



**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 NINTH QUARTERLY
EM&A SUMMARY REPORT FOR DRAINAGE
WORKS UNDER EP-277/2007/A
(JUNE 2014 – AUGUST 2014)**

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

Quality Index

Date	Reference No.	Prepared By	Approval By
6 October 2014	TCS00599/12/600/R0295	 Ben Tam Environmental Consultant	 T. W. Tam Environmental Team Leader

Version	Date	Description
0	23 September 2014	First submission.
1	6 October 2014	Amended against IEC's comments on 3 Oct 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_0315L.14

9 October 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
Ninth Quarterly EM&A Summary Report for Drainage Works under EP-
277/2007/A (June 2014 – August 2014)

Reference is made to the Environmental Team's submission of the captioned report (Version 1) dated 6 October 2014 received through E-mail on 6 October 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 ninth quarterly EM&A summary report for Drainage Works under EP-277/2007/A, covering the construction period of the Works from 1 June 2014 to 31 August 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 and construction noise were recorded. However, a total of 26 water quality exceedances occurred in this reporting period, and NOEs were issued to relevant parties. Based on the investigation and consider that the exceedances should not be due to the Project works. Therefore, 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 ninth quarterly EM&A summary report (herein after “this Report”) for Drainage Works under EP-277/2007/A, covering the construction period from 1 June 2014 to 31 August 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)	
June 2014	<ul style="list-style-type: none"> • Establishment of Transplanted Tree T1107 • Liaise with lot owner for the access • Construction of Gabion Block at the upstream • Construction of Box Culvert • Installation of temporary noise barrier • Underground Utilities Detection
July 2014	<ul style="list-style-type: none"> • Establishment of Transplanted Tree T1107 • Liaise with lot owner for the access • Construction of Gabion Block at the upstream • Construction of Box Culvert • Installation of temporary noise barrier • Underground Utilities Detection
August 2014	<ul style="list-style-type: none"> • Establishment of Transplanted Tree T1107 • Liaise with lot owner for the access • Construction of Gabion Block at the upstream • Construction of Box Culvert

	<ul style="list-style-type: none"> • Installation of temporary noise barrier • Underground Utilities Detection
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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

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

Water Parameter	Action Level	Limit Level
Dissolved Oxygen (DO)	4.42 mg/L	4.37 mg/L
Turbidity & Suspended Solids (SS)	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 one (1) Action Level exceedances and ten (25) Limit Level exceedances for water quality monitoring were recorded during the reporting period. Moreover, NOEs were issued in this reporting period. Based on the investigation and consider that the exceedances 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. However, a total of 26 Action and Limit Level exceedances on water quality were occurred, 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 – May 2014	June 2014 to August 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.
- 6.03 During the rainy season, muddy water and other water quality pollutants via site surface water runoff get into public areas should be avoided. Mitigation measures for water quality should be properly implemented to avoid adverse water quality impacts on the receiving water bodies.
- 6.04 Moreover, attention is drawn to implementation of the construction noise mitigation measures during noisy construction works. The temporary noise barrier should be modified in compliance with the Environment Permit and contract specific requirement.

ANNEX A

LOCATION PLAN FOR THE WORKS

NOTES:

1. ALL LEVELS ARE IN METRIC UNITS. FURNISHING WORK IS TO BE DONE.
2. EXISTING AND PROPOSED CHANNEL CROSS-SECTIONS ARE TO BE MAINTAINED.
3. EXISTING AND PROPOSED CHANNELS ARE TO BE MAINTAINED AND CHANNELS ARE TO BE KEPT OPEN AT ALL TIMES UNLESS OTHERWISE NOTED.
4. THE CHANNELS FOR THE CHANNELS ARE TO BE MAINTAINED AND CHANNELS ARE TO BE KEPT OPEN AT ALL TIMES UNLESS OTHERWISE NOTED.
5. THE EXISTING CHANNELS FOR THE CHANNELS ARE TO BE MAINTAINED AND CHANNELS ARE TO BE KEPT OPEN AT ALL TIMES UNLESS OTHERWISE NOTED.
6. FLOOD MARKING SIGN BOARDS TO BE LOCATED WITHIN THE CHANNELS IN 15%.
7. FLOOD MARKING SIGN BOARDS TO BE LOCATED WITHIN THE CHANNELS IN 15%.

LEGEND:

- POWER LINE**
- ◇ SETTING OUT POINT (S.O.P.) FOR CHANNEL
 - ACQUINTE OF ALIGNMENT
 - END OF ALIGNMENT
- CHANNELS**
- EXISTING CHANNELS
 - PROPOSED CHANNELS
 - PROPOSED FLOOD MARKING SIGN



FOR TENDER PURPOSES ONLY

Description	Qty	Unit	Amount
1. S.O.P.	1	1	1.00
2. ACQUINTE	1	1	1.00
3. END OF ALIGNMENT	1	1	1.00
4. CHANNELS	1	1	1.00
5. FLOOD MARKING SIGN	1	1	1.00

Contract No.: DC/2011/06

Contract Title: REDEMPTION OF BOUNDARY FENCED ROAD AND ASSOCIATED SECURITY FACILITIES BETWEEN PING TUN RIVER AND PAU FU SHAI AND DRAINAGE WORKS IN NORTH DISTRICT

Drawn Title: GENERAL LAYOUT PLAN FOR DRAINAGE CHANNEL MUP05

ESTIMATED BILL OF MATERIALS

S.O.P.	Channel	Lot	Electric	Materials
1	1.00	1	1.00	1.00
2	1.00	1	1.00	1.00
3	1.00	1	1.00	1.00
4	1.00	1	1.00	1.00
5	1.00	1	1.00	1.00
6	1.00	1	1.00	1.00
7	1.00	1	1.00	1.00
8	1.00	1	1.00	1.00
9	1.00	1	1.00	1.00
10	1.00	1	1.00	1.00

GENERAL LAYOUT PLAN FOR DRAINAGE CHANNEL MUP05

Scale: 1:500 A1, 1:1000 A3

Project Title: REDEMPTION OF BOUNDARY FENCED ROAD AND ASSOCIATED SECURITY FACILITIES BETWEEN PING TUN RIVER AND PAU FU SHAI AND DRAINAGE WORKS IN NORTH DISTRICT

