



**DRAINAGE SERVICES DEPARTMENT
CONTRACT NO. DC/2011/06**

**REPROVISIONING OF BOUNDARY PATROL ROAD
AND ASSOCIATED SECURITY FACILITIES
BETWEEN PING YUEN RIVER AND PAK FU SHAN
AND DRAINAGE WORKS IN NORTH DISTRICT**

**THE SEVENTH QUARTERLY
EM&A SUMMARY REPORT FOR DRAINAGE
WORKS UNDER EP-277/2007/A
(DECEMBER 2013 – FEBRUARY 2014)**

**PREPARED FOR
SANG HING CIVIL CONSTRUCTORS CO., LTD.**

Quality Index

Date	Reference No.	Prepared By	Approval By
24 March 2014	TCS00599/12/600/R0213	 Ben Tam Environmental Consultant	 T. W. Tam Environmental Team Leader

Version	Date	Description
0	12 March 2014	First submission.
1	24 March 2014	Amended against IEC's comments on 24 March 2014

This report has been prepared by Action-United Environmental Services & Consulting with all reasonable skill, care and diligence within the terms of the Agreement with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

Ref.: DSDBPRNDEM00_0_0250L.14

25 March 2014

By Post and Fax (2959 6079)

Action-United Environmental Services & Consulting
Unit A, 20/F,
Gold King Industrial Building,
New Territories, Hong Kong

Attention: Mr. TW Tam

Dear Sir,

**Re: Contract No. DC/2011/06
Reprovisioning of Boundary Patrol Road and Associated Security Facilities
between Ping Yuen River and Pak Fu Shan and Drainage Works in North
District
Seventh Quarterly EM&A Summary Report for Drainage Works under EP-
277/2007/A (December 2013 – February 2014)**

Reference is made to the Environmental Team's submission of the captioned report (Version 1) dated 24 March 2014 received through E-mail on 24 March 2014 for our review and comment.

Please be informed that we have no adverse comment on the captioned submission.

Should you have any queries, please do not hesitate to contact the undersigned or our Ms. Cherry Mak at 3465 2807.

Yours sincerely,



Roger Leung
Independent Environmental Checker

c.c.	DSD	Mr. Eric Cheng	by fax: 2827 8700
	SHCCCL	Mr. Raymond W.M. Yau	by fax: 2403 1162

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EXECUTIVE SUMMARY

REPORTING OF THE CONTRACT

ES01. In order to ease reporting of the Contract, it has been agreed among the Engineer, IEC, Contractor and ET that the EM&A reports for the Contract are split into three stand-alone reports, namely EM&A Report for Advanced Works under EP-430/2011, EM&A Report for Drainage Works under EP-277/2007/A and EM&A Report for Drainage Works at Ma Wat Wai. This is the sixth quarterly EM&A summary report for Drainage Works under EP-277/2007/A, covering the construction period of the Works from 1 Dec 2013 to 28 Feb 2014.

ES02. The structure of this Report is as follows:

EXECUTIVE SUMMARY

- 1 *Introduction*
- 2 *Requirements for Construction Impact monitoring*
- 3 *Environmental monitoring Results*
- 4 *solid and liquid Waste Management*
- 5 *Complaints, Notification of Summons and Successful Prosecution*
- 6 *Conclusions and Recommendations*

Annex

- Annex A Location plan for the Works*
Annex B Environmental Management Organization, Communication Lines and 24-Hour Hotline
Annex C Construction Program
Annex D Status of Environmental Licenses and Permits
Annex E Environmental Monitoring Locations
Annex F Graphical Plots of the Trends of Monitored Parameters
Annex G Monthly Summary of Waste Flow Table

BREACH OF ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

ES03. No exceedances of environmental quality performance limits for air quality, construction noise and water quality were recorded. Therefore, neither NOE nor remedial actions were required.

COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES04. No environmental complaints, notifications of summons and successful prosecutions were registered during the quarter.

CONCLUSIONS

ES05. The EM&A results for the Reporting Period confirmed that the monitoring work was effective and was generating data with the necessary statistical power to categorically identify or confirm the absence of impact attributable to the works.

ES06. Neither breaches of environmental quality performance limits nor written or verbal environmental complaints, notification of summons and successful prosecutions were recorded during the Reporting Period, indicating the implemented environmental mitigation measures were effective and efficient to alleviate adverse environmental impacts generated from the construction activities of the Works.

RECOMMENDATIONS

ES07. The Contractor is reminded to fully comply with all the environmental requirements stipulated in the environmental regulations, guidelines and Particular Specifications under the Contract, in particular construction suppression measures during dusty construction activities under dry and windy conditions and water quality mitigation measures during rainy conditions.

ES08. In addition, attention is drawn to implementation of the construction noise mitigation measures during noisy construction works.

1 INTRODUCTION

BASIC PROJECT INFORMATION

- 1.01 Sang Hing Civil Contractors Company Limited has been awarded by DSD since 31 March 2012 Contract No. DC/2011/06 – Re-provisioning of Boundary Patrol Road and Associated Security Facilities between Ping Yuen River and Pak Fu Shan and Drainage Works in North District (hereafter “the Contract”). The Contract comprises:
- 1) Drainage Works in North District to be implemented under Environmental Permit No. EP-277/2007/A (hereinafter “Drainage Works under EP-277/2007/A or “the Works”);
 - 2) Re-provisioning of Boundary Patrol Road and Associated Security Facilities between Ping Yuen River and Pak Fu Shan; and
 - 3) Drainage Works in North District, a non-designated project of drainage works at Ma Wat Wai.
- 1.02 Location plan for the Works is shown in **Annex A**, whereas environmental management organization and communication lines, including contacts of key personnel under the Contract are shown in **Annex B**.
- 1.03 The Works has been commenced since 21 May 2012 upon completion of the site clearance and preparation activities after commencement of the Contract since 31 April 2012.
- 1.04 Action-United Environmental Services and Consulting (hereinafter “AUES”) has been commissioned by the Contractor as the Environmental Team (hereinafter “the ET”) to implement the environmental monitoring and audit (hereinafter “EM&A”) under the Contract.
- 1.05 In order to ease reporting of the Contract, it has been agreed among the Engineer, IEC, Contractor and ET that the EM&A reports for the Contract are split into three stand-alone reports, namely EM&A Report for Advanced Works under EP-430/2011, EM&A Report for Drainage Works under EP-277/2007/A and EM&A Report for Drainage Works at Ma Wat Wai.
- 1.06 This is the seventh quarterly EM&A summary report (herein after “this Report”) for Drainage Works under EP-277/2007/A, covering the construction period from 1 December 2013 to 28 February 2014 (hereinafter “the Reporting Period”).

WORK UNDERTAKEN DURING THE QUARTER

- 1.07 Construction program is presented in **Annex C**, whereas construction activities undertaken during the Reporting Period are summarized in the following **Table 1-1**.

