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 SIXTH QUARTERLY EM&A SUMMARY REPORT FOR DRAINAGE WORKS UNDER EP-277/2007/A (SEPTEMBER – NOVEMBER 2013)

PREPARED FOR SANG HING CIVIL CONSTRUCTORS CO., LTD.

Quality Index

Date	Reference No.	Prepared By	Approval By		
31 December 2013	TCS00599/12/600/R0153	Ben Tam Environmental Consultant	T. W. Tam Environmental Team Leader		

Version	Date	Description
0	31 December 2013	First submission.

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_0221L.13

9 January 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 Sixth Quarterly EM&A Summary Report for Drainage Works under EP-277/2007/A (September – November 2013)

Reference is made to the Environmental Team's submission of the captioned report (Version 1) dated 31 December 2013 received through E-mail on 31 December 2013 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,

hopen.

Roger Leung Independent Environmental Checker

c.c. DSD Mr. Eric Cheng SHCCCL Mr. Raymond W.M. Yau by fax: 2827 8700 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 fifth quarterly EM&A summary report for Drainage Works under EP-277/2007/A, covering the construction period of the Works from 1 June to 31August 2013.
- 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

<u>Annex</u>

- 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 – Reprovisioning 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) Reprovisioning 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 sixth quarterly EM&A summary report (herein after "this Report") for Drainage Works under EP-277/2007/A, covering the construction period from 1 September to 30 November 2013 (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 Con	struction Activities during the Reporting Period at Portion E (Man Uk Pin)	
September 2013	• Establishment of Transplanted Tree 1110/	
October 2013	 Construction of gabion wall at CH317 Establishment of Transplanted Tree T1107 Laying of Watermain Pipe and associated T-junction Liaise with lot owner for the access Construction of Inlet Transition at the upstream Relocation of Gate near CH275 	
November 2013	 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 	



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 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

I 					
Aspect		Parameters			
A in Ouality	• 1-Hour Total Suspended Particulate (hereinafter '1-Hr TSP'); and				
Air Quality	• 24-Hour Total Suspended	• 24-Hour Total Suspended Particulate (hereinafter '24-Hr TSP').			
	• A-weighted equivalent	continuous sound pressure level (30min) (hereinafter			
Construction	'Leq(30min)' during the	normal working hours; and			
Noise	• A-weighted equivalent	• A-weighted equivalent continuous sound pressure level (5min) (hereinafter			
	'Leq(5min)' for construction work during the restricted hours.				
Watar	• In Situ Measurement: Temperature, Dissolved Oxygen, Dissolved Oxygen				
Water		Saturation, pH value, Water Depth & Turbidity			
Quality	 Laboratory Analysis 	boratory Analysis Suspended Solids (hereinafter 'SS'),			
	• The stream conditions monitoring (in-situ measurements of DO, pH and				
	turbidity; laboratory testing of SS);				
Ecology	• Riparian vegetation along the banks of channel monitoring;				
	• General site audit to ensu	ire 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.

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 Sixth Quarterly EM&A Summary Report for Drainage Works under EP-277/2007/A



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

 Table 2-3
 Summary of Additional Environmental Monitoring Locations

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 (µg /m ³)		Limit Level (µg/m ³)	
Monitoring Station	1-Hour TSP 24-Hour TSP		1-Hour TSP	24-Hour TSP
MUP-A1	307 156		500	260

Table 2-5Action 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 2-6Action 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.

EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

3.03 No exceedances of environmental quality performance limits were registered during the Reporting Period. Neither Notice Of Exceedances of the environmental quality performance limits (hereinafter "NOE") nor the associated remediation actions were required during the Reporting Period.

CONCLUSIONS

3.04 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.

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 Sixth Quarterly EM&A Summary Report for Drainage Works under EP-277/2007/A



3.05 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*.

