


**Environmental Protection Department**

Contract No. HY/2012/06  
&  
Contract No. 02/HY/2015

**Widening of Fanling Highway  
– Tai Hang to Wo Hop Shek  
Interchange**

**Final EM&A Report Review  
For Construction Phase  
(November 2013 – September 2021)**

[10/2022]

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Environmental Permit No. EP-324/2008/E Condition 3.3 – Submission of Final EM&A Review Report for Construction Phase (November 2013 – September 2021)**

**Our Reference**

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We refer to the revised Final EM&A Review Report for Construction Phase (November 2013 – September 2021) for the captioned project received on 13 October 2022 and submitted by the Environmental Team via email. We confirm we have no comment.

Yours faithfully  
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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) was completed and approved under the EIAO on 14 July 2000 (Register Number: EIA-043/2000). An Environmental Review Report (ERR) approved in November 2008 identified and quantified various potential changes in environmental impacts and required mitigation measures arising from the construction of the Project. An updated Environmental Monitoring and Audit (EM&A) Manual (the updated EM&A Manual) approved in October 2013 guided the setup of an EM&A programme to ensure compliance with the recommendations in the ERR, to assess the effectiveness of the recommended mitigation measures and to identify any further need for additional mitigation measures or remedial action. The purpose of this final EM&A review report is to review the result and findings of EM&A programme required in the EM&A Manual during the construction phase and the effectiveness of mitigation measures recommended in the ERR and the EIA Report.

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 traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic.

The Project is a designated project and governed by an Environmental Permit (EP-324/2008) issued by the EPD on 23 December 2008. Subsequently, the EPD issued Variation of Environmental Permits of EP-324/2008/A, EP-324/2008/B, EP-324/2008/C and EP-324/2008/D on 31 January 2012, 17 March 2014, 27 March 2015 and 27 August 2015 respectively. The current valid VEP was applied on 29 December 2016 and the VEP (EP-324/2008/E) was subsequently granted on 26 January 2017.

The construction works for this Project were 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). The construction works for Stage 2 of the Project were implemented under three works contracts, including (i) Contract No. HY/2012/06 “Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange”, (ii) Contract No. CV/2012/09, which is a portion entrusted to Civil Engineering and Development Department (CEDD) under “Liantang/Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 3”, and (iii) Contract No. 02/HY/2015 “Provision of Bus-Bus Interchange on Fanling Highway Kowloon Bound”, which is an additional contract works for carrying the management and maintenance of roads in Tai Po and North Districts under the Project. All the construction works under the Project have been completed on 30 September 2021.

This final EM&A review 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 phase of the Project under the EP and the EM&A programme of the Project commenced on 21 November 2013. The impacts environmental monitoring and audit includes air quality, noise, water quality, waste management and ecology.

This final EM&A review report documents the findings of overall EM&A works conducted in the Construction Phase between 21 November 2013 and 30 September 2021. As informed by the Contractor, construction activities of Contract No. HY/2012/06 in the construction phase were:

- Site clearance;
- Ground investigation;
- Construction of site accommodation;
- Tree felling and transplantation;
- Piling works;
- Pipe laying;
- Retaining wall construction;
- Excavation;
- Backfilling;
- Drainage;
- Temporary bridge construction;
- Bridge construction;
- Box culvert construction;
- Noise barrier construction;
- Noise barrier maintenance;
- Houses demolition;
- Soil nail;
- Footbridge demolition;
- House construction;
- Bridge demolition;
- Sign gantry installation;
- Road pavement and resurfacing;
- Construction of hub room; and
- Landscape works.

As informed by the Contractor, construction activities of Works Order Nos. CB128520-5 and CB128519-0 under Contract No. 02/HY/2015 in the construction phase were:

- Site clearance;
- Backfilling;
- Construction of catchpits and drainage pipes sheetpiling;
- Construction of footing;
- Construction of posts;
- Construction of wall stem;
- Erection of posts and panels;
- Sheetpiling;
- Metal frame & roof cladding of bus-bus interchange; and
- Construction of footpath & bus lay-by.

### **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 construction phase.

### **Breaches of Action and Limit Levels for Noise**

No Action Level exceedance of construction noise was recorded in the construction phase. No noise complaints related to 0700 – 1900 hours on normal weekdays was received and followed by the ET in the construction phase.

There was a total of 6 Limit Level exceedances recorded throughout the construction phase, all of exceedances were considered non-project related.

### **Complaint, Notification of Summons and Successful Prosecution**

During the construction phase, there was a total of 10 complaints received, in which 2 were air quality related, 3 were noise related, 1 was water quality related, 1 was odour related, 1 was both noise and odour related and 2 was both air quality and odour related.

No notification of summons or successful prosecution was received in the construction phase.

## 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
<b>ER</b> (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer	Edwin Chung	6115 0818	2638 0950
<b>IEC</b> (Mott MacDonald Hong Kong Limited)	Independent Environmental Checker	Steven Tang	2828 5920	2827 1823
<b>Contractor of [HY/2012/06]</b>  (China State Construction Engineering (Hong Kong) Limited)	Environmental Officer	Michael Tsang	9277 4956	2672 2501
		C C Chow	9679 6315	2672 2501
<b>Contractor of [02/HY/2015]</b>  (Chiu Hing Construction & Transportation Company Limited)	Safety Officer	Marty Tai	9106 5318	-
<b>ET</b> (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 of Contract No. HY/2012/06 carried out by the Contractor in the construction phase are listed below:

- Site clearance;
- Ground investigation;
- Construction of site accommodation;
- Tree felling and transplanted;
- Piling works;
- Pipe laying;
- Retaining wall construction;
- Excavation;
- Backfilling;
- Drainage;
- Temporary bridge construction;
- Bridge construction;
- Box culvert construction;
- Noise barrier construction and maintenance;
- Houses demolition;
- Soil nail;
- Footbridge demolition;
- House construction; and
- Bridge demolition;
- Sign gantry installation;
- Road pavement and resurfacing;
- Construction of hub room; and
- Landscape works.

Details of the construction works of Works Order Nos. CB128520-5 and CB128519-0 under Contract No. 02/HY/2015 carried out by the Contractor in the construction phase are listed below:

- Site clearance;
- Backfilling;
- Construction of catchpits and drainage pipes sheetpiling;
- Construction of footing;
- Construction of posts;
- Construction of wall stem;
- Erection of posts and panels;
- Sheetpiling;
- Metal frame & roof cladding of bus-bus interchange; and
- Construction of footpath & bus lay-by.

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 Project areas are shown in **Figure 1.1** and **Figure 1.2** respectively.

1.3.3 The environmental mitigation measures implementation schedule is presented in **Appendix C**.

## 2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

### 2.1 Monitoring Parameters

- 2.1.1 Environmental Review Report (ERR) approved in November 2008 has demonstrated the acceptability of the residual impacts from the project and the protection of the population and environmentally sensitive resources. EM&A programmes have been recommended as necessary, to verify the validity of the EIA predictions and the effectiveness of recommended mitigation measures.
- 2.1.2 The updated EM&A Manual approved in October 2013 has designated 1 air quality (for both 1-hour TSP and 24-hour TSP) monitoring station and 2 construction noise (for Leq (30 mins)) monitoring stations to monitor environmental impacts on air quality and noise due to the Project.
- 2.1.3 The updated EM&A Manual has designated 3 water quality monitoring stations to monitor environmental impacts on water quality due to the Project, monitoring of turbidity in NTU, dissolved oxygen (DO) in mg/l and suspended solids (SS) in mg/l were carried out by the ET. The water quality monitoring was only carried under Contract No. CV/2012/09. The implemented mitigation measures can be referred to the Monthly EM&A report and Final EM&A Review report under Contract No. CV/2012/09.
- 2.1.4 According to the updated EM&A Manual, the Contractor was responsible for the implementation of ecological mitigation measures to minimize ecological impacts due to Stage 2 of the Project. The implementation of these measures was checked by the ET as part of the environmental audit.
- 2.1.5 According to the updated EM&A Manual, the Contractor was responsible for waste control within the construction site, removal of waste material produced by the site and the implementation of any mitigation measures to minimize waste or redress problems arising from site waste.
- 2.1.6 The updated EM&A Manual also required environmental site inspections for air quality, noise, water quality, waste management and ecological impacts for checking the effectiveness of recommended mitigation measures.

### 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. **Figure 1.3a** shows the locations of the air monitoring station.
- 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 noise monitoring stations.
- 2.2.3 For water quality monitoring, the 3 water quality monitoring stations to monitor environmental impacts on water quality of the Project, the water quality monitoring location can be referred to Monthly EM&A report and Final EM&A Review report under Contract No. CV/2012/09.

### 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 Project to adopt. A list of environmental mitigation measures and their implementation statuses are given in **Appendix C**.

## 2.5 Environmental Impact Hypotheses Tested

- 2.5.1 The EIA report concluded that with proper implementation of recommended mitigation measures, no adverse environmental impact due to the Project during construction phase is anticipated. The hypotheses above have been tested by reviewing the audit and monitoring results to assess the performance of mitigation measures. The result of the hypothesis tests will reflect the implementation effectiveness of mitigation measures recommended in ERR and EIA report.

### Hypothesis for Air Quality and Construction Noise

- 2.5.2 Air quality and construction noise were monitored throughout the construction phase. Hypothesis for air quality and construction noise will be carried through comparing the impact monitoring results with non-compliance criteria of air quality and construction noise set up in the updated EM&A Manual, namely Action and Limit Levels to be used, for determining effectiveness of air and noise mitigation measures implemented by the Contractor and the residual environmental impacts with measures in place.

### Hypothesis for Water Quality

- 2.5.3 As the water quality monitoring was carried under Contract No. CV/2012/09, the related environmental impacts hypotheses test can be referred to final EM&A review report under Contract No. CV/2012/09.

### Hypothesis for Ecological Impact

- 2.5.4 According to the updated EM&A manual, mitigation measures for ecological impacts are required to be implemented by the Contractor and checked by the ET team during the environmental audit. The hypothesis for ecological impacts will be carried through reviewing the environmental audit results related to ecological impact for determination effectiveness of ecological impact mitigation measures implemented by the Contractor and the residual environmental impacts with measures in place.

### Hypothesis for Waste Management

- 2.5.5 According to the updated EM&A manual, the Contractor is responsible to implement waste management mitigation measure for control and minimizing the waste generated in the construction phase. The waste amount after implementation of waste management mitigation measure was predicted in ERR. The hypothesis for waste management will be carried through reviewing waste management record and comparing the amount of waste generated from the Project and the amount of waste predicted in ERR in order to determine effectiveness of waste management mitigation measures implemented by the Contractor and the residual environmental impacts with measures in place.
- 2.5.6 The results of above environmental impact hypotheses tests will be provided in the end of each part of impact sections.

### 3 AIR QUALITY

#### 3.1 Air Quality Monitoring Results

- 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. The Action and Limit level of the air quality monitoring is provided in **Appendix E**.
- 3.1.2 Weather information including wind speed and wind direction is annexed in **Appendix F**. The information was obtained from Hong Kong Observatory Weather Station and Anemometer Station.
- 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.

**Table 3.1 Summary of 1-hour TSP Monitoring Results in the Construction Phase**

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 ( $\mu\text{g}/\text{m}^3$ )
<b>AM2</b> (Fanling Government Secondary School)	69.3	31.3 – 89.6	317.8	500

**Table 3.2 Summary of 24-hour TSP Monitoring Results in the Construction Phase**

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 ( $\mu\text{g}/\text{m}^3$ )
<b>AM2</b> (Fanling Government Secondary School)	36.3	0.2 – 176.1	200.7	260

- 3.1.4 The major dust sources in the construction phase included construction activities 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 construction phase.
- 3.1.6 The graphical presentation of the monitoring data of air quality over the construction phase is provided in **Appendix E**.
- 3.1.7 According to the monitoring record in the construction phase, the major dust sources were construction activities and the traffic emissions. However, no exceedance and no particular weather effect were recorded during the construction phase. From the graphical presentation of the monitoring data of air quality, no particular trend contributed from major construction activities, weather condition or other significant effect was identified in graphical presentation, and air quality monitoring results with mitigation measures implemented during the period was observed.

### 3.2 **Environmental Impact Hypotheses Tested for Air Quality**

- 3.2.1 According to the section 2.8.1 of the Updated EM&A Manual, the Action Level for 1-hour and 24-hour TSP were  $317.8 \mu\text{g}/\text{m}^3$  and  $200.7 \mu\text{g}/\text{m}^3$  respectively, the Limit Level for 1-hour and 24-hour TSP were  $500 \mu\text{g}/\text{m}^3$  and  $260 \mu\text{g}/\text{m}^3$  respectively. Compared to Action and Limit Level, the average of measured 1-hour and 24-hour TSP levels during construction phase were lower than the Action and Limit Level. There was not exceedance of Action and Limit Level was recorded through the construction phase. With consideration the average of air quality monitoring result and the exceedance record, we can conclude that the mitigation measures for air quality recommended in the ERR / EIA report were implemented effectively and no adverse residual air quality impacts with mitigation measures in place.

## 4 NOISE MONITORING

### 4.1 Noise Monitoring Result

4.1.1 In accordance with the updated EM&A Manual, impact noise monitoring was conducted for at least once per week during the construction phase of the Project. The Action and Limit level of the noise monitoring is provided in **Appendix D**.

4.1.2 The monitoring results for construction noise are summarized in Table 4.1.

**Table 4.1 Summary of Construction Noise Monitoring Results in the Construction Phase**

	Average (dB(A))	Range (dB(A))	Limit Level (dB(A))
	$L_{eq}$ (30 mins)	$L_{eq}$ (30 mins)	$L_{eq}$ (30 mins)
M2* (SR13)	68.5	53.4 – 72.6	75
M3# (SR2)	64.2	53.8 – 69.8	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 graphical presentation of the monitoring data of noise over the construction phase is provided in **Appendix G**.

4.1.4 The major noise sources during the noise monitoring included nearby road traffic noise.

4.1.5 There was no noise complaint related to 0700 – 1900 hours on normal weekdays was received and followed up by the ET in the construction phase. Hence, no Action Level exceedance was recorded.

4.1.6 There were six (6) Limit Level exceedances recorded throughout the construction phase. All recorded exceedances were considered as non-project related.

4.1.7 According to the monitoring record in the construction phase, the major noise sources was traffic noise. There was no significant construction noise and particular weather effect were recorded throughout the construction phase. Six (6) non-project related Limit Level exceedances were recorded throughout the construction phase. Mitigation measures were also implemented for preventive action after the exceedance. From the graphical presentation of the monitoring data of noise, no particular trend contributed from major construction activities, weather condition or other significant effect was identified in graphical presentation, and noise monitoring results with mitigation measures implemented during the period was observed.

### 4.2 Environmental Impact Hypotheses Tested for Noise

4.2.1 According to the section 3.7 of EM&A Manual, the Limit Level for M2 was 75dB(A), while the Limit Level for M3 were 70dB(A) and 65dB(A) during normal period and examination period respectively. Also, any documented complaint received was considered as Action Level exceedance. The averages of noise monitoring result measured at both monitoring stations were lower than their Limit Level. No Action Level was recorded, and there were six non-project related Limit Level exceedances recorded throughout the construction phase. With consideration the average of noise monitoring result and the exceedance record, we can conclude that the mitigation measures recommended in the ERR / EIA report for construction noise were implemented effectively and no adverse residual noise impacts with mitigation measures in place.

## **5 WATER MONITORING**

- 5.1.1 In accordance with the Updated EM&A Manual, during the course of the culvert extension works, monitoring shall be undertaken on three occasions per week during construction phase. The interval between two sets of monitoring was less than 36 hours except where there were exceedances of Action and/or Limit levels.
- 5.1.2 Upon completion of all culvert extension work, a post project monitoring exercise on river water quality was carried out for four weeks in the same manner as the impact monitoring.
- 5.1.3 The monitoring result and implemented mitigation measures for water quality can be referred to the Monthly EM&A report and Final EM&A Review report under Contract No. CV/2012/09.

## 6 ADVICE ON THE SOLID AND LIQUID WASTE MANAGEMENT STATUS

### 6.1 Waste Management for Contract No. HY/2012/06

6.1.1 As advised by the Contractor of Contract No. HY/2012/06, 204,907 m<sup>3</sup> of inert C&D material was generated in the construction phase (76,406 m<sup>3</sup> disposed of as public fill to Tuen Mun 38, 68,806 m<sup>3</sup> of inert C&D materials was reused on site, 55,854 m<sup>3</sup> of inert C&D materials was reused in other projects and 3,841 m<sup>3</sup> was broken concrete). For C&D wastes, 9,908 m<sup>3</sup> of general refuse was disposed of at NENT landfill, 5,646 kg of paper/cardboard packaging, 27,451 kg of plastics and 222,953 kg of metals were collected by recycling Contractors, and 0 L of chemical wastes was processed by licensed chemical waste collector in the construction phase.

6.1.2 The actual amounts of different types of waste generated by the activities of Contractor No. HY/2012/06 during the construction phase are summarized in Table 6.1.

**Table 6.1 Summary of Waste Flow Table for Contract No. HY/2012/06**

Waste Type	Actual Amount	Disposal/Reuse Locations
Inert C&D materials disposed of as public fill	76,406 m <sup>3</sup>	Tuen Mun 38
Broken concrete	3,841 m <sup>3</sup>	Tuen Mun 38
C&D wastes disposed as general refuse	9,908 m <sup>3</sup>	NENT Landfill
Paper/cardboard packaging	5,646 kg	Recycling Contractors
Plastics	27,451 kg	Recycling Contractors
Metals	222,953 kg	Recycling Contractors
C&D materials reused on site	68,806 m <sup>3</sup>	Site Area
C&D materials reused in other projects	55,854 m <sup>3</sup>	Other projects
Chemical wastes	0 L	Licensed Chemical Waste Collector

### 6.2 Waste Management for Contract No. 02/HY/2015

6.2.1 As advised by the Contractor of Works Order Nos. CB128520-5 and CB128519-0 under Contract No. 02/HY/2015, 1,222 m<sup>3</sup> of inert C&D material was generated during the construction phase (1,205 m<sup>3</sup> disposed of as public fill to Tuen Mun 38, 0 m<sup>3</sup> of inert C&D materials was reused on site, 0 m<sup>3</sup> of inert C&D materials was reused in other projects and 17 m<sup>3</sup> was broken concrete). For C&D wastes, 0 m<sup>3</sup> of general refuse was disposed of at NENT landfill, 14 kg of paper/cardboard packaging, 14 kg of plastics and 0 kg of metals were collected by recycling Contractors during the construction phase.

6.2.2 The actual amounts of different types of waste generated by the activities of the Project in the construction phase are shown in Table 6.2.



**Table 6.2 Summary of Waste Flow Table for Contract No. 02/HY/2015**

Waste Type	Actual Amount	Disposal/Reuse Locations
Inert C&D materials disposed as public fill	1,205 m <sup>3</sup>	Tuen Mun 38
Broken concrete	17 m <sup>3</sup>	Tuen Mun 38
C&D wastes disposed as general refuse	0 m <sup>3</sup>	NENT Landfill
Paper/cardboard packaging	14 kg	Recycling Facilities
Plastics	14 kg	Recycling Facilities
Metals	0 kg	Recycling Facilities
C&D materials reused on site	0 m <sup>3</sup>	Site Area
C&D materials reused in other projects	0 m <sup>3</sup>	Other projects
Chemical wastes	0 L	Licensed Chemical Waste Collector

### 6.3 Environmental Impact Hypotheses Tested for Waste Management

6.3.1 According to the Section 7.10 of ERR, waste generated from the Project was acceptable with proper implementation of waste management mitigation measures. The waste amount after implementation of waste management mitigation measures was predicted in ERR. In order to determinate the effectiveness of waste management mitigation measures implemented by the Contractor, the amounts of waste generated from the Project is compared with the amounts of waste predicted in ERR. The waste amounts predicted in ERR and amounts of waste generated throughout the construction phase was shown in **Appendix H**.

#### Comparison for Inert waste (Waste disposed to the Public fill)

6.3.2 The amount of inert waste disposed to the public fill (inert C&D materials disposed as public fill and broken concrete) under Contract No. HY/2012/06 and 02/HY/2015 was 81,469 m<sup>3</sup>. According to the information provided from the Contract No. CV/2012/09, the amount of inert waste disposed to the public fill was 112,002 m<sup>3</sup>. Therefore, the total amount of inert waste disposed to the public fill under Stage 2 of the Project was 193,471 m<sup>3</sup>

6.3.3 According to Table 7-4 of ERR, the total amount of inert waste was predicted as 249,000 m<sup>3</sup>. However, this predicted amount was considered all the projects under Widening of Tolo Highway / Fanling Highway Between Island House Interchange and Fanling. It means the inert waste disposed to public fill under Stage 1 of the Projects should be included in this comparison.

6.3.4 The inert waste disposed to public fill under Stage 1 of the Project was 58,434 m<sup>3</sup>. The total inert waste disposed to public fill under Stage 1 and Stage 2 of the Project was 251,905 m<sup>3</sup>.

