



**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 ELEVENTH QUARTERLY
EM&A SUMMARY REPORT FOR DRAINAGE
WORKS UNDER EP-277/2007/A
(DECEMBER 2014 – FEBRUARY 2015)**

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

Quality Index

Date	Reference No.	Prepared By	Approval By
18 March 2015	TCS00599/12/600/R0379	 Donald Kwok Assistant Environmental Consultant	 T. W. Tam Environmental Team Leader

Version	Date	Description
0	18 March 2015	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_0379L.15

24 March 2015

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
Eleventh Quarterly EM&A Summary Report for Drainage Works under EP-
277/2007/A (December 2014 – February 2015)**

Reference is made to the Environmental Team's submission of the captioned report (Version 0) dated 18 March 2015 received through E-mail on 18 March 2015 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.

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 eleventh quarterly EM&A summary report for Drainage Works under EP-277/2007/A, covering the construction period of the Works from 1 December 2014 to 28 February 2015.

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 eight (8) 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 eleventh quarterly EM&A summary report (herein after “this Report”) for Drainage Works under EP-277/2007/A, covering the construction period from 1 December 2014 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 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/ Transition • Installation of temporary noise barrier • Underground Utilities Detection
January 2015	<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/ Transition • Installation of temporary noise barrier • Underground Utilities Detection • Reinstatement of the existing road and footpath
February 2015	<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

	<ul style="list-style-type: none"> • Construction of Box Culvert/ Transition • Installation of temporary noise barrier • Underground Utilities Detection • Reinstatement of the existing road and footpath
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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)
		-	MUP-Wx4	Relocation for MUP-Wx2 since 19 th September 2014

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 seven (7) 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 8 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 – November 2014	December 2014 to February 2015
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 As dry season is approaching, dust control measures to avoid fugitive dust in the construction site should be properly provided and maintained, as appropriate. Stockpile and dusty materials should be covered properly to prevent dust nuisance.
- 6.05 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

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NOTES:
 1. ALL LEVELS ARE IN METRIC UNITS.
 2. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN METERS.
 3. EXISTING AND PROPOSED CHANNELS ARE TO BE MAINTAINED AND OPERATED AS OPEN CHANNELS.
 4. THE CHANNELS FOR THE DRAINAGE ARE TO BE MAINTAINED AND OPERATED AS OPEN CHANNELS UNLESS OTHERWISE SPECIFIED.
 5. THE TRACK LOCATIONS FOR THE PROPOSED RAILWAY, ROAD, AND OTHER FACILITIES TO BE CONSIDERED ACCORDING TO THE SITE CONDITIONS.
 6. THE TRACK LOCATIONS FOR THE PROPOSED RAILWAY ARE TO BE DETERMINED BY THE ENGINEER IN CHARGE.
 7. FLOOD MARKING SIGN BOARDS TO BE LOCATED WITHIN THE FLOODING AREAS TO BE DETERMINED BY THE ENGINEER IN CHARGE.

LEGEND:
 FLOOD MARKING SIGN BOARD
 PROPOSED FLOOD MARKING SIGN BOARD
 PROPOSED CHANNEL
 EXISTING CHANNEL
 PROPOSED ROAD
 EXISTING ROAD
 PROPOSED RAILWAY
 EXISTING RAILWAY
 PROPOSED FLOODING AREA
 EXISTING FLOODING AREA
 PROPOSED OPEN STORAGE
 EXISTING OPEN STORAGE
 PROPOSED FLOODING SIGN BOARD
 EXISTING FLOODING SIGN BOARD

FOR TENDER PURPOSES ONLY

Contract No. DC/2011/06

GENERAL LAYOUT PLAN FOR DRAINAGE CHANNEL MUP05

REPRODUCTION OF BOUNDARY FENCED ROAD AND ASSOCIATED SECURITY FACILITIES BETWEEN PING TUN RIVER AND PING FU SHUI AND DRAINAGE MOBS IN NORTH DISTRICT

