deterioration for the retained trees. In addition, Ecological water quality monitoring at ECA was conducted on 15/8 with result: Turbidity: 6.95NTU; Temperature: 34.8°C; DO: 4.68mg/L; pH: 6.3.

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

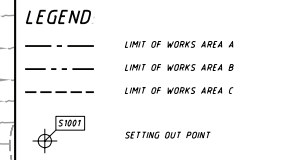
ET has reminded the contractor to provide environmental pollution control measures wherever necessary, and to keep a good environmental management at site practice.

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 HK(1980) 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



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

DRGNQ. 70102/C4/1001A
圖紙編號

DESIGNED BY CPWU	CONTRACT NO. DC/2009/22	DR. APPROVED DML
DRAWN BY LWL	STATUS 1/10	
SCALE A1 : 1 500	DIMENSIONS ARE IN METRES	

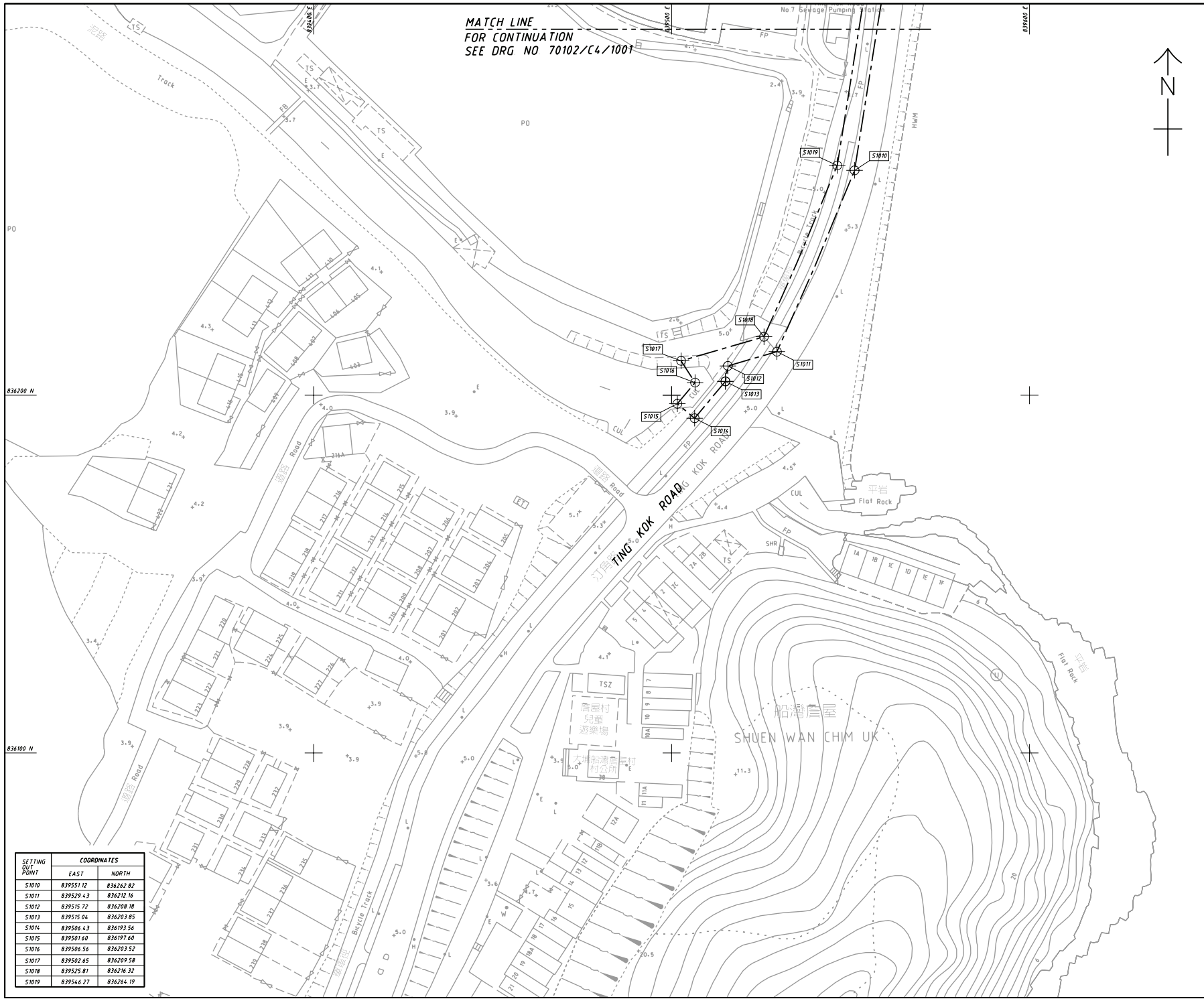
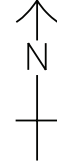
SETTING OUT POINT	COORDINATES		SETTING OUT POINT	COORDINATES	
	EAST	NORTH		EAST	NORTH
S1001	839419.85	836487.39	S1033	839416.57	836565.02
S1002	839552.87	836448.19	S2001	839359.64	836440.00
S1003	839565.71	836455.59	S2002	839455.33	836377.17
S1004	839645.15	836453.32	S2003	839454.72	836364.01
S1005	839642.86	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	839343.40	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

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	CPWU	CONTRACT NO. 合約編號	DC/2009/22	APPROVED BY 核准人	DML
-------------------	------	----------------------	------------	--------------------	-----

DRAWN BY 繪圖	LWL	STATUS 狀態	
----------------	-----	--------------	--

SCALE 1:1 500
圖則比例尺
DIMENSIONS ARE IN METRES
尺寸單位為公尺

© COPYRIGHT RESERVED
版權所有

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

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. 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

This report may not be reproduced except with prior written approval from ALS Technichem (HK) Pty Ltd.

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

Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

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

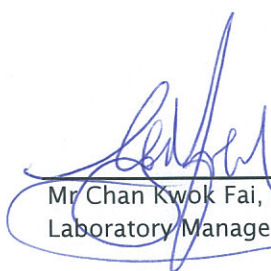
Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	3.95	-0.05
7.0	6.94	-0.06
10.0	9.95	-0.05
	Tolerance Limit (±unit)	0.20

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).

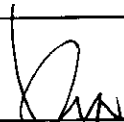
Main Test equipment used:

<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



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		1/8/2012	1/8/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		13:10	13:45
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 955	
Wind Speed (m/s)		0.2	0.2
Measurement Results	L _{eq} (dB(A))	63.4	66.1
	L ₁₀ (dB(A))	65.4	67.4
	L ₉₀ (dB(A))	48.1	57.3
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

1/8/2012

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		8/8/2012	8/8/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		11:05	11:40
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 955	
Wind Speed (m/s)		0.2	0.2
Measurement Results	L _{eq} (dB(A))	64.3	64.9
	L ₁₀ (dB(A))	66.1	67.5
	L ₉₀ (dB(A))	49.3	57.9
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

8/8/2012

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		15/8/2012	15/8/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		11:00	11:35
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 955	
Wind Speed (m/s)		0.4	0.4
Measurement Results	L _{eq} (dB(A))	62.1	65.3
	L ₁₀ (dB(A))	63.4	66.2
	L ₉₀ (dB(A))	47.2	49.1
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

Prepared by: Lau Kai Chung

Lau Kai Chung

15/8/2012

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		22/8/2012	22/8/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		11:00	11:35
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 955	
Wind Speed (m/s)		0.6	0.6
Measurement Results	L _{eq} (dB(A))	60.9	67.8
	L ₁₀ (dB(A))	61.2	69.2
	L ₉₀ (dB(A))	46.6	50.1
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

Prepared by: Lau Kai Chung

Lau Kai Chung

22/8/2012

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		29/8/2012	29/8/2012
Weather Condition		Sunny	Sunny
Measurement Start Time (hh:mm)		11:50	12:25
Measurement Time Length (mins)		30 mins	
SLM Model & S/N		SVAN 955	
Wind Speed (m/s)		0.2	0.2
Measurement Results	L _{eq} (dB(A))	58.8	62.3
	L ₁₀ (dB(A))	59.9	64.1
	L ₉₀ (dB(A))	50.1	48.2
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: Lai Chi Hang

Lau Kai Chung

29/8/2012

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 : 1/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	11:00	13:10	12:00
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.90	7.33	8.20
Temperature (°C)	33.8	31.5	33.7
Turbidity (NTU)	3.0	8.3	1.9
DO (mg/L)	4.30	7.61	4.50
DO Saturation (%)	59%	95%	60%
Suspended Solids (mg/L)	5.0	14.0	12.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

1/8/2012

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

Date of Sampling : 3/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	13:30	13:50	9:00
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.30	7.61	8.00
Temperature (°C)	32.6	30.5	31.9
Turbidity (NTU)	2.3	3.1	1.3
DO (mg/L)	5.00	7.32	5.30
DO Saturation (%)	66%	95%	67%
Suspended Solids (mg/L)	8.0	7.4	12.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

3/8/2012

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

Date of Sampling : 6/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	15:00	14:35	10:15
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.50	7.60	7.80
Temperature (°C)	32.7	30.6	32.3
Turbidity (NTU)	8.80	4.1	3.30
DO (mg/L)	4.70	7.46	5.20
DO Saturation (%)	65%	95%	65%
Suspended Solids (mg/L)	23.0	5.6	8.2

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

6/8/2012

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

Date of Sampling : 8/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	16:00	15:30	16:25
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.40	7.34	7.80
Temperature (°C)	32.7	31.4	32.7
Turbidity (NTU)	8.2	6.0	2.3
DO (mg/L)	4.20	7.35	4.90
DO Saturation (%)	58%	96%	68%
Suspended Solids (mg/L)	9.0	8.2	7.2

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

8/8/2012

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

Date of Sampling : 10/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C1
Time (hhmm)	17:00	14:00	14:05
Tide Mode	Mid-flood		N/A
Water Depth (m)	<1	<1	<1
pH value	6.90	7.26	7.77
Temperature (°C)	32	30	30.8
Turbidity (NTU)	10.8	10.0	4.8
DO (mg/L)	5.20	7.56	7.06
DO Saturation (%)	62%	96%	86%
Suspended Solids (mg/L)	13.0	8.4	7.8

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

10/8/2012

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

Date of Sampling : 13/8/2012

Weather : Rainy

Monitoring Location	W1	W2	C2
Time (hhmm)	10:15	11:00	9:45
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.50	7.46	9.40
Temperature (°C)	30.5	27.6	30.6
Turbidity (NTU)	22.5	121.5	2.1
DO (mg/L)	4.20	7.68	5.10
DO Saturation (%)	56%	90%	67%
Suspended Solids (mg/L)	20.0	36.0	22.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

13/8/2012

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

Date of Sampling : 15/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	10:45	11:00	10:25
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.70	7.46	8.00
Temperature (°C)	35.1	30.7	36.1
Turbidity (NTU)	8.2	6.0	2.5
DO (mg/L)	3.50	6.79	4.70
DO Saturation (%)	50%	85%	69%
Suspended Solids (mg/L)	19.0	11.0	12.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

15/8/2012

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

Date of Sampling : 17/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	13:15	13:05	9:50
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.50	7.58	8.20
Temperature (°C)	29.2	28.1	28.7
Turbidity (NTU)	2.0	10.8	3.8
DO (mg/L)	6.50	7.09	5.30
DO Saturation (%)	64%	90%	67%
Suspended Solids (mg/L)	2.0	14.0	14.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

17/8/2012

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

Date of Sampling : 20/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	14:00	15:10	9:40
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.30	7.13	6.30
Temperature (°C)	34.9	30.2	34
Turbidity (NTU)	3.8	9.7	1.7
DO (mg/L)	5.10	6.90	5.20
DO Saturation (%)	72%	88%	72%
Suspended Solids (mg/L)	4.0	7.6	9.6

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

20/8/2012

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

Date of Sampling : 22/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	16:00	15:05	10:30
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	7.80	7.46	7.90
Temperature (°C)	31	28.9	31.1
Turbidity (NTU)	11.8	7.6	2.8
DO (mg/L)	6.50	6.87	5.60
DO Saturation (%)	80%	90%	69%
Suspended Solids (mg/L)	8.0	9.4	13.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

22/8/2012

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

Date of Sampling : 24/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C1
Time (hhmm)	17:00	12:40	12:50
Tide Mode	Mid-flood		
Water Depth (m)	<1	<1	<1
pH value	7.10	7.50	7.52
Temperature (°C)	33.3	31.8	31.6
Turbidity (NTU)	10.3	9.6	10.1
DO (mg/L)	4.90	7.37	7.41
DO Saturation (%)	67%	92%	93%
Suspended Solids (mg/L)	9.0	8.0	7.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

24/8/2012

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

Date of Sampling : 27/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	10:10	9:45	10:30
Tide Mode	Mid-ebb		
Water Depth (m)	<1	<1	<1
pH value	6.40	7.26	8.00
Temperature (°C)	34.3	29.8	34.6
Turbidity (NTU)	8.9	2.9	4.2
DO (mg/L)	5.00	6.84	4.60
DO Saturation (%)	72%	88%	65%
Suspended Solids (mg/L)	13.0	4.2	6.2

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

27/8/2012

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

Date of Sampling : 29/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	11:00	11:50	10:15
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.20	7.26	8.70
Temperature (°C)	18.0	32.5	33.4
Turbidity (NTU)	14.3	4.9	2.6
DO (mg/L)	5.80	6.87	4.30
DO Saturation (%)	79%	84%	61%
Suspended Solids (mg/L)	19.0	9.6	8.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

29/8/2012

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

Date of Sampling : 31/8/2012

Weather : Sunny

Monitoring Location	W1	W2	C2
Time (hhmm)	12:00	11:50	12:15
Tide Mode	Mid-ebb		N/A
Water Depth (m)	<1	<1	<1
pH value	6.40	7.44	6.60
Temperature (°C)	31.2	29.4	31.4
Turbidity (NTU)	4.9	8.5	7.5
DO (mg/L)	6.30	6.85	5.30
DO Saturation (%)	85%	85%	74%
Suspended Solids (mg/L)	6.0	7.6	8.0

Remark or Observation : _____

Name

Signature

Date

Prepared By : Lau kai chung

Lau kai chung

31/8/2012

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	3-Aug-2012					0.000
H1	Mid	Flood	10-Aug-2012	13:45	Sunny	0.3	0.12	0.150
H1	Mid	Flood	17-Aug-2012					0.000
H1	Mid	Flood	24-Aug-2012	12:20	Sunny	0.24	0.06	0.075
H1	Mid	Flood	31-Aug-2012					0.000
H2	Mid	Flood	3-Aug-2012					0.000
H2	Mid	Flood	10-Aug-2012	13:30	Sunny	0.18	0.06	0.377
H2	Mid	Flood	17-Aug-2012					0.000
H2	Mid	Flood	24-Aug-2012	12:35	Sunny	0.18	0.12	0.754
H2	Mid	Flood	31-Aug-2012					0.000
H1	Mid	Ebb	3-Aug-2012	13:30	Sunny	0.12	0.06	0.075
H1	Mid	Ebb	10-Aug-2012					0.000
H1	Mid	Ebb	17-Aug-2012	12:55	Sunny	0.12	0.06	0.075
H1	Mid	Ebb	24-Aug-2012					0.000
H1	Mid	Ebb	31-Aug-2012	12:00	Sunny	0.18	0.12	0.150
H2	Mid	Ebb	3-Aug-2012	13:10	Sunny	0.12	0.18	0.225
H2	Mid	Ebb	10-Aug-2012					0.000
H2	Mid	Ebb	17-Aug-2012	12:40	Sunny	0.12	0.12	0.754
H2	Mid	Ebb	24-Aug-2012					0.000
H2	Mid	Ebb	31-Aug-2012	11:45	Sunny	0.3	0.06	0.377

*: Only one mid-tide is within working hours of construction activity on 3,10,17,24 and 31 Aug 12.

Appendix G: Landscape and Visual Monitoring Photos



Photo 1 – Temporary hoardings have been established to surround the works area at Wai Ha River estuary.



Photo 2 – Temporary hoardings have been established to active works area along Ting Kok Road.



Photo 3 – Temporary hoardings has been erected to surround the new section of construction areas within the Nursery, an access road has been maintained for daily operation of the Nursery.



Photo 4 – No discharge of muddy water of observed in Area C.



Photo 5 – Overall view of the transplanted tree U58 *Grevillea robusta*.



Photo 6 – A broken scaffold branch (indicated) has overhung in the canopy of U58, while new and small leaves were observed in the canopy.



Photo 7 – Watersprouts were observed along the trunk of the transplanted tree U58 *Grevillea robusta*.



Photo 8 – The relocated tree U55 (*Pterocarpus indicus*) found being planted directly to the soil ground by the Nursery.



Photo 9 – The fallen tree U68 was pruned and removed by the Nursery, leaving its stump within the planter.



Photo 10 – The retained tree U67 was recently pruned, possibly as horticultural maintenance by the Nursery.



Photo 11 – Close-up view of the pruned tree part on the retained tree U67.



Photo 12 – More severe leaning tree trunk of the transplanted tree U61 was observed in Area B.



Photo 13 – Crack on the planter of U75 became more obvious in Area B.



Photo 14 – No temporary storage of construction materials were observed within the TPZs in Area A.



Photo 15 – A broken scaffold branch was observed on the tree to be transplanted (T102) in Area B.



Photo 16 – Close-up view of the broken scaffold branch observed on T102 in Area B.



Photo 17 – Declining health condition of U37 in Area B.



Photo 18 – Declining health condition of U34 in Area B.



Photo 19 – Declining health condition of U35 in Area B.



Photo 20 – General view of the relocated trees behind the sheet piles in Area B.



Photo 21 – General view of the relocated trees behind the sheet piles in Area B.



Photo 22 – Waterlogged area was observed at the base of the relocated tree U76 in Area B.



Photo 23 – Waterlogged area was observed at the base of the relocated tree U78 in Area B.

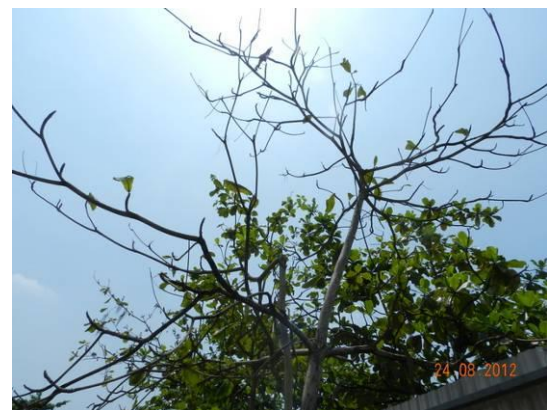


Photo 24 – Poor health condition was observed in the canopy of the relocated tree U77 in Area B.



1.1.1 **Photo 25** – The untagged tree next to U54 have been surrounded by the orange construction nets to prevent further damage to the tree trunk.



1.1.2 **Photo 26** – U54 (left) and an untagged tree (right) have been surrounded by the orange construction nets to prevent further damage to the tree trunks.



Photo 27 – General view of the transplanted tree T152 in Area C.



Photo 28 – General view of the transplanted tree T153 in Area C.



Photo 29 – The protected shrubs *Pavetta hongkongensis* (PH01 and PH02) showed fair health condition in Area C.



