

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 2021 to September 2021**

[11/2021]

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Reviewed & Approved:	Y W Fung	

Version: Rev. 0 Date: 01 November 2021

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Environmental Monitoring and Audit (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/E
Quarterly EM&A Summary Report for August 2021 to September 2021 for the portion of Stage 2 works under Contract No. HY/2012/06

28 October 2021
By Fax (2805 5028) & Hand

We refer to the Quarterly EM&A Summary Report for August 2021 to September 2021 for the captioned Project received on 22 October 2021 submitted by ET via email. We confirm we have no comment.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED



Steven Tang
Independent Environmental Checker

c.c.
HyD
AECOM

Mr. Alan Leung
Mr. Y W Fung

By Fax (2714 5198)
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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 three 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”. In addition, Contract No. “Provision of Bus-Bus Interchange on Fanling Highway Kowloon Bound” was carried out within the site boundary of Contract No. 02/HY/2015. This report focuses on Contract No. HY/2012/06 “Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange” in Stage 2 of the Project and “Provision of Bus-Bus Interchange on Fanling Highway Kowloon Bound” under Works Order Nos. CB128520-5 and CB128519-0 in Contract No. 02/HY/2015 “Highway Department Term Contract (Management and Maintenance of Roads in Tai Po and North District excluding High Speed Roads 2016-2022)”. The construction works of Works Order Nos. CB128520-5 and CB128519-0 under Contract No. 02/HY/2015 have been completed on 23 May 2018.

Pursuant to the EP (EP-324/2008/E) 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.

As informed by the Contractor, the construction works of the Contract No. HY/2012/06 and 02/HY/2015 under EP-324/2008/E have been substantially completed. The termination of construction phase EM&A for Stage 2 of the Project was approved by the EPD under the Condition 3.1 of EP-324/2008. The EM&A monitoring for the Project was stopped since 1 October 2021. This report documents the findings of EM&A works conducted in the period between 1 August 2021 and 30 September 2021.

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.

Complaint, Notification of Summons and Successful Prosecution

No complaint, notification of summons and successful prosecution was received in the reporting period.

Future Key Issues

As informed by the Contractor, the construction works of the Contract No. HY/2012/06 and 02/HY/2015 under EP-324/2008/E have been substantially completed. The termination of construction phase EM&A for Stage 2 of the Project was approved by the EPD under the Condition 3.1 of EP-324/2008. The EM&A monitoring for the Project was stopped since 1 October 2021.

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)	Resident Engineer	Arthur Ng	---	2638 0950
IEC (Mott MacDonald Hong Kong Limited)	Independent Environmental Checker	Steven Tang	2828 5920	2827 1823
Contractor of [HY/2012/06] (China State Construction Engineering (Hong Kong) Limited)	Environmental Officer	Michael Tsang	9277 4956	2672 2501
		C C Chow	9679 6315	2672 2501
Contractor of [02/HY/2015] (Chiu Hing Construction & Transportation Company Limited)	Safety Officer	Marty Tai	9106 5318	-
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 As informed by the Contractor, the construction works of the Contract No. HY/2012/06 and 02/HY/2015 under EP-324/2008/E have been substantially completed. The termination of construction phase EM&A for Stage 2 of the Project was approved by the EPD under the Condition 3.1 of EP-324/2008. The EM&A monitoring for the Project was stopped since 1 October 2021.
- 1.3.2 The general layout plan of the Project site of Contract No. HY/2012/06 and Works Order Nos. CB128520-5 and CB128519-0 under 02/HY/2015 showing the contract areas are shown in Figure 1.1 and Figure 1.2 respectively.
- 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 1.3a.
- 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 1.3a-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, occasionally fine and cloudy 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 ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM2 (Fanling Government Secondary School)	60.8	56.6 – 63.6	317.8	500

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

Location	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM2 (Fanling Government Secondary School)	19.2	9.4 – 42.9	200.7	260

- 3.1.4 The major dust sources in the reporting period included the 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)) L_{eq} (30 mins)	Range (dB(A)) L_{eq} (30 mins)	Limit Level (dB(A)) L_{eq} (30 mins)
M2* (West Tai Wo)	66.1	65.3 – 67.3	75
M3# (Fanling Government Secondary School)	63.1	59.7 – 68.2	65/70

*+3dB(A) Façade correction included

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

- 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 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 of Contract No. HY/2012/06, 0 m³ of inert C&D material was generated in the reporting period. 0 m³ was broken concrete, 0 m³ was reused in the Contract, 0 m³ was reused in other Projects and 0 m³ was disposed as public fill to Tuen Mun 38. 0 m³ of general refuse was disposed of at NENT landfill. 0 kg of metals, 0 kg of paper and 0 kg of plastics were collected by recycling Contractors, and 0 kg of chemical wastes were 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.

Table 5.1 Summary of Waste Flow Table for Contract No. HY/2012/06

Waste Type	Actual Amount	Disposal/Reuse Locations
Inert C&D materials disposed as public fill	0 m ³	Tuen Mun 38
Broken concrete	0 m ³	Tuen Mun 38
C&D wastes disposed as general refuse	0 m ³	NENT Landfill
Paper/cardboard packaging	0 kg	Recycling Facilities
Plastics	0 kg	Recycling Facilities
Metals	0 kg	Recycling Facilities
C&D materials reused on site	0 m ³	Site Area
C&D materials reused in other projects	0 m ³	Other projects
Chemical wastes	0 kg	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 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.

7 SUMMARY OF COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 7.1.1 No complaint, notification of summons and successful prosecution was received in the reporting period.
- 7.1.2 The statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix H.
- 7.1.3 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 period, the following comments are made to the Contractor for precautionary and rectification purposes:

Contract No. HY/2012/06

Air Quality Impact

- Nil.

Construction Noise Impact

- Nil.

Water Quality Impact

- Nil.

Chemical and Waste Management

- Nil.

Landscape and Visual Impact

- Nil.

Miscellaneous

- Nil.

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.

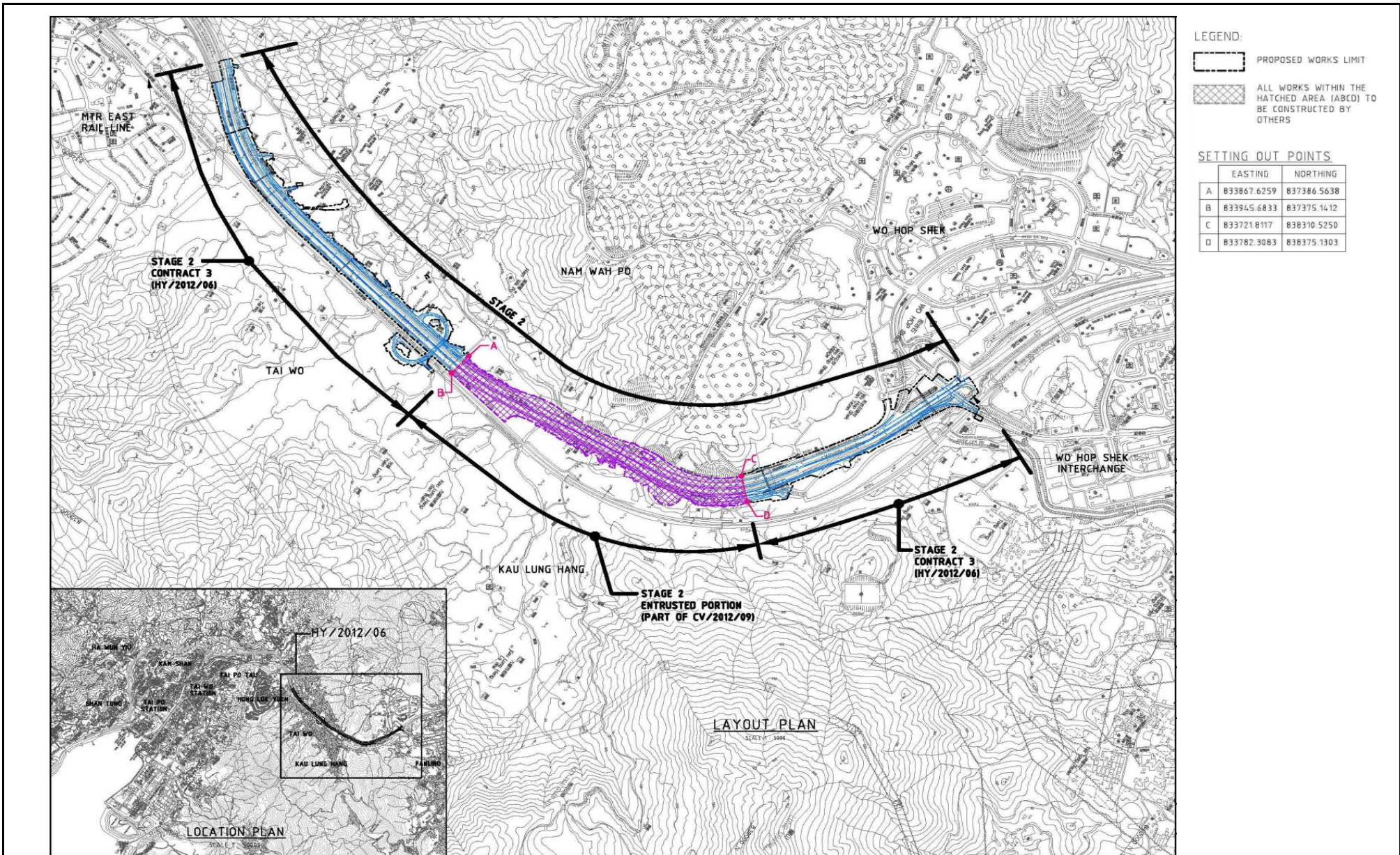
8.3 Conclusions

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 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.