-				
	Frequency of Occurrence			
Environmental Issue	From the project commencement to last reporting month	This reporting Period		
	December 2012 – August 2013	September to November 2013		
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		

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

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



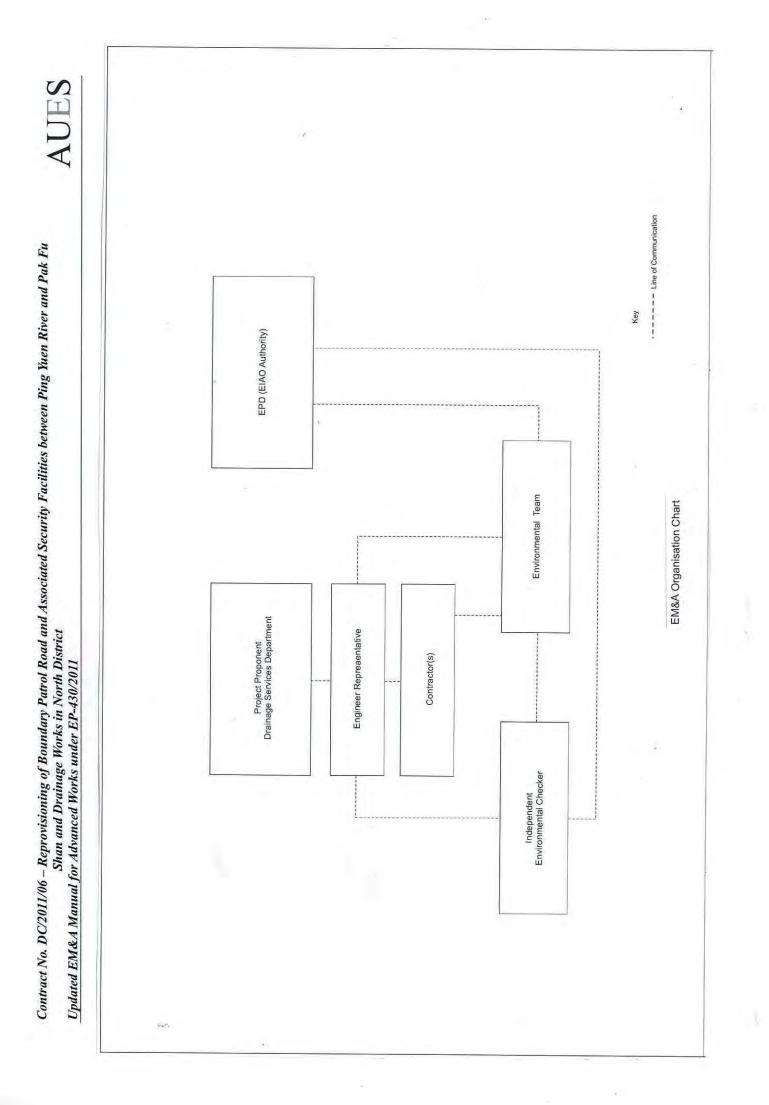


ANNEX B

ENVIRONMENTAL MANAGEMENT ORGANIZATION AND COMMUNICATION LINES

AND
24-HOUR HOTLINE

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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