Photo 30 – The protected shrubs *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	<p>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.</p> <p>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.</p>	To minimize the impacts on the stream and natural river bank.	Whole site	Construction phase	EIAO-TM	Implemented
6.6	<p>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.</p> <p>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.</p> <p>Planting pits should be provided in the gabion bank to allow the re-establishment of riparian vegetation.</p>	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, <i>Pavetta hongkongensis</i>). 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

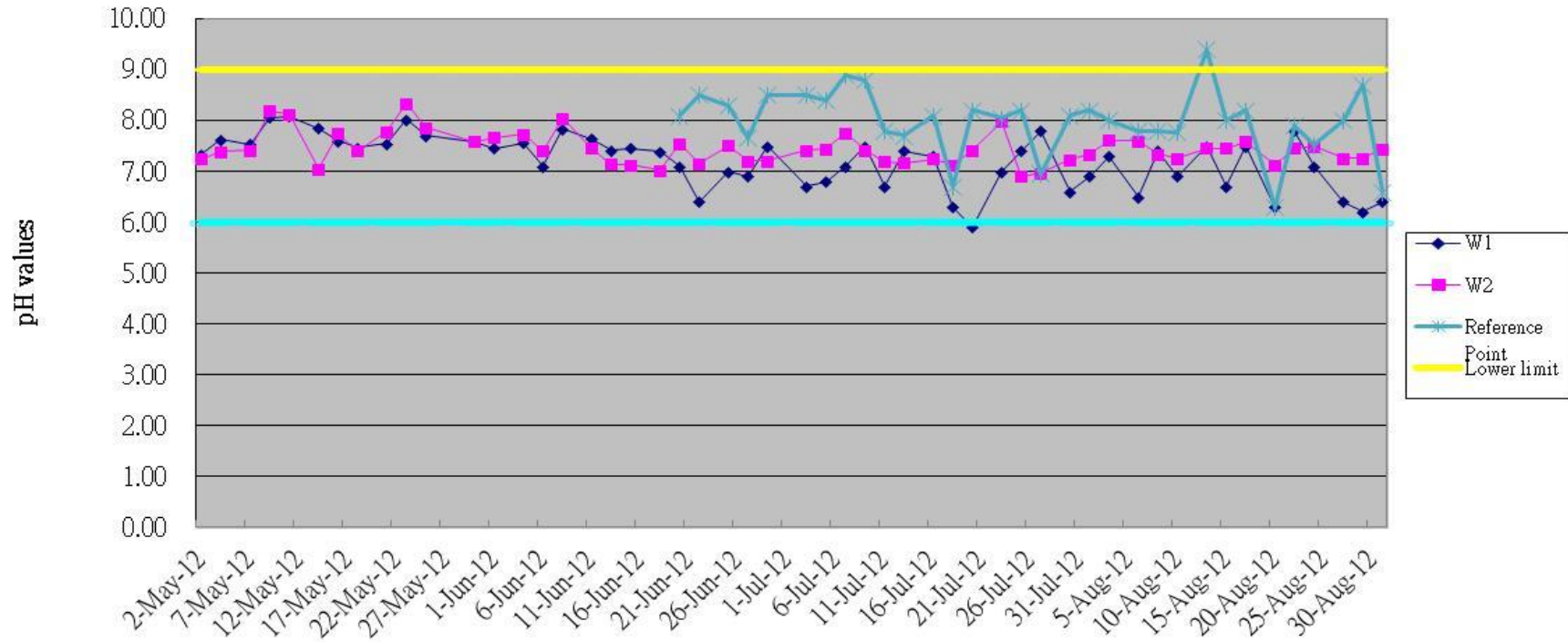
Appendix J: Three month rolling programme

Master Programme (Rev. 6)

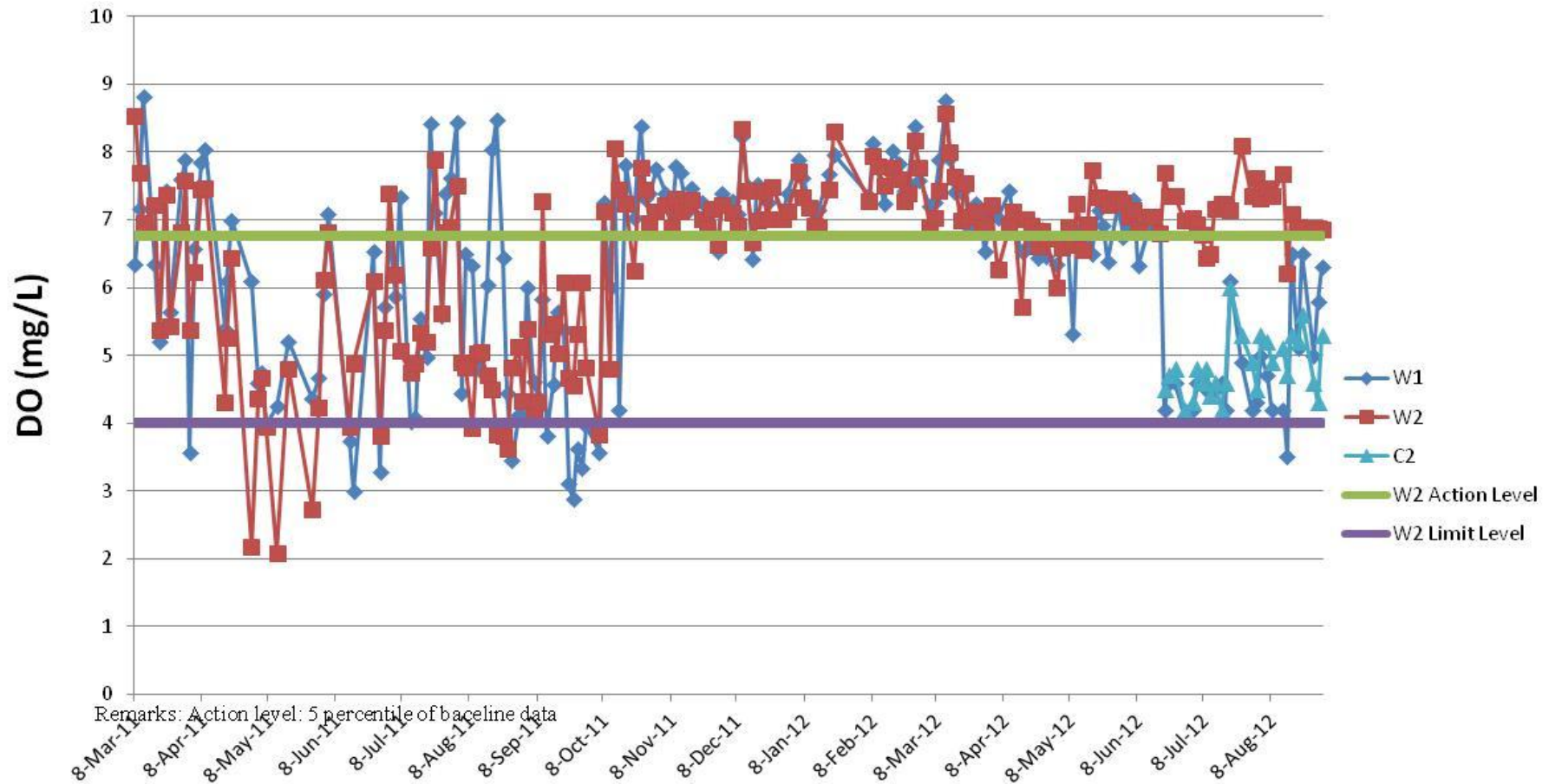
ID	ID no. in Rev. 5	ID no. in Rev. 4	ID no. in Rev. 3	ID no. in Rev. 2	Task Name	Duration	Start	Finish	Predecessors	Successors	2010												2011												2012									
											1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter																							
												Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1	1	1	1	Preliminary Works (Area I - Pak Shek Kok)	175 days	Fri 26/2/10	Thu 19/8/10				2010												2011												2012								
2	2	2	2	2	Commencement of Works	0 days	Fri 26/2/10	Fri 26/2/10		3,83,88,105		2010												2011												2012								
3	3	3	3	3	Design & Construction of Site Hoarding	30 days	Fri 26/2/10	Sat 27/3/10		2	4FS-5 days	2010												2011												2012								
4	4	4	4	4	Site Clearance	10 days	Tue 23/3/10	Thu 1/4/10	3FS-5 days	8FS+10 days,5	6	2010												2011												2012								
5	5	5	5	5	Design of Engineer's Site Office	30 days	Fri 2/4/10	Sat 1/5/10		4	6	2010												2011												2012								
6	6	6	6	6	Construction of Engineer's Site Office	60 days	Sun 2/5/10	Wed 30/6/10		5	7	2010												2011												2012								
7	7	7	7	7	Engineer's Site Office - Setup the Internal Finishing / Furniture/ Equipment	15 days	Thu 1/7/10	Thu 15/7/10		6		2010												2011												2012								
8	8	8	8	8	Construction of Contractor's Accommodation	70 days	Mon 12/4/10	Sun 20/6/10	4FS+10 days	9		2010												2011												2012								
9	9	9	9	9	Installation of Sewerage Storage Tank	5 days	Mon 21/6/10	Fri 25/6/10		8	10	2010												2011												2012								
10	10	10	10	10	Contractor Accommodation - Setup the Internal Finishing / Furniture / Equipment	20 days	Sat 26/6/10	Thu 15/7/10		9	11	2010												2011												2012								
11	11	11	11	11	Establishment of Vehicular Gate, Storage Area	15 days	Fri 16/7/10	Fri 30/7/10		10	12,13	2010												2011												2012								
12	12	12	12	12	Establishment of Welfare Facilities for Workers	20 days	Sat 31/7/10	Thu 19/8/10		11		2010												2011												2012								
13	13	13	13	13	Temporary Drainage System	20 days	Sat 31/7/10	Thu 19/8/10		11		2010												2011												2012								
14												2010												2011												2012								
15	15	15	15	15	Time for Completion of Section I	915 days	Fri 26/2/10	Tue 28/8/12				2010												2011												2012								
16	16	16	16	16	Section I (Area A,B - Shuen Wan)	915 days	Fri 26/2/10	Tue 28/8/12				2010												2011												2012								
17	17	17	17	17	Commencement of Works	0 days	Fri 26/2/10	Fri 26/2/10		19FS+30 days,35,111,22,20,28		2010												2011												2012								
18	18	18	18	18	Preliminary Works	240 days	Fri 26/2/10	Sat 23/10/10				2010												2011												2012								
19	19	19	19	19	Seek clarification regarding Environmental Permit	30 days	Sun 28/3/10	Mon 26/4/10	17FS+30 days	30		2010												2011												2012								
20	20	20	20	20	Design of TTA Scheme for Site Access	40 days	Fri 26/2/10	Tue 6/4/10		17	21	2010												2011												2012								
21	21	21	21	21	Submission of TTA to TMLG for Approval	60 days	Wed 7/4/10	Sat 5/6/10		20	25	2010												2011												2012								
22	22	22	22	22	Site Clearance	50 days	Fri 26/2/10	Fri 16/4/10		17	23,26	2010												2011												2012								
23	23	23	23	23	Project Signboard	5 days	Sat 17/4/10	Wed 21/4/10		22	24	2010												2011												2012								
24	24	24	24	24	Hoarding Erection	40 days	Thu 22/4/10	Mon 31/5/10		23	25	2010												2011												2012								
25	25	25	25	25	Establish Site Access	30 days	Sun 6/6/10	Mon 5/7/10	24,21	30		2010												2011												2012								
26	26	26	26	26	Ground Investigation	75 days	Sat 17/4/10	Wed 30/6/10		22	30	2010												2011												2012								
27												2010												2011												2012								
28	28	28	28	28	Tree Survey	75 days	Fri 26/2/10	Tue 11/5/10		17	29	2010												2011												2012								
29	29	29	29	29	Submission of Tree Survey Record	60 days	Wed 12/5/10	Sat 10/7/10		28	30,31	2010												2011												2012								
30	30	30	30	30	Tree Felling	20 days	Mon 26/7/10	Sat 14/8/10	29,139,25,26,19	94,99,37		2010												2011												2012								
31	31	31	31	31	Tree Transplanting	90 days	Mon 26/7/10	Sat 23/10/10	29,139	94FS-30 days,99FS-30 days,40FS-30 days		2010												2011												2012								
32												2010												2011												2012								
33	33	33	33	33	Pumping Station	915 days	Fri 26/2/10	Tue 28/8/12				2010												2011												2012								
34	34	34	34	34	Piling Works	485 days	Fri 26/2/10	Sat 25/6/11				2010												2011												2012								
35	35	35	35	35	Submission of Method Statement	100 days	Fri 26/2/10	Sat 5/6/10		17	46,54,36	2010												2011												2012								
36	36	36	36	36	Material Ordering & Delivery to Site	60 days	Sun 6/6/10	Wed 4/8/10		35	38	2010												2011												2012								
37	37	37	37	37	Ground Preparation for Piling	10 days	Sun 15/8/10	Tue 24/8/10	139,30	38		2010												2011												2012								
38	38	38	38	37	Preliminary Pile	35 days	Wed 25/8/10	Tue 28/9/10	37,36	39,40		2010												2011												2012								
39	39	39	39	39	Loading Test	30 days	Wed 29/9/10	Thu 28/10/10		38		2010												2011												2012								
40	40	40	40	38	Working Piles	110 days	Wed 29/9/10	Sun 16/1/11	38,31FS-30 days	41		2010												2011												2012								
41	41	41	41	40	Loading Test for working piles	30 days	Mon 17/1/11	Tue 15/2/11		40	42	2010												2011												2012								
42	42	42	42	41	Sheetpiling	30 days	Wed 16/2/11	Thu 17/3/11		41	43	2010												2011												2012								
43	43	43	43	41	Excavation to Pile Cut Off Level / Shoring	100 days	Fri 18/3/11	Sat 25/6/11		42	47	2010												2011												2012								
44												2010												2011												2012								
45	45	45	44	43	Main Structure of Pumping Station	815 days	Sun 6/6/10	Tue 28/8/12				2010												2011												2012								
46	46	46	45	44	Temporary Works Submission	120 days	Sun 6/6/10	Sun 3/10/10		35	47	2010												2011												2012								
47	47	47	46	45	Reinforced Concrete Works	210 days	Sun 26/6/11	Sat 21/1/12	46,43	118SS+80 days,75,48,68,62,74,57		2010												2011												2012								
48	48	48	47	46	Roofing	50 days	Sun 22/1/12	Sun 11/3/12		47	49,50	2010												2011												2012								
49	49	49	48	47	Manmade Slope	50 days	Mon 12/3/12	Mon 30/4/12		48	51	2010												2011												2012								
50	50	50	49	48	Internal Finishing Works	70 days	Mon 12/3/12	Sun 20/5/12		48	51	2010												2011												2012								
51	51	51	50	49	External Finishing Works	100 days	Mon 21/5/12	Tue 28/8/12	50,49	125		2010												2011												2012								
52												2010												2011												2012								
53	53	53	52	51	E & M	815 days	Sun 6/6/10	Tue 28/8/12				2010												2011												2012								
54	54	54	53	52	Submission of E & M Design	120 days	Sun 6/6/10	Sun 3/10/10		35	55FS-30 days	2010												2011												2012								
55	55	55	54	53	Approval of E & M Design	90 days	Sat 4/9/10	Thu 2/12/10	54FS-30 days	56		2010												2011												2012								
56	56	56	55	54	Fabrication & Delivery of Plant & Material	415 days	Fri 3/12/10	Sat 21/1/12		55	57	2010												2011												2012								
57	57	57	56	55	Plumbing & E&M works	150 days	Sun 22/1/12	Tue 19/6/12	56,47	58FS-30 days		2010												2011												2012								
58	58	58	57	56	Final Testing Works	100 days	Mon 21/5/12	Tue 28/8/12	57FS-30 days	125		2010												2011												2012								
59												2010												2011												2012								
60	60	60	59	58	External Structure	220 days	Sun 22/1/12	Tue 28/8/12				2010												2011												2012								
61	61	61	60	59	Pumping Station to Outfall Structure	220 days	Sun 22/1/12	Tue 28/8/12				2010												2011												2012								
62	62	62	61	60	Installation of Cofferdam & Site Hoarding Phase 2	30 days	Sun 22/1/12	Mon 20/2/12		47	63	2010												2011												2012								
63	63	63	62	61	Excavation	30 days	Tue 21/2/12	Wed 21/3/12		62	64	2010												2011												2012								
64	64	64	63	62	Construction of 2nos. of 1500mm dia. Drainage Pipes	50 days	Thu 22/3/12	Thu 10/5/12		63	65	2010												2011												2012								
65	65	65	64	63	2 nos. of Outfall Structures	110 days	Fri 11/5/12	Tue 28/8/12		64	125	2010												2011												2012								
66												2010												2011												2012								
67	67	67	66	65	Tide Level Monitoring Chamber	220 days	Sun 22/1/12	Tue 28/8/12				2010												2011												2012								
68	68	68	67	66	Installation of Cofferdam & Site Hoarding Phase 2	30 days	Sun 22/1/12	Mon 20/2/12		47	69	2010												2011												2012								
69	69	69	68	67	Excavation	30 days	Tue 21/2/12	Wed 21/3/12		68	70	2010												2011												2012								
70	70	70	69	68	Construction of Pipe & Tide Level Monitoring Chambers	50 days	Thu 22/3/12	Thu 10/5/12		69	71	2010												2011												2012								
71	71	71	70	69	Outfall Structure	110 days	Fri 11/5/12	Tue 28/8/12		70	125	2010												2011												2012								
72												2010												2011												2012								
73	73	73	72	71	External Misc. Works	220 days	Sun 22/1/12	Tue 28/8/12				2010												2011												2012								
74	74	74	73	72	Boundary Wall & Fencing	160 days	Sun 22/1/12	Fri 29/6/12		47	78	2010												2011												2012								
75	75	75	74	73	3nos. of Flow Measurement chambers and Pipes	60 days	Sun 22/1/12	Wed 21/3/12		47	76,79	2010												2011												2012								

Appendix K. Graphical plots of trends of monitored parameter

Graphical plots of pH values W1&W2



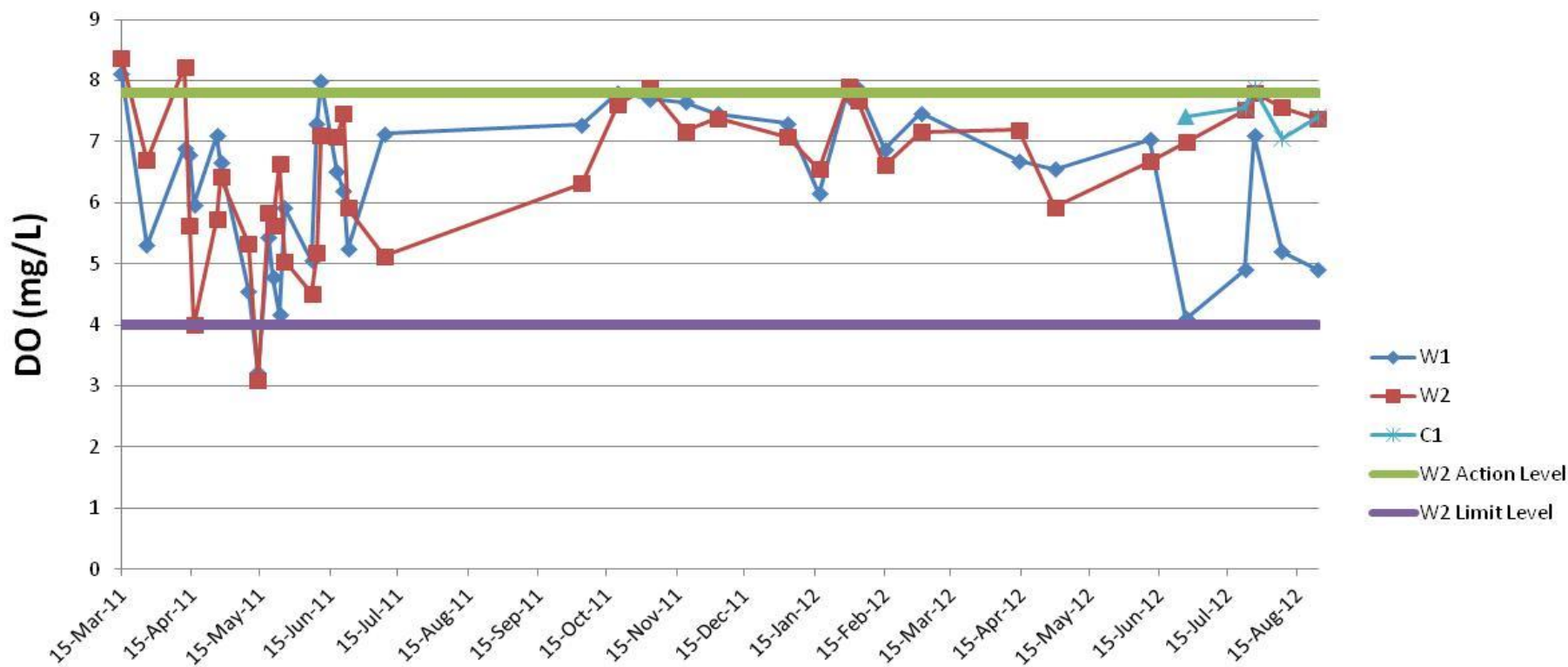
Graphical plots of DO (ebb tide) for W1&W2



Remarks: Action level: 5 percentile of baseline data

Limit level: 1 percentile of baseline

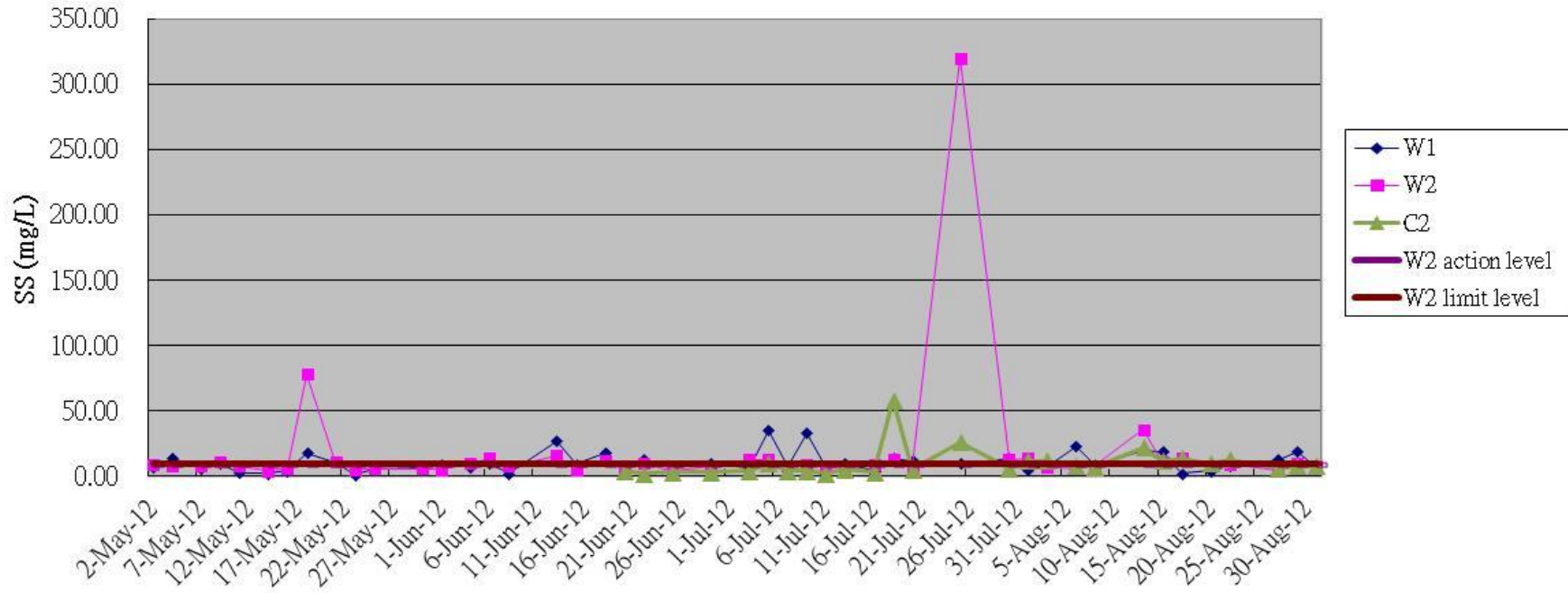
Graphical plot of DO (flood tide) of W1&W2