Scale
 1:500 A1
 1:1000 A3

Scale
 1:500 A1
 1:1000 A3

Scale
 1:500 A1
 1:1000 A3

Scale
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 1:1000 A3

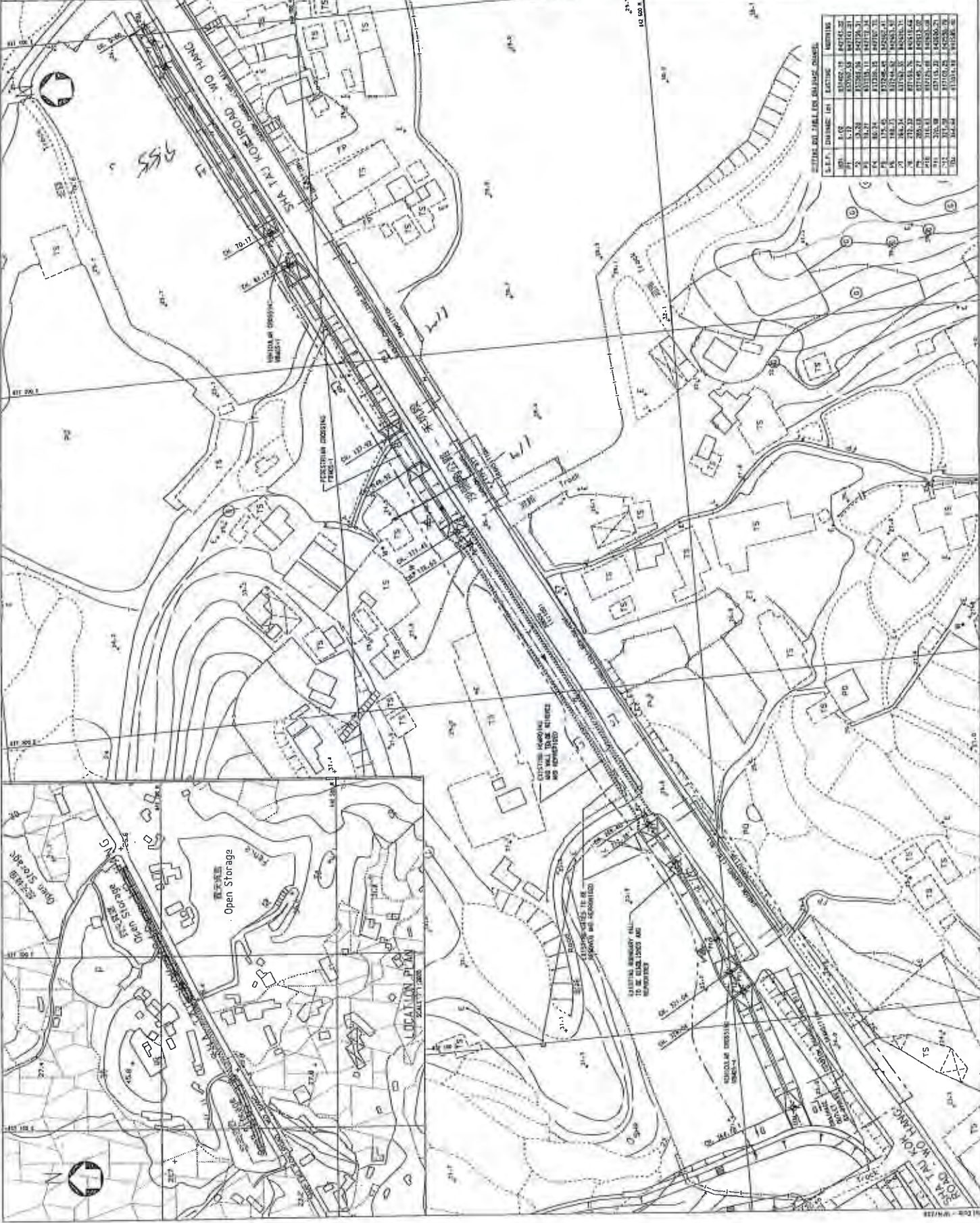
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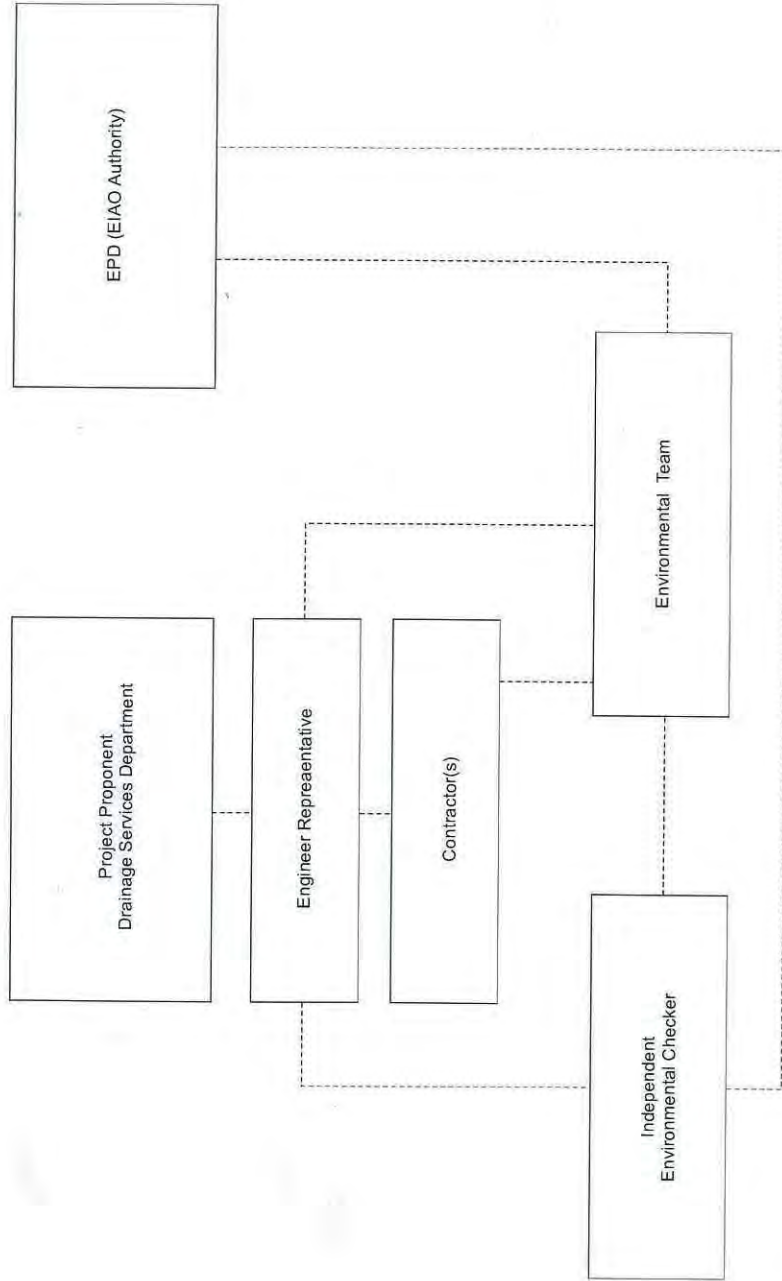