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1995 1986 Construction of Portion E	Duration 294 days	Start Sat 31/3/12	Finth Arr 1 Thu 28/3/13	192	2012. 191 162. 193 134 145	6 1 6/7 1 3/9 1 3//6 28/9 26/10 1	er Januar 2311 2112 161 152
Possession of Site Site clearance	1 day 250 dame	Sat 31/3/12	Sat 31/3/12				
Setting out		Sat 14/4/12	Thu 7/6/12				
Utilies detection Utility Diversion	150 days	Thu 10/5/12 Wed 3/10/12	Tue 6/11/12	ar Dis Kollini Ar Dis			
Liasten with villagers		Fri 8/6/12	Wed 1/8/12				
1. Chainage 276-317	45 days	Fri 8/6/12	Wed 1/8/12	Wed 1/8/12			
 Chainage 1/1-2/2 Chainage 151-168 	45 days	Fri 8/6/12	Wed 1/8/12 Wed 1/8/12	Wed 1/812 Parameters and Parameters an			
4. Chainage 70-81	45 days	Fri 8/6/12	Wed 1/8/12	Wed 1/8/12			
5. Châinage 0.67		Fri 8/6/12	Wed 1/8/12	Wed 1/8/12			
terret oversetung or examing boundary rence for private fors 1. Chainage 276-317	20 days 20 days	Thu 2/8/12	Wed 5/9/12 Fri 24/8/12				
2. Chainage 171-272	30 days	Thu 2/8/12	Wed 5/9/12				
3. Chainage 151-168	10 days	Tlu: 2/8/12	Mon 13/8/12				
4. Chainage 70-81	15 days	Thu 2/8/12	Sat 18/8/12				
5. Crianage 0-67 Landscaming Works	2.5 days	Thu 2/8/12 The starts	Thu 30/8/12				
1. Tree Survey	30 days	Fri 8/6/12	Sat 14/7/12				
2. Tree felling		Mon 16/7/12	Sat 22/9/12	Sat 229/12			
3. Transplant			Wed 31/10/12				
4. Compensatory planting		Sat 17/11/12	Fri 11/1/13	Fri 11/13			
1. CH 359-364	22 days N	Mon 16/7/12	Thi 22/3/13				
2. CH 328-333		Mon 20/8/12	Thu 13/9/12				
3. CH 317-321		Mon 20/8/12	Thu 13/9/12	THU 139/12			
4. CH 2/2-2/0 5. CH 168-171		The 8/1/13	Vad 6/2/12				
6. CH 148-151		Thu 21/2/13	Fri 22/3/13				
7. CH 134-137 8. CH 81 84	26 days		Fri 22/3/13				
0. CH 67-70		Mon 22/10/12	Wed 21/11/12				
Gabion Wall Channel			FH 22/3/13				
1. CH 333-359 (27m type B1) with 1 gang		Fri 27/7/12	Sat 27/10/12				
2. CH 276-317 (41m type B1) with 2 gangs		Fri 31/8/12	Tue 4/12/12	Tue 4/12/12			
3. CTU 25.124 (40m type BL) Will I gang	52 days	Wed 5/12/12	Thu 21/2/13				
5. CH 0.67 (67m type A1) with 2 gauge		Thu 22/11/12	Tue 12/3/13				
Box Culvert		Thu 6/9/12	Saf 16/3/13				
CH [71-272 (9 bays)			Sat 16/3/13	Sat 16(3/13)			
V enteutar Crossing			Fri 16/11/12	22.10.1/12			
2. VBM05-1	52 days	Mon 20/8/12	FII 10/11/12				
Pedestrian Crossing FIBM05-1	-		Fri 21/12/12				
Railing	107 days S	Sat 17/11/12	Thu 28/3/13				
1. gabion wall and box culvert		Fri 22/2/13	Thu 28/3/13	\$ 133			
2. Iransition		Sat 23/3/13	Thu 28/3/13				
 velacular crossing modestrian crossing 	6 days S	Sat 17/11/12	Fri 23/11/12				
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Page 3

Summany

Split

progress

Project No: DC/2011/06 Master Programme: MP03 Date: 15-11-2012

	Lask Name	Duration	IPIC
198	5.2.1 Base slab	63 days	15/2/201
199	5.2.2 Wall	80 days	6/5/201
200	5.3.3 Fill behind wall	25 days	10/8/201
201	6. XPM fence and gates	236 days	10/8/201
202	7. Landscaping	606 days	13/9/201:
203	8. Security system by EMSD	103 days	27/5/201
204			
	Construction of Portion D	294 days	31/3/201
206	Possession of Site	1 day	31/3/201
207	Setting out and site clearance	24 days	31/3/201
208	Traffic diversion	45 days	2/4/201
209	Box culvert	155 days	31/5/201:
210	Reinstate existing road	6 days	26/7/201
211	Rectangular Channel	213 days	5/5/201:
212	Protect existing structure near CH 54	120 days	2/4/201
213	Inlet apron	32 days	18/1/201:
214	Reinstate existing structure	45 days	4/12/201:
215	Type 2 railing	25 days	28/2/201
	Construction of Portion E	323 days	31/3/201
218	Possession of Site	1 day	31/3/201
219	Site clearance	30 days	31/3/201
220	Setting out	15 days	12/5/201:
57	Utilies detection	7 days	30/5/201:
222	Utility Diversion	20 days	14/9/201:
223	Liasion with villagers	45 days	30/5/201
224	Reprovisioning of existing boundary fence for private lots	30 days	24/7/201:
225	Landscaping Works	271 days	30/5/201
226	1. Tree Survey	30 days	30/5/201:
227	2. Tree felling	60 days	6/7/201:
228	3. Transplant	90 days	6/7/201:
229	 Compensatory planting 	89 days	7/1/201
230	Transition Section	226 days	6/7/201
231	Gabion Wall Channel	162 days	14/9/201
232	Box Culvert	172 days	14/9/201
233	Vehicular Crossings	92 days	14/9/201
234	Pedestrian Crossing FBM05-1 (S7)	52 days	7/1/201
235	Parapet	34 days	12/3/201
236	Tvne 2 railing	16 davs	18/4/201