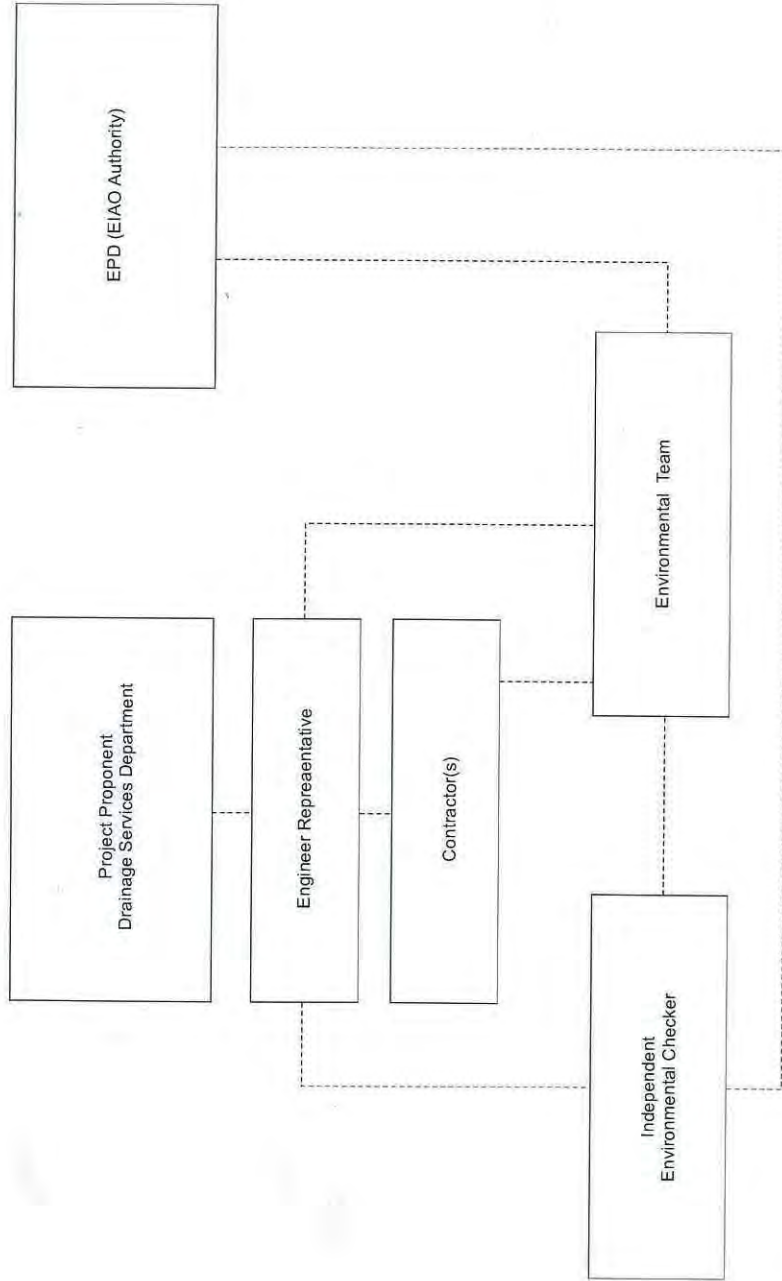
Drawn Title: GENERAL LAYOUT PLAN FOR DRAINAGE CHANNEL MUP05



香港特別行政區政府渠務署
URBAN & PARTNERS
DRAINAGE SERVICES DEPARTMENT

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
SHCC	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