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Scale
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ANNEX B

***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

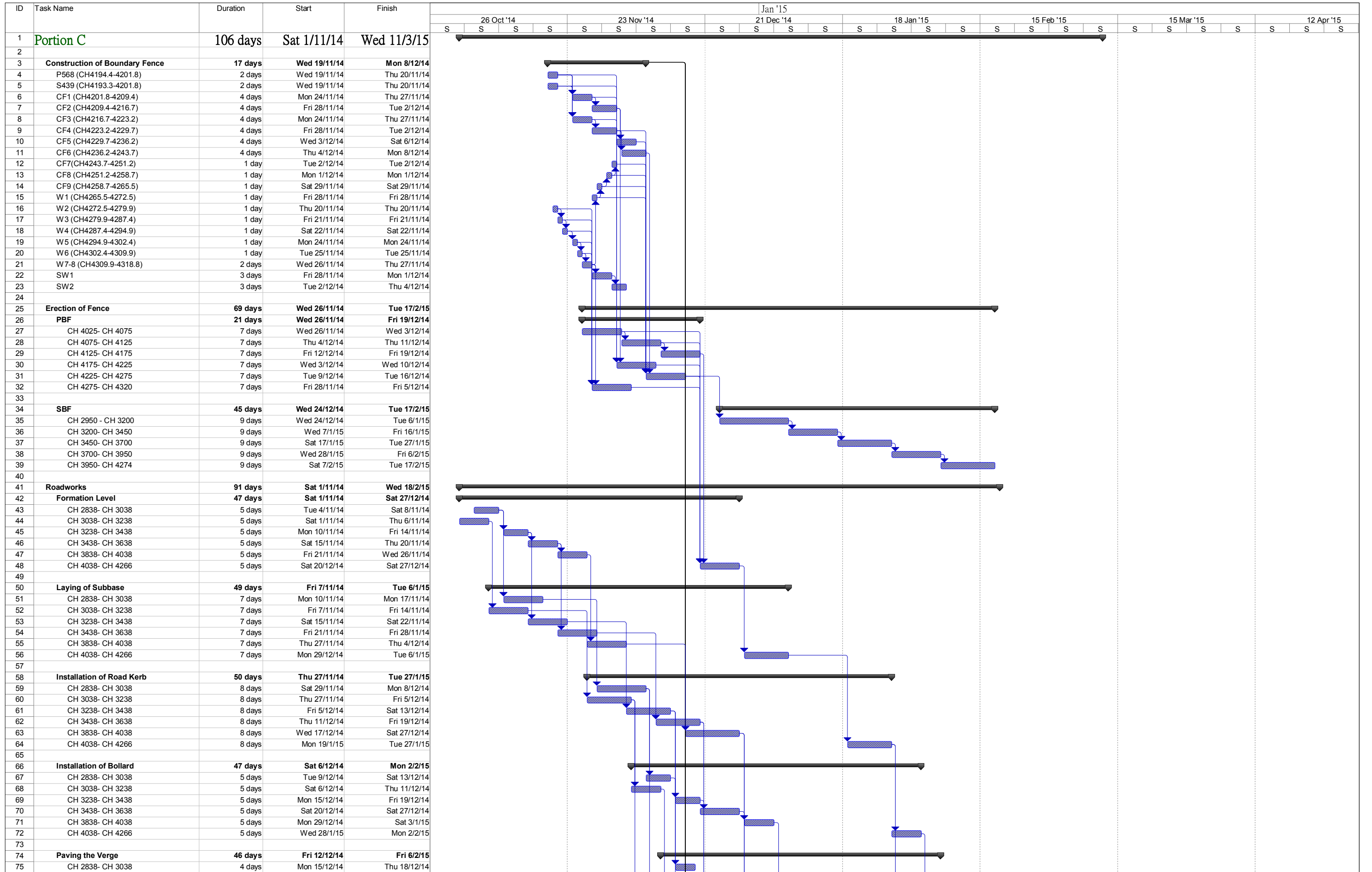
Environ (IEC) – Environ Hong Kong Limited