6.3.5 The comparison of inert waste between actual disposed amount and predicted amount was shown in Table 6.3.

**Table 6.3 Comparison of Inert waste disposed under the Project and the amount of Inert waste predicted in ERR**

Waste types	Inert waste			
	Stage 1	Stage 2		
#1 Actual amount	58,434 m <sup>3</sup>	HY2012/06	02/HY/2015	CV/2012/09
		80,247 m <sup>3</sup> 1,222 m <sup>3</sup> 112,002 m <sup>3</sup>		
		193,471 m <sup>3</sup>		
		251,905 m <sup>3</sup>		
#2 Prediction in ERR	249,000 m <sup>3</sup>			

#1: All of inert waste disposed to public fill  
 #2: All of inert waste listed in Table 7-4 of ERR

**Comparison for Non-Inert waste and General Refuse (Waste disposed to the Landfill)**

- 6.3.6 The amount of non-inert waste and general refuse disposed to the landfill (C&D wastes disposed as general refuse) under Contract No. HY/2012/06 and 02/HY/2015 was 9,908 m<sup>3</sup>. According to the information provided from the Contract No. CV/2012/09, the amount of non-inert waste and general refuse disposed to the landfill was 8,465 m<sup>3</sup>. Therefore, the total amount of non-inert waste and general refuse disposed to the landfill under Stage 2 of the Project the was 18,373 m<sup>3</sup>.
- 6.3.7 The non-inert waste and general refuse disposed to landfill under Stage 1 of the Project was 31,375 m<sup>3</sup>. The total non-inert waste and general refuse disposed to landfill under Stage 1 and Stage 2 of the Project was 49,748 m<sup>3</sup>.
- 6.3.8 According to Table 7-4 of ERR, the amounts of non-inert waste and general refuse were predicted as 35,500 m<sup>3</sup> and 2,448 m<sup>3</sup> respectively.
- 6.3.9 The ERR predicted the amounts of non-inert waste and general refuse separately, the comparison between predicted amounts and actual disposed amounts shall compare non-inert waste and general refuse separately. However, the Contractor treated the non-inert waste and general refuse with the same method, which were disposed to landfill, the recorded amount of non-inert waste and general refuse were summed in monthly EM&A reports. Therefore, the predicted amounts of non-inert waste and general refuse in ERR should be summed during comparison. The comparison of non-inert waste and general refuse between actual disposed amount and predicted amount was shown in Table 6.4.

**Table 6.4 Comparison of Non-Inert waste and General Refuse disposed under the Project and the amount of Non-Inert waste and General Refuse predicted in ERR**

Waste types	Non-inert waste and General Refuse			
	#1 Stage 1	#1 Stage 2		
Actual amount	31,375 m <sup>3</sup>	HY2012/06	02/HY/2015	CV/2012/09
		9,908 m <sup>3</sup>	0 m <sup>3</sup>	8,465 m <sup>3</sup>
	18,373 m <sup>3</sup>			
#2 49,748 m <sup>3</sup>				
Prediction in ERR	#3 Non-inert waste		#4 #5 #6 General Refuse	
	35,500 m <sup>3</sup>		2,420 m <sup>3</sup>	
	37,920 m <sup>3</sup>			

#1: All non-inert waste and general refuse disposed to the landfill  
 #2: The amount of general refuse and non-inert waste were predicted separately in ERR, but the contractor treated non-inert waste and general refuse in the same method, which was disposed to landfill. The predicted amount of general refuse and non-inert waste in ERR should be summed during comparison.  
 #3: All of the non-inert waste listed in Table 7-4 of ERR  
 #4: Amount of General refuse listed in Table 7-4 of ERR, 4,896kg x 613 weeks (total construction period for Stage 1&2).  
 #5: As the Contractor recorded the amount of disposed of general refuse and non-inert waste in unit Cubic meter (m<sup>3</sup>), so the predicted amount of general refuse in ERR should be converted from kilogram (kg) to m<sup>3</sup> with general refuse density at 1.24 ton/m<sup>3</sup>.  
 #6: According to a report from Audit Commission ( Section 5.19 at *Government's efforts in managing municipal solid waste*), from 1993 to 2011, the three landfills received waste with a total weight of 98.3 million tonnes, which had used up 79 million m<sup>3</sup> of the total capacity of 139 million m<sup>3</sup> of the three landfills. Accordingly, the weight-to-volume ratio during the period was 1.24 ton of waste: 1 m<sup>3</sup> of landfill space, this ratio is adopted as general refuse density.  
[https://www.aud.gov.hk/pdf\\_e/e65ch01.pdf](https://www.aud.gov.hk/pdf_e/e65ch01.pdf)

**Comparison for Chemical waste**

- 6.3.10 There was no chemical waste was generated and processed under the Contract No. HY/2012/06 and 02/HY/2015 in the construction phase. According to the information provided from the Contract No. CV/2012/09, 4,243L of chemical waste was processed by licensed chemical waste collector during the Construction phase. Therefore, the total amount chemical waste processed under Stage 2 of the Project the was 4,243L.
- 6.3.11 According to Table 7-4 of ERR, the total amount of chemical waste generated from the Project was predicted as 64,350L.
- 6.3.12 The chemical waste processed by the licensed chemical waste collector under Stage 1 of the Project was 10,200L. The total amount of chemical waste processed under Stage 1 and Stage 2 of the Project was 14,443L.
- 6.3.13 The comparison of chemical waste between actual processed amount and predicted amount was shown in Table 6.5.

**Table 6.5 Comparison of Chemical waste processed under the Project and the amount of Chemical waste predicted in ERR**

Waste types	Chemical waste			
Actual amount	#1 Stage 1	#1 Stage 2		
	10,200 L	HY2012/06	02/HY/2015	CV/2012/09
		0 L	0 L	4,243 L
		4,243 L		
14,443 L				
Prediction in ERR	#264,350 L			

#1: All of chemical waste collected by licensed chemical waste collector

#2: The amount of chemical waste listed in Table 7-4 of ERR, 450L x 143months (total construction period for Stage 1&2)

**Summary for Waste Management Hypothesis Test**

- 6.3.14 As shown in Table 6.5 above, the amount of chemical waste processed under Stage 1 and Stage 2 of the Projects was lower than the amount of chemical waste predicted in ERR.
- 6.3.15 As shown in Table 6.3 and Table 6.4, the amounts of inert and non-inert waste disposed under Stage 1 and Stage 2 of the Projects were both slightly higher than the amounts of inert and non-inert waste predicted in ERR, but the exceeded amounts were considered as insignificant.
- 6.3.16 In addition, referring to the disposal, reuse, and recycling record in Table 6.1 and Table 6.2, it is observed that the Contractor was carried waste management strategy for implement recycling, storage, transportation, and disposal measures, which were recommended in ERR, to avoid or minimize potential adverse impacts associated with waste arising from the Project. There was no significant observation related to waste management mitigation measure was identified in environmental site inspection. Considered both the waste management strategy, environmental inspection record and the comparisons above, it can conclude that mitigation measures recommended in the ERR / EIA report for waste management was implemented effectively with no adverse residual waste impacts with mitigation measures in place.

## 7 ECOLOGY

### 7.1 Mitigation measures

- 7.1.1 In accordance with the updated EM&A Manual, the Contractor was responsible for the implementation of all mitigation measures as listed in Section 6.2 of the EM&A Manual to minimize ecological impacts from site activities. The implementation of these measures was checked by the ET as part of the environmental audit.
- 7.1.2 The ET was responsible for checking (auditing) the correct implementation of the following mitigation measures (and good site practices) by the Contractor prior to and during the construction phase.
- Erection of fences along the boundary of construction sites before the commencement of works to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly fung-shui woodlands and where the rare/protected plant species are located;
  - Selection of haul routes, storage and works areas etc. so as to minimize habitat/vegetation disturbance;
  - Regular checking to ensure that the work site boundaries are not exceeded and that no damage occurs to surrounding areas;
  - Prohibition and prevention of open fires within the work site boundary during construction and provision of temporary fire fighting equipment in the work area during construction; and
  - Check the effectiveness of on-site compensation planting to address loss of fung-shui woodlands and secondary woodlands due to road construction.
- 7.1.3 The environmental audit for the ecological impact measures were summarized in the **Section 9**.

### 7.2 Environmental Impact Hypotheses Tested for Ecology impact

- 7.2.1 With reviewing record of ecological impact auditing, the Contractor implemented the mitigation measures required in Section 7.1.2 correctly with minor ecological impact observations identified during the construction phase. And all of the follow-up actions for the ecological impact observations requested by ET during the site inspection were undertaken as reported by the Contractor and confirmed into the following weekly site inspection conducted during the construction phase. Also, there was no significant vegetation damage recorded as a consequence of non-compliance of any of the above mitigation measures. From the result of ecological impact audit review, it can conclude that the mitigation measures recommended in the ERR / EP for the ecological impact were implemented effectively and no adverse residual ecological impacts with mitigation measures in place.

## 8 ENVIRONMENTAL SITE INSPECTION AND AUDIT

### 8.1 Site Audit

8.1.1 Site inspection and audit was carried out by the representative of the Contractor, ER and ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the construction site. The representative of the IEC joined the site inspection once per month.

### 8.2 Environmental Mitigation Measures

8.2.1 The Contractor has implemented the relevant environmental mitigation measures as specified in the EIA Report, ERR and updated EM&A Manual. The bullet points below are the summaries of observation / minor deficiencies identified in the site inspection during the construction phase. The implementation status of environmental mitigation measures during construction phase is summarized in **Appendix C**.

#### Contract No. HY/2012/06

##### Air Quality

- Watering and covering of exposed slopes and stockpiles to avoid fugitive dust emission;
- Watering within site and vehicles washing facilities shall be enhance;
- Water spraying should be properly implemented whenever necessary for the unpaved roads, access roads and construction areas;
- Watering should be properly implemented during dusty works carried out.
- All vehicles should be washed to remove any dust materials before leaving the construction site;
- Colour NRMM label shall be provided for all Non Road Mobile Machineries; and
- The stockpile of more than 20 bags of cement shall be entirely covered for dust suppression.

##### Noise

- Absorptive materials should be wrapped at the breaker head to minimize the noise emission.
- The power mechanical equipment should be placed away from the noise sensitive receiver.

##### Water Quality

- Surface run-off rainwater and wastewater from construction site discharged into public drainage system should be properly treated by removal facilities and pH adjusted before discharge;
- Wheel washing water should be trapped on the site and treated by desilting facility.
- Channel or earth buds or sandbag should be provided on site to prevent surface runoff and properly direct stormwater to silt removal facilities.
- The desilting facilities in the should be maintained and cleaned regularly.
- The drainage system near to the site should be maintained regularly and protected properly.
- Preventing action should be provided to the stockpile near to the river.

#### Chemical and Waste Management

- Waste storage area should be maintained and cleaned regularly;
- The chemical stored on site should be provide with chemical label;
- The chemical stored on site should be provide with drip tray/ secondary containment;
- The general refuse on site should clean regularly to maintain site hygiene;
- Stagnant water should be removed from secondary containment regularly; and
- The waste on the site should be properly sorted for before disposal.

#### Ecology

- The Contractor should keep construction materials away from trees and improve housekeeping on site.
- The Contractor should remove the construction materials near trees for maximum protection.

#### Miscellaneous

- Stagnant water and retained water should be removed to prevent mosquito breeding.
- The public area near to the site should be cleaned regularly for maintain the hygiene.
- The latest environmental permit should be displayed at the entrance of the site.

#### **Contract No. 02/HY/2015 (Works Order Nos. CB128520-5 and CB128519-0)**

#### Air Quality Impact

- The vehicles wheel should be washed properly before leaving the site.
- Water spraying should be properly implemented whenever necessary for the unpaved roads, access roads and construction areas;
- Watering and covering of exposed slopes and stockpiles to avoid fugitive dust emission;
- Adequate water spray should be provided to the dusty activities on site to prevent windblown dust emission.
- Colour NRMM label shall be provided for all Non Road Mobile Machineries;

#### Construction Noise Impact

- Nil.

#### Water Quality Impact

- Channel or earth buds or sandbags should be provided on site to prevent surface runoff and properly direct stormwater to silt removal facilities.
- The drainage system near to the site should be maintained regularly and protected properly.

#### Chemical and Waste Management

- The chemical stored on site should be provide with drip tray/ secondary containment;
- The site area should improve the housekeeping condition and keep the site clean and tidy.

#### Ecology

- Nil.

#### Miscellaneous

- Stagnant water and retained water should be removed to prevent mosquito breeding.

## **9 SUMMARY OF NON-COMPLIANCE OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT**

### **9.1 Summary of Non-Compliance**

9.1.1 Summary of non-compliances of different environmental aspects monitored during construction phase were shown in below. The non-compliance detail throughout the construction phase are summarized in **Appendix I**.

9.1.2 There was a total of six (6) non-compliances recorded throughout the construction phase, all recorded non-compliances were considered as non-project related. The detail of recorded non-compliances in different environmental aspects were summarized as follows:

#### Air Quality Impact

9.1.3 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the construction phase.

9.1.4 No exceedance (non-compliance) of air quality was recorded in the construction phase.

#### Construction Noise Impact

9.1.5 No Action Level exceedance of construction noise was recorded during the construction phase. No noise complains related to 0700 – 1900 hours on normal weekdays was received and followed by the Environmental Team in the construction phase.

9.1.6 Six (6) Limit Level exceedances were recorded throughout the construction phase. All recorded noise exceedances were considered as non-project related.

#### Water Quality Impact

9.1.7 The non-compliance of water quality can be referred to the final EM&A review report under CV/2012/09.

#### Waste management

9.1.8 No non-compliance of waste management was recorded throughout the construction phase.

#### Ecology

9.1.9 No non-compliance of ecology impact was recorded throughout the construction phase.

### **9.2 Summary of Actions Taken in the event of Non-Compliance**

9.2.1 In the event of non-compliance, actions were taken in accordance with the Event-Action Plan in the updated EM&A Manual. Investigation was carried out within three working days of identification of non-compliance, checking the implementation status of the mitigation measures, etc. Assessments showed that the monitoring exceedance was not due to the Project works and therefore no further action was required to be taken. The Event-Action Plan was shown in **Appendix D**.

## 10 SUMMARY OF COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 10.1.1 Once the environmental complaint was referred to the ET Leader, the ET Leader would carry out complaint investigation procedures. The ET Leader would undertake the following procedures upon receipt of the complaints:
- (a) log complaint and date of receipt onto the complaint database;
  - (b) investigate the complaint to determine its validity, and to assess whether the source of the problem is due to works activities;
  - (c) if a complaint is valid and due to works, identify mitigation measures;
  - (d) if mitigation measures are required, advise the Contractor accordingly;
  - (e) review the Contractor's response on the identified mitigation measures, and the updated situation;
  - (f) if the complaint is transferred from EPD, submit interim report to EPD on status of the complaint investigation and follow-up action within the time frame assigned by EPD;
  - (g) undertake additional monitoring and audit to verify the situation if necessary, and review that any valid reason for complaint does not recur;
  - (h) report the investigation results and the subsequent actions to the source of complaint for responding to complainant (If the source of complaint is EPD, the results should be reported within the time frame assigned by EPD); and
  - (i) record the complaint, investigation, the subsequent actions and the results in the monthly EM&A report
- 10.1.2 During the complaint investigation work, the Contractor and ER would cooperate with the ET Leader in providing all the necessary information and assistance for completion of the investigation. Any mitigation measures were identified in the investigation, the Contractor would promptly carry out the mitigation. The ER would ensure that the measures have been carried out by the Contractor.
- 10.1.3 During the construction phase, there were a total of 10 complaints received, in which 2 were air quality related, 3 were noise related, 1 was water quality related, 1 was odour relate, 1 was both noise and odour related and 2 was both air and odour related. The complaints detail throughout the construction phase are summarized in **Appendix I**.
- 10.1.4 No notification of summons or successful prosecution was received in the construction phase.
- 10.1.5 The statistics on complaints, notifications of summons and successful prosecutions are summarized in **Appendix I**.
- 10.1.6 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.



## **11 REVIEW OF THE VALIDITY OF THE EIA/ERR PREDICTIONS**

- 11.1.1 All the air quality monitoring results in the construction phase were below the Action and Limit Levels. The result was in line with the (EIA) and Environmental Review Report (ERR) prediction so that dust generation would be controlled and would not exceed the acceptable criteria, with proper implementation of the recommended dust mitigation measures.
- 11.1.2 Most of the noise monitoring results in the construction phase were below the Action and Limit Levels. The result was in line with the EIA and ERR prediction so that with the implementation of noise mitigation measures, the construction noise from the Project works will meet the stipulated criterion at the residential NSRs and at a majority of the education institutions.
- 11.1.3 The review of water quality monitoring results in the construction phase can be referred to the final EM&A review report under CV/2012/09.
- 11.1.4 With reviewing record of ecological impact auditing, the Contractor implemented the ecological mitigation measures correctly and no significant vegetation damage recorded as a consequence of non-compliance. The result was in line with the EIA and ERR prediction so that ecological impact would be controlled and would not exceed the acceptable criteria, with proper implementation of the recommended ecological impact mitigation measures.
- 11.1.5 The waste management strategy, environmental inspection record for waste management and the waste amount were reviewed. The result was in line with the EIA and ERR prediction so that waste generation would be controlled and would not exceed the acceptable criteria, with proper implementation of the recommended waste management mitigation measures.
- 11.1.6 There was a total of 6 non-compliance recorded throughout the construction phase, all of exceedances were considered as non-project related.

## **12 REVIEW OF THE EFFECTIVENESS AND EFFICIENCY OF MITIGATION MEASURES**

- 12.1.1 The impact air quality and noise monitoring programme ensured that any environmental impact to the receivers would be readily detected and timely actions could be taken to rectify any non-compliance. The environmental monitoring results indicated that the construction activities in general were in compliance with the relevant environmental requirements and were environmentally acceptable.
- 12.1.2 For air quality and construction noise under monitoring as mentioned in Section 3 and 4, the measured levels were in line with the EIA and ERR predictions generally. This indicates that the mitigation measures were effectively and efficiently implemented.
- 12.1.3 The review of the effectiveness and efficiency for water quality monitoring in the construction phase can be referred to the to the final EM&A review report under CV/2012/09.
- 12.1.4 For waste management as mentioned in Section 6, considered both the waste management strategy, environmental inspection record for waste management and the waste amount during the construction phase, the mitigation measures for waste management recommended in the EIA/ERR were effectively implemented.
- 12.1.5 For ecology as mentioned in Section 7, the result of ecological impact audit review concluded the Contractor implemented all mitigation measures as listed in Section 6.2 of the EM&A Manual to minimize ecological impacts from site activities. The mitigation measures for ecology impact recommended in the EP/ERR were effectively implemented.
- 12.1.6 The weekly site inspections ensured that all the environmental mitigation measures recommended in the EIA/ERR were effectively implemented. Despite the minor deficiencies found during site audits, the Contractor has taken appropriate actions to rectify deficiencies within a reasonable timeframe. Therefore, the effectiveness and efficiency of the mitigation measures were considered high in most of the time.

## **13 REVIEW OF SUCCESS OF EM&A PROGRAMME**

- 13.1.1 The environmental monitoring methodology was considered well established as the monitoring results were found in line with the EIA predictions.
- 13.1.2 As effective follow-up actions were promptly taken once exceedances were recorded, no further exceedance occurred. The EM&A programme was considered successfully and adequately conducted during the course of the construction phase.
- 13.1.3 With the success of the overall EM&A programme, the deterioration of the environment caused by the Project was cost-effectively identified and necessary prompt effective mitigation measures were implemented to avoid any unacceptable impacts.

## **14 REVIEW OF MEASURES AND SUBMISSIONS TO BE IMPLEMENTED DURING CONSTRUCTION AND OPERATION OF PROJECT**

### **14.1 Measures to Mitigate Construction and Traffic Noise Impact**

- 14.1.1 Under the Condition 2.5 of EP-324/2008/E, the Permit Holder shall erect the temporary noise barriers shown in Figure 2d and 2e of the EP before commencement of construction work for the Contract No. HY/2012/06 and Contract No. 02/HY/2015 under the Project. The purpose of the temporary noise barriers in Figure 2d and 2e was minimizing the noise impact from construction work under Stage 2 of the Project. The Figure 2d and 2e under EP-324/2008/E were shown in Figure 1.4a-b.
- 14.1.2 Under the Condition 2.8 of EP-324/2008/E, the Permit Holder shall erect various type of barriers (permanent noise barriers) of varying heights as shown in Figures 4d, 4d(i), 4e and 4e(i) of the EP before commencement of operation for the Contract No. HY/2012/06 and Contract No. 02/HY/2015 under the Project and maintained throughout the operational phase of the Project. The purpose of the permanent noise barriers in Figures 4d, 4d(i), 4e and 4e(i) was minimizing the noise impact from operating of widened Fanling Highway under Stage 2 of the Project. The Figure 4d, 4e and 4e(i) under EP-324/2008/E were shown in Figure 1.4c-e.
- 14.1.3 Under the Condition 2.9 of EP-324/2008, the Permit Holder shall deposit five (5) copies of as-built drawing(s) in 1:1000 scale to fulfill the requirement of noise mitigation measures and the requirements in the EIA Report (Register No: AEIAR-037/2000), and other relevant documents in the Register, to the Director before commencement of operation of the Project.
- 14.1.4 The temporary noise barriers were erected before the construction phase of the Project and removed after the permanent barriers erected during the construction phase. The as-built drawings of permanent noise barriers were submitted on December 2019 with certification the ET Leader and verification of the IEC to confirmed with the requirements under the Condition 2.8 of EP-324/2008/E and the requirements in the EIA Report (Register No: AEIAR-037/2000), and other relevant documents in the Register.
- 14.1.5 With reviewing of the mitigation measures for Mitigation the Construction Noise Impact and Measure and Submission to implemented during Construction and Operation of the Project under EP-324/2008/E, the Permit Holder was considered as fulfilled the Condition 2.5, 2.8 and 2.9 of EP-324/2008/E.