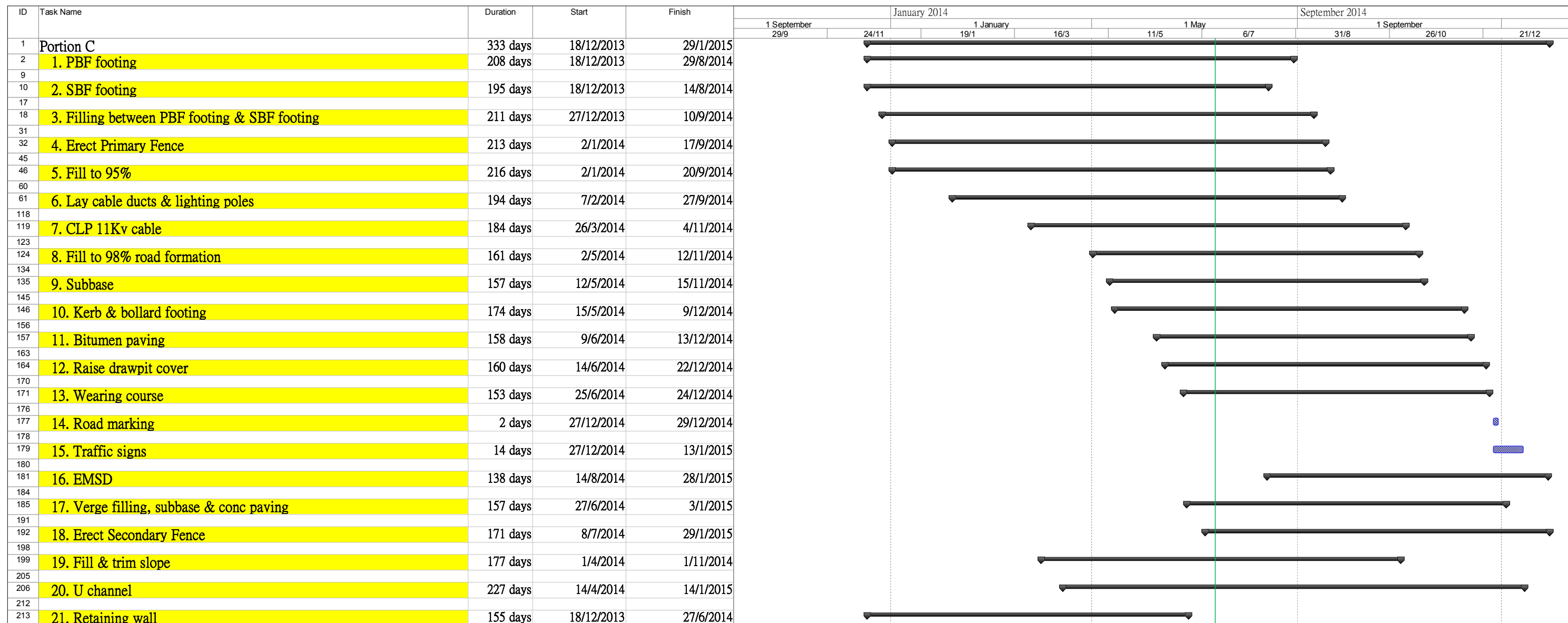
ANNEX C

CONSTRUCTION PROGRAM

ID	Task Name	Duration	Start	Finish	B							B							B							B							B																																																		
					9 Sep '13	27 Oct '13	24 Nov '13	22 Dec '13	19 Jan '14	16 Feb '14	16 Mar '14	13 Apr '14	11 May '14	8 Jun '14	6 Jul '14	3 Aug '14	31 Aug '14	28 Sep '14	26 Oct '14	23 Nov '14	21 Dec '14	9 Sep '13	27 Oct '13	24 Nov '13	22 Dec '13	19 Jan '14	16 Feb '14	16 Mar '14	13 Apr '14	11 May '14	8 Jun '14	6 Jul '14	3 Aug '14	31 Aug '14	28 Sep '14	26 Oct '14	23 Nov '14	21 Dec '14	9 Sep '13	27 Oct '13	24 Nov '13	22 Dec '13	19 Jan '14	16 Feb '14	16 Mar '14	13 Apr '14	11 May '14	8 Jun '14	6 Jul '14	3 Aug '14	31 Aug '14	28 Sep '14	26 Oct '14	23 Nov '14	21 Dec '14																												
T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S
1	Portion A	280 days	9/11/2013	17/10/2014																																																																															
2	A. CLP take down existing power supply to wells (4 nos)	16 days	9/12/2013	28/12/2013																																																																															
16	B. Construction of BC#2	25 days	17/1/2014	18/2/2014																																																																															
20	C. Construction of BC#1	24 days	28/11/2013	27/12/2013																																																																															
25	D. Gate #56	15 days	9/12/2013	27/12/2013																																																																															
29	E. Existing access near Gate #54B	15 days	9/12/2013	27/12/2013																																																																															
33	F. PBF footing	201 days	15/11/2013	19/7/2014																																																																															
53	G. SBF footing	101 days	9/11/2013	13/3/2014																																																																															
62	H. Erect PB Fence	91 days	9/12/2013	31/3/2014																																																																															
77	I. Backfill between PBF and SBF footing to 300mm below formation (95%)	77 days	2/1/2014	4/4/2014																																																																															
88	J. Lay duct , draw pit and lighting pole	106 days	10/2/2014	17/6/2014																																																																															
99	K. Backfill to road formation level	50 days	12/6/2014	9/8/2014																																																																															
110	L. Road sub-base	20 days	25/7/2014	16/8/2014																																																																															
117	M. Bollard and Kerb	33 days	2/8/2014	10/9/2014																																																																															
124	N. Verge backfill, sub-base and pavement	32 days	16/8/2014	23/9/2014																																																																															
131	O. Bitumen pavement	27 days	29/8/2014	30/9/2014																																																																															
139	P. Raise drawpit cover	32 days	4/9/2014	14/10/2014																																																																															
147	Q. Wearing course	28 days	13/9/2014	17/10/2014																																																																															
148	a. P1-P96	3 days	23/9/2014	25/9/2014																																																																															
149	b. P97-P190	3 days	6/10/2014	8/10/2014																																																																															
150	c. P191-P277	2 days	15/10/2014	16/10/2014																																																																															
152	R. Road marking	1 day	17/10/2014	17/10/2014																																																																															
154	S. Traffic signs Type B	16 days	13/9/2014	3/10/2014																																																																															
156	T. Erect SB Fence	62 days	24/4/2014	9/7/2014																																																																															
161	U. EMSD install, testing and commissioning	80 days	24/4/2014	30/7/2014																																																																															
165	V. CLP 11KV	83 days	16/1/2014	26/4/2014																																																																															
171	W. Lo Fong Bridge Police Post	199 days	16/12/2013	16/8/2014																																																																															

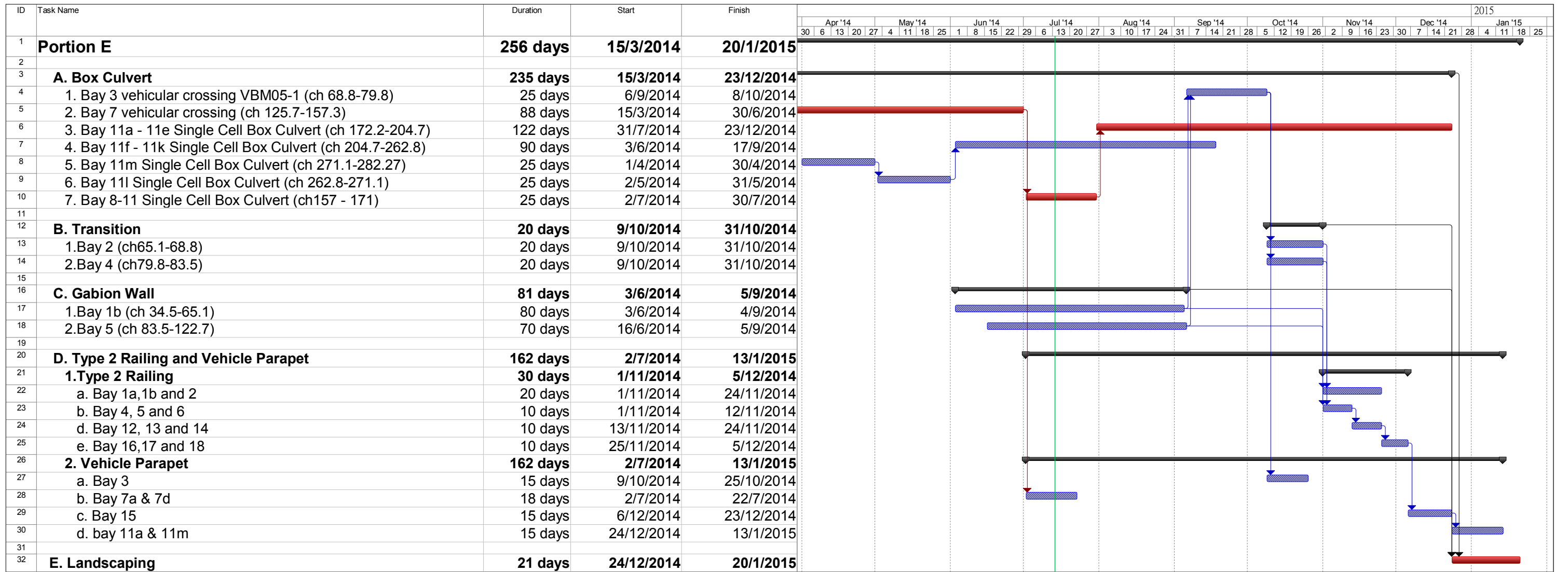
Project No: DC/2011/06
 Programme: Portion A
 Date: 1-7-2014

