Environmental Protection Department

Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

Quarterly EM&A Report for August to October 2014

[11/2014]

	Name	Signature
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Hyder-Arup-Black & Veatch Joint Venture c/o Hyder Consulting Limited 47/F Hopewell Centre 183 Queen's Road East Wanchai, Hong Kong

Dear Sir.

21 November 2014 By Fax (2805 5028) & Post

Attn: Mr. James Penny

EM&A for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling Stage 2 (between Tai Hang to Wo Hop Shek Interchange)

Environmental Permit No. EP-324/2008/B

Quarterly EM&A Summary Report for August 2014 to October 2014 for the portion of Stage 2 works under Contract No. HY/2012/06

We refer to the Quarterly EM&A Summary Report for August 2014 to October 2014 for the Project received on 19 and 21 November 2014 submitted by ET via email. We confirm we have no comment.

Yours faithfully

for MOTT MACDONALD HONG KONG LIMITED

Terence Kong

Independent Environmental Checker

c.c. HyD – Mr. Chung Lok Chin / Mr. Tang Man Kai (Fax: 2714 5198)

AECOM - Mr. Y W Fung (Fax:2891 0305)

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AECOM Asia Co. Ltd. 1 November 2014

EXECUTIVE SUMMARY

The proposed widening of Tolo Highway and Fanling Highway between Island House Interchange and Fanling (the Project) is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). An Environmental Impact Assessment (EIA) Report (the approved EIA Report) together with an Environmental Monitoring and Audit (EM&A) Manual (the approved EM&A Manual) were completed and approved under the EIAO on 14 July 2000 (Register Number: EIA-043/2000).

The objective of the Project "Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling" is to widen Tolo Highway and Fanling Highway to dual 4-lane carriageway in order to alleviate the current traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic.

The construction works for this Project will be delivered in 2 stages i.e. Stage 1 (between Island House Interchange and Tai Hang) and Stage 2 (between Tai Hang and Wo Hop Shek Interchange). Stage 2 would be implemented under two works contracts. Contract No. HY2012/06 "Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange" and the entrusted portion to CEDD under Contract No. CV/2012/09 "Liantang/Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 3". This report focuses on Contract No. HY2012/06 "Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange" in Stage 2 of the Project only.

Pursuant to the EP (EP-324/2008/A) Condition 2.7, the Capture Survey Trip Report for Ma Wat River Northern Meander (Version 2) for the Project was submitted on 24 December 2013 by the Environmental Team (ET) and verified by the Independent Environmental Checker (IEC) on 6 January 2014.

The construction phase of the Contract under the EP and the Environmental Monitoring and Audit (EM&A) programme of the contract commenced on 21 November 2013. The impact environmental monitoring and audit includes air quality and noise monitoring.

This report documents the findings of EM&A works conducted in the period between 1 August 2014 and 31 October 2014. As informed by the Contractor, construction activities in the reporting period were:-

- Site clearance;
- Ground investigation:
- Tree felling and transplantation;
- Piling works;
- Pipe laying;
- Retaining wall construction;
- Excavation;
- Backfilling;
- Drainage;
- Temporary bridge construction;
- Noise barrier construction;
- Houses demolition; and
- Bridge demolition.

Reporting Change

There was no reporting change required in the reporting period.

Breaches of Action and Limit Levels for Air Quality

No exceedance of Action and Limit Level was recorded for 1-hour and 24-hour TSP monitoring in the reporting period.

Breaches of Action and Limit Levels for Noise

No Action or Limit Level exceedance of construction noise was recorded in the reporting period. No noise complaints related to 0700-1900 hours on normal weekdays was received and followed by Environmental Team in the reporting period.

1 INTRODUCTION

1.1 Project Organization and Contacts of Key Management

1.1.1 The project organization structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
ER (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer	Edwin Chung	6115 0818	2638 0950
IEC (Mott MacDonald Hong Kong Limited)	Independent Environmental Checker	Terence Kong	2828 5919	2827 1823
Contractor (China State	Environmental	Michael Tsang	9277 4956	2672 2501
Construction Engineering (Hong Kong) Limited)	onstruction Officer neering (Hong		9679 6315	2672 2501
ET (AECOM Asia Company Limited)	ET Leader	Y W Fung	3922 9393	3922 9797

1.2 Programme

1.2.1 The Construction Programme is shown in Appendix B.

1.3 Summary of Construction Works

- 1.3.1 Details of the construction works carried out by the Contractor in this reporting period are listed below:-
 - Site clearance;
- Ground investigation;
- Tree felling and transplantation;
- Piling works;
- Pipe laying;
- Retaining wall construction;
- Excavation;
- Backfilling;
- Drainage;
- Temporary bridge construction;
- Noise barrier construction;
- Houses demolition; and
- Bridge demolition.

- The general layout plan of the Project site showing the contract areas is shown in Figure 1.1. 1.3.2
- 1.3.3 The environmental mitigation measures implementation schedule are presented in Appendix C.

2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

2.1 Monitoring Parameters

- 2.1.1 The updated EM&A Manual has designated 1 air quality monitoring station and 2 noise monitoring stations to monitor environmental impacts on air quality and noise due to Stage 2 of the Project.
- 2.1.2 The updated EM&A Manual also requires environmental site inspections for air quality, noise, water quality, chemical, waste management, ecology and landscape and visual impacts.

2.2 Monitoring Locations

- 2.2.1 For air quality monitoring, the monitoring station was set up at Fanling Government Secondary School, in accordance with updated EM&A Manual. The location is shown in Figure 1.2a.
- 2.2.2 For noise monitoring, the monitoring stations M2 and M3 were set up at West Tai Wo and Fanling Government Secondary School respectively in accordance with updated EM&A Manual. Figure 1.2a-b shows the locations of the monitoring stations.

2.3 Environmental Quality Performance Limits (Action/Limit Levels)

- 2.3.1 The environmental quality performance limits (i.e. Action/Limit Levels) of air quality monitoring were derived from the baseline air quality monitoring results at the monitoring station (AM2); while the environmental quality performance limits of noise monitoring were defined in the EM&A Manual.
- 2.3.2 The environmental quality performance limits are given in Appendix D.

2.4 Environmental Mitigation Measures

2.4.1 Relevant environmental mitigation measures were stipulated in the Particular Specification and EP for the Contractor to adopt. A list of environmental mitigation measures and their implementation statuses are given in Appendix C.

3 AIR QUALITY MONITORING

- 3.1.1 In accordance with the updated EM&A Manual, baseline 1-hour and 24-hour TSP levels at one air quality monitoring station was established. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was carried out for at least once every 6 days.
- 3.1.2 The weather was mostly sunny, with several fine, cloudy and rainy days in the reporting quarter. Weather information including the wind speed and wind direction is annexed in Appendix F. The information was obtained from the Hong Kong Observatory Tai Po and Tai Mei Tuk Automatic Weather Stations.
- 3.1.3 The monitoring results for 1-hour TSP and 24-hour TSP monitoring are summarized in Tables 3.1 and 3.2 respectively. Detailed impact air quality monitoring results are presented in Appendix E.

Table 3.1 Summary of 1-hour TSP Monitoring Results in the Reporting Period

Location	Average (μg/m³)	Range (μg/m³)	Action Level (μg/m³)	Limit Level (μg/m³)
AM2 (Fanling Government Secondary School)	74.4	61.7 – 89.6	317.8	500

Table 3.2 Summary of 24-hour TSP Monitoring Results in the Reporting Period

Location	Average (μg/m³)	Range (μg/m³)	Action Level (μg/m³)	Limit Level (μg/m³)
AM2 (Fanling Government Secondary School)	30.1	0.2 – 59.9	200.7	260

- 3.1.4 The major dust sources in the reporting period included construction activities from Stage 2 of the Project, as well as nearby traffic emissions.
- 3.1.5 All 1-hour and 24-hour TSP results were below the Action and Limit Level in the reporting quarter.
- 3.1.6 Detailed impact air quality monitoring results are presented in Appendix E.

4 NOISE MONITORING

- 4.1.1 In accordance with the EM&A Manual, impact noise monitoring was conducted for at least once per week during the construction phase of the Contract.
- 4.1.2 The monitoring results for construction noise are summarized in Table 4.1 and the monitoring data are provided in Appendix G.

Table 4.1 Summary of Construction Noise Monitoring Results in the Reporting Period

	Average (dB(A))	Range (dB(A))	Limit Level (dB(A))
	L _{eq (30 mins)}	L _{eq (30 mins)}	L _{eq (30 mins)}
M2*	69.7	66.8 – 72.6	75
M3 [#]	64.1	60.1 – 67.5	65/70

^{*+3}dB(A) Façade correction included

- 4.1.3 The major noise sources during the noise monitoring included nearby road traffic noise.
- 4.1.4 No Action or Limit Level exceedance of construction noise was recorded in the reporting period. No noise complaints related to 0700 1900 hours on normal weekdays was received and followed by the Environmental Team in the reporting period.
- 4.1.5 The graphical plots of the trends of the monitoring results are provided in Appendix G.

5 ADVICE ON THE SOLID AND LIQUID WASTE MANAGEMENT STATUS

- 5.1.1 As advised by the Contractor, 3,666 m³ of inert C&D material was disposed of as public fill to Tuen Mun 38 (of which 0m³ was broken concrete), while 280 m³ of general refuse was disposed of at NENT landfill. 203 kg of paper/cardboard packaging, 0 kg of plastics and 17 kg of metals were collected by recycling contractors in the reporting period. 2,105 m³, 553 m³, and 1,008 m³ of inert C&D materials were reused on site, in other projects and in NENT for backfilling purpose respectively. 0kg of chemical wastes was collected by licensed contractors in the reporting period.
- 5.1.2 The actual amounts of different types of waste generated by the activities of the Project in the reporting quarter are summarized in Table 5.1.

[#] Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

Table 5.1 Summary of Waste Flow Table

Waste Type	Actual Amount	Disposal/Reuse Locations
Inert C&D materials	3,666 m ³ (of which 0m ³	Tuen Mun 38
	was broken concrete)	
General refuse	280 m ³	NENT Landfill
Paper/cardboard packaging	203 kg	Recycling Contractors
Plastics	0kg	Recycling Contractors
Metals	17kg	Recycling Contractors
C&D materials reused on site	2,105 m ³	Site Area
C&D materials reused in other	553 m ³	Other projects
projects	393 111	Other projects
C&D materials reused in NENT	1,008 m ³	NENT Landfill
for backfilling	1,000 111	INCINI Lanumi
Chemical wastes	0kg	Licensed Contractors

6 SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

- 6.1.1 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the reporting quarter.
- 6.1.2 All construction noise monitoring results complied with the Action / Limit Levels in the reporting quarter.

7 SUMMARY OF COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 7.1.1 One (1) air-related complaint was received on 23 October 2014 and followed up by the Environmental Team in the reporting period. The full complaint investigation report is annexed in Appendix M of the Monthly EM&A Report for October 2014.
- 7.1.2 No notification of summons and successful prosecution was received in the reporting period.
- 7.1.3 The statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix H.
- 7.1.4 A 24-hour complaint hotline at 6628 8366 has been established for the Project. The hotline number is displayed at the site entrances, fencings and project signboards, as well as printed on publications such as newsletters for the public.

8 COMMENTS, RECOMMENDATIONS AND CONCLUSIONS

8.1 Comments

8.1.1 According to the environmental site inspections performed in the reporting quarter, the following comments are made to the Contractor for precautionary and rectification purposes:

Air Quality Impact

- 8.1.2 The Contractor should maintain effective wheel washing facilities and clear the mud trails left on public road.
- 8.1.3 The Contractor should spray the stockpiles with water or cover them entirely by tarpaulin sheets for dust suppression.
- 8.1.4 The Contractor was reminded to spray water on main haul roads to maintain the surfaces wet and suppress dust. (Reminder)

Construction Noise Impact

8.1.5 The Contractor should further wrap the upper part of the breaker with absorptive materials to minimize noise generation.

Water Quality Impact

- 8.1.6 The Contractor was reminded to divert muddy water to desilting facilities prior to discharge. (Reminder)
- 8.1.7 The Contractor should clear the muddy water and add sand bundings near the site boundary to prevent the discharge of muddy water when necessary.

Chemical and Waste Management

- 8.1.8 The Contractor was reminded to use absorptive materials to soak leaked oil, if any, when maintaining the power pack. (Reminder)
- 8.1.9 The Contractor should clear oil stains on the ground and prevent oil leakage to air, soil and water bodies.
- 8.1.10 The Contractor should provide drip trays to chemicals and generator to prevent any oil leakage.
- 8.1.11 The Contractor should clear the general refuse regularly to maintain site hygiene.

Landscape and Visual Impact

8.1.12 No adverse observation was identified in the reporting month.

Miscellaneous

8.1.13 The Contractor should clear the stagnant water to prevent mosquito breeding.

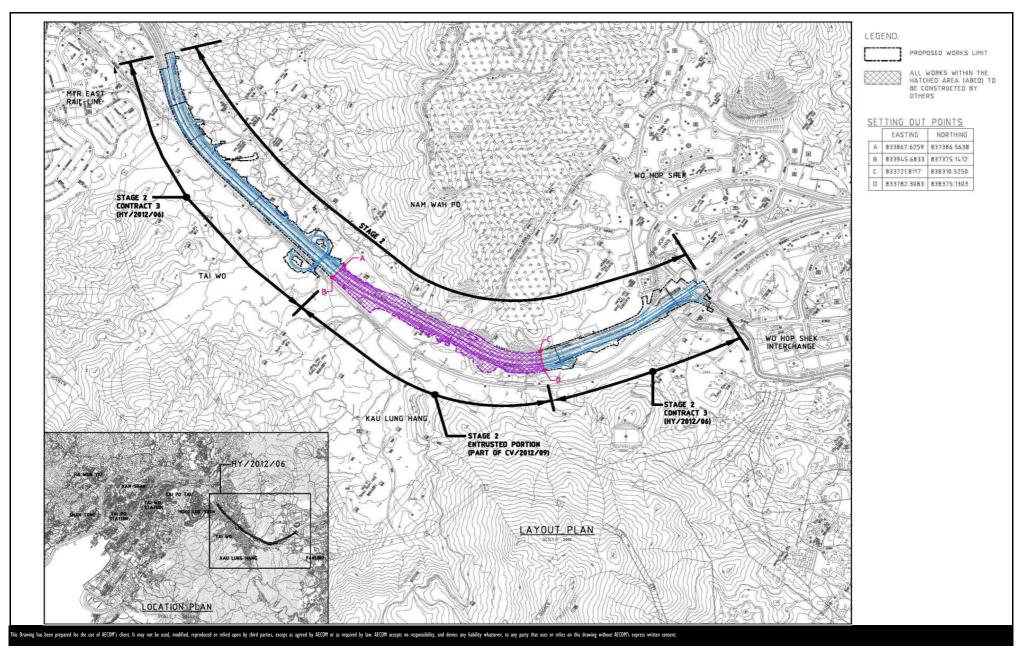
8.2 Recommendations

- 8.2.1 The impact air quality and noise monitoring programme ensures that any deterioration in environmental condition is readily detected and timely actions are taken to rectify any non-compliances. Assessment and analysis of monitoring results collected demonstrated the environmental acceptability of the Project. The weekly environmental site inspections ensure that all the environmental mitigation measures recommended in the ERR are effectively implemented.
- 8.2.2 The EM&A programme effectively monitored the environmental impacts from the construction activities and no particular recommendations were advised for the improvement of the programme.

8.3 Conclusions

- 8.3.1 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the reporting quarter.
- 8.3.2 All construction noise monitoring results complied with the Action / Limit Levels in the reporting quarter.
- 8.3.3 One (1) air-related complaint was received on 23 October 2014 and followed up by the Environmental Team in the reporting period. The full complaint investigation report is annexed in Appendix M of the Monthly EM&A Report for October 2014.
- 8.3.4 No notification of summons and successful prosecution was received in the reporting period.