8.3.3 No complaint, notification of summons and successful prosecution was received in the reporting period.

FIGURES

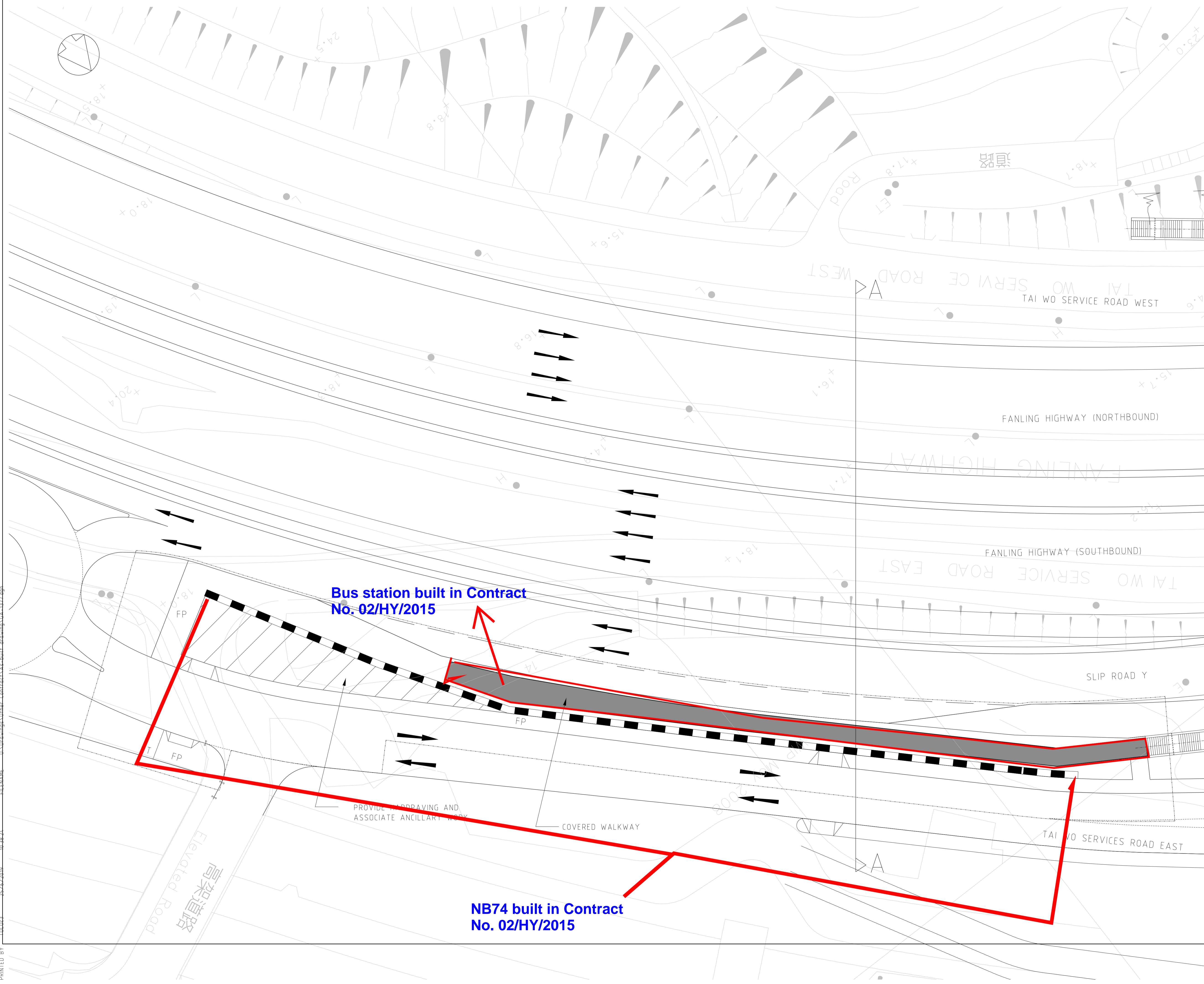


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CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Layout Plan



- LEGENDS :**
- LIMIT OF WORKS AREA
 - VERTICAL NOISE BARRIER 6m HIGH
 - COVERED WALKWAY
 - FOOTPATH
 - CYCLE TRACK

Z	OCT2018	AS-BUILT DRAWING	EC	JP
REV	DATE	DESCRIPTION	CHECKED	APP
修訂	日期	內容摘要	覆核	批覆人
REVISION				
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檔案名稱	A3 = 1300			

路政署
HIGHWAYS DEPARTMENT
 主要工程管理處
 MAJOR WORKS PROJECT MANAGEMENT OFFICE

CONTRACT TITLE
 合約項目
Highways Department Term Contract (Management and Maintenance of Roads in Tai Po and North Districts excluding High Speed Roads 2016-2012)

CONTRACT NO 02/HY/2015

CONSULTANT
 工程顧問
Hyder ARUP BLACK & VEATCH

DRAWING TITLE
 圖名
GENERAL LAYOUT FOR BB1

AS-BUILT DRAWING

DRAWING NO
 圖紙編號
 02/HY/2015/1377

REV
 修訂
 Z

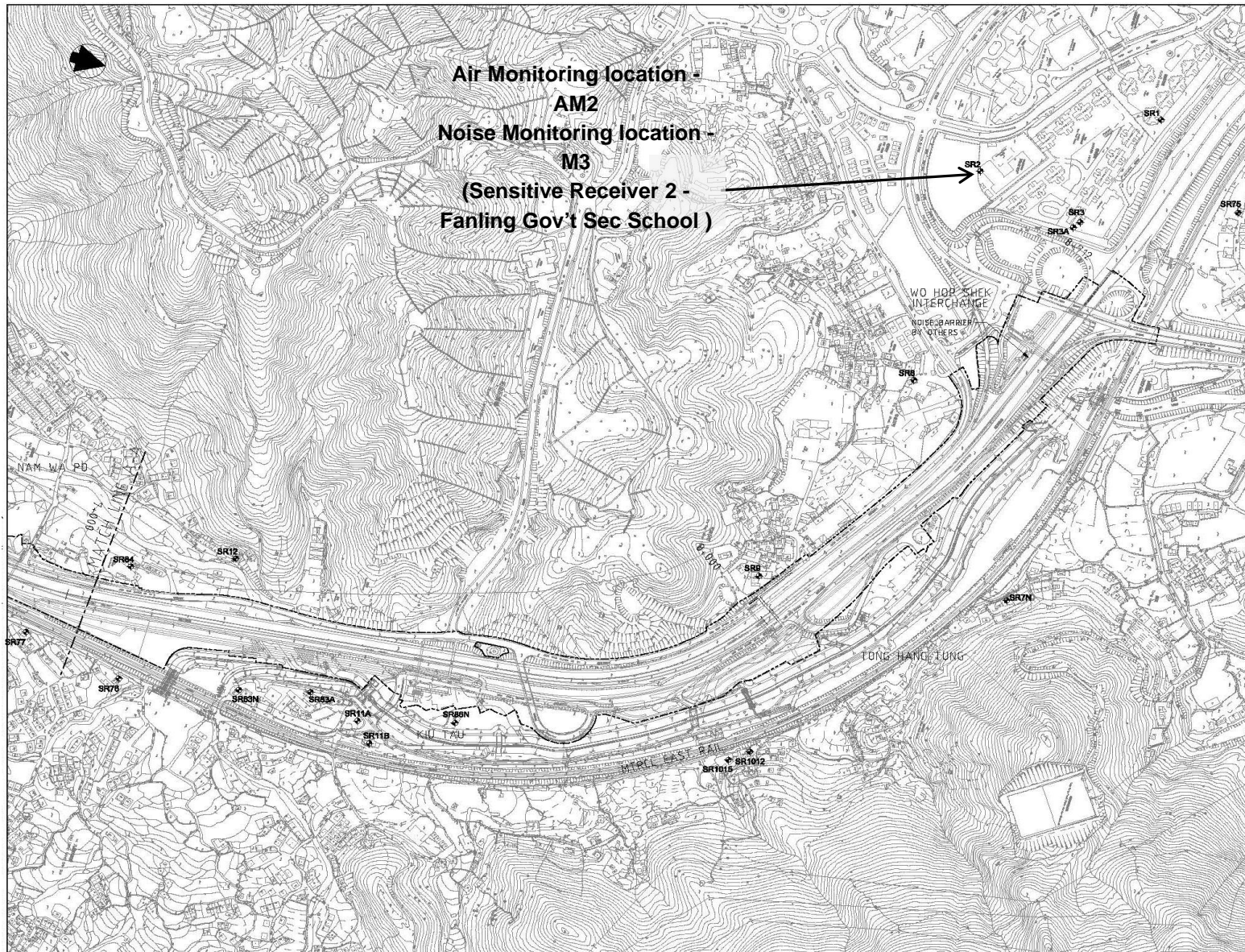
Bus station built in Contract No. 02/HY/2015