Table 1-1 Major Construction Activities of the Works during the Reporting Period

Major Construction Activities during the Reporting Period at Portion E (Man Uk Pin)	
December 2013	<ul style="list-style-type: none"> • Establishment of Transplanted Tree T1107 • Laying of Watermain Pipe and the associated T-junction • Liaise with lot owner for the access • Construction of Inlet Transition at the upstream • Construction of Box Culvert
January 2014	<ul style="list-style-type: none"> • Establishment of Transplanted Tree T1107 • Laying of Watermain Pipe and the associated T-junction • Liaise with lot owner for the access • Construction of Gabion Block at the upstream
February 2014	<ul style="list-style-type: none"> • Establishment of Transplanted Tree T1107 • Plugging the abandoned watermain by WSD • Liaise with lot owner for the access • Construction of Gabion Block at the upstream • Construction of Box Culvert • Installation of temporary noise barrier

ENVIRONMENTAL MITIGATION MEASURES AND ENVIRONMENTAL IMPLEMENTATION STATUS

- 1.08 Environmental mitigation measures to minimize potential environmental impacts arising from the construction of the project have been recommended in the Final EIA and summarized in the stand-alone EM&A Manual. They can be found in the *First Monthly EM&A Report for Drainage Works under EP-277/2007/A* (ref. TCS00599/12/600/R0017v4, dated 16 July 2012).
- 1.09 Implementation status of environmental protection and pollution control/mitigation measures, as recommended in the Final EIA and summarized in the updated implementation schedule is detailed in the following *Section 3 to 5* of this Report, whereas status of environmental licenses and permit is summarized in the *Annex D*.

2 REQUIREMENTS FOR CONSTRUCTION IMPACT MONITORING
MONITORING PARAMETERS

- 2.01 The monitoring parameters to be monitored are summarized in *Table 2-1*.

Table 2-1 Summary of Environmental Monitoring Parameters

Aspect	Parameters	
Air Quality	<ul style="list-style-type: none"> • 1-Hour Total Suspended Particulate (hereinafter ‘1-Hr TSP’); and • 24-Hour Total Suspended Particulate (hereinafter ‘24-Hr TSP’). 	
Construction Noise	<ul style="list-style-type: none"> • A-weighted equivalent continuous sound pressure level (30min) (hereinafter ‘Leq(30min)’ during the normal working hours; and • A-weighted equivalent continuous sound pressure level (5min) (hereinafter ‘Leq(5min)’ for construction work during the restricted hours. 	
Water Quality	In Situ Measurement:	Temperature, Dissolved Oxygen, Dissolved Oxygen Saturation, pH value, Water Depth & Turbidity
	Laboratory Analysis	Suspended Solids (hereinafter ‘SS’),
Ecology	<ul style="list-style-type: none"> • The stream conditions monitoring (in-situ measurements of DO, pH and turbidity; laboratory testing of SS); • Riparian vegetation along the banks of channel monitoring; • General site audit to ensure the existing natural stream channel is protected; and • Reported the sediment condition during the construction phase 	

- 2.02 As there was neither riparian vegetation along the banks of channel nor existing natural stream channel within the construction site under the Works, no ecology monitoring is required.

MONITORING LOCATIONS

Monitoring Locations Designated in the EM&A Manual

- 2.03 The sensitive receiver designated in the EM&A Manual, namely MUP05-2, which is the closest to the construction site, is selected as monitoring location for air quality namely MUP-A1 and construction noise namely MUP-N1 respectively. They are shown in *Annex E* and summarized in *Table 2-2* below.

Table 2-2 Designated Monitoring Locations

Issue	Channel	Sensitive Receiver	Location ID	Detailed Address
Air	MUP05	MUP05-2	MUP-A1	A village house at Man Uk Pin
Noise	MUP05	MUP05-2	MUP-N1	Same village house at Man Uk Pin as MUP-A1

Additional Monitoring Locations

- 2.04 Additional monitoring locations for construction noise and water quality are also shown in *Annex E* and summarized in *Table 2-3* below.

Table 2-3 Summary of Additional Environmental Monitoring Locations

Issue	Channel	Sensitive Receiver	Location ID	Detailed Address
Noise	MUP05	MUP05-2	MUP-Nx	Village house
Water Quality	MUP05	-	MUP-Wx1	Additional Up-Stream Control Station: (Prior to and after connection of stream diversion)
		-	MUP-Wx2	Additional Impact Monitoring Station: (Prior to connection of stream diversion)
		-	MUP-Wx3	Additional Impact Monitoring Station: (After connection of stream diversion)

ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

2.05 The environmental quality performance limits, i.e. Action/Limit Levels, for air quality and construction noise are summarized in *Table 2-4* and *Table 2-5* respectively.

Table 2-4 Action and Limit Levels for Air Quality

Monitoring Station	Action Level ($\mu\text{g}/\text{m}^3$)		Limit Level ($\mu\text{g}/\text{m}^3$)	
	1-Hour TSP	24-Hour TSP	1-Hour TSP	24-Hour TSP
MUP-A1	307	156	500	260

Table 2-5 Action and Limit Levels for Construction Noise (dB(A))

Time Period	Action Level	Limit Level
0700-1900 hours on normal weekdays	When one documented complaint is received	75 dB(A)

2.06 Environmental quality criteria for additional water quality monitoring are presented in *Table 2-6* below.

Table 2-6 Action and Limit Levels for Water Quality

Action Level	Limit Level
120% of the Levels of Up-Stream Control Station	130% of the Levels of Up-Stream Control Station

3 ENVIRONMENTAL MONITORING RESULTS

3.01 Graphical plots of the trends of monitored parameters over the past 4 months, including the last month of the previous quarter and the Reporting Period, are presented in *Annex F*.

3.02 Weather conditions extracted from Hong Kong Observatory have been used in interpretation of this Report. They can be found in corresponding Monthly EM&A Reports.

3.03 A total of sixteen (16) Action Level exceedances and seven (7) Limit Level exceedances for water quality monitoring were recorded during the reporting period. Due to the exceedances were insignificant, it is considered as not due to the project. Moreover, six (6) NOEs were issued in this reporting period. Based on the investigation and consider that the exceedance should not be due to the Project works.

EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

3.04 No exceedances of environmental quality performance limits were registered and found related to the Project during the Reporting Period. A total of six (6) Notice Of Exceedances of the environmental

quality performance limits (hereinafter “NOE”) were issued and nor the associated remediation actions were required during the Reporting Period.

CONCLUSIONS

- 3.05 The EM&A results confirmed that the monitoring work was effective and generating data with necessary statistical power to categorically identify the absence of impact attributable to the works.
- 3.06 Monitoring results recorded no exceedances of the environmental quality performance limits during the Reporting Period, indicating no adverse environmental impacts were generated from construction activities during the Reporting Period. No remediation actions were required.

4 SOLID AND LIQUID WASTE MANAGEMENT

- 4.01 The quantity of solid and liquid waste for disposal or reuse is summarized in Monthly Summary of Waste Flow Table in *Annex G*.

5 COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

- 5.01 No written or verbal environmental complaints, notification of summons and successful prosecutions were recorded during the Reporting Period. They are summarized in *Table 5-1*.

Table 5-1 Summary of Complaints, Notification of Summons and Successful Prosecutions

Environmental Issue	Frequency of Occurrence	
	From the project commencement to last reporting month	This reporting Period
	December 2012 – November 2013	December 2013 to February 2014
Complaints	0	0
Nature of Complaints	Not Applicable	Not Applicable
Notification of Summons	0	0
Nature of Summons	Not Applicable	Not Applicable
Successful Prosecutions	0	0
Nature of Prosecutions	Not Applicable	Not Applicable

- 5.02 Project proponents' contacts and hotline telephone number for the public to make enquiries can be found in *Annex B*.