ANNEX D

SUMMARY OF STATUS OF ENVIRONMENTAL LICENSES AND PERMIT

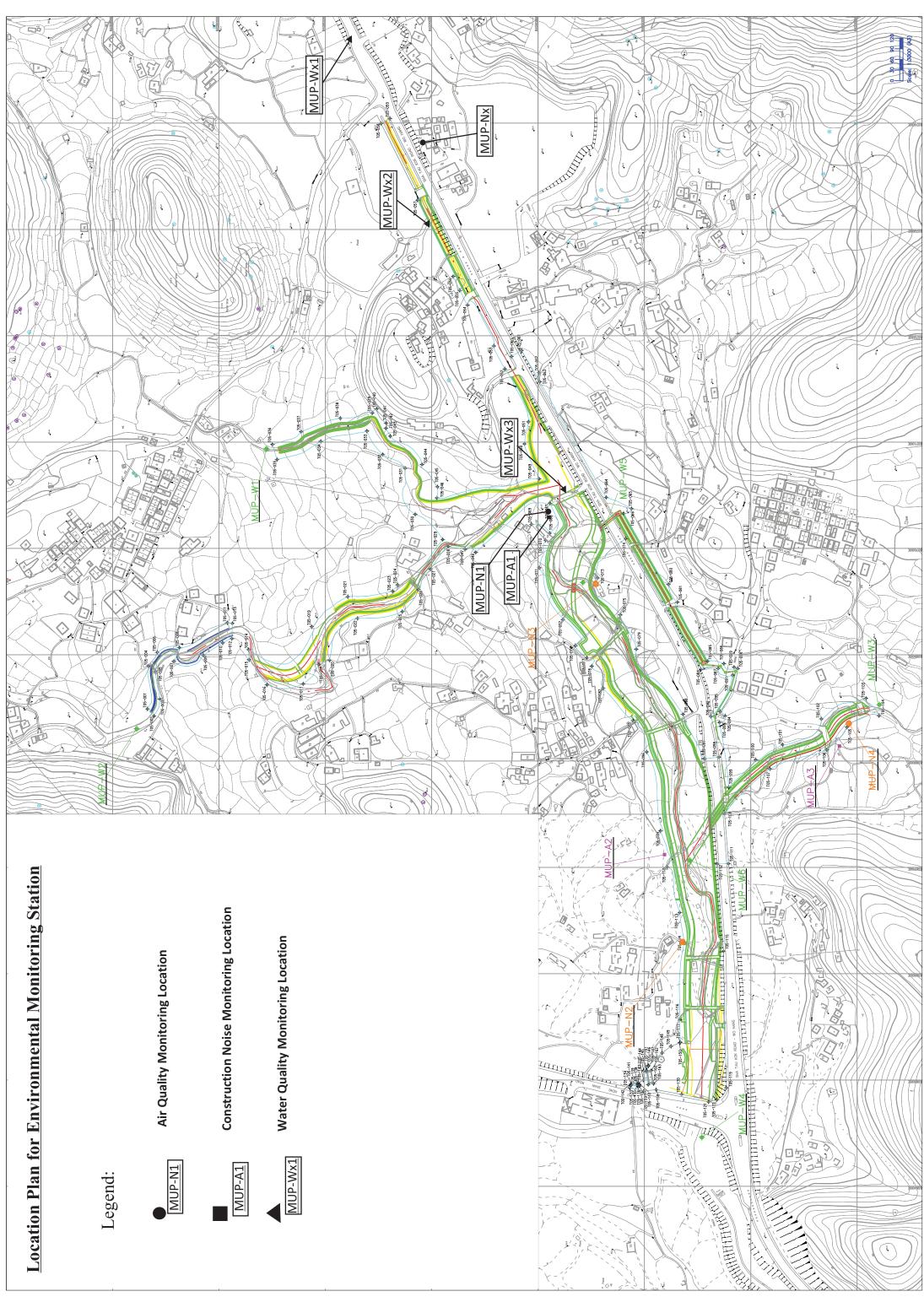


Permit Type	Licenses / Permit No.	Date of Issuance by EPD	Expiry Date	Concerned Location	Status
	EP-277/2007	09 Jul 2007		Man Lila D'a	EP-277/2007/A to
Environmental Permit	EP-277/2007/A	01 Dec 2009	N.A	Man Uk Pin	supersede EP- 277/2007
Notification pursuant to Section 3(1) of the Air Pollution Control Ordinance (APCO) (Construction Dust) Regulation	N.A.	Pending	N.A.	Contract Area (Lin Ma Hang, Man Uk Pin, Ma Wat Wai and Ping Yuen River)	The Notification was submitted to EPD on 28 May 2012
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