FIGURES



CONTRACT NO. HY/2012/06

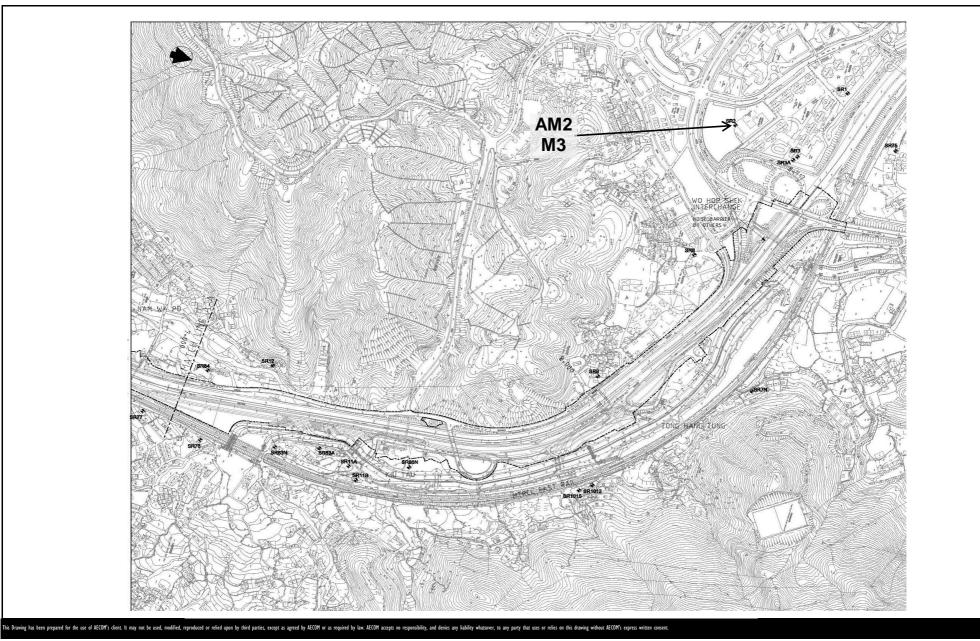
WIDENING OF FANLING HIGHWAY

- TAI HANG TO WO HOP SHEK INTERCHANGE

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Layout Plan

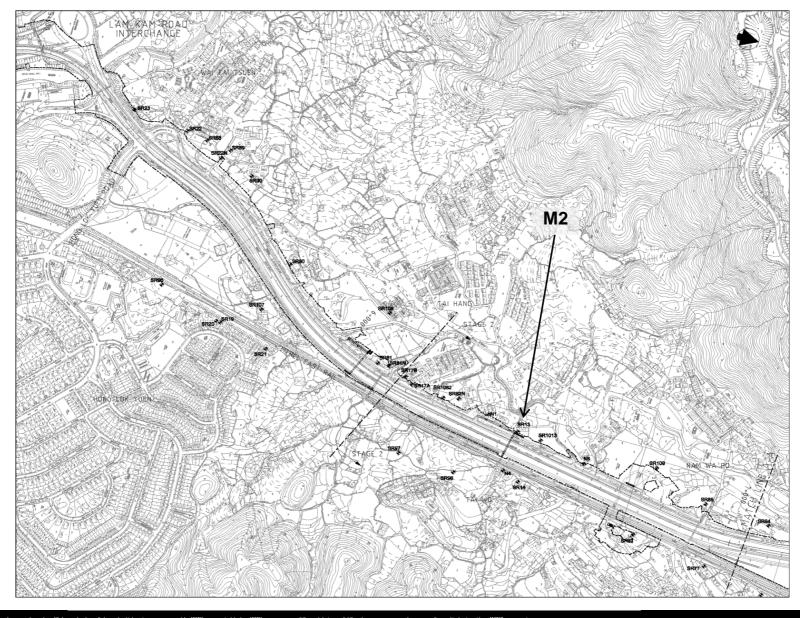
Date: Dec 2013 Figure 1.1



CONTRACT NO. HY/2012/06
WIDENING OF FANLING HIGHWAY

- TAI HANG TO WO HOP SHEK INTERCHANGE





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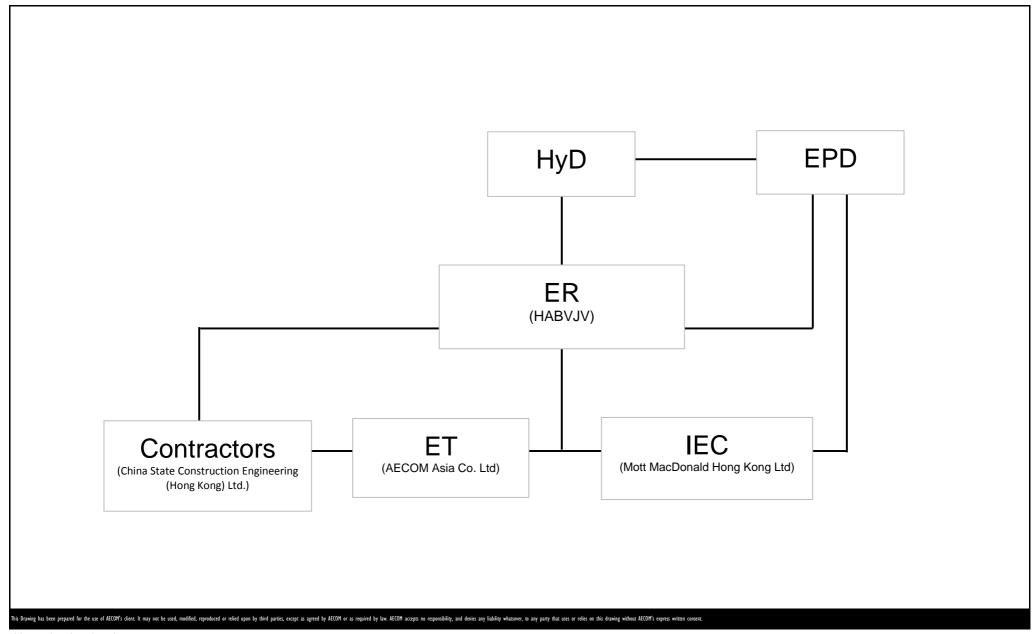
CONTRACT NO. HY/2012/06
WIDENING OF FANLING HIGHWAY

- TAI HANG TO WO HOP SHEK INTERCHANGE



Date: Dec 2013 Figure 1.2b

APPENDIX A PROJECT ORGANIZATION STRUCTURE



CONTRACT NO. HY/2012/06

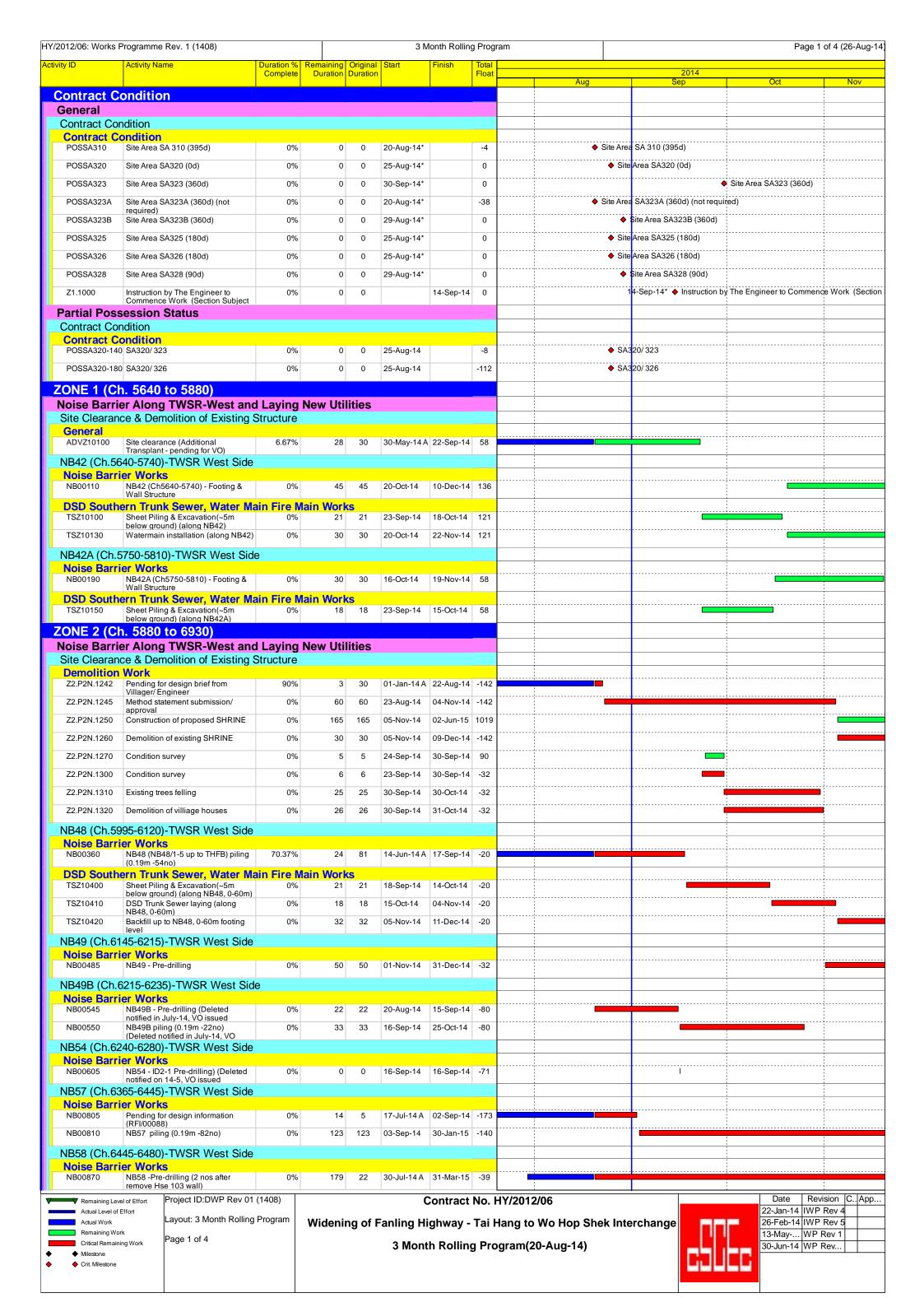
WIDENING OF FANLING HIGHWAY

- TAI HANG TO WO HOP SHEK INTERCHANGE

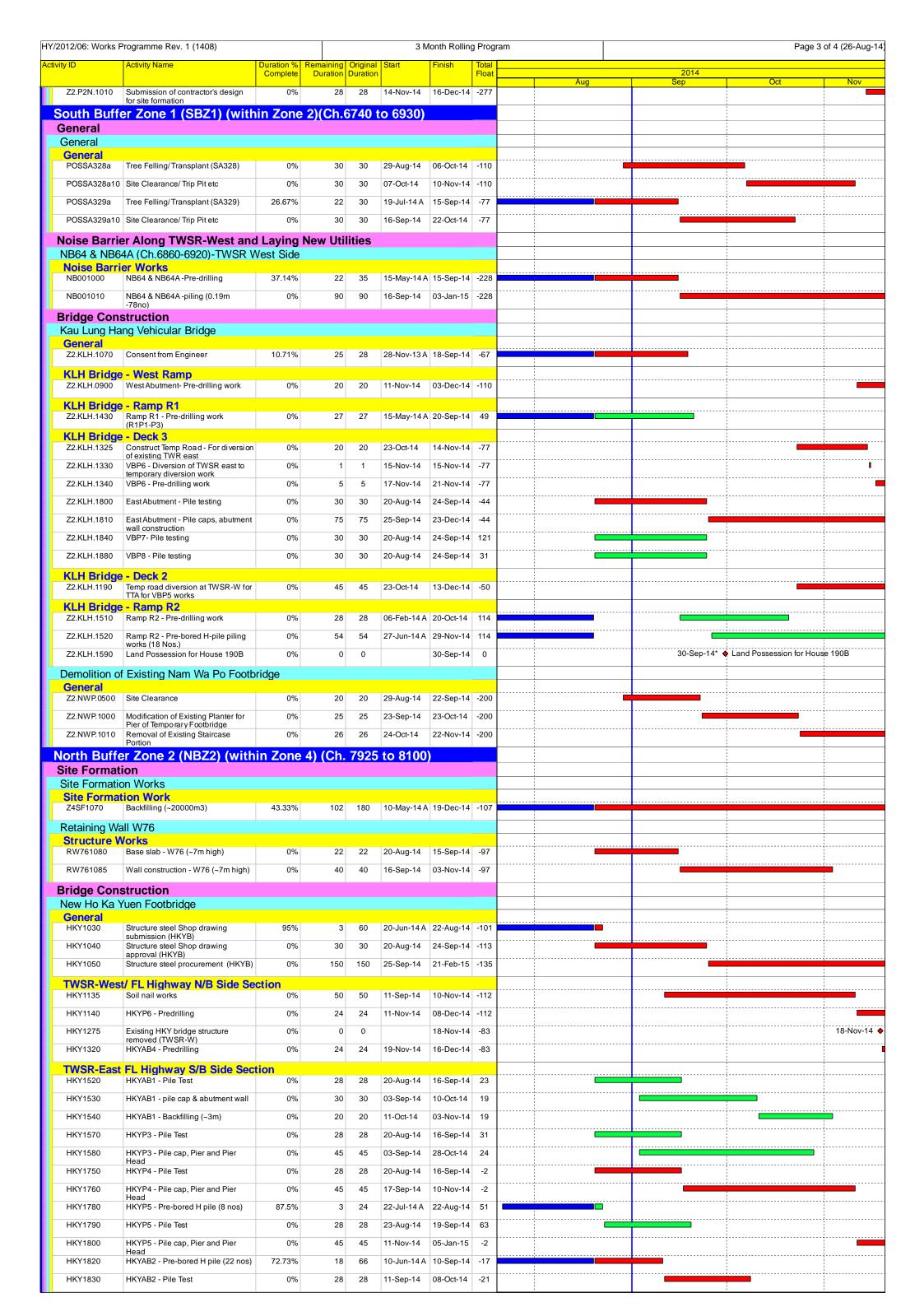


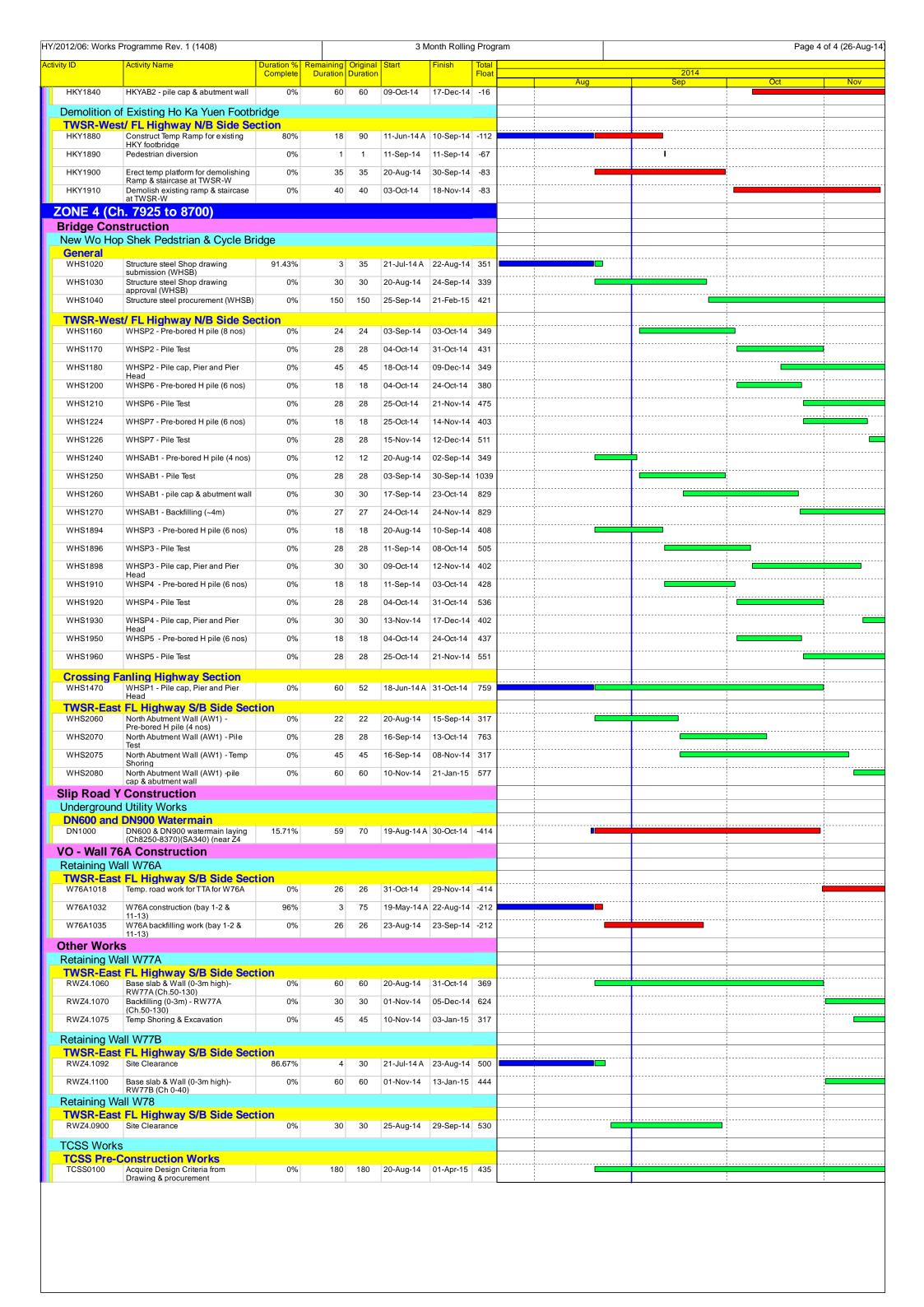
Project No.: 60307376 Date: Dec 2013 Appendix A