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

ANNEX C

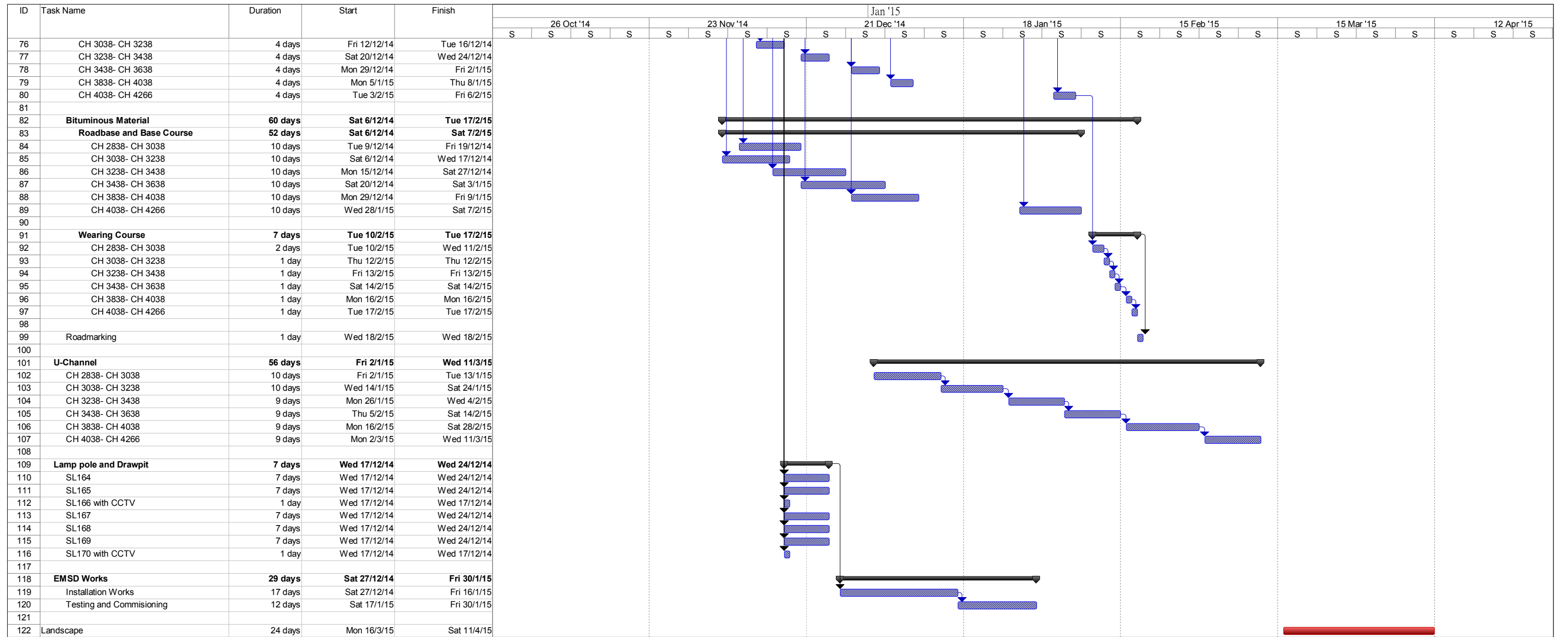
CONSTRUCTION PROGRAM

ID	Task Name	Duration	Start	Finish	Gantt Chart																																				
					Oct '14							23 Nov '14							Jan '15							18 Jan '15							15 Feb '15							15 Mar '15	
					Sun 9/11	Sun 16/11	Sun 23/11	Sun 30/11	Sun 7/12	Sun 14/12	Sun 21/12	Sun 28/12	Sun 4/1	Sun 11/1	Sun 18/1	Sun 25/1	Sun 1/2	Sun 8/2	Sun 15/2	Sun 22/2	Sun 1/3	Sun 8/3	Sun 15/3	Sun 22/3	Sun 29/3																
1	Portion A	30 days?	Mon 17/11/14	Sat 20/12/14																																					
3	U-Channel	29 days	Tue 18/11/14	Sat 20/12/14																																					
4	675U: CH1070 to CH 1100 (Temp Access)	4 days	Wed 17/12/14	Sat 20/12/14																																					
5	675U: CH1289 to CH 1345	3 days	Tue 18/11/14	Thu 20/11/14																																					
6	675U: CH1357 to CH 1415	6 days	Wed 10/12/14	Tue 16/12/14																																					
7	300U: CH1415 to CH 1460	4 days	Fri 5/12/14	Tue 9/12/14																																					
8	750 Drain Pipe: CH 1415 to CH 1460	10 days	Mon 24/11/14	Thu 4/12/14																																					
9	675U: CH 1460 to CH 1617	16 days	Tue 18/11/14	Fri 5/12/14																																					
10	300U: CH 1656 to CH 1674	4 days	Mon 8/12/14	Thu 11/12/14																																					
11	300U: CH 1674 to CH 1780	8 days	Fri 21/11/14	Sat 29/11/14																																					
13	SBF	12 days	Mon 17/11/14	Sat 29/11/14																																					
14	S79- S112	7 days	Sat 22/11/14	Sat 29/11/14																																					
15	S147- S153 (Temp Access)	3 days	Thu 27/11/14	Sat 29/11/14																																					
16	S181- S202	5 days	Mon 17/11/14	Fri 21/11/14																																					
17	S203- S237	7 days	Sat 22/11/14	Sat 29/11/14																																					
19	Bituminous Material (Wearing Course)	5 days	Tue 25/11/14	Sat 29/11/14																																					
20	CH 0 to CH 400	1 day	Wed 26/11/14	Wed 26/11/14																																					
21	CH 400 to CH 800	1 day	Tue 25/11/14	Tue 25/11/14																																					
22	CH 800 to CH 1200	1 day	Thu 27/11/14	Thu 27/11/14																																					
23	CH 1200 to CH 1600	1 day	Fri 28/11/14	Fri 28/11/14																																					
24	CH 1600 to CH 2050	1 day	Sat 29/11/14	Sat 29/11/14																																					
26	Box Culvert	21 days	Tue 18/11/14	Thu 11/12/14																																					
27	Box Culvert 1	7 days	Mon 24/11/14	Mon 1/12/14																																					
28	Security Grille	7 days	Mon 24/11/14	Mon 1/12/14																																					
30	Box Culvert 2	21 days	Tue 18/11/14	Thu 11/12/14																																					
31	Inlet	10 days	Tue 18/11/14	Fri 28/11/14																																					
32	Security Grille	10 days	Mon 1/12/14	Thu 11/12/14																																					
34	Verge	8 days	Tue 18/11/14	Wed 26/11/14																																					
35	Bollard	6 days	Tue 18/11/14	Mon 24/11/14																																					
36	P209- P243	3 days	Tue 18/11/14	Thu 20/11/14																																					
37	P243- P277	3 days	Fri 21/11/14	Mon 24/11/14																																					
39	Pavement and Traffic Sign	8 days	Tue 18/11/14	Wed 26/11/14																																					
40	P126- P151	2 days	Tue 18/11/14	Wed 19/11/14																																					
41	P175- P188	3 days	Thu 20/11/14	Sat 22/11/14																																					
42	P189- P243	3 days	Fri 21/11/14	Mon 24/11/14																																					
43	P243- P277	2 days	Tue 25/11/14	Wed 26/11/14																																					
45	Staircase for Irrigation	20 days	Wed 26/11/14	Thu 18/12/14																																					
46	at PG 3	10 days	Wed 26/11/14	Sat 6/12/14																																					
47	at PG 8	10 days	Mon 8/12/14	Thu 18/12/14																																					
49	Roadmarking	1 day?	Mon 1/12/14	Mon 1/12/14																																					
51	Landscape	25 days	Mon 2/3/15	Mon 30/3/15																																					



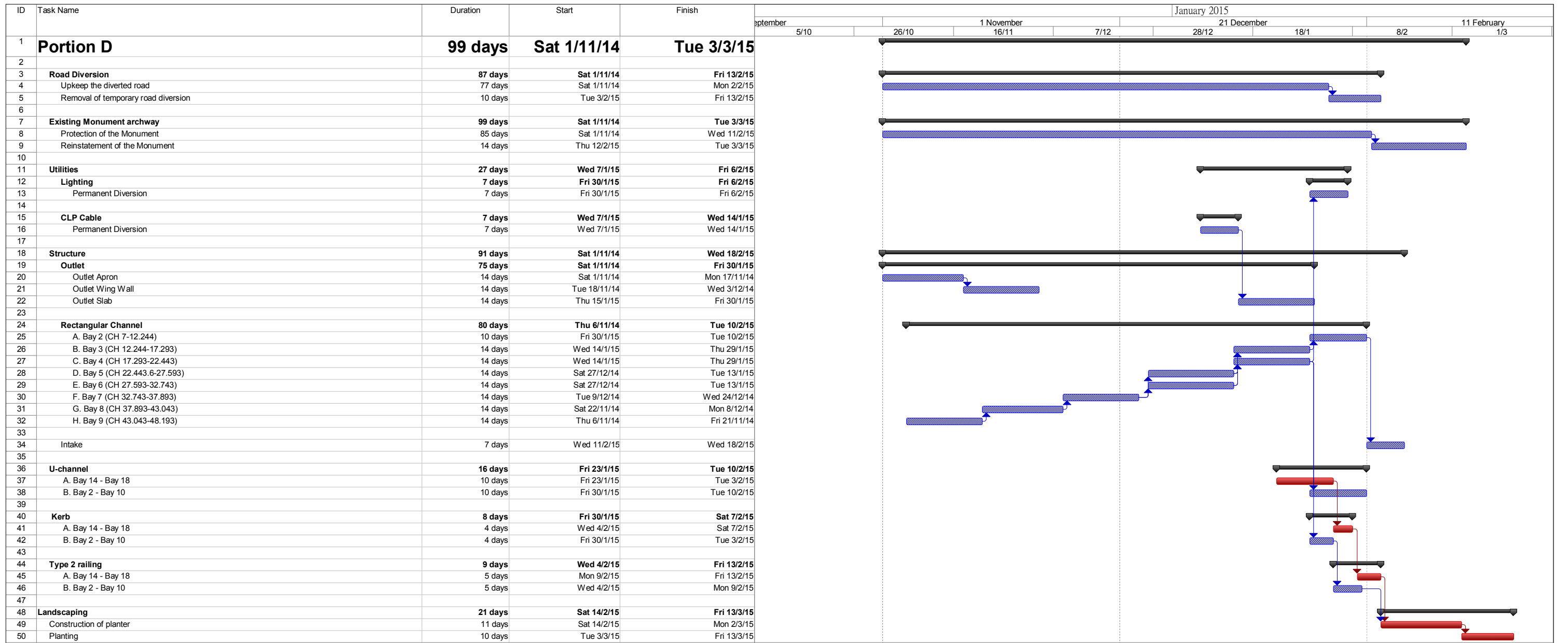
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 Programme: Portion C
 Date: 1-11-2014