Remarks: Action level: 5 percentile of baceline data

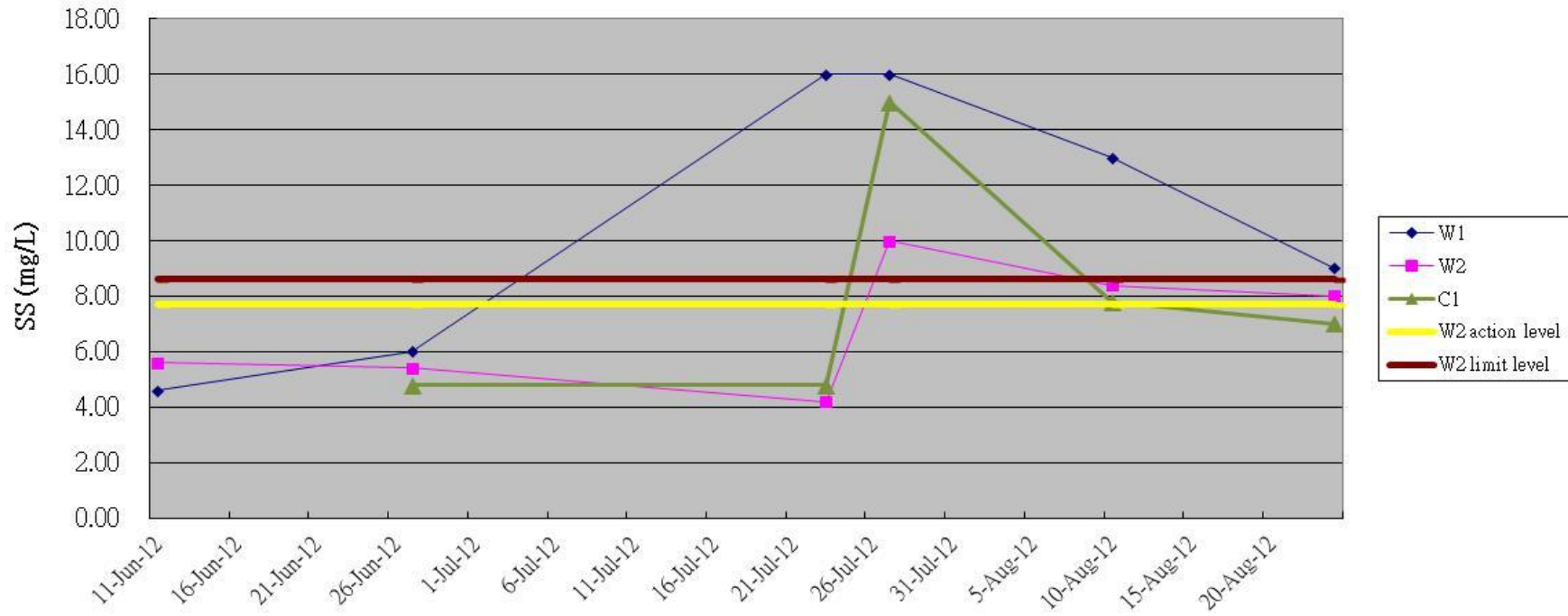
Limit level: 1 percentile of baceline

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



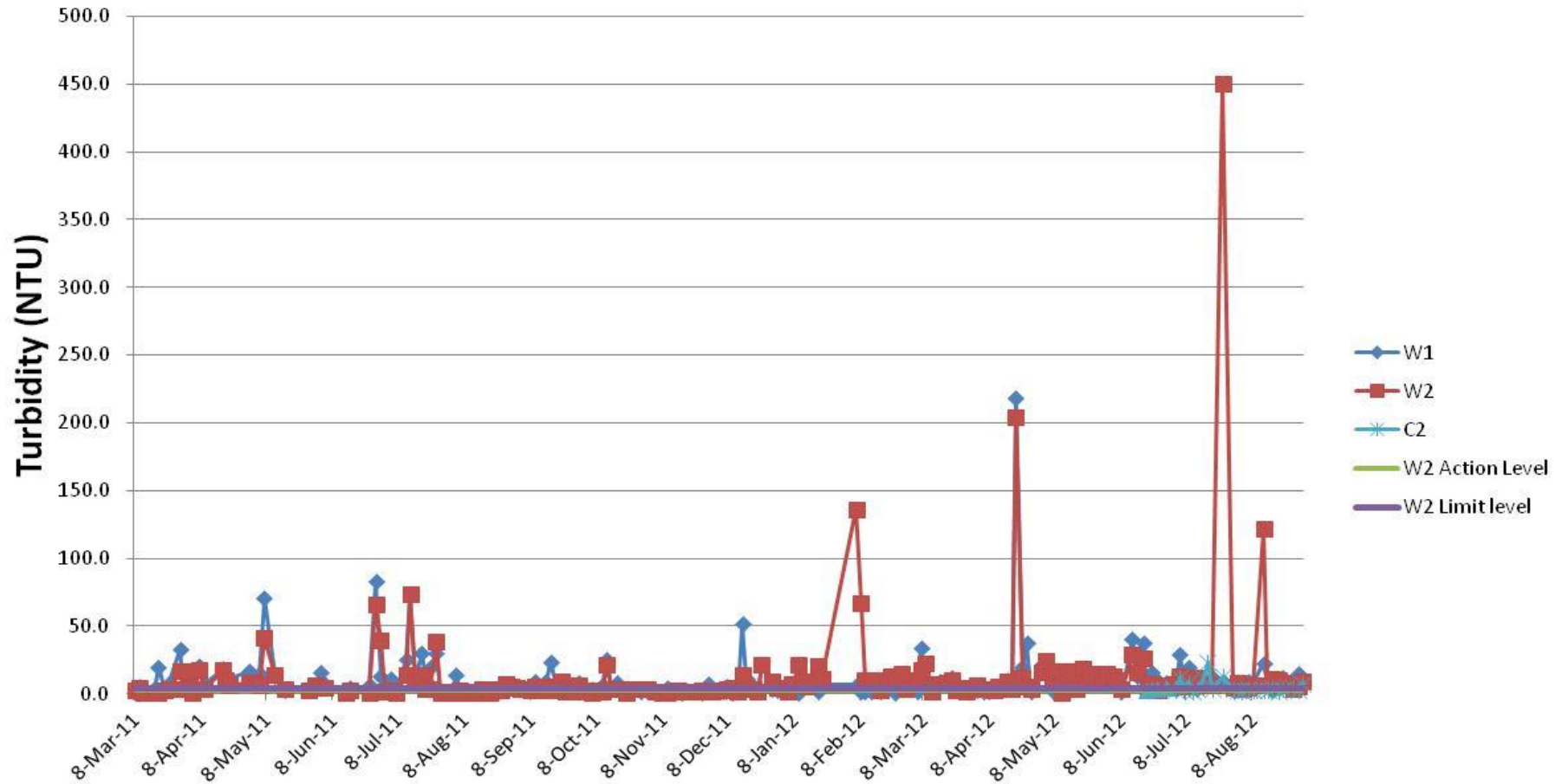
Remarks: Action limit is 95% of baseline data or 120% of upstream control station's SS
 Limit level is 99% of baseline data or 130% of upstream control station's SS

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



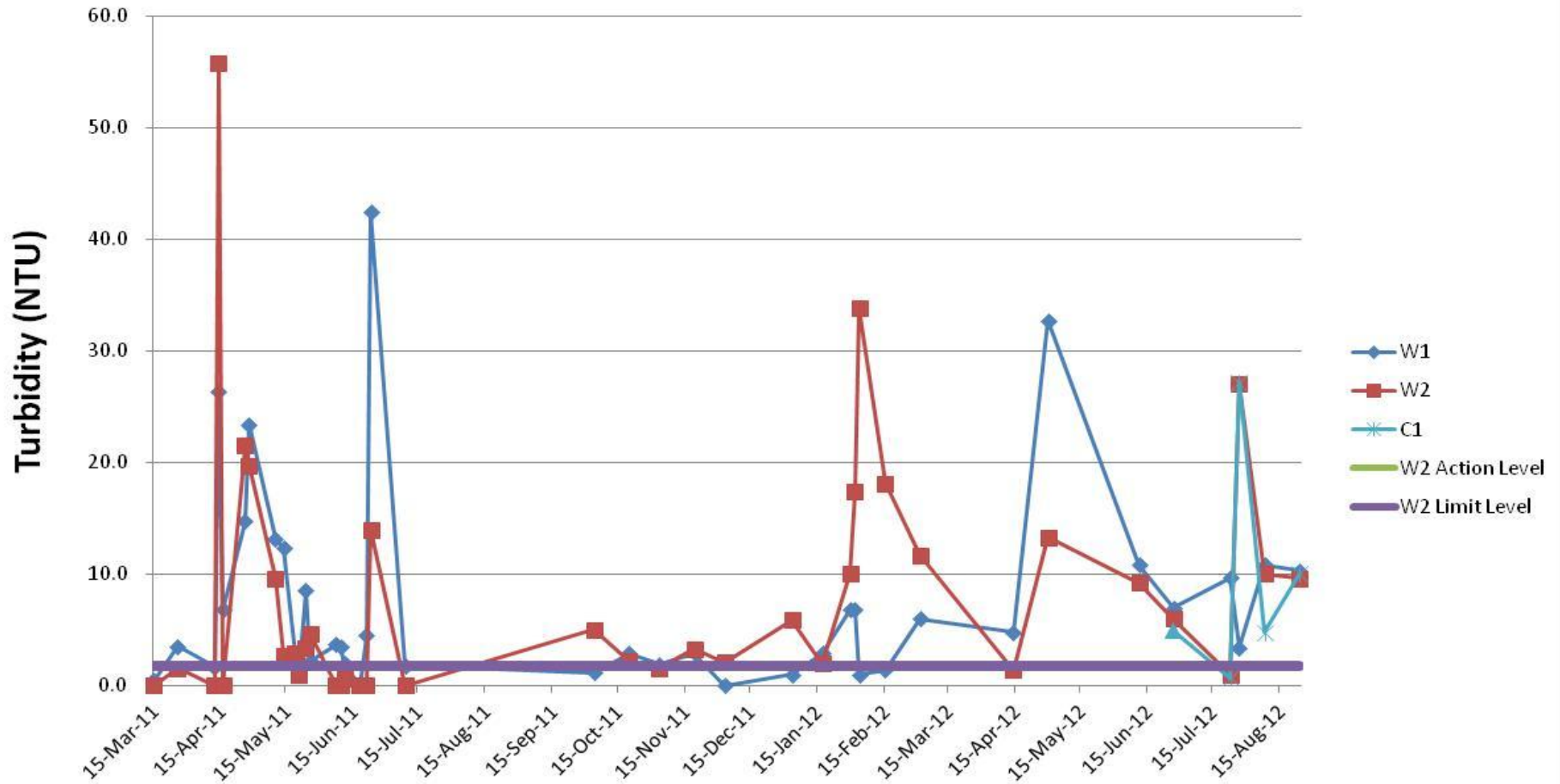
Remarks: Action limit is 95% of baseline data or 120% of upstream control station's SS
 Limit level is 99% of baseline data or 130% of upstream control station's SS

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



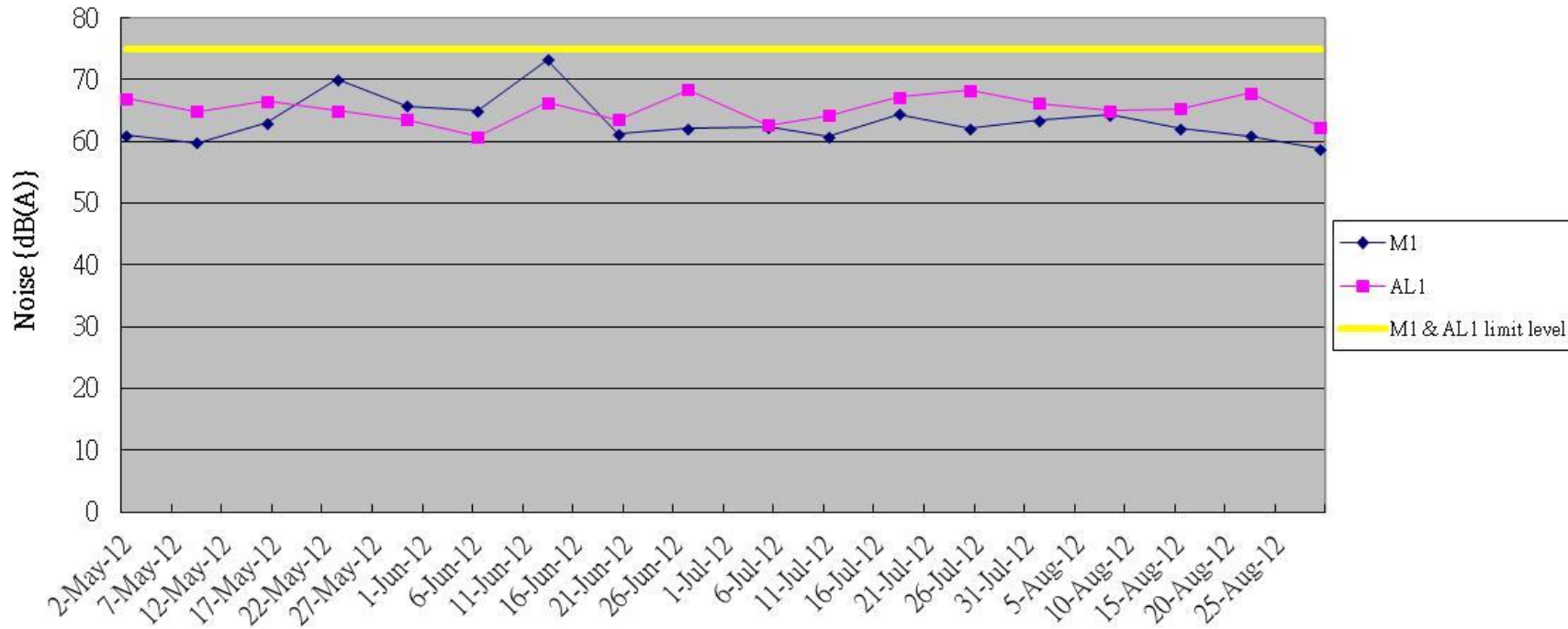
Remarks: Action limit is 95% of baseline data or 120% of upstream control station's Turbidity
Limit level is 99% of baseline data or 130% of upstream control station's Turb

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



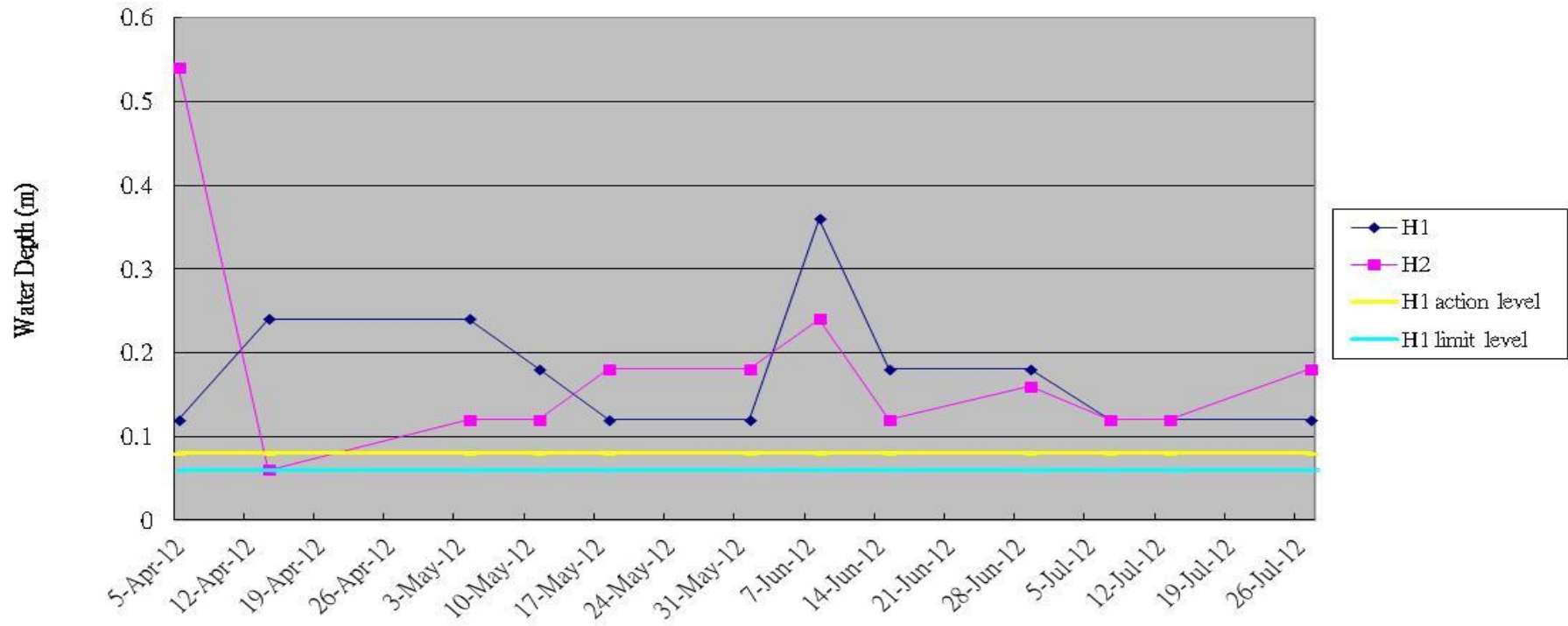
Remarks: Action limit is 95% of baseline data or 120% of upstream control station's Turbidity
 Limit level is 99% of baseline data or 130% of upstream control station's Turb

Graphical plots of Noise for M1 & AL1



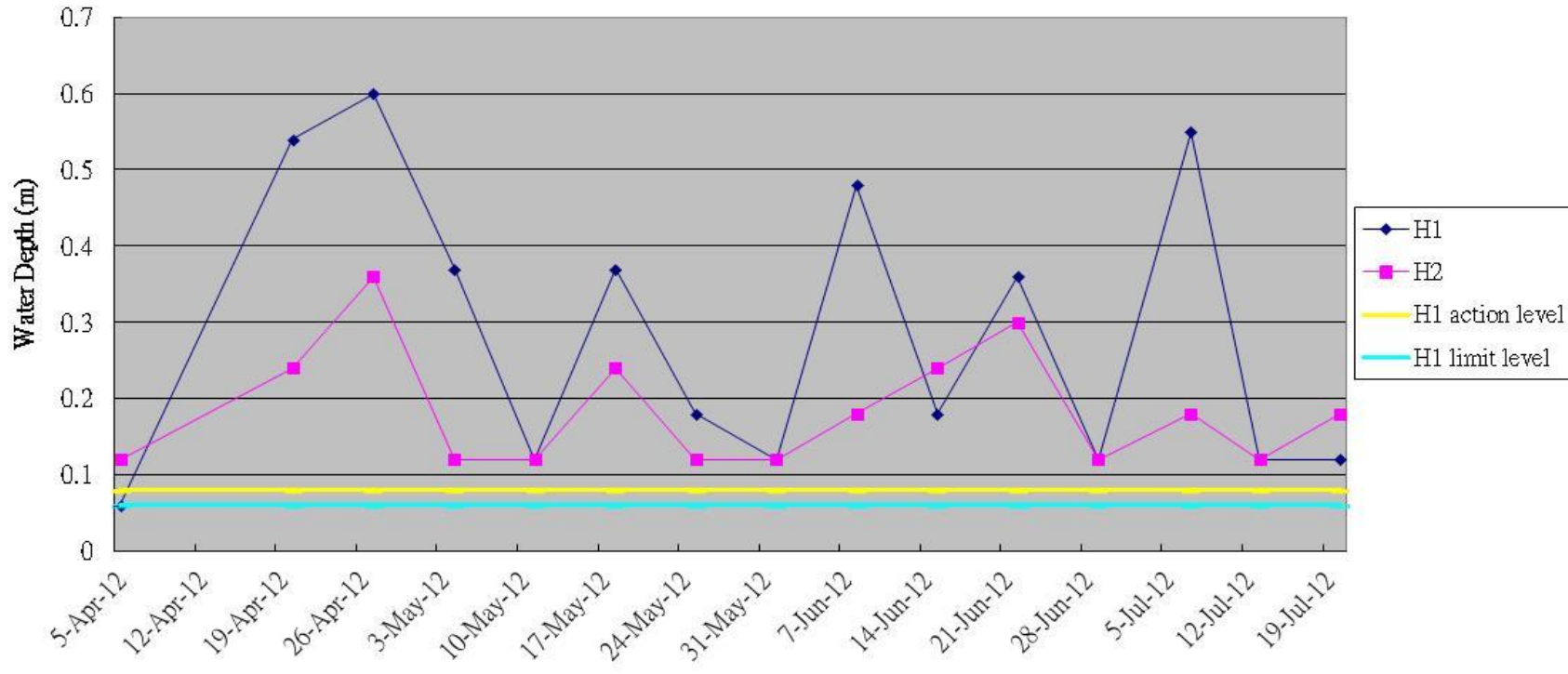
Remarks: Action limit is when one documented complaint is received