6 CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

- 6.01 Neither breaches of environmental quality performance limits nor written/verbal environmental complaints, notification of summons and successful prosecutions were recorded during the Reporting Period, indicating the implemented environmental mitigation measures were effective and efficient to alleviate adverse environmental impacts generated from the construction activities of the Works.

RECOMMENDATIONS

- 6.02 The Contractor is reminded to fully comply with all the required environmental mitigation measures, in particular construction dust suppression measures during dusty construction activities under dry and windy conditions and water quality mitigation measures during rainy conditions. In addition, attention is

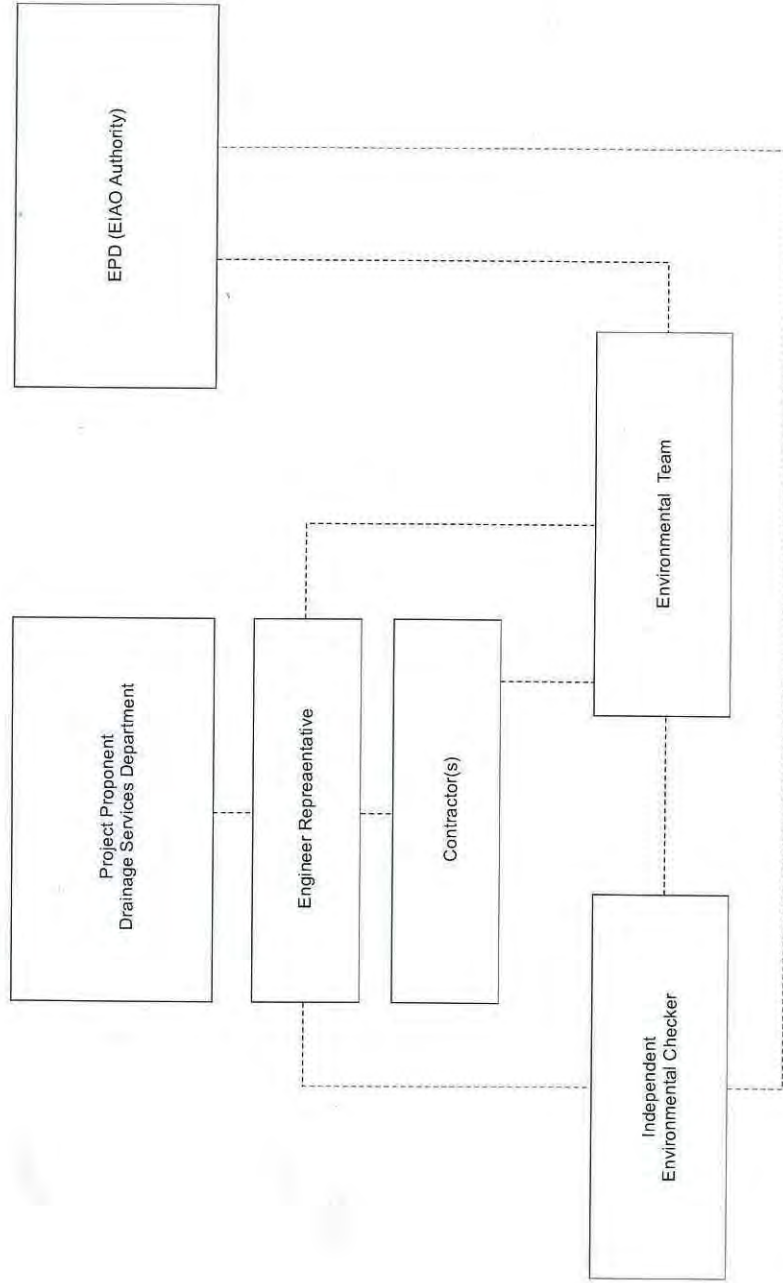
drawn to implementation of the construction noise mitigation measures during noisy construction works.

ANNEX A

LOCATION PLAN FOR THE WORKS

ANNEX B

***ENVIRONMENTAL MANAGEMENT ORGANIZATION AND
COMMUNICATION LINES
AND
24-HOUR HOTLINE***



Key
- - - - - Line of Communication

EM&A Organisation Chart

Contact Details of Key Personnel

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
DSD	Project Proponent / Employer	Mr. Eric Y. M. Cheng	2594-7341	2827-8700
Environ	Independent Environmental Checker	Mr. Roger W. K. Leung	3465 2888	3465 2899
CHCC	Project Manager	Mr. Raymond Yau	2403 1165	2403 1165
SHCC	Site Agent	Mr. Elvin Lam	2640 9286	2640 9286
AUES	Environmental Team Leader	Mr. T. W. Tam	2959-6059	2959-6079
AUES	Environmental Consultant	Miss Nicola Hon	2959-6059	2959-6079
AUES	Environmental Team Supervisor	Mr. Ben Tam	2959-6059	2959-6079

24-Hour Hotline Telephone Number for the Public to Make Enquiries

24-Hour Hotline: 6770 3827
Contact Person: Mr. Mocha Mok

Legends:

DSD (Project Proponent / Engineer) – Drainage Services Department

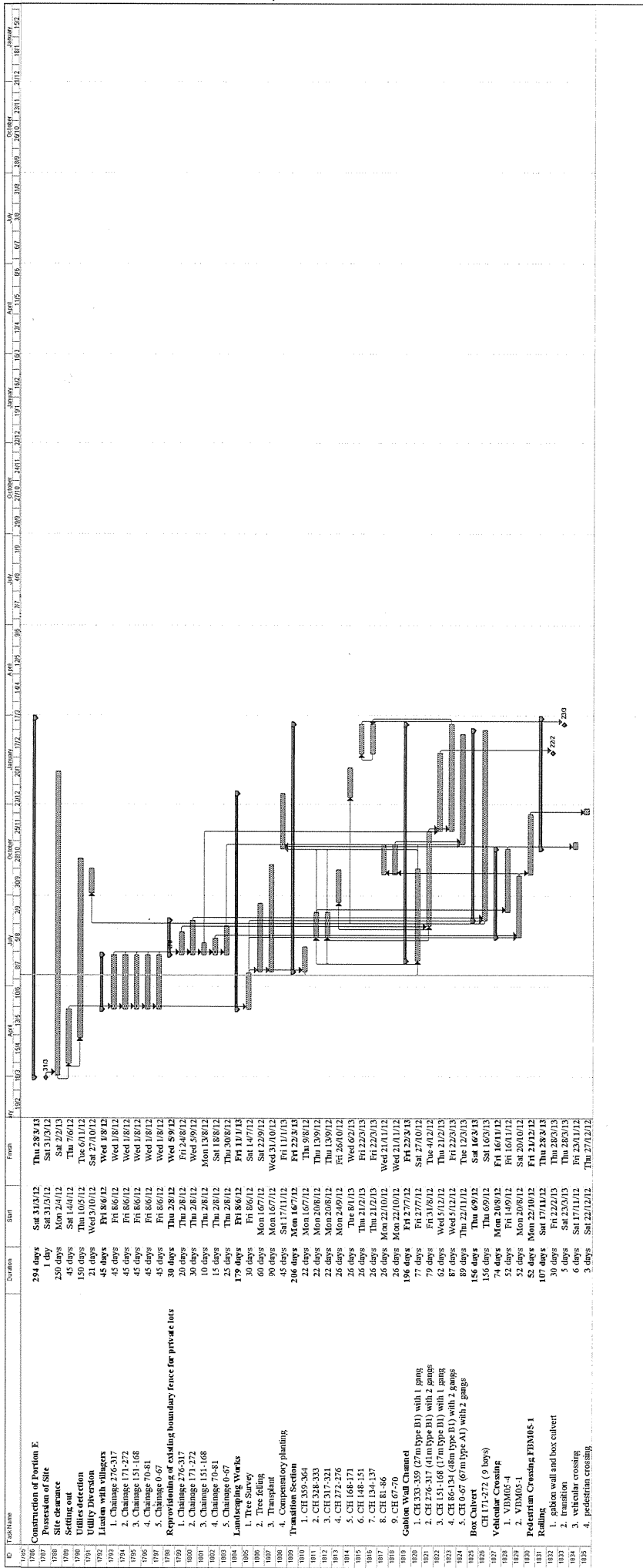
SHCC (Main Contractor) – Sang Hing Civil Constructors Co., Ltd