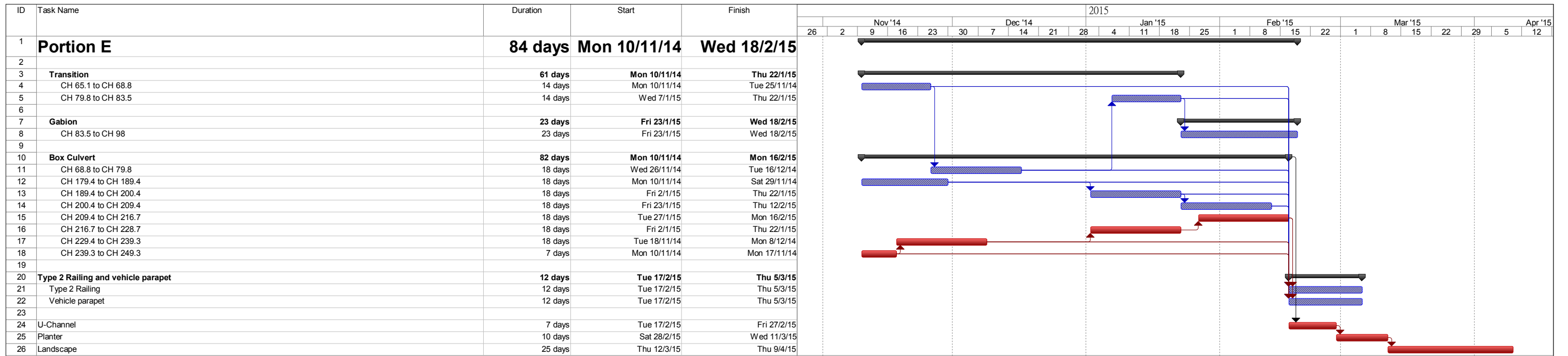
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Split		Project Summary		Manual Summary		Critical Split			



Project No: DC/2011/06
 Programme: Portion C
 Date: 1-11-2014

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





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:



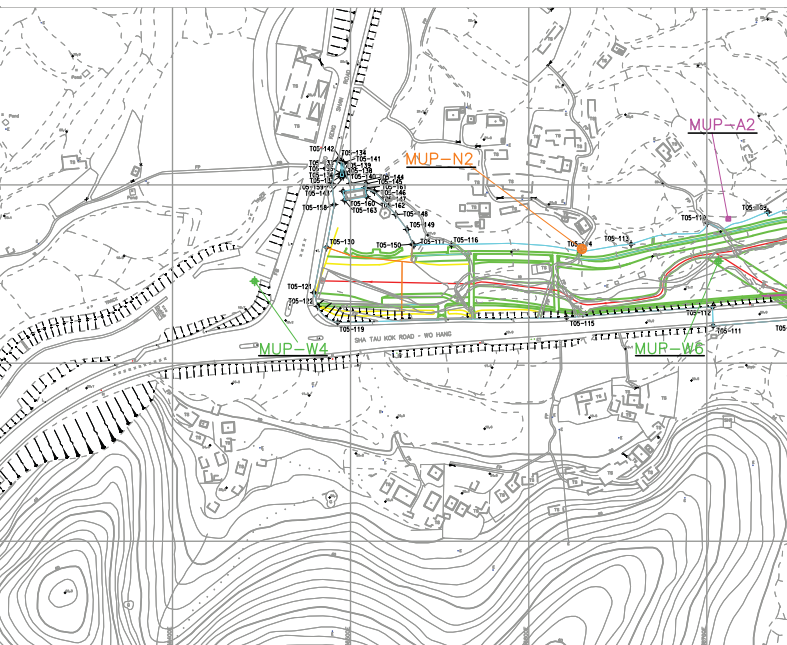
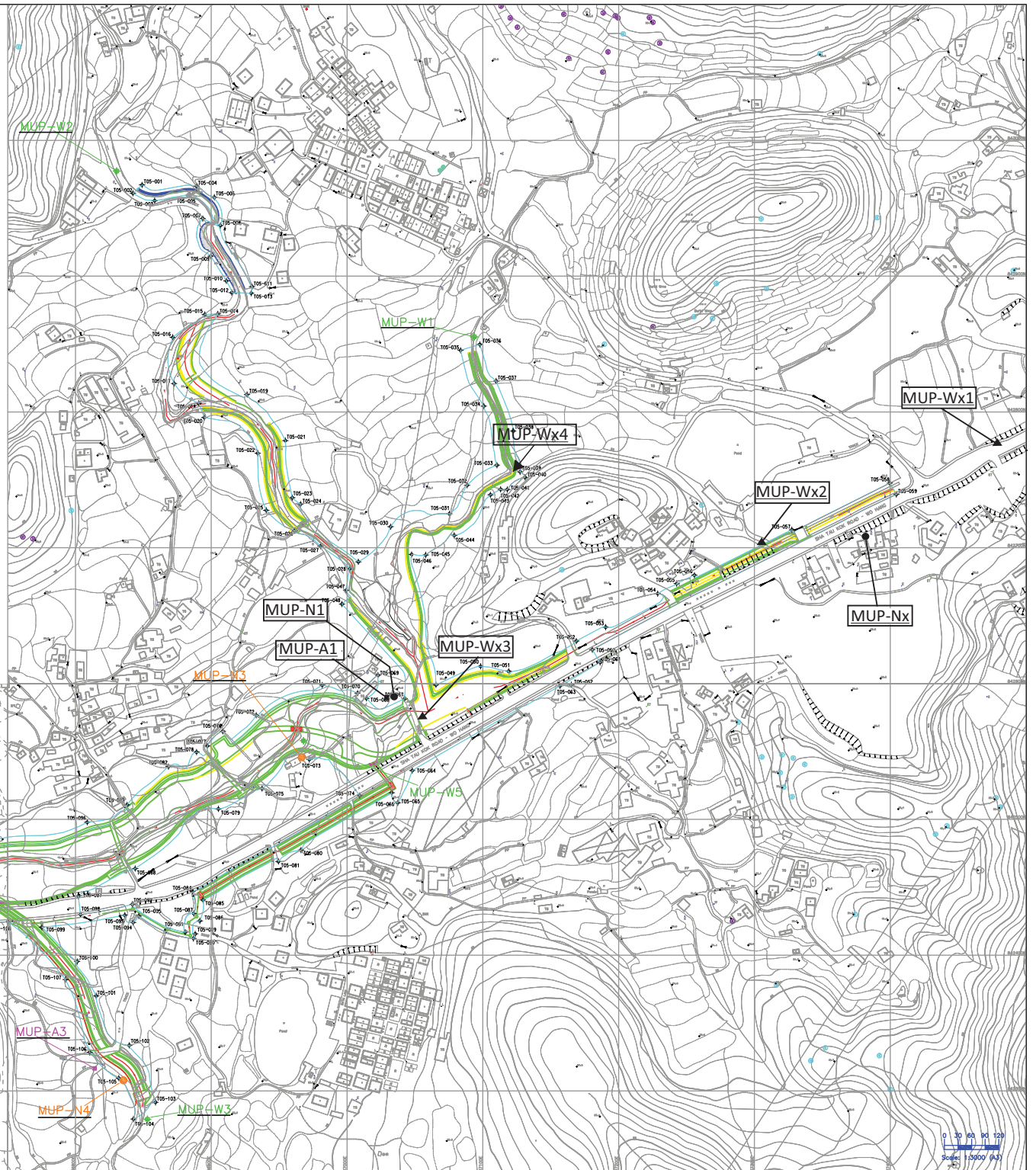
Air Quality Monitoring Location