NB74 built in Contract No. 02/HY/2015

PROVIDE PAVEMENTING AND ASSOCIATE ANCILLARY WORK
 COVERED WALKWAY

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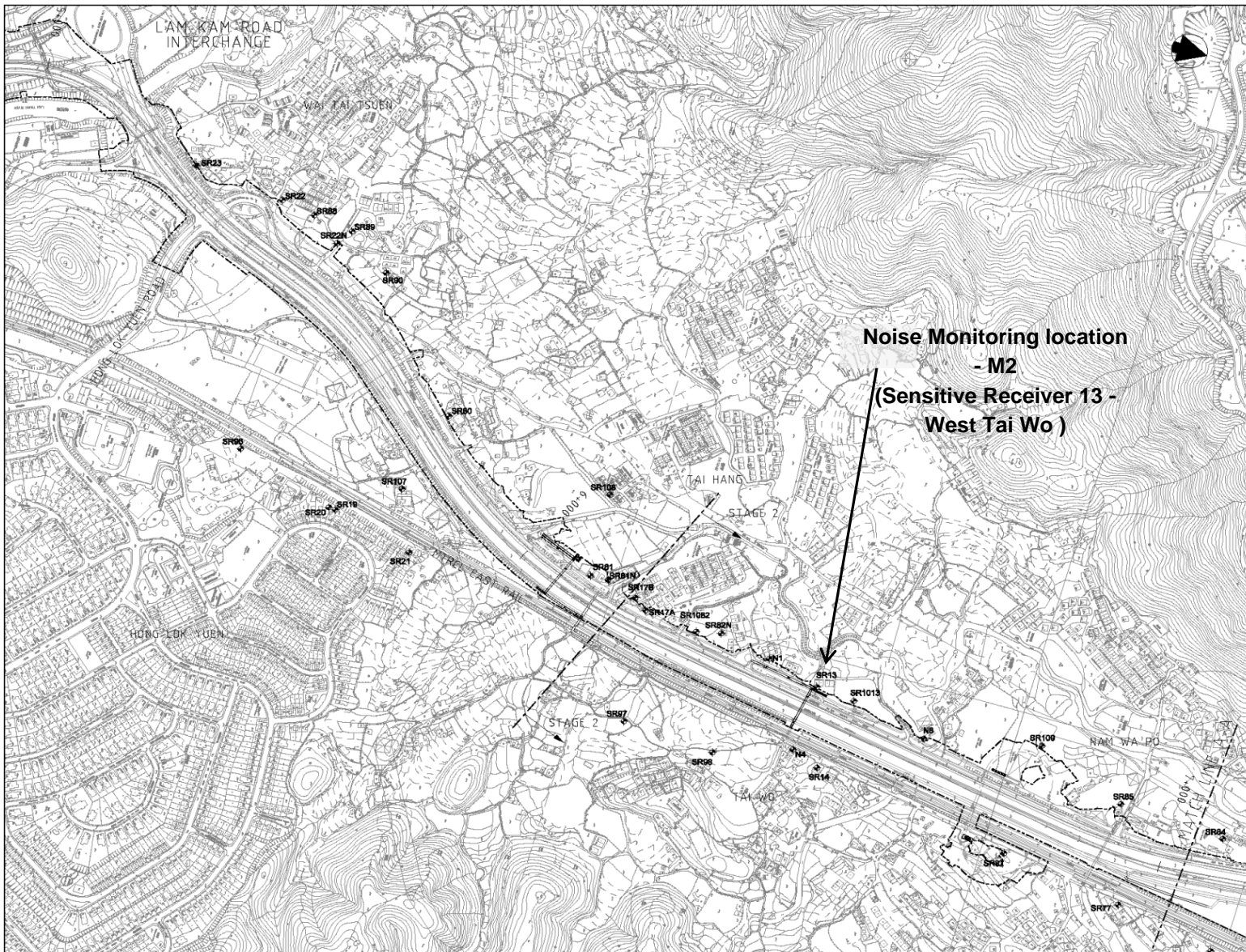
CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Locations of Monitoring Station

Date: Dec 2013

Figure 1.3a



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

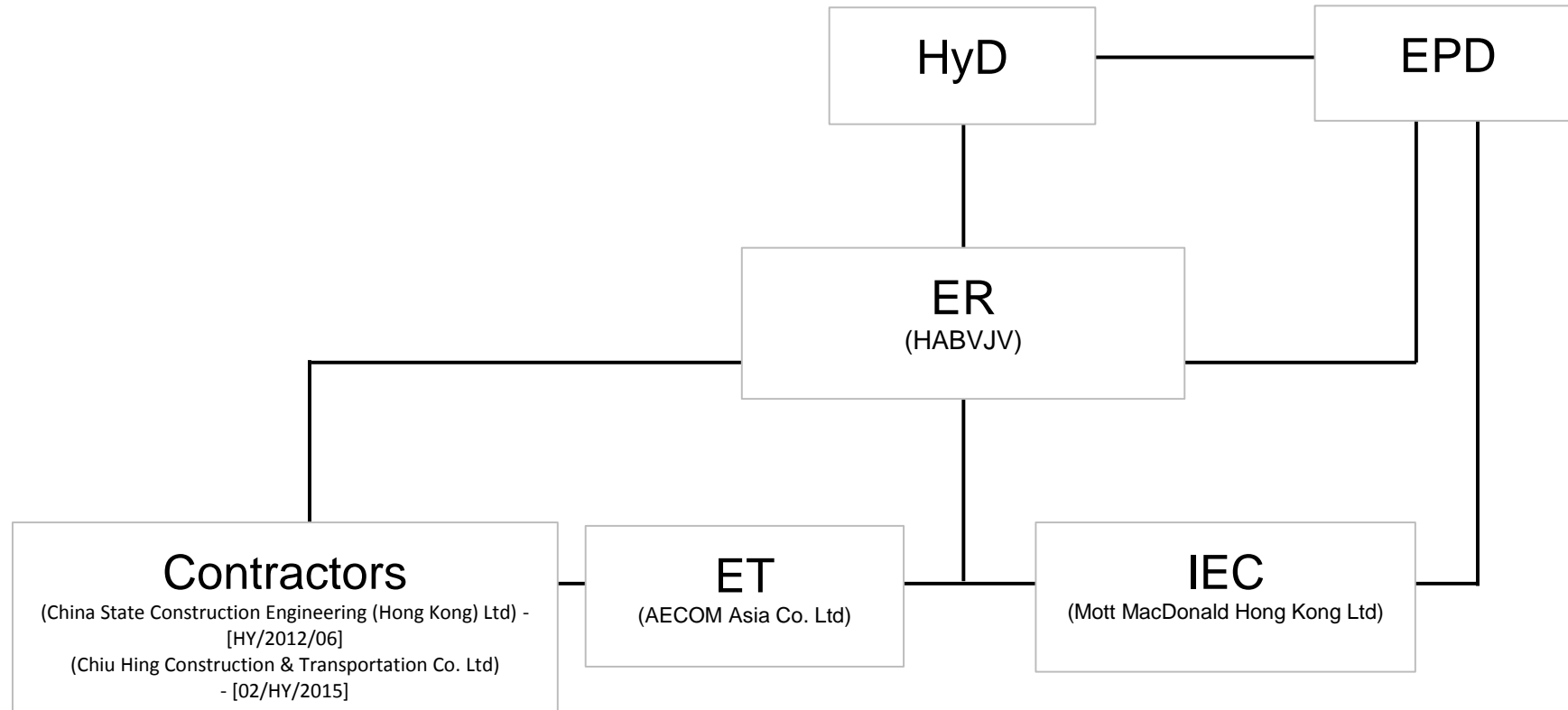


Locations of Monitoring Station

Date: Dec 2013

Figure 1.3b

**APPENDIX A
PROJECT ORGANIZATION STRUCTURE**



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



Project Organization Structure

**APPENDIX B
CONSTRUCTION PROGRAMMES**

Activity ID	Activity Name	Dur. % Complete	Rem. Duration	Original Duration	Start	Finish	Total Float	2019		2020	
								Nov	Dec	Jan	Feb
ZONE 1 (Ch. 5640 to 5880)											
Other Works											
VO189 - Irrigation System in Zone 1 and Zone 2											
VO189 - Irrigation System in Zone 1 and Zone 2											
IS0120	Irrigation system installation in Zone 1	0%	30	30	20-Nov-19*	24-Dec-19	252				
Establishment Works											
Establishment Works											
Z1.EW.1000	Establishment work Zone1	44.38%	203	365	11-Jun-19 A	09-Jun-20	0				
ZONE 2 (Ch. 5880 to 6930)											
General											
DRM Proposal											
DRM Proposal											
ADVZ20300	TWSR-W lane 2 construction	0%	30	30	27-Dec-19	03-Feb-20	222				
Noise Barrier Along Fanling Highway N/B											
NB43A (Ch.5880-6060)-FH N/B Side											
Noise Barrier Works											
NB03340	Relocate Bus Shelter installation - VO86	0%	11	11	16-Dec-19*	30-Dec-19	249				
Underground Utility Works											
Underground Utility Works											
UU0110	Towgas duct laying and associated work before backfill in Zone 1 & 2	92.72%	41	563	20-Apr-18 A	30-Dec-19	187				
UU0130	TTA duct laying and Road reinstatement by Towgas in Zone 1 & 2 (if required)	0%	120	120	31-Dec-19	28-Apr-20	187				
Bridge Construction											
New Tai Hang Footbridge											
General											
THBF0655	Tai Hang Footbridge Complete	0%	0	0		31-Dec-19	248				31-Dec-19 ◆ Tai Hang Footbridge Complete
TWSR-East FL Highway S/B Side Section											
THBF0640	Finishes Work	0%	34	30	25-Sep-19 A	31-Dec-19	248				
THBF0645	Bridge Structure complete (THFB-TWSR-E side)	0%	0	0		31-Dec-19	248				31-Dec-19 ◆ Bridge Structure complete (THFB
THBF0800	ABWF work	0%	34	30	25-Sep-19 A	31-Dec-19	248				
Lift at TWSR-W Side											
L1800	THFB Completion Date	0%	0	0		31-Dec-19	248				31-Dec-19 ◆ THFB Completion Date
Lift at FLHY S/B											
L1400	Roof cover for RC Platform	0%	33	30	25-Sep-19 A	30-Dec-19	249				
L1430	EMSD inspection & approval	60.71%	11	28	21-Oct-19 A	30-Nov-19	292				
L1440	E&M and Finishes work	0%	35	35	02-Dec-19	14-Jan-20	237				
L1460	Lift available - NF78	0%	0	0		14-Jan-20	237				14-Jan-20 ◆ Lift available - NF78
L1490	THFB Completion Date	0%	0	0		31-Dec-19	248				31-Dec-19 ◆ THFB Completion Date
New Tai Wo Footbridge											
General											
TWFB1110	Tai Wo Footbridge Complete	0%	0	0		30-Dec-19	235				30-Dec-19 ◆ Tai Wo Footbridge Complete
Crossing Fanling Highway Section											
TWFB1460	Finishes Work	80.36%	33	168	06-Apr-19 A	30-Dec-19	235				
TWFB1470	Bridge Structure complete (TWFB-Cross fanling highway)	0%	0	0		30-Dec-19	235				30-Dec-19 ◆ Bridge Structure complete (TWFB
Lift at TWSR-W Side											
L1760	EMSD inspection & approval	71.43%	8	28	31-Oct-19 A	27-Nov-19	322				
L1770	E&M and Finishes work	93.33%	10	150	23-Apr-19 A	30-Nov-19	258				
L1790	Lift available - NF116-Lift 1	0%	0	0		30-Nov-19	258				30-Nov-19 ◆ Lift available - NF116-Lift 1
L1810	New Tai Wo footbridge completion	0%	0	0		30-Dec-19	249				30-Dec-19 ◆ New Tai Wo footbridge completor
Signalized Junction											
New Tai Hang Footbridge											
TWSR-West/ FL Highway N/B Side Section											
THBF0630	Installation of Traffic Signal Poles at TWSR-W N/B (Tai hang Junction)	0%	21	21	18-Jan-20	13-Feb-20	192				
THBF0650	Ducting & Cable Draw Installation (Tai hang Junction)	79.39%	27	131	08-May-19 A	20-Dec-19	192				
THBF0660	Installation of Traffic Signal Poles at TWSR-W S/B (Tai hang Junction)	0%	21	21	21-Dec-19	17-Jan-20	192				
THBF0670	E-prom ordering by EMSD (Tai hang Junction)	82.93%	56	328	20-Nov-18 A	14-Jan-20	302				
THBF0680	Ducting & cable draw inspection by EMSD (Tai hang Junction)	0%	6	6	15-Jan-20	21-Jan-20	213				
THBF0690	Ducting & cable draw rectification (Tai hang Junction)	0%	12	12	22-Jan-20	06-Feb-20	213				
THBF0692	PCCW cable installation & connection (Tai hang Junction)	0%	6	6	14-Feb-20	20-Feb-20	207				
THBF0694	EMSD cable & equipment installation (Tai hang Junction)	0%	21	21	14-Feb-20	09-Mar-20	192				
TWSR-West Construction											
Drainage & Road Works											
Ch 5880-6740											