Environ (IEC) – Environ Hong Kong Limited

AUES (ET) – Action-United Environmental Services & Consulting

ANNEX C

CONSTRUCTION PROGRAM



ID	Task Name	Duration	Start	Finish
1786	Construction of Portion E	294 days	Sat 13/1/82	Thu 28/3/85
1787	Possession of Site	1 day	Sat 13/1/82	Sat 13/1/82
1788	Site clearance	250 days	Mon 2/4/82	Sat 2/2/83
1789	Utilities detection	45 days	Sat 14/4/82	Thu 7/6/82
1790	Utility diversion	150 days	Thu 10/5/82	Thu 6/11/82
1791	Utility diversion	21 days	Wed 3/10/82	Sat 27/10/82
1792	Utility diversion	45 days	Fri 8/6/82	Wed 1/8/82
1793	Chainage 276-317	45 days	Fri 8/6/82	Wed 1/8/82
1794	Chainage 151-168	45 days	Fri 8/6/82	Wed 1/8/82
1795	Chainage 70-81	45 days	Fri 8/6/82	Wed 1/8/82
1796	Chainage 151-168	45 days	Fri 8/6/82	Wed 1/8/82
1797	Chainage 70-81	45 days	Fri 8/6/82	Wed 1/8/82
1798	Chainage 276-317	30 days	Thu 2/8/82	Wed 4/9/82
1799	Chainage 151-168	30 days	Thu 2/8/82	Wed 4/9/82
1800	Chainage 70-81	30 days	Thu 2/8/82	Wed 4/9/82
1801	Chainage 151-168	10 days	Thu 2/8/82	Mon 13/8/82
1802	Chainage 70-81	15 days	Thu 2/8/82	Sat 18/8/82
1803	Chainage 0-67	25 days	Thu 2/8/82	Thu 30/8/82
1804	Landscaping Works	179 days	Fri 8/6/82	Fri 11/1/83
1805	The Survey	30 days	Fri 8/6/82	Sat 14/7/82
1806	The Editing	60 days	Mon 16/7/82	Sat 22/9/82
1807	Transplant	90 days	Mon 16/7/82	Wed 3/1/00/82
1808	Transition Season	42 days	Sat 17/1/82	Fri 11/1/83
1809	Vegetation planting	26 days	Mon 16/7/82	Thu 9/8/82
1810	CH 329-326	22 days	Mon 20/8/82	Thu 13/9/82
1811	CH 328-333	22 days	Mon 20/8/82	Thu 13/9/82
1812	CH 317-321	26 days	Mon 20/8/82	Fri 26/10/82
1813	CH 272-276	26 days	Mon 20/8/82	Fri 26/10/82
1814	CH 168-171	26 days	Thu 8/1/83	Wed 6/2/83
1815	CH 148-151	26 days	Thu 21/2/83	Fri 22/2/83
1816	CH 134-137	26 days	Thu 21/2/83	Fri 22/2/83
1817	CH 81-86	26 days	Mon 22/10/82	Wed 21/11/82
1818	CH 67-70	26 days	Mon 22/10/82	Wed 21/11/82
1819	Gullion Wall Channel	196 days	Fri 27/7/82	Fri 22/8/83
1820	CH 276-317 (27m type B1) with 1 gangs	77 days	Fri 27/7/82	Fri 22/8/83
1821	CH 276-317 (27m type B1) with 2 gangs	77 days	Fri 27/7/82	Fri 22/8/83
1822	CH 151-168 (67m type B1) with 1 gangs	65 days	Wed 17/8/82	Thu 4/12/82
1823	CH 151-168 (67m type B1) with 2 gangs	65 days	Wed 17/8/82	Thu 4/12/82
1824	CH 0-67 (67m type A1) with 2 gangs	89 days	Thu 22/11/82	Thu 12/2/83
1825	Box Culvert	156 days	Thu 6/9/82	Sat 16/3/83
1826	CH 171-272 (9 bays)	156 days	Thu 6/9/82	Sat 16/3/83
1827	Vehicular Crossing	74 days	Mon 20/8/82	Fri 16/11/82
1828	VBM05-4	52 days	Fri 14/9/82	Fri 16/11/82
1829	VBM05-1	52 days	Mon 20/8/82	Sat 20/10/82
1830	Pedestrian Crossing-FBM05-1	52 days	Mon 20/8/82	Sat 20/10/82
1831	pavon wall and box culvert	107 days	Sat 17/11/82	Thu 28/8/83
1832	station	30 days	Fri 22/2/83	Thu 28/3/83
1833	vehicular crossing	2 days	Sat 23/3/83	Thu 28/3/83
1834	pedestrian crossing	6 days	Sat 23/3/83	Thu 28/3/83
1835	pedestrian crossing	2 days	Sat 23/3/83	Thu 28/3/83