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



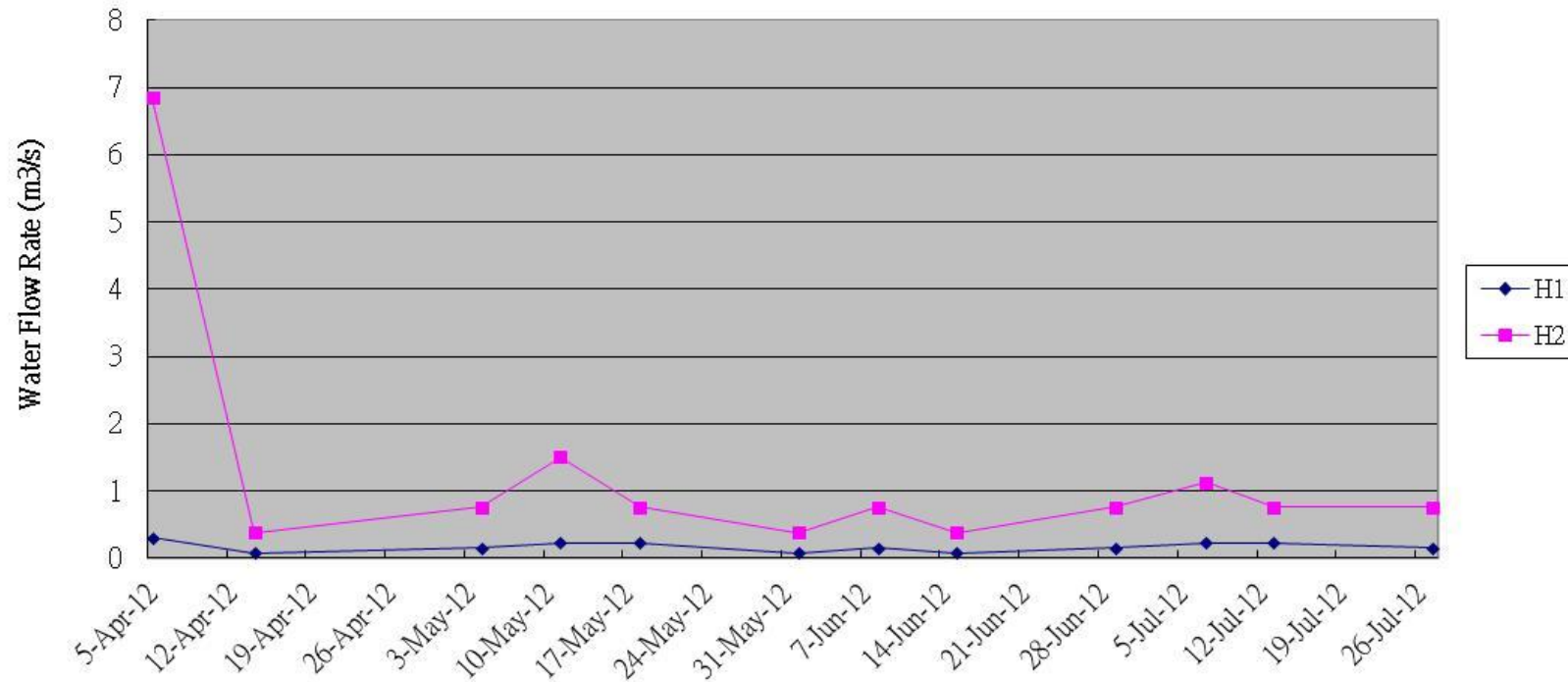
Remarks: Action level: 80% of baseline water depth.
 Limit level: 60% of baseline water depth.

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



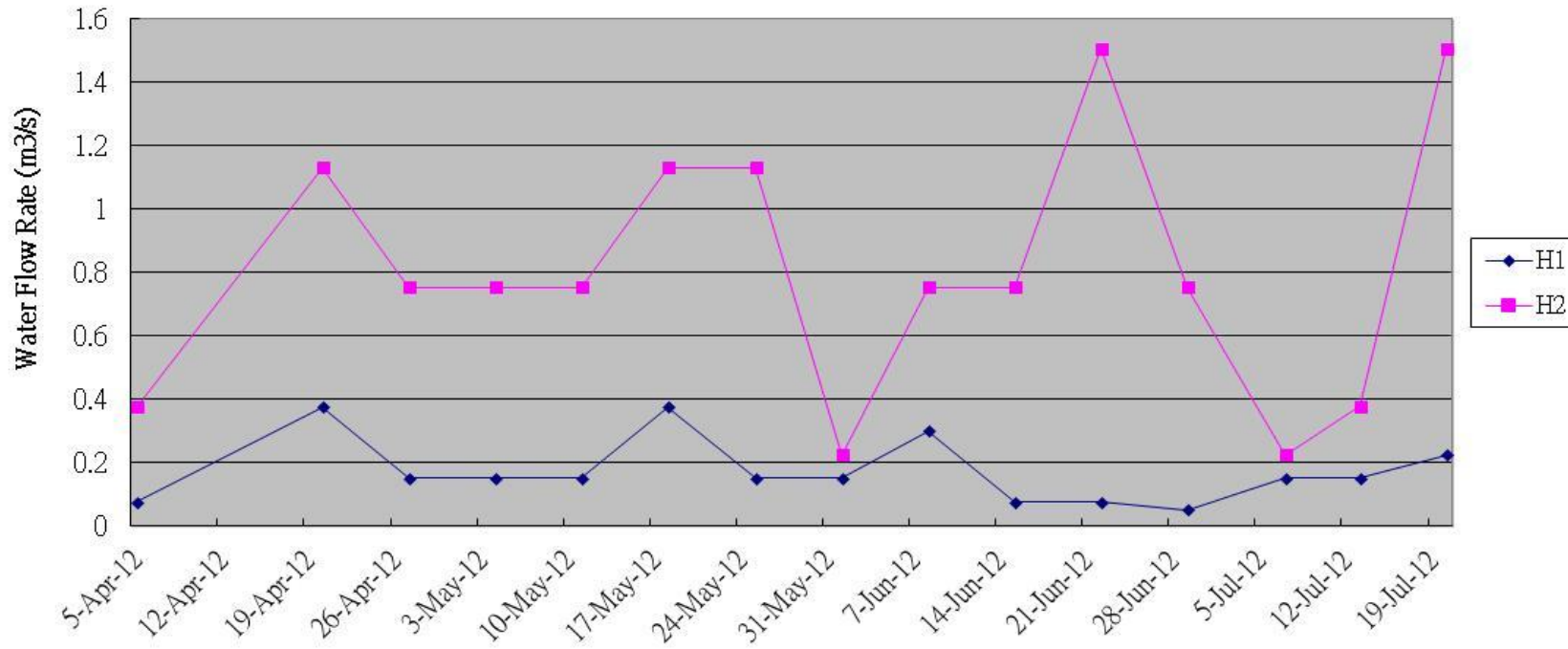
Remarks: Action level: 80% of baseline water depth.
Limit level: 60% of baseline water depth.

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 vegetations and relative abundance in the ECA during establishment phase in June 2012

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

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

D). List of trees will be replace at Ecological Compensations Area

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 dilatatum</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	Fair	
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	Poor	Dehydrated Crown
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 2012.

Appendix L (D). List of trees will be replace at Ecological Compensations Area

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	

Appendix M. Photo of Wai Ha River in August 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 N
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
電話
TEL NO.: 2802 4511
圖文傳真
FAX NO.:
電子郵件
E-MAIL:
網址
HOMEPAGE: <http://www.epd.gov.hk>

Environmental Protection Department

Branch Office

28th Floor, Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong.



環境保護署分處

香港灣仔
軒尼詩道
一百三十一號
修頓中心廿八樓

By Post & Fax : 2827 8700

31 May 2012

Drainage Projects Division,
Drainage Services Department,
40/F, 44/F & 45/F, Revenue Tower,
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

CONTENTS

1. Introduction	3
2. Water Quality Monitoring	4
2.1 Monitoring Locations	4
2.2 Reference Points for Contract No. 1	5
2.3 Data Analysis	6
3. Conclusion	9

Appendix A

Appendix B

Appendix C

Appendix D

Appendix E

Appendix F

Appendix G

Appendix H

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.

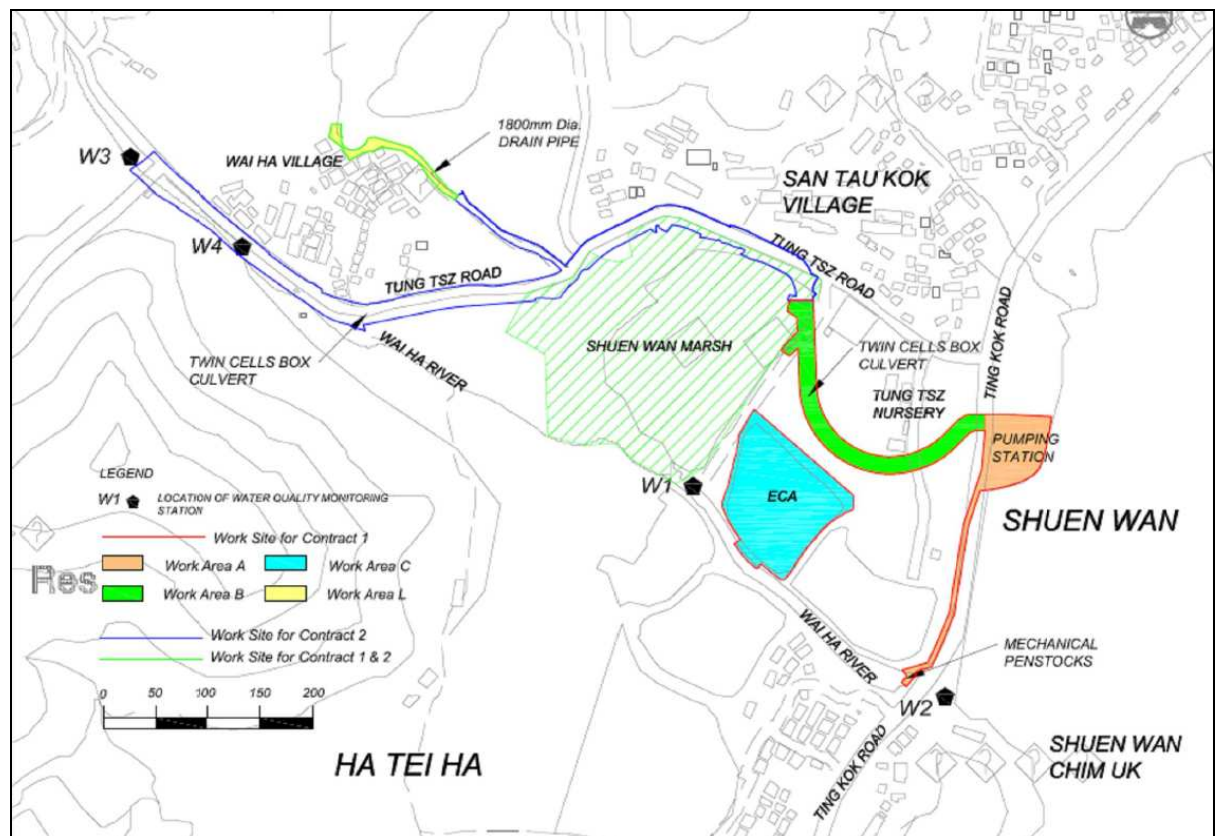
The construction period of the project was commenced on February 26th, 2010 and anticipated to complete in August 2013.

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.

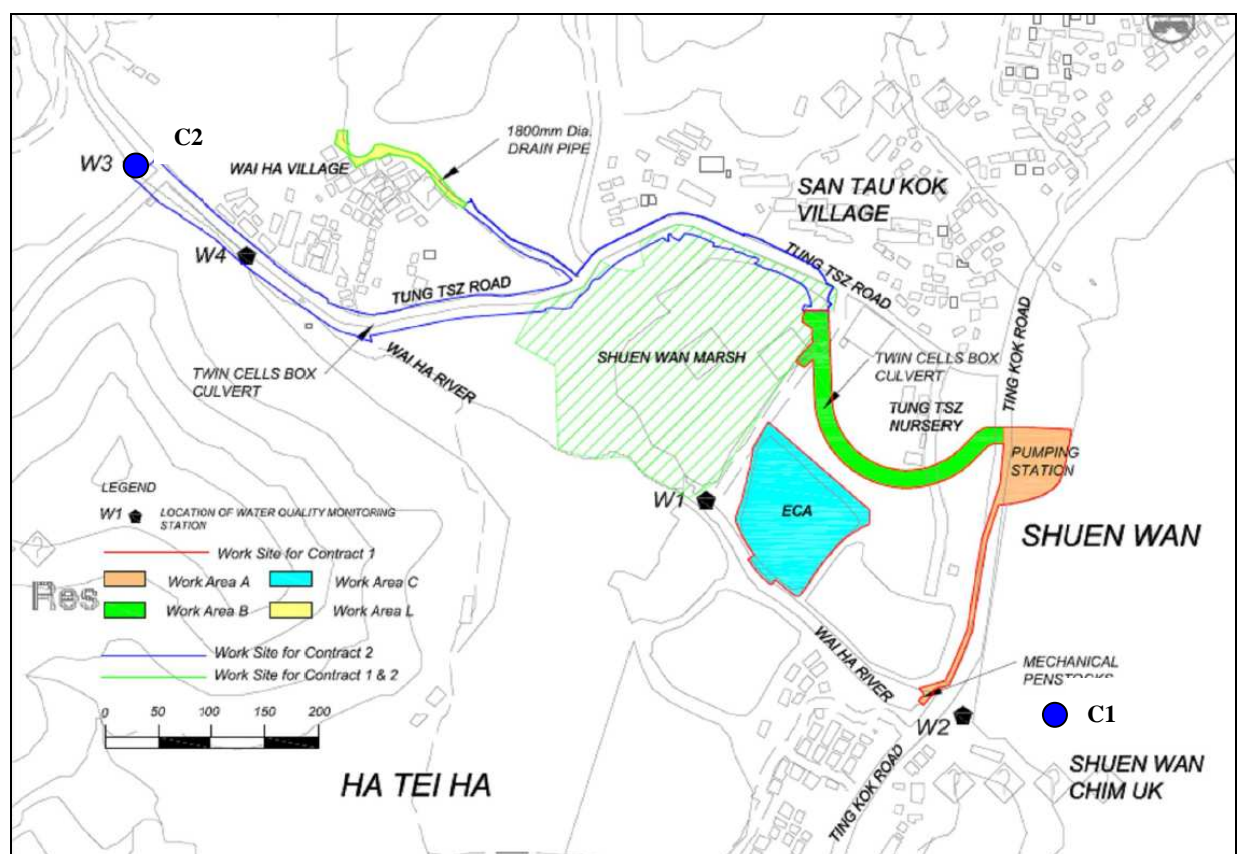
Figure 2.1 Water Quality Monitoring Locations



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		

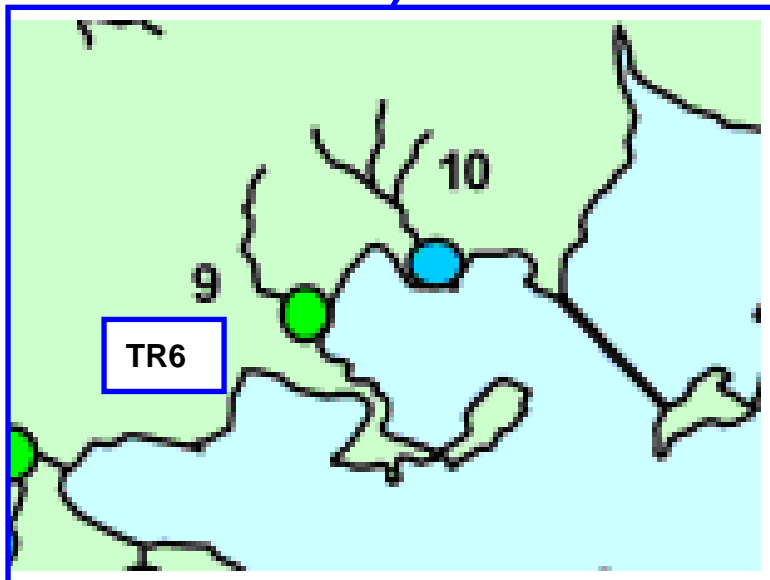
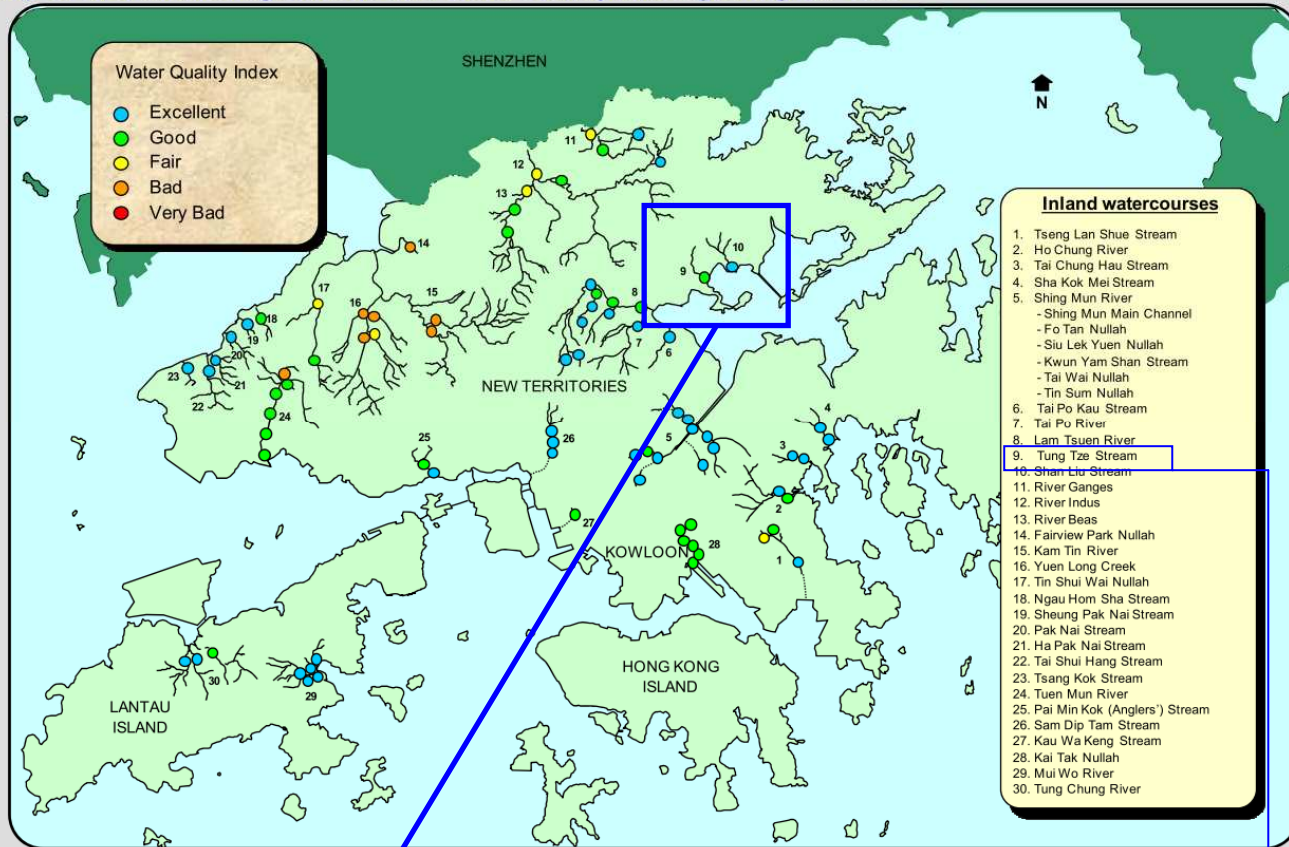
Remarks:

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 O Site Diary

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 2

Typhoon / Warning Signal:
Thunderstorm Warning - 01:10~03:15
Very Hot Weather Warning - 06:45~24:00

Contract No.: DC/2009/22 Date: 01/08/2012
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	6	1
	Community Liaison Officer	1	Bamboo Scaffolder	C303	2	Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine	2	
	CEG	1	Bar Bender & Fixer	C304	5	Excavator	C404		Dump Truck	3	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Electric Drill	1	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	27	Generator	2	
	Environmental Officer	1	Carpenter (Formwork)	C307		Sewermain	C407		Grab Lorry	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	4	1
	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	6	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	3	1
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor Manager	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	6						
			Plant and Equipment Operator (Hoist and Crane)	C334							
			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	22				Total Labour		46	Total	36	5
	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: Eddie Luk / SRE
Date:

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

Signed:

IOW
Tso Sai Kuen / Inspector of Works
Date: 2-8-2012

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: 01/08/2012

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	Drawing cables through surface mounted conduits for lighting at transformer room Rendering to cable trenches at transformer room Dismantling bamboo working platform at transformer room	Bamboo Scaffolder	C303	2	Electric Drill	1						
			Labourer (male)	C406	3								
			Plasterer	C337	1								
08:00 - 18:00	Area A - Pump Station	Excavating for Ø1200 pipe trench between manhole MH06-box culvert bay 20 and fabricating top layer I-beam walings & struts for shoring Erecting tubular working platform for store room construction Rebar fixing for roof beams RB18-RB22 and roof slab of store room General housekeeping and cleaning up sediments from wheel washing bay	Bar Bender & Fixer	C304	5	Backhoe	1	EX28					
			Labourer (female)	C406	1	Backhoe	1	EX50					
			Labourer (male)	C406	5	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	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.70-120 and fabricating 1st & 2nd layers of I-beam waling & struts Cart away excavated materials to stockpile area at Lot D.D.12, Tung Tsz Road (24 truckloads)	General Welder	C318	1	Backhoe	1	EX25					
			Labourer (male)	C406	4	Backhoe	1	EX36					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Dump Truck	3						
			Truck Driver	C349	4	Grab Lorry	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											