	Project ID: WP Rev 08 (1911) Layout: 3 Month Rolling Program Page 1 of 3	Contract No. HY/2012/06 Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange 3 Month Rolling Program(20-Nov-19)		Date	Revision	C/A...
				17-Aug-17	WP Rev 5	
				28-Mar-18	WP Rev 6	
				27-Nov-18	WP Rev 6A	
				15-Jan-19	WP Rev 7	
				31-Oct-19	WP Rev 8	

WP Rev. 8 (Progress Update)(20-Nov-19)		3 Month Rolling Program						Page 2 of 3 (22-Nov-19)			
Activity ID	Activity Name	Dur. % Complete	Rem. Duration	Original Duration	Start	Finish	Total Float	2019		2020	
								Nov	Dec	Jan	Feb
RDZ20140	Z2 (CH5880-6930) : New TWSR - West Road works (2 lanes) complete	0%	0	0		03-Feb-20	222			03-Feb-20	◆ Z2 (CH5880-6930) complete
RDZ20170	Z2 : New TWSR-Westroad Works (lane 2)	0%	30	30	27-Dec-19	03-Feb-20	222				
Other Works											
TCSS Works											
Civil Provision for TCSS Works											
TCSS2140	M10 for CCTV	0%	14	14	31-Dec-19	16-Jan-20	235				
TCSS2180	Pillar box, isolator & associated duct work - PL204 for G30 & G55	0%	16	16	20-Nov-19	07-Dec-19	266				
TCSS2190	Pillar box, isolator & associated duct work - PL205 for G54 & M10	0%	16	16	20-Nov-19	07-Dec-19	266				
TCSS2200	Pillar box, isolator & associated duct work - PL206 for G32	0%	16	16	20-Nov-19	07-Dec-19	266				
TCSS2270	Civil Provision for TCSS works available (Zone 2)	0%	0	0		07-Dec-19	266				◆ Civil Provision for TCSS works available (Zone 2)
VO184 - Irrigation System in SA328 and SA329											
VO184 - Irrigation System in SA328 and SA329											
IS0140	Irrigation system installation in SA328 and SA329	34.69%	32	49	04-Sep-19 A	28-Dec-19	250				
VO189 - Irrigation System in Zone 1 and Zone 2											
VO189 - Irrigation System in Zone 1 and Zone 2											
IS0130	Irrigation system installation in Zone 2	4.08%	47	49	04-Sep-19 A	16-Jan-20	235				
Landscape Softwork											
Landscape Works											
Z2.LW.1000	Landscape soft work Zone2	0%	47	32	25-Sep-19 A	16-Jan-20	235				
Establishment Works											
Establishment Works											
Z2.EW.1000	Establishment work Zone2	4.66%	348	365	02-Nov-19 A	01-Nov-20	0				
Pai Lau in Tai Hang (VO126)											
Pai Lau in Tai Hang (VO126)											
Pai Lau in Tai Hang (VO126)											
PL01050	Pai Lau Superstructure	84.62%	10	65	07-Oct-19 A	30-Nov-19	231				
PL01080	Material Order & delivery on site	0%	45	45	20-Nov-19	14-Jan-20	196				
PL01090	Finishes works	0%	41	41	15-Jan-20	04-Mar-20	196				
South Buffer Zone 1 (SBZ1) (within Zone 2)(Ch.6740 to 6930)											
Bridge Construction											
Kau Lung Hang Vehicular Bridge											
KLH Bridge - West Ramp											
KLH.1290	West Ramp - Planting	0%	34	34	20-Nov-19*	31-Dec-19	248				
KLH Bridge - Deck 1											
KLH.3430	Deck 1 - Planting	0%	34	34	20-Nov-19	31-Dec-19	248				
KLH Bridge - Deck 3											
KLH.3500	Deck 3 - Planting	0%	34	34	20-Nov-19	31-Dec-19	248				
KLH Bridge - East Ramp											
KLH.3590	East Ramp - Planting	0%	34	34	20-Nov-19	31-Dec-19	248				
KLH Bridge - Staircase S1											
Z2.KLH.1500	S1 - Roof steel frame installation	75.61%	10	41	11-Sep-19 A	30-Nov-19	242				
Z2.KLH.1750	S1 - Corrugated steel roof	0%	18	18	02-Dec-19	21-Dec-19	242				
Z2.KLH.1760	S1 - Handrail	0%	12	12	23-Dec-19	08-Jan-20	242				
Z2.KLH.1770	S1 - Lighting & finishes works	0%	12	12	23-Dec-19	08-Jan-20	242				
Bridge Road Work											
Z2.KLH.2040	Landscape work of KLHVB	71.95%	46	164	23-Apr-19 A	15-Jan-20	236				
Signalized Junction											
Kau Lung Hang Vehicular Bridge											
KLH Bridge - West Ramp											
Z2.KLH.1032	Installation of Traffic Signal Poles at TWSR-W N/B (KLHVB)	0%	34	21	14-Nov-19 A	31-Dec-19	227				
Z2.KLH.1082	Ducting & cable draw rectification (KLHVB)	0%	22	12	19-Oct-19 A	14-Dec-19	248				
Z2.KLH.1092	PCCW cable installation & connection (KLHVB)	0%	6	6	02-Jan-20	08-Jan-20	236				
Z2.KLH.1102	EMSD cable & equipment installation (KLHVB)	0%	21	21	02-Jan-20	28-Jan-20	227				
Z2.KLH.1112	Traffic Signal Installation complete (KLHVB)	0%	0	0		28-Jan-20	227				◆ Traffic Signal
North Buffer Zone 2 (NBZ2) (within Zone 4) (Ch. 7925 to 8100)											
Bridge Construction											
New Ho Ka Yuen Footbridge											
TWSR-West/ FL Highway N/B Side Section											
HKY1520	VO11 - slope improvement work	0%	45	45	20-Nov-19	14-Jan-20	237				
ZONE 4 (Ch. 7925 to 8700)											
Bridge Construction											
New Wo Hop Shek Pedestrian & Cycle Bridge											
General											
WHS1110	Wo Hop Shek Bridge Complete	0%	0	0		31-Dec-19	248				◆ Wo Hop Shek Bridge Complete
TWSR-West/ FL Highway N/B Side Section											
WHS1420	Ramp Finishes Work	91.37%	34	394	13-Jul-18 A	31-Dec-19	248				
WHS1430	Bridge Structure complete (WHS-TWSR-W side)	0%	0	0		31-Dec-19	248				◆ Bridge Structure complete (WHS-TWSR-W side)