## 14.2 Measures to Mitigate Ecological, Visual and Landscape Impacts

- 14.2.1 Under the Condition 2.7 of EP-324/2008/E, the Permit Holder shall carry a capture-surveys on the native frog species of *Rana guentheri*, tadpole and fish within the Ma Wat River Northern Meander, before commencement of construction works of the Project. The purpose of this capture-survey was to determine the demand for relocating the species above to the nearby undisturbed meander of the river channel.
- 14.2.2 The capture survey was conducted on 14 November 2013, about one week before the Project commencement date. After the capture survey, it concluded no translocation work was needed, and the capture survey report was submitted to EPD in January 2014.
- 14.2.3 Under the Condition 2.6 of EP-324/2008/E, the Permit Holder shall submit a Landscape Plan before the commencement of construction of the Project. The landscape plan should show details of the landscape measures and compensatory ecological planting, including boundaries of proposed works areas, trees within the works areas that require and do not require removal, compensatory ecological planting of about 5.5 hectares including native species. The plan shall also include tree transplantation and compensation arising from the construction of Kau Lung Hang Vehicular Bridge. The Landscape plan shall be submitted of scale 1 to 1000, included detail on locations, size, number and species of planning, implementation programme, maintenance and management schedules.
- 14.2.4 Under the Condition 2.10 – 2.13 of EP-324/2008/E, the Permit Holder shall implement all ecological measures in accordance with the approved Landscape Plan to compensate for loss of woodlands and prevent encroachment of adjacent habitats.
- 14.2.5 The landscape plan was submitted to EPD in May 2011, the plan was included detail on locations, size, number and species of planning, implementation programme, maintenance and management schedules, which certified by the ET Leader and verified by IEC.
- 14.2.6 The Permit Holder and the Contractor implemented ecological compensatory planting according to the Landscape Plan submitted in May 2011. Ecological compensatory planting in the Landscape Plan were completed before the commencement of operational of the Project.
- 14.2.7 With reviewing the mitigation measures for Measures to Mitigate Ecological, Visual and Landscape Impacts under EP-324/2008/E, most of measures recommended in Landscape plan was fully and properly implemented. The Permit Holder was considered as fulfilled the Condition 2.6-2.7 and Condition 2.10-2.13 of EP-324/2008/E.

## **15 CONCLUSIONS AND ENVIRONMENTAL ACCEPTABILITY OF THE PROJECT**

### **15.1 Conclusions**

- 15.1.1 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the construction phase.
- 15.1.2 No Action Level exceedance of construction noise was recorded in the construction phase. No noise complaints related to 0700 – 1900 hours on normal weekdays was received and followed by Environmental Team in the construction phase.
- 15.1.3 There was a total of 6 limit level exceedances recorded throughout the construction phase, all of exceedances were considered as non-project related.
- 15.1.4 During the construction phase, there were a total of 10 complaints received, in which 2 were air quality related, 3 were noise related, 1 was water quality related, 1 was odour relate, 1 was both noise and odour related and 2 was both air and odour related.
- 15.1.5 The acceptability of water quality monitoring during the construction phase can be referred to the final review report under CV/2012/09.
- 15.1.6 The mitigation measures for ecology impacts were implemented according to the ERR / EP.
- 15.1.7 The mitigation measures for waste management were implemented according to the ERR / EIA report.
- 15.1.8 No notification of summons and successful prosecution was received in the construction phase.

### **15.2 Environmental Acceptability of the Project**

- 15.2.1 Most of Environmental monitoring result were below the Action and Limit Levels in the construction phase, excepted few exceedances of noise results were recorded. The environmental monitoring results indicated that the construction activities in general complied with the relevant environmental requirements.
- 15.2.2 From the implementation of mitigation measures, it is concluded that the overall environmental performance of the Project is satisfactory.

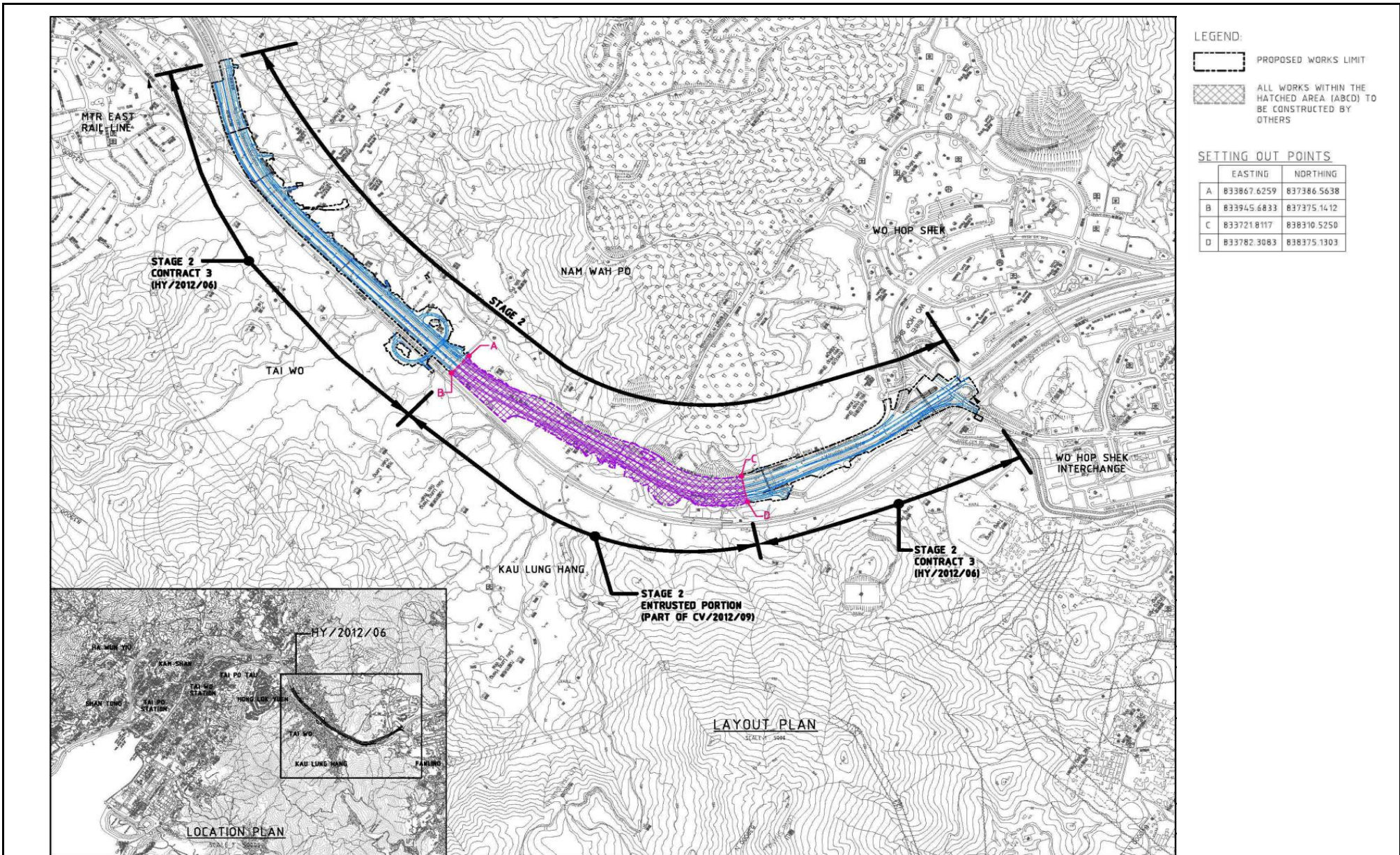
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## FIGURES

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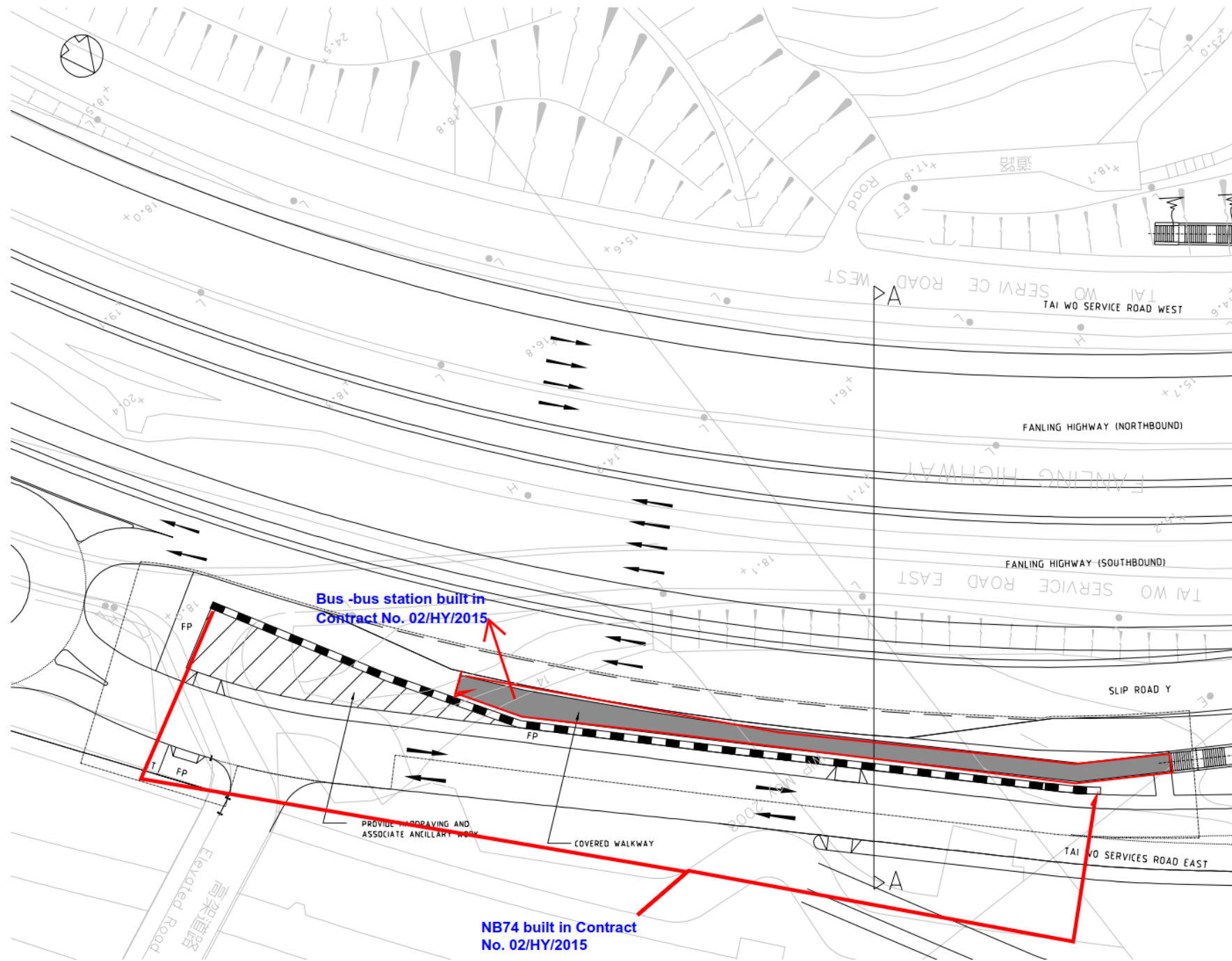


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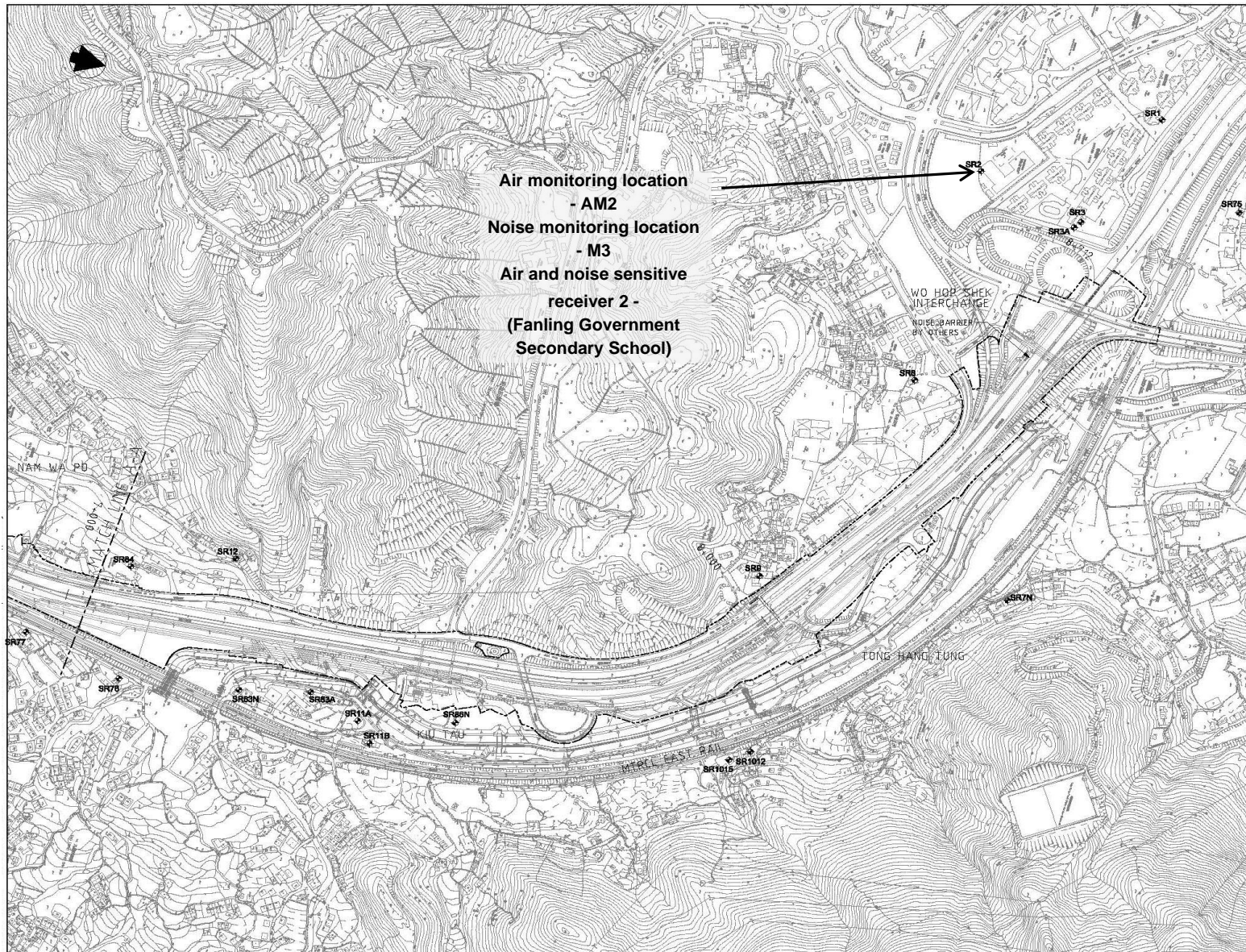
CONTRACT NO. HY/2012/06  
 WIDENING OF FANLING HIGHWAY  
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Layout Plan







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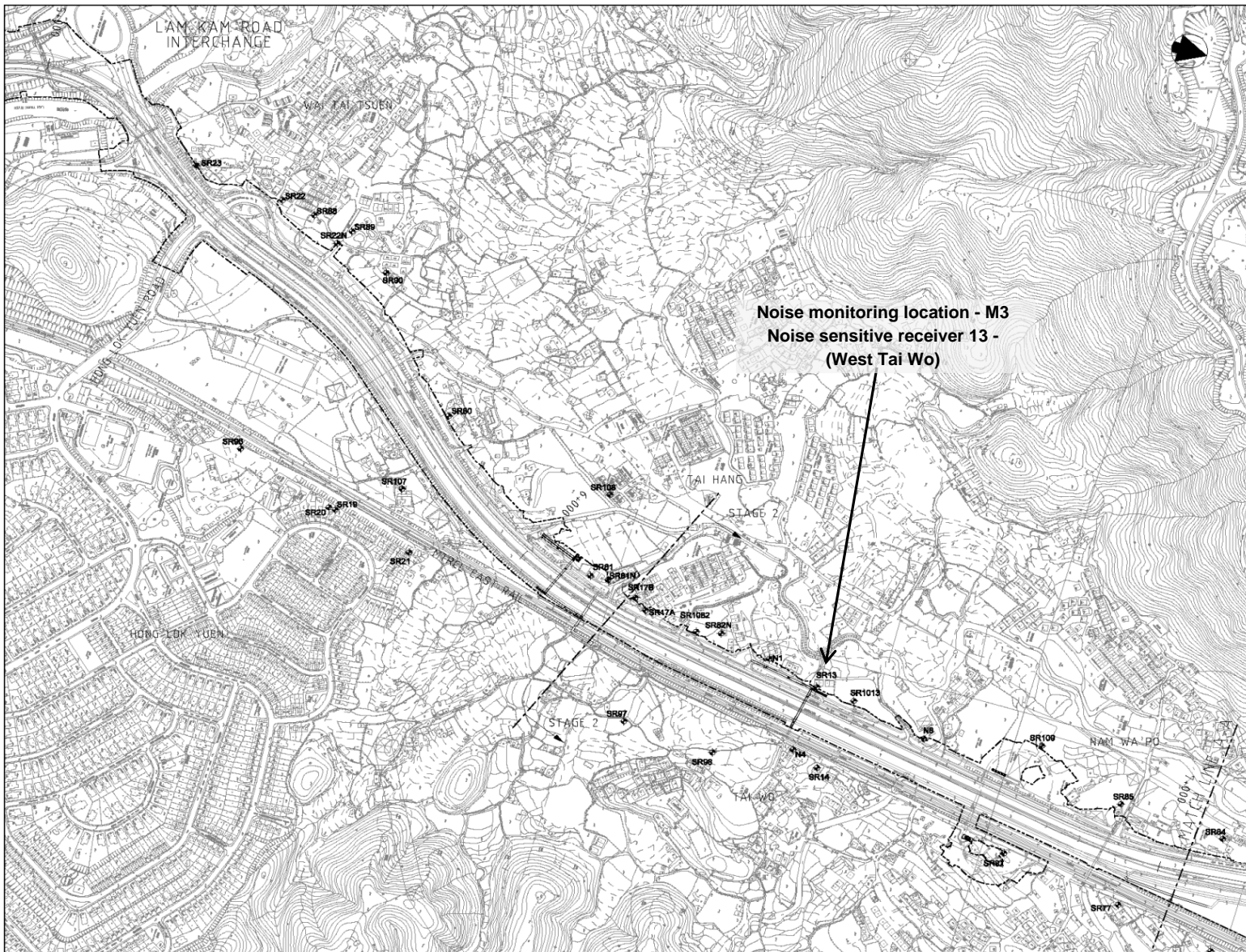
CONTRACT NO. HY/2012/06  
 WIDENING OF FANLING HIGHWAY  
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Locations of Monitoring Station

Date: Dec 2013

Figure 1.3a



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



Locations of Monitoring Station

Date: Dec 2013

Figure 1.3b

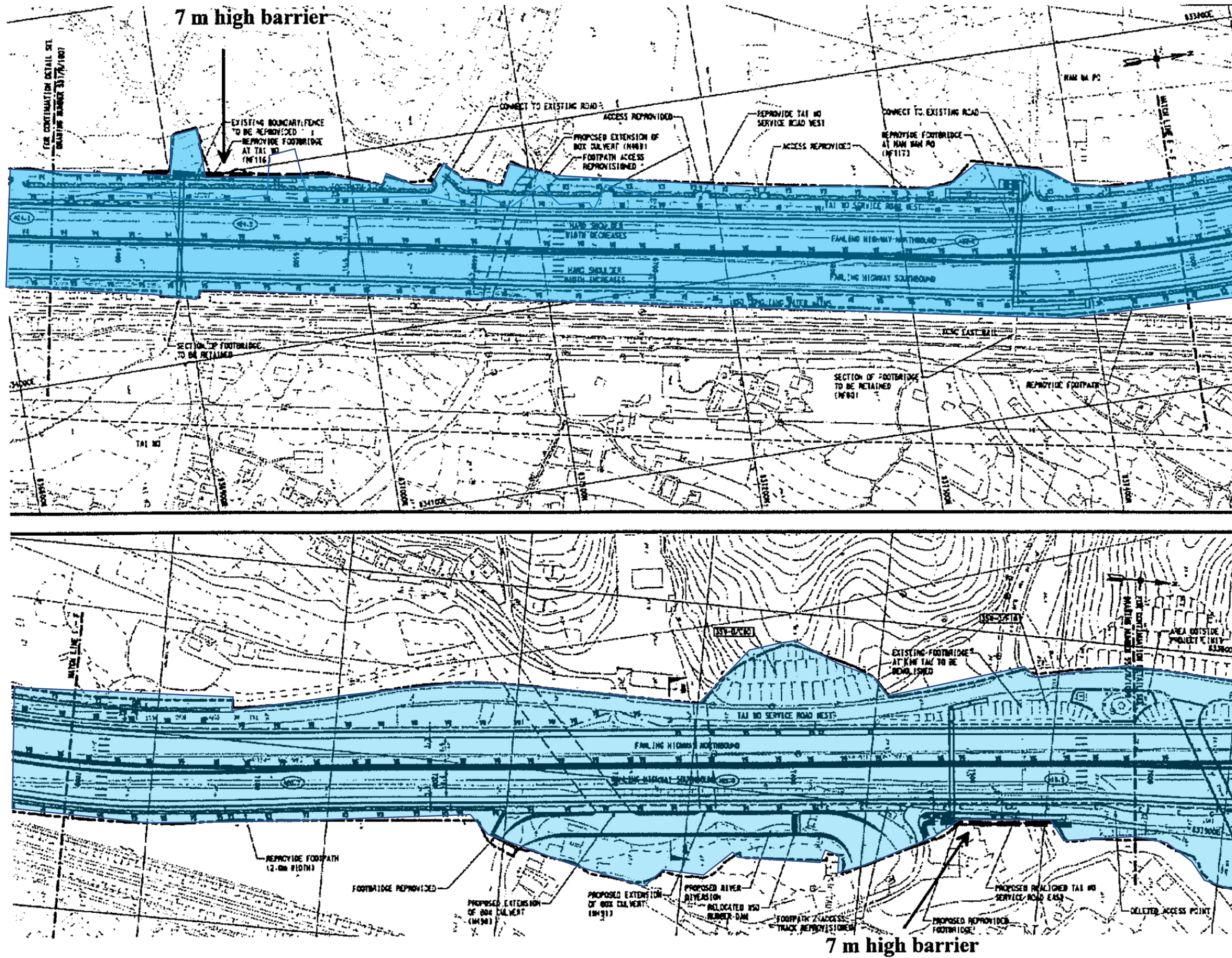


Figure 1.4a Temporary Noise Barrier show in 2d of Environmental Permit (EP-324/2008/E)