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 2-8-2012

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: 01/08/2012

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 - Dewatering from box culvert trench Bay 12~13 - Dismantling lower layer of I-beam walings and struts to facilitate walls construction Repairing hoarding damaged by typhoon	Labourer (male)	C406	4	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene	2						
						Water Pump 50mm	1						
						Water Pump 75mm	2						
						Welding Set	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 hole for grouting at pipe jacking route Dewatering from jacking pit and general housekeeping	Labourer (male)	C406	4	Air Compressor			1	AC04	h		
						Coring Machine	2						
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1	AC04					
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Excavating trench along shoring line to remove obstruction Cart away excavated materials to area B (3 Truckloads)	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 2-8-2012

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: 02/08/2012
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				
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402				
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403				
	CEG	1	Bar Bender & Fixer	C304	5	Excavator	C404				
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405				
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	27			
	Environmental Officer	1	Carpenter (Formwork)	C307		Sewermain	C407				
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301				
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302				
	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	1			
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor Manager	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							
			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	22				Total Labour		42	Total	34	6
	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: Eddie Luk / SRE

Date:

Signed:

Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:

IOW

Tso Sai Kuen / Inspector of Works

Date:

3-8-2012

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: 02/08/2012

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	Drawing cables through surface mounted conduits for lighting at transformer room	Electrician/Electrical Fitter	E305	1	Electric Drill	1						
			Labourer (male)	C406	2								
08:00 - 18:00	Area A - Pump Station	Excavating for Ø1200 pipe trench between manhole MH06~box culvert bay 20 and fabricating top layer I-beam walings Erecting tubular working platform outside beams RB19~RB21 Rebars fixing for roof slab of store room Installing cast-in bolts for corbel at columns CD2B and CE1B	Bar Bender & Fixer	C304	5	Backhoe			1	EX28	h		
			Labourer (male)	C406	5	Backhoe	1	EX50					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	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 for Ø2100 pipe trench at Ch.70~120 and fabricating I-beam walings & struts for shoring Cart away excavated materials to stockpile area at Lot D.D.12, Ting Tsz Road(17 truckloads)	General Welder	C318	1	Backhoe	1	EX25					
			Labourer (female)	C406	2	Backhoe	1	EX36					
			Labourer (male)	C406	3	Dump Truck	3						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
			Truck Driver	C349	3	Water Pump 50mm	2						
						Welding Set	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 Bay 12 ~ 13 - Dismantling lower layer of I-beam walings and struts to facilitate walls construction	Labourer (male)	C406	4	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene	2						
						Water Pump 50mm	1						
						Water Pump 75mm	2						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 3-8-2012

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: 02/08/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Welding Set	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 Dewatering from jacking pit and general housekeeping	Labourer (male)	C406	4	Air Compressor			1	AC04	h		
						Coring Machine	2						
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1	AC04					
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Excavating trench along shoring line at Ch.20-25 to remove obstruction Cart away excavated materials to area B (1 Truckload)	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											
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 / SRE
 Date: _____

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

Signed: 
 IOW
 Tso Sai Kuen / Inspector of Works
 Date: 3-8-2012

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 - 00:00~21:45

Contract No.: DC/2009/22 Date: 03/08/2012
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	5	2	
	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	4	Excavator	C404		Coring Machine	2		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	2		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	25	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	4	1	
	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	6		
	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 Manager	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	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	2							
			Window Frame Installer	C350								
	Total	22				Total Labour		41	Total	33	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										

Remarks
Area A - Backhoe with vibrating hammer EX48 on site

* 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 / SRE

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: 6-8-2012

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: 03/08/2012

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	Excavating for Ø1200 pipe trench between manhole MH06-box culvert bay 20 and fabricating top layer I-beam walings & struts Erecting tubular working platform outside walls of store room Laying G.I concealed conduits at roof slab formwork for screen house and store room Installing cast-in bolts at corbel of columns CE1B and CE2B General housekeeping	Carpenter (Formwork)	C307	2	Backhoe			1	EX28	h		
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	6	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station	Rendering to cable trenches at transformer room	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 lower layer I-beam walings & struts Cart away excavated materials to stockpile area at Lot D.D.12, Tung Tsz Road (16 truckloads) Extracting sheetpiles from temporary plug end shoring of Ø2100 pipe trench at Ch.125	General Welder	C318	1	Backhoe	1	EX25					
			Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	Backhoe with Vibrating Hammer	1	EX48					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Dump Truck	2						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene	1						
			Truck Driver	C349	2	Water Pump 50mm	2						
						Welding Set	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 - Dewatering from box culvert trench and general cleaning works Bay 11 - Rebar fixing for base slab Bay 12~13 - Dismantling lower layer of I-beam walings and struts to facilitate walls construction	Bar Bender & Fixer	C304	4	Backhoe	1	EX08					
			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 / SRE
Date: _____

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

Signed: 
IOW
Tso Sai Kuen / Inspector of Works
Date: 6-8-2012

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: 03/08/2012

Day: Friday

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						
						Water Pump 50mm	1						
						Water Pump 75mm	2						
						Welding Set	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)	Dewatering from jacking pit and general housekeeping	Labourer (male)	C406	1	Air Compressor			1	AC04	h		
						Coring Machine	2						
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1	AC04					
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Excavating trench along shoring line at Ch.20-25 and breaking up boulders Cart away excavated materials to area B (2 Truckloads)	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											
08:00 - 18:00	Area I - Contractor Office	Office cleaning and site patrol	Labourer (male)	C406	2								

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 6-8-2012

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:
Nil

Contract No.: DC/2009/22 Date: 04/08/2012
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	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	2	Excavator	C404		Dump Truck	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	27	Sewer man	1	
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Automation Equipment Mechanic	E301		Grout Machine	1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Building Services Mechanic	E302		Oxy-Acetylene	5	
	General Foreman	1	Concretor	C309		Cable Jointer (Power)	E303		Water Pump 50mm	8	
	Labour Officer	1	Construction Plant Mechanic	C310		Carpenter	E304		Water Pump 75mm	6	
	Land Surveyor	1	Curtain Wall Installer	C311		Electrician/Electrical Fitter	E305		Welding Set	4	
	Project Director	1	Demolition Worker	C312		Fire Services Mechanic	E306				
	Project Manager	2	Diver	C313		Instrument Mechanic	E307				
	Project Quantity Surveyor	1	Drainlayer	C314		Lift Electrician	E308				
	Quantity Surveyor Manager	1	Electrician (Main Contractor's)	C315		Lift Mechanic	E309				
	Safety Officer	1	Floor Layer	C316		Mechanical Fitter	E310				
	Site Agent	1	Gas Plumber	C317		Overhead Linesman	E311				
	Surveyor	1	General Welder	C318	2	Painter	E312				
			Glazier	C319		Plumber and Pipe Fitter	E313				
			Ground Investigation Operator/Driller/Borer	C320		Refrigeration/AC/Ventilation Mechanic	E314				
			Grouting Worker	C321		Sheet Metal Worker	E315				
			Joiner	C322		Sign Fabricator	E316				
			Leveller	C323		Sign Installer	E317				
			Marble Worker	C324		Thermal Insulation Craftsman	E318				
			Marine Construction Plant Operator	C325		Welder	E319				
			Mason	C326		Labourer	E401				
			Metal Scaffolder	C327		Semi-skilled Worker	E402				
			Metal Worker	C328		Technician	T				
			Painter & Decorator	C329							
			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	2						
			Window Frame Installer	C350							
	Total	22									
	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		42	Total	33	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:
Eddie Luk
Engineer's Representative

Name/Post: Eddie Luk / SRE

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: 6-8-2012

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: 04/08/2012

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	Excavating for Ø1200 pipe trench between manhole MH06~box culvert bay 20, fabricating top layer I-beam walings for shoring and working platform over the trench for deep excavation Erecting tubular working platform outside store room for walls and roof construction Laying G.I concealed conduits on roof slab formwork of screen house and store room Rebar fixing and formwork shuttering for parapet walls on roof slab of screen house and store room General housekeeping and cleaning up sediments from wheel washing bay	Bar Bender & Fixer	C304	2	Backhoe			1	EX28	h		
			Carpenter (Formwork)	C307	2	Backhoe	1	EX50					
			Labourer (female)	C406	2	Oxy-Acetylene	1						
			Labourer (male)	C406	7	Water Pump 50mm	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	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)	Excavating for Ø2100 pipe trench at Ch.70~120 and fabricating top layer I-beam walings & struts for shoring Cart away excavated materials to stockpile area at Lot D.D.12, Tung Tsz Road (16 truckloads)	General Welder	C318	1	Backhoe	1	EX25					
			Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	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 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 Bay 11 - Formwork shuttering for wall kickers	Carpenter (Formwork)	C307	2	Backhoe	1	EX08					
			Labourer (male)	C406	3	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	2						
						Water Pump 50mm	1						
						Water Pump 75mm	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 6-8-2012

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: 04/08/2012

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 (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)	Pressure grouting to top layer of holes along jacking route	Labourer (male)	C406	6	Air Compressor			1	AC04	h		
						Coring Machine			2		h		
						Grout Machine	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Fabricating lower layer I-beam walings and struts for trench shoring at Ch.20~25	General Welder	C318	1	Backhoe	1	EX21					
			Labourer (male)	C406	1	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 6-8-2012

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:
Thunderstorm Warning - 02:25~10:35 & 22:55~23:55

Contract No.: DC/2009/22 Date: 05/08/2012
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
Comments by Engineer's / Contractor's Representative		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		7
		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	Water Pump 50mm	4	1
		Carpenter (Formwork) C307	Sewermain C407	Water Pump 75mm	1	1
		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
					5	14

* 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 / SRE

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: 6-8-2012

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: 05/08/2012

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 J)	Labourer (female)	C406	3	Backhoe			1	EX25	i		
						Backhoe			1	EX36	i		
	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	EX29	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 6-8-2012

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: 05/08/2012

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 1 - Contractor Office	Office cleaning & 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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 6-8-2012

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 2, TP 2

Typhoon / Warning Signal:

Thunderstorm Warning - 04:45~07:00 & 11:45~13:45

Contract No.: DC/2009/22 Date: 06/08/2012

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		Coring Machine	1	1
	CEG	1	Bar Bender & Fixer	C304	4	Excavator	C404		Dump Truck	2	
	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	26	Grout Machine		1
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewerman	C407		Oxy-Acetylene	4	1
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Vibrating Prob	1	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Water Pump 50mm	8	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joints (Power)	E303		Water Pump 75mm	6	
	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 Manager	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	6						
			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	2						
			Window Frame Installer	C350							
	Total	22									
	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	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 GIS 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 / SRE

Date:

Signed:

Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:

Tso Sai Kuen
IOW

Tso Sai Kuen / Inspector of Works

Date:

7-8-2012

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: 06/08/2012

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	Fabricating sheetpile platform at ground level for deep excavation of Ø1200 pipe trench between manhole MH06-box culvert, bay 20 Fixing tie bolts and walings for wall formwork (W16 & W17) Laying G.I concealed conduits at roof formwork of screen house & store room Rebar fixing for ground floor slab and walls (W11 & W12) between grid line A & B Pre-pour cleaning for walls and manmade slope of screen house and store room Drawing cables for electric appliance at transformer room	Bar Bender & Fixer	C304	4	Backhoe	1	EX28					
			Carpenter (Formwork)	C307	2	Backhoe	1	EX50					
			Labourer (female)	C406	1	Oxy-Acetylene	1						
			Labourer (male)	C406	5	Water Pump 50mm	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	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. 84~88 and fabricating lower layer I-beam walings & struts Excavating for Ø2100 pipe trench Ch.120~125 to formation level Cart away excavated material to stockpile area at Lot D.D. 12, Tung Tsz Road (13 truckloads)	General Welder	C318	1	Backhoe	1	EX25					
			Labourer (female)	C406	2	Backhoe	1	EX36					
			Labourer (male)	C406	5	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 B - Tung Tsz Nursery (CH00-CH40)	No activity as per KLKJV arrangement											
08:00 - 18:00	Area B - Tung Tsz Nursery (CH130-CH280)	Bay 11 - Concreting for base slab & wall kickers (Total : 45.0 cu.m) Bay 10 - Fabricating reinforcement bar cat ladder at Ch. 1250	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					
			Labourer (male)	C406	5	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	2						
						Vibrating Prob	1						
						Water Pump 50mm	1						
						Water Pump 75mm	2						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

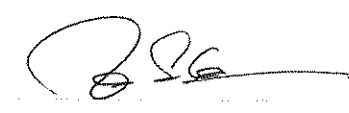
Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 7-8-2012

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: 06/08/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Welding Set	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	Labourer (male)	C406	2	Air Compressor			1	AC04	h		
						Coring Machine	1		1		h		
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Excavating for pipe trench at Ch.20-25 Cart away excavated materials to area B (5 Truckloads)	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 7-8-2012

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:
Thunderstorm Warning - 16:10~17:30 & 17:45~19:30
Very Hot Weather Warning - 07:45~24:00

Contract No.: DC/2009/22 Date: 07/08/2012
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	2	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine	1	1	
	CEG	1	Bar Bender & Fixer	C304	4	Excavator	C404		Dump Truck	2		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) - Lorry checker / Watchman/Office attendant	C406	26	Grout Machine		1	
	Environmental Officer	1	Carpenter (Formwork)	C307	2	Sewerman	C407		Oxy-Acetylene	4	1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Pump Truck	1		
	General Foreman	1	Concretor	C309	2	Building Services Mechanic	E302		Vibrating Prob.	1		
	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	6		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	3	1	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306					
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor Manager	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	2							
			Window Frame Installer	C350								
	Total	22	(To be continued)			Total Labour		43	Total	33	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: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 8-8-2012

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: 07/08/2012

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	Fabricating sheetpile platform for deep excavation of Ø1200 pipe trench between manhole MH06~box culvert, bay 20 Pre-pour cleaning for walls of screen house, store room & manmade slope Cleaning up concrete floor at switchroom for finishing works Drawing cables for ceiling lighting at transformer room	Carpenter (Formwork)	C307	1	Backhoe			1	EX28	h		
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	5	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 12:00	Area A - Pump Station	Preparation work for concreting to walls of screen house, store room and manmade slope (concreting work postpone due to concrete supply).	Concretor	C309	2	Pump Truck	1						
			Labourer (male)	C406	5								
			Plant and Equipment Operator (Hoist and Crane)	C334	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 (2 F/Lab. + 1 M/Lab.) Manual control of temporary traffic light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	2								
			Labourer (male)	C406	1								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Fabricating lower layer I-beam walings and struts for shoring of Ø2100 pipe trench at Ch. 80~84 Excavating for Ø2100 pipe trench Ch. 116~120 to formation level Cart away excavated material to stockpile area at Lot D.D.12, Tung Tsz Road (19 truckloads)	General Welder	C318	1	Backhoe	1	EX25					
			Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	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 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 - Formwork shuttering and rebar fixing for base slab Cutting & bending reinforcement bars for base slab & walls at Contract 2's bending yard Bay 11 - Formwork shuttering for walls	Bar Bender & Fixer	C304	4	Backhoe	1	EX08					

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 8-8-2012

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: 07/08/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
			Carpenter (Formwork)	C307	1	Generator	1						
			Labourer (male)	C406	1	Oxy-Acetylene	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	1						
						Water Pump 75mm	2						
						Welding Set	1						
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				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	Labourer (male)	C406	4	Air Compressor			1	AC04	h		
						Coring Machine	1		1		h		
						Grout Machine			1		h		
						Vibrating Prob	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Excavating pipe trench at Ch.20-25 to formation and then placing blinding concrete	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 8-8-2012

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:
Thunderstorm Warning - 07:50-09:00 & 14:05-17:15
Very Hot Weather Warning - 00:00-24:00

Contract No.: DC/2009/22 Date: 08/08/2012
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	2
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine	1	1
	CEG	1	Bar Bender & Fixer	C304	4	Excavator	C404		Dump Truck	3	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	29	Grout Machine		1
	Environmental Officer	1	Carpenter (Formwork)	C307	1	Sewerman	C407		Oxy-Acetylene	2	2
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Vibrating Prob	1	
	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	6	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Welding Set	2	2
	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 Manager	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							
			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	22	(To be continued)			Total Labour		44	Total	30	9
	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 / SRE
Date:

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

Signed:

IOW
Tso Sai Kuen / Inspector of Works
Date: 9-8-2012

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: 08/08/2012

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	Fabricating sheetpile working platform for deep excavation of Ø1200 pipe trench between manhole MH06-box culvert, bay 20 Rendering to cable trenches at transformer room Installing twin fluorescent lamps on walls (2.8m from FFL) at transformer room Drawing cables & installing exhaust fans at transformer room Installing manual call point (break glass unit) & heat detector at transformer room Installing 930W x 2100H stainless steel door at transformer room	Labourer (female)	C406	2	Backhoe			1	EX28	h		
			Labourer (male)	C406	7	Backhoe	1	EX50					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plasterer	C337	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)	Fabricating lower layer I-beam walings and struts for shoring of Ø2100 pipe trench at Ch 80-84 Excavating for Ø2100 pipe trench at Ch. 112-116 to formation level Cart away excavated material to stockpile area at Lot D.D.12, Tung Tsz Road (10 truckloads)	General Welder	C318	1	Backhoe	1	EX25					
			Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	7	Dump Truck	3						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
			Truck Driver	C349	3	Water Pump 50mm	2						
						Welding Set	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 - Rebars fixing for base slab Bay 13 - Erecting falsework and shuttering for soffit of top slab	Bar Bender & Fixer	C304	4	Backhoe	1	EX08					
			Carpenter (Formwork)	C307	1	Generator	1						
			Labourer (male)	C406	5	Oxy-Acetylene			1		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	1						
						Water Pump 75mm	2						
						Welding Set			1		h		

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative
Name/Post: Eddie Luk / SRE
Date: _____

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

Signed: 
IOW
Tso Sai Kuen / Inspector of Works
Date: 8-8-2012

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: 08/08/2012

Day: Wednesday

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 (CH40-CH130)	No activity as per KLKJV arrangement				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	Labourer (male)	C406	2	Air Compressor			1	AC04	h		
						Coring Machine	1		1		h		
						Grout Machine			1		h		
						Vibrating Prob	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1603.1 - Prepration work for laying pipes at Ch.20~25	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 8-8-2012

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 0, TP 10

Typhoon / Warning Signal:
Thunderstorm Warning - 12:30~13:30 & 15:25~19:00
Very Hot Weather Warning - 00:00~19:45

Contract No.: DC/2009/22 Date: 09/08/2012
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	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	4	Excavator	C404		Crane Lorry	1		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	1		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	27	Generator	2		
	Environmental Officer	1	Carpenter (Formwork)	C307	2	Sewerman	C407		Grout Machine	1		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Mobile Crane	1		
	General Foreman	1	Concretor	C309	2	Building Services Mechanic	E302		Oxy-Acetylene	2	2	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Pump Truck	1		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Vibrating Prob	5		
	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	6		
	Project Quantity Surveyor	1	Drainlayer	C314	1	Instrument Mechanic	E307		Welding Set	2	2	
	Quantity Surveyor Manager	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	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								
			Trackworker	C348								
			Truck Driver / Coxswain / Barge Engineer / Working Ganger*	C349	1							
			Window Frame Installer	C350								
	Total	22				Total Labour		48	Total	34	10	
	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 / SRE
Date:

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

Signed:
Tso Sai Kuen
IOW
Inspector of Works
Name/Post: Tso Sai Kuen / Inspector of Works
Date: 10-8-2012

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: 09/08/2012

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	Fabricating sheetpile platform for deep excavation of Ø1200 pipe trench between manhole MH06-box culvert, Bay 20 Concreting to walls, beams & roof slab for screen house, store room & manmade slope (Total : 143.8 cu.m.) Rebar fixing for walls (W10~W13) of discharge chamber at GL- A & B Cleaning up concrete floor at switchroom for finishing works Rendering for cable trenches at transformer room	Bar Bender & Fixer	C304	4	Backhoe			1	EX28	h		
			Carpenter (Formwork)	C307	1	Backhoe	1	EX50					
			Concretor	C309	2	Oxy-Acetylene	1						
			General Welder	C318	1	Pump Truck	1						
			Labourer (female)	C406	3	Vibrating Prob	5						
			Labourer (male)	C406	9	Water Pump 50mm	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 75mm	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Welding Set	1						
			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)	Excavating for Ø2100 pipe trench at Ch. 108-112 to formation level Cart away excavated material to stockpile area at Lot D.D.12, Tung Tsz Road (6 truckloads) Laying blinding concrete for Ø2100 concrete pipe at Ch. 116-125	Labourer (male)	C406	4	Backhoe	1	EX25					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Backhoe	1	EX36					
			Truck Driver	C349	1	Dump Truck	1						
						Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set	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 - Shuttering for wall kickers Bay 13 - Shuttering for soffit of top slab	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					
			Labourer (male)	C406	2	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 10-8-2012

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: 09/08/2012

Day: Thursday

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	2						
						Welding Set			1			h	
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Backhoe			1	EX29		h	
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Pressure cement grouting to pipe jacking route	Labourer (male)	C406	4	Air Compressor			1	AC04		h	
						Coring Machine			2			h	
						Grout Machine	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	Pl. 1603.1 - Laying 1650Ø PC pipes at Ch.20~25	Drainlayer	C314	1	Backhoe			1	EX21		h	
			Labourer (male)	C406	2	Crane Lorry	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	2	Mobile Crane	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 10-8-2012