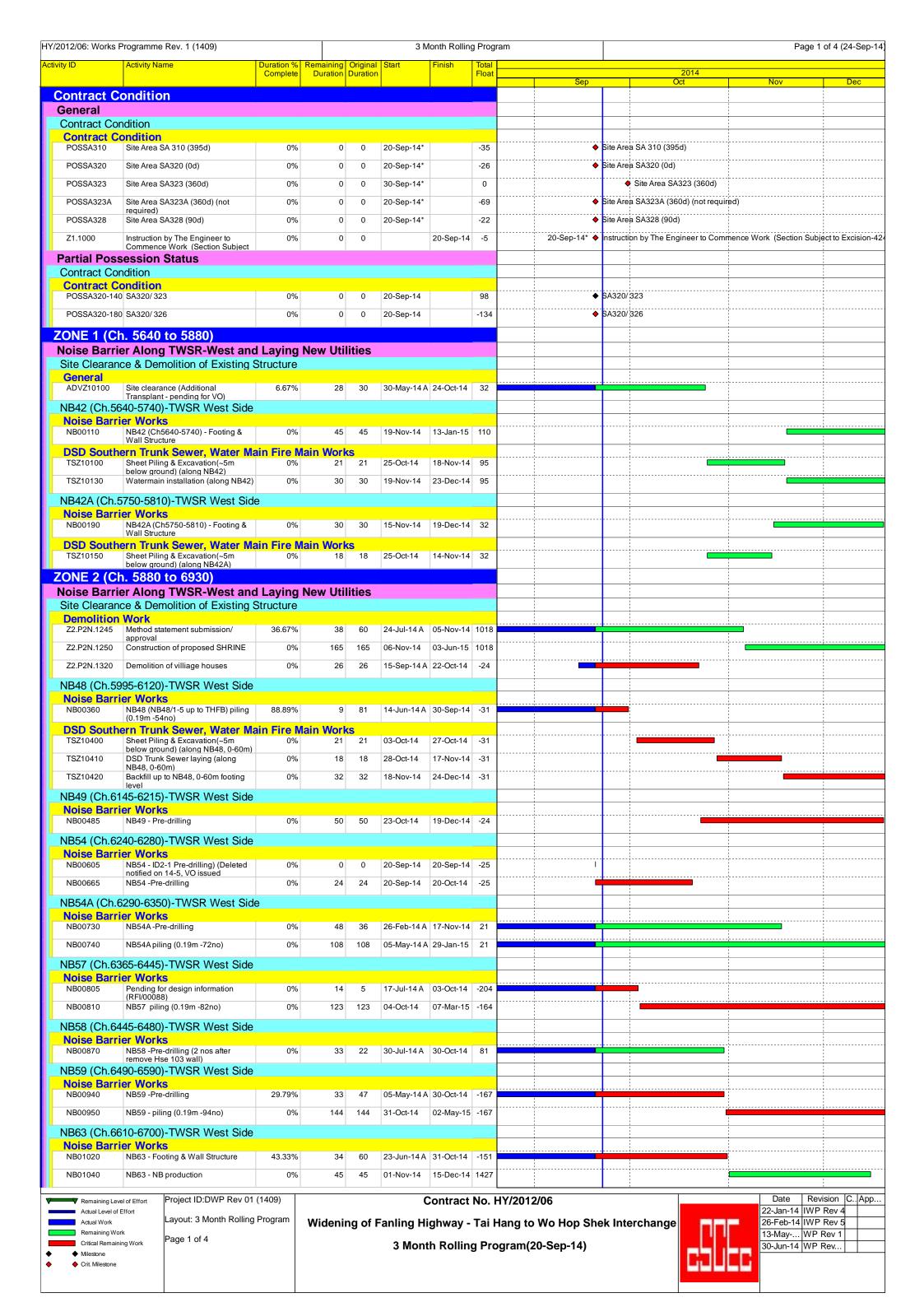
APPENDIX B CONSTRUCTION PROGRAMMES



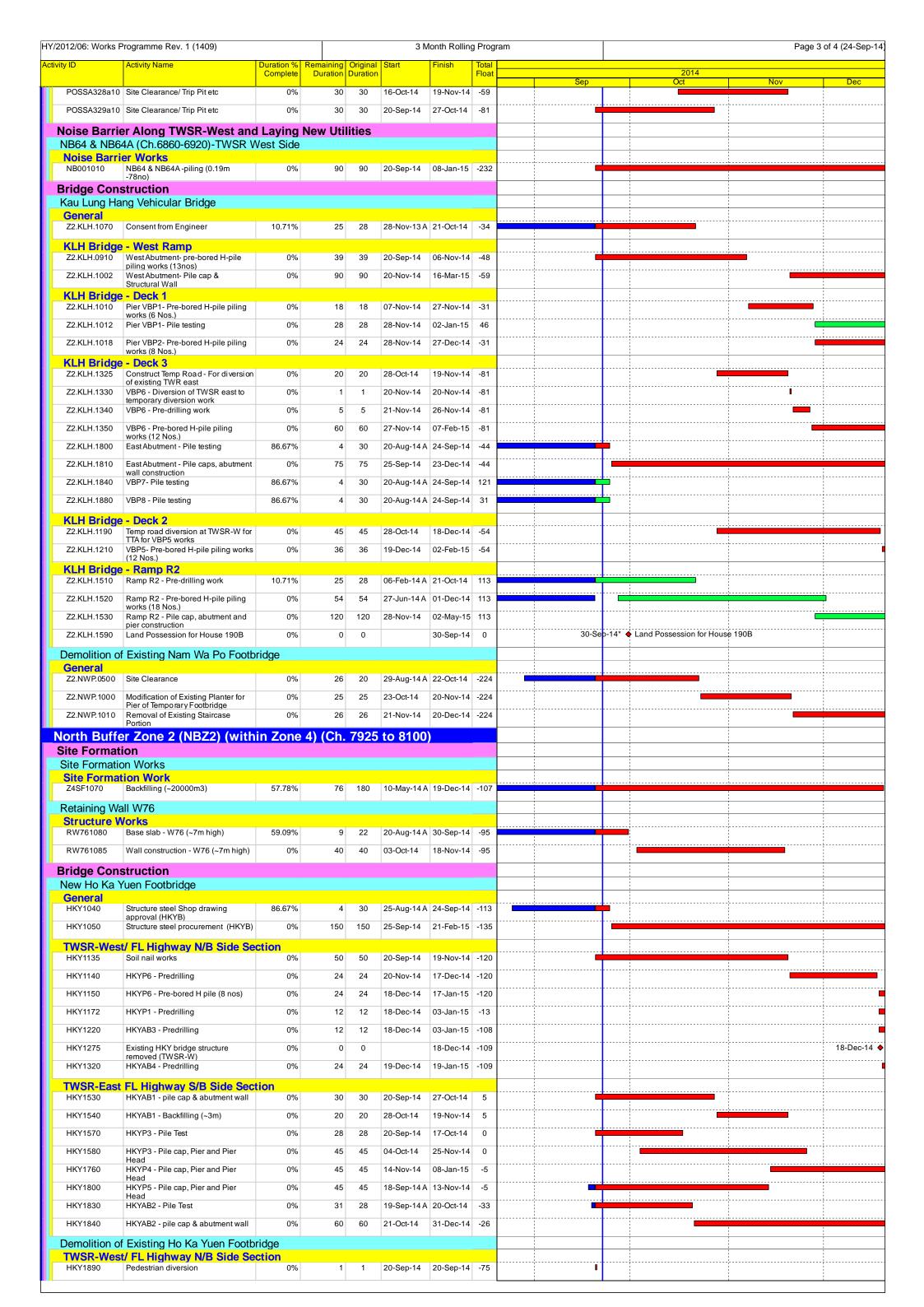
	Programme Rev. 1 (1408)	Duroties	Domaini	Origin		Month Rolling Pr					e 2 of 4 (26-Au
ty ID	Activity Name	Complete	Remaining Duration	Duration	n Start	Finish To		Aug	2014 Sep	Oct	Nov
	190-6590)-TWSR West Side										
Noise Barri NB00940	ier Works NB59 -Pre-drilling	0%	47	47	05-May-14 A	A 16-Oct-14 -1	55				
NB00950	NB59 - piling (0.19m -94no)	0%	144	144	17-Oct-14	17-Apr-15 -1	55				
NB63 (Ch.66	510-6700)-TWSR West Side										
Noise Barri	ier Works NB63 - Footing & Wall Structure	0%	60	60	18-Nov-14	29-Jan-15 -1	25				
NB4560	NB63 - ID3-1 Footing & Wall	88.33%	7	60		29-Jan-15 -1.					
	Structure ern Trunk Sewer, Water Ma				14-3011-147	21-Aug-14 -					
TSZ10300	Sheet Piling & Excavation(~7m below ground) (along NB63)	0%	22	12	23-Jul-14 A	15-Sep-14 -1	35				
TSZ10310	DSD Trunk Sewer laying (along NB63)	0%	18	18	16-Sep-14	08-Oct-14 -1	35				
TSZ10320	Backfill up to NB63 footing level	0%	34	34	09-Oct-14	17-Nov-14 -1	35				
TSZ10330	Watermain installation (along NB63)	0%	30	30	18-Nov-14	22-Dec-14 -1	35				
	ern Trunk Sewer - Trenchle			00	40 0 44	00 Nov. 4.4					
TSZ10950	Construct Pipe jacking pits	0%	60	60	16-Sep-14	26-Nov-14 6	1				
Structure V	Extension ID1 Vorks										
ID1-0100	Box Culvert Extension ID1 structure	0%	118	118	01-Nov-14	30-Mar-15 -11	18				
	Extension ID2										
Structure V	Vorks Box Culvert Extension ID2 structure	0%	118	118	01-Nov-14	30-Mar-15 -1	18				
Bridge Con	struction										
New Tai Han	g Footbridge										
General THBF0330	Structure steel Shop drawing	0%	60	60	20-Aug-14	31-Oct-14 62	21				
THBF0335	submission (THFB) Structure steel Shop drawing	0%	30	30	15-Oct-14	18-Nov-14 62	21				
THBF0340	approval (THFB) Structure steel procurement (THFB)	0%	150	150	19-Nov-14	17-Apr-15 77	77				
TWSR-Wes	│ st/ FL Highway N/B Side Se	ection									
THBF0120	THP5 - Pre-bored H pile (8 nos)	0%	24	24	03-Sep-14	03-Oct-14 -7	9				
THBF0130	THP5 - Pile Test	0%	28	28	04-Oct-14	31-Oct-14 10					
THBF0140	THP5 - Pile cap, Pier and Pier Head	0%	45	45	18-Oct-14	09-Dec-14 80					
THBF0160	THP8, THP9 - Pre-bored H pile (8 nos)	0%	24	24	04-Oct-14	31-Oct-14 -7					
THBF0170	THP8, THP9 - Pile Test	0%	28	28	01-Nov-14	28-Nov-14 11					
THBF0180	THP8, THP9 - Pile cap, Pier and Pier Head	0%	30	30	15-Nov-14	19-Dec-14 88					
THBF0200	THAB3 - Pre-bored H pile (4 nos) THAB3 - Pile Test	0%	12	12	20-Aug-14 03-Sep-14	02-Sep-14 -7 30-Sep-14 11					
THBF0210	THAB3 - Pile lest	0%	30	30	17-Sep-14	23-Oct-14 91					
THBF0230	THAB3 - pile cap & abdument wall THAB3 - Backfilling (~4m)	0%	27	27	24-Oct-14	23-Oct-14 91 24-Nov-14 91					
THBF0290	THAB2 - Pre-bored H pile (18 nos)	0%	54	54	01-Nov-14	06-Jan-15 -7					
	FL Highway S/B Side Sec			· ·	01110111						
THBF0440	THAB1 - Predrilling	0%	12	12	20-Aug-14	02-Sep-14 74	16		<u></u>		
THBF0490	THP2 - Predrilling	0%	12	12	03-Sep-14	17-Sep-14 74	16				
THBF0700	THP3 - Predrilling	0%	6	6	18-Sep-14	24-Sep-14 76	64				
THBF0740	THP4 - Predrilling	0%	6	6	25-Sep-14	03-Oct-14 77	74				
New Tai Wo	Footbridge										
General TWFB1010	Site Clearance	0%	30	30	25-Aug-14	29-Sep-14 -7	5			•	
TWFB1020	Structure steel Shop drawing	0%	90	90	20-Aug-14	05-Dec-14 84	12				:
TWFB1030	submission (TWFB) Structure steel Shop drawing	0%	30	30	19-Nov-14	23-Dec-14 84	12	i			
	approval (TWFB) tt/ FL Highway N/B Side Se										
TWFB1210	TWAB2 - Predrilling	0%	12	12	30-Sep-14	15-Oct-14 13					
TWFB1310	TWAB1 - Predrilling	0%	27	27		20-Sep-14 -6		-			
TWFB1320	TWAB1 - Pre-bored H pile (18 nos)	0%	54	54	30-Sep-14	03-Dec-14 -7	5				
Temporary Topological Temporary Topological Temporary Te	ai Wo Footbridge										
	Design preparation	0%	90	90	20-Aug-14	05-Dec-14 27	73				-
	f Existing Tai Wo Footbridge				1	1					
	t <mark>/ FL Highway N/B Side Se</mark> Site Clearance	ection 0%	30	30	20-Aug-14	24-Sep-14 66	60				
	er Along Fanling Highwa				. g	,					
NB51 (Ch.59	935-6055)-FH S/B Side	y 5/15									
Noise Barri NB02270		0%	21	21	20-Aug-14	13-Sep-14 40)8				
NB02280	Excavation NB51 ID1-3 (0-25m) - Sneet pilling & Excavation NB51 ID1-3 (0-25m) - Footing &	0%	90	90	15-Sep-14	02-Jan-15 40					
	Wall Structure 6560-6745)-FH S/B Side (MT			90	.5 Jep-14	02 Jan-10 40					
Noise Barri	ier Works	INC IAP F	u ca)								
NB03020	NB61A (75-190m) - Footing & Wall Structure	24.29%	53	70	02-Jun-14 A	23-Oct-14 -19	90				
NB03030	NB61A (75-190m)- backfilling	0%	80	80	24-Oct-14	28-Jan-15 -19	90			_	
NB03040	NB61A (75-190m) - NB production	0%	45	45	24-Oct-14	07-Dec-14 14	35				
Other Work		0.1									
Site Clearan Contract C	ce & Demolition of Existing S	Structure									
Z2.P2N.1280	Re-provision of Man Ching Lung	0%	183	150	21-Jul-14 A	08-Apr-15 -5	9			 	
General	Tong									1	
Ochici ai											4