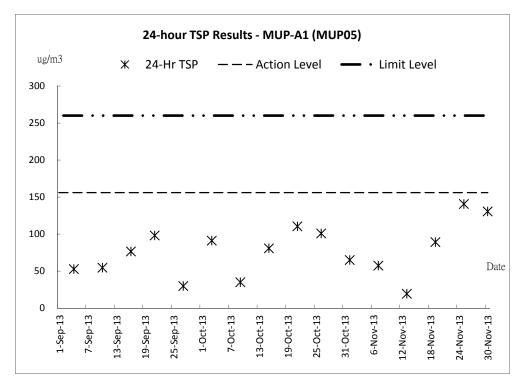


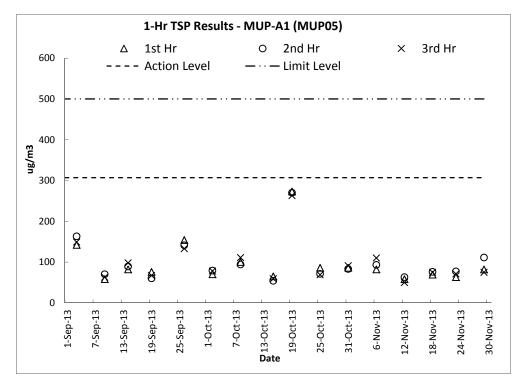
ANNEX F

GRAPHICAL PLOTS OF THE TRENDS OF MONITORED PARAMETERS



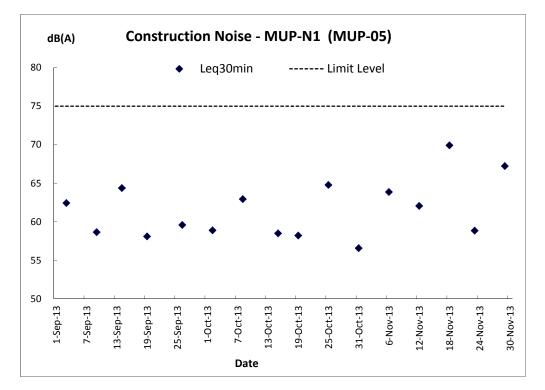
Air Quality

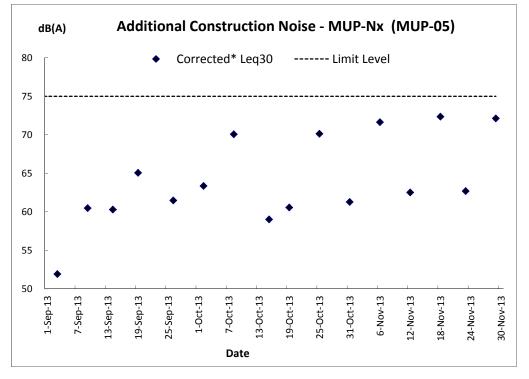






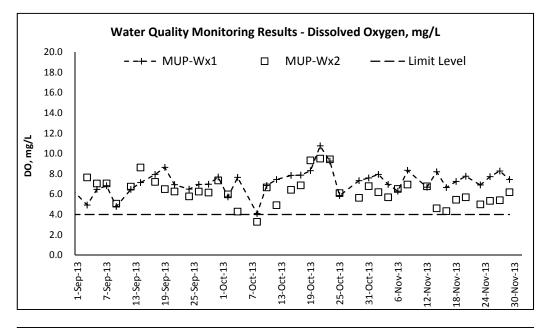
Construction Noise

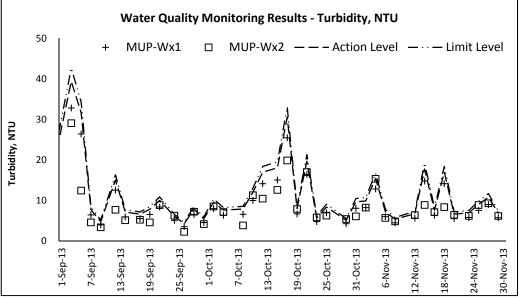




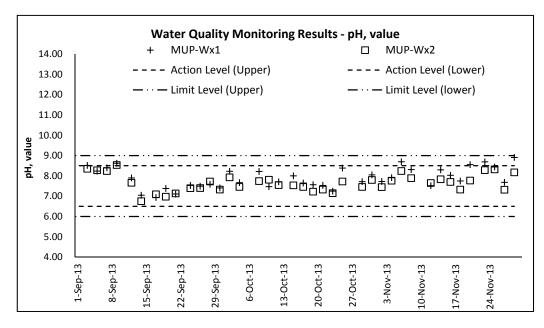


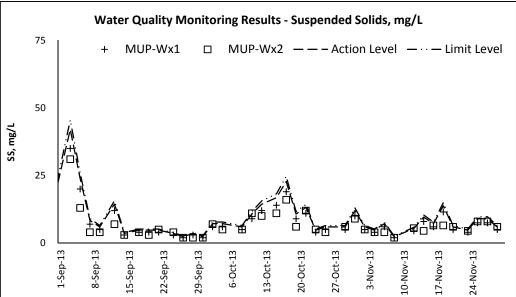
Water Quality





Water Quality





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ANNEX G

MONTHLY SUMMARY OF WASTE FLOW TABLE

Appendix D

Monthly Summary Waste Flow Table

Name of Department: DSD

Contract No.: <u>DC/2011/06</u>

Monthly Summary Waste Flow Table for 2013

fonthly	Ste Others, e.g. general refuse	(in '000m ³)	0.035	0.015	0.041	0.041	0.035	0.037	0.036	0.000	0.000	0.003	0.012				0.564
tes Generated N	Chemical Waste	(in '000kg)	0.000	0.000	0,000	0.020	0.00	0.00	0.000	0.016	0.000	0.000	0.025				0.061
Non C&D Was	Plastics (see Note 3)	(in '000kg)	0.000	000.0	0.000	0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		-		0.000
Actual Quantities of Non C&D Wastes Generated Monthly	Paper/ cardboard packaging	(im '000kg)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				0.000
	Metals	(in '000kg)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				0.000
	Imported Fill	(іп '000m ³)	0.000	0.000	0.000	0 000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				0.000
onthly	Disposed as Public Fill	(^т ш000, щ)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				0.000
Actual Quantities of Inert C&D Materials Generated Monthly	Reused in other Projects	(_с ш000, щ)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				0.000
Inert C&D Mate	Reused in the Contract	(_с ш000, щ)	0.002	0.001	0.003	0,003	0.002	0.002	0.003	0.000	0.000	0.000	0.000				0.040
tual Quantities of	Hard Rock and Large Broken Concrete	(证 '000 ^m 3)	0.000	0.000	0.000	0.000	0,000	0.000	0.000	0.000	0.000	0.000	0.000				0.000
Ac	Total Quantity Generated	(in '000m ³)	0.002	100'0	0.003	0.003	0,002	0.002	0.003	0.000	0.000	0.004	0.012				0.040
	Montĥ		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13				Total

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.

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

Appendix F

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 baween Ping Yuen River and Pak Fu Shan and Drainage Works in North District

Report Period: Nov-13

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
	Transition formwork & falsework (Portion A.B.E)	Temperary formwork & falsework design	10	6	
2	Transition formwork & falsework (Portion A.B.C)	Temperary formwork & falsework design	25	18	
3	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	52	40	
4	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	77	72	
Ś	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	102	86	
9	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	115	103	
L	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	121	112	
×	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	145	139	

(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.

Notes

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

Appendix F

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

Contract No.: <u>DC/2011/06</u>

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: Nov-13

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
6	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	154	151	
10	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	156	155	
11	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	157	156	
12	Transition formwork & falsework (Portion A,B,C,E)	Temperary formwork & falsework design	160	157	
13	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	160	157	
14	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	171	166	
15	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	178	173	
16	Transition formwork & falsework (Portion A.B.C.E)	Temperary formwork & falsework design	191	186	
	Total E	Total Estimated Quantity of Timber Used	1974		

(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

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