Construction Noise Monitoring Location



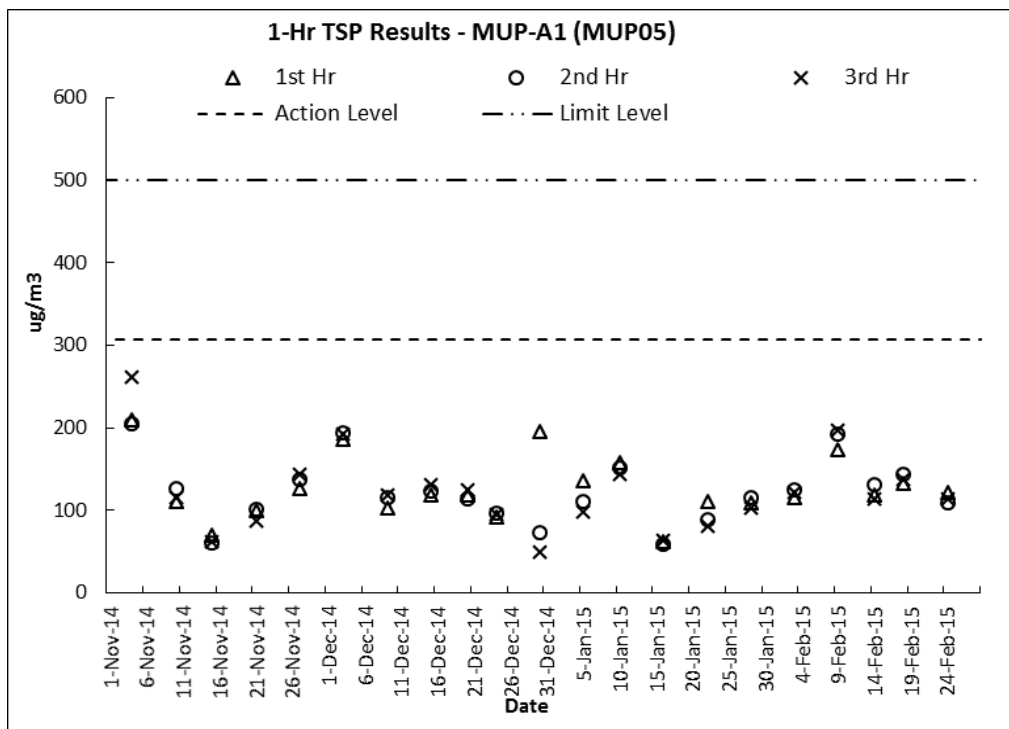
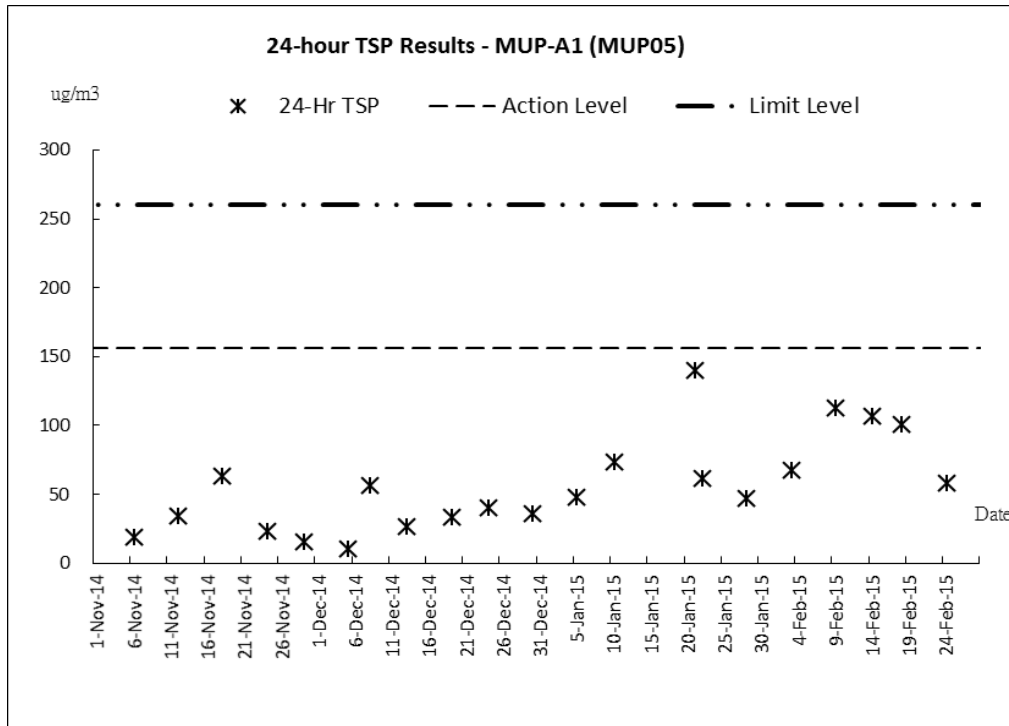
Water Quality Monitoring Location