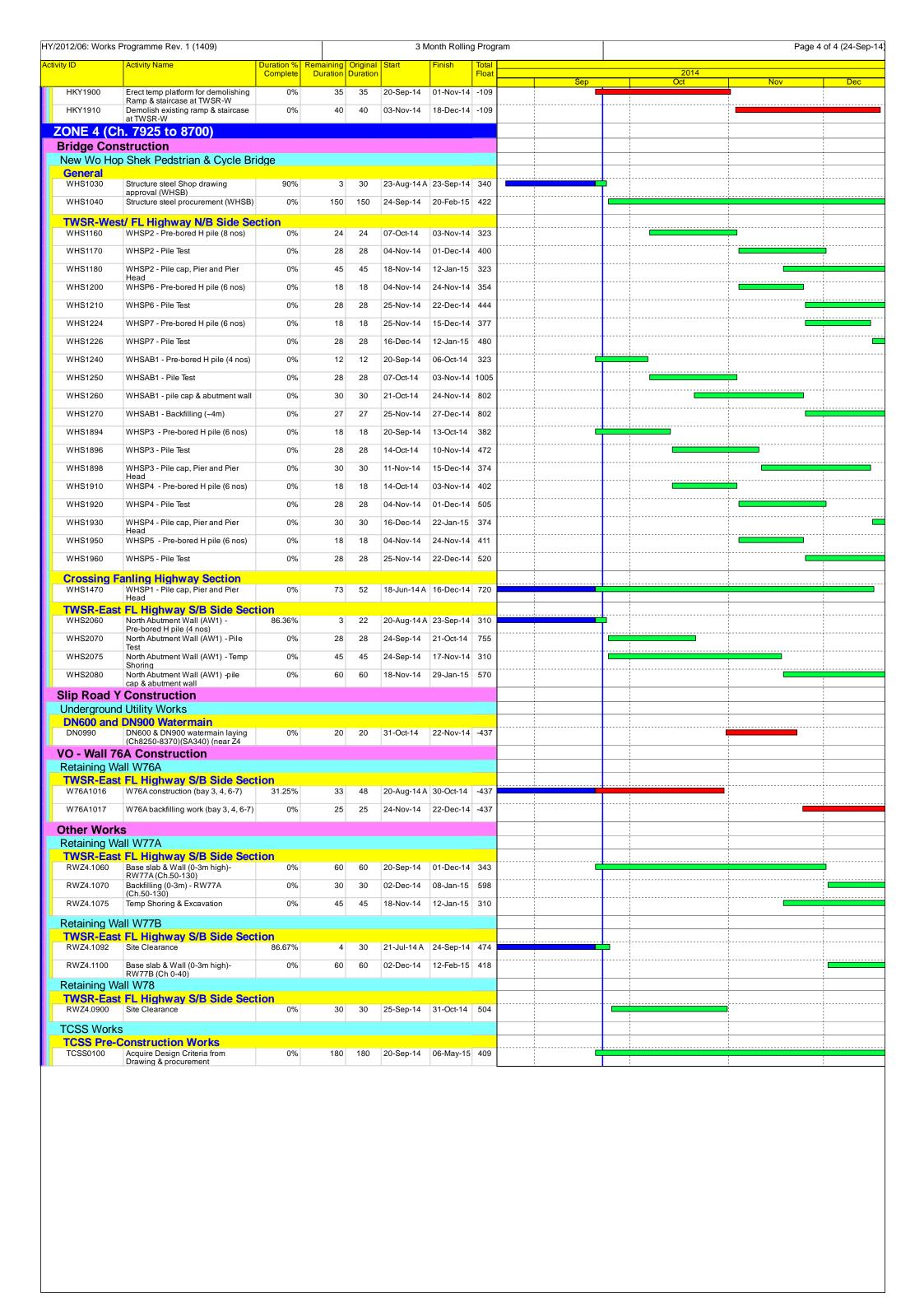




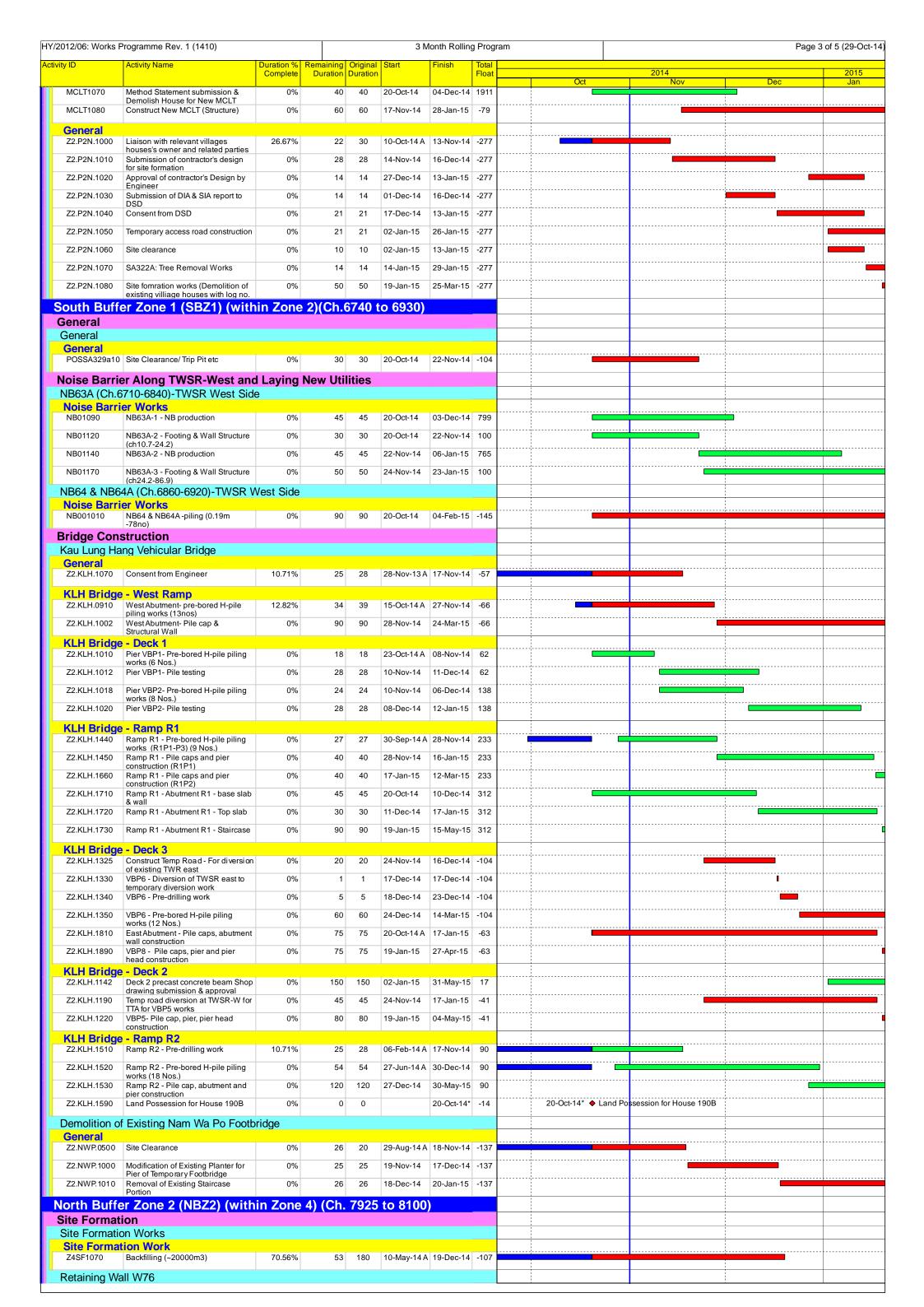


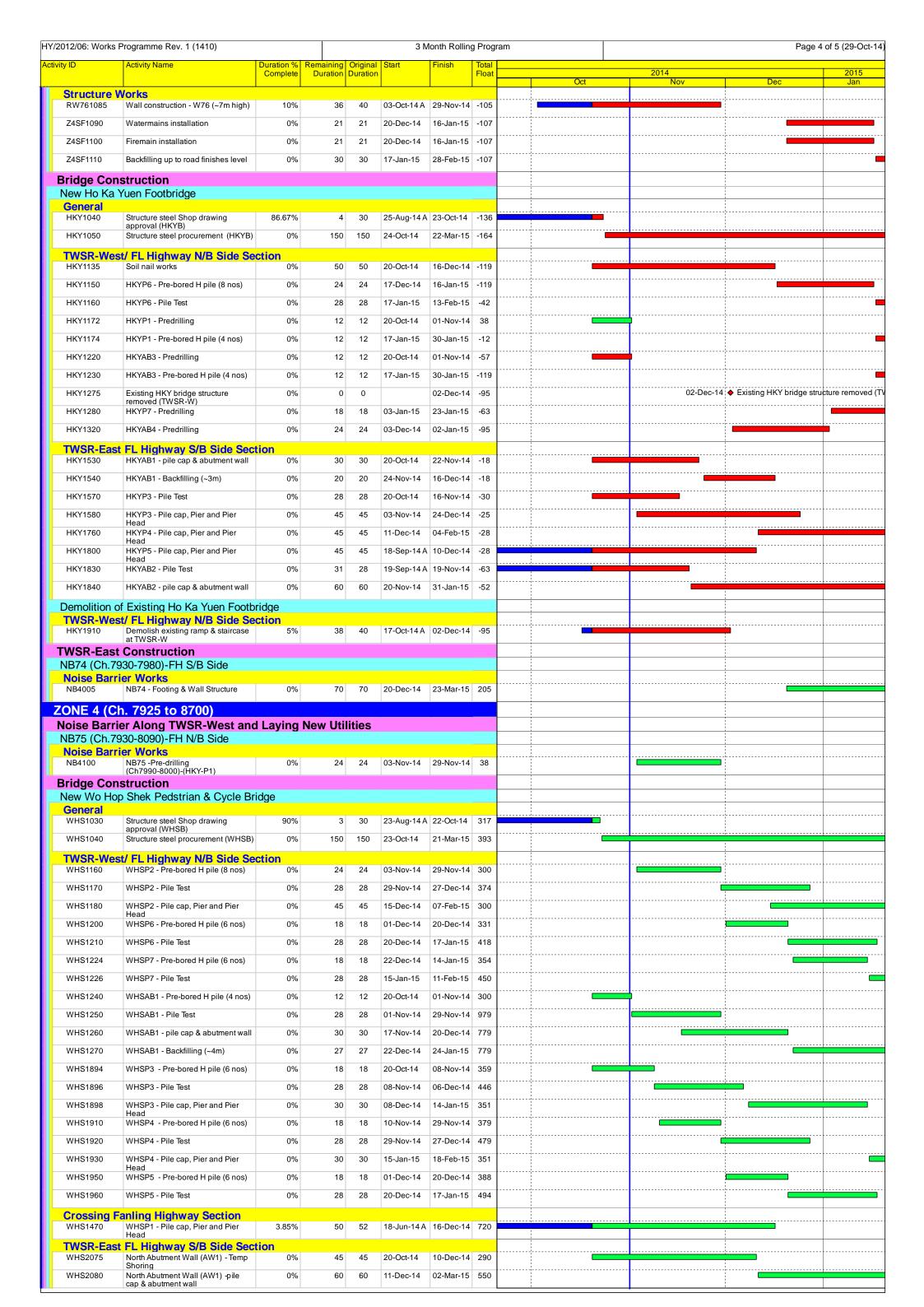
NB4560 NB63 - ID3-1 Footing & Wall Structure Structure Works ID1-0100 Box Culvert Extension ID1 Structure Works ID1-0100 Box Culvert Extension ID2 Structure Works ID2-0100 Box Culvert Extension ID2 Structure Structu	Duration Durat 20 60	Activity Name		Finish Total Float						
Box Culvert Extension ID1 Structure Works	20 60			rioat		Sep		2014 Oct	Nov	Dec
Box Culvert Extension ID1 Structure Works			14-Jun-14 A	15-Oct-14 -137						
BOX Culvert Extension ID2 Structure O%		ulvert Extension ID1)						
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Structure Works			0.1107.1	00 11101						
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THBF0335 Structure steel Shop drawing approval (THFB) 0%	60 60	330 Structure steel Shop drawing	20-Sep-14	01-Dec-14 595						<u>,</u>
THBF0340 Structure steel procurement (THFB) 0% TWSR-West/FL Highway N/B Side Section THBF0120 THP5 - Pire-bored H pile (8 nos) 0% THBF0120 THP5 - Pile Test 0% THBF0140 THP5 - Pile Cap, Pile rand Piler Head 0% THBF0140 THP5 - Pile Cap, Piler and Piler Head 0% THBF0160 THP6, THP9 - Pile Cap, Piler and Piler Head 0% THBF0170 THP8, THP9 - Pile Cap, Piler and 0% THBF0180 THP8, THP9 - Pile Cap, Piler and 0% THBF0180 THP8, THP9 - Pile Cap, Piler and 0% THBF0200 THAB3 - Pile Cap, Piler and 0% THBF0200 THAB3 - Pile Test 0% 0% THBF0220 THAB3 - Pile Test 0% 0% THBF0220 THAB3 - Pile Cap, Richard 0% 0% 0% 0% 0% 0% 0% 0	30 30		14-Nov-14	18-Dec-14 595						
TWSR-West/ FL Highway N/B Side Section THBF0120 THP5 - Pre-bored H pile (8 nos) 0% THBF0130 THP5 - Pile Test 0% THBF0140 THP5 - Pile Test 0% THBF0140 THP5 - Pile Cap, Pier and Pier Head 0% THBF0160 THP6, THP9 - Pre-bored H pile (8 nos) THBF0170 THP8, THP9 - Pile Test 0% THBF0170 THP8, THP9 - Pile Test 0% THBF0180 THP8, THP9 - Pile Cap, Pier and Pier Head 0% THBF0200 THAB3 - Pre-bored H pile (4 nos) 0% THBF0210 THAB3 - Pile Test 0% THBF0220 THAB3 - Pile Test 0% THBF0220 THAB3 - Pile Test 0% THBF0230 THAB3 - Pile Test 0% THBF0240 THAB3 - Pile Cap, Pier and Pile (18 nos) 0% TWSR-East FL Highway S/B Side Section THBF0440 THAB1 - Predrilling 0% THBF0740 THP3 - Predrilling 0% THBF0740 THP4 - Predrilling 0% THBF0740 THP4 - Predrilling 0% THBF0740 THP4 - Predrilling 0% TWFB1030 Site Clearance 73.33% TWFB1030 Site Clearance 73.33% TWFB1030 Site Clearance 73.33% TWFB1040 Site Clearance 73.33% TWFB1050 Site Clearance 73.33% TWFB1070 TWAB1 - Predrilling 0% TWFB1080 Site Clearance 73.33% TWFB109 Site Clearance 73.33% TWFB100 Site Clearance 73.33% TWBB10 TWAB1 - Predrilling 70% TWB10 TWAB1 - Predrilling 70% TWBB10 TWBD-TD00 Site Clearance 70% TWBB10 TWBD-TD00 Site Clearance 70% TWBD-TD00 Site Clearance	150 150		19-Dec-14	17-May-15 747						,
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THBF0140	24 24		07-Oct-14	03-Nov-14 -105	:		<u> </u>			
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New Tail Wo Footbridge Structure steel Shop drawing submission (TWFB) TWFB110 TWFB120 TWAB2 - Pre-bored H pile (18 nos) Pre-bored	45 45	140 THP5 - Pile cap, Pier and Pier Head	18-Nov-14	12-Jan-15 782						
THBF0170	24 24		04-Nov-14	01-Dec-14 -105						•
Pier Head THAB6200	28 28		02-Dec-14	29-Dec-14 1080						
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THBF0210	12 12	Pier Head		06-Oct-14 -105						
THBF0220	28 28	. , ,	·	03-Nov-14 1105						
THBF0230	30 30			24-Nov-14 884						; !
THBF0290	27 27	· · ·		27-Dec-14 884						
TWSR-East FL Highway S/B Side Section	54 54	J ,		05-Feb-15 -105						
THBF0440	04 04		02-060-14	20 1 60-10 -100						
THBF0490	12 12		20-Sep-14	06-Oct-14 720						
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THBF0740 THP4 - Predrilling 0% New Tai Wo Footbridge General TWFB1010 Site Clearance 73.33% TWFB1020 Structure steel Shop drawing submission (TWFB) TWFB1030 Structure steel Shop drawing approval (TWFB) TWSR-West/ FL Highway N/B Side Section TWFB1210 TWAB2 - Predrilling 0% TWFB1310 TWAB1 - Pre-bored H pile (18 nos) 0% TWFB1320 TWAB1 - Pre-bored H pile (18 nos) 0% TEmporary Tai Wo Footbridge Design Works TWFB-T1010 Design preparation 0% Demolition of Existing Tai Wo Footbridge TWSR-West/ FL Highway N/B Side Section TWFB-De090 Site Clearance 0% Noise Barrier Along Fanling Highway S/B NB51 (Ch.5935-6055)-FH S/B Side Noise Barrier Works NB02270 NB51 ID1-3 (0-25m) - Sheet piling & 0% Wall Structure NB61A (Ch.6560-6745)-FH S/B Side (MTRC I&P Area Noise Barrier Works NB0300 NB51 K107-3 (0-25m) - Footing & 0% Wall Structure NB63030 NB61A (75-190m) - Footing & Wall Structure NB03030 NB61A (75-190m) - NB production 0% NB03040 NB61A (75-190m) - NB production 0% NB03050 NB61A (75-190m) - NB post & panel installation Other Works Site Clearance & Demolition of Existing Structure Contract Condition MCLT1040 Engineer approval 0% MCLT1050 Apply cert for exemption by DLO by Engineer MCLT1060 Design available for construction 0% MCLT1070 Method Statement submission & 0% Demolish House for New MCLT MCLT1080 Construct New MCLT (Structure) 0% General 22.P2N.1000 Liaison with relevant villages houses's owner and related parties Z2.P2N.1010 Submission of contractor's design for site formation 0%	6 6	9		27-Oct-14 738	·					¦
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Structure steel Shop drawing approval (TWFB)	8 30		25-Aug-14 A	29-Sep-14 -75						
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Design Works	54 54	TWAB1 - Pre-bored H pile (18 nos)	24-Oct-14	27-Dec-14 -94						
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NB03050 NB61A (75-190m) - NB post & panel own installation Other Works Site Clearance & Demolition of Existing Structure Contract Condition MCLT1040 Engineer approval 0% MCLT1050 Apply cert for exemption by DLO by Engineer MCLT1060 Design available for construction 0% MCLT1070 Method Statement submission & 0% Demolish House for New MCLT MCLT1080 Construct New MCLT (Structure) 0% General Z2.P2N.1000 Liaison with relevant villages house's owner and related parties Z2.P2N.1010 Submission of contractor's design for site formation	80 80		24-Oct-14	28-Jan-15 -190						
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Z2.P2N.1000 Liaison with relevant villages houses's owner and related parties Z2.P2N.1010 Submission of contractor's design for site formation 0%	00 60	,	Z 1-OU-14	31-DEC-14 -90						
houses's owner and related parties Z2.P2N.1010 Submission of contractor's design for site formation 0%	30 30		10-Oct-14	13-Nov-14 -277						, !
for site formation	28 28	houses's owner and related parties		16-Dec-14 -277	ļ					!
En Elliovo - Cuping-mar ti table de le le mar de la	14 14	for site formation	01-Dec-14	16-Dec-14 -277						
Z2.P2N.1040 Consent from DSD 0%	21 21	DSD		13-Jan-15 -277						
				70 Jun-10 -211						
South Buffer Zone 1 (SBZ1) (within Zone 2)	2)(Ch.674(to 6930)							
General General										
General										