progress Summary Duration-only Critical Progress
 Split Project Summary Manual Summary Critical Split



ID	Task Name	Duration	Start	Finish	September		October				November				December				January 2015					
					13/10	3/11	24/11	15/12	5/1	26/1	16/2	9/3	30/3	20/4	11/5	1/6	22/6	13/7	3/8	24/8	14/9	5/10	26/10	16/11
1	Portion D	299 days	3/3/2014	2/3/2015																				
2	1. Possession of Site	1 day	3/3/2014	3/3/2014																				
3																								
4	2. Setting out	7 days	3/3/2014	10/3/2014																				
5																								
6	3. Site clearance	14 days	11/3/2014	26/3/2014																				
7																								
8	4. Road diversion	97 days	28/7/2014	20/11/2014																				
9	A. Construction	5 days	28/7/2014	1/8/2014																				
10	B. Diversion	1 day	2/8/2014	2/8/2014																				
11	C. Reinstate existing road	2 days	25/10/2014	27/10/2014																				
12	D Removal of temporary road diversion	1 day	28/10/2014	28/10/2014																				
13	E. Reinstatement of private land	20 days	29/10/2014	20/11/2014																				
14																								
15	5. Existing monumental archway	236 days	4/3/2014	12/12/2014																				
16	A. Survey	25 days	4/3/2014	1/4/2014																				
17	B. Removal	35 days	2/4/2014	15/5/2014																				
18	C. Reinstatement	30 days	8/11/2014	12/12/2014																				
19																								
20	6. Utilities	241 days	27/3/2014	14/1/2015																				
21	A. Public lighting	121 days	27/3/2014	20/8/2014																				
22	1) Locate existing cable alignment at outlet	5 days	27/3/2014	1/4/2014																				
23	2) Lay duct and draw pit between inlet and existing road at downstream	15 days	2/4/2014	19/4/2014																				
24	3) Lay duct under existing road	3 days	2/8/2014	5/8/2014																				
25	4) Extend existing cable duct at outlet	5 days	4/8/2014	8/8/2014																				
26	5) Cable laying and erect new pole by others	30 days	16/7/2014	19/8/2014																				
27	6) Take down existing lighting pole by others	1 day	20/8/2014	20/8/2014																				
28	B. Construct new telephone pit at inlet	3 days	17/12/2014	19/12/2014																				
29	C. WSD	241 days	27/3/2014	14/1/2015																				
30	1) Trial pit to locate existing U/G water pipeline	5 days	27/3/2014	1/4/2014																				
31	2) Confirm alignment of new pipe by WSD	21 days	2/4/2014	26/4/2014																				
32	3) Lay new pipe	28 days	24/11/2014	27/12/2014																				
33	4) Connect by WSD	14 days	29/12/2014	14/1/2015																				
34	7. Outlet apron	213 days	11/3/2014	22/11/2014																				
35	A. Confirm alignment of outlet	2 days	11/3/2014	12/3/2014																				
36	B. Construct outlet	30 days	20/10/2014	22/11/2014																				
37																								
38	8. Box culvert	79 days	16/7/2014	18/10/2014																				
39	A. Bay 11 (CH 48.193-53.443) with ex. Lighting poje	21 days	3/9/2014	27/9/2014																				
40	B. Bay 12 (CH 53.443-58.693)	21 days	9/8/2014	2/9/2014																				
41	C. Bay 13 (58.693-62.868)	21 days	16/7/2014	8/8/2014																				
42	D. Bay 19 (84.083-89.723)	21 days	4/8/2014	27/8/2014																				
43	E. Bay 20 (89.723-95.423)	21 days	28/8/2014	22/9/2014																				
44	F. Bay 21 (95.423-99.441)	21 days	23/9/2014	18/10/2014																				
45																								
46	9. Rectangular channel	227 days	21/4/2014	21/1/2015																				
47	A. Bay 2 (CH 7-12.244) with ex. Lighting pole	14 days	17/12/2014	5/1/2015																				
48	B. Bay 3 (CH 12.244-17.293)	14 days	6/1/2015	21/1/2015																				
49	C. Bay 4 (CH 17.293-22.443)	14 days	22/12/2014	9/1/2015																				
50	D. Bay 5 (CH 22.443.6-27.593)	14 days	5/12/2014	20/12/2014																				
51	E. Bay 7 (CH 27.593-32.743)	14 days	19/11/2014	4/12/2014																				
52	F. Bay 8 (CH 32.743-37.893)	14 days	3/11/2014	18/11/2014																				
53	G. Bay 9 (CH 37.893-43.043)	14 days	17/10/2014	1/11/2014																				
54	H. Bay 10 (CH 43.043-48.193)	14 days	29/9/2014	16/10/2014																				
55	I. Bay 14 (CH 58.693-62.868)	14 days	28/6/2014	15/7/2014																				