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 0, TP 2

Typhoon / Warning Signal:
Thunderstorm Warning - 06:45~07:45 & 09:30~16:40

Contract No.: DC/2009/22 Date: 10/08/2012

Day: Friday

(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		Chainman	C401		Air Compressor		1
	Chairman	Asphalter (Roadworks)	C302		Concreting Labourer	C402		Backhoe	5	2
	Community Liaison Officer	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine		2
	CEG	Bar Bender & Fixer	C304	5	Excavator	C404		Dump Truck	3	
	Contract Manager	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	26	Grout Machine		1
	Environmental Officer	Carpenter (Formwork)	C307		Sewermain	C407		Oxy-Acetylene	2	2
	Foreman/Assistant Foreman	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Water Pump 50mm	8	
	General Foreman	Concretor	C309		Building Services Mechanic	E302		Water Pump 75mm	6	
	Labour Officer	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Welding Set	1	3
	Land Surveyor	Curtain Wall Installer	C311		Carpenter	E304	2			
	Project Director	Demolition Worker	C312		Electrician/Electrical Fitter	E305				
	Project Manager	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor Manager	Electrician (Main Contractor's)	C315		Lift Electrician	E308				
	Safety Officer	Floor Layer	C316		Lift Mechanic	E309				
	Site Agent	Gas Plumber	C317		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	4						
		Plant and Equipment Operator (Hoist and Crane)	C334	1						
		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							
		Shottfirer	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			22						
	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		44	Total	27	11

* 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 / SRE

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-8-2012

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: 10/08/2012

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	Stripping off wall formwork from parapet of screen house, store room & manmade slope General housekeeping & cleaning up sediments from wheel washing bay Drawing cables through surface mounted conduits & installing "exit sign" box at transformer room Rendering to cable trenches at transformer room	Labourer (female)	C406	2	Backhoe			1	EX28	h		
			Labourer (male)	C406	5	Backhoe			1	EX50	h		
			Plasterer	C337	2	Oxy-Acetylene			1		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. 104~108 to formation level Cart away excavated material to stockpile area at Lot D.D.12, Tung Tsz Road (10 truckloads) Fabricating lower layer I-beam walings and struts for shoring of Ø2100 pipe trench at Ch. 76~80	General Welder	C318	1	Backhoe	1	EX25					
			Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	5	Dump Truck	3						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
			Truck Driver	C349	3	Water Pump 50mm	2						
						Welding Set	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 - Concreting for base slab (Total : 46.5 cu.m) Cutting & bending reinforcement bars for walls & top slab at Contract 2's bending yard Bay 11 - Dismantling lower layer I-beam walings & struts to facilitate walls construction Bay 13 - Rebars fixing for walls & top slab	Bar Bender & Fixer	C304	5	Backhoe	1	EX08					
			Carpenter	E304	2	Backhoe	1	EX29					
			Labourer (male)	C406	6	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	2						
						Welding Set			1		h		

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-8-2012

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: 10/08/2012

Day: Friday

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 (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay				Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Concreting to block the gap at hoarding toe for surface water flow control	Labourer (male)	C406	2	Air Compressor			1	AC04	h		
						Coring Machine			2		h		
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	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 drain pipe at Ch.20-25	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-8-2012

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 10, TP 5

Typhoon / Warning Signal:
Thunderstorm Warning - 03:20~10:00 & 12:55~15:00
Amber Rainstorm Warning - 06:40~08:25

Contract No.: DC/2009/22 Date: 11/08/2012
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	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine		2
	CEG	1	Bar Bender & Fixer	C304	4	Excavator	C404		Dump Truck	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman Office attendant	C406	24	Grout Machine		1
	Environmental Officer	1	Carpenter (Formwork)	C307	4	Sewermain	C407		Oxy-Acetylene	3	1
	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	6	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Welding Set	2	1
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304				
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305	1			
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor Manager	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	4						
			Plant and Equipment Operator (Hoist and Crane)	C334	1						
			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	2						
			Window Frame Installer	C350							
	Total	22	(To be continued)			Total Labour		43	Total	28	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:
Eddie Luk
Engineer's Representative

Name/Post: Eddie Luk / SRE

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: 13-8-2012

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: 11/08/2012

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	Stripping off wall formwork from screen house, store room & manmade slope Excavating for Ø1200 pipe trench between manhole MH06~box culvert, bay 20 and fabricating I-beam walings for shoring Painting primer to air trunk of exhaust fans at transformer room Rendering to cable trenches and cutting MS chequer plates for trench covers at transformer room Drawing cables and installing heat detector at switchroom Rebar fixing for walls (W10~W13) between grid line A & B	Bar Bender & Fixer	C304	4	Backhoe	1	EX25					
			Electrician/Electrical Fitter	E305	1	Backhoe	1	EX50					
			General Welder	C318	1	Oxy-Acetylene	1						
			Labourer (female)	C406	2	Water Pump 50mm	2						
			Labourer (male)	C406	9	Water Pump 75mm	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Welding Set	1						
			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)	Excavating for Ø2100 pipe trench at Ch. 96~104 to formation Cart away excavated material to stockpile area at Lot D.D.12, Tung Tsz Road (10 truckloads) Laying blinding concrete for Ø2100 pipe trench at Ch. 100~116	Labourer (female)	C406	1	Backhoe	1	EX36					
			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 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 ~ 11 - Stripping off formwork from base slab Dismantling lower layer I-beam walings and struts to facilitate wall construction	Carpenter (Formwork)	C307	4	Backhoe	1	EX08					
			Labourer (male)	C406	3	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	2						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-8-2012

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: 11/08/2012

Day: Saturday

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 (CH40-CH130)	No activity as per KLKJV arrangement				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	h		
						Coring Machine			2		h		
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	Manhole MH 1602.1 - Formwork shuttering for base slab and benching	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-8-2012

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 Shower ST 20, TP 30

Typhoon / Warning Signal:
Thunderstorm Warning - 01:45~07:45 & 22:00~23:00

Contract No.: DC/2009/22 Date: 12/08/2012
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 Scaffold	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Backhoe		5
			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	4	1
			Carpenter (Formwork)	C307		Sewer man	C407		Water Pump 75mm	1	1
			Concrete Repairer	C308		Automation Equipment Mechanic	E301				
			Concrete	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 Scaffold	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							
			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			5	12	

* 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 / SRE

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:
IOW

Tso Sai Kuen / Inspector of Works

Date:

13-8-2012

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: 12/08/2012

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	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		
	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											
	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-8-2012

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: 12/08/2012

Day: Sunday

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 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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 13-8-2012

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 2, TP 50

Typhoon / Warning Signal:
Thunderstorm Warning - 03:20~07:15 & 10:15~16:00

Contract No.: DC/2009/22 Date: 13/08/2012
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	5	
	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		Dump Truck	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	25	Grab Lorry	1	
	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	2	2
	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	6	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Welding Set	1	2
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305	1			
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306				
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor Manager	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	4						
			Plant and Equipment Operator (Hoist and Crane)	C334	1						
			Plant and Equipment Operator (Piling)	C335							
			Plant and Equipment Operator (Tunnelling)	C336							
			Plasterer	C337	3						
			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	22				Total Labour		45	Total	27	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 / SRE

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:
IOW

Tso Sai Kuen / Inspector of Works

Date: 14-8-2012

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: 13/08/2012

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	Stripping off wall formwork from screen house, store room & manmade slope Excavating for Ø1200 pipe trench between manhole MH06 and box culvert bay 20 and fabricating 1st layer I-beam walings & struts Fabricating 25x25 angle bracket and M.S. hanger for air trunking of exhaust fans at transformer room Rendering for cable trenches Plastering to walls around door and louver openings at transformer room Rebar fixing for walls (W10-W13) between grid line A & B	Bar Bender & Fixer	C304	3	Backhoe	1	EX25					
			Electrician/Electrical Fitter	E305	1	Backhoe	1	EX50					
			General Welder	C318	1	Oxy-Acetylene	1						
			Labourer (female)	C406	2	Water Pump 50mm	2						
			Labourer (male)	C406	8	Water Pump 75mm	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Welding Set	1						
			Plasterer	C337	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. 86-96 to formation level Cart away excavated materials to stockpile area at Lot D.D.12, Tung Tsz Road (13 truckloads) Dewatering from Ø2100 pipe trench	Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	4	Dump Truck	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Grab Lorry	1						
			Truck Driver	C349	3	Oxy-Acetylene			1		h		
						Water Pump 50mm	2						
	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 11 - Formwork shuttering for walls Bay 10 - Dismantling lower layer I-beam walings and struts to facilitate wall construction Bay 13 - Strutting to wall formwork Pre-pour cleaning for walls and top slab	Carpenter (Formwork)	C307	4	Backhoe	1	EX08					
			Labourer (male)	C406	3	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
						Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 14-8-2012

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: 13/08/2012

Day: Monday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Water Pump 75mm	2						
						Welding Set			1			h	
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Rendering to block up the gap between hoarding and soil surface for surface water flow control	Labourer (male)	C406	1	Air Compressor			1	AC04		h	
						Coring Machine			2			h	
						Grout Machine			1			h	
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	MH 1602.1 - Formwork shuttering and concreting for base slab and benching of manhole	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 14-8-2012

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:
Nil

Contract No.: DC/2009/22 Date: 14/08/2012
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	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine	1	2
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Crane Lorry	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	1	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	26	Generator	2	
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewerian	C407		Grab Lorry	1	
	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 Joiner (Power)	E303		Oxy-Acetylene	2	2
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 50mm	8	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305	1	Water Pump 75mm	6	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Welding Set	1	2
	Project Quantity Surveyor	1	Drainlayer	C314	1	Instrument Mechanic	E307				
	Quantity Surveyor Manager	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	4						
			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	2						
			Window Frame Installer	C350							
	Total	22				Total Labour		44	Total	30	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 15-8-2012

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: 14/08/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered			
						Trade	Code	No.	Type	Working			Idling	
			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	Excavating for Ø1200 pipe trench between manhole MH06-box culvert, bay 20 and fabricating upper layer I-beam walings & struts for shoring Formwork shuttering for walls (W10-W13) between grid line A & B Formwork shuttering for parapet walls on roof at screen house, store room & manmade slope Installing GMS trunking of exhaust fans at transformer room Rendering to cable trenches & plastering to walls around door and louver openings at transformer room Coring 8 nos. Ø200 & 2 nos. Ø180 holes on walls of cable trench	Carpenter (Formwork)	C307	2	Backhoe	1	EX25						
			Electrician/Electrical Fitter	E305	1	Backhoe	1	EX50						
			General Welder	C318	1	Coring Machine	1							
			Labourer (female)	C406	2	Oxy-Acetylene	1							
			Labourer (male)	C406	7	Water Pump 50mm	2							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Water Pump 75mm	1							
			Plasterer	C337	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)	Excavating for Ø2100 pipe trench at Ch. 82-86 to formation level Cart away excavated materials to stockpile area (at Lot D.D.12, Tung Tsz Road (6 truckloads) Laying 2 nos. Ø2100 concrete pipes (3m) at ch 119-125 Laying blinding concrete for Ø2100 pipe at Ch. 92-100	Drainlayer	C314	1	Backhoe	1	EX36						
			Labourer (female)	C406	1	Crane Lorry	2							
			Labourer (male)	C406	6	Dump Truck	1							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Grab Lorry	1							
			Plant and Equipment Operator (Hoist and Crane)	C334	3	Mobile Crane	1							
			Truck Driver	C349	2	Oxy-Acetylene	1							
						Water Pump 50mm	2							
						Welding Set			l		h			
	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 11 - Formwork shuttering of walls	Carpenter (Formwork)	C307	1	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

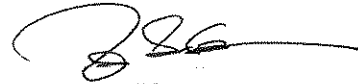
Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 15-8-2012

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: 14/08/2012

Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
			Labourer (male)	C406	3	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1			h	
						Water Pump 50mm	1						
						Water Pump 75mm	2						
						Welding Set			1			h	
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)	Rendering to block up gaps between hoarding toe and formation for surface water flow control	Labourer (male)	C406	1	Air Compressor			1	AC04		h	
						Coring Machine			2			h	
						Grout Machine			1			h	
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	MH 1602.1 - Stripping off formwork from base slab and benching PL 1604.1 - General site clearance prior to trench excavation	Labourer (male)	C406	2	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	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

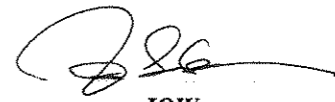
Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 15-8-2012

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:
T1 - 20:10~24:00
Thunderstorm Warning - 23:20~24:00
Very Hot Weather Warning - 06:45~19:50

Contract No.: DC/2009/22 Date: 15/08/2012
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	
	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	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	1	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	29	Generator	2	
	Environmental Officer	1	Carpenter (Formwork)	C307	1	Sewermain	C407		Grab Lorry	1	
	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 Jointer (Power)	E303		Oxy-Acetylene	2	2
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 50mm	8	
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305	1	Water Pump 75mm	6	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Welding Set	1	2
	Project Quantity Surveyor	1	Drainlayer	C314	1	Instrument Mechanic	E307				
	Quantity Surveyor Manager	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		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	4						
			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	22									
	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	29	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: *Eddie Luk*
Engineer's Representative

Name/Post: Eddie Luk / SRE

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:

16-8-2012

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: 15/08/2012

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	Excavating for Ø1200 pipe trench between manhole MH06-bay 20 of box culvert and fabricating sheetpile platform over the trench for deep excavation Stripping off wall formwork from screen house, store room & manmade slope Installing air trunk of exhaust fans at transformer room Cleaning up at switchroom for finishing works	Electrician/Electrical Fitter	E305	1	Backhoe	1	EX25					
			Labourer (female)	C406	2	Backhoe	1	EX50					
			Labourer (male)	C406	7	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	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. 76-82 to formation Cart away excavated materials to stockpile area at Lot D.D.12, Tung Tsz Road (13 truckloads) Laying 6 nos. Ø2100 concrete pipes (@3m long) at ch 101-119 Laying blinding concrete for Ø2100 pipe at Ch. 84-92	Drainlayer	C314	1	Backhoe	1	EX36					
			Labourer (female)	C406	1	Crane Lorry	2						
			Labourer (male)	C406	8	Dump Truck	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Grab Lorry	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	3	Mobile Crane	1						
			Truck Driver	C349	2	Oxy-Acetylene	1						
						Water Pump 50mm	2						
						Welding Set			1		h		
	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 13 - Erecting falsework and shuttering for soffit of top slab	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					
			Labourer (male)	C406	2	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	2						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-8-2012

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: 15/08/2012

Day: Wednesday

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 (CH40-CH130)	No activity as per KLKJV arrangement				Water Pump 50mm	1							
						Water Pump 75mm	1							
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Rendering to block up gap between hoarding toe and soil formation for surface water flow control	Labourer (male)	C406	1	Air Compressor			1	AC04	h			
						Coring Machine			2		h			
						Grout Machine			1		h			
						Water Pump 50mm	1							
						Water Pump 75mm	1							
08:00 - 18:00	Area C - Shallow Marshy Area	Planting to replace the unhealthy trees	Labourer (female)	C406	1									
			Labourer (male)	C406	2									
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1604.1 - General site cleaning and driving sheetpiles for trench shoring	Labourer (male)	C406	2	Backhoe	1	EX21						
			Plant and Equipment Operator (Hoist and Crane)	C334	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 16-8-2012

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 Shower ST 5, TP 5
(Hong Kong Observatory's record)

Typhoon / Warning Signal:
Thunderstorm Warning - 00:00~01:30, 03:45~07:30 & 16:45~18:00
T1 - 00:00~13:40
T3 - 13:40~22:15
T8 - 22:15~24:00

Contract No.: DC/2009/22 Date: 16/08/2012

Day: Thursday

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				
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402				
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403			5	1
	CEG	1	Bar Bender & Fixer	C304	2	Excavator	C404				2
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405			1	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	27		2	
	Environmental Officer	1	Carpenter (Formwork)	C307	2	Sewermain	C407			1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301				1
	General Foreman	1	Concrete	C309	1	Building Services Mechanic	E302			3	1
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303			2	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304			7	1
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305	1		5	1
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306			2	1
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307				
	Quantity Surveyor Manager	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	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	2						
			Window Frame Installer	C350							
	Total	22									
	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		43		Total	28
											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: _____
Engineer's Representative

Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 17-8-2012

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: 16/08/2012

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	Excavating for Ø1200 pipe trench between manhole MH06~bay 20 of box culvert and fabricating sheetpile platform over the trench for deep excavation Formwork shuttering for walls (W10~W13) between grid line A & B Rendering to cable trenches & laying wall tiles around door & louvre openings at transformer room Installing air trunking for exhaust fans at transformer room	Carpenter (Formwork)	C307	1	Backhoe	1	EX50					
			Electrician/Electrical Fitter	E305	1	Oxy-Acetylene	1						
			General Welder	C318	1	Water Pump 50mm	2						
			Labourer (female)	C406	3	Water Pump 75mm	1						
			Labourer (male)	C406	5	Welding Set	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2								
			Plasterer	C337	1								
08:00 - 18:00	Area A - Pump Station - Box Culvert (Receiving Pit)	Excavating for receiving pit of twin 2800Ø pipe to upper waling level	Labourer (male)	C406	2	Backhoe	1	EX25					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1								
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. 76~82 to formation Cart away excavated materials to stockpile area at Lot D.D.12, Tung Tsz Road (4 truckloads) Formwork shuttering, rebar fixing and then laying concrete haunching for Ø2100 concrete pipe at Ch.101~125	Bar Bender & Fixer	C304	2	Backhoe	1	EX36					
			Labourer (female)	C406	1	Dump Truck	1						
			Labourer (male)	C406	3	Grab Lorry	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Truck Driver	C349	2	Vibrating Prob	1						
						Water Pump 50mm	2						
						Welding Set			l		h		
	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 - Dismantling lower layer I-beam walings to facilitate wall construction Bay 11 - Shuttering for soffit of top slab Bay 13 - Pre-pour cleaning and concreting to walls & top slab	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					
			Concretor	C309	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 17-8-2012

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: 16/08/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
			Labourer (male)	C406	4	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Vibrating Prob	1						
						Water Pump 50mm	1						
						Water Pump 75mm	2						
08:00 - 18:00	Area B - Tung Tsz Nursery (CH40-CH130)	General housekeeping	Labourer (male)	C406	1	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	Rendering to block the gap between hoarding toe and soil formation for surface water flow control	Labourer (male)	C406	1	Air Compressor			1	AC04	h		
						Coring Machine			2		h		
						Grout Machine			1		h		
						Water Pump 50mm			1		h		
						Water Pump 75mm			1		h		
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Preparation works to cut the sheet-piles shoring to form portal for heading works Precautionary measures against typhoon and general housekeeping	Labourer (male)	C406	4	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 17-8-2012

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 Cloudy ST 5, TP 10

Typhoon / Warning Signal:
T8 - 00:00~06:20
T3 - 06:20~15:20
T1 - 15:20~16:25

Contract No.: DC/2009/22 Date: 17/08/2012
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	4	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		Generator	2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Grout Machine		1
	Engineer	1	Carpenter (Pender)	C306		Labourer (male / female) / Lorry checker / Watchman/Office attendant	C406	26	Oxy-Acetylene	1	3
	Environmental Officer	1	Carpenter (Formwork)	C307	1	Sewermain	C407		Water Pump 50mm	7	1
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Water Pump 75mm	5	1
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Welding Set	2	2
	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 Manager	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	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	3						
			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							
			Window Frame Installer	C350							
	Total	22				Total Labour		34	Total	21	12
	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-8-2012

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: 17/08/2012

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	Excavating for Ø1200 pipe trench between manhole MH06~bay 20 of box culvert Rendering for cable trenches and laying wall tiles around door & louver openings at transformer room Painting base coat to GMS trunking of exhaust fans at transformer room General housekeeping & cleaning up sediments from wheel washing bay	Labourer (female)	C406	3	Backhoe			1	EX42	h		
			Labourer (male)	C406	7	Backhoe	1	EX50					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			Plasterer	C337	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area A - Pump Station - Box Culvert (Receiving Pit)	Fabricating upper layer I-beam walings for shoring of receiving pit	General Welder	C318	1								
			Labourer (male)	C406	1								
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)	Trimming the formation of Ø2100 pipe trench at Ch. 76~84 and laying blinding concrete	Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	3	Oxy-Acetylene			1		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
						Welding Set			1		h		
	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 11 - Shuttering for soffit of top slab Bay 13 - Stripping off wall formwork	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					
			Labourer (male)	C406	3	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	2						
						Welding Set			1		h		
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						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-8-2012

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: 17/08/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Water Pump 75mm	1						
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Air Compressor			1	AC04	h		
						Coring Machine			2		h		
						Grout Machine			1		h		
						Water Pump 50mm			1		h		
						Water Pump 75mm			1		h		
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Cutting sheetpile shoring to form portal, digging for heading tunnel (Ch.0-0.2) and installing shoring frames	General Welder	C318	1	Backhoe	1	EX21					
			Labourer (male)	C406	2	Generator	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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	Office and stockpile area 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: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-8-2012

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 Cloudy ST 0.5, TP 10

Typhoon / Warning Signal:
 Nil

Contract No.: DC/2009/22 Date: 18/08/2012

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	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	5	Excavator	C404		Dump Truck	2		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman-Office attendant	C406	19	Grab Lorry	1		
	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	1	4	
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Water Pump 50mm	7	1	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Water Pump 75mm	5	1	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Welding Set	2	2	
	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 Manager	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	3							
			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								
			Shotcrete	C342								
			Shoffirer	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	22				Total Labour		35	Total	24	13	
	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 / SRE