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ity ID	Activity Name	Duration % Complete	Remaining Duration		Start Finish	Total Float		Oct	2014 Nov	Dec	2015 Jan
Noise Barrie								Oct	Nov	Dec	Jan
	NB59 -Pre-drilling	29.79%	33	47	05-May-14 A 26-Nov						
NB00950	NB59 - piling (0.19m -94no)	0%	144	144	27-Nov-14 30-May	-15 -190					
	10-6700)-TWSR West Side										
Noise Barrie	NB63 - Footing & Wall Structure	43.33%	34	60	23-Jun-14 A 27-Nov	-14 -174				l	
NB01040	NB63 - NB production	0%	45	45	28-Nov-14 11-Jan-	15 1400	 				
	NB63 - ID3-1 Footing & Wall	66.67%	20	60	14-Jun-14 A 11-Nov	-14 -160					
	Structure rn Trunk Sewer, Water Ma	ain Fire M	ain Work	S							
TSZ10300	Sheet Piling & Excavation(~7m below ground) (along NB63)	0%	12	12	02-Jan-15 15-Jan-	-15 -201					
TSZ10310	DSD Trunk Sewer laying (along NB63)	0%	18	18	16-Jan-15 05-Feb	-15 -201					
DSD Southe	rn Trunk Sewer - Trenchle										
	Construct Pipe jacking pits	0%	60	60	16-Jan-15 07-Apr-	-15 -39					
Box Culvert E Structure W											
	Box Culvert Extension ID1 structure	0%	118	118	20-Oct-14 A 30-Mar	-15 -118					
Box Culvert E	extension ID2										
Structure W		201	110	110		15 110		<u></u> -			
	Box Culvert Extension ID2 structure	0%	118	118	20-Oct-14 A 30-Mar	-15 -118					
Bridge Cons											
New Tai Hang General	g i ootbridge								<u> </u>		
THBF0330	Structure steel Shop drawing submission (THFB)	0%	60	60	20-Oct-14 30-Dec	-14 572					
THBF0335	Structure steel Shop drawing approval (THFB)	0%	30	30	11-Dec-14 17-Jan-	-15 572					
	Structure steel procurement (THFB)	0%	150	150	17-Jan-15 16-Jun-	-15 717					
	/ FL Highway N/B Side Se				1						
	THP5 - Pre-bored H pile (8 nos)	0%			03-Nov-14 29-Nov					<u> </u>	
	THP5 - Pile Test	0%	28	28		-14 956					
	THP5 - Pile cap, Pier and Pier Head	0%	45	45	15-Dec-14 07-Feb	-15 759					
	THP8, THP9 - Pre-bored H pile (8 nos)	0%	24	24	01-Dec-14 30-Dec	-14 -128					-
THBF0170	THP8, THP9 - Pile Test	0%	28	28	31-Dec-14 27-Jan-	-15 1051	 				
	THP8, THP9 - Pile cap, Pier and Pier Head	0%	30	30	14-Jan-15 17-Feb	-15 841					
THBF0200	THAB3 - Pre-bored H pile (4 nos)	0%	12	12	20-Oct-14 01-Nov	-14 -128			1		
THBF0210	THAB3 - Pile Test	0%	28	28	01-Nov-14 29-Nov	-14 1079					
THBF0220	THAB3 - pile cap & abutment wall	0%	30	30	17-Nov-14 20-Dec	-14 861					
THBF0230	THAB3 - Backfilling (~4m)	0%	27	27	22-Dec-14 24-Jan-	-15 861					
THBF0290	THAB2 - Pre-bored H pile (18 nos)	0%	54	54	31-Dec-14 12-Mar	-15 -128	!				
	FL Highway S/B Side Sect		1					<u></u> -			
	THAB1 - Predrilling	0%	12	12		-14 697					
	THP2 - Predrilling	0%	12	12		-14 697					
	THP3 - Predrilling	0%	6	6		-14 715					
	THP4 - Predrilling	0%	6	6	24-Nov-14 29-Nov	-14 725					
New Tai Wo F	ootbridge										
	Site Clearance	73.33%	8	30	25-Aug-14 A 28-Oct-	14 -98	!				
	Structure steel Shop drawing	0%	90	90	20-Oct-14 04-Feb	-15 793					
TWFB1030	submission (TWFB) Structure steel Shop drawing	0%	30	30	19-Jan-15 02-Mar	-15 793					
	approval (TWFB) / FL Highway N/B Side Se	ction									
TWFB1280	TWP4, TWP5 - Pre-bored H pile (14 nos)	0%	42	42		-15 -81					
	TWAB1 - Pre-bored H pile (18 nos)	0%	54	54	29-Oct-14 02-Jan-	-15 -98	 	_			
TWFB1330	TWAB1 - Pile Test	0%	28	28	03-Jan-15 30-Jan-	-15 -121					
TWFB1340	TWAB1 - pile cap & abutment wall	0%	30	30	17-Jan-15 28-Feb	-15 -99					
	i Wo Footbridge										
Design Worl	ks Design preparation	0%	90	90	20-Oct-14 04-Feb	-15 224				<u> </u>	
	Existing Tai Wo Footbridge	370	30	33	50. 71 04-160	-2-4					
TWSR-West	/ FL Highway N/B Side Se	ction									
TWFB-DE0900		0%	30	30	20-Oct-14 22-Nov	-14 611	!				
	r Along Fanling Highway	y S/B			'		 				
NB51 (Ch.593	35-6055)-FH S/B Side										
NB02270	NB51 ID1-3 (0-25m) - Sheet piling &	0%	21	21	20-Oct-14 12-Nov	-14 359					
NB02280	Excavation NB51 ID1-3 (0-25m) - Footing &	0%	90	90	13-Nov-14 09-Mar	-15 359	; ;				
	Wall Structure 560-6745)-FH S/B Side (MT	RC I&P A	rea)						 		
Noise Barrie	er Works				la a			<u></u>			
	NB61A (75-190m)- backfilling	0%	80	80	18-Oct-14 A 23-Jan-						
	NB61A (75-190m) - NB production	0%	45	45		-14 1439					
	NB61A (75-190m) - NB post & panel installation	0%	5	5	04-Dec-14 09-Dec	-14 1154					
Other Works	3										
	e & Demolition of Existing S	Structure									
Contract Co	Indition Engineer approval	0%	12	12	16-Sep-14 A 01-Nov	-14 -79			-		
MCLT1040	3						i i		i contract of the contract of	The state of the s	1
MCLT1050	Apply cert for exemption by DLO by Engineer	0%	12	12	03-Nov-14 15-Nov	-14 -79				· 	





Y/2012/06: Works Programme Rev. 1 (1410)				3 Month Rolling Progr												
vity ID	Activity Name	Duration % Complete		g Original Duration	Start	Finish	Total Float				2014			2015		
		Complete	Duration	Buration			riout			Oct		Nov		Dec		Jan
Slip Road Y	Construction								i !							
Underground	d Utility Works															
DN600 and	DN900 Watermain								1							
DN0990	DN600 & DN900 watermain laying (Ch8250-8370)(SA340) (near Z4	0%	20	20	31-Oct-14	22-Nov-14	-437		 - - -							
DN1030	DN600 & DN900 watermain laying (Ch7925-8050)(SA346)	0%	120	120	20-Dec-14	26-May-15	-85		 							
VO - Wall 7 0	6A Construction								1 1 1							
Retaining W	all W76A								1							
	t FL Highway S/B Side Sec	tion							1							
W76A1016	W76A construction (bay 3, 4, 6-7)	79.17%	10	48	20-Aug-14 A	30-Oct-14	-437									
W76A1017	W76A backfilling work (bay 3, 4, 6-7)	0%	25	25	24-Nov-14	22-Dec-14	-437		; 							
W76A1018	Temp. road work for TTA for W76A (TTA-2)	0%	26	26	23-Dec-14	24-Jan-15	-437		 							
Other Work	: 3				1				! ! !				-			
Retaining W									1							
	t FL Highway S/B Side Sec	tion							1 1 1				-			
RWZ4.1060	Base slab & Wall (0-3m high)- RW77A (Ch.50-130)	0%	60	60	20-Oct-14	30-Dec-14	320		 				1			
RWZ4.1070	Backfilling (0-3m) - RW77A (Ch.50-130)	0%	30	30	31-Dec-14	04-Feb-15	575		/							
RWZ4.1075	Temp Shoring & Excavation	0%	45	45	11-Dec-14	04-Feb-15	290									
Retaining W	all W77B								1 1 1							
TWSR-East	t FL Highway S/B Side Sec	tion							 							
RWZ4.1092	Site Clearance	86.67%	4	30	21-Jul-14 A	23-Oct-14	451									
RWZ4.1100	Base slab & Wall (0-3m high)- RW77B (Ch 0-40)	0%	60	60	31-Dec-14	19-Mar-15	395		1 1 1 1 1							
Retaining W									! !							
	t FL Highway S/B Side Sec								1 1 1							
RWZ4.0900	Site Clearance	0%	30	30	24-Oct-14	27-Nov-14	481		! ! !							
TCSS Works									1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
	Construction Works								; }							
TCSS0100	Acquire Design Criteria from Drawing & procurement	0%	180	180	20-Oct-14	03-Jun-15	386		 							

APPENDIX C
IMPLEMENTATION SCHEDULE OF
ENVIRONMENTAL MITIGATION MEASURES
(EMIS)

Appendix C - Implementation Schedule of Environmental Mitigation Measures (EMIS)

Air Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status			
			Aug 14	Sep 14	Oct 14	
Air Quality during construction	Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading.	During construction	V	V	V	
	All stockpiles of excavated materials or spoil of more than 50m ³ shall be enclosed, covered or dampened during dry or windy conditions.		V	V	@	
	Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas.		V	V	+	
	All spraying of materials and surfaces shall avoid excessive water usage.		V	V	V	
	Vehicles that have the potential to create dust while transporting materials shall be covered, with the cover properly secured and extended over the edges of the side and tail boards.		V	V	V	
	Materials shall be dampened, if necessary, before transportation.		V	V	V	
	Travelling speeds shall be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks.		V	V	V	
	Vehicle washing facilities shall be provided to minimize the quantity of material deposited on public roads.		V	@	V	

Noise – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status			
•			Aug 14	Sep 14		
Noise during construction	Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant.	During construction	@	V	V	
	Reduce the number of equipment and their percentage on-time.		V	V	V	
	3.5 m and 5.5 m high temporary noise barrier at culvert construction work area (Figure 2a of the Environmental Permit).		#	#	#	
	3 m high temporary noise barrier along the northern edge of Bridge 12 at ground level (Figure 2b of the Environmental Permit).		#	#	#	
	2 m high temporary noise barrier along the northern edge of Bridge 12 at bridge level (Figure 2b of the Environmental Permit).		#	#	#	
	2.5 m high temporary noise barrier along Tai Wo Service Road West (Figure 2c of the Environmental Permit).		#	#	#	
	3.5m and 7m high temporary noise barrier along Tai Wo Services Road West near Tai Hang (Figure 2c of the Environmental Permit).		#	#	#	
	7 m high temporary noise barrier along Tai Wo Service Road West near Tai Wo Footbridge work area (Figure 2d of the Environmental Permit).		#	#	#	
	7 m high temporary noise barrier near Kiu Tau Footbridge work area (Figure 2d of the Environmental Permit).		#	#	#	
	2.5 m high temporary noise barrier near river diversion work area (Figure 2e of the Environmental Permit).		#	#	#	

Water Quality – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status		
			Aug 14	Sep 14	Oct 14
Water quality during construction	 Demolition and reconstruction of bridges Prevent off-site migration through use of sheet piles. Minimise duration of works as far as practical. All sewer and drainage connections should be sealed to prevent debris, soil, sand, etc, from entering public sewers/drains. Site surface runoff should be settled to remove sand/silt before it is discharged into the existing storm drains. 	During construction	#	#	V
	 Road Widening Works, Earthworks and Culvert Extension Works Wastewater generated from any concrete batching washdown of equipment or similar activities should be discharged into foul sewers, after the removal of settable solids, and pH adjustment as necessary. All sewage discharges from the study area should meet the TM standards and approval from EPD through the licensing process is required. Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained. Runoff from exposed working areas, unfinished slopes and from unlined temporary channels should be directed to stilling basins and/or silt traps before discharging to the drainage outfalls. Regular inspections of stilling basins and/or silt traps is required to ensure that sediment is not conveyed into the existing drainage system. Open stockpiles should be covered with a tarpaulin cover. During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded. Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains. Fuels should be stored in bunded areas such that spillage can be easily collected. 		V	+	@