Project Area

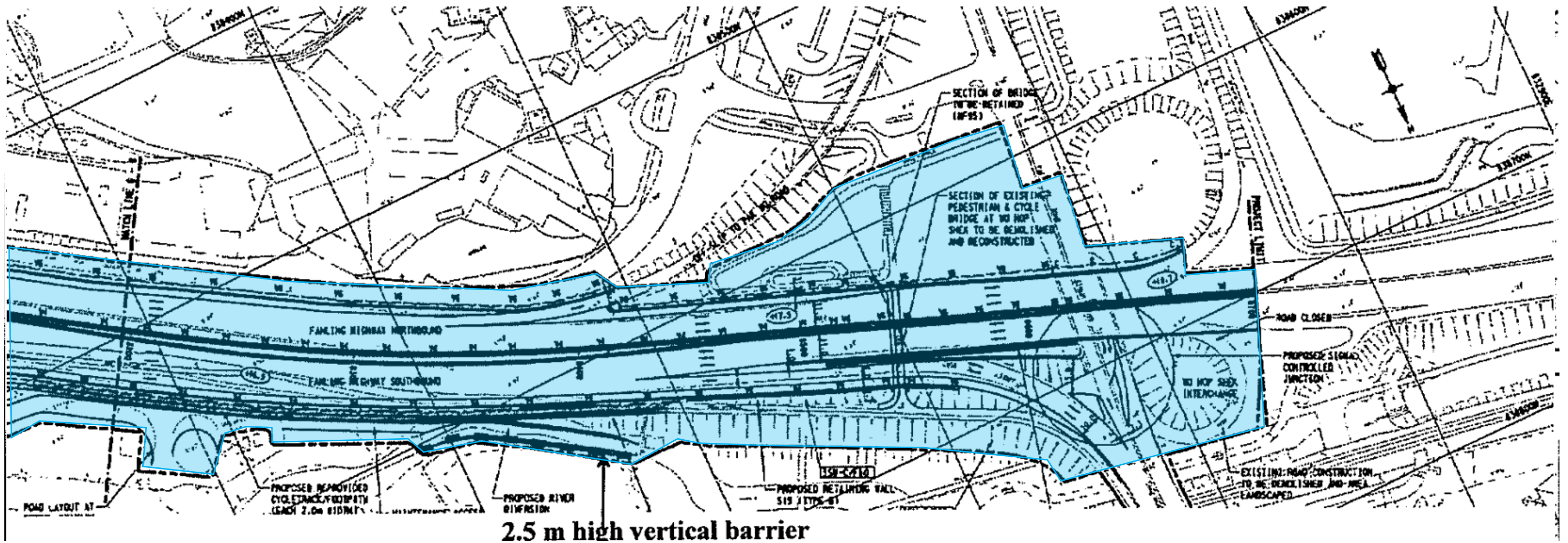
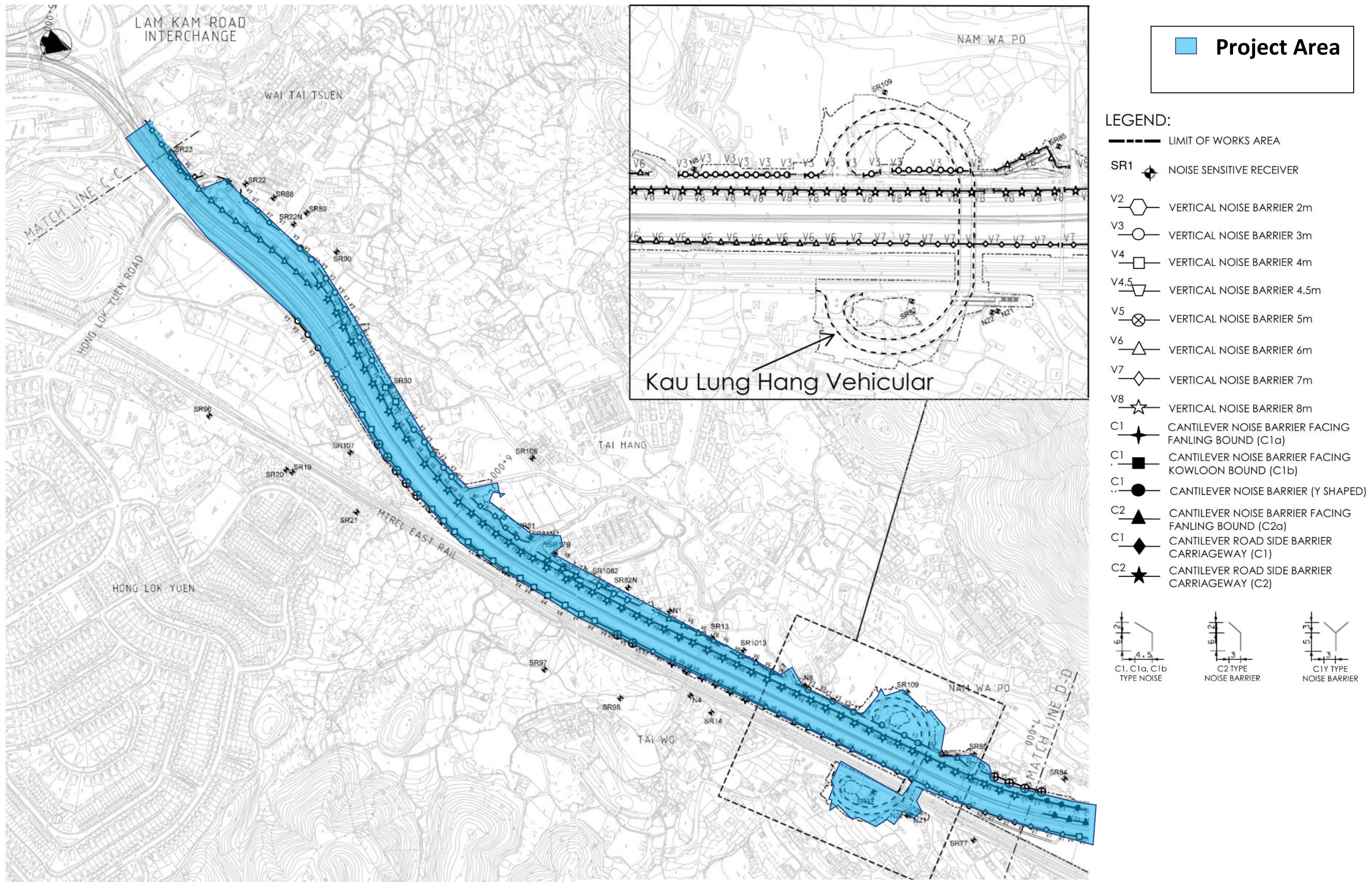
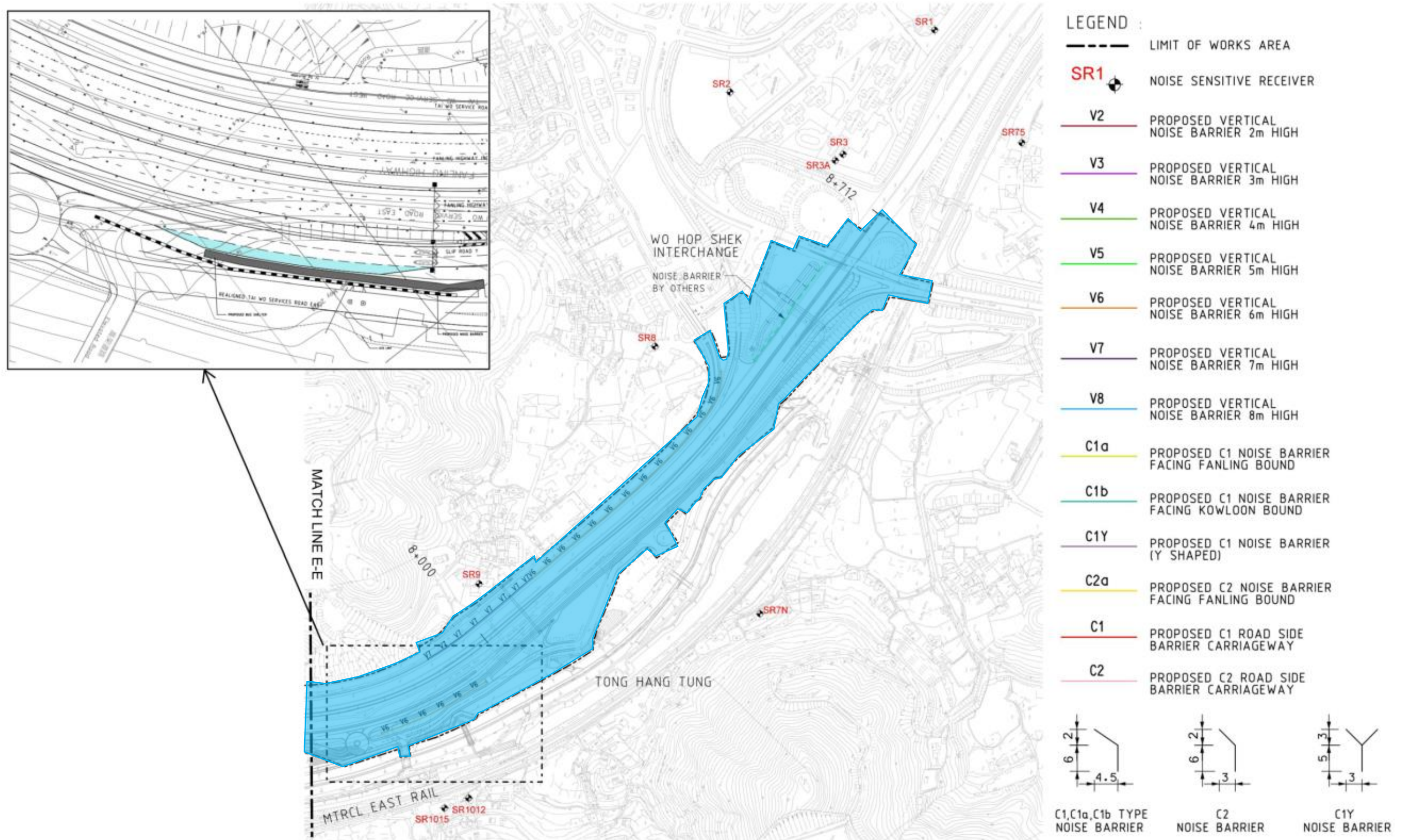


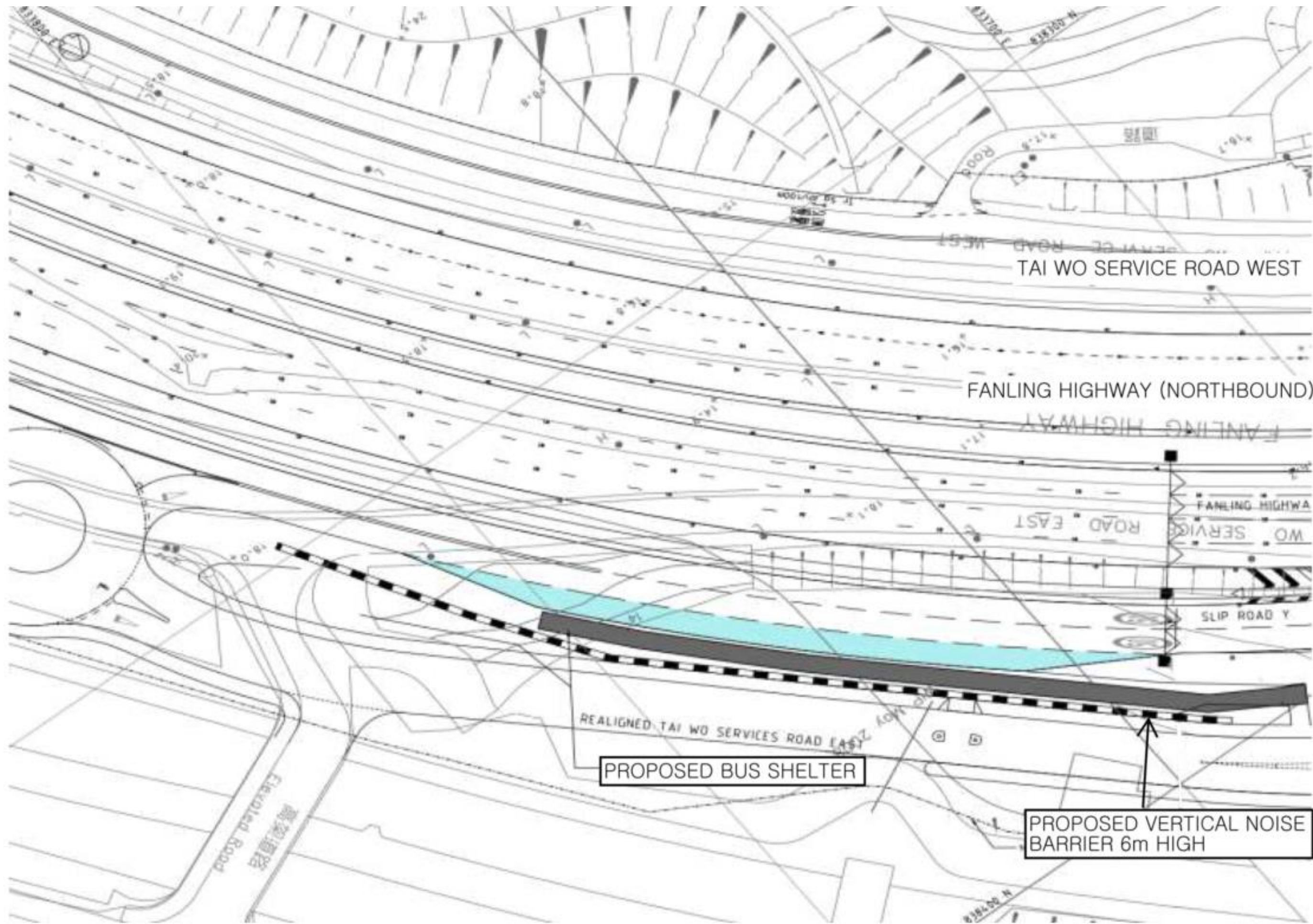
Figure 1.4b Temporary Noise Barrier show in 2e of Environmental Permit (EP-324/2008/E)



**Figure 1.4c Permanent Noise Barrier show in 4d&4d(i) of Environmental Permit (EP-324/2008/E)**

Project Area





Project  
 Road Section

**Figure 1.4e Permanent Noise Barrier show in 4e(i) of Environmental Permit (EP-324/2008/E)**

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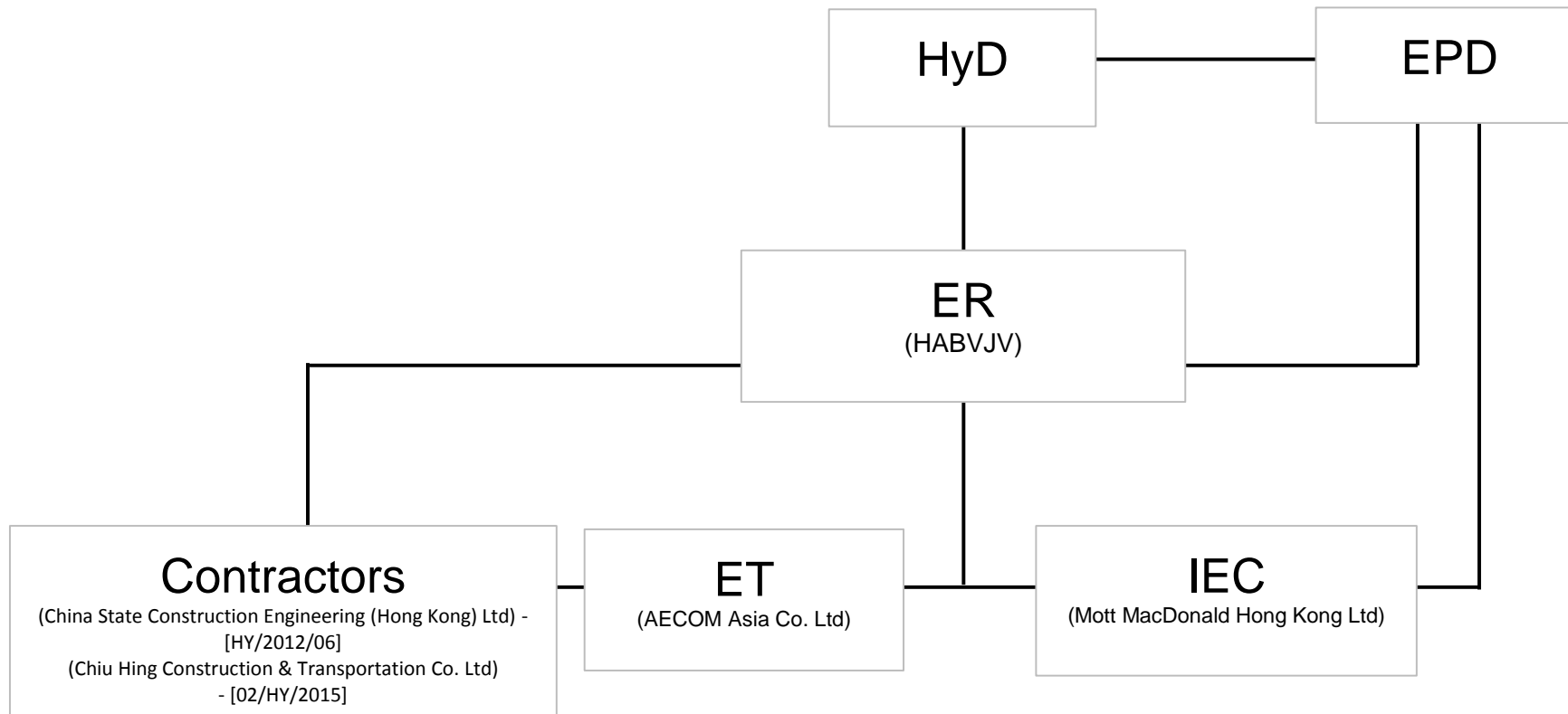
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**APPENDIX A  
PROJECT ORGANIZATION STRUCTURE**

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



Project Organization Structure

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**APPENDIX B  
CONSTRUCTION PROGRAMMES**