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: 20-8-2012

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: 18/08/2012

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	Excavating for Ø1200 pipe trench between manhole MH06-bay 20 of box cuvlert Cart away excavated material to stockpile area at Lot D.D.12, Tung Tsz Road (10 truckloads) Formwork shuttering for parapet walls & staircase on roof Cleaning up floor slab, cable trenches and then forming level studs for floor screeding at transformer room	Carpenter (Formwork)	C307	2	Backhoe	1	EX42					
			Labourer (female)	C406	1	Backhoe			1	EX50	h		
			Labourer (male)	C406	5	Grab Lorry	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
			Plasterer	C337	1	Water Pump 50mm	2						
			Truck Driver	C349	1	Water Pump 75mm	1						
						Welding Set			1		h		
08:00 - 18:00	Area A - Pump Station - Box Culvert (Receiving Pit)	Fabricating upper layer I-beam walings for shoring of receiving pit	General Welder	C318	1	Oxy-Acetylene	1						
			Labourer (male)	C406	1	Welding Set	1						
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)	Dewatering from Ø2100 pipe trench Delivery of sand material from Contract 2's stockpile area at Tai Po Industrial Estate (17 Truckloads) and backfilling to Ø2100 pipe trench at Ch.102-125 up to lower waling level	Labourer (female)	C406	1	Backhoe	1	EX36					
			Labourer (male)	C406	4	Dump Truck	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
			Truck Driver	C349	2	Water Pump 50mm	2						
						Welding Set			1		h		
	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 11 - Rebars fixing for walls & top slab	Bar Bender & Fixer	C304	5	Backhoe	1	EX08					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	2						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-8-2012

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: 18/08/2012

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 (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	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				Air Compressor			1	AC04	h		
						Coring Machine			2		h		
						Grout Machine			1		h		
						Water Pump 50mm			1		h		
						Water Pump 75mm			1		h		
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Hand digging for heading tunnel at Ch. 0.2~0.6 and installation of shoring frames	Labourer (male)	C406	3	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Eddie Luk / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-8-2012

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 Shower ST 10, TP 5

Typhoon / Warning Signal:
Thunderstorm Warning - 14:15~18:00

Contract No.: DC/2009/22 Date: 19/08/2012
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		
Comments by Engineer's / Contractor's Representative			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	5
			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	4
			Carpenter (Formwork)	C307		Sewerman	C407					Water Pump 75mm	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			5 12	
	Assistance to Engineer	No.											
	Driver	1											
	Watchman	1											
	Total	2											

* 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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-8-2012

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: 19/08/2012

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	EX42	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		
	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											
	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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-8-2012

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: 19/08/2012

Day: Sunday

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 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 / SRE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 20-8-2012

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 0

Typhoon / Warning Signal:
Thunderstorm Warning - 12:30~14:30
Very Hot Weather Warning - 16:15~24:00

Contract No.: DC/2009/22 Date: 20/08/2012
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	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		Crane Lorry	2		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Electric Breaker	1		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	34	Generator	2		
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewerian	C407		Grout Machine		1	
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Mobile Crane	1		
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Oxy-Acetylene	1	4	
	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	6		
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305		Welding Set	2		
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306					
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor Manager	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	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								
			Pipelay	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	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								
			Window Frame Installer	C350								
	Total	22				Total Labour		47	Total	27	9	
	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: Stephen Poon/RE

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:
IOW

Tso Sai Kuen / Inspector of Works

Date: 21-8-2012

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: 20/08/2012

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	Cutting sheetpiles to form portal of heading tunnel for Ø225 sewer pipe between MS1 & FMH1023921 Formwork shuttering for parapet walls & stair on the manmade slope Forming level studs for rendering to cable trenches at switchroom Laying screeding on floor slab & cable trenches at transformer room	Carpenter (Formwork)	C307	2	Backhoe	1	EX42					
			General Welder	C318	1	Backhoe			1	EX50	h		
			Labourer (female)	C406	1	Oxy-Acetylene			1		h		
			Labourer (male)	C406	9	Water Pump 50mm	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 75mm	1						
			Plasterer	C337	1								
08:00 - 18:00	Area A - Pump Station	Trimming concrete of parapet walls on roof of switchroom & transformer room for rectification of alignment	Labourer (male)	C406	1	Electric Breaker	1						
08:00 - 18:00	Area A - Pump Station - Box Culvert (Receiving Pit)	Fabricating upper layer I-beam walings for shoring of receiving pit	General Welder	C318	1	Oxy-Acetylene	1						
			Labourer (male)	C406	1	Welding Set	1						
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)	Laying 6 nos. Ø2100 x 3 m concrete pipes at Ch. 83~101	Labourer (female)	C406	2	Backhoe	1	EX36					
			Labourer (male)	C406	8	Crane Lorry	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Mobile Crane	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	3	Oxy-Acetylene			1		h		
						Water Pump 50mm	2						
	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 11 - Formwork shuttering for walls General housekeeping	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					
			Labourer (female)	C406	1	Generator	1						
			Labourer (male)	C406	3	Oxy-Acetylene			1		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	1						
						Water Pump 75mm	2						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

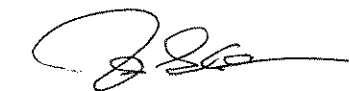
Name/Post: Stephen Poon/RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 21-8-2012

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: 20/08/2012

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 (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	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				Air Compressor			1	AC04	h			
						Coring Machine			2		h			
						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 - Hand digging for heading tunnel at Ch. 0.6-0.8 and installation of shoring frames	Labourer (male)	C406	3	Backhoe	1	EX21						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1							
						Oxy-Acetylene			1		h			
						Water Pump 50mm	1							
						Water Pump 75mm	1							
						Welding Set	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: Stephen Poon/RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 21-8-2012

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 0, TP 50

Typhoon / Warning Signal:
Thunderstorm Warning - 12:00~14:00
Very Hot Weather Warning - 00:00~16:20

Contract No.: DC/2009/22 Date: 21/08/2012
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
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Coring Machine
	CEG	1	Bar Bender & Fixer	C304	3	Excavator	C404		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	30	
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewermain	C407		Mobile Crane
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Vibrating Prob
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Water Pump 75mm
	Project Director	1	Demolition Worker	C312		Electrician/Electrical Fitter	E305	1	
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307		
	Quantity Surveyor Manager	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	3				
			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					
			Window Frame Installer	C350					
	Total	22							
	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		44	
									Total
									28
									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: 
Engineer's Representative


Name/Post: Stephen Poon/RE

Date:

Signed: 
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 22-8-2012

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: 21/08/2012

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	Forming portal of heading tunnel for 225Ø sewer pipe between MS1 & FMH1023921 Formwork shuttering for stair on manmade slope Formwork shuttering and concreting for kerbs around roof openings for sky light & extraction fans of screen house Fixing tie bolts and walings for wall formworks (W10~W13) at discharge chamber Drawing cables to MCB distribution board & painting to air trunk at transformer room Rendering to cable trenches at switchroom	Carpenter (Formwork)	C307	2	Backhoe	1	EX42					
			Electrician/Electrical Fitter	E305	1	Backhoe			i	EX50	h		
			Labourer (female)	C406	3	Mobile Crane	0.5						
			Labourer (male)	C406	4	Oxy-Acetylene			i		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Vibrating Prob	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	0.5	Water Pump 50mm	2						
			Plasterer	C337	1	Water Pump 75mm	1						
08:00 - 18:00	Area A - Pump Station	Trimming concrete at parapet walls on roof of switchroom & transformer room for rectification of alignment	Labourer (male)	C406	1	Electric Breaker	1						
08:00 - 18:00	Area A - Pump Station - Box Culvert (Receiving Pit)	Fabricating upper layer I-beam walings for shoring	General Welder	C318	1	Oxy-Acetylene	1						
			Labourer (male)	C406	1	Welding Set	1						
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)	Laying 1 no.(3m) & 1 no.(1.5m) of Ø2100 concrete pipes at Ch. 78-83 Formwork shuttering, rebar fixing and concreting for concrete haunching of Ø2100 pipe at Ch. 78-101 Dismantling lower layer of I-beam walings and struts at Ch. 106-125	Bar Bender & Fixer	C304	3	Backhoe	1	EX36					
			Labourer (female)	C406	1	Mobile Crane	0.5						
			Labourer (male)	C406	7	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Vibrating Prob	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	0.5	Water Pump 50mm	2						
	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 11 - Formwork shuttering for walls	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Stephen Poon/RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 22-8-2012

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: 21/08/2012


Day: Tuesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
			Labourer (male)	C406	3	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	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)	Dismantling tubular working platform for grouting	Labourer (male)	C406	2	Air Compressor			1	AC04	h		
						Coring Machine			2		h		
						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 - Hand digging for heading tunnel at Ch. 0.8~ 1.3 and installation of shoring frames	Labourer (male)	C406	3	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Stephen Poon / RE

Date:

Signed: 
Contractor's Representative

Name/Post: Wong Ching Lung / Site Agent

Date:

Signed: 
IOW

Name/Post: Tso Sai Kuen / Inspector of Works

Date: 22-8-2012

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 2, TP 0.5

Typhoon / Warning Signal:
Thunderstorm Warning - 03:25~04:30 & 08:50~12:00

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

(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 1	Asphalter (Other Construction) C301			Chainman C401			Backhoe	5	
	Chainman 3	Asphalter (Roadworks) C302			Concreting Labourer C402			Dump Truck	1	
	Community Liaison Officer 1	Bamboo Scaffolder C303			Diver's Linesman / Dredger Crew / Barge Crew C403			Generator	2	
	CEG 1	Bar Bender & Fixer C304			Excavator C404			Oxy-Acetylene	3	2
	Contract Manager 1	Bricklayer C305			Heavy Load Labourer C405			Water Pump 50mm	8	
	Engineer 1	Carpenter (Fender) C306			Labourer (male / female) / Lorry checker / Watchman / Office attendant C406	29		Water Pump 75mm	6	
	Environmental Officer 1	Carpenter (Formwork) C307	6		Sewerman C407			Welding Set	4	
	Foreman/Assistant Foreman 2	Concrete Repairer C308			Automation Equipment Mechanic E301					
	General Foreman 1	Concretor C309			Building Services Mechanic E302					
	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 Manager 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	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	3							
		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 22									
	Assistance to Engineer									
	Amah 1									
	Coordinate Engineer 1									
	Drafting Assistant 1									
	Driver 2									
	Field Assistant 2									
	Office Assistant									
	Watchman 1									
	Total 8									
		(To be continued)								
					Total Labour		43	Total	29	2

* 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: *Stephen Poon*
Engineer's Representative

Name/Post: Stephen Poon / RE

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: 23-8-2012

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: 22/08/2012

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	Hand digging for heading tunnel of Ø225 sewer pipe at Ch. 1.6~1.3 and installing shoring frames Formwork shuttering for walls (W10,11&13) of discharge chamber Forming level studs for rendering to cable trenches at switchroom Installation of air trunk at transformer room and painting Trimming concrete surace of parapet wall on roof of switchroom & transformer room for rectification of alignment Excavating for Ø1200 pipe trench between manhole MH06~bay 20 of box culvert	Carpenter (Formwork)	C307	3	Backhoe	1	EX50					
			Labourer (female)	C406	3	Oxy-Acetylene	1						
			Labourer (male)	C406	6	Water Pump 50mm	2						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	0.5	Water Pump 75mm	1						
			Plasterer	C337	1	Welding Set	1						
08:00 - 18:00	Area A - Pump Station - Box Culvert (Receiving Pit)	Fabricating upper layer I-beam walings for shoring	General Welder	C318	1	Backhoe	1	EX42					
			Labourer (male)	C406	1	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	0.5	Welding Set	1						
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)	Laying concrete haunching for Ø2100 concrete pipe at Ch. 75-95 Dismantling lower layer of I-beam walings and struts from trench shoring at Ch.110~125 Delivery of sand material from Contract 2's stockpile area at Tai Po Industrial Estate (6 Truckloads) and backfilling to Ø2100 pipe trench at Ch.102~125	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (female)	C406	1	Dump Truck	1						
			Labourer (male)	C406	7	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
			Truck Driver	C349	1	Welding Set	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 12 - Formwork shuttering for walls Bay 13 - Stripping off soffit formwork and dismantling falsework	Carpenter (Formwork)	C307	3	Backhoe	1	EX08					
			Labourer (male)	C406	1	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 23-8-2012

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: 22/08/2012

Day: Wednesday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Water Pump 75mm	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)	Dismantling tubular working platform for grouting	Labourer (male)	C406	2	Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Remove excavated soil off the heading tunnel	Labourer (male)	C406	3	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 23-8-2012

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 - 07:55~24:00
Thunderstorm Warning - 14:35~15:20

Contract No.: DC/2009/22 Date: 23/08/2012
Day: Thursday

(Hong Kong Observatory's record)

Instructions to Contractor (Record verbal instructions given)	Contractor's Site Staff	Labour	Labour	Plant
	Code No.	Code No.	Code No.	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
	Community Liaison Officer 1	Bamboo Scaffolder C303	Diver's Linesman / Dredger Crew / Barge Crew C403	Blower 1
	CEG 1	Bar Bender & Fixer C304	Excavator C404	Coring Machine 2
	Contract Manager 1	Bricklayer C305	Heavy Load Labourer C405	Dump Truck 2
	Engineer 1	Carpenter (Fender) C306	Labourer (male / female) / Lorry checker / Watchman / Office attendant C406	Generator 2
	Environmental Officer 1	Carpenter (Formwork) C307	Sewerian C407	Grout Machine 1
	Foreman/Assistant Foreman 2	Concrete Repairer C308	Automation Equipment Mechanic E301	Oxy-Acetylene 2
	General Foreman 1	Concretor C309	Building Services Mechanic E302	Vibrating Prob 1
	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 6
	Project Director 1	Demolition Worker C312	Electrician/Electrical Fitter E305	Welding Set 2
	Project Manager 2	Diver C313	Fire Services Mechanic E306	
	Project Quantity Surveyor 1	Drainlayer C314	Instrument Mechanic E307	
	Quantity Surveyor Manager 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	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		
		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		
		Window Frame Installer C350		
	Total 22		Total Labour 43	Total 28 10
	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)		

* 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: Stephen Poon / RE

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:
IOW

Tso Sai Kuen / Inspector of Works

Date:

24-8-2012

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: 23/08/2012

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	Hand digging heading tunnel between MS1 & FMH1023921 at Ch. 1.3~1.9 for Ø225 sewer pipe and installing shoring frames Formwork shuttering for walls (W10~W13) of discharge chamber Installing GMS plates to form exhaust fan chamber and painting to air trunk at transformer room Rendering to cable trenches at switchroom	Carpenter (Formwork)	C307	1	Backhoe			1	EX50	h		
			Labourer (female)	C406	1	Blower	1						
			Labourer (male)	C406	7	Oxy-Acetylene			1		h		
			Plasterer	C337	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
08:00 - 18:00	Area A - Pump Station - Box Culvert (Receiving Pit)	Fabricating upper layer I-beam walings for receiving pit	General Welder	C318	1	Backhoe	1	EX42					
			Labourer (male)	C406	1	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Welding Set	1						
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)	Dismantling lower layer of I-beam walings and struts from shoring of Ø2100 pipe trench at Ch.96~108 Delivery of sand material from Contract 2's stockpile area at Tai Po Industrial Estate (15 Truckloads), backfilling to Ø2100 pipe trench at Ch.78~102 to lower layer of I-beam walings Cutting & bending reinforcement bars for manhole MH03 at bending yard	Bar Bender & Fixer	C304	2	Backhoe	1	EX36					
			Labourer (female)	C406	1	Dump Truck	2						
			Labourer (male)	C406	3	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
			Truck Driver	C349	2	Welding Set			1		h		
	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 11 - Concreting to walls & top slab of box culvert (Total : 79.0 cu.m) Bay 12 - Erecting falsework & shuttering for soffit of top slab General housekeeping Cutting & bending reinforcement bars for box culvert at steel yard	Bar Bender & Fixer	C304	2	Backhoe	1	EX08					
			Carpenter (Formwork)	C307	1	Generator	1						
			Labourer (female)	C406	1	Oxy-Acetylene			1		h		
			Labourer (male)	C406	4	Vibrating Prob	1						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 24-8-2012

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: 23/08/2012

Day: Thursday

Time	Location	Activity	Labour			Plant					Material Delivered			
						Trade	Code	No.	Type	Working			Idling	
			No.	ID	No.					ID	Code	Description	Quantity	
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	1							
						Water Pump 75mm	2							
						Welding Set			1		h			
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)	Dismantling tubular working platform for grouting General housekeeping	Labourer (female)	C406	1	Air Compressor			1	AC04	h			
			Labourer (male)	C406	2	Coring Machine			2		h			
						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 - Hand digging for heading tunnel at Ch. 1.3~1.6 and installation of shoring frames	Labourer (male)	C406	3	Backhoe	1	EX21						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1							
						Oxy-Acetylene			1		h			
						Water Pump 50mm	1							
						Water Pump 75mm	1							
						Welding Set	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 24-8-2012

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 Cloudy ST 0, TP 0

Typhoon / Warning Signal:
T1 - 22:40~24:00
Very Hot Weather Warning - 00:00~19:00

Contract No.: DC/2009/22 Date: 24/08/2012
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	2	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Blower	1		
	CEG	1	Bar Bender & Fixer	C304	3	Excavator	C404		Coring Machine		2	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Dump Truck	2		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) - Lorry checker - Watchman - Office attendant	C406	28	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		Mini Backhoe	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		Vibrating Prob	1		
	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	6		
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Welding Set	2	2	
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor Manager	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	3							
			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	22	(To be continued)			Total Labour		40	Total	28	11	
	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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: 24/08/2012

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	Hand digging for heading tunnel at Ch.1~2. between MS1 & FMH1023921 and installing shoring frames Formwork shuttering for stair on roof of manmade slope Installing air trunk and painting to fan chamber at transformer room Stripping off soffit formwork from roof slab & beams of screen house	Carpenter (Formwork)	C307	1	Backhoe			1	EX50	h		
			Labourer (male)	C406	5	Blower	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	2						
						Water Pump 75mm	1						
08:00 - 18:00	Area A - Pump Station - Box Culvert (Receiving Pit)	Fabricating upper layer of I-beam struts for receiving pit	General Welder	C318	1	Backhoe			1	EX42	h		
			Labourer (male)	C406	1	Oxy-Acetylene	1						
						Welding Set	1						
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 (CH30-75)	Excavating to expose existing rising main prior to driving sheetpile shoring	Labourer (male)	C406	1	Mini Backhoe	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Dismantling lower layer of I-beam walings and struts from Ø2100 pipe trench at Ch. 84~96 Delivery of sand material from Contract 2's stockpile area at Tai Po Industrial Estate (17 Truckloads) and backfilling to Ø2100 pipe trench at Ch.78~125 to upper waling level MH03 - Rebars fixing and concreting for base slab & walls of manhole	Bar Bender & Fixer	C304	3	Backhoe	1	EX36					
			Labourer (female)	C406	2	Dump Truck	2						
			Labourer (male)	C406	6	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Vibrating Prob	1						
			Truck Driver	C349	2	Water Pump 50mm	2						
						Welding Set			1		h		
	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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: 24/08/2012

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 - General cleaning for wall construction and falsework erection Bay 11 - Stripping off wall formwork and concrete curing Bay 12 - Soffit shuttering for top slab	Carpenter (Formwork)	C307	1	Backhoe	1	EX08							
			Labourer (male)	C406	4	Generator	1								
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1			h			
						Water Pump 50mm	1								
						Water Pump 75mm	2								
	Area B - Tung Tsz Nursery (CH40-CH130)	No activity as per KLKJV arrangement				Water Pump 50mm	1								
						Water Pump 75mm	1								
08:00 - 18:00	Area B - Tung Tsz Nursery (Jacking Pit)	General housekeeping	Labourer (female)	C406	1	Air Compressor			1	AC04	h				
			Labourer (male)	C406	1	Coring Machine			2		h				
						Grout Machine			1		h				
						Water Pump 50mm	1								
						Water Pump 75mm	1								
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PI 1602.1 - Hand digging for heading tunnel at Ch. 1.6-2.0 and installation of shoring frames	Labourer (male)	C406	3	Backhoe	1	EX21							
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1								
						Oxy-Acetylene			1		h				
						Water Pump 50mm	1								
						Water Pump 75mm	1								
						Welding Set	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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 Cloudy ST 0, TP 0

Typhoon / Warning Signal:
T1 - 00:00~24:00
Very Hot Weather Warning - 12:35~20:45

Contract No.: DC/2009/22 Date: 25/08/2012
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			
Comments by Engineer's / Contractor's Representative									Type	No. Working	No. Idle	
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401					
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402					
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403					
	CEG	1	Bar Bender & Fixer	C304	3	Excavator	C404					
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405					
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	26				
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewermain	C407					
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301					
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302					
	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 Manager	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	3							
			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	22	(To be continued)			Total Labour		39	Total	25	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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: 25/08/2012

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	Hand digging for heading tunnel at Ch. 2.5~3.3 between MS1 & FMH1023921 for Ø225 sewer pipe and installing shoring frames Shuttering for box-out at landings of stair at manmade slope Forming box-outs at kerb & wall W16 at manmade slope for handrails construction Installing air ducts for exhaust fan chambers at transformer room and painting Fabricating upper layer I-beam walings for shoring of Ø1200 pipe trench between manhole MH06 ~ bay 20 of box culvert	Carpenter (Formwork)	C307	1	Backhoe	1	EX50					
			General Welder	C318	1	Blower	1						
			Labourer (male)	C406	6	Oxy-Acetylene			1		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
	Area A - Pump Station - Box Culvert (Receiving Pit)	No activity as per KLKJV arrangement				Backhoe			1	EX42	h		
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 (CH30-75)	No activity as per KLKJV arrangement				Mini Backhoe			1		h		
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Delivery of sand material from Contract 2's stockpile area at Tai Po Industrial Estate (16 Truckloads) and backfilling to Ø2100 pipe trench at Ch.78~125 up to top layer of walings Formwork shuttering for walls of manhole MH03	Carpenter (Formwork)	C307	1	Backhoe	1	EX36					
			Labourer (female)	C406	1	Dump Truck	2						
			Labourer (male)	C406	5	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
			Truck Driver	C349	2								
	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 - Formwork shuttering for walls Bay 11 - Stripping off soffits from top slab and dismantling falsework Bay 12 - Rebars fixing for walls & top slab	Bar Bender & Fixer	C304	3	Backhoe	1	EX08					
			Carpenter (Formwork)	C307	1	Generator	1						
			Labourer (male)	C406	3	Oxy-Acetylene			1		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	1						