Waste - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status		
,			Aug 14	Sep 14	Oct 14
Waste management during construction	General Waste - Transport of wastes off site as soon as possible Maintenance of accurate waste records Minimisation of waste generation for disposal (via reduction/recycling/re-use) No on-site burning will be permitted Use of re-useable metal hoardings/signboards.	During construction	V	V	@
	Vegetation from site clearance Segregation of materials to facilitate disposal. Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas.		V	V	V
	Demolition Wastes - Segregation of materials to facilitate disposal Appropriate stockpile management.		V	V	V
	Excavated Materials Segregation of materials to facilitate disposal / reuse. Appropriate stockpile management. Re-use of excavated material on or off site (where possible). Special handling and disposal procedures in the event that contaminated materials are excavated.		V	V	V
	 Construction Wastes Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles). Appropriate stockpile management. Planning to reduce over ordering and waste generation. Recycling and re-use of materials where possible (e.g. metal, wood from formwork) For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal. 		V	V	V
	Bentonite Slurries - Bentonite slurries should be reused as far as possible. - Disposal in accordance with Practice Note For Professional Persons ProPECC PN 1/94.		#	#	#

 Chemical Wastes Storage within locked, covered and bunded area. The storage area shall not be located adjacent to sensitive receivers e.g. drains. Minimise waste production and recycle oils/solvents where possible. A spill response procedure shall be in place and absorption material available for minor spillages. Use appropriate and labelled containers. Educate site workers on site cleanliness/waste management procedures. If chemical wastes are to be generated, the contractor must register with EPD as a chemical waste producer. The chemical wastes shall be collected by a licensed chemical waste collector. 	+	(0)	(9)
 Municipal Wastes Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal. Regular, daily collections are required by an approved waste collector. 	V	V	V

Ecology – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Impleme	Implementation Status		
			Aug 14	Sep 14	Oct 14	
Ecology during construction	Accurate Delineation of Works Area Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats. Individual trees which fall within the works areas but which work plans do not require removal are to be retained and fenced off to maximize protection.	During construction	V	V	V	
	Vegetation Clearance No fires shall be lit within the works area for the purpose of burning cleared vegetation. The Contractor shall give consideration to mulching the cleared vegetation for recycling within the works area / adjacent land.		V	V	V	
	 Dust generation There are a number of measures which shall be taken as specified in the Air Pollution Control (Construction Dust) Regulation on 'Dust Control Requirements, including the following key measures to be applied during construction: Vehicle washing facilities to be provided at every discernible or designated vehicle exit point; All temporary site access roads shall be sprayed with water to suppress dust as necessary; All dusty materials should be sprayed with water immediately prior to any handling; and All debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area. 		V	V	V	
	Surface Run-off In general, mitigation measures shall be in accordance with ProPECC PN1/94 on 'Construction Site Drainage'. Key measures include: - Bund and cover stock piles to avoid run-off; - Channel any run-off through a system of oil, grease and sediment / silt traps and reuse water on site where ever practical; - All vehicle maintenance to be undertaken within a bunded area; and - Maximise vegetation retention on-site to maximise absorption (minimise transport).		V	V	V	

Landscape and Visual Impact – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Responsibility		
•		•	Aug 14		Oct 14
Landscape & Visual during construction	Preservation of Existing Vegetation Trees identified for retention within the project limit would be protected during the works; The tree transplanting and planting works shall be implemented by approved Landscape Contractors.	During construction		V	V
	Temporary Works Areas Where feasible the works areas would be screened using hoarding and existing vegetation would be retained where possible to reduce the landscape and visual impacts arising from the construction activity. The landscape of these works areas would be restored following the completion of the construction phase.		V	V	V
	Hoarding - A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSRs.		V	V	V
	Top Soils - The works will result in disturbance to extensive areas of topsoil. Topsoil worthy of retention should be stockpiled for use following completion of the civil engineering works. It should either be temporarily vegetated with hydroseeded grass or turned over on a regular basis.		#	#	#
	Protection of Important Landscape Features - Important features such as temples, Island House and kilns within the study area, although remote from the proposed works retained and adequately protected.		#	#	#

Legend:

V = implemented;

x = not implemented;

@ = partially implemented;

+ = recommended and immediately implemented during the site inspection by the Contractor;

N/A = not applicable - No such work was undertaken or no such material was used on site;

= to be implemented.

APPENDIX D SUMMARY OF ACTION AND LIMIT LEVELS

Appendix D - Summary of Action and Limit Levels

Table 1 – Action and Limit Levels for 1-hour TSP

Location	Action Level	Limit Level
AM2	317.8 μg/m3	500 μg/m3

Table 2 - Action and Limit Levels for 24-hour TSP

Location	Action Level	Limit Level
AM2	200.7 μg/m3	260 μg/m3

Table 3 – Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)

Location	Action Level	Limit Level
M2	When one documented	75 dB(A)
	complaint, related to 0700 -	
	1900 hours on normal	
M3*	weekdays, is received	65/70 dB(A)
	from any one of the sensitive	
	receivers	

^{*}Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period

APPENDIX E
IMPACT AIR QUALITY MONITORING
RESULTS AND THEIR GRAPHICAL
PRESENTATION

Impact Air Quality Monitoring Results

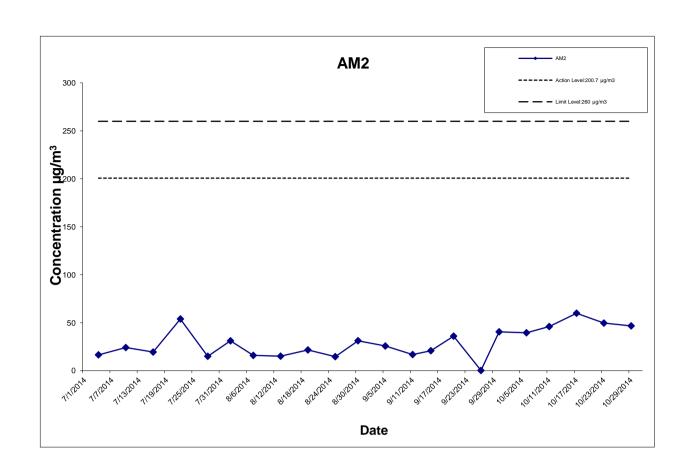
24-hour TSP Monitoring Results at Station AM2 (Fanling Government Secondary School)

Date	Weather	Air	Atmospheric	Flow Rate	(m³/min.)	Av. flow	Total vol.	Filter W	eight (g)	Particulate	Elapse	e Time	Sampling	Conc.	Actino Level	Limit Level
	Condition	Temp. (°C	Pressure(hPa)	Initial	Final	(m³/min)	(m ³)	Initial	Final	weight(g)	Initial	Final	Time(hrs.)	(µg/m³)	(µg/m ³)	(µg/m³)
4-Jul-14	Sunny	30.9	1004.0	1.314	1.314	1.314	1892.2	2.7084	2.7397	0.0313	4161.02	4185.02	24.00	16.5	200.7	260
10-Jul-14	Fine	30.1	1003.9	1.314	1.314	1.314	1892.2	2.7170	2.7626	0.0456	4185.02	4209.02	24.00	24.1	200.7	260
16-Jul-14	Sunny	30.2	1007.9	1.314	1.314	1.314	1892.2	2.6473	2.6840	0.0367	4209.02	4233.02	24.00	19.4	200.7	260
22-Jul-14	Sunny	29.4	1002.6	1.314	1.314	1.314	1892.2	2.6721	2.7741	0.1020	4233.02	4257.02	24.00	53.9	200.7	260
28-Jul-14	Sunny	29.6	1006.3	1.314	1.314	1.314	1892.2	2.7296	2.7580	0.0284	4257.02	4281.02	24.00	15.0	200.7	260
2-Aug-14	Sunny	29.7	1001.4	1.314	1.314	1.314	1892.2	2.7041	2.7630	0.0589	4281.02	4305.02	24.00	31.1	200.7	260
7-Aug-14	Fine	29.0	1003.3	1.314	1.314	1.314	1892.2	2.7355	2.7656	0.0301	4305.02	4329.02	24.00	15.9	200.7	260
13-Aug-14	Rainy	26.0	1003.5	1.314	1.314	1.314	1892.2	2.7245	2.7530	0.0285	4329.02	4353.02	24.00	15.1	200.7	260
19-Aug-14	Sunny	27.4	1008.7	1.314	1.314	1.314	1892.2	2.7675	2.8083	0.0408	4353.02	4377.02	24.00	21.6	200.7	260
25-Aug-14	Sunny	29.9	1010.1	1.314	1.314	1.314	1892.2	2.6675	2.6951	0.0276	4377.02	4401.02	24.00	14.6	200.7	260
30-Aug-14	Sunny	30.1	1011.1	1.314	1.314	1.314	1892.2	2.7063	2.7654	0.0591	4401.02	4425.02	24.00	31.2	200.7	260
5-Sep-14	Sunny	29.7	1007.2	1.314	1.314	1.314	1892.2	2.7102	2.7588	0.0486	4425.02	4449.02	24.00	25.7	200.7	260
11-Sep-14	Sunny	30.3	1008.0	1.314	1.314	1.314	1892.2	2.7923	2.8240	0.0317	4449.02	4473.02	24.00	16.8	200.7	260
15-Sep-14	Cloudy	29.2	1001.8	1.314	1.314	1.314	1892.2	2.8107	2.8501	0.0394	4473.02	4497.02	24.00	20.8	200.7	260
20-Sep-14	Sunny	29.2	1004.0	1.314	1.314	1.314	1892.2	2.7784	2.8466	0.0682	4497.02	4521.02	24.00	36.0	200.7	260
26-Sep-14	Fine	28.4	1012.5	1.314	1.314	1.314	1892.2	2.7472	2.7475	0.0003	4521.02	4545.02	24.00	0.2	200.7	260
30-Sep-14	Sunny	29.6	1011.1	1.314	1.314	1.314	1892.2	2.7928	2.8694	0.0766	4545.02	4569.02	24.00	40.5	200.7	260
6-Oct-14	Sunny	26.8	1015.1	1.314	1.314	1.314	1892.2	2.7481	2.8228	0.0747	4545.02	4569.02	24.00	39.5	200.7	260
11-Oct-14	Sunny	27.9	1010.9	1.314	1.314	1.314	1892.2	2.7725	2.8595	0.0870	4617.02	4641.02	24.00	46.0	200.7	260
17-Oct-14	Sunny	25.0	1017.5	1.314	1.314	1.314	1892.2	2.7651	2.8784	0.1133	4614.02	4638.02	24.00	59.9	200.7	260
23-Oct-14	Fine	24.8	1016.2	1.314	1.314	1.314	1892.2	2.7916	2.8855	0.0939	4638.02	4662.02	24.00	49.6	200.7	260
29-Oct-14	Sunny	25.2	1017.0	1.314	1.314	1.314	1892.2	2.8114	2.8997	0.0883	4662.02	4686.02	24.00	46.7	200.7	260

Average for the reporting quarter (Aug to Oct 14) 30.1

Minimum for the reporting quarter (Aug to Oct 14) 0.2

Maximum for the reporting quarter (Aug to Oct 14) 59.9



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CONTRACT NO. HY/2012/06
WIDENING OF FANLING HIGHWAY
- TAI HANG TO WO HOP SHEK INTERCHANGE

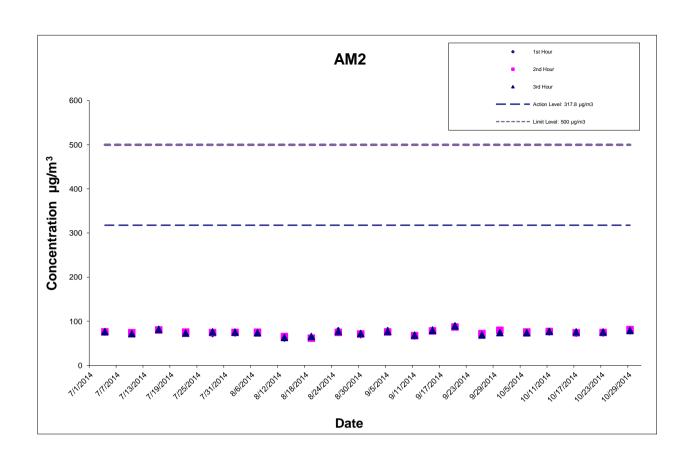


Project No.: 60307376 Date: Nov-14 Appendix E

Impact Air Quality Monitoring Results

1-hour TSP Monitoring Results at Station AM2 (Fanling Government Secondary School)

	Start	1st Hour	2nd Hour	3rd Hour
	Time	Conc.	Conc.	Conc.
Date	(hh:mm)	(µg/m³)	(µg/m³)	(µg/m³)
4-Jul-14	10:47	75.4	76.1	76.6
10-Jul-14	10:18	73.5	74.2	71.9
16-Jul-14	9:49	81.4	80.3	81.7
22-Jul-14	10:13	74.2	75.5	73.1
28-Jul-14	10:00	72.0	74.4	76.0
2-Aug-14	13:02	73.5	74.8	75.5
7-Aug-14	11:09	74.1	75.2	73.9
13-Aug-14	11:45	62.0	65.4	63.4
19-Aug-14	14:05	62.4	61.7	65.6
25-Aug-14	12:00	78.6	74.8	77.2
30-Aug-14	10:10	69.6	71.2	72.4
5-Sep-14	12:00	78.6	75.8	77.2
11-Sep-14	14:00	66.6	67.4	68.8
15-Sep-14	12:45	80.2	78.2	79.5
20-Sep-14	10:50	88.8	87.1	89.6
26-Sep-14	13:05	69.9	72.1	69.0
30-Sep-14	11:40	78.8	79.6	74.4
6-Oct-14	14:12	74.4	75.7	74.0
11-Oct-14	14:10	75.7	76.8	77.4
17-Oct-14	13:30	72.8	74.0	75.9
23-Oct-14	16:00	73.5	74.6	75.7
29-Oct-14	12:00	78.4	81.2	79.2
Average for th	ne reporting of	quarter (Aug to	Oct 14)	74.4
Minimum for t	he reporting	quarter (Aug t	o Oct 14)	61.7
Maximum for	the reporting	quarter (Aug	to Oct 14)	89.6



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WIDENING OF FANLING HIGHWAY
- TAI HANG TO WO HOP SHEK INTERCHANGE



Project No.: 60307376 Date: Nov-14 Appendix E

APPENDIX F METEROLOGICAL DATA

APPENDIX G
IMPACT DAYTIME CONSTRUCTION NOISE
MONITORING RESULTS AND THEIR
GRAPHICAL PRESENTATION

 $Climatological\ Information\ Services > Extracts\ of\ Climatological\ Data > Extract\ of\ Automatic\ Weather\ Station > Station:\ Tai\ Po\ Automatic\ Weather\ Station,\ Year:\ 2014,\ Month:\ August$

Extract of Meteorological Observations for Tai Po Automatic Weather Station, August 2014 (Table 1)