Activity ID	Activity Name	Dur. % Complete	Rem. Duration	Original Duration	Start	Finish	Total Float	2019				2020		
								Nov		Dec		Jan		Feb
VO152 - Additional Retaining Wall in Zone 4 Near at Grade Cycle Track and Footpath at WHS Bridge														
Cycle Track														
WHS1560	Retaining Wall construction	0%	34	24	14-Nov-19 A	31-Dec-19	101							
WHS1570	Concrete Footing for railing	0%	10	10	02-Jan-20	13-Jan-20	101							
WHS1580	Concrete Footing for Expressway boundary fence	0%	10	10	14-Jan-20	24-Jan-20	101							
WHS1590	300 U-channel	0%	12	12	28-Jan-20	10-Feb-20	149							
WHS1600	backfill	0%	3	3	11-Feb-20	13-Feb-20	149							
WHS1610	Cycle Track sub-base & wearing course	0%	6	6	14-Feb-20	20-Feb-20	149							
Footpath														
WHS2150	Concrete Footing for railing	0%	15	15	28-Jan-20	13-Feb-20	101							
WHS2160	Concrete Footing for Expressway boundary fence	0%	15	15	14-Feb-20	02-Mar-20	101							
TWSR-West Construction														
Drainage & Road Works														
TWSR-West/ FL Highway NB Side Section														
RDZ41180	TWSR -W Road Works rectification	0%	18	18	20-Nov-19	10-Dec-19	264							
Other Works														
TCSS Works														
TCSS Pre-Construction Works														
TCSS0180	Sign Gantry Factory production - FVMS1 (Deleted)	0%	0	0	20-Nov-19	20-Nov-19	282							
Civil Provision for TCSS Works														
TCSS2150	M12 for CCTV	0%	14	14	02-Jan-20*	17-Jan-20	234							
TCSS2160	P51 for VSLS	0%	14	14	02-Dec-19*	17-Dec-19	168							
TCSS2170	P52 for VSLS	0%	14	14	02-Dec-19*	17-Dec-19	168							
TCSS2210	Pillar box, isolator & associated duct work - PL207 for G34 & G35	0%	30	30	18-Dec-19*	24-Jan-20	168							
TCSS2230	Pillar box, isolator & associated duct work - PL251 for G51	0%	30	30	28-Jan-20	02-Mar-20	168							
DS50														
TCSS1850	Sign Gantry Erection - DS50 (Z4) (Deleted by Verbal instruction, VO is pending)	0%	0	0	20-Nov-19	20-Nov-19	282							
TCSS Hub Room														
TCSS1920	TCSS Hub Room BS provision	24.44%	34	45	29-Oct-19A	31-Dec-19	248							
VO190 - Irrigation System near Ho Ka Yuen Footbridge														
VO190 - Irrigation System near Ho Ka Yuen Footbridge														
IS160	Irrigation system installation near Ho Ka Yuen Footbridge	73.91%	6	23	04-Sep-19 A	26-Nov-19	276							
Landscape Softwork														
Landscape Works														
Z4.LW.1000	Landscape soft work Zone4	73.91%	6	23	04-Sep-19 A	26-Nov-19	276							
Establishment Works														
Establishment Works														
Z3.EW.1000	Establishment work Zone4	13.15%	317	365	02-Oct-19A	01-Oct-20	0							
VO Relocation of Traffic Sign at Pak Wo Road & Jockey Club Road														
VO Relocation of Traffic Sign at Pak Wo Road & Jockey Club Road														
TS01030	TTA submission & approval	0%	40	34	02-Sep-19 A	08-Jan-20	125							
TS01040	TTA	0%	2	2	09-Jan-20	10-Jan-20	125							
TS01050	Sheet piling & excavation	0%	18	18	11-Jan-20	03-Feb-20	125							
TS01060	Footing (FL02, A DS52)	0%	45	45	04-Feb-20	26-Mar-20	125							
TS1160	XP application period - Jockey Club Road	62.04%	41	108	08-Aug-19 A	30-Dec-19	164							
TS1180	TTA	0%	2	2	31-Dec-19	02-Jan-20	132							
TS1190	Sheet piling & excavation	0%	18	18	03-Jan-20	23-Jan-20	132							
TS1200	Footing (DS53, FL01)	0%	45	45	24-Jan-20	18-Mar-20	132							
Ducting Works in Traffic Signalized Junction at Pak Wo Road														
WHS Interchange														
TSJ01050	Duct Laying (Road Crossing) - Pak Wo Road	8.7%	42	46	17-Sep-19 A	10-Jan-20	240							
Pak Wo Road and Jockey Club Road Junction														
TSJ01260	Existing MJ modified by HyD structure	34.43%	40	61	26-Oct-19A	08-Jan-20	101							
TSJ01270	Road Construction & reinstatement (new 2nd stage after MJ modification by HyD)	0%	35	35	09-Jan-20	20-Feb-20	101							
Commissioning of Traffic Signalized Junction (by EMSD)														
TSJ01220	Eprom procurement	0%	60	60	13-Dec-19	26-Feb-20	101							

**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	
			Aug 21	Sep 21
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
	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
	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
	Materials shall be dampened, if necessary, before transportation.		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
	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	
			Aug 21	Sep 21
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
	3.5 m and 5.5 m high temporary noise barrier at culvert construction work area (Figure 2a of the Environmental Permit).		V*	V*
	3 m high temporary noise barrier along the northern edge of Bridge 12 at ground level (Figure 2b of the Environmental Permit).		V*	V*
	2 m high temporary noise barrier along the northern edge of Bridge 12 at bridge level (Figure 2b of the Environmental Permit).		V*	V*
	2.5 m high temporary noise barrier along Tai Wo Service Road West (Figure 2c of the Environmental Permit).		V*	V*
	3.5m and 7m high temporary noise barrier along Tai Wo Services Road West near Tai Hang (Figure 2c of the Environmental Permit).		V*	V*
	7 m high temporary noise barrier along Tai Wo Service Road West near Tai Wo Footbridge work area (Figure 2d of the Environmental Permit).		V*	V*
	7 m high temporary noise barrier near Kiu Tau Footbridge work area (Figure 2d of the Environmental Permit).		V*	V*
	2.5 m high temporary noise barrier near river diversion work area (Figure 2e of the Environmental Permit).		V*	V*
Noise during operation	Various type of barriers of varying heights as shown in Figures 4a to 4e – Layout of Noise Barriers of the Environmental Permit	Review of required noise barrier layout during the design stage	V*	V*

* Permanent noise barriers have been erected.

Water Quality – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status	
			Aug 21	Sep 21
Water quality during construction	All wastewater generated on the Site shall be collected, removed from Site via a suitable and properly designed temporary drainage system and disposed of at a location and in a manner that will cause neither pollution nor nuisance.	During construction	V	V
	The Contractor shall construct, maintain, remove and reinstate, as necessary, temporary drainage works and take all other precautions necessary for the avoidance of damage by flooding and silt washed down from the Works. He shall also provide adequate precautions to ensure that no spoil or debris of any kind is allowed to be pushed, washed down, fall or be deposited on land or on the seabed adjacent to the site.		V	V
	Around any material storage, batching plants or other facilities where spillage may occur, a bund with a capacity of 110% will be provided.		V	V
	The Contractor shall not permit any sewage, waste water or other effluent containing sand, cement, silt or any other suspended or dissolved material to flow from the Site onto any adjoining land or allow any solid waste to be deposited anywhere within the Site or onto any adjoining land and shall have all such materials removed from the Site.		V	V
	The Contractor shall be responsible for temporary drainage, diverting or conducting of open streams or drains intercepted by any works and for reinstating these to their original courses on completion of the Works.		V	V
	Any proposed temporary diversions to stream courses or nullahs shall be submitted to the Engineer for agreement one month prior to such diversion works being commenced. Diversions shall be constructed to allow the water flow to discharge without overflow, erosion or washout. The area through which the temporary diversion runs is to be reinstated to its original condition when the temporary diversion is no longer required.		V	V
	The Contractor shall not discharge directly or indirectly (by runoff) or cause or permit to be discharged into any public sewer, storm-water drain, channel, stream-course or sea, any effluent or foul or contaminated water or cooling water without the prior consent of the relevant Authority who may require the Contractor to provide, operate and maintain at the Contractor's own expense, within the premises or otherwise, suitable works for the treatment and disposal of such effluent or foul or contaminated or cooling or hot water.		V	V

	<p>If any office, site canteen or toilet facilities is erected, foul water effluent shall, subject to clause as stated in the last paragraph above, be directed to a foul sewer or to a sewage treatment facilities either directly or indirectly by means of pumping.</p>		<p>V</p>	<p>V</p>
	<p>The Contractor shall at all times ensure that all existing stream courses and drains within, and adjacent to the Site are kept safe and free from any debris and any excavated materials arising from the Works. The Contractor shall ensure that chemicals and concrete agitator washings are not deposited in watercourses.</p>		<p>V</p>	<p>V</p>
	<p>All Contractor's Equipment shall be designed and maintained to minimize the risk of silt and other contaminants being released into the water column or deposited in other than designated locations</p>		<p>V</p>	<p>V</p>

Waste – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation	
			Aug 21	Sep 21
Waste management during construction	General Waste <ul style="list-style-type: none"> - 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 <ul style="list-style-type: none"> - 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
	Demolition Wastes <ul style="list-style-type: none"> - Segregation of materials to facilitate disposal. - Appropriate stockpile management. 		V	V
	Excavated Materials <ul style="list-style-type: none"> - 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
	Construction Wastes <ul style="list-style-type: none"> - 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
	Bentonite Slurries <ul style="list-style-type: none"> - Bentonite slurries should be reused as far as possible. - Disposal in accordance with Practice Note For Professional Persons ProPECC PN 1/94. 		#	#

	<p>Chemical Wastes</p> <ul style="list-style-type: none"> - 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. 		V	V
	<p>Municipal Wastes</p> <ul style="list-style-type: none"> - 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

Ecology – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation	
			Aug 21	Sep 21
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
	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
	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
	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

Landscape and Visual Impact – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation	
			Aug 21	Sep 21
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
	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
	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.		V	V