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Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	2014												2015												2016												2017												2018												2019												2020											
								J	F	A	M	J	J	A	S	O	J	F	A	M	J	J	A	S	O	J	F	A	M	J	J	A	S	O	J	F	A	M	J	J	A	S	O	J	F	A	M	J	J	A	S	O	J	F	A	M	J	J	A	S	O	J	F	A	M	J	J	A	S	O	J	F	A	M	J	J	A	S	O												
<b>Contract Condition</b>																																																																																											
<b>General</b>																																																																																											
<b>Contract Condition</b>																																																																																											
<b>Contract Condition</b>																																																																																											
COM.100	Date of Commencement of the Works	0	18-Jul-13 A					◆ Date of Commencement of the Works																																																																																			
COM.110	Date of Completion of the Works	0		24-Sep-20		08-Jul-20	-78	24-Sep-20 ◆																																																																																			
KD01	KD-1(1948d)- Section Subject to Excision comprises all works(excl. landscape Softwork & Establishment Works in Zone 1	0		30-May-19*		30-May-19	0	30-May-19* ◆ KD-1(1948d)- Section Subject																																																																																			
KD02	KD-2(1948d)- Comprise all Works (excluding Landscape works) in Zone 2 excluding SA322A, SA323A, SA323B & SA324A	0		25-Sep-19*		26-Jun-19	-91	25-Sep-19* ◆ KD-2(1948d)- Compris																																																																																			
KD03a	KD-3a (270d) - Comprises all works in SA322A (Area: Resite Houses)	0		17-Jan-15 A				17-Jan-15 A ◆ KD-3a (270d) - Comprises all works in SA322A (Area: Resite Houses)																																																																																			
KD03b	KD-3b (630d) - Section Subject to Excision comprises all Works in SA323A & SA323B (New MCLT Location)	0		26-Aug-14 A				26-Aug-14 A ◆ KD-3b (630d) - Section:Subject to Excision comprises all Works in SA323A & SA323B (New MCLT Location)																																																																																			
KD03c	KD-3c (165d) - Comprises all works in SA324A	0		29-Dec-13 A				Dec-13 A ◆ KD-3c (165d) - Comprises all works in SA324A																																																																																			
KD04	KD-4(1948d) - Comprises the remainder of the Works (All works except Works included in other sections)	0		30-Sep-19*		10-Jun-19	-112	30-Sep-19* ◆ KD-4(1948d) - Compris																																																																																			
KD05	KD-5 (1978d) - Section Subject to Excision comprise Landscape Softworks in Zone 1	0		10-Jun-19*		10-Jun-19	0	10-Jun-19* ◆ KD-5(1978d) - Section Subject																																																																																			
KD06	KD-6 (1978d) - Comprises Landscapes Softworks in Zone 2 excluding SA322A, SA323A, SA323B & SA324A	0		25-Sep-19*		02-Aug-19	-54	25-Sep-19* ◆ KD-6 (1978d) - Compris																																																																																			
KD07	KD-7 (1978d) - Comprises remainder of Landscaping Softworks	0		09-Jul-19*		09-Jul-19	0	09-Jul-19* ◆ KD:7 (1978d) - Comprises re																																																																																			
KD08	KD-8 (2343d) - Section Subject to Excision comprises Establishment Works in Zone 1	0		09-Jun-20*		09-Jun-20	0	09-Jun-20* ◆ KD-8(2																																																																																			
KD09	KD-9 (2343d) - Comprises Establishment works in Zone 2 excluding SA322A, SA323A, SA323B & SA324A	0		24-Sep-20*		08-Jul-20	-78	24-Sep-20* ◆																																																																																			
KD10	KD-10 (2343d) - Comprises remainder of Establishment works	0		08-Jul-20*		08-Jul-20	0	08-Jul-20* ◆ KD-10																																																																																			
KD11	KD-11(1061d)- S1:Achievement: Kau Lung Hang Veh. Bridge & Enable demolish KiuTai Bridge & Nam Wah Po Footbridge	0		08-Aug-16 A				08-Aug-16 A ◆ KD-11(1061d)- S1:Achievement: Kau Lung Hang Veh. Bridge & Enable demolish KiuTai Bridge																																																																																			
KD12	KD-12 (1239d) - S2:Achievement Demolition of Nam Wa Po Footbridge	0		25-Apr-17 A				25-Apr-17 A ◆ KD-12 (1239d) - S2:Achievement Demolition of Nam Wa Po Footbridge																																																																																			
KD13	KD-13 (1309d)-S3: Connection of realigned Tai Wo Service Road West at interface between Zone 2 & 3	0		16-Aug-17 A				16-Aug-17 A ◆ KD-13 (1309d)-S3: Connection of realigned Tai Wo Service Road West																																																																																			
KD14	KD-14 1523d) - S4:Achievement: Rd widening of Fanling Highway @ SBZ1 (expt. final pavement and central divider)	0		20-Apr-18 A				20-Apr-18 A ◆ KD-14 1523d) - S4:Achievement: Rd widening of Fanling																																																																																			
KD15	KD-15 (707d) - N1:Achievement: Demolition of Ho Ka Yuen Footbridge	0		13-Oct-16 A				13-Oct-16 A ◆ KD-15 (707d) - N1:Achievement: Demolition of Ho Ka Yuen Footbridge																																																																																			
KD16	KD-16 (883d) - N2: Connection of realigned Tai Wo Service Road East at interface between Zone 3 & 4	0		17-Dec-15 A				17-Dec-15 A ◆ KD-16 (883d) - N2: Connection of realigned Tai Wo Service Road East at interface between Zone 3 & 4																																																																																			
KD17	KD-17 (1097d) -N3: Comission of Slip Road Y (Section bet. Fanling Highway to Mini- roundabout	0		03-Jul-16 A				03-Jul-16 A ◆ KD-17 (1097d)-N3: Comission of Slip Road Y (Section bet. Fanling Highway to Mini- roundabout																																																																																			
KD18	KD-18(1380d) -N4:Achieve: Eastern Rd widening works at Fanling Highway @NBZ2(expt. final pavement and central divider)	0		15-Mar-18 A				15-Mar-18 A ◆ KD-18(1380d) -N4:Achieve: Eastern Rd widening works at																																																																																			
KD19	KD-19 (1734d)- N5: Acheive: Rd widening & reconst. of Fanling Highway@NBZ2 for comission Link Rd 2 & 4 by CV/2012/09	0		24-Nov-18*		08-Jan-19	45	24-Nov-18* ◆ KD-19 (1734d)- N5: Acheive: Rd widening																																																																																			
KD20	KD-20 (1064d)- Stage 1: Acheivement: Whole length of Southern Trunk Sewer(STS) at Tai Wo Service Road West	0		03-Jan-17 A				03-Jan-17 A ◆ KD-20 (1064d)- Stage 1: Acheivement: Whole length of Southern Trunk Sewer(STS) a																																																																																			
POSSA301	Site Area SA301 (0d)	0	12-Dec-13 A					◆ Site Area SA301 (0d)																																																																																			
POSSA302	Site Area SA302 (0d)	0	18-Jul-13 A					◆ Site Area SA302 (0d)																																																																																			
POSSA310	Site Area SA 310 (395d)	0	16-Aug-14 A					◆ Site Area SA 310 (395d)																																																																																			
POSSA320	Site Area SA320 (0d)	0	25-Aug-14 A					◆ Site Area SA320 (0d)																																																																																			
POSSA320A	Site Area SA320A (120d)	0	23-Apr-14 A					◆ Site Area SA320A (120d)																																																																																			
POSSA320B	Site Area SA320B (0d)	0	25-Nov-14 A					◆ Site Area SA320B (0d)																																																																																			
POSSA321	Site Area SA321 (120d)	0	25-Nov-14 A					◆ Site Area SA321 (120d)																																																																																			
POSSA322	Site Area SA322 (120d)	0	23-Apr-14 A					◆ Site Area SA322 (120d)																																																																																			
POSSA322A	Site Area SA322A (180d)	0	09-Jan-15 A					◆ Site Area SA322A (180d)																																																																																			
POSSA322B	Site Area SA322B (180d)	0	09-Jan-15 A					◆ Site Area SA322B (180d)																																																																																			
POSSA323	Site Area SA323 (360d)	0	26-Sep-14 A					◆ Site Area SA323 (360d)																																																																																			
POSSA323A	Site Area SA323A (360d) (not required)	0	20-Nov-18		08-Jul-20		597	◆ Site Area SA323A (360d) (not required)																																																																																			
POSSA323B	Site Area SA323B (360d)	0	26-Aug-14 A					◆ Site Area SA323B (360d)																																																																																			
POSSA324	Site Area SA324 (180d)	0	09-Jul-14 A					◆ Site Area SA324 (180d)																																																																																			
POSSA324A	Site Area SA324A (30d)	0	25-Sep-13 A					◆ Site Area SA324A (30d)																																																																																			

█ Remaining Level of Effort  
█ Actual Level of Effort  
█ Actual Work  
█ Remaining Work  
█ Critical Remaining Work  
◆ Milestone  
◆ Crit. Milestone

Project File: WP Rev 07  
 Layout: WP rev 7  
 Data Date: 20-Nov-18  
 Page 1 of 48

**Contract No. HY/2012/06**  
**Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange**  
**Works Programme - WP Rev. 7**



Date	Revision	Checked	Approved
07-Nov-16	WP Rev 4		
17-Aug-17	WP Rev 5		
29-Mar-18	WP Rev 6		
03-Dec-18	WP Rev 7		











































































































CHIU HING CONSTRUCTION AND TRANSPORTATION CO. LTD.

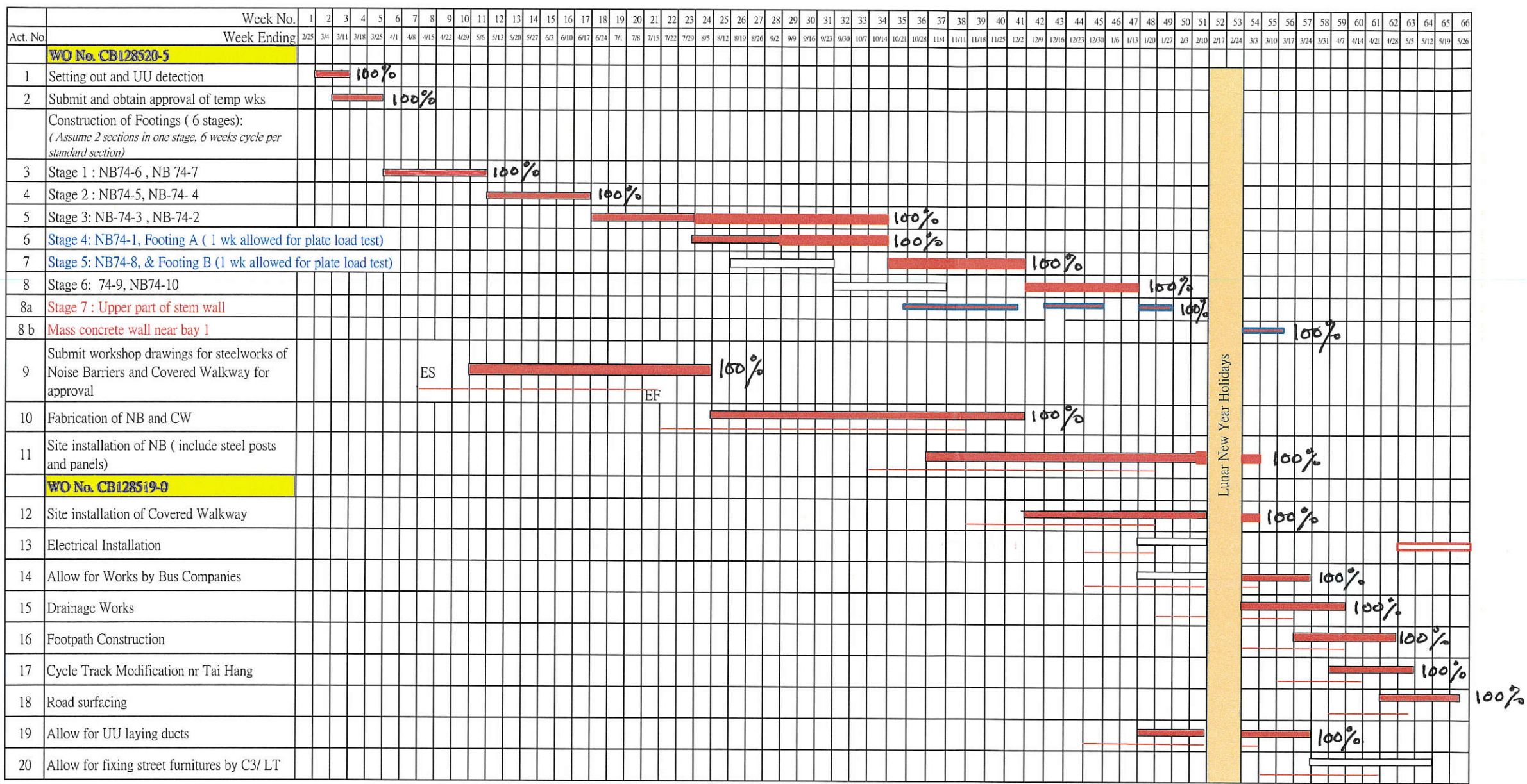
Contract No. 02/HY/2015

Works Order Nos: CB128519-0 & CB128520-5

Programme of Construction of Noise Barrier and Pedestrian Covered Walkway at Tai Wo Service Road East near Ho Ka Yuen

- ▬ Revised Program Duration
- Programmed Duration
- Actual Progress
- Critical Path Activities
- ▬ Early Start & Early Finish
- Float = 3 weeks
- ▬ upper part of stem wall

Rev	Date	Description
00	28/02/17	initial issue
01	29/03/17	refer RE's comments
02	22/5/17	add plate load test program
03	28/9/2017	revise program of task 5-8
04	23/1/2018	add mass wall & revise installation of NB & BBI



Cycle time for standard section :

Item	Activity	Approx Qty	Days for Construction (Calendar Days)
1	Sheet-piling with struts	24 x 7 = 168M2	10 days
2	Excavation	12 x 6 x 6 =432 M	7 days
3	Rock Fill ( assumed)	12 x 2 = 24 M3	2 days
4	Blinding Layer		1 day
5	Fwk-Rebar- Concreting	110 M 3	10 days **
6	Posts for Covered Walkway		7 days ##
7	Backfilling	290M 3	5 days
			Total = 42 days

\*\* Breakdown of Item 5

	Base Slab calendar days	Stem calendar days
Fwk	1	2
Re-bar	1	3
Concreting	1	1
Remove Fwk		1
Total :	10 days	

## Breakdown of Item 6

	Posts calendar days
Fwk	2
Re-bar	3
Concreting	1
Remove Fwk	1
Total :	7 days

\$\$Breakdown of Item 8a ( for 2 sections of stem wall)

	Posts calendar days
Fwk	4
Re-bar	2
Concreting	1
Fix HD bolts	2
Remove Fwk	1
Total :	10 days

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**APPENDIX C  
IMPLEMENTATION SCHEDULE OF  
ENVIRONMENTAL MITIGATION MEASURES  
(EMIS)**

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

### **Air Quality – Schedule of Recommended Mitigation Measures**

<b>Impact</b>	<b>Mitigation Measures</b>	<b>Timing</b>	<b>Implementation Status</b>
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
	All stockpiles of excavated materials or spoil of more than 50m <sup>3</sup> shall be enclosed, covered or dampened during dry or windy conditions.		V
	Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas.		V
	All spraying of materials and surfaces shall avoid excessive water usage.		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
	Materials shall be dampened, if necessary, before transportation.		V
	Travelling speeds shall be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks.		V
	Vehicle washing facilities shall be provided to minimize the quantity of material deposited on public roads.		V

### Noise – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Noise during construction	Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction works;	During construction phase	V
	Machines and plant that may be in intermittent use shall be shut down between work periods or shall be throttled down to a minimum;		V
	Plant known to emit noise strongly in one direction, shall, where possible, be orientated to direct noise away from nearby NSRs;		V
	Mobile plant shall be sited as far away from NSRs as possible;		V
	Material stockpiles and other structures shall be effectively utilised, where practicable, to screen noise from on-site construction activities;		V
	Quieter Plant and Working Methods shall be selected during planning the Construction Programme;		V
	Temporary and movable noise barriers shall be very effective in providing noise screening from a particular plant;		V
	Number of Plant Operating On-site Close to NSRs shall be reduced.		V
	Various heights of temporary noise barriers of as shown in Figures 2d and 2e – Layout of Noise Barriers of the Environmental Permit	Before the construction phase	V <sup>#</sup>
Noise during operation	Various type of barriers of varying heights as shown in Figures 4d, 4d(i), 4e and 4e(i) Layout of Noise Barriers of the Environmental Permit	Review of required noise barrier layout during the design stage	V*

<sup>#</sup>Temporary noise barriers are removed after the permanent noise barriers erected.

\* Permanent noise barriers have been erected.

### Water Quality – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
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
	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
	Around any material storage, batching plants or other facilities where spillage may occur, a bund with a capacity of 110% will be provided.		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
	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
	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
	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

	<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>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>All Contractor's Equipment shall be designed and maintained to minimise the risk of silt and other contaminants being released into the water column or deposited in other than designated locations</p>		<p>V</p>



### Waste – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Waste management during construction	<b>General Waste</b> <ul style="list-style-type: none"> <li>- Transport of wastes off site as soon as possible.</li> <li>- Maintenance of accurate waste records.</li> <li>- Minimisation of waste generation for disposal (via reduction/recycling/re-use).</li> <li>- No on-site burning will be permitted.</li> <li>- Use of re-useable metal hoardings/signboards.</li> </ul>	During construction	V
	<b>Vegetation from site clearance</b> <ul style="list-style-type: none"> <li>- Segregation of materials to facilitate disposal.</li> <li>- Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas.</li> </ul>		V
	<b>Demolition Wastes</b> <ul style="list-style-type: none"> <li>- Segregation of materials to facilitate disposal.</li> <li>- Appropriate stockpile management.</li> </ul>		V
	<b>Excavated Materials</b> <ul style="list-style-type: none"> <li>- Segregation of materials to facilitate disposal / reuse.</li> <li>- Appropriate stockpile management.</li> <li>- Re-use of excavated material on or off site (where possible).</li> <li>- Special handling and disposal procedures in the event that contaminated materials are excavated.</li> </ul>		V
	<b>Construction Wastes</b> <ul style="list-style-type: none"> <li>- Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles).</li> <li>- Appropriate stockpile management.</li> <li>- Planning to reduce over ordering and waste generation.</li> <li>- Recycling and re-use of materials where possible (e.g. metal, wood from formwork)</li> <li>- For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.</li> </ul>		V
	<b>Bentonite Slurries</b> <ul style="list-style-type: none"> <li>- Bentonite slurries should be reused as far as possible.</li> <li>- Disposal in accordance with Practice Note For Professional Persons ProPECC PN 1/94.</li> </ul>		N/A

	<p>Chemical Wastes</p> <ul style="list-style-type: none"> <li>- Storage within locked, covered and bunded area.</li> <li>- The storage area shall not be located adjacent to sensitive receivers e.g. drains.</li> <li>- Minimise waste production and recycle oils/solvents where possible.</li> <li>- A spill response procedure shall be in place and absorption material available for minor spillages.</li> <li>- Use appropriate and labelled containers.</li> <li>- Educate site workers on site cleanliness/waste management procedures.</li> <li>- If chemical wastes are to be generated, the contractor must register with EPD as a chemical waste producer.</li> <li>- The chemical wastes shall be collected by a licensed chemical waste collector.</li> </ul>		V
	<p>Municipal Wastes</p> <ul style="list-style-type: none"> <li>- Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal.</li> <li>- Regular, daily collections are required by an approved waste collector.</li> </ul>		V

### Ecology – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
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
	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
	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
	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

### Landscape and Visual Impact – Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation
Landscape & Visual during construction	<b>Preservation of Existing Vegetation</b> - 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
	<b>Temporary Works Areas</b> - 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
	<b>Hoarding</b> - A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSRs.		V
	<b>Top Soils</b> - 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.		N/A
	<b>Protection of Important Landscape Features</b> - Important features such as temples, Island House and kilns within the study area, although remote from the proposed works retained and adequately protected.		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.

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**APPENDIX D  
SUMMARY OF ACTION AND LIMIT LEVELS  
&  
EVENT - ACTION PLAN**

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## Appendix D - Summary of Action and Limit Levels and Event - Action Plan

### 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 <sup>3</sup>	500 µg/m <sup>3</sup>

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

Location	Action Level	Limit Level
AM2	200.7 µg/m <sup>3</sup>	260 µg/m <sup>3</sup>

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

# Event Action Plan

## Event / Action Plan for Air Quality

Event	Action			
	ET Leader	IEC	ER	Contractor
<b>Action Level</b>				
Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC and ER;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice;</li> <li>2. Amend working methods if appropriate.</li> </ol>
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC and ER;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Discuss with IEC and Contractor on remedial actions required;</li> <li>6. If exceedance continues, arrange meeting with IEC and ER;</li> <li>7. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise Implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>2. Implement the agreed proposals;</li> <li>3. Amend proposal if appropriate.</li> </ol>

Event / Action Plan for Air Quality

Event Action Level	Action			
	ET Leader	IEC	ER	Contractor
<b>Limit Level</b>				
Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, Contractor and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise ER on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Amend proposal if appropriate.</li> </ol>
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase frequency to daily;</li> <li>5. Analyse Contractor's working procedures to determine possible mitigation to be;</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Ensure remedial measures properly implemented;</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by ER until the exceedance is abated.</li> </ol>



Event / Action Plan for Noise Impact

Event Limit Level	Action			
	ET Leader	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify IEC and the Contractor.</li> <li>2. Carry out investigation.</li> <li>3. Report the results of investigation to IEC and the Contractor.</li> <li>4. Discuss with the Contractor and formulate remedial measures.</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review with analysed results submitted by ET.</li> <li>2. Review the proposed remedial measures by the Contractor and advise ER accordingly.</li> <li>3. Supervise the implement of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC.</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Notify, IEC, ER, EPD and the Contractor.</li> <li>2. Identify the source.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency.</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>6. Inform IEC, ER, and EPD the causes &amp; actions taken for the exceedances.</li> <li>7. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET Leader and the Contractor on the potential remedial actions.</li> <li>2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> <li>5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance.</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Resubmit proposals if problem still not under control.</li> <li>5. Stop the relevant activity of works as determined by the ER until the exceedance is abated.</li> </ol>

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**APPENDIX E  
IMPACT AIR QUALITY MONITORING  
RESULTS AND THEIR GRAPHICAL  
PRESENTATION**

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Impact Air Quality Monitoring Results