ID	Task Name	Duration	Start	Finish	Timeline																							
					September	11 November	1 January	21 February	May 2014	1 June	21 July	11 September	1 November	21 December	11													
					13/10	3/11	24/11	15/12	5/1	26/1	16/2	9/3	30/3	20/4	11/5	1/6	22/6	13/7	3/8	24/8	14/9	5/10	26/10	16/11	7/12	28/12	18/1	8/2
56	J. Bay 15 (CH 62.868-67.043)	14 days	12/6/2014	27/6/2014																								
57	K. Bay 16 (CH 67.043-72.743)	14 days	26/5/2014	11/6/2014																								
58	L. Bay 17 (CH 72.743-78.443)	14 days	9/5/2014	24/5/2014																								
59	M. Bay 18 (CH 78.443-84.083)	14 days	21/4/2014	8/5/2014																								
60																												
61	10. Intake apron Bay 1 (CH 0-7)	20 days	24/11/2014	16/12/2014																								
62																												
63	11. U-channel	59 days	5/12/2014	14/2/2015																								
64	A. Bay 14 - Bay 18	21 days	22/1/2015	14/2/2015																								
65	B. Bay 2 - Bay 10	21 days	5/12/2014	31/12/2014																								
66																												
67	12. Kerb	48 days	5/12/2014	2/2/2015																								
68	A. Bay 14 - Bay 18	10 days	22/1/2015	2/2/2015																								
69	B. Bay 2 - Bay 10	10 days	5/12/2014	16/12/2014																								
70																												
71	13. Type 2 railing	45 days	17/12/2014	10/2/2015																								
72	A. Bay 14 - Bay 18	7 days	3/2/2015	10/2/2015																								
73	B. Bay 2 - Bay 10	7 days	17/12/2014	24/12/2014																								
74																												
75	14. Landscaping	10 days	16/2/2015	2/3/2015																								



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:



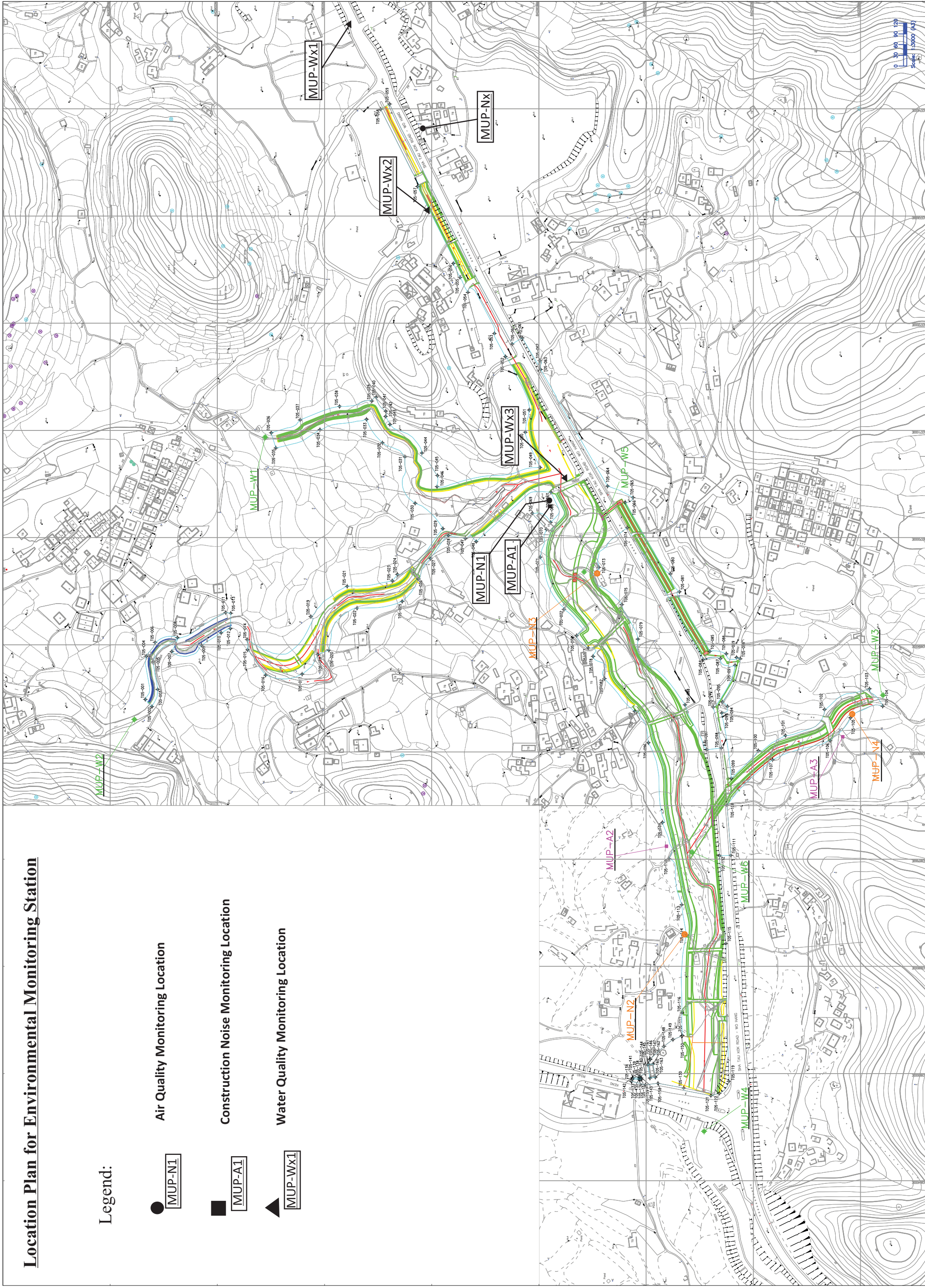
Air Quality Monitoring Location



Construction Noise Monitoring Location



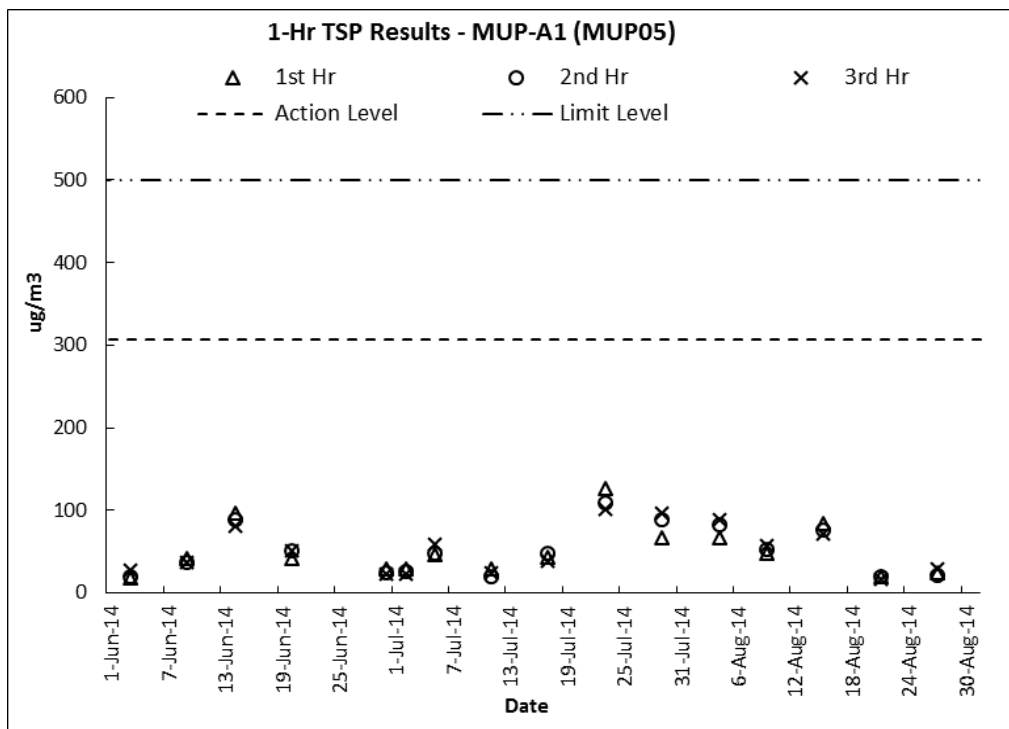
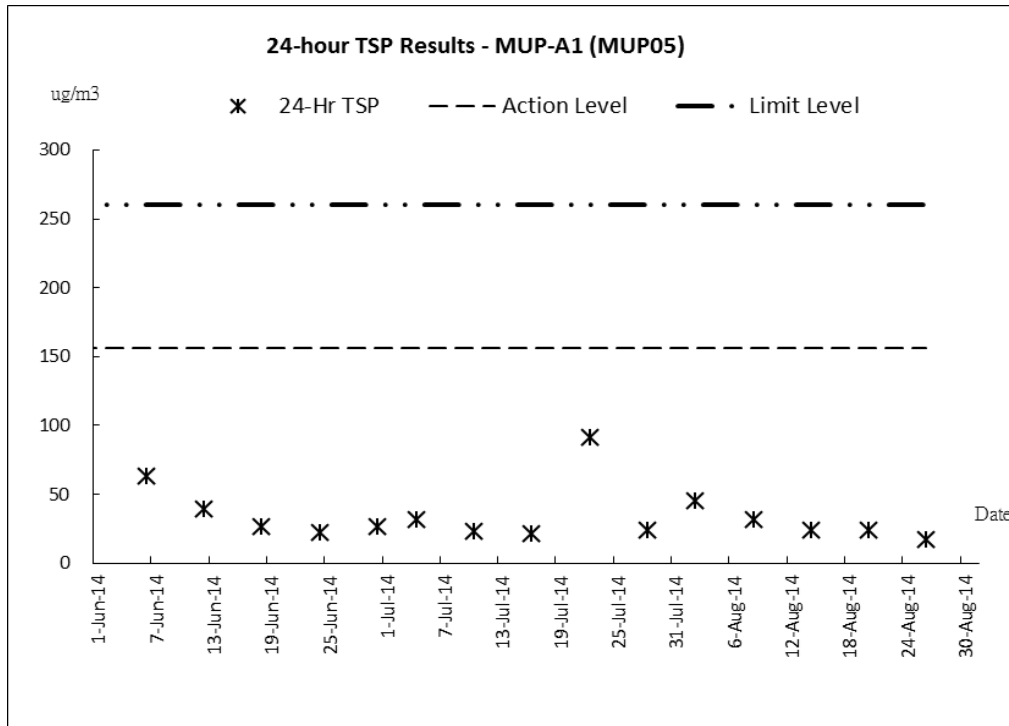
Water Quality Monitoring Location