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/m ³	500 µg/m ³

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

Location	Action Level	Limit Level
AM2	200.7 µg/m ³	260 µg/m ³

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

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

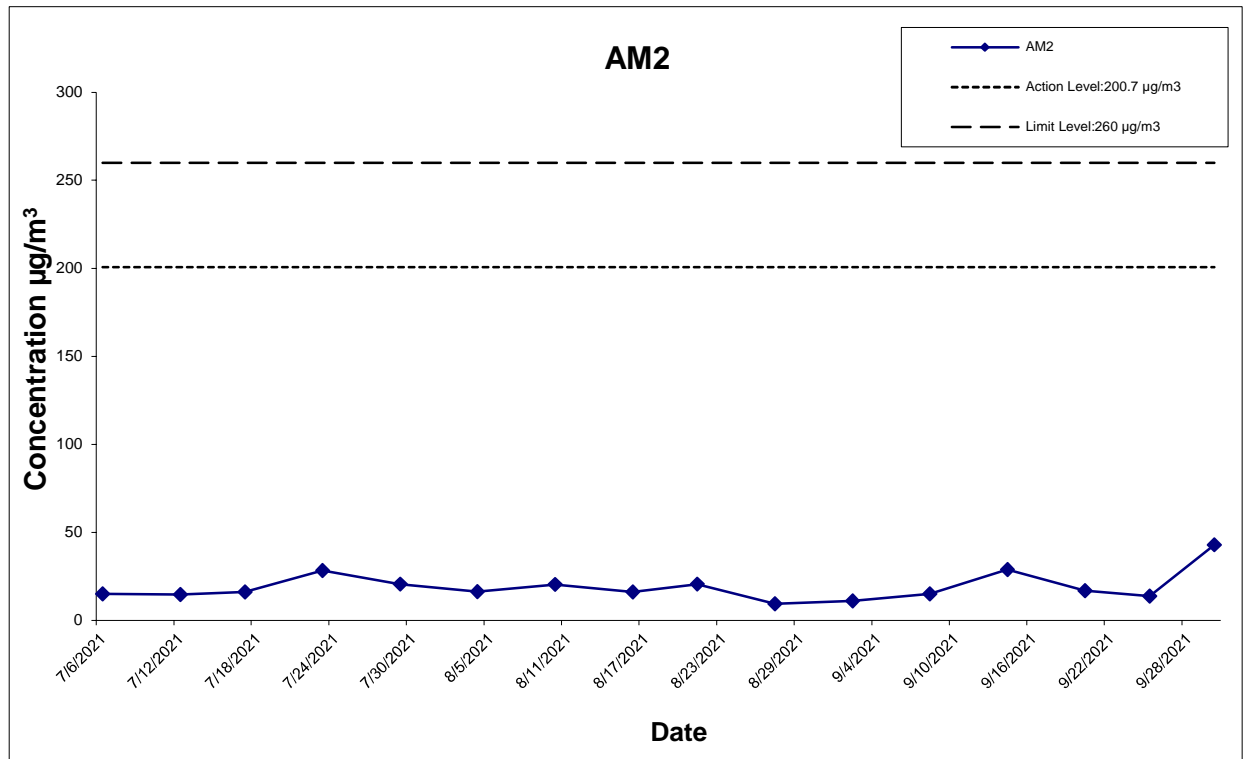
*Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period

**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 Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)	Actino Level (µg/m ³)	Limit Level (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final				
6-Jul-21	Fine	29.4	1006.4	1.314	1.314	1.314	1892.2	2.6625	2.6909	0.0284	16246.07	16270.07	24.00	15.0	200.7	260
12-Jul-21	Sunny	30.9	1010.2	1.314	1.314	1.314	1892.2	2.6707	2.6985	0.0278	16270.07	16294.07	24.00	14.7	200.7	260
17-Jul-21	Fine	28.8	1005.8	1.314	1.314	1.314	1892.2	2.6747	2.7050	0.0303	16294.07	16318.07	24.00	16.0	200.7	260
23-Jul-21	Sunny	30.3	998.3	1.314	1.314	1.314	1892.2	2.6667	2.7202	0.0535	16318.07	16342.07	24.00	28.3	200.7	260
29-Jul-21	Cloudy	29.5	1000.1	1.334	1.334	1.334	1921.0	2.6849	2.7243	0.0394	16342.07	16366.07	24.00	20.5	200.7	260
4-Aug-21	Rainy	28.2	995.6	1.334	1.334	1.334	1921.0	2.6759	2.7072	0.0313	16366.07	16390.07	24.00	16.3	200.7	260
10-Aug-21	Rainy	29.0	1005.9	1.334	1.334	1.334	1921.0	2.6922	2.7314	0.0392	16390.07	16414.07	24.00	20.4	200.7	260
16-Aug-21	Cloudy	28.3	1012.5	1.334	1.334	1.334	1921.0	2.6824	2.7133	0.0309	16414.07	16438.07	24.00	16.1	200.7	260
21-Aug-21	Sunny	29.8	1008.6	1.334	1.334	1.334	1921.0	2.6937	2.7333	0.0396	16438.07	16462.07	24.00	20.6	200.7	260
27-Aug-21	Rainy	25.6	1012.0	1.334	1.334	1.334	1921.0	2.6773	2.6953	0.0180	16462.07	16486.07	24.00	9.4	200.7	260
2-Sep-21	Sunny	29.5	1009.0	1.334	1.334	1.334	1921.0	2.6715	2.6927	0.0212	16486.07	16510.07	24.00	11.0	200.7	260
8-Sep-21	Sunny	30.6	1009.4	1.334	1.334	1.334	1921.0	2.6812	2.7100	0.0288	16510.07	16534.07	24.00	15.0	200.7	260
14-Sep-21	Rainy	29.0	1011.5	1.334	1.334	1.334	1921.0	2.6801	2.7355	0.0554	16534.07	16558.07	24.00	28.8	200.7	260
20-Sep-21	Sunny	29.3	1010.4	1.334	1.334	1.334	1921.0	2.6934	2.7254	0.0320	16558.07	16582.07	24.00	16.7	200.7	260
25-Sep-21	Sunny	29.6	1012.8	1.334	1.334	1.334	1921.0	2.6845	2.7108	0.0263	16582.07	16606.07	24.00	13.7	200.7	260
30-Sep-21	Sunny	30.3	1008.1	1.334	1.334	1.334	1921.0	2.6687	2.7511	0.0824	16606.07	16630.07	24.00	42.9	200.7	260
Average for the reporting quarter (Aug 2021 to Sep 2021)													19.2			
Minimum for the reporting quarter (Aug 2021 to Sep 2021)													9.4			
Maximum for the reporting quarter (Aug 2021 to Sep 2021)													42.9			



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



Graphical Presentation of Impact 24-hour TSP Monitoring Results

Project No.: 60307376

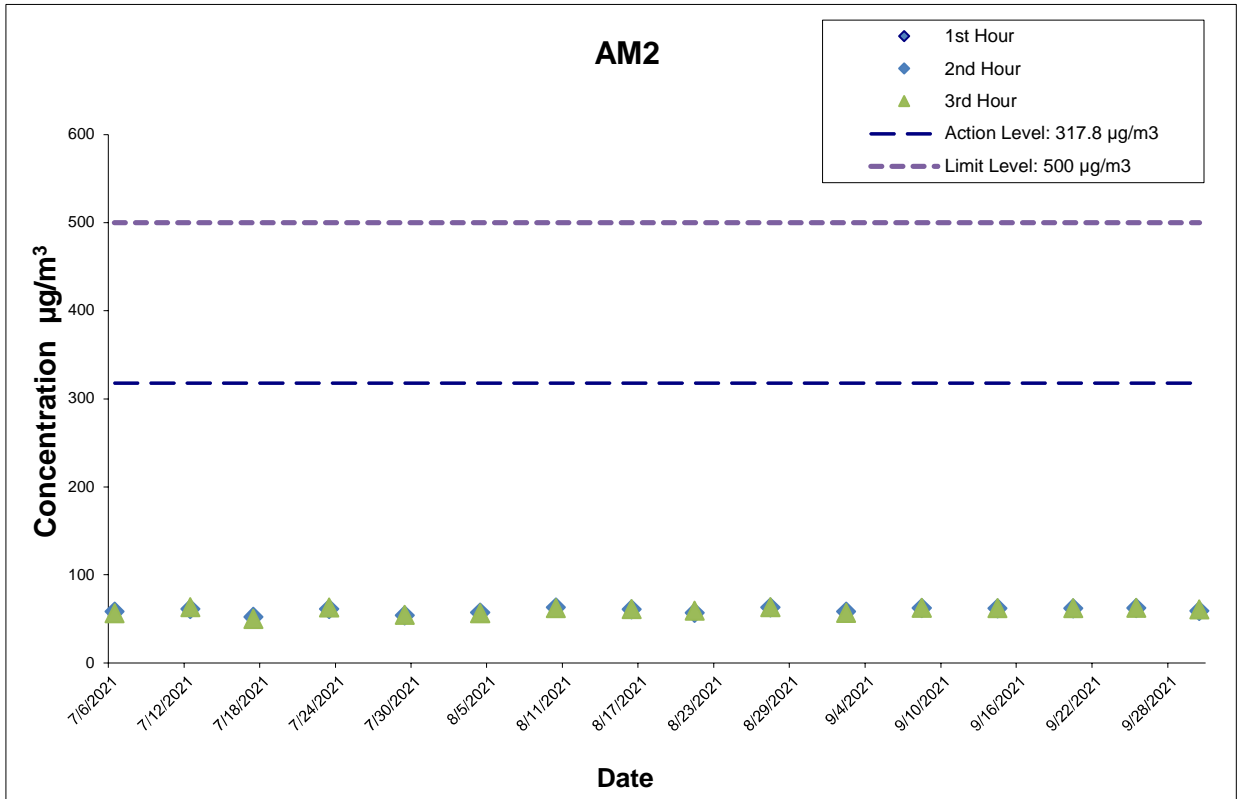
Date: Oct-21

Appendix E

Impact Air Quality Monitoring Results

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

Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
6-Jul-21	10:00	57.5	58.4	56.6
12-Jul-21	10:00	59.6	61.4	63.3
17-Jul-21	14:00	53.4	52.4	50.1
23-Jul-21	10:06	62.5	61.4	63.1
29-Jul-21	10:00	52.8	54.1	54.9
4-Aug-21	11:05	58.5	57.4	56.6
10-Aug-21	11:30	62.6	63.2	62.4
16-Aug-21	10:50	60.7	61.1	61.3
21-Aug-21	10:00	58.1	57.1	59.4
27-Aug-21	10:20	62.6	63.2	63.6
2-Sep-21	10:00	57.7	58.5	56.8
8-Sep-21	14:20	63.2	62.3	62.7
14-Sep-21	13:05	61.4	62.0	62.3
20-Sep-21	11:30	61.1	61.9	62.5
25-Sep-21	10:33	63.1	62.3	62.8
30-Sep-21	10:00	58.4	59.1	61.1
Average for the reporting quarter (Aug 2021 to Sep 2021)				60.8
Minimum for the reporting quarter (Aug 2021 to Sep 2021)				56.6
Maximum for the reporting quarter (Aug 2021 to Sep 2021)				63.6