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

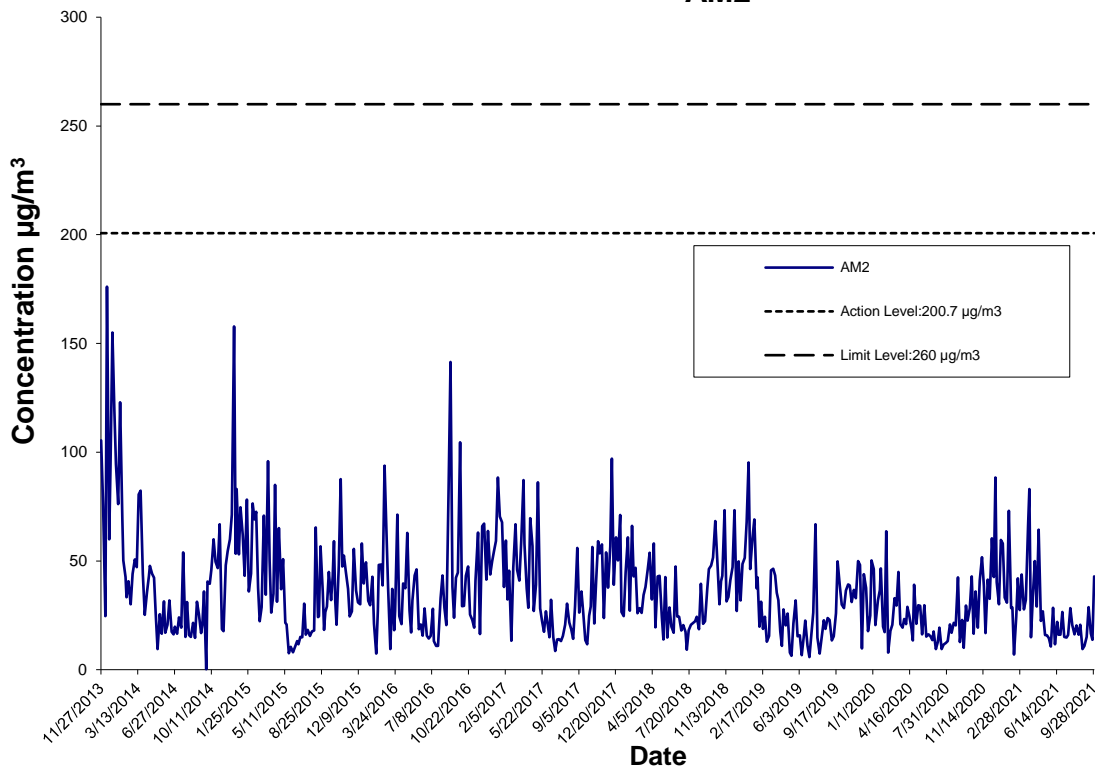
Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m <sup>3</sup> /min.)		Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m <sup>3</sup> )	Actino Leve (µg/m <sup>3</sup> )	Limit Level (µg/m <sup>3</sup> )
				Initial	Final			Initial	Final		Initial	Final				
27-Nov-13	Cloudy	20.1	1018.1	1.314	1.314	1.314	1892.2	2.7111	2.9106	0.1995	3201.02	3225.02	24.00	105	200.7	260
3-Dec-13	Sunny	18.9	1019.2	1.314	1.314	1.314	1892.2	2.7081	2.8504	0.1423	3225.02	3249.02	24.00	75.2	200.7	260
9-Dec-13	Sunny	22.0	1013.6	1.314	1.314	1.314	1892.2	2.8003	2.8469	0.0466	3249.02	3273.02	24.00	24.6	200.7	260
14-Dec-13	Fine	18.8	1018.8	1.314	1.314	1.314	1892.2	2.6965	3.0298	0.3333	3273.02	3297.02	24.00	176.1	200.7	260
20-Dec-13	Fine	13.9	1022.9	1.314	1.314	1.314	1892.2	2.7428	2.8562	0.1134	3297.02	3321.02	24.00	59.9	200.7	260
24-Dec-13	Fine	14.8	1023.1	1.314	1.314	1.314	1892.2	2.7307	2.9079	0.1772	3321.02	3345.02	24.00	93.6	200.7	260
30-Dec-13	Fine	13.8	1022.5	1.314	1.314	1.314	1892.2	2.7086	3.0019	0.2933	3345.02	3369.02	24.00	155.0	200.7	260
4-Jan-14	Sunny	18.8	1017.8	1.314	1.314	1.314	1892.2	2.7387	2.9650	0.2263	3369.02	3393.02	24.00	119.6	200.7	260
9-Jan-14	Fine	15.5	1022.9	1.314	1.314	1.314	1892.2	2.7104	2.8893	0.1789	3393.02	3417.02	24.00	94.5	200.7	260
15-Jan-14	Fine	13.2	1025.6	1.314	1.314	1.314	1892.2	2.7211	2.8651	0.1440	3417.02	3441.02	24.00	76.1	200.7	260
21-Jan-14	Sunny	14.9	1024.5	1.314	1.314	1.314	1892.2	2.6852	2.9179	0.2327	3441.02	3465.02	24.00	123.0	200.7	260
27-Jan-14	Sunny	16.4	1021.3	1.314	1.314	1.314	1892.2	2.6550	2.7857	0.1307	3465.02	3489.02	24.00	69.1	200.7	260
30-Jan-14	Sunny	18.9	1019.3	1.314	1.314	1.314	1892.2	2.6818	2.7770	0.0952	3489.02	3513.02	24.00	50.3	200.7	260
5-Feb-14	Sunny	17.1	1013.9	1.314	1.314	1.314	1892.2	2.6918	2.7725	0.0807	3513.02	3537.02	24.00	42.6	200.7	260
8-Feb-14	Rainy	16.6	1011.4	1.314	1.314	1.314	1892.2	2.7252	2.7883	0.0631	3537.02	3561.02	24.00	33.3	200.7	260
14-Feb-14	Fine	10.6	1022.1	1.314	1.314	1.314	1892.2	2.6647	2.7415	0.0768	3561.02	3585.02	24.00	40.6	200.7	260
20-Feb-14	Fine	12.3	1024.8	1.314	1.314	1.314	1892.2	2.6785	2.7352	0.0567	3585.02	3609.02	24.00	30.0	200.7	260
26-Feb-14	Sunny	20.2	1018.0	1.314	1.314	1.314	1892.2	2.7061	2.7893	0.0832	3609.02	3633.02	24.00	44.0	200.7	260
4-Mar-14	Sunny	16.8	1017.5	1.314	1.314	1.314	1892.2	2.6471	2.7431	0.0960	3633.02	3657.02	24.00	50.7	200.7	260
10-Mar-14	Fine	14.4	1022.1	1.314	1.314	1.314	1892.2	2.7341	2.8234	0.0893	3657.02	3681.02	24.00	47.2	200.7	260
15-Mar-14	Sunny	16.0	1022.1	1.314	1.314	1.314	1892.2	2.9393	3.0919	0.1526	3681.02	3705.02	24.00	80.6	200.7	260
21-Mar-14	Sunny	16.5	1020.4	1.314	1.314	1.314	1892.2	2.7468	2.8025	0.1557	3705.02	3729.02	24.00	62.3	200.7	260
27-Mar-14	Sunny	23.5	1012.7	1.314	1.314	1.314	1892.2	2.7061	2.7893	0.0832	3729.02	3753.02	24.00	44.0	200.7	260
2-Apr-14	Rainy	19.4	1011.9	1.314	1.314	1.314	1892.2	2.7261	2.7737	0.0476	3753.02	3777.02	24.00	25.2	200.7	260
8-Apr-14	Fine	19.9	1014.6	1.314	1.314	1.314	1892.2	2.7022	2.7696	0.0674	3777.02	3801.02	24.00	35.6	200.7	260
14-Apr-14	Sunny	22.8	1014.7	1.314	1.314	1.314	1892.2	2.6934	2.7748	0.0814	3801.02	3825.02	24.00	43.0	200.7	260
17-Apr-14	Fine	24.1	1012.0	1.314	1.314	1.314	1892.2	2.7491	2.8394	0.0903	3825.02	3849.02	24.00	47.7	200.7	260
23-Apr-14	Cloudy	22.4	1012.3	1.314	1.314	1.314	1892.2	2.7202	2.8035	0.0833	3849.02	3873.02	24.00	44.0	200.7	260
29-Apr-14	Sunny	23.9	1013.1	1.314	1.314	1.314	1892.2	2.7230	2.8031	0.0801	3873.02	3897.02	24.00	42.3	200.7	260
3-May-14	Fine	24.6	1014.5	1.314	1.314	1.314	1892.2	2.7160	2.7659	0.0499	3897.02	3921.02	24.00	26.4	200.7	260
9-May-14	Rainy	21.7	1009.1	1.314	1.314	1.314	1892.2	2.7576	2.7756	0.0180	3921.02	3945.02	24.00	9.5	200.7	260
15-May-14	Cloudy	28.9	1005.1	1.314	1.314	1.314	1892.2	2.7400	2.7882	0.0482	3945.02	3969.02	24.00	25.5	200.7	260
21-May-14	Rainy	27.1	1006.9	1.314	1.314	1.314	1892.2	2.7175	2.7487	0.0312	3969.02	3993.02	24.00	16.5	200.7	260
27-May-14	Sunny	29.7	1007.9	1.314	1.314	1.314	1892.2	2.7417	2.8011	0.0594	3993.02	4017.02	24.00	31.4	200.7	260
31-May-14	Sunny	30.1	1008.0	1.314	1.314	1.314	1892.2	2.7477	2.7798	0.0321	4017.02	4041.02	24.00	17.0	200.7	260
6-Jun-14	Fine	28.0	1003.1	1.314	1.314	1.314	1892.2	2.6844	2.7234	0.0390	4041.02	4065.02	24.00	20.6	200.7	260
12-Jun-14	Fine	28.8	1002.6	1.314	1.314	1.314	1892.2	2.6940	2.7242	0.0392	4065.02	4089.02	24.00	31.8	200.7	260
18-Jun-14	Fine	30.1	1004.6	1.314	1.314	1.314	1892.2	2.6890	2.6890	0.0000	4089.02	4113.02	24.00	17.2	200.7	260
24-Jun-14	Fine	27.8	1004.3	1.314	1.314	1.314	1892.2	2.6855	2.6862	0.0007	4113.02	4137.02	24.00	16.2	200.7	260
28-Jun-14	Fine	30.8	1004.3	1.314	1.314	1.314	1892.2	2.7331	2.7706	0.0375	4137.02	4161.02	24.00	19.8	200.7	260
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	0.0586	4401.02	4425.02	24.00	31.2	200.7	260
5-Sep-14	Sunny	29.7	1007.5	1.314	1.314	1.314	1892.2	2.7102	2.7598	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	2.7823	2.8240	0.0417	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	4569.02	4593.02	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	4593.02	4617.02	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	4617.02	4641.02	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	4641.02	4665.02	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	4665.02	4689.02	24.00	46.7	200.7	260
4-Nov-14	Fine	22.8	1017.5	1.314	1.314	1.314	1892.2	2.7514	2.8778	0.1264	4689.02	4713.02	24.00	66.8	200.7	260
10-Nov-14	Sunny	23.3	1017.3	1.314	1.314	1.314	1892.2	2.7444	2.7795	0.0351	4713.02	4737.02	24.00	18.6	200.7	260
15-Nov-14	Sunny	21.9	1019.7	1.314	1.314	1.314	1892.2	2.7792	2.8126	0.0334	4737.02	4761.02	24.00	17.7	200.7	260
21-Nov-14	Fine	22.1	1017.0	1.314	1.314	1.314	1892.2	2.7746	2.8655	0.0909	4761.02	4785.02	24.00	48.0	200.7	260
27-Nov-14	Cloudy	22.2	1015.2	1.314	1.314	1.314	1892.2	2.7703	2.8734	0.1031	4785.02	4809.02	24.00	54.5	200.7	260
3-Dec-14	Cloudy	18.3	1017.4	1.314	1.314	1.314	1892.2	2.7865	2.8998							

3-Oct-15	Sunny	26.8	1011.7	1.314	1.314	1.314	1892.2	2.8379	2.8976	0.0597	6194.03	6218.03	24.00	31.6	200.7	260
7-Oct-15	Fine	26.4	1012.7	1.314	1.314	1.314	1892.2	2.8069	2.8461	0.0392	6218.03	6242.03	24.00	20.7	200.7	260
13-Oct-15	Sunny	25.1	1018.7	1.314	1.314	1.314	1892.2	2.7828	2.8730	0.0902	6242.03	6266.03	24.00	47.7	200.7	260
19-Oct-15	Sunny	25.3	1010.2	1.314	1.314	1.314	1892.2	2.8150	2.9808	0.1658	6266.03	6290.03	24.00	87.6	200.7	260
24-Oct-15	Sunny	26.8	1015.0	1.314	1.314	1.314	1892.2	2.8352	2.9250	0.0898	6290.03	6314.03	24.00	47.5	200.7	260
28-Oct-15	Sunny	26.7	1017.0	1.314	1.314	1.314	1892.2	2.8408	2.9401	0.0993	6314.03	6338.03	24.00	52.5	200.7	260
3-Nov-15	Sunny	23.7	1019.5	1.314	1.314	1.314	1892.2	2.8270	2.9124	0.0854	6338.03	6362.03	24.00	45.1	200.7	260
9-Nov-15	Sunny	26.7	1015.8	1.314	1.314	1.314	1892.2	2.8287	2.8991	0.0704	6362.03	6386.03	24.00	37.2	200.7	260
14-Nov-15	Cloudy	26.3	1014.5	1.314	1.314	1.314	1892.2	2.7789	2.8262	0.0463	6386.03	6410.03	24.00	24.5	200.7	260
20-Nov-15	Sunny	24.8	1017.2	1.314	1.314	1.314	1892.2	2.8246	2.8754	0.0506	6410.03	6434.03	24.00	26.2	200.7	260
26-Nov-15	Sunny	18.2	1020.6	1.314	1.314	1.314	1892.2	2.7840	2.8691	0.1051	6434.03	6458.03	24.00	55.5	200.7	260
2-Dec-15	Sunny	23.3	1017.1	1.314	1.314	1.314	1892.2	2.8084	2.8773	0.0689	6458.03	6482.03	24.00	36.4	200.7	260
8-Dec-15	Fine	18.0	1022.2	1.314	1.314	1.314	1892.2	2.7871	2.8455	0.0584	6482.03	6506.03	24.00	30.9	200.7	260
14-Dec-15	Sunny	18.4	1019.0	1.314	1.314	1.314	1892.2	2.8342	2.8911	0.0569	6506.03	6530.03	24.00	30.1	200.7	260
19-Dec-15	Sunny	16.2	1025.4	1.314	1.314	1.314	1892.2	2.7980	2.9079	0.1099	6530.03	6554.03	24.00	58.1	200.7	260
24-Dec-15	Sunny	22.3	1016.8	1.314	1.314	1.314	1892.2	2.8477	2.9226	0.0749	6554.03	6578.03	24.00	39.6	200.7	260
28-Dec-15	Fine	17.3	1026.6	1.314	1.314	1.314	1892.2	2.8146	2.9028	0.0882	6578.03	6602.03	24.00	46.6	200.7	260
31-Dec-15	Fine	20.5	1026.4	1.314	1.314	1.314	1892.2	2.8115	2.9048	0.0933	6602.03	6626.03	24.00	49.3	200.7	260
6-Jan-16	Fine	20.9	1018.8	1.314	1.314	1.314	1892.2	2.8890	2.9490	0.0600	6626.03	6650.03	24.00	31.7	200.7	260
12-Jan-16	Fine	17.3	1019.9	1.314	1.314	1.314	1892.2	2.9183	2.9743	0.0560	6650.03	6674.03	24.00	29.6	200.7	260
18-Jan-16	Fine	15.2	1017.1	1.314	1.314	1.314	1892.2	2.8988	2.9798	0.0810	6674.03	6698.03	24.00	42.8	200.7	260
23-Jan-16	Cloudy	8.5	1027.1	1.314	1.314	1.314	1892.2	2.9150	2.9550	0.0400	6698.03	6722.03	24.00	21.7	200.7	260
29-Jan-16	Fine	14.6	1017.9	1.314	1.314	1.314	1892.2	2.9098	2.9098	0.0140	6722.03	6746.03	24.00	7.4	200.7	260
3-Feb-16	Fine	12.5	1023.6	1.314	1.314	1.314	1892.2	2.8827	2.9335	0.0506	6746.03	6770.03	24.00	26.8	200.7	260
6-Feb-16	Sunny	13.8	1024.9	1.314	1.314	1.314	1892.2	2.8636	2.9546	0.0910	6770.03	6794.03	24.00	48.1	200.7	260
12-Feb-16	Cloudy	19.2	1013.4	1.314	1.314	1.314	1892.2	2.8981	2.9894	0.0913	6794.03	6818.03	24.00	48.3	200.7	260
17-Feb-16	Cloudy	12.9	1024.1	1.314	1.314	1.314	1892.2	2.8231	2.8966	0.0735	6818.03	6842.03	24.00	38.8	200.7	260
22-Feb-16	Cloudy	16.1	1020.6	1.314	1.314	1.314	1892.2	2.8389	3.0164	0.1775	6842.03	6866.03	24.00	93.8	200.7	260
27-Feb-16	Cloudy	15.5	1024.7	1.314	1.314	1.314	1892.2	2.8154	2.9441	0.1287	6866.03	6890.03	24.00	68.0	200.7	260
4-Mar-16	Sunny	20.2	1018.1	1.314	1.314	1.314	1892.2	2.7468	2.8184	0.0716	6890.03	6914.03	24.00	37.8	200.7	260
10-Mar-16	Rainy	13.4	1019.5	1.314	1.314	1.314	1892.2	2.8466	2.8645	0.0179	6914.03	6938.03	24.00	9.5	200.7	260
16-Mar-16	Fine	15.3	1015.0	1.314	1.314	1.314	1892.2	2.8321	2.9023	0.0702	6938.03	6962.03	24.00	37.1	200.7	260
21-Mar-16	Cloudy	17.1	1014.8	1.314	1.314	1.314	1892.2	2.8048	2.8391	0.0343	6962.03	6986.03	24.00	18.1	200.7	260
24-Mar-16	Cloudy	15.3	1020.2	1.314	1.314	1.314	1892.2	2.9065	2.9580	0.0515	6986.03	7010.03	24.00	27.2	200.7	260
30-Mar-16	Cloudy	20.0	1018.3	1.314	1.314	1.314	1892.2	2.8067	2.9416	0.1349	7010.03	7034.03	24.00	71.3	200.7	260
5-Apr-16	Cloudy	22.3	1013.3	1.314	1.314	1.314	1892.2	2.7931	2.8396	0.0465	7034.03	7058.03	24.00	24.6	200.7	260
11-Apr-16	Cloudy	21.5	1010.1	1.314	1.314	1.314	1892.2	2.8907	2.9302	0.0395	7058.03	7082.03	24.00	20.9	200.7	260
16-Apr-16	Cloudy	24.7	1010.7	1.314	1.314	1.314	1892.2	2.8964	2.9614	0.0750	7082.03	7106.03	24.00	39.6	200.7	260
22-Apr-16	Cloudy	24.8	1010.7	1.314	1.314	1.314	1892.2	2.8361	2.9071	0.0710	7106.03	7130.03	24.00	37.5	200.7	260
28-Apr-16	Sunny	26.0	1010.4	1.314	1.314	1.314	1892.2	2.8699	2.9889	0.1190	7130.03	7154.03	24.00	62.9	200.7	260
9-May-16	Rainy	28.7	1010.1	1.314	1.314	1.314	1892.2	2.8156	2.8480	0.0324	7154.03	7178.03	24.00	17.1	200.7	260
13-May-16	Sunny	25.5	1012.4	1.314	1.314	1.314	1892.2	2.8226	2.8828	0.0602	7178.03	7202.03	24.00	31.8	200.7	260
19-May-16	Sunny	25.5	1009.9	1.314	1.314	1.314	1892.2	2.8048	2.8867	0.0819	7202.03	7226.03	24.00	43.3	200.7	260
25-May-16	Sunny	28.0	1007.8	1.314	1.314	1.314	1892.2	2.8067	2.8940	0.0873	7226.03	7250.03	24.00	46.1	200.7	260
31-May-16	Sunny	29.9	1009.5	1.314	1.314	1.314	1892.2	2.8274	2.8625	0.0351	7250.03	7274.03	24.00	18.6	200.7	260
6-Jun-16	Fine	26.2	1008.8	1.314	1.314	1.314	1892.2	2.8206	2.8600	0.0394	7274.03	7298.03	24.00	20.8	200.7	260
11-Jun-16	Rainy	26.6	1005.9	1.314	1.314	1.314	1892.2	2.8108	2.8404	0.0296	7298.03	7322.03	24.00	15.6	200.7	260
17-Jun-16	Rainy	29.4	1008.2	1.314	1.314	1.314	1892.2	2.8073	2.8604	0.0531	7322.03	7346.03	24.00	28.1	200.7	260
23-Jun-16	Fine	30.4	1008.4	1.314	1.314	1.314	1892.2	2.7637	2.7933	0.0296	7346.03	7370.03	24.00	15.6	200.7	260
29-Jun-16	Sunny	29.0	1010.0	1.314	1.314	1.314	1892.2	2.8801	2.9071	0.0270	7370.03	7394.03	24.00	14.3	200.7	260
5-Jul-16	Fine	30.1	1006.6	1.314	1.314	1.314	1892.2	2.8262	2.8555	0.0293	7394.03	7418.03	24.00	15.5	200.7	260
11-Jul-16	Cloudy	28.9	1002.2	1.314	1.314	1.314	1892.2	2.8638	2.9368	0.0530	7418.03	7442.03	24.00	28.0	200.7	260
15-Jul-16	Sunny	28.9	1006.8	1.314	1.314	1.314	1892.2	2.7992	2.8230	0.0248	7442.03	7466.03	24.00	13.0	200.7	260
21-Jul-16	Cloudy	29.2	1009.8	1.314	1.314	1.314	1892.2	2.8147	2.8644	0.0507	7466.03	7490.03	24.00	10.9	200.7	260
27-Jul-16	Sunny	29.4	1008.3	1.314	1.314	1.314	1892.2	2.8455	2.8864	0.0209	7490.03	7514.03	24.00	11.0	200.7	260
2-Aug-16	Rainy	27.1	995.9	1.314	1.314	1.314	1892.2	2.8072	2.8693	0.0621	7514.03	7538.03	24.00	32.8	200.7	260
8-Aug-16	Sunny	30.5	1003.0	1.314	1.314	1.314	1892.2	2.8007	2.8827	0.0820	7538.03	7562.03	24.00	43.3	200.7	260
13-Aug-16	Sunny	28.8	999.8	1.314	1.314	1.314	1892.2	2.8278	2.8818	0.0540	7562.03	7586.03	24.00	28.5	200.7	260
19-Aug-16	Fine	28.2	1003.0	1.314	1.314	1.314	1892.2	2.8446	2.8833	0.0387	7586.03	7610.03	24.00	20.5	200.7	260
25-Aug-16	Fine	30.4	1004.2	1.314	1.314	1.314	1892.2	2.8290	2.9860	0.1570	7610.03	7634.03	24.00	83.0	200.7	260
31-Aug-16	Sunny	28.6	1006.3	1.314	1.314	1.314	1892.2	2.8408	3.1086	0.2678	7634.03	7658.03	24.00	141.5	200.7	260
5-Sep-16	Rainy	27.1	1006.1	1.314	1.314	1.314	1892.2	2.8580	2.9303	0.0723	7658.03	7682.03	24.00	38.2	200.7	260
10-Sep-16	Rainy	26.3	1007.8	1.314	1.314	1.314	1892.2	2.8700	2.9153	0.0453	7682.03	7706.03	24.00	23.9	200.7	260
15-Sep-16	Sunny	42703.0	1002.9	1.314	1.314	1.314	1892.2	2.8643	2.9443	0.0800	7706.03	7730.03	24.00	42.3	200.7	260
21-Sep-16	Sunny	27.1	1014.4	1.314	1.314	1.314	1892.2	2.7900	2.8746	0.0846	7730.03	7754.03	24.00	44.7	200.7	260
27-Sep-16	Sunny	31.1	1002.6	1.314	1.314	1.314	1892.2	2.8658	3.0638	0.1980	7754.03	7778.03	24.00	104.6	200.7	260
3-Oct-16	Sunny	27.5	1007.8	1.314	1.314	1.314	1892.2	2.8192	2.8744	0.0552	7778.03	7802.03	24.00	29.2	200.7	260
8-Oct-16	Cloudy	28.1	1006.8	1.314	1.314	1.314	1892.2	2.8385	2.8940	0.0555	7802.03	7826.03	24.00	29.3	200.7	260
14-Oct-16	Fine	28.7	1013.2	1.314	1.314	1.314	1892.2	2.8303	2.9121	0.0818	7826.03	7850.03	24.00	43.2	200.7	260
20-Oct-16	Fine	28.5	1013.2	1.314	1.314	1.314	1892.2	2.8317	2.9213	0.0896	7850.03	78				