Project No. 1207/2017 Date 12/07/2017

Task SHT

Milestone Summary

Project Summary External Milestone Inactive Milestone

Project Summary External Milestone Inactive Milestone

Manual Summary Manual Task

Manual Summary Risk Manual Summary Risk

Final Summary Critical

Close of SHT Progress

Double

Page 21

ID	Task Name	Duration	Start	Finish	2013	2014	2015
					Jan	Feb	Mar
198	5.2.1 Base slab	63 days	15/2/2013	4/5/2013			
199	5.2.2 Wall	80 days	6/5/2013	9/8/2013			
200	5.3.3 Fill behind wall	25 days	10/8/2013	7/9/2013			
201	6. XPM fence and gates	236 days	10/8/2012	26/5/2014			
202	7. Landscaping	606 days	13/9/2012	26/9/2014			
203	8. Security system by EMSD	103 days	27/5/2014	26/9/2014			
204							
205	Construction of Portion D	294 days	31/3/2012	28/3/2013			
206	Possession of Site	1 day	31/3/2012	31/3/2012			
207	Settling out and site clearance	24 days	31/3/2012	4/5/2012			
208	Traffic diversion	45 days	2/4/2012	30/5/2012			
209	Box culvert	155 days	31/5/2012	3/12/2012			
210	Reinstate existing road	6 days	26/7/2012	1/8/2012			
211	Rectangular Channel	213 days	5/5/2012	1/11/2013			
212	Protect existing structure near CH 54	120 days	2/4/2012	28/8/2012			
213	Inlet apron	32 days	18/1/2013	27/2/2013			
214	Reinstate existing structure	45 days	4/12/2012	28/1/2013			
215	Type 2 railing	25 days	28/2/2013	28/3/2013			
216							
217	Construction of Portion E	323 days	31/3/2012	7/5/2013			
218	Possession of Site	1 day	31/3/2012	31/3/2012			
219	Site clearance	30 days	31/3/2012	11/5/2012			
220	Settling out	15 days	12/5/2012	29/5/2012			
221	Utilities detection	7 days	30/5/2012	6/6/2012			
222	Utility Diversion	20 days	14/9/2012	9/10/2012			
223	Liaison with villagers	45 days	30/5/2012	23/7/2012			
224	Reprovisioning of existing boundary fence for private lots	30 days	24/7/2012	2/8/2012			
225	Landscaping Works	271 days	30/5/2012	27/4/2013			
226	1. Tree Survey	30 days	30/5/2012	5/7/2012			
227	2. Tree felling	60 days	6/7/2012	13/9/2012			
228	3. Transplant	90 days	6/7/2012	20/10/2012			
229	4. Compensatory planting	89 days	7/11/2012	27/4/2013			
230	Transition Section	226 days	6/7/2012	10/4/2013			
231	Gabon Wall Channel	162 days	14/9/2012	5/4/2013			
232	Box Culvert	172 days	14/9/2012	1/4/2013			
233	Vehicular Crossings	92 days	14/9/2012	5/1/2013			
234	Pedestrian Crossings	52 days	7/11/2012	11/3/2013			
235	Parapet	34 days	12/3/2013	24/4/2013			
236	Type 2 railing	16 days	18/4/2013	7/5/2013			

ANNEX D

SUMMARY OF STATUS OF ENVIRONMENTAL LICENSES AND PERMIT

Permit Type	Licenses / Permit No.	Date of Issuance by EPD	Expiry Date	Concerned Location	Status
Environmental Permit	EP-277/2007	09 Jul 2007	N.A.	Man Uk Pin	EP-277/2007/A to supersede EP-277/2007
	EP-277/2007/A	01 Dec 2009			
Notification pursuant to Section 3(1) of the Air Pollution Control Ordinance (APCO) (Construction Dust) Regulation	N.A.	N.A.	N.A.	Contract Area (Lin Ma Hang, Man Uk Pin, Ma Wat Wai and Ping Yuen River)	Valid
Account for Disposal of Construction Waste	7015003	07 May 2012	N.A.	Contract Area (Lin Ma Hang, Man Uk Pin, Ma Wat Wai and Ping Yuen River)	Valid
Application for Wastewater Discharge License under Water Pollution Control Ordinance (WPCO)	W5/11363/1	29 August 2012	31 Aug 2017	Man Uk Pin	Valid
Register as a Chemical Waste Producer under Waste Disposal Ordinance	5123-642-S3565-03	3 October 2012	N.A.	Contract Area (Lin Ma Hang, Man Uk Pin, Ma Wat Wai and Ping Yuen River)	Valid

ANNEX E

ENVIRONMENTAL MONITORING LOCATIONS

Location Plan for Environmental Monitoring Station

Legend:



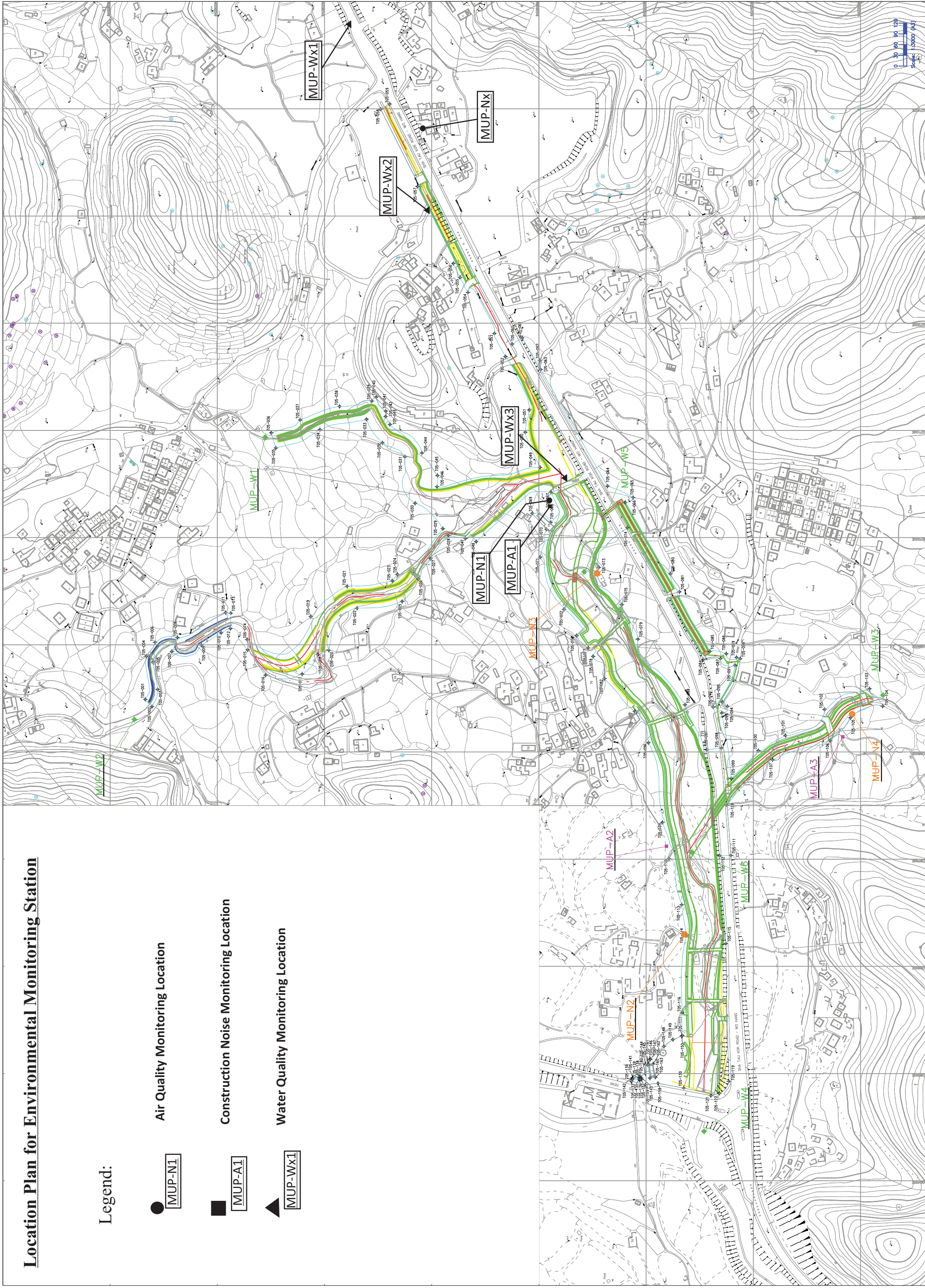
Air Quality Monitoring Location



Construction Noise Monitoring Location



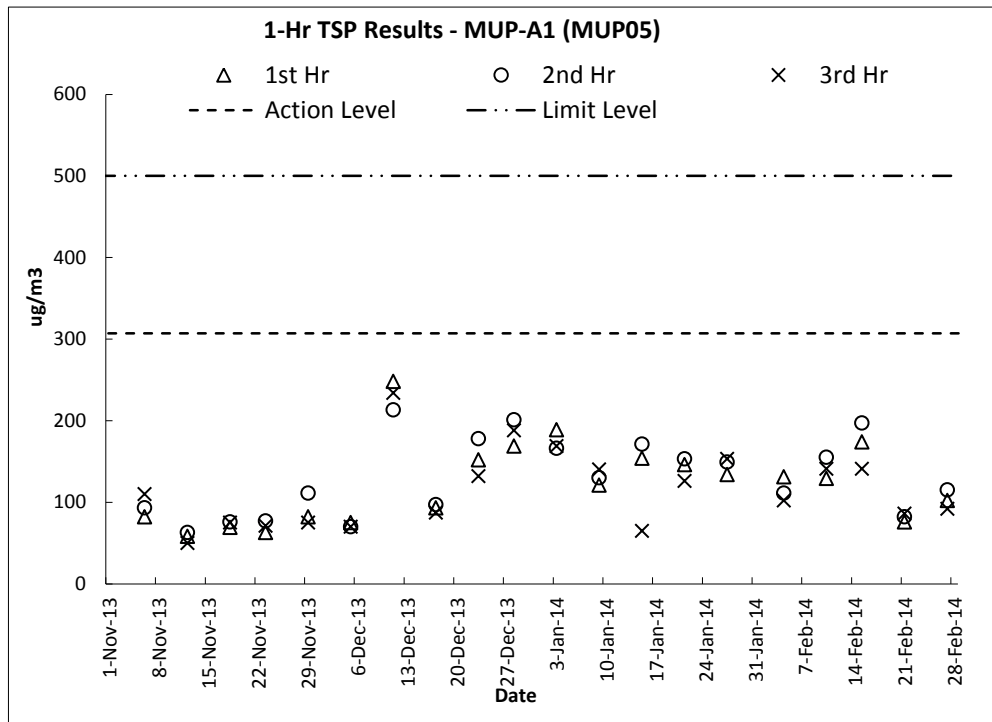
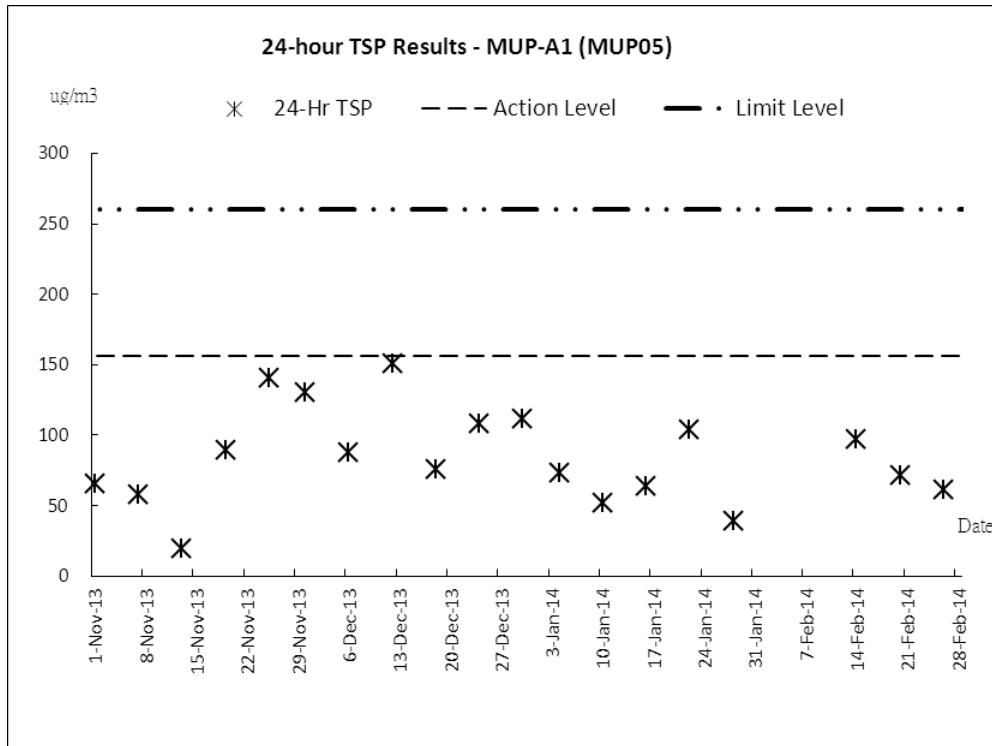
Water Quality Monitoring Location



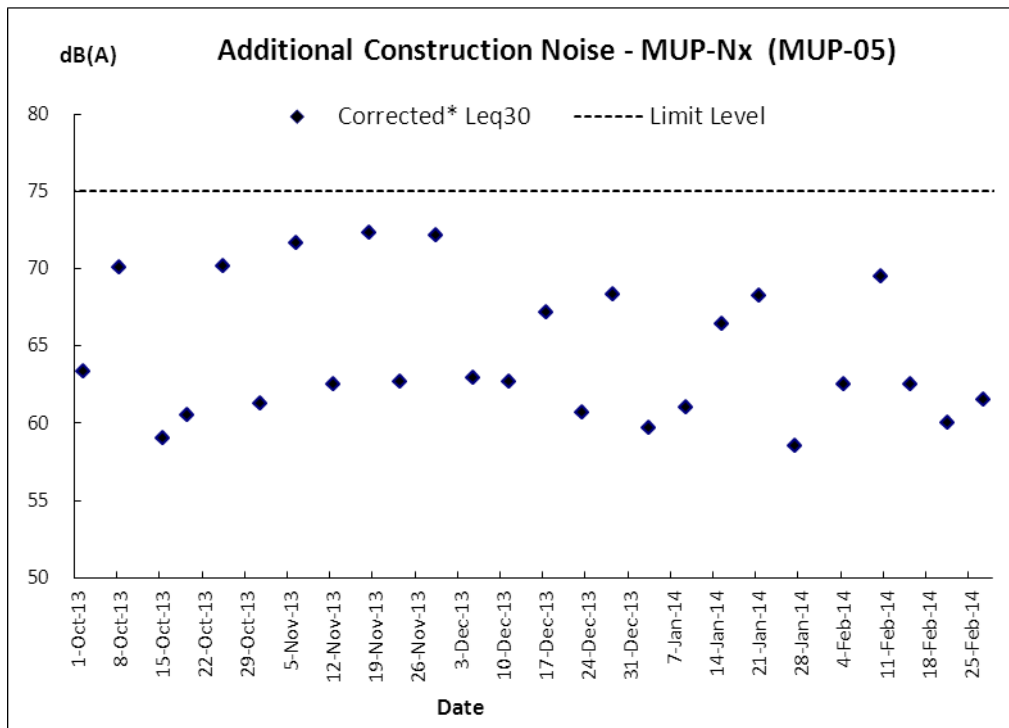
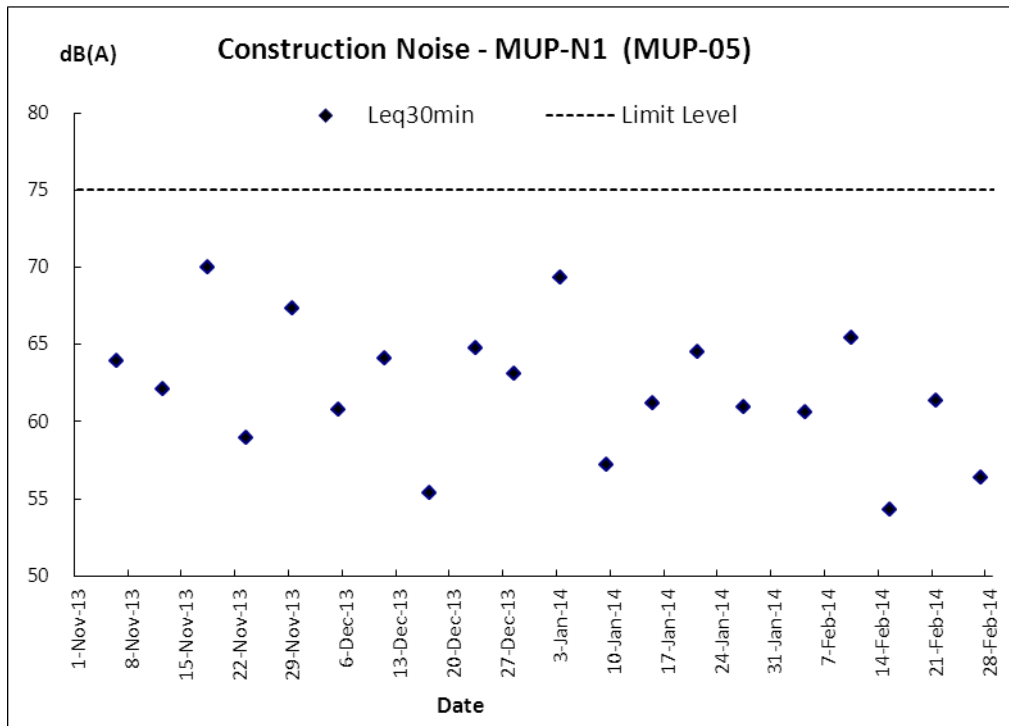
ANNEX F