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



Graphical Presentation of Impact 1-hour TSP Monitoring Results

**APPENDIX F
METEOROLOGICAL DATA FOR THE
REPORTING PERIOD**

Day	Hong Kong Observatory							
	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)
		Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)				
1	998.5	32.5	29.4	27.1	26	83	83	11.6
2	998.3	33.9	30	28.5	26	80	84	Trace
3	997.2	29.7	28.2	27.1	26	88	82	19.7
4	995.6	31.3	28.2	25.9	25.3	85	84	41.9
5	996	28.6	27.6	26.2	25.9	90	88	28.1
6	998	29.7	28.3	26.4	26.2	89	89	31
7	1001.3	30.9	28.8	27.6	25.9	85	86	0
8	1004.3	31.5	29.3	27.8	26.5	85	86	3.1
9	1005.4	31.3	29.1	27.2	26.2	85	88	36.3
10	1005.9	30.4	29	27.5	26.6	87	88	17.3
11	1008.3	32.1	29.5	27.1	26.4	84	87	3
12	1008.9	33	29	26.8	25.5	82	78	1
13	1006.2	30.7	28.6	26.6	25.3	83	80	5.4
14	1006.4	29.2	28	26.6	25.1	85	87	2.2
15	1010.2	30	27.3	25.7	25	87	83	5.7
16	1012.5	31	28.3	26.2	25.1	83	56	3.9
17	1010.5	32.5	29.5	27.4	25.1	78	42	0
18	1008.2	32.3	29.5	28.1	24.9	77	80	0
19	1008.6	31	28.6	26.2	25.7	84	72	34.6
20	1009.5	32.5	29.5	27.3	24.9	77	47	Trace
21	1008.6	32.5	29.8	28	25	76	68	0
22	1007.4	33.1	30.1	28.3	24.8	74	63	0
23	1007.2	33.2	30.2	28.4	25.1	75	61	Trace
24	1007.7	32.1	29.6	26.6	25.4	79	78	23.7
25	1009	34.4	29.7	28.2	25.6	79	84	1.1
26	1011	32.7	29.7	27.1	25.8	80	71	2.2
27	1012	29.2	25.6	23.4	23.6	89	82	29.3
28	1011.6	29.8	26.9	24.9	23.4	81	77	22
29	1011.2	29.9	27.8	25.3	24.7	83	86	13.9
30	1011.4	32.9	29.1	27.4	25.3	81	75	Trace
31	1011.1	29.1	27.3	25.2	25.1	88	87	13.5
Mean/Total	1006.4	31.4	28.8	26.8	25.4	83	77	350.5

Day	Hong Kong Observatory								King's Park	Waglan Island^	
	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Total Bright Sunshine (hours)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)							
1	1009.9	32.1	28.7	26.7	25.8	85	84	5.9	***	***	***
2	1009	33	29.5	27.7	25.7	80	74	0	***	***	***
3	1007.4	33.6	29.8	27.8	25.6	79	66	Trace	***	***	***
4	1008.3	33.6	29.8	27.9	25.7	79	49	0.9	***	***	***
5	1010	33.2	29.8	28.3	25.7	79	61	Trace	***	***	***
6	1010.5	32.5	29.7	28	25.2	77	73	0	***	***	***
7	1010.4	33.4	30.1	28.1	25.7	78	72	0.2	***	***	***
8	1009.4	34.3	30.6	28.2	25.2	74	66	0	***	***	***
9	1009.3	33.5	30.1	27.8	24.7	73	66	0	***	***	***
10	1008.3	33.7	30.5	28.6	24.6	71	79	0	***	***	***
11	1004.5	33.4	30.5	28.4	25.5	75	77	0	***	***	***
12	1002	34.5	31.2	29	26.4	76	78	0	***	***	***
13	1006.7	33.6	30.9	29.5	26.5	77	80	0	***	***	***
14	1011.5	30.2	29	26.7	25.8	83	81	33.8	***	***	***
15	1011.2	33	30.2	27.9	25.2	75	71	0	***	***	***
16	1009.4	31.9	29.2	26.8	24.6	77	86	Trace	***	***	***
17	1009.2	34.1	29.5	27.5	25	77	81	7.6	***	***	***
18	1011.1	33.2	30.2	28.3	26.1	79	69	0.2	***	***	***
19	1011.3	32.1	29.3	27.4	26.6	86	83	21.2	***	***	***
20	1010.4	32.3	29.3	27.9	26.2	84	80	9.4	***	***	***
21	1009.5	31.7	29	26.7	25.6	82	74	10.2	***	***	***
22	1010.5	34	30.3	27.9	25.7	77	66	0.5	***	***	***
23	1013	30.2	28	26	25.6	87	87	38.4	***	***	***
24	1013.6	32	29.4	27.8	25.7	81	76	1.2	***	***	***
25	1012.8	32.3	29.6	27.9	24.7	76	64	0.1	***	***	***
26	1012.3	31.6	29.1	27.8	23.5	72	86	0	***	***	***
27	1010.8	32.8	29.5	28.1	24.6	75	60	0	***	***	***
28	1009.6	32.2	29.6	27.9	24.7	75	66	0	***	***	***
29	1008.3	32.7	29.7	27.9	25.1	77	44	0	***	***	***
30	1008.1	32.9	30.3	28.4	26	78	38	0	***	***	***
Mean/Total	1009.6	32.8	29.7	27.8	25.4	78	71	129.6	***	***	***

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

Location : M2 (West Tai Wo - Free Field)