	Mean	Mean Air Temperature Pressure				Relative Humidity			
Date	Pressure at M.S.L. (hPa)	Max. (deg C)	Mean (deg C)	Min. (deg C)	Dew Point Temperature (deg C)	Max. (%)	Mean (%)	Min. (%)	
Aug 1	1000.2	35.6	29.8	24.7	24.5	97	75	48	
Aug 2	1000.5	34.1	29.3	24.4	25.0	96	78	56	
Aug 3	1001.0	31.0	27.9	25.3	25.3	96	86	74	
Aug 4	1001.6	30.6	28.3	25.3	25.8	98	86	73	
Aug 5	1002.6	30.9	28.8	26.8	25.9	95	85	70	
Aug 6	1002.8	29.1	27.7	25.8	25.7	97	89	77	
Aug 7	1002.4	32.1	27.7	25.6	25.9	96	90	69	
Aug 8	1002.1	32.2	29.1	26.0	25.2	93	80	62	
Aug 9	1003.3	33.5	29.4	26.4	25.3	96	80	57	
Aug 10	1003.6	32.8	29.8	28.0	25.0	88	76	63	
Aug 11	1002.3	31.7	29.0	27.2	25.4	95	81	61	
Aug 12	1001.1	31.6	28.2	26.0	25.9	97	88	72	
Aug 13	1002.8	26.8	25.5	24.7	25.0	99	97	91	
Aug 14	1007.2	30.3	27.5	25.1	25.2	98	87	73	
Aug 15	1009.2	32.9	28.8	25.7	24.9	96	81	61	
Aug 16	1007.6	33.0	29.1	26.3	24.6	92	77	59	
Aug 17	1006.2	33.4	29.1	25.1	24.2	90	75	56	
Aug 18	1007.2	33.5	29.6	26.5	24.3	90	74	53	
Aug 19	1007.7	31.7	27.2	24.4	24.7	98	87	68	
Aug 20	1009.7	25.8	24.5	23.4	23.6	98	95	88	
Aug 21	1010.0	29.1	26.1	23.5	24.0	99	89	73	
Aug 22	1009.9	30.2	27.1	25.4	24.8	96	88	69	
Aug 23	1009.0	31.1	27.8	25.2	24.7	94	83	70	
Aug 24	1008.9	31.8	28.3	25.2	24.1	93	79	60	
Aug 25	1009.4	33.0	28.9	25.6	24.7	93	79	57	
Aug 26	1010.0	32.5	29.2	26.4	25.0	94	79	61	
Aug 27	1009.6	30.4	29.1	27.3	24.9	93	78	67	
Aug 28	1011.6	30.6	29.0	28.0	25.1	89	80	66	
Aug 29	1011.8	32.0	29.1	26.6	24.5	95	77	58	
Aug 30	1010.4	31.9	29.0	26.2	24.3	90	77	59	
Aug 31	1008.9	30.4	28.7	26.8	25.2	92	81	71	

Mean	1006.1	31.5	28.3	25.8	24.9	95	82	66
Maximum	1011.8	35.6	29.8	28.0	25.9	99	97	91
Minimum	1000.2	25.8	24.5	23.4	23.6	88	74	48

Extract of Meteorological Observations for Tai Po Automatic Weather Station, August 2014 (Table 2)

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
Aug 1	****	***	****
Aug 2	****	***	****
Aug 3	****	***	****
Aug 4	****	***	****
Aug 5	****	***	****
Aug 6	****	***	****
Aug 7	****	***	****
Aug 8	****	***	****
Aug 9	****	***	****
Aug 10	****	***	****
Aug 11	****	***	****
Aug 12	****	***	****
Aug 13	****	***	****
Aug 14	****	* * *	****
Aug 15	****	***	****
Aug 16	****	***	****
Aug 17	****	***	****
Aug 18	****	***	****
Aug 19	****	* * *	****
Aug 20	****	***	****
Aug 21	****	***	****
Aug 22	****	***	****
Aug 23	****	***	****
Aug 24	****	***	****
Aug 25	****	***	****
Aug 26	****	***	****
Aug 27	****	***	****
Aug 28	****	***	****
Aug 29	****	***	****
Aug 30	****	***	****
Aug 31	****	***	****
Mean		***	****
Total	****		

Maximum	****	 ****
Minimum	****	 ****

^{***} unavailable

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

[#] missing (less than 24 hourly observations a day)

 $Climatological\ Information\ Services > Extracts\ of\ Climatological\ Data > Extract\ of\ Automatic\ Weather\ Station:\ Tai\ Mei\ Tuk\ Automatic\ Weather\ Station,\ Year:\ 2014,\ Month:\ August$

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, August 2014 (Table 1)

	Mean	Air Temperature			Mean	Re	elative Humid	ity
Date	Pressure at M.S.L. (hPa)	Max. (deg C)	Mean (deg C)	Min. (deg C)	Dew Point Temperature (deg C)	Max. (%)	Mean (%)	Min. (%)
Aug 1	****	35.7	30.3	24.8	***	***	***	***
Aug 2	*****	34.0	29.8	25.0	***	* * *	***	* * *
Aug 3	*****	34.0	28.9	25.5	***	***	***	***
Aug 4	*****	34.8	29.6	27.8	***	***	***	***
Aug 5	****	34.0	29.5	27.5	****	***	***	***
Aug 6	*****	32.6	28.4	26.4	***	***	***	***
Aug 7	*****	32.6	28.7	27.2	* * * *	***	***	***
Aug 8	****	34.5	29.8	26.8	***	***	***	***
Aug 9	****	34.1	30.1	27.4	***	***	***	***
Aug 10	****	32.6	29.9	27.7	* * * *	***	***	***
Aug 11	*****	34.6	29.4	27.1	***	* * *	***	***
Aug 12	****	33.1	28.6#	25.6	***	***	***	***
Aug 13	*****	27.7	25.9	24.9	***	***	***	***
Aug 14	****	31.6	27.9	25.5	***	* * *	***	* * *
Aug 15	****	33.2	29.4	26.6	***	***	***	* * *
Aug 16	****	33.3	29.6	27.0	***	***	***	***
Aug 17	*****	34.0	29.8	26.0	***	***	***	***
Aug 18	****	34.0	30.1	26.7	***	***	***	***
Aug 19	*****	32.2	28.0	24.8	***	* * *	***	* * *
Aug 20	*****	27.4	25.0	23.7	***	***	***	***
Aug 21	*****	31.3	27.0	24.1	***	***	***	***
Aug 22	****	32.3	28.1	26.2	***	***	***	***
Aug 23	*****	32.7	28.7	25.8	***	***	***	***
Aug 24	****	34.0	29.1	26.0	***	***	***	***
Aug 25	*****	34.4	29.7	26.5	***	***	***	***
Aug 26	****	34.5	29.7	26.9	***	***	***	***
Aug 27	****	30.9	29.0	27.0	***	* * *	***	* * *
Aug 28	*****	31.9	29.0	27.1	***	***	***	***
Aug 29	*****	33.7	29.6	26.8	****	***	***	***
Aug 30	****	34.2	29.7	27.1	***	***	***	***
Aug 31	*****	31.3	28.6	26.5	***	***	***	***

Mean	*****	32.9	28.9#	26.3	***	***	***	***
Maximum	*****	35.7	30.3#	27.8	****	***	***	***
Minimum	*****	27.4	25.0#	23.7	****	***	***	***

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, August 2014 (Table 2)

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)		
Aug 1	9.0	270	14.7		
Aug 2	1.0	240	8.8		
Aug 3	24.5	260	5.8		
Aug 4	3.5	060	5.4		
Aug 5	0.0	070	6.5		
Aug 6	1.0	270	6.0		
Aug 7	1.5	260	6.0		
Aug 8	0.0	230	9.1		
Aug 9	0.0	240	11.9		
Aug 10	0.0	260	15.8		
Aug 11	15.5	260	8.0		
Aug 12	26.0#	240#	8.5#		
Aug 13	55.0	050	7.8		
Aug 14	2.5	240	10.3		
Aug 15	0.0	260	9.8		
Aug 16	0.0	260	12.3		
Aug 17	0.0	260	11.0		
Aug 18	0.0	260	11.0		
Aug 19	7.0	270	11.8		
Aug 20	20.5	140	5.8		
Aug 21	2.5	050	5.4		
Aug 22	1.5	050	4.7		
Aug 23	0.0	150	5.0		
Aug 24	0.0	120	5.4		
Aug 25	0.0	140	6.8		
Aug 26	0.0	040	12.8		
Aug 27	1.0	070	30.8		
Aug 28	0.5	090	22.4		
Aug 29	0.0	070	10.6		
Aug 30	0.0	090	10.8		
Aug 31	2.5	090	17.7		
Mean		260#	10.3#		
Total	175.0#				

Maximum	55.0#	 30.8#		
Minimum	0.0#	 4.7#		

^{***} unavailable

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

[#] missing (less than 24 hourly observations a day)

 $Climatological\ Information\ Services > Extracts\ of\ Climatological\ Data > Extract\ of\ Automatic\ Weather\ Station:\ Tai\ Po\ Automatic\ Weather\ Station,\ Year:\ 2014,\ Month:\ September\ Automatic\ Weather\ Station > Station:\ Tai\ Po\ Automatic\ Weather\ Station,\ Year:\ 2014,\ Month:\ September\ Automatic\ Weather\ Station > Station:\ Tai\ Po\ Automatic\ Weather\ Station,\ Year:\ 2014,\ Month:\ September\ Automatic\ Weather\ Station > Station:\ Tai\ Po\ Automatic\ Weather\ Station > Stati$

Extract of Meteorological Observations for Tai Po Automatic Weather Station, September 2014 (Table 1)

	Mean	Air Temperature			Mean	Relative Humidity		
Date	Pressure at M.S.L. (hPa)	Max. (deg C)	Mean (deg C)	Min. (deg C)	Dew Point Temperature (deg C)	Max. (%)	Mean (%)	Min. (%)
Sep 1	1009.7	32.1	29.3	27.5	24.9	92	78	59
Sep 2	1010.0	33.0	29.2	26.0	24.5	91	77	58
Sep 3	1008.4	34.6	30.0	26.3	24.1	88	72	50
Sep 4	1006.2	32.8	28.8	25.5	24.4	90	78	60
Sep 5	1006.5	30.9	28.5	25.3	25.2	97	83	67
Sep 6	1007.0	32.0	29.2	26.3	24.7	90	78	61
Sep 7	1006.8	30.8	29.2	27.9	25.3	89	80	69
Sep 8	1006.2	30.8	28.1	26.8	25.7	95	87	73
Sep 9	1006.9	33.9	29.3	26.4	24.6	93	77	56
Sep 10	1007.3	31.8	28.8	26.5	25.1	90	81	66
Sep 11	1007.3	32.0	29.1	26.2	24.9	93	79	62
Sep 12	1005.8	29.4	27.4	25.5	25.2	98	88	75
Sep 13	1005.2	31.1	28.7	26.4	25.5	97	83	65
Sep 14	1005.3	32.0	29.4	27.1	25.4	93	80	65
Sep 15	1001.4	32.3	29.2	25.9	24.8	97	78	57
Sep 16	1003.1	30.0	27.6	25.2	24.8	98	85	71
Sep 17	1010.6	28.4	27.4	26.2	25.4	96	89	81
Sep 18	1011.3	32.6	28.9	25.5	25.0	95	80	57
Sep 19	1005.9	34.4	30.1	26.3	24.9	90	75	52
Sep 20	1003.5	31.2	28.4	26.0	21.5	80	67	56
Sep 21	1004.7	28.4	26.7	24.7	19.7	77	66	59
Sep 22	1006.5	30.1	26.8	23.8	20.6	82	69	58
Sep 23	1008.0	30.6	26.9	23.5	21.7	84	74	57
Sep 24	1010.2	31.1	27.5	24.6	22.8	89	76	60
Sep 25	1011.4	31.2	27.8	24.7	23.3	88	77	59
Sep 26	1011.7	29.5	27.4	25.1	23.3	87	79	69
Sep 27	1012.1	30.9	28.0	25.1	23.7	90	78	64
Sep 28	1011.3	30.8	27.9	24.6	23.7	90	79	67
Sep 29	1010.8	31.7	28.4	25.0	23.6	91	76	61
Sep 30	1010.8	33.9	29.2	26.0	24.2	89	75	51
Mean	1007.7	31.5	28.4	25.7	24.1	91	78	62

M	Taximum	1012.1	34.6	30.1	27.9	25.7	98	89	81
M	1inimum	1001.4	28.4	26.7	23.5	19.7	77	66	50

Extract of Meteorological Observations for Tai Po Automatic Weather Station, September 2014 (Table 2)

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
Sep 1	****	***	****
Sep 2	****	***	****
Sep 3	****	***	****
Sep 4	****	* * *	****
Sep 5	****	***	****
Sep 6	****	***	****
Sep 7	****	* * *	****
Sep 8	****	***	****
Sep 9	****	***	****
Sep 10	****	***	****
Sep 11	****	***	****
Sep 12	****	***	****
Sep 13	****	***	****
Sep 14	****	***	****
Sep 15	****	* * *	****
Sep 16	****	***	****
Sep 17	****	***	****
Sep 18	****	***	****
Sep 19	****	***	****
Sep 20	****	***	****
Sep 21	****	***	****
Sep 22	****	***	****
Sep 23	****	***	****
Sep 24	****	***	****
Sep 25	****	***	****
Sep 26	****	***	****
Sep 27	****	***	****
Sep 28	****	***	****
Sep 29	****	***	****
Sep 30	****	***	****
Mean		***	****
Total	****		
Maximum	****		****
Minimum	****		****

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*** unavailable
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missing (less than 24 hourly observations a day)

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

 $Climatological\ Information\ Services > Extracts\ of\ Climatological\ Data > Extract\ of\ Automatic\ Weather\ Station:\ Tai\ Mei\ Tuk\ Automatic\ Weather\ Station,\ Year:\ 2014,\ Month:\ September$

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, September 2014 (Table 1)

	Mean		Air Temperature	Air Temperature			Relative Humidity		
Date	Pressure at M.S.L. (hPa)	Max. (deg C)	Mean (deg C)	Min. (deg C)	Dew Point Temperature (deg C)	Max. (%)	Mean (%)	Min. (%)	
Sep 1	*****	34.5	29.7	27.4	***	***	***	***	
Sep 2	*****	35.2	30.2	26.9	***	* * *	***	***	
Sep 3	*****	34.8	30.4	27.0	***	***	***	***	
Sep 4	*****	35.8	30.0	27.7	***	***	***	***	
Sep 5	*****	31.5	29.0	26.9	***	***	***	***	
Sep 6	*****	34.5	29.8	27.0	***	* * *	***	***	
Sep 7	*****	31.4	29.0	27.0	***	***	***	***	
Sep 8	*****	32.7	28.4	26.7	***	* * *	***	***	
Sep 9	*****	35.1	30.2	27.3	***	***	***	***	
Sep 10	****	35.2	30.1	27.4	* * * *	* * *	***	***	
Sep 11	*****	34.4	30.0	27.5	***	* * *	***	***	
Sep 12	*****	29.1	27.4	25.8	***	***	***	***	
Sep 13	*****	33.8	29.2	26.6	***	***	***	***	
Sep 14	****	34.1	29.9	27.4	* * * *	* * *	***	***	
Sep 15	*****	33.2	29.1	25.6	***	* * *	***	***	
Sep 16	*****	29.3	27.2	25.1	***	***	***	***	
Sep 17	*****	30.7	28.0	27.0	***	***	***	***	
Sep 18	*****	34.0	29.6	26.4	***	***	***	***	
Sep 19	*****	35.8	30.8	26.9	***	* * *	***	***	
Sep 20	*****	32.9	28.7	25.4	***	* * *	***	***	
Sep 21	*****	31.7	26.9#	25.3	***	***	***	***	
Sep 22	*****	32.0	27.8	24.8	***	* * *	***	***	
Sep 23	*****	33.1	27.9	24.5	* * * *	* * *	***	***	
Sep 24	****	34.0	28.7	25.4	* * * *	***	***	***	
Sep 25	*****	34.4	28.9	25.8	****	***	***	***	
Sep 26	****	32.6	28.3	26.1	***	***	***	***	
Sep 27	****	33.9	28.9	26.2	* * * *	* * *	* * *	* * *	
Sep 28	****	34.0	28.4#	25.6	* * * *	* * *	***	***	
Sep 29	****	34.6	29.6	26.2	****	***	***	***	
Sep 30	****	36.0	30.4	27.0	***	***	***	***	
Mean	*****	33.5	29.1#	26.4	***	***	***	***	

Maximum	*****	36.0	30.8#	27.7	***	***	***	***	
Minimum	*****	29.1	26.9#	24.5	****	***	***	***	

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, September 2014 (Table 2)

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
Sep 1	0.0	090	9.3
Sep 2	0.0	140	5.4
Sep 3	0.0	260	12.1
Sep 4	0.0	270	6.8
Sep 5	6.5	090	14.4
Sep 6	0.0	050	9.1
Sep 7	3.5	080	22.7
Sep 8	8.0	140	9.5
Sep 9	0.0	140	5.3
Sep 10	0.0	140	5.6
Sep 11	0.0	080	11.0
Sep 12	26.5	050	22.4
Sep 13	12.0	140	11.5
Sep 14	0.5	040	9.8
Sep 15	34.5	040	29.0
Sep 16	34.5	100	49.3
Sep 17	2.5	120	20.5
Sep 18	0.0	140#	4.2#
Sep 19	0.0	240	5.6
Sep 20	0.0	040	17.1
Sep 21	0.0#	010#	14.0#
Sep 22	0.0	360	8.7
Sep 23	0.0	140	4.3
Sep 24	0.0	150	4.0
Sep 25	0.0	150	3.6
Sep 26	0.0	150	4.1
Sep 27	0.0	150	5.2
Sep 28	0.0#	130#	5.3#
Sep 29	0.0	140	3.3
Sep 30	0.0	150	5.0
Mean		140#	11.3#
Total	128.5#		
Maximum	34.5#		49.3#
Minimum	0.0#		3.3#