GRAPHICAL PLOTS OF THE TRENDS OF MONITORED PARAMETERS

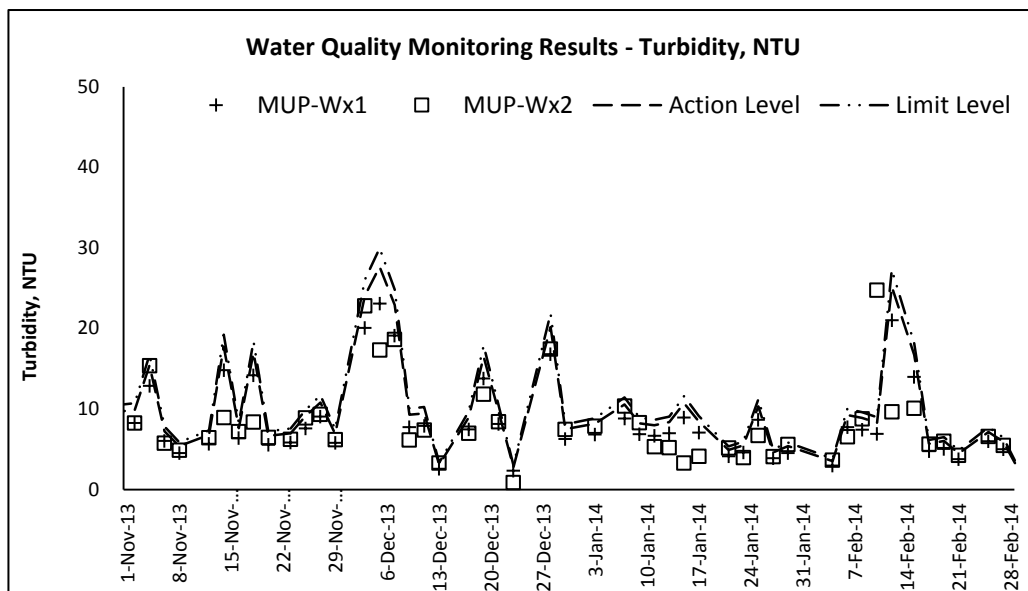
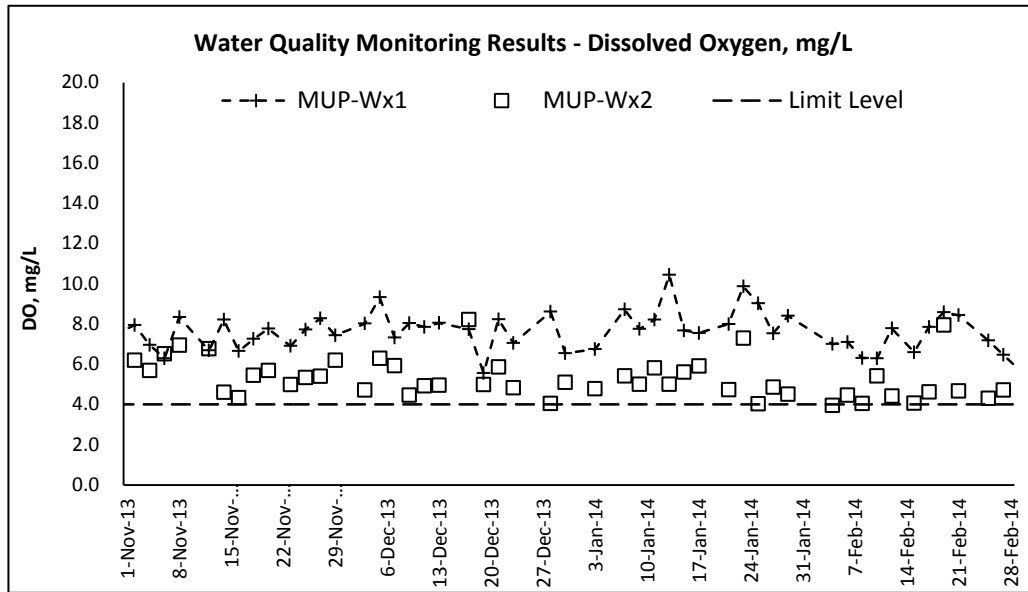
Air Quality