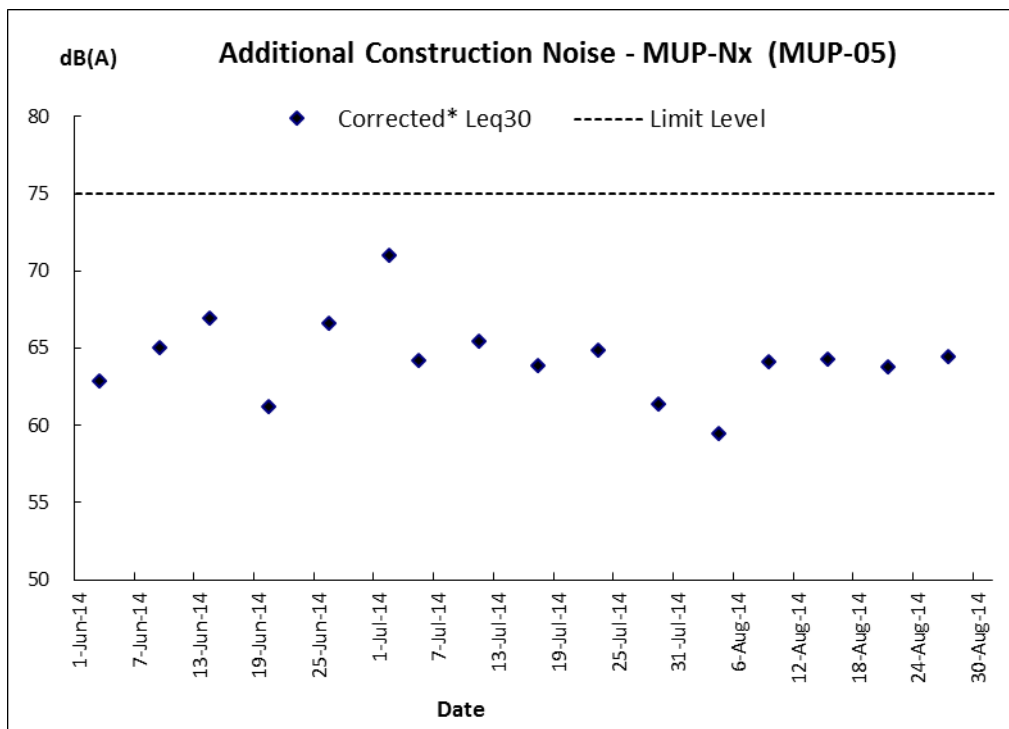
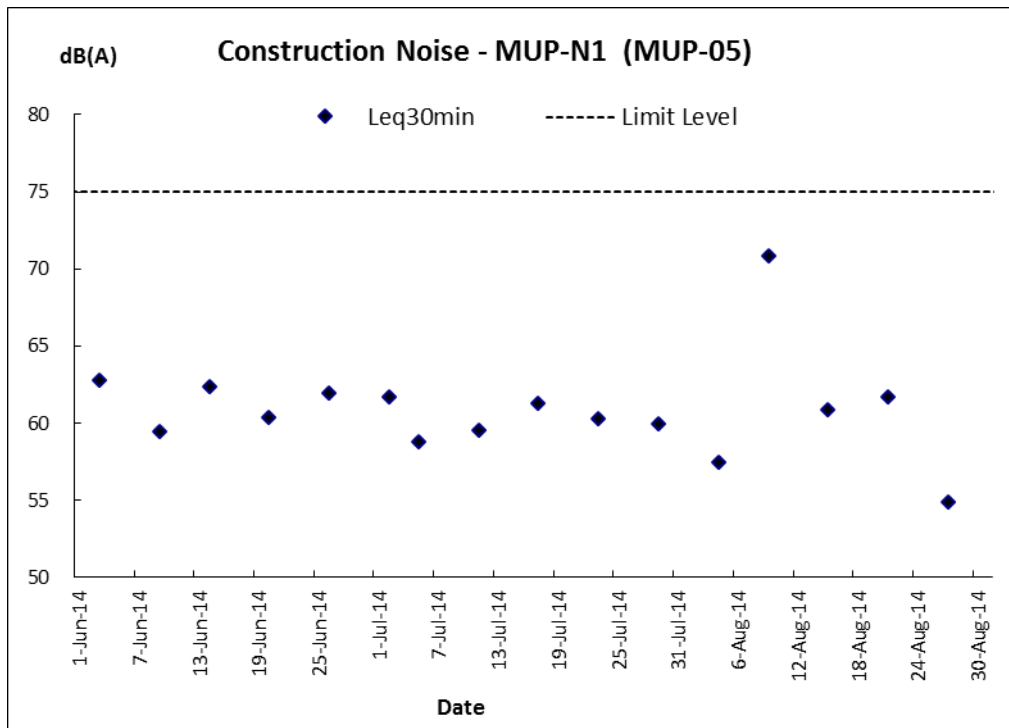
ANNEX F

GRAPHICAL PLOTS OF THE TRENDS OF MONITORED PARAMETERS

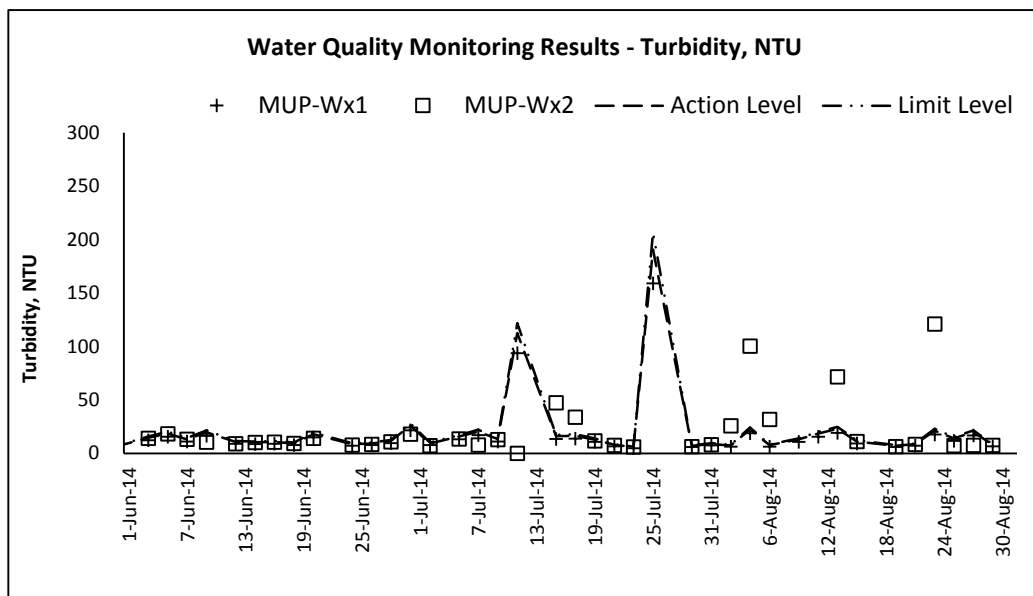
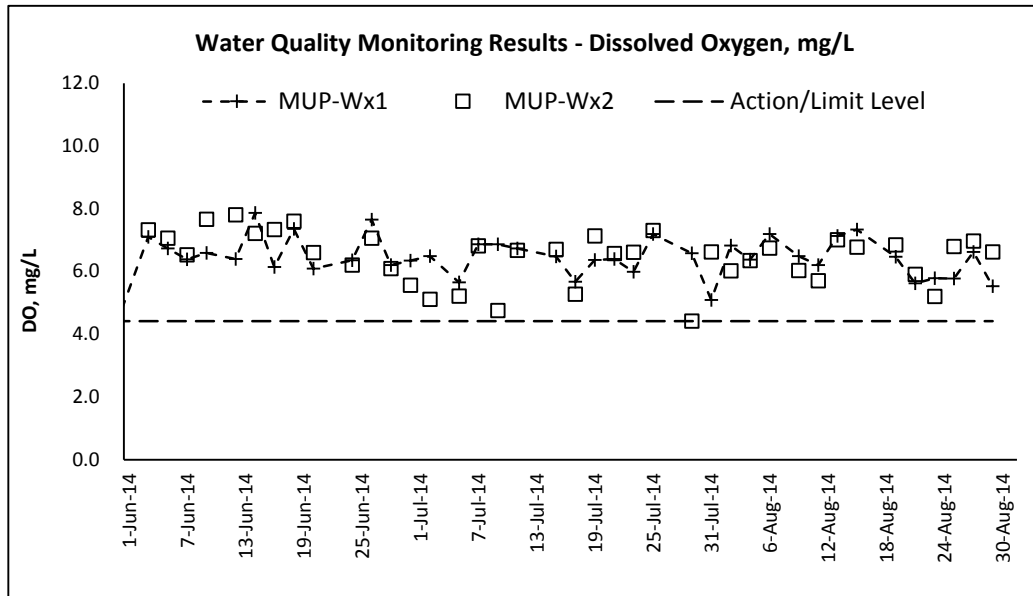
Air Quality