29-Sep-17	Sunny	30.2	1012.2	1.314	1.314	1.314	1892.2	2.5966	2.6188	0.0222	9282.02	9306.02	24.00	11.7	200.7	260
4-Oct-17	Sunny	28.7	1014.0	1.314	1.314	1.314	1892.2	2.8265	2.8734	0.0469	9306.02	9330.02	24.00	24.8	200.7	260
9-Oct-17	Sunny	29.4	1010.1	1.314	1.314	1.314	1892.2	2.8087	2.8638	0.0551	9330.02	9354.02	24.00	29.1	200.7	260
14-Oct-17	Fine	24.5	1004.5	1.314	1.314	1.314	1892.2	2.7571	2.8638	0.1067	9354.02	9378.02	24.00	56.4	200.7	260
19-Oct-17	Cloudy	25.4	1011.9	1.314	1.314	1.314	1892.2	2.7491	2.7892	0.0401	9378.02	9402.02	24.00	21.2	200.7	260
25-Oct-17	Sunny	24.1	1018.8	1.314	1.314	1.314	1892.2	2.7547	2.8326	0.0779	9402.02	9426.02	24.00	41.2	200.7	260
30-Oct-17	Fine	22.7	1020.9	1.314	1.314	1.314	1892.2	2.7653	2.8772	0.1119	9426.02	9450.02	24.00	59.1	200.7	260
4-Nov-17	Cloudy	23.6	1018.9	1.314	1.314	1.314	1892.2	2.7728	2.8740	0.1012	9450.02	9474.02	24.00	53.5	200.7	260
10-Nov-17	Sunny	25.0	1014.9	1.314	1.314	1.314	1892.2	2.5779	2.6989	0.1090	9474.02	9498.02	24.00	57.6	200.7	260
16-Nov-17	Sunny	23.4	1015.1	1.314	1.314	1.314	1892.2	2.7702	2.8450	0.0446	9498.02	9522.02	24.00	23.7	200.7	260
22-Nov-17	Fine	19.8	1016.5	1.314	1.314	1.314	1892.2	2.5905	2.6925	0.1020	9522.02	9546.02	24.00	53.9	200.7	260
28-Nov-17	Cloudy	22.2	1017.4	1.314	1.314	1.314	1892.2	2.6048	2.6761	0.0713	9546.02	9570.02	24.00	37.7	200.7	260
4-Dec-17	Fine	20.1	1018.3	1.314	1.314	1.314	1892.2	2.7948	2.9017	0.1069	9570.02	9594.02	24.00	56.5	200.7	260
9-Dec-17	Sunny	15.5	1019.7	1.314	1.314	1.314	1892.2	2.5645	2.7482	0.1837	9594.02	9618.02	24.00	97.1	200.7	260
15-Dec-17	Cloudy	19.6	1019.2	1.314	1.314	1.314	1892.2	2.5939	2.6676	0.0737	9618.02	9642.02	24.00	39.0	200.7	260
21-Dec-17	Sunny	15.0	1025.7	1.314	1.314	1.314	1892.2	2.7486	2.8639	0.1153	9642.02	9666.02	24.00	60.9	200.7	260
27-Dec-17	Sunny	17.6	1021.2	1.314	1.314	1.314	1892.2	2.7844	2.8794	0.0950	9666.02	9690.02	24.00	50.2	200.7	260
2-Jan-18	Sunny	17.8	1019.3	1.314	1.314	1.314	1892.2	2.7513	2.8859	0.1346	9690.02	9714.02	24.00	71.1	200.7	260
6-Jan-18	Rainy	16.2	1014.6	1.314	1.314	1.314	1892.2	2.6227	2.7031	0.0504	9714.02	9738.02	24.00	26.6	200.7	260
12-Jan-18	Sunny	12.8	1027.1	1.314	1.314	1.314	1892.2	2.6116	2.6581	0.0465	9738.02	9762.02	24.00	24.6	200.7	260
18-Jan-18	Sunny	19.2	1016.6	1.314	1.314	1.314	1892.2	2.6277	2.7125	0.0848	9762.02	9786.02	24.00	44.8	200.7	260
24-Jan-18	Fine	17.7	1015.5	1.314	1.314	1.314	1892.2	2.6559	2.7710	0.1151	9786.02	9810.02	24.00	60.8	200.7	260
30-Jan-18	Sunny	10.1	1020.4	1.314	1.314	1.314	1892.2	2.6395	2.6997	0.0512	9810.02	9834.02	24.00	27.1	200.7	260
5-Feb-18	Sunny	9.8	1026.6	1.314	1.314	1.314	1892.2	2.6299	2.7550	0.1251	9834.02	9858.02	24.00	66.1	200.7	260
10-Feb-18	Sunny	18.0	1017.4	1.314	1.314	1.314	1892.2	2.6218	2.7029	0.0811	9858.02	9882.02	24.00	42.9	200.7	260
15-Feb-18	Sunny	19.8	1016.0	1.304	1.304	1.304	1877.8	2.7064	2.7942	0.0878	9882.02	9906.02	24.00	46.8	200.7	260
21-Feb-18	Sunny	18.2	1014.9	1.304	1.304	1.304	1877.8	2.6167	2.6653	0.0486	9906.02	9930.02	24.00	25.9	200.7	260
27-Feb-18	Sunny	19.1	1017.3	1.304	1.304	1.304	1877.8	2.7051	2.7582	0.0531	9930.02	9954.02	24.00	28.3	200.7	260
5-Mar-18	Rainy	14.5	1019.4	1.304	1.304	1.304	1877.8	2.7194	2.7684	0.0490	9954.02	9978.02	24.00	26.1	200.7	260
10-Mar-18	Sunny	16.7	1022.1	1.324	1.324	1.324	1906.6	2.7396	2.8052	0.0656	9978.02	10002.02	24.00	34.4	200.7	260
16-Mar-18	Sunny	22.7	1014.8	1.324	1.324	1.324	1906.6	2.7142	2.7867	0.0725	10002.02	10026.02	24.00	38.0	200.7	260
22-Mar-18	Sunny	19.5	1016.9	1.324	1.324	1.324	1906.6	2.7397	2.8275	0.0878	10026.02	10050.02	24.00	46.1	200.7	260
28-Mar-18	Sunny	22.7	1014.7	1.324	1.324	1.324	1906.6	2.7216	2.8239	0.1023	10050.02	10074.02	24.00	53.7	200.7	260
3-Apr-18	Fine	24.7	1013.6	1.324	1.324	1.324	1906.6	2.5332	2.5947	0.0615	10074.02	10098.02	24.00	32.3	200.7	260
9-Apr-18	Sunny	22.0	1017.6	1.324	1.324	1.324	1906.6	2.5558	2.6666	0.1108	10098.02	10122.02	24.00	58.1	200.7	260
14-Apr-18	Sunny	26.7	1011.3	1.324	1.324	1.324	1906.6	2.5912	2.6284	0.0372	10122.02	10146.02	24.00	19.5	200.7	260
20-Apr-18	Sunny	23.2	1014.6	1.324	1.324	1.324	1906.6	2.5630	2.6448	0.0818	10146.02	10170.02	24.00	42.9	200.7	260
26-Apr-18	Rainy	24.6	1013.6	1.324	1.324	1.324	1906.6	2.5346	2.6169	0.0823	10170.02	10194.02	24.00	43.2	200.7	260
2-May-18	Sunny	27.9	1012.4	1.324	1.324	1.324	1906.6	2.5685	2.6131	0.0468	10194.02	10218.02	24.00	24.4	200.7	260
7-May-18	Sunny	24.0	1017.4	1.324	1.324	1.324	1906.6	2.5926	2.6382	0.0461	10218.02	10242.02	24.00	20.7	200.7	260
12-May-18	Cloudy	26.5	1012.3	1.324	1.324	1.324	1906.6	2.5849	2.6482	0.0613	10242.02	10266.02	24.00	42.6	200.7	260
18-May-18	Cloudy	29.8	1007.7	1.324	1.324	1.324	1906.6	2.5772	2.6055	0.0283	10266.02	10290.02	24.00	14.8	200.7	260
24-May-18	Fine	30.0	1009.3	1.324	1.324	1.324	1906.6	2.5708	2.6254	0.0546	10290.02	10314.02	24.00	28.6	200.7	260
30-May-18	Sunny	31.2	1009.7	1.324	1.324	1.324	1906.6	2.5794	2.6172	0.0378	10314.02	10338.02	24.00	19.8	200.7	260
5-Jun-18	Rainy	27.1	1006.8	1.324	1.324	1.324	1906.6	2.5755	2.6079	0.0324	10338.02	10362.02	24.00	17.0	200.7	260
11-Jun-18	Fine	30.5	1002.4	1.324	1.324	1.324	1906.6	2.5494	2.6399	0.0905	10362.02	10386.02	24.00	47.5	200.7	260
15-Jun-18	Fine	27.1	1001.8	1.324	1.324	1.324	1906.6	2.6021	2.6488	0.0467	10386.02	10410.02	24.00	24.5	200.7	260
21-Jun-18	Sunny	30.0	1005.9	1.324	1.324	1.324	1906.6	2.6176	2.6642	0.0466	10410.02	10434.02	24.00	24.4	200.7	260
27-Jun-18	Fine	29.2	1010.0	1.324	1.324	1.324	1906.6	2.5561	2.5894	0.0343	10434.02	10458.02	24.00	18.0	200.7	260
3-Jul-18	Fine	29.7	1002.5	1.324	1.324	1.324	1906.6	2.5630	2.6020	0.0390	10458.02	10482.02	24.00	20.5	200.7	260
9-Jul-18	Rainy	28.2	1005.7	1.324	1.324	1.324	1906.6	2.6762	2.7094	0.0332	10482.02	10506.02	24.00	17.4	200.7	260
13-Jul-18	Rainy	26.7	1003.9	1.324	1.324	1.324	1906.6	2.6764	2.6939	0.0175	10506.02	10530.02	24.00	9.2	200.7	260
19-Jul-18	Sunny	27.9	1004.6	1.324	1.324	1.324	1906.6	2.6427	2.6774	0.0347	10530.02	10554.02	24.00	18.2	200.7	260
25-Jul-18	Fine	29.4	1005.8	1.324	1.324	1.324	1906.6	2.6561	2.6956	0.0385	10554.02	10578.02	24.00	20.7	200.7	260
31-Jul-18	Rainy	30.2	1005.6	1.324	1.324	1.324	1906.6	2.6784	2.6936	0.0152	10578.02	10602.02	24.00	21.4	200.7	260
6-Aug-18	Cloudy	30.2	1005.4	1.324	1.324	1.324	1906.6	2.6707	2.7133	0.0426	10602.02	10626.02	24.00	22.3	200.7	260
11-Aug-18	Rainy	27.0	998.7	1.324	1.324	1.324	1906.6	2.6242	2.6706	0.0464	10626.02	10650.02	24.00	24.3	200.7	260
17-Aug-18	Rainy	27.2	1000.2	1.324	1.324	1.324	1906.6	2.6755	2.7110	0.0355	10650.02	10674.02	24.00	18.6	200.7	260
23-Aug-18	Rainy	27.7	1001.7	1.324	1.324	1.324	1906.6	2.6326	2.7080	0.0754	10674.02	10698.02	24.00	39.5	200.7	260
29-Aug-18	Rainy	27.4	1002.5	1.324	1.324	1.324	1906.6	2.6521	2.6924	0.0403	10698.02	10722.02	24.00	21.1	200.7	260
4-Sep-18	Fine	29.1	1005.7	1.324	1.324	1.324	1906.6	2.6206	2.6629	0.0423	10722.02	10746.02	24.00	22.2	200.7	260
10-Sep-18	Sunny	26.1	1012.5	1.324	1.324	1.324	1906.6	2.6729	2.7440	0.0711	10746.02	10770.02	24.00	37.3	200.7	260
15-Sep-18	Rainy	30.7	1002.8	1.324	1.324	1.324	1906.6	2.6734	2.7615	0.0881	10770.02	10794.02	24.00	46.2	200.7	260
21-Sep-18	Sunny	29.2	1011.6	1.324	1.324	1.324	1906.6	2.6708	2.7622	0.0914	10794.02	10818.02	24.00	47.9	200.7	260
27-Sep-18	Rainy	27.3	1009.8	1.324	1.324	1.324	1906.6	2.6686	2.7670	0.0984	10818.02	10842.02	24.00	51.6	200.7	260
3-Oct-18	Sunny	26.9	1015.3	1.324	1.324	1.324	1906.6	2.6345	2.7650	0.1305	10842.02	10866.02	24.00	68.4	200.7	260
9-Oct-18	Sunny	26.5	1013.7	1.324	1.324	1.324	1906.6	2.6330	2.7305	0.0975	10866.02	10890.02	24.00	51.1	200.7	260
15-Oct-18	Cloudy	25.6	1014.6	1.324	1.324	1.324	1906.6	2.6903	2.7476	0.0573	10890.02	10914.02	24.00	30.1	200.7	260
20-Oct-18	Cloudy	24.0	1018.6	1.324	1.324	1.324	1906.6	2.6641	2.7436	0.0795	10914.02	10938.02	24.00	40.6	200.7	260
24-Oct-18	Rainy	25.2	1018.8	1.324	1.3											

3-Oct-19	Sunny	29.0	1012.1	1.324	1.324	1.324	1906.6	2.6815	2.7385	0.0570	12486.02	12510.02	24.00	29.9	200.7	260
9-Oct-19	Sunny	27.8	1014.7	1.324	1.324	1.324	1906.6	2.6704	2.7244	0.0540	12510.02	12534.02	24.00	28.3	200.7	260
15-Oct-19	Sunny	26.0	1019.0	1.324	1.324	1.324	1906.6	2.6743	2.7437	0.0694	12534.02	12558.02	24.00	36.4	200.7	260
21-Oct-19	Sunny	25.3	1014.0	1.324	1.324	1.324	1906.6	2.6304	2.7051	0.0747	12558.02	12582.02	24.00	39.2	200.7	260
26-Oct-19	Sunny	25.9	1017.0	1.324	1.324	1.324	1906.6	2.6277	2.7015	0.0738	12582.02	12606.02	24.00	38.7	200.7	260
1-Nov-19	Sunny	25.7	1015.7	1.314	1.314	1.314	1892.2	2.6580	2.7168	0.0588	12606.02	12630.02	24.00	31.1	200.7	260
7-Nov-19	Sunny	23.8	1013.7	1.314	1.314	1.314	1892.2	2.6445	2.7139	0.0694	12630.02	12654.02	24.00	36.7	200.7	260
13-Nov-19	Sunny	24.1	1018.3	1.314	1.314	1.314	1892.2	2.6317	2.6939	0.0622	12654.02	12678.02	24.00	32.9	200.7	260
19-Nov-19	Sunny	23.1	1015.2	1.314	1.314	1.314	1892.2	2.6401	2.7042	0.0647	12678.02	12702.02	24.00	35.0	200.7	260
25-Nov-19	Sunny	23.8	1018.6	1.314	1.314	1.314	1892.2	2.6327	2.7239	0.0812	12702.02	12631.02	24.00	48.2	200.7	260
30-Nov-19	Sunny	20.4	1020.4	1.314	1.314	1.314	1892.2	2.6476	2.6662	0.0186	12702.02	12726.02	24.00	9.8	200.7	260
6-Dec-19	Sunny	16.5	1024.7	1.331	1.331	1.331	1916.6	2.6357	2.7198	0.0841	12726.02	12774.02	24.00	43.9	200.7	260
12-Dec-19	Sunny	17.4	1020.9	1.331	1.331	1.331	1916.6	2.6228	2.6948	0.0720	12774.02	12798.02	24.00	37.6	200.7	260
18-Dec-19	Fine	22.2	1018.1	1.331	1.331	1.331	1916.6	2.6977	2.7317	0.0340	12798.02	12822.02	24.00	17.7	200.7	260
24-Dec-19	Sunny	20.4	1017.9	1.331	1.331	1.331	1916.6	2.6742	2.7220	0.0478	12822.02	12846.02	24.00	24.9	200.7	260
28-Dec-19	Sunny	18.5	1020.2	1.331	1.331	1.331	1916.6	2.6784	2.7746	0.0962	12846.02	12870.02	24.00	50.2	200.7	260
3-Jan-20	Sunny	18.9	1023.0	1.331	1.331	1.331	1916.6	2.6136	2.7023	0.0887	12870.02	12894.02	24.00	46.3	200.7	260
8-Jan-20	Sunny	21.9	1018.5	1.331	1.331	1.331	1916.6	2.6919	2.7312	0.0393	12894.02	12918.02	24.00	20.5	200.7	260
15-Jan-20	Sunny	19.5	1018.3	1.331	1.331	1.331	1916.6	2.6944	2.7555	0.0611	12918.02	12942.02	24.00	31.9	200.7	260
21-Jan-20	Fine	18.8	1022.4	1.331	1.331	1.331	1916.6	2.6909	2.7610	0.0701	12942.02	12966.02	24.00	36.6	200.7	260
24-Jan-20	Sunny	21.5	1018.1	1.331	1.331	1.331	1916.6	2.6738	2.7631	0.0893	12966.02	12990.02	24.00	46.6	200.7	260
30-Jan-20	Sunny	14.4	1021.5	1.331	1.331	1.331	1916.6	2.6871	2.7251	0.0380	12990.02	13014.02	24.00	19.8	200.7	260
4-Feb-20	Fine	17.3	1020.2	1.331	1.331	1.331	1916.6	2.7064	2.7395	0.0331	13014.02	13038.02	24.00	17.3	200.7	260
8-Feb-20	Fine	17.6	1024.0	1.344	1.344	1.344	1935.4	2.7135	2.8395	0.1230	13038.02	13062.02	24.00	63.6	200.7	260
14-Feb-20	Rainy	20.4	1013.8	1.331	1.331	1.331	1916.6	2.6988	2.7139	0.0151	13062.02	13086.02	24.00	7.9	200.7	260
20-Feb-20	Sunny	17.7	1026.2	1.331	1.331	1.331	1916.6	2.7227	2.7570	0.0343	13086.02	13110.02	24.00	17.9	200.7	260
26-Feb-20	Sunny	23.3	1017.9	1.331	1.331	1.331	1916.6	2.6733	2.7130	0.0397	13110.02	13134.02	24.00	20.7	200.7	260
3-Mar-20	Fine	19.4	1018.2	1.331	1.331	1.331	1916.6	2.6717	2.7348	0.0631	13134.02	13158.02	24.00	32.9	200.7	260
9-Mar-20	Sunny	23.4	1008.5	1.331	1.331	1.331	1916.6	2.7312	2.7877	0.0565	13158.02	13182.02	24.00	29.5	200.7	260
14-Mar-20	Sunny	21.6	1017.6	1.331	1.331	1.331	1916.6	2.6729	2.7592	0.0863	13182.02	13206.02	24.00	45.0	200.7	260
20-Mar-20	Sunny	21.2	1015.4	1.331	1.331	1.331	1916.6	2.6644	2.7044	0.0400	13206.02	13230.02	24.00	20.9	200.7	260
26-Mar-20	Cloudy	23.3	1013.5	1.331	1.331	1.331	1916.6	2.6755	2.7127	0.0372	13206.02	13230.02	24.00	19.4	200.7	260
31-Mar-20	Fine	20.3	1013.1	1.331	1.331	1.331	1916.6	2.6626	2.7073	0.0447	13230.02	13254.02	24.00	23.3	200.7	260
6-Apr-20	Cloudy	17.1	1016.8	1.331	1.331	1.331	1916.6	2.7051	2.7451	0.0400	13278.02	13302.02	24.00	20.9	200.7	260
9-Apr-20	Sunny	21.6	1017.5	1.331	1.331	1.331	1916.6	2.6587	2.7140	0.0553	13302.02	13326.02	24.00	28.9	200.7	260
15-Apr-20	Sunny	22.2	1015.4	1.331	1.331	1.331	1916.6	2.6734	2.7209	0.0475	13326.02	13350.02	24.00	24.8	200.7	260
21-Apr-20	Sunny	26.7	1012.4	1.331	1.331	1.331	1916.6	2.6890	2.7248	0.0358	13350.02	13374.02	24.00	18.7	200.7	260
25-Apr-20	Sunny	20.5	1018.4	1.331	1.331	1.331	1916.6	2.6637	2.6895	0.0258	13374.02	13398.02	24.00	13.5	200.7	260
29-Apr-20	Sunny	24.2	1017.0	1.331	1.331	1.331	1916.6	2.6845	2.7594	0.0749	13398.02	13422.02	24.00	38.1	200.7	260
5-May-20	Sunny	27.9	1008.8	1.331	1.331	1.331	1916.6	2.6633	2.7037	0.0404	13422.02	13446.02	24.00	21.1	200.7	260
11-May-20	Sunny	28.9	1010.3	1.331	1.331	1.331	1916.6	2.6710	2.7280	0.0570	13446.02	13470.02	24.00	29.7	200.7	260
16-May-20	Sunny	28.9	1007.5	1.331	1.331	1.331	1916.6	2.6773	2.7337	0.0564	13470.02	13494.02	24.00	29.4	200.7	260
22-May-20	Sunny	27.9	1003.2	1.331	1.331	1.331	1916.6	2.6774	2.7087	0.0313	13494.02	13518.02	24.00	16.3	200.7	260
28-May-20	Rainy	27.7	1010.1	1.331	1.331	1.331	1916.6	2.8581	2.9150	0.0569	13494.02	13518.02	24.00	29.7	200.7	260
3-Jun-20	Sunny	29.8	1008.6	1.331	1.331	1.331	1916.6	2.8747	2.9038	0.0291	13542.02	13566.02	24.00	15.2	200.7	260
9-Jun-20	Sunny	29.4	1008.2	1.331	1.331	1.331	1916.6	2.8824	2.9135	0.0311	13566.02	13590.02	24.00	16.2	200.7	260
15-Jun-20	Sunny	29.3	1011.1	1.331	1.331	1.331	1916.6	2.8550	2.8844	0.0294	13590.02	13614.02	24.00	15.3	200.7	260
20-Jun-20	Sunny	30.0	1008.5	1.331	1.331	1.331	1916.6	2.8654	2.8914	0.0260	13614.02	13638.02	24.00	13.6	200.7	260
24-Jun-20	Sunny	30.4	1006.5	1.331	1.331	1.331	1916.6	2.8692	2.9030	0.0338	13638.02	13662.02	24.00	17.6	200.7	260
30-Jun-20	Sunny	30.7	1004.6	1.331	1.331	1.331	1916.6	2.8405	2.8585	0.0180	13662.02	13686.02	24.00	9.40	200.7	260
6-Jul-20	Sunny	30.1	1007.4	1.331	1.331	1.331	1916.6	2.8162	2.8406	0.0244	14696.02	14720.02	24.00	12.7	200.7	260
11-Jul-20	Sunny	30.4	1007.4	1.331	1.331	1.331	1916.6	2.8364	2.8736	0.0372	14720.02	14744.02	24.00	19.4	200.7	260
17-Jul-20	Sunny	30.5	1008.7	1.331	1.331	1.331	1916.6	2.8867	2.9163	0.0292	14744.02	14768.02	24.00	11.5	200.7	260
23-Jul-20	Sunny	31.0	1009.0	1.331	1.331	1.331	1916.6	2.6617	2.6838	0.0221	14768.02	14792.02	24.00	11.5	200.7	260
29-Jul-20	Sunny	30.5	1007.2	1.331	1.331	1.331	1916.6	2.6727	2.6960	0.0233	14792.02	14816.02	24.00	13.2	200.7	260
4-Aug-20	Fine	27.5	1004.0	1.331	1.331	1.331	1916.6	2.6400	2.6653	0.0253	14816.02	14840.02	24.00	13.2	200.7	260
10-Aug-20	Sunny	30.0	1004.3	1.331	1.331	1.331	1916.6	2.6149	2.6547	0.0398	14840.02	14864.02	24.00	20.8	200.7	260
15-Aug-20	Sunny	29.8	1004.1	1.331	1.331	1.331	1916.6	2.6432	2.6755	0.0323	14864.02	14888.02	24.00	14.3	200.7	260
21-Aug-20	Sunny	29.8	1009.0	1.331	1.331	1.331	1916.6	2.6672	2.7086	0.0414	14888.02	14912.02	24.00	21.6	200.7	260
27-Aug-20	Sunny	28.5	10005.0	1.331	1.331	1.331	1916.6	2.6707	2.7097	0.0390	14912.02	14936.02	24.00	20.3	200.7	260
2-Sep-20	Cloudy	30.0	1006.2	1.331	1.331	1.331	1916.6	2.6804	2.7617	0.0813	14936.02	14960.02	24.00	42.4	200.7	260
8-Sep-20	Cloudy	27.1	1010.8	1.331	1.331	1.331	1916.6	2.6768	2.7012	0.0244	14960.02	14984.02	24.00	12.7	200.7	260
14-Sep-20	Sunny	28.0	1008.7	1.331	1.331	1.331	1916.6	2.6741	2.6741	0.0000	14984.02	15008.02	24.00	10.1	200.7	260
19-Sep-20	Rainy	27.2	1011.9	1.331	1.331	1.331	1916.6	2.6871	2.7085	0.0194	14984.02	15008.02	24.00	10.1	200.7	260
25-Sep-20	Sunny	28.3	1009.7	1.331	1.331	1.331	1916.6	2.6503	2.7069	0.0566	15008.02	15032.02	24.00	29.5	200.7	260
30-Sep-20	Sunny	27.4	1007.4	1.331	1.331	1.331	1916.6	2.6404	2.6835	0.0431	15032.02	15056.02	24.00	22.5	200.7	260
6-Oct-20	Sunny	25.9	1013.8	1.331	1.331	1.331	1916.6	2.6890	2.7432	0.0542	15056.02	15080.02	24.00	28.3	200.7	260
12-Oct-20	Cloudy	23.1	1011.0	1.331	1.331	1.331	1916.6	2.6731	2.6911	0.0180	15080.02	15104.02	24.00	43.9	200.7	260
17-Oct-20	Fine	25.6	1014.9	1.331	1.331	1.331	1916.6	2.7248	2.7567	0.0319	15118.02	15142.02	24.00	16.6	200.7	260
23-Oct-2																