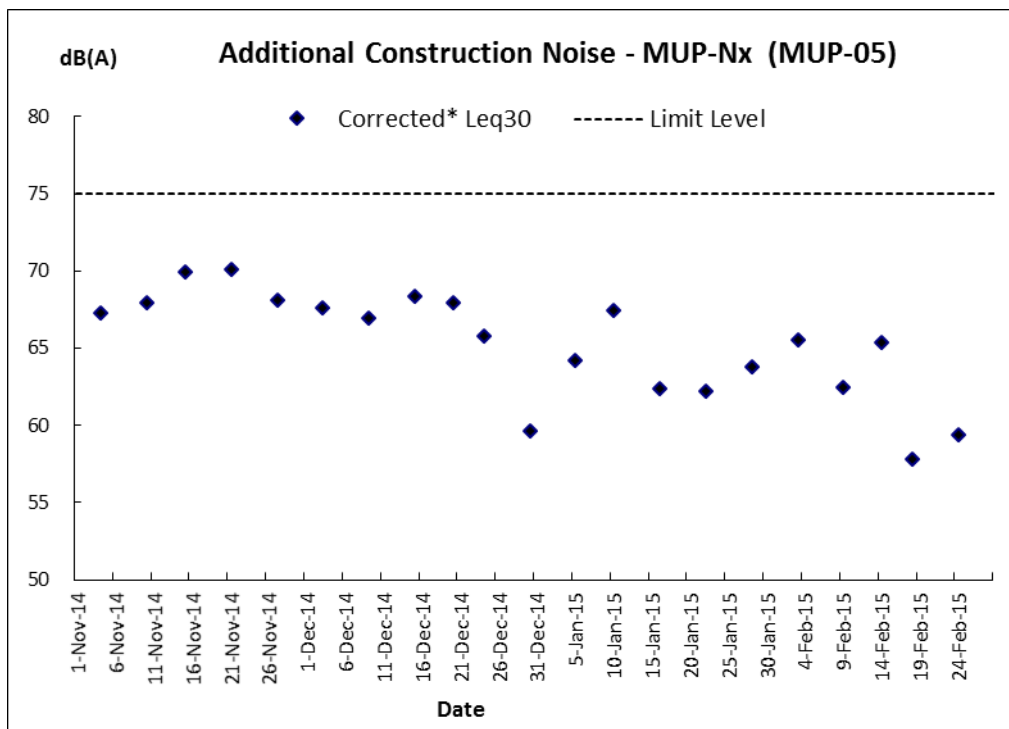
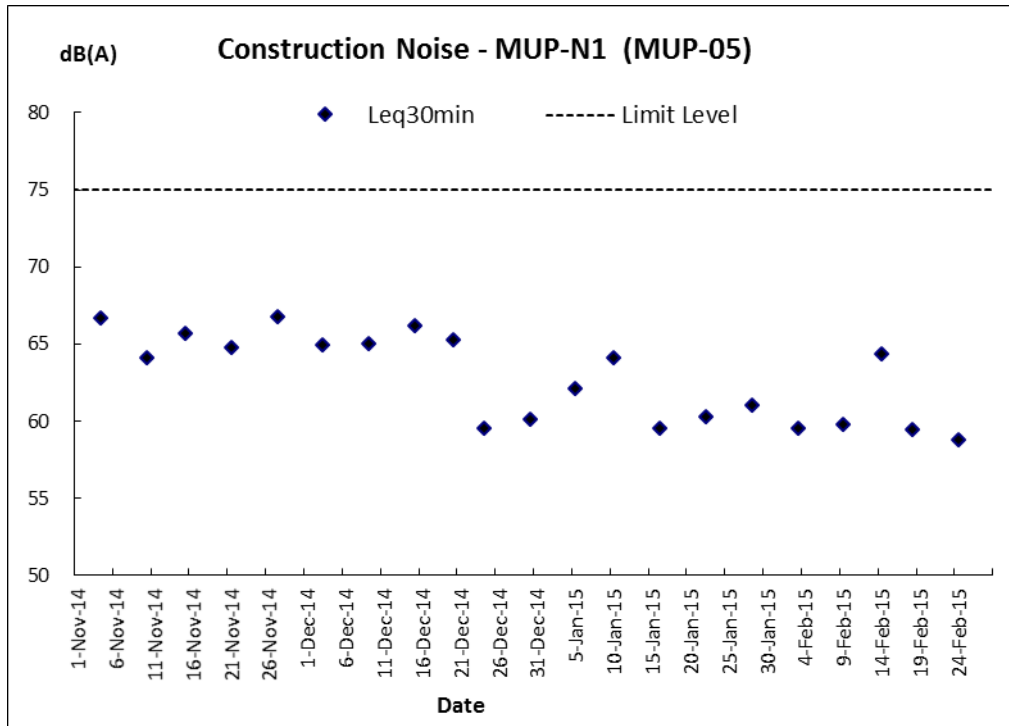
ANNEX F

GRAPHICAL PLOTS OF THE TRENDS OF MONITORED PARAMETERS

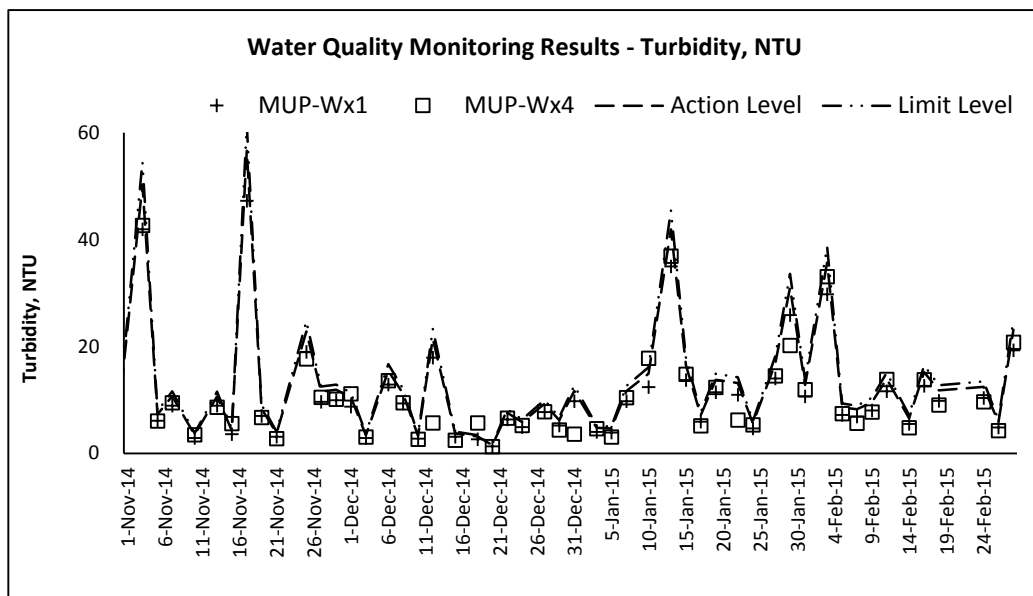
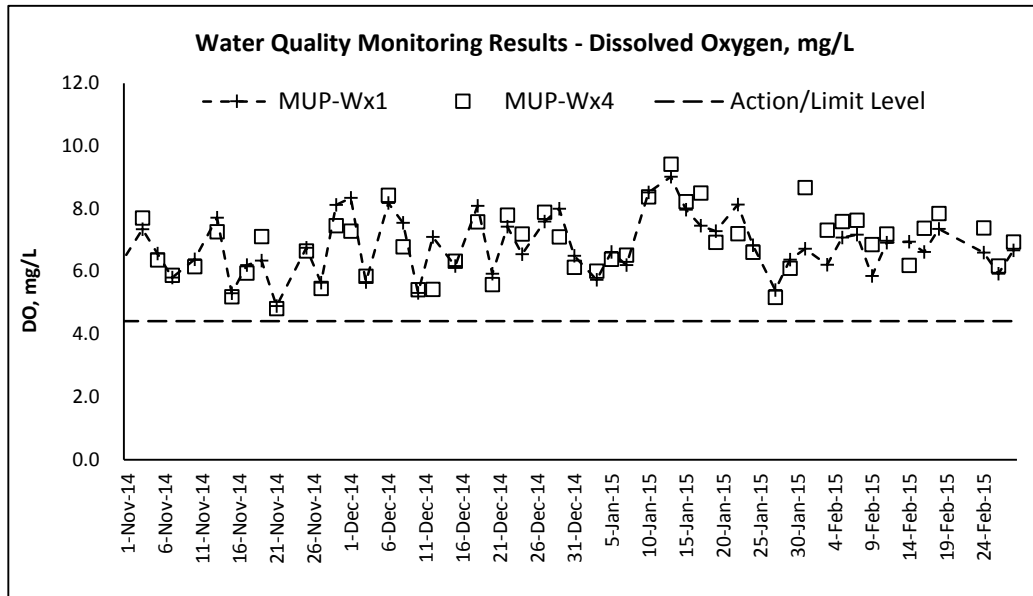
Air Quality