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

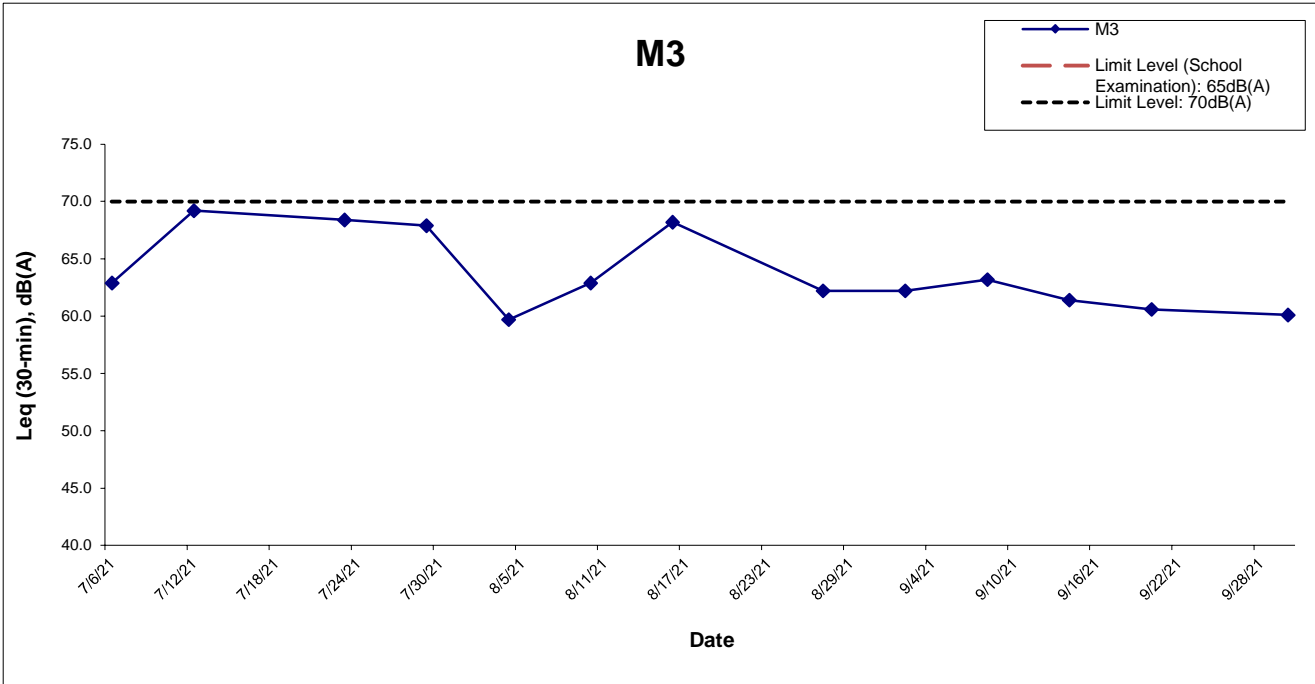
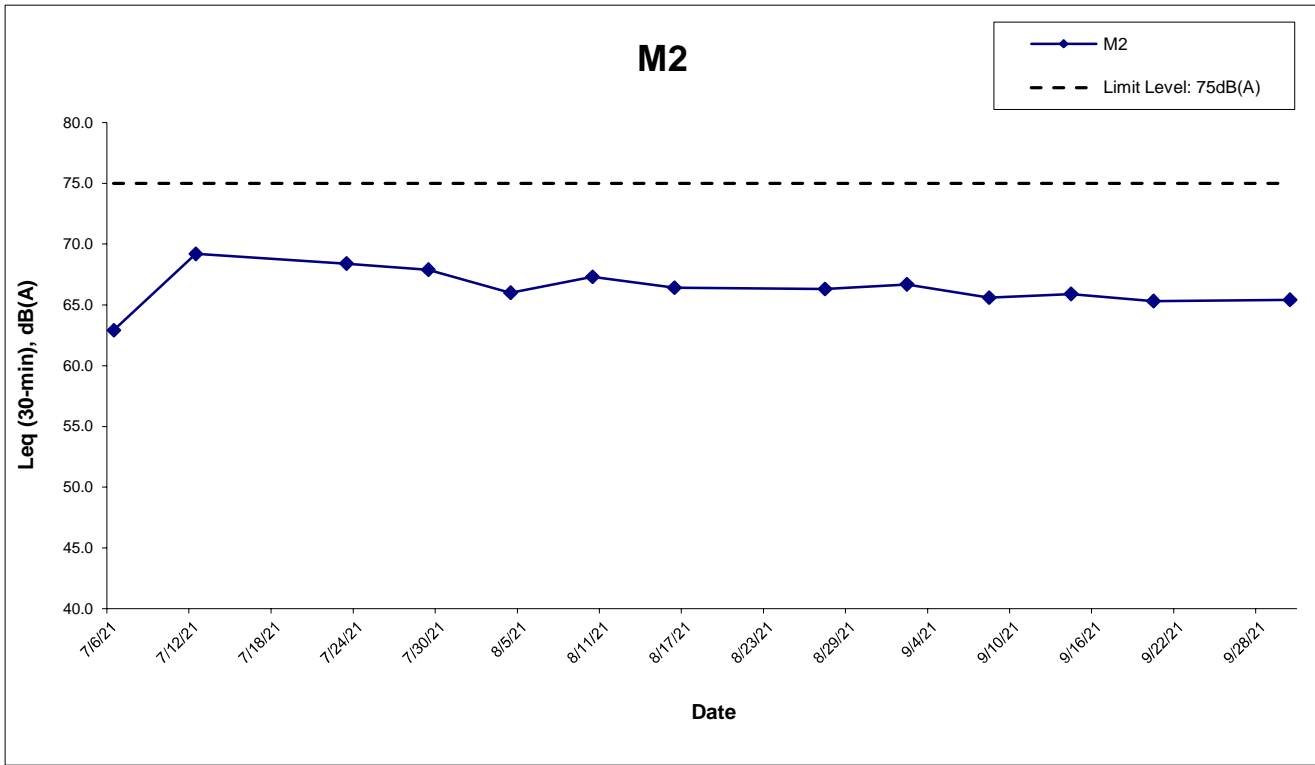
Date	Measured Noise Level for 30-min, dB(A)				Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq*	L10*	L90*		
6-Jul-21	11:05	62.9	64.1	61.7	75	N
12-Jul-21	14:10	69.2	71.3	67.0	75	N
23-Jul-21	10:45	68.4	70.3	66.8	75	N
29-Jul-21	14:05	67.9	69.5	65.2	75	N
4-Aug-21	14:30	66.0	67.7	64.0	75	N
10-Aug-21	11:20	67.3	69.0	65.0	75	N
16-Aug-21	10:00	66.4	67.9	65.9	75	N
27-Aug-21	11:30	66.3	67.8	63.9	75	N
2-Sep-21	15:10	66.7	68.3	64.4	75	N
8-Sep-21	14:00	65.6	66.9	63.4	75	N
14-Sep-21	15:20	65.9	67.6	63.6	75	N
20-Sep-21	13:35	65.3	66.7	62.4	75	N
30-Sep-21	13:25	65.4	66.8	63.1	75	N
Minimum for Aug 21 to Sep 21		65.3	66.7	62.4		
Maximum for Aug 21 to Sep 21		67.3	69.0	65.9		
Average for Aug 21 to Sep 21		66.1	67.7	64.1		

Location : M3 (Fanling Government Secondary School- Façade)

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

Date	Measured Noise Level for 30-min, dB(A)				Limit Level, dB(A)^	Exceedance (Y/N)
	Start Time	Leq	L10	L90		
6-Jul-21	11:05	62.9	64.1	61.7	75	N
12-Jul-21	14:10	69.2	71.3	67.0	75	N
23-Jul-21	10:45	68.4	70.3	66.8	75	N
29-Jul-21	14:05	67.9	69.5	65.2	75	N
4-Aug-21	15:20	59.7	61.0	56.7	70	N
10-Aug-21	10:30	62.9	64.4	59.9	70	N
16-Aug-21	10:50	68.2	69.9	66.7	70	N
27-Aug-21	10:40	62.2	64.0	60.1	70	N
2-Sep-21	14:15	62.2	63.8	60.0	70	N
8-Sep-21	14:45	63.2	63.4	61.9	70	N
14-Sep-21	14:05	61.4	63.0	59.0	70	N
20-Sep-21	13:10	60.6	62.0	58.0	70	N
30-Sep-21	13:05	60.1	61.3	56.0	70	N
Minimum for Aug 21 to Sep 21		59.7	61.0	56.0		
Maximum for Aug 21 to Sep 21		68.2	69.9	66.7		
Average for Aug 21 to Sep 21		63.1	64.6	61.1		

* +3dB(A) Façade effect correction included



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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: Oct-21

Appendix G

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

Appendix H

Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Contract No. HY/2012/06 – Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange

	Date Received	Subject	Status	Total no. followed up by the ET this quarter	Total no. followed up by the ET since project commencement
Environmental complaints	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	0	10
	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		
	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.	Closed		

Date Received	Subject	Status	Total no. followed up by the ET this quarter	Total no. followed up by the ET since project commencement
	<p>The resident also complained that the stockpiles have not been covered and watered properly. He now requires the EPD to follow up.</p> <p>The location of complaint is near Lamppost Location EB5717.</p>			
31 December 2014	<p>EPD referred a water complaint on 31 December 2014.</p> <p>The complainant complained about the muddy river outside Tai Hang Village Office on 29 December 2014. It was suspected that the muddy water was discharged from the construction works of the Project.</p> <p>He required the EPD to follow up.</p>	Closed		
25 March 2015	<p>EPD referred a water complaint on 25 March 2015.</p> <p>The complainant complained about the generation of the smell of gasoline from the Widening of Fanling Highway construction site on Tai Wo Service Road West, causing serious nuisance to nearby houses.</p> <p>The situation has continued for a few weeks and she asked the EPD to follow up as soon as possible.</p>	Closed		

Date Received	Subject	Status	Total no. followed up by the ET this quarter	Total no. followed up by the ET since project commencement
<p>5 January 2017 (Referred by the Contractor on 13 January 2017)</p>	<p>A complaint was received by the 1823 enquiry and complaint hotline on 5 January 2017. The complaint was referred to the Environmental Team by the Contractor on 13 January 2017.</p> <p>The complainant complained against the dust emission generated by the Widening of Fanling Highway construction site on Tai Wo Service Road West near Tai Hang Village.</p> <p>The complainant also complained that Highway Department did not conduct road surface cleansing, which affects residents' health. He/she now requires the Highway Department to follow up.</p>	<p>Closed</p>		
<p>22 May 2017 (Referred by the Contractor on 23 May 2017)</p>	<p>A complaint was received by the 1823 enquiry and complaint hotline on 22 May 2017. The complaint was referred to the Environmental Team by the Contractor on 23 May 2017.</p> <p>A complainant complained that construction noise was caused by the erection of noise barrier on Tai Wo Service Road West near Tai Hang Village on Sunday(s).</p> <p>The complainant concerned about if any Construction Noise Permit is issued by the Environmental Protection Department.</p>	<p>Closed</p>		

Date Received	Subject	Status	Total no. followed up by the ET this quarter	Total no. followed up by the ET since project commencement
25 February 2018 (Referred by the Contractor on 1 March 2018)	<p>The 1823 enquiry and complaint hotline received a complaint on 25 February 2018. The complaint was referred to the Environmental Team by the Contractor on 1 March 2018.</p> <p>A complainant complained that noise nuisance was caused continuously by road construction works at Fanling Highway near Tai Hang Village during 01:30 to 04:00 on 25 February 2018. The complainant concerned that the nuisance affects residence and asked for follow-up action from the related department.</p>	Closed		
28 September 2019 (Referred by the EPD on 28 October 2019)	<p>The EPD received a complaint on 28 October 2019. The complaint was referred to the Environmental Team by the Contractor on 28 October 2019.</p> <p>The complainant was regarded to the use of powered mechanical equipment not in accordance with the conditions stipulated in the Construction Noise Permit (CNP) - GW-RN0602-19 in Pak Wo Road near Fanling Highway on 24 September 2019.</p> <p>The complainant concerned about if any Construction Noise Permit is issued by the Environmental Protection Department.</p>	Closed		

	Date Received	Subject	Status	Total no. followed up by the ET this quarter	Total no. followed up by the ET since project commencement
	28 October 2019 (Referred by the EPD on 14 November 2019)	The Buildings Department received a complaint on 28 October 2019 through email. The complaint was referred to Environmental Team of HY/2012/06 on 14 November 2019. The complainant complained about dust and noise nuisance caused continuously by road construction works at Tai Wo Service Road West.	Closed		
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0

Contract No. 02/HY/2015 – Provision of Bus-Bus Interchange on Fanling Highway Kowloon Bound

	Date Received	Subject	Status	Total no. followed up by the ET this quarter	Total no. followed up by the ET since project commencement
Environmental complaints	-	-	-	0	0
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0