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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: 25/08/2012

Day: Saturday

Time	Location	Activity	Labour			Plant					Material Delivered		
						Type	Working		Idling				
			Trade	Code	No.		No.	ID	No.	ID	Code	Description	Quantity
						Water Pump 75mm	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						
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Air Compressor			1	AC04	h		
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area C - Shallow Marshy Area	Grass cutting & general cleaning	Labourer (female)	C406	2								
			Labourer (male)	C406	1								
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Hand digging for heading tunnel at Ch. 2.0~2.4 and installation of shoring frames	Labourer (male)	C406	3	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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 Cloudy ST 0, TP 0

Typhoon / Warning Signal:
T1 - 00:00~16:40
Very Hot Weather Warning - 06:55~24:00

Contract No.: DC/2009/22 Date: 26/08/2012
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				
			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	10			
			Carpenter (Formwork)	C307		Sewermain	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							
			Pipelay	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							
			Shottfirer	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		10	Total	5	12
			Assistance to Engineer	No.							
			Driver	1							
			Watchman	1							
			Total	2							

* 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: Stephen Poon / RE

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:
Tso Sai Kuen
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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: 26/08/2012

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											
08:00 - 18:00	Area A - Pump Station	Stripping off soffit formwork from roof of screen house & dismantling falsework	Labourer (male)	C406	3	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				Backhoe			1	EX42	i		
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		
	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						
08:00 - 18:00	Area C - Shallow Marshy Area	Grass cutting & general cleaning up	Labourer (female)	C406	1								
			Labourer (male)	C406	2								
	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											

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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: 26/08/2012

Day: Sunday

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 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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 27-8-2012

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: 27/08/2012

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	5	1	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Blower	2		
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Dump Truck	2		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2		
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	28	Grout Machine		1	
	Environmental Officer	1	Carpenter (Formwork)	C307	3	Sewerman	C407		Mini Backhoe	1		
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Mobile Crane	1		
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Oxy-Acetylene	1	3	
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Joiner (Power)	E303		Vibrating Prob	2		
	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	6		
	Project Manager	2	Diver	C313		Fire Services Mechanic	E306		Welding Set	2		
	Project Quantity Surveyor	1	Drainlayer	C314		Instrument Mechanic	E307					
	Quantity Surveyor Manager	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	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	22	(To be continued)			Total Labour		41	Total	32	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										

Remarks
Pre-handover Meeting was held at Transformer Room of Pump Station at 10:30 A.M. amongst Ms. Leung of CLP, Mr. Dragon Wong of KLKJV, Mr. Ben Yuen of Bi-water and Mr. Stephon Poon of AECOM
Area A - Backhoe EX17 on site

* 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

Signed: _____
Engineer's Representative

Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 28-8-2012

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: 27/08/2012

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	Excavating for heading tunnel of Ø225 sewer pipe between MS1 & FMH1023921 at Ch.3.3 ~3.8 and installing shoring frames Drilling holes & installing of Ø25 UPVC drains from green landing to U-channel at manmade slope Pre-pour cleaning and concreting to parapet walls & stair on roof of manmade slope & store room (Total : 23.0 cu.m) General cleaning, installing GMS chequer plate covers for cable trenches Laying G.I surface mounted cable conduits for earthing to metal works at transformer room Fabricating upper layer I-beam walings for shoring of Ø2100 pipe trench between manhole MH05 & MH06	Carpenter (Formwork)	C307	1	Backhoe	1	EX36					
			General Welder	C318	1	Backhoe	1	EX50					
			Labourer (female)	C406	3	Blower	2						
			Labourer (male)	C406	9	Mobile Crane	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	2	Oxy-Acetylene	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Vibrating Prob	1						
						Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert (Receiving Pit)	No activity as per KLKJV arrangement				Backhoe			1	EX42	h		
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 (CH30-75)	Excavating to expose existing rising main at planter area, then backfilling	Labourer (male)	C406	1	Mini Backhoe	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Delivery of sand material from contract 2's stockpile area at Tai Po Industrial Estate (9 Truckloads) and backfilling to Ø2100 pipe trench at Ch. 78~125 to top layer I-beam walings Formwork shuttering and concreting to walls of manhole MH03	Carpenter (Formwork)	C307	1	Backhoe	1	EX17					
			Labourer (female)	C406	1	Dump Truck	2						
			Labourer (male)	C406	1	Oxy-Acetylene			1		h		
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Vibrating Prob	1						
			Truck Driver	C349	2	Water Pump 50mm	2						
	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

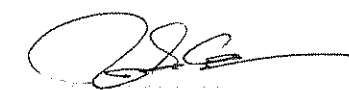
Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 28-8-2012

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: 27/08/2012

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 - Formwork shuttering for walls	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					
			Labourer (male)	C406	2	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	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						
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Air Compressor			1	AC04	h		
						Grout Machine			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
08:00 - 18:00	Area C - Shallow Marshy Area	Grass cutting & general cleaning	Labourer (male)	C406	3								
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Hand digging for heading tunnel of Ø1650 pipe at Ch.2.4~2.8 and installing shoring frames PL 1604.1 - Excavating for Ø1650 pipe trench and fabricating top layer I-beam walings and struts for trench shoring	Labourer (male)	C406	4	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 28-8-2012

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 2

Typhoon / Warning Signal:
Very Hot Weather Warning - 00:00~24:00
Thunderstorm Warning - 13:25~14:30 & 23:25~24:00

Contract No.: DC/2009/22 Date: 28/08/2012
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	3	3
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Blower	2	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Dump Truck	3	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator	2	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	27	Grab Lorry	1.5	
	Environmental Officer	1	Carpenter (Formwork)	C307	1	Sewermain	C407		Grout Machine		1
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		Oxy-Acetylene	1	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	6	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Welding Set	2	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 Manager	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	1						
			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	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	4						
			Window Frame Installer	C350							
	Total	22									
	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		38	Total	28.5	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: Stephen Poon / RE

Date:

Signed:
Contractor's Representative

Wong Ching Lung / Site Agent

Date:

Signed:

IOW

Tso Sai Kuen / Inspector of Works

Date:

29-8-2012

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: 28/08/2012

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	Hand digging for heading tunnel of Ø225 sewer pipe between MS1 & FMH1023921 at Ch.3.8-4.5 and installing tunnel frames Stripping off formwork from parapet walls & stair at manmade slope of store room Fabricating upper layer I-beam walings for shoring of Ø2100 pipe trench between manhole MH05 & MH06 Installing 2 nos. Ø450 & 4 nos. Ø900 flange puddle pipes in wall between discharge chamber & valve chamber Disposal of construction waste to WENT (1 Truckload)	General Welder	C318	1	Backhoe	1	EX36					
			Labourer (female)	C406	2	Backhoe			1	EX50	h		
			Labourer (male)	C406	10	Blower	2						
			Pipelayer	C331	1	Grab Lorry	0.5						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene	1						
			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 (Receiving Pit)	No activity as per KLKJV arrangement				Backhoe			1	EX42	h		
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)	Delivery of sand material from Contract 2's stockpile area at Tai Po Industrial Estate (26 Truckloads) and backfilling to Ø2100 pipe trench at Ch. 78-125 to top waling level Stripping off formwork from walls of manhole MH03	Labourer (female)	C406	1	Backhoe	1	EX17					
			Labourer (male)	C406	4	Dump Truck	3						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
			Truck Driver	C349	3	Water Pump 50mm	2						
						Welding Set			1		h		
	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 12 - Formwork shuttering for walls	Carpenter (Formwork)	C307	1	Backhoe			1	EX08	h		
			Labourer (male)	C406	2	Generator	1						
						Oxy-Acetylene			1		h		

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative


Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 29.8.2012

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: 28/08/2012

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	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						
	Area B - Tung Tsz Nursery (Jacking Pit)	No activity as per KLKJV arrangement				Air Compressor			1	AC04	h		
						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 - Hand digging for heading tunnel of Ø1650 pipe at Ch.2.8~3.1 and installation of shoring frames PL 1604.1 - Excavating for pipe trench, driving sheet piles and fabricating 1st layer of I-beam walings and struts for trench shoring Cart away excavated material to Aara A (1 truckload)	Labourer (male)	C406	4	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1						
			Truck Driver	C349	1	Grab Lorry	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 29-8-2012

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:
Thunderstorm Warning - 00:00~09:30
Very Hot Weather Warning - 00:00~04:25

Contract No.: DC/2009/22 Date: 29/08/2012
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 2
	Community Liaison Officer 1	Bamboo Scaffolder C303	Diver's Linesman / Dredger Crew / Barge Crew C403	Blower 2
	CEG 1	Bar Bender & Fixer C304	Excavator C404	Dump Truck 3
	Contract Manager 1	Bricklayer C305	Heavy Load Labourer C405	Generator 2
	Engineer 1	Carpenter (Fender) C306	Labourer (male / female) / Lorry checker / Watchman / Office attendant C406	Grab Lorry 1
	Environmental Officer 1	Carpenter (Formwork) C307	Sewerman C407	Grout Machine 1
	Foreman/Assistant Foreman 2	Concrete Repairer C308	Automation Equipment Mechanic E301	Oxy-Acetylene 2
	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 6
	Land Surveyor 1	Curtain Wall Installer C311	Carpenter E304	Welding Set 2
	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 Manager 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	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 22	(To be continued)	Total Labour 40	Total 29 6
	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: *Stephen Poon*
Engineer's Representative

Name/Post: Stephen Poon / RE

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:

30-8-2012

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: 29/08/2012

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	Hand digging for heading tunnel of Ø225 sewer pipe between MSI & FMH1023921 at Ch.4.5~5.5 and installing shoring frames Stripping off formwork from parapet walls & stair at manmade slope of store room Fabricating upper layer I-beam struts for shoring of Ø2100 pipe trench between manhole MH05 & MH06 Fixing Ø900 puddle flanged pipe in wall between discharge chamber & valve chamber	General Welder	C318	1	Backhoe			1	EX50	h		
			Labourer (female)	C406	2	Blower	2						
			Labourer (male)	C406	8	Oxy-Acetylene	1						
			Pipelayer	C331	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert (Receiving Pit)	Excavating for receiving pit to lower layer walings level & cart away excavated materials to Contract 2's stockpile area at Tai Po Industrial Estate (24 Truckloads)	Labourer (male)	C406	1	Backhoe	1	EX36					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	3						
			Truck Driver	C349	3								
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 light for traffic flow regulation (1 F/Lab.)	Labourer (female)	C406	3								
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Compaction of sand materials at Ø2100 pipe trench Ch. 78~125 Formwork shuttering for base slab and benching of manhole MH03 Dismantling upper layer I-beam walings and struts from shoring of Ø2100 pipe trench at Ch. 120~125	Labourer (female)	C406	1	Backhoe	1	EX17					
			Labourer (male)	C406	5	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
	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 - Erecting falsework for top slab construction Bay 12 - Formwork shuttering for walls Bay 13 - Patching up tie bolt holes on walls	Carpenter (Formwork)	C307	1	Backhoe			1	EX08	h		
			Labourer (male)	C406	4	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	2						

Day's record and instructions checked and agreed

Original - ER's File

Duplicate - Contractor

Signed: _____
Engineer's Representative

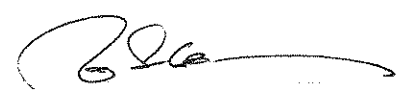
Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 30-8-2012

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: 29/08/2012

Day: Wednesday

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 (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)	General housekeeping	Labourer (male)	C406	1	Air Compressor			1	AC04	h			
						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 - Hand digging for heading tunnel of Ø1650 pipe at Ch.3.1~3.6 and installation of shoring frames PL 1604.1 - Excavating for Ø1650 pipe trench, driving sheet piles and fabricating top layer of I-beam walings and struts for shoring Cart away excavated soil to Aara A (1 truckload)	General Welder	C318	1	Backhoe	1	EX21						
			Labourer (male)	C406	3	Generator	1							
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Grab Lorry	1							
			Truck Driver	C349	1	Oxy-Acetylene			1		h			
						Water Pump 50mm	1							
						Water Pump 75mm	1							
						Welding Set	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 30-8-2012

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 0.5, TP 10

Typhoon / Warning Signal:
Thunderstorm Warning - 08:15~10:30 & 12:40~14:15
Very Hot Weather Warning - 13:20~19:00

Contract No.: DC/2009/22 Date: 30/08/2012
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
	Assistant Surveyor	1	Asphalter (Other Construction)	C301		Chainman	C401		Air Compressor
	Chainman	3	Asphalter (Roadworks)	C302		Concreting Labourer	C402		
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Blower
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Generator
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman / Office attendant	C406	28	
	Environmental Officer	1	Carpenter (Formwork)	C307	1	Sewermain	C407		Grout Machine
	Foreman/Assistant Foreman	2	Concrete Repairer	C308		Automation Equipment Mechanic	E301		
	General Foreman	1	Concretor	C309		Building Services Mechanic	E302		Water Pump 50mm
	Labour Officer	1	Construction Plant Mechanic	C310		Cable Jointer (Power)	E303		
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Welding Set
	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 Manager	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	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	1				
			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	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	4				
			Window Frame Installer	C350					
	Total	22	(To be continued)			Total Labour		40	Total
	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 31-8-2012

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: 30/08/2012

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	Hand digging for heading tunnel of Ø225 sewer pipe between MS1 & FMH1023921 at Ch.5.5~6.1 Stripping off soffit formwork from roof slab & beams of screen house and dismantling falsework Fabricating upper layer I-beam struts for Ø2100 pipe trench between manhole MH05 & MH06 Fixing Ø900 puddle flange pipes at wall between discharge chamber & valve chamber General housekeeping & cleaning up sediments from wheel washing bay	General Welder	C318	1	Backhoe			1	EX50	h		
			Labourer (female)	C406	2	Blower	2						
			Labourer (male)	C406	7	Oxy-Acetylene	1						
			Pipelayer	C331	1	Water Pump 50mm	2						
						Water Pump 75mm	1						
						Welding Set	1						
	Area A - Pump Station - Box Culvert (Receiving Pit)	Excavating for receiving pit to lower waling level & cart away excavated materials to Contract 2's stockpile area at Tai Po Industrial Estate (11 Truckloads)	Labourer (male)	C406	3	Backhoe	1	EX36					
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Dump Truck	3						
			Truck Driver	C349	3								
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)	Compaction of sand materials at Ø2100 pipe trench Ch. 78~125 Formwork shuttering and concreting to base slab and benching of manhole MH03 Dismantling upper layer I-beam walings and struts from shoring of Ø2100 pipe trench at Ch. 116~120	Labourer (female)	C406	1	Backhoe	1	EX17					
			Labourer (male)	C406	4	Oxy-Acetylene	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Water Pump 50mm	2						
	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 - Formwork shuttering for soffit formwork Bay 12 - Concreting to walls & top slab of box culvert (Total : 77.2 cu.m)	Carpenter (Formwork)	C307	1	Backhoe	1	EX08					
			Labourer (male)	C406	4	Generator	1						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	2						
						Welding Set			1		h		

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 31-8-2012

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: 30/08/2012

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 (CH40-CH130)	General housekeeping & cleaning up sediments from wheel washing bay	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				Air Compressor			1	AC04	h		
						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 - Hand digging for heading tunnel of Ø1650 pipe at Ch.3.6~4.0 and installation of shoring frames PL 1603.1 - Extracting sheetpiles from trench shoring at Ch.20~25 PL 1604.1 - Excavating Ø1650 pipe trench, driving sheet piles and fabricating top layer of I-beam walings and struts for trench shoring Cart away excavated soilsto Aara A (1 truckload)	General Welder	C318	1	Backhoe	1	EX21					
			Labourer (male)	C406	3	Generator	1						
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Grab Lorry	1						
			Truck Driver	C349	1	Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 31-8-2012

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 Cloudy ST 0, TP 0.5

Typhoon / Warning Signal:
 Thunderstorm Warning - 07:15~18:30

Contract No.: DC/2009/22 Date: 31/08/2012
 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	5	
	Community Liaison Officer	1	Bamboo Scaffolder	C303		Diver's Linesman / Dredger Crew / Barge Crew	C403		Blower	2	
	CEG	1	Bar Bender & Fixer	C304		Excavator	C404		Crane Lorry	1	
	Contract Manager	1	Bricklayer	C305		Heavy Load Labourer	C405		Crawler Drill	1	
	Engineer	1	Carpenter (Fender)	C306		Labourer (male / female) / Lorry checker / Watchman/Office attendant	C406	29	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	3	2
	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	6	
	Land Surveyor	1	Curtain Wall Installer	C311		Carpenter	E304		Welding Set	3	
	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 Manager	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	3						
			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							
			Window Frame Installer	C350							
	Total	22				Total Labour		40	Total	32	3
	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: Stephen Poon / RE

Date: _____

Signed: _____
 Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
 IOW

Tso Sai Kuen / Inspector of Works

Date: 3-9-2012

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: 31/08/2012

Day: Friday

Time	Location	Activity	Labour			Plant					Material Delivered			
			Trade	Code	No.	Type	Working		Idling			Description	Quantity	
							No.	ID	No.	ID	Code			
	Area A - DN1800 Stormwater Drain	No activity as per KLKJV arrangement												
08:00 - 18:00	Area A - Pump Station	Hand digging for heading tunnel of 225Ø sewer pipe between MS1 & FMH1023921 at Ch.6.1~6.7 and installing shoring frames Stripping off soffit formwork from roof slab & beams of store room and dismantling the falsework Fabricating upper layer I-beam struts for Ø2100 pipe trench between manhole MH05 & MH06 General cleaning on roof slab of Pump Station Installation of louvre (L5) at screen house Fabricating MS channel supports for cable trench cover at transformer room	General Welder	C318	1	Backhoe	1	EX50						
			Labourer (female)	C406	2	Blower	2							
			Labourer (male)	C406	6	Oxy-Acetylene	1							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	0.5	Water Pump 50mm	2							
						Water Pump 75mm	1							
						Welding Set	1							
	Area A - Pump Station - Box Culvert (Receiving Pit)	Excavating for receiving pit to lower layer waling level	Labourer (male)	C406	2	Backhoe	1	EX36						
			Plant & Equipment Operator (Earthmoving Machinery)	C333	0.5									
07:00 - 18:00 18:00 - 20:00	Area A - Ting Kok Road	Manual control of "stop/go" sign for traffic flow regulation (1 F/Lab) Manual control of temporary traffic light for traffic flow regulation (3 F/Lab.)	Labourer (female)	C406	3									
08:00 - 18:00	Area A - Ting Kok Road (CH70-125)	Delivery of sand material (23 truckloads) from Contract 2's stockpile area at Tai Po Industrial Estate and backfilling to Ø2100 pipe trench at Ch. 78~125 Formwork shuttering and concreting for temporary stop end wall at Ch.75 of Ø2100 pipe trench to facilitate backfilling work Dismantling upper layer of I-beam walings and struts from Ø2100 pipe trench at Ch. 95~105	Carpenter (Formwork)	C307	2	Backhoe	1	EX17						
			Labourer (female)	C406	1	Oxy-Acetylene	1							
			Labourer (male)	C406	4	Water Pump 50mm	2							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	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 - Formwork shuttering soffit of top slab Bay 12 - Stripping off external wall wall	Carpenter (Formwork)	C307	2	Backhoe	1	EX08						
			Labourer (male)	C406	2	Generator	1							
			Plant & Equipment Operator (Earthmoving Machinery)	C333	1	Oxy-Acetylene			1		h			
						Water Pump 50mm	1							
						Water Pump 75mm	2							

Day's record and instructions checked and agreed

Original - ER's File
Duplicate - Contractor

Signed: _____
Engineer's Representative

Name/Post: Stephen Poon / RE

Date: _____

Signed: _____
Contractor's Representative

Wong Ching Lung / Site Agent

Date: _____

Signed: 
IOW

Tso Sai Kuen / Inspector of Works

Date: 3-9-2012

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: 31/08/2012

Day: Friday


Time	Location	Activity	Labour			Plant					Material Delivered		
						Trade	Code	No.	Type	Working			Idling
			No.	ID	No.					ID	Code	Description	Quantity
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)	Set up crawler drill and preparation works for grouting	Labourer (male)	C406	4	Air Compressor	1	AC05					
			Plant and Equipment Operator (Hoist and Crane)	C334	2	Crane Lorry	1						
						Crawler Drill	1	EX53					
						Grout Machine			1		h		
						Oxy-Acetylene	1						
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	1						
08:00 - 18:00	Area E - Siu Lek Yuen Rd. Playground	PL 1602.1 - Hand digging for heading tunnel at Ch.4.0~4.8 and installation of shoring frames PL 1604.1 - Driving sheet piles for trench shoring and fabricating top layer I-beam walings and struts	Labourer (male)	C406	4	Backhoe	1	EX21					
			Plant and Equipment Operator (Hoist and Crane)	C334	1	Generator	1						
						Oxy-Acetylene			1		h		
						Water Pump 50mm	1						
						Water Pump 75mm	1						
						Welding Set	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: Stephen Poon / RE
Date: _____

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

Signed: 
IOW
Tso Sai Kuen / Inspector of Works
Date: 3-9-2012