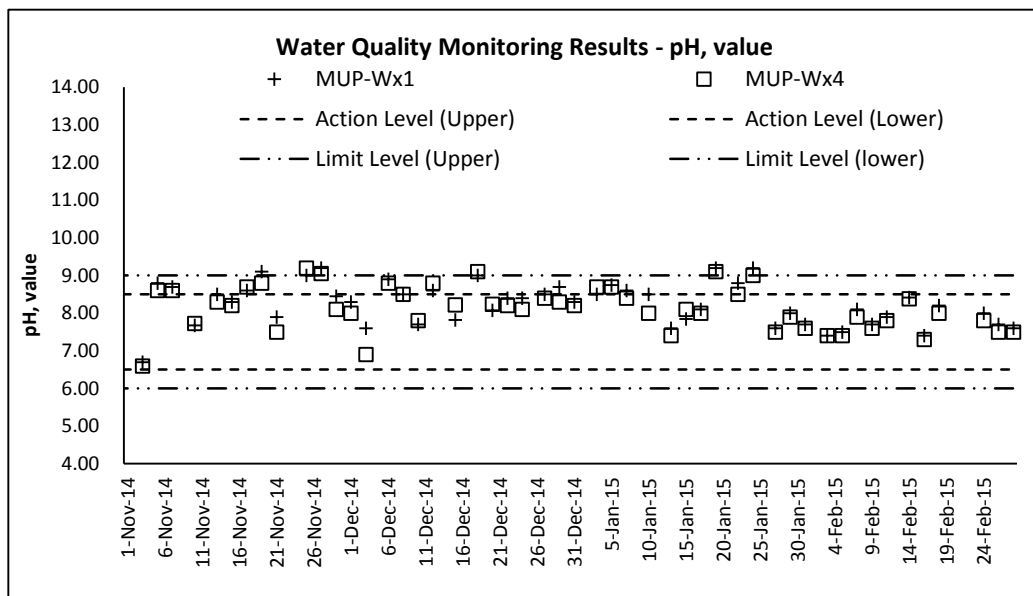
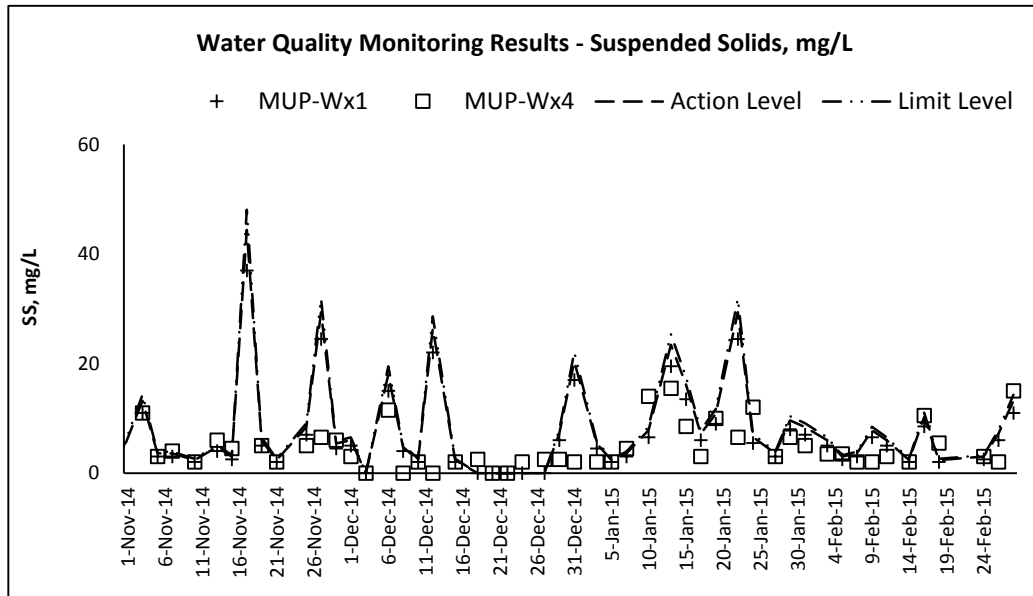
Construction Noise



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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025
Oct-14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030
Nov-14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec-14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	27.160	0.000	0.000	27.160	0.000	2.560	0.550	0.148	0.000	0.040	0.455

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 2015

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-15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Feb-15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar-15											
Apr-15											
May-15											
Jun-15											
Jul-15											
Aug-15											
Sep-15											
Oct-15											
Nov-15											
Dec-15											
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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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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: Dec-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

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Report Period: Dec-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.
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Report Period: Dec-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	
20	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	225	222	
21	Transition formwork & falsework (Portion A,B,C,D,E)	Temporary formwork & falsework design	226	223	
22	Transition formwork & falsework (Portion A,B,C,D,E)	Temporary formwork & falsework design	230	229	
23	Transition formwork & falsework (Portion A,B,C,D,E)	Temporary formwork & falsework design	231	230	
24	Transition formwork & falsework (Portion A,B,C,D,E)	Temporary formwork & falsework design	236	237	

Notes

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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: Jan-15

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	
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Contract No.: DC/2011/06

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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 (m³)	Actual Quantities used (m³)	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	
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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	
20	Transition formwork & falsework (Portion A,B,C,E)	Temporary formwork & falsework design	225	222	
21	Transition formwork & falsework (Portion A,B,C,D,E)	Temporary formwork & falsework design	226	223	
22	Transition formwork & falsework (Portion A,B,C,D,E)	Temporary formwork & falsework design	230	229	
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24	Transition formwork & falsework (Portion A,B,C,D,E)	Temporary formwork & falsework design	236	237	
25	Transition formwork & falsework (Portion A,B,C,D,E)	Temporary formwork & falsework design	239	239	

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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: Feb-15

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1	Transition formwork & falsework (Portion A,B,E)	Temporary formwork & falsework design	10	9	
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19	Transition formwork & falsework (Portion A,B,C,E)	Temperary formwork & falsework design	215	212	
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