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*** unavailable
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missing (less than 24 hourly observations a day)

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

 $Climatological\ Information\ Services > Extracts\ of\ Climatological\ Data > Extract\ of\ Automatic\ Weather\ Station:\ Tai\ Po\ Automatic\ Weather\ Station,\ Year:\ 2014,\ Month:\ October\ Automatic\ Weather\ Station:\ Tai\ Po\ Automatic\ Weather\ Station:\ Tai\ Po\ Automatic\ Weather\ Station,\ Year:\ 2014,\ Month:\ October\ Automatic\ Weather\ Station:\ Tai\ Po\ Automatic\ Weather\ Nonther\ Nonthe$

Extract of Meteorological Observations for Tai Po Automatic Weather Station, October 2014 (Table 1)

	Mean	Air Temperature			Mean	Relative Humidity		
Date	Pressure at M.S.L. (hPa)	Max. (deg C)	Mean (deg C)	Min. (deg C)	Dew Point Temperature (deg C)	Max. (%)	Mean (%)	Min. (%)
Oct 1	1011.9	30.4	27.8	25.2	24.1	97	81	66
Oct 2	1010.0	32.6	28.3	25.8	24.6	92	81	61
Oct 3	1009.1	31.0	28.1	25.9	24.0	91	79	61
Oct 4	1010.5	29.7	27.2	25.2	22.8	87	77	64
Oct 5	1012.7	29.8	26.8	24.3	20.4	89	70	46
Oct 6	1015.0	29.1	25.8	22.5	18.1	88	64	38
Oct 7	1014.5	27.7	25.4	22.9	17.9	82	64	48
Oct 8	1012.9	28.3	25.0	22.0	17.7	85	65	43
Oct 9	1010.7	28.9	25.7	22.3	17.3	78	61	42
Oct 10	1010.0	29.8	25.6	21.9	17.7	83	62	46
Oct 11	1010.8	30.3	26.4	22.3	18.7	76	63	49
Oct 12	1013.4	30.5	26.5	22.9	17.0	85	58	38
Oct 13	1016.3	28.3	25.5	22.3	15.3	74	54	40
Oct 14	1017.6	27.3	24.3	21.3	16.0	78	60	49
Oct 15	1017.2	27.1	23.9	20.2	17.7	81	69	54
Oct 16	1017.8	26.6	24.8	22.4	18.5	94	69	53
Oct 17	1017.4	26.8	24.6	23.1	17.8	77	66	52
Oct 18	1016.2	27.3	25.2	23.0	18.7	79	68	49
Oct 19	1015.7	27.7	25.2	23.6	20.0	87	73	56
Oct 20	1014.8	28.0	25.7	23.7	21.5	87	78	66
Oct 21	1015.0	30.0	26.2	22.9	21.4	91	76	60
Oct 22	1015.2	29.4	27.0	24.7	20.0	86	67	54
Oct 23	1016.2	24.8	23.4	21.9	20.8	99	86	73
Oct 24	1016.2	24.9	24.2	23.3	20.2	85	78	70
Oct 25	1016.5	25.3	24.5	23.7	20.4	85	78	69
Oct 26	1016.7	28.0	25.3	23.7	21.4	90	79	64
Oct 27	1016.3	28.1	25.7	23.1	21.5	92	78	56
Oct 28	1016.8	26.2	25.0	24.4	18.3	79	67	47
Oct 29	1016.9	26.8	25.0	23.8	19.7	83	73	59
Oct 30	1015.7	26.6	25.0	23.6	20.9	89	78	63
Oct 31	1013.9	27.2	25.0	23.3	21.5	91	82	69

Mean	1014.5	28.2	25.6	23.3	19.7	86	71	55
Maximum	1017.8	32.6	28.3	25.9	24.6	99	86	73
Minimum	1009.1	24.8	23.4	20.2	15.3	74	54	38

Extract of Meteorological Observations for Tai Po Automatic Weather Station, October 2014 (Table 2)

		1	(1a)
Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
Oct 1	****	***	****
Oct 2	****	***	****
Oct 3	****	* * *	****
Oct 4	****	***	****
Oct 5	****	***	****
Oct 6	****	* * *	****
Oct 7	****	***	****
Oct 8	****	***	****
Oct 9	****	***	****
Oct 10	****	***	****
Oct 11	****	* * *	****
Oct 12	****	***	****
Oct 13	****	***	****
Oct 14	* * * * *	***	****
Oct 15	****	***	****
Oct 16	****	***	****
Oct 17	****	***	****
Oct 18	****	***	****
Oct 19	****	***	****
Oct 20	****	***	****
Oct 21	****	***	****
Oct 22	****	***	****
Oct 23	****	***	****
Oct 24	****	***	****
Oct 25	****	***	****
Oct 26	****	***	****
Oct 27	****	* * *	****
Oct 28	****	***	****
Oct 29	****	***	****
Oct 30	****	***	****
Oct 31	****	***	****
Mean		* * *	****
Total	****		

Maximum	****	 ****
Minimum	****	 ****

^{***} unavailable

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

[#] missing (less than 24 hourly observations a day)

Climatological Information Services > Extracts of Climatological Data > Extract of Automatic Weather Station > Station: Tai Mei Tuk Automatic Weather Station, Year: 2014, Month: October

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, October 2014 (Table 1)

Date	Mean	Air Temperature			Mean	Relative Humidity		
	Pressure at M.S.L. (hPa)	Max. (deg C)	Mean (deg C)	Min. (deg C)	Dew Point Temperature (deg C)	Max. (%)	Mean (%)	Min. (%)
Oct 1	****	32.4	28.0#	25.0	***	***	***	***
Oct 2	*****	33.4	28.8	25.9	***	* * *	***	***
Oct 3	*****	33.8	28.8	26.3	***	***	***	***
Oct 4	*****	32.1	27.7	25.9	***	***	***	***
Oct 5	*****	31.3	27.2	24.9	***	***	***	***
Oct 6	*****	30.5	26.7	23.8	***	***	***	***
Oct 7	*****	29.7	25.6	22.1	***	***	***	***
Oct 8	*****	29.7	25.8	23.1	***	***	***	***
Oct 9	*****	30.9	26.4	23.6	***	***	***	***
Oct 10	*****	30.1	26.6	23.6	***	***	***	***
Oct 11	*****	32.5	27.8	23.9	***	* * *	***	* * *
Oct 12	*****	31.0	27.5	24.3	***	***	***	***
Oct 13	*****	30.1	26.1	23.1	***	***	***	***
Oct 14	*****	29.3	25.2	22.3	* * * *	* * *	***	* * *
Oct 15	*****	29.2	24.9	21.6	****	* * *	***	***
Oct 16	*****	29.0	25.1	22.2	***	* * *	***	***
Oct 17	*****	29.1	24.8	21.6	***	***	***	***
Oct 18	*****	29.3	25.4	21.9	***	***	***	***
Oct 19	*****	29.5	25.5	23.4	* * * *	* * *	***	***
Oct 20	*****	30.5	26.3	24.1	****	***	***	***
Oct 21	*****	32.0	27.0	23.8	****	***	***	***
Oct 22	*****	31.8	27.3	25.0	* * * *	* * *	***	***
Oct 23	*****	25.6	23.7	21.7	* * * *	***	***	***
Oct 24	****	25.8	24.3	23.7	***	***	***	***
Oct 25	*****	27.4	24.8	23.3	***	***	***	***
Oct 26	*****	30.0	25.9	23.7	***	***	***	***
Oct 27	****	30.6	26.2	23.9	* * * *	* * *	***	* * *
Oct 28	*****	26.6	25.0	23.7	***	***	***	***
Oct 29	*****	28.8	25.3	23.5	****	***	***	***
Oct 30	****	29.5	25.4	23.6	****	***	***	***
Oct 31	****	30.3	25.6	23.4	***	***	***	***

Mean	*****	30.1	26.1#	23.6	***	***	***	***
Maximum	*****	33.8	28.8#	26.3	****	***	***	***
Minimum	*****	25.6	23.7#	21.6	***	***	***	***

Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station, October 2014 (Table 2)

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
Oct 1	2.5	090#	12.5#
Oct 2	0.5	270	3.8
Oct 3	0.0	100	8.8
Oct 4	0.0	050	11.7
Oct 5	0.0	040	11.9
Oct 6	0.0	030	13.7
Oct 7	0.5	050	13.8
Oct 8	0.0	040	11.1
Oct 9	0.0	030	9.5
Oct 10	0.0	040	9.8
Oct 11	0.0	050	9.9
Oct 12	0.0	040	15.0
Oct 13	0.0	030	15.4
Oct 14	0.0	040	12.1
Oct 15	0.0	090	9.7
Oct 16	0.5	100	20.8
Oct 17	0.0	100	17.3
Oct 18	0.0	100	17.5
Oct 19	0.0	050	15.3
Oct 20	0.0	090	10.5
Oct 21	0.0	270	2.7
Oct 22	0.0	040	13.3
Oct 23	9.0	030	10.7
Oct 24	0.0	100	13.2
Oct 25	0.0	090	13.8
Oct 26	0.0	050	10.3
Oct 27	0.0	100	17.4
Oct 28	0.0	100	26.2
Oct 29	0.0	080	18.8
Oct 30	0.0	100	16.6
Oct 31	0.0	080	9.5
Mean		100#	13.0#
Total	13.0		

Maximum	9.0	 26.2#
Minimum	0.0	 2.7#

^{***} unavailable

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

[#] missing (less than 24 hourly observations a day)

APPENDIX H
STATISTICS ON COMPLAINTS,
NOTIFICATION OF SUMMONS AND
SUCCESSFUL PROSECUTIONS

Location : M2 (West Tai Wo - Free Field)

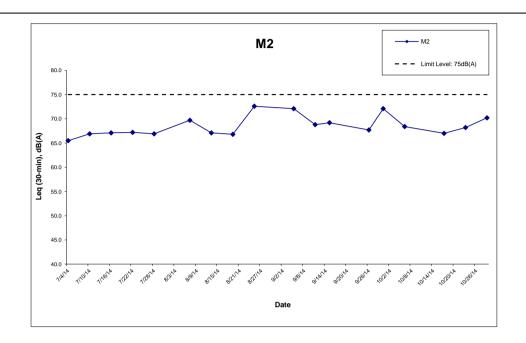
Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

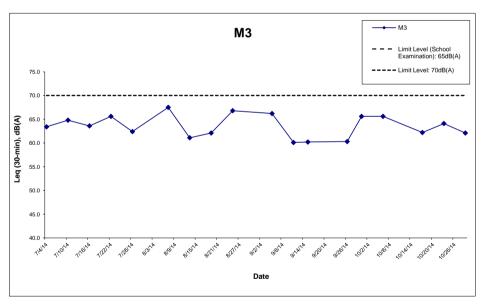
	Mea	sured Noise Le	Limit Level,	Exceedance		
Date	Start Time	Leq*	L10*	L90*	dB(A)	(Y/N)
4-Jul-14	10:25	65.5	67.6	61.8	75	N
10-Jul-14	11:12	66.9	68.5	63.5	75	N
16-Jul-14	10:38	67.1	70.0	62.5	75	N
22-Jul-14	13:00	67.2	69.0	65.0	75	N
28-Jul-14	10:50	66.9	68.5	65.0	75	N
7-Aug-14	11:20	69.7	72.1	67.3	75	N
13-Aug-14	14:30	67.1	68.0	65.9	75	N
19-Aug-14	15:00	66.8	68.0	64.4	75	N
25-Aug-14	13:05	72.6	76.2	70.4	75	N
5-Sep-14	15:30	72.1	75.6	70.0	75	N
11-Sep-14	14:25	68.8	70.7	66.6	75	N
15-Sep-14	13:50	69.2	72.1	66.5	75	N
26-Sep-14	13:20	67.7	68.0	65.5	75	N
30-Sep-14	11:00	72.1	74.8	70.2	75	N
6-Oct-14	15:15	68.4	70.3	65.2	75	N
17-Oct-14	14:15	67.0	68.6	64.7	75	N
23-Oct-14	14:13	68.2	70.1	65.5	75	N
29-Oct-14	13:05	70.2	73.1	68.0	75	N
Minimum for A	Minimum for Aug to Oct 14		68.0	64.4		
Maximum for Aug to Oct 14		72.6	76.2	70.4		
Average for A	Average for Aug to Oct 14		72.3	67.4	1	

Location : M3 (Fanling Government Secondary School- Façade)Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

	Mea	sured Noise Le	Measured Noise Level for 30-min, dB(A)			
Date	Start Time	Leq	L10	L90	dB(A)^	(Y/N)
4-Jul-14	10:45	63.4	65.4	61.3	70	N
10-Jul-14	10:20	64.8	66.5	62.5	70	N
16-Jul-14	9:52	63.6	65.0	58.5	70	N
22-Jul-14	13:46	65.6	67.2	63.1	70	N
28-Jul-14	10:00	62.4	63.0	59.9	70	N
7-Aug-14	13:31	67.5	69.1	65.4	70	N
13-Aug-14	15:15	61.1	62.5	57.0	70	N
19-Aug-14	14:00	62.1	63.5	59.0	70	N
25-Aug-14	13:52	66.8	69.4	62.6	70	N
5-Sep-14	13:31	66.2	69.8	62.4	70	N
11-Sep-14	14:05	60.1	61.5	59.0	70	N
15-Sep-14	13:00	60.2	63.4	58.2	70	N
26-Sep-14	13:05	60.3	61.2	57.0	70	N
30-Sep-14	11:40	65.6	69.2	61.2	70	N
6-Oct-14	16:10	65.6	67.7	62.8	70	N
17-Oct-14	13:35	62.2	63.5	59.5	70	N
23-Oct-14	13:05	64.1	65.8	62.0	70	N
29-Oct-14	13:05	62.1	64.8	59.3	70	N
Minimum for Aug to Oct 14		60.1	61.2	57.0		
Maximum for Aug to Oct 14		67.5	69.8	65.4		
Average for Aug to Oct 14		64.1	66.5	61.1		

^{* +3}dB(A) Façade effect correction included ^ Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.





^ Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

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CONTRACT NO. HY/2012/06

WIDENING OF FANLING HIGHWAY
- TAI HANG TO WO HOP SHEK INTERCHANGE

Graphical Presentation of Impact Daytime Construction Noise Monitoring Results

Project No.: 60307376 Date: Nov-14 Appendix G



APPENDIX I COMPLAINT INVESTIGATION REPORT

Appendix H
Statistics on Complaints, Notifications of Summons and Successful Prosecutions

	Date Received	Subject	Status	Total no. followed up by the ET this month	Total no. followed up by the ET since project commencement
Environmental	19 December 2013	EPD referred a complaint from Lot no. 116 of Fui Sha Wai at Tai Hang of Tai Po which is concerned about the construction noise and diesel-like smell generated from construction activities nearby which caused nuisance and health problems on 19 December 2013 morning.	Closed		
complaints	24 February 2014	EPD referred an air-and-odour complaint on 24 February 2014. The complainant complained about the construction site located near the bus stop in Fui Sha Wai, Tai Hang, Tai Wo Service Road West. When construction works were carried out, odour, white smoke and dust were generated. The complainant asked for follow-up actions.	Closed	1	3

	Date Received	Subject	Status	Total no. followed up by the ET this month	Total no. followed up by the ET since project commencement
	23 October 2014	EPD referred an air complaint on 24 October 2014. A resident complained against the excavation works of Tai Wo Service Road West between Nam Wah Po & Tai Hang Tsuen, which have piled up high stockpiles, causing serious dust nuisance to his house. The resident also complained that the stockpiles have not been covered and watered properly. He now requires the EPD to follow up. The location of complaint is near Lamppost Location EB5717.	Closed		
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0