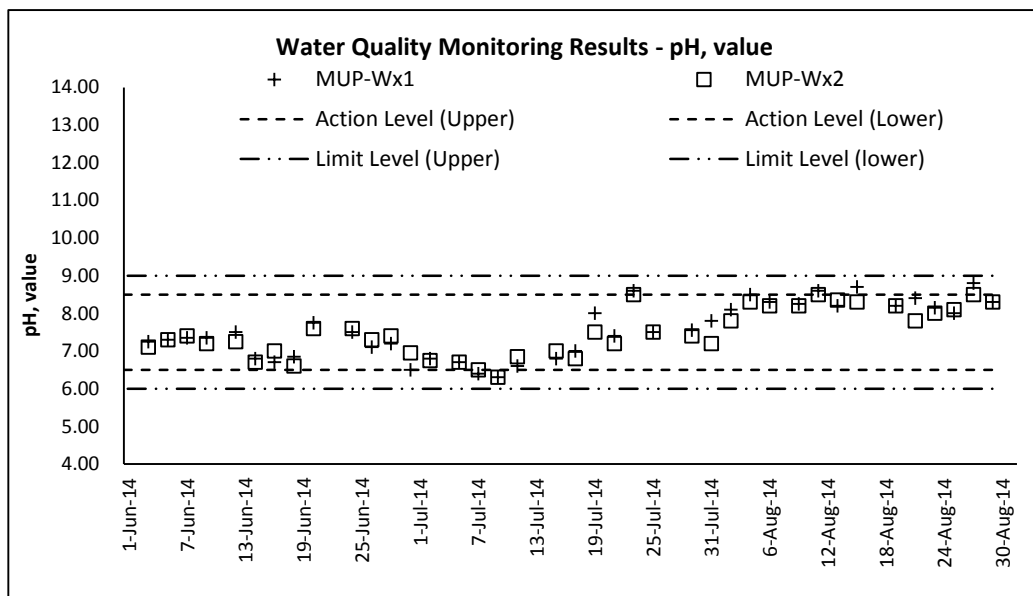
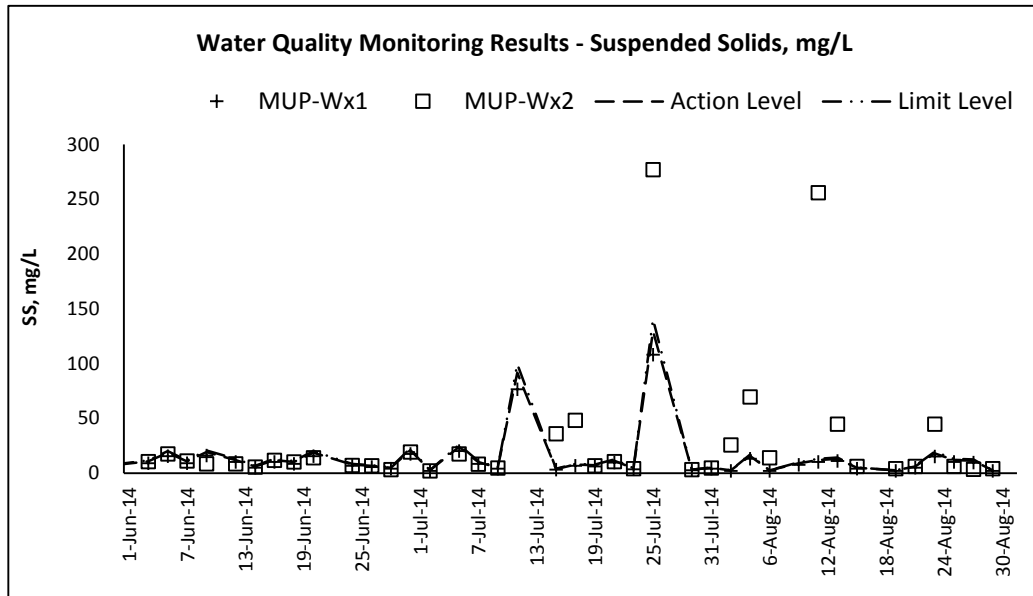
Construction Noise



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 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	14.248	0.000	0.000	14.248	0.000	0.568	0.244	0.003	0.000	0.000	0.000
Feb-14	12.912	0.000	0.000	12.912	0.000	0.656	0.103	0.002	0.000	0.000	0.005
Mar-14	0.000	0.000	0.000	0.000	0.000	0.744	0.200	0.005	0.000	0.04	0.065
Apr-14	0.000	0.000	0.000	0.000	0.000	0.352	0.000	0.000	0.000	0.000	0.030
May-14	0.000	0.000	0.000	0.000	0.000	0.240	0.000	0.000	0.000	0.000	0.175
Jun-14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
Jul-14	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.072	0.000	0.000	0.030
Aug-14	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.066	0.000	0.000	0.045
Sep-14											
Oct-14											
Nov-14											
Dec-14											
Total	27.160	0.000	0.000	27.160	0.000	2.560	0.550	0.148	0.000	0.040	0.400

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: Jun-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

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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

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18	Transition formwork & falsework (Portion A,B,C,E)	Temperary formwork & falsework design	205	201	
19	Transition formwork & falsework (Portion A,B,C,E)	Temperary formwork & falsework design	215	212	
20	Transition formwork & falsework (Portion A,B,C,E)	Temperary formwork & falsework design	225	222	
21	Transition formwork & falsework (Portion A,B,C,D,E)	Temperary formwork & falsework design	226	223	

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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: Jul-14

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