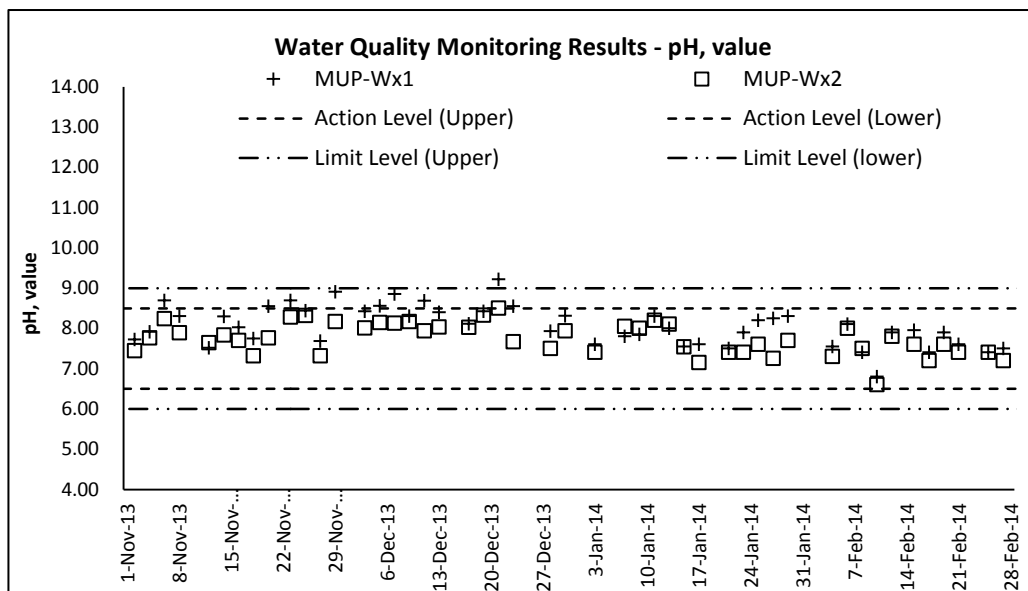
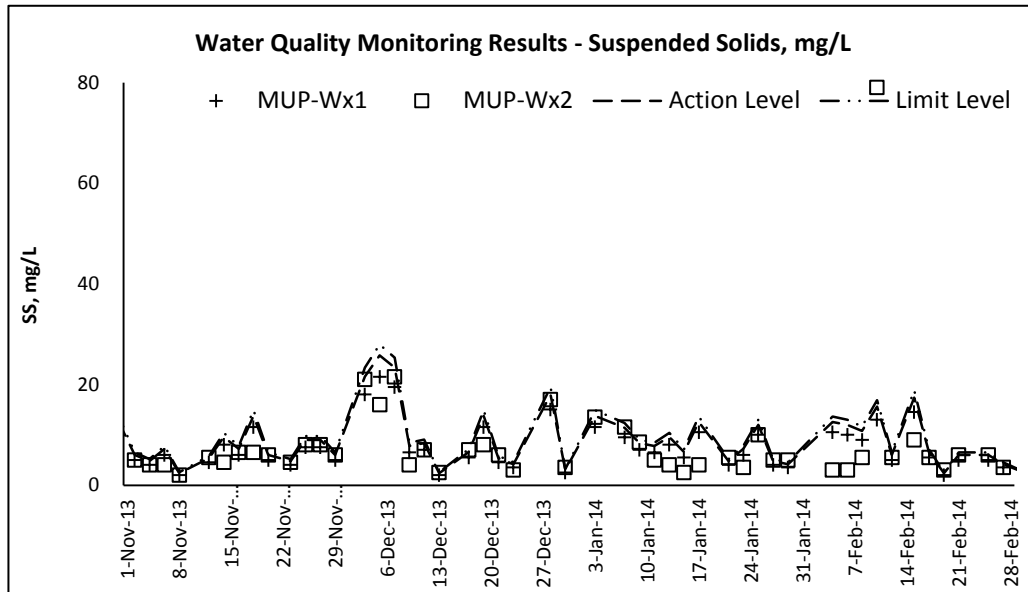
Construction Noise



Water Quality



Water Quality



ANNEX G

MONTHLY SUMMARY OF WASTE FLOW TABLE

Monthly Summary Waste Flow Table

Name of Department: DSD

Contract No.: DC/2011/06

Monthly Summary Waste Flow Table for 2013

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non 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 Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan-13	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035
Feb-13	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
Mar-13	0.003	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041
Apr-13	0.003	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.041
May-13	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035
Jun-13	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037
Jul-13	0.003	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036
Aug-13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000
Sep-13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct-13	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
Nov-13	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.012
Dec-13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.040	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.564

Notes :

- (1) Note Used.
- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Sites.
- (3) Plastics refer to plastic 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.

Monthly Summary Waste Flow Table

Name of Department: DSD

Contract No.: DC/2011/06

Monthly Summary Waste Flow Table for 2014

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non 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 Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan-14	0.000	0.000	0.000	14.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb-14	0.000	0.000	0.000	12.912	0.000	0.000	0.000	0.000	0.000	0.000	0.005
Mar-14											
Apr-14											
May-14											
Jun-14											
Jul-14											
Aug-14											
Sep-14											
Oct-14											
Nov-14											
Dec-14											
Total	0.000	0.000	0.000	27.160	0.000	0.000	0.000	0.000	0.000	0.000	0.005

Notes :

(1) Note Used.

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

(3) Plastics refer to plastic 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.

Summary Table for Work Processes or Activities Requiring Timber for Temporary Works

Contract No.: DC/2011/06

Contract Title: *Reprovisioning of Boundary Patrol Road and Associated Security Facilities between Ping Yuen River and Pak Fu Shan and Drainage Works in North District*

Report Period: Feb-14

Item No	Description of Works Process or Activity [see note (a) below]	Justifications for Using Timber in Temporary Construction Works	Est. Quantities of Timber Used (m ³)	Actual Quantities used (m ³)	Remarks
1	Transition formwork & falsework (Portion A,B,E)	Temporary formwork & falsework design	10	9	
2	Transition formwork & falsework (Portion A,B,C)	Temporary formwork & falsework design	25	18	
3	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	52	40	
4	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	77	72	
5	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	102	86	
6	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	115	103	
7	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	121	112	
8	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	145	139	

Notes

(a) The Contractor shall list out all the work items requiring timber for use in temporary construction works. Several minor work items may be grouped into one for ease of updating.

(b) The summary table shall be submitted to the Engineer's Representative monthly together with the Waste Flow Table for review and monitoring

Summary Table for Work Processes or Activities Requiring Timber for Temporary Works

Contract No.: DC/2011/06

Contract Title: *Reprovisioning of Boundary Patrol Road and Associated Security Facilities between Ping Yuen River and Pak Fu Shan and Drainage Works in North District*

Report Period: Feb-14

Item No	Description of Works Process or Activity [see note (a) below]	Justifications for Using Timber in Temporary Construction Works	Est. Quantities of Timber Used (m ³)	Actual Quantities used (m ³)	Remarks
9	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	154	151	
10	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	156	155	
11	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	157	156	
12	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	160	157	
13	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	160	157	
14	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	171	166	
15	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	178	173	
16	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	191	186	

Notes

(a) The Contractor shall list out all the work items requiring timber for use in temporary construction works. Several minor work items may be grouped into one for ease of updating.

(b) The summary table shall be submitted to the Engineer's Representative monthly together with the Waste Flow Table for review and monitoring

Summary Table for Work Processes or Activities Requiring Timber for Temporary Works

Contract No.: DC/2011/06

Contract Title: *Reprovisioning of Boundary Patrol Road and Associated Security Facilities between Ping Yuen River and Pak Fu Shan and Drainage Works in North District*

Report Period: Feb-14

Item No	Description of Works Process or Activity [see note (a) below]	Justifications for Using Timber in Temporary Construction Works	Est. Quantities of Timber Used (m ³)	Actual Quantities used (m ³)	Remarks
17	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	200	194	
18	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	205	201	
19	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	215	212	

Notes

(a) The Contractor shall list out all the work items requiring timber for use in temporary construction works. Several minor work items may be grouped into one for ease of updating.

(b) The summary table shall be submitted to the Engineer's Representative monthly together with the Waste Flow Table for review and monitoring