## AM2



### Major construction activities carried during the construction phase

- Site clearance;
- Ground investigation;
- Construction of site accommodation;
- Tree felling and transplantation;
- Piling works;
- Pipe laying;
- Retaining wall construction;
- Excavation;
- Backfilling;
- Drainage;
- Temporary bridge construction;
- Bridge construction;
- Box culvert construction;
- Noise barrier construction;
- Noise barrier maintenance;
- Houses demolition;
- Soil nail;
- Footbridge demolition;
- House construction; and
- Bridge demolition;
- Sign gantry installation;
- Road pavement and resurfacing;
- Construction of hub room; and
- Landscape works.

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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-22

Appendix E

## 1-hour TSP Monitoring Results at Station AM2

Date	Start Time (hh:mm)	1st Hour	2nd Hour	3rd Hour
		Conc. ( $\mu\text{g}/\text{m}^3$ )	Conc. ( $\mu\text{g}/\text{m}^3$ )	Conc. ( $\mu\text{g}/\text{m}^3$ )
27-Nov-13	11:07	82.0	81.7	83.1
3-Dec-13	14:00	85.1	82.4	81.7
9-Dec-13	14:00	82.6	84.9	83.2
14-Dec-13	11:45	84.7	85.2	83.4
20-Dec-13	13:30	83.8	81.9	84.4
24-Dec-13	9:10	80.7	81.5	82.1
30-Dec-13	10:10	80.1	83.3	82.0
4-Jan-14	13:05	78.5	77.0	77.5
9-Jan-14	14:08	78.6	79.3	76.2
15-Jan-14	13:49	76.2	77.3	75.9
21-Jan-14	9:45	85.9	87.4	88.6
27-Jan-14	15:20	82.6	81.2	83.0
30-Jan-14	11:00	80.5	80.9	81.6
5-Feb-14	10:00	71.0	74.3	72.6
8-Feb-14	13:05	76.6	75.4	75.7
14-Feb-14	13:40	73.1	74.5	75.8
20-Feb-14	15:05	81.4	82.1	80.7
26-Feb-14	13:10	74.6	75.7	75.2
4-Mar-14	13:45	68.6	69.7	71.2
10-Mar-14	11:45	78.6	80.4	79.2
15-Mar-14	10:50	77.1	78.2	76.1
21-Mar-14	13:00	81.7	82.9	85.5
27-Mar-14	13:30	73.1	74.4	72.6
2-Apr-14	13:31	77.2	76.2	78.4
8-Apr-14	11:30	79.4	80.6	82.1
14-Apr-14	12:15	84.4	82.6	81.8
17-Apr-14	12:16	74.1	73.8	74.4
23-Apr-14	12:20	76.2	75.9	74.1
29-Apr-14	13:35	78.7	81.5	82.2
3-May-14	13:33	82.2	81.6	83.5
9-May-14	13:30	62.9	64.1	63.7
15-May-14	14:07	71.7	72.1	71.2
21-May-14	14:00	75.8	76.2	75.7
27-May-14	14:00	78.2	81.7	83.6
31-May-14	10:10	72.7	74.1	71.6
6-Jun-14	10:21	73.9	76.1	75.5
12-Jun-14	10:05	77.2	78.3	76.7
18-Jun-14	13:20	73.9	72.1	73.4
24-Jun-14	10:20	73.7	72.6	74.2
28-Jun-14	10:09	82.2	80.5	77.9
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
4-Nov-14	12:30	78.8	83.2	81.2
10-Nov-14	10:00	68.2	69.4	70.7
15-Nov-14	13:04	79.4	78.1	79.2
21-Nov-14	12:31	80.5	79.2	81.1
27-Nov-14	13:15	79.6	79.0	81.1
3-Dec-14	12:34	77.2	78.5	76.8
9-Dec-14	13:05	80.8	82.6	78.7
15-Dec-14	11:18	77.9	78.1	77.4
20-Dec-14	13:20	76.6	77.8	77.2
23-Dec-14	13:45	66.6	69.7	71.7
29-Dec-14	14:00	75.6	76.8	76.4
3-Jan-15	14:03	82.1	80.9	81.6
9-Jan-15	10:15	71.7	73.2	70.6
15-Jan-15	13:08	76.9	77.2	74.6
21-Jan-15	11:47	81.1	80.7	82.2
27-Jan-15	10:39	78.2	81.6	80.4
2-Feb-15	10:22	74.6	76.5	77.2
7-Feb-15	13:10	78.6	78.2	78.9
13-Feb-15	13:30	72.3	74.6	75.9
17-Feb-15	13:30	69.0	72.4	76.0
23-Feb-15	13:30	73.3	74.2	76.8
27-Feb-15	10:05	73.1	71.6	72.3
5-Mar-15	11:05	78.6	79.1	77.3
11-Mar-15	10:40	78.9	79.6	81.0
17-Mar-15	13:45	81.9	80.8	79.7
23-Mar-15	10:00	68.2	71.9	72.4
28-Mar-15	13:10	79.1	78.1	79.5
2-Apr-15	13:05	71.4	73.3	72.2
8-Apr-15	10:30	61.0	60.2	63.3
13-Apr-15	14:28	80.9	80.1	79.5
18-Apr-15	9:57	82.1	80.9	81.9
24-Apr-15	13:27	80.7	79.6	81.2
30-Apr-15	10:55	72.6	71.9	74.3
6-May-15	10:00	73.0	74.4	72.5
12-May-15	14:09	80.9	79.5	81.1
16-May-15	14:10	73.5	74.6	72.0
22-May-15	9:31	77.4	78.1	77.1
28-May-15	10:52	78.1	79.0	78.3
3-Jun-15	9:50	66.9	68.2	67.7

9-Jun-15	12:49	81.9	82.1	80.7
15-Jun-15	11:30	79.2	74.8	77.2
19-Jun-15	11:28	78.1	79.2	79.4
25-Jun-15	10:02	76.7	78.0	77.6
30-Jun-15	10:00	86.8	88.7	85.9
6-Jul-15	11:00	74.8	77.6	75.9
10-Jul-15	13:00	67.6	69.2	70.5
16-Jul-15	10:42	77.4	79.0	77.8
22-Jul-15	10:40	74.3	73.2	75.5
28-Jul-15	10:00	76.2	79.4	75.8
3-Aug-15	13:00	75.1	72.4	76.3
8-Aug-15	13:05	79.7	80.4	80.9
14-Aug-15	10:50	70.6	72.6	71.4
18-Aug-15	13:00	72.6	74.3	71.5
22-Aug-15	13:15	80.3	79.8	80.9
28-Aug-15	14:10	71.6	73.4	72.4
1-Sep-15	13:50	82.2	84.6	80.8
5-Sep-15	13:14	79.3	78.6	78.0
9-Sep-15	12:46	79.2	80.3	79.4
15-Sep-15	13:09	81.2	80.9	79.7
21-Sep-15	14:00	68.6	69.7	72.0
26-Sep-15	13:45	76.4	77.0	77.6
30-Sep-15	10:00	76.8	76.2	75.9
3-Oct-15	13:15	79.2	78.9	78.5
7-Oct-15	12:57	78.1	77.4	76.7
13-Oct-15	14:43	78.6	79.2	77.9
19-Oct-15	14:20	78.8	80.6	79.3
24-Oct-15	14:00	77.2	78.3	77.1
28-Oct-15	13:05	74.6	76.1	72.8
3-Nov-15	14:00	73.3	74.6	72.4
9-Nov-15	14:00	78.8	74.5	77.3
14-Nov-15	13:34	78.5	79.6	77.2
20-Nov-15	13:00	68.6	71.4	73.9
26-Nov-15	14:05	67.6	68.9	71.8
2-Dec-15	9:50	77.6	81.8	75.9
8-Dec-15	13:52	77.6	78.8	78.4
14-Dec-15	13:40	81.2	79.6	82.1
19-Dec-15	13:45	76.4	77.2	77.8
24-Dec-15	14:15	69.9	72.7	74.4
28-Dec-15	13:00	79.3	81.3	81.9
31-Dec-15	13:05	72.3	71.6	73.2
6-Jan-16	13:40	81.6	79.4	79.0
12-Jan-16	10:15	73.8	76.3	77.9
18-Jan-16	10:00	68.6	71.2	69.4
23-Jan-16	13:11	78.0	78.9	78.4
29-Jan-16	10:30	68.2	66.2	65.4
3-Feb-16	9:35	80.9	80.5	79.4
6-Feb-16	10:03	77.6	78.5	77.3
12-Feb-16	9:52	75.6	74.9	75.1
17-Feb-16	10:02	77.4	78.2	77.1
22-Feb-16	10:00	77.8	75.3	78.4
27-Feb-16	12:52	76.2	77.5	76.7
4-Mar-16	9:50	73.3	70.5	72.1
10-Mar-16	10:00	65.2	63.8	67.2

16-Mar-16	10:10	70.6	72.4	68.8
21-Mar-16	10:05	78.8	75.2	74.4
24-Mar-16	13:06	74.6	75.1	74.1
30-Mar-16	13:25	81.2	80.7	79.8
5-Apr-16	10:02	77.4	76.3	76.5
11-Apr-16	11:29	73.3	74.4	74.2
16-Apr-16	9:57	75.6	74.2	76.0
22-Apr-16	10:15	78.4	79.1	78.5
28-Apr-16	9:50	68.6	69.2	67.9
4-May-16	11:00	79.6	74.8	76.4
9-May-16	10:00	68.8	69.2	70.7
13-May-16	10:00	68.6	67.9	69.4
19-May-16	12:07	74.6	75.1	74.3
25-May-16	11:20	68.6	69.4	67.1
31-May-16	13:05	75.4	77.5	78.3
6-Jun-16	10:50	70.1	66.8	64.2
11-Jun-16	10:30	62.2	61.7	60.3
17-Jun-16	11:30	70.8	71.6	73.3
23-Jun-16	9:40	74.9	76.1	77.0
29-Jun-16	11:50	74.9	75.8	77.3
5-Jul-16	11:49	69.5	68.7	70.9
11-Jul-16	15:30	67.4	68.9	69.5
15-Jul-16	9:59	73.4	72.2	74.0
21-Jul-16	15:07	70.5	69.7	71.6
27-Jul-16	11:05	66.9	68.2	66.4
2-Aug-16	13:00	72.1	72.6	71.7
8-Aug-16	14:59	70.4	71.2	70.8
13-Aug-16	10:15	78.4	77.6	79.1
19-Aug-16	11:40	71.2	69.4	70.6
25-Aug-16	15:09	70.8	71.2	70.9
31-Aug-16	10:08	76.1	74.8	75.2
5-Sep-16	10:49	73.4	72.7	72.2
10-Sep-16	10:10	76.4	75.7	75.2
15-Sep-16	13:30	72.5	71.6	73.0
21-Sep-16	13:50	72.8	73.8	73.3
27-Sep-16	14:00	72.1	71.3	70.6
3-Oct-16	11:58	72.0	70.6	71.3
8-Oct-16	10:22	75.6	77.2	76.4
14-Oct-16	12:39	68.9	70.2	69.1
20-Oct-16	13:10	74.3	75.2	72.5
26-Oct-16	11:10	71.6	70.0	72.4
1-Nov-16	13:40	78.2	76.4	73.9
7-Nov-16	14:10	73.8	71.6	70.4
12-Nov-16	10:30	74.1	72.2	73.8
18-Nov-16	10:14	74.3	73.8	74.6
24-Nov-16	14:15	71.2	73.1	72.2
30-Nov-16	12:17	73.1	72.6	73.3
6-Dec-16	13:05	73.3	74.8	71.5
12-Dec-16	10:30	68.6	71.2	72.6
17-Dec-16	10:30	73.3	74.0	70.4
23-Dec-16	12:12	72.8	73.5	73.1
29-Dec-16	13:10	70.6	72.8	69.2
3-Jan-17	13:15	72.2	74.1	70.9
9-Jan-17	9:30	72.8	73.1	72.6

14-Jan-17	10:40	74.2	71.5	70.7
20-Jan-17	9:50	66.6	67.2	68.3
26-Jan-17	11:45	73.3	75.1	71.8
1-Feb-17	13:13	69.5	68.7	70.6
6-Feb-17	10:02	74.0	74.6	73.8
11-Feb-17	10:45	73.5	71.8	75.5
16-Feb-17	13:20	72.8	74.3	70.4
22-Feb-17	14:00	65.6	64.8	65.3
28-Feb-17	10:49	73.1	72.6	73.3
6-Mar-17	12:00	73.8	76.4	75.0
11-Mar-17	10:45	75.2	71.5	72.6
17-Mar-17	13:30	68.2	68.8	69.3
23-Mar-17	10:30	73.5	74.6	71.9
29-Mar-17	10:05	65.6	66.7	64.2
1-Apr-17	10:15	75.1	76.6	72.8
7-Apr-17	13:05	66.7	68.1	67.5
12-Apr-17	14:05	68.4	70.1	69.4
18-Apr-17	13:12	73.6	74.1	72.9
24-Apr-17	13:45	69.6	70.9	71.7
28-Apr-17	9:56	74.4	72.5	71.6
4-May-17	13:10	70.6	71.2	70.8
10-May-17	11:20	73.8	72.9	74.8
16-May-17	13:05	73.6	74.8	77.2
22-May-17	11:35	66.2	65.5	66.9
27-May-17	11:00	66.0	65.3	66.7
2-Jun-17	13:29	68.9	70.2	71.1
6-Jun-17	10:48	72.2	73.1	72.4
12-Jun-17	13:00	73.2	69.4	72.4
17-Jun-17	13:00	73.4	75.5	70.3
23-Jun-17	11:10	71.6	70.4	68.2
29-Jun-17	13:10	72.6	70.4	71.2
4-Jul-17	14:00	68.4	65.9	72.6
10-Jul-17	13:00	72.0	70.6	71.9
15-Jul-17	10:30	73.2	70.9	75.5
21-Jul-17	13:12	76.4	77.6	76.6
27-Jul-17	13:10	60.1	58.8	60.7
2-Aug-17	13:45	72.6	70.4	72.2
8-Aug-17	13:30	72.7	75.6	76.6
14-Aug-17	13:03	67.1	68.2	67.8
19-Aug-17	13:30	71.5	73.2	68.5
25-Aug-17	13:08	62.1	63.7	62.2
31-Aug-17	14:05	73.6	74.2	69.7
6-Sep-17	13:02	64.8	62.9	63.4
12-Sep-17	11:15	73.6	70.6	71.2
18-Sep-17	13:07	67.9	69.0	67.3
23-Sep-17	13:15	72.9	75.0	71.4
29-Sep-17	11:52	73.1	71.6	70.9
4-Oct-17	9:45	68.2	66.9	67.3
9-Oct-17	10:10	72.9	70.8	73.4
14-Oct-17	10:10	71.6	73.0	67.5
19-Oct-17	13:30	67.5	70.8	71.1
25-Oct-17	14:10	73.4	69.6	70.3
30-Oct-17	9:55	67.9	71.4	70.6
4-Nov-17	14:00	65.8	66.8	70.2

10-Nov-17	12:12	63.4	61.9	62.9
16-Nov-17	12:25	62.1	62.7	63.4
22-Nov-17	11:05	69.8	70.1	69.9
28-Nov-17	13:38	67.9	67.8	70.2
4-Dec-17	10:48	72.0	69.6	70.4
9-Dec-17	10:20	71.1	68.5	65.9
15-Dec-17	12:05	67.8	70.5	68.1
21-Dec-17	10:30	66.2	65.9	67.8
27-Dec-17	14:00	65.0	66.7	68.1
2-Jan-18	10:00	79.1	78.6	79.7
6-Jan-18	13:30	71.2	68.5	65.6
12-Jan-18	9:30	70.6	73.2	72.8
18-Jan-18	10:45	69.5	70.8	71.1
24-Jan-18	13:10	78.1	78.7	77.8
30-Jan-18	13:00	64.6	65.3	66.2
5-Feb-18	12:30	65.4	66.7	67.2
10-Feb-18	13:06	80.4	79.8	80.6
15-Feb-18	13:05	78.6	79.3	78.8
21-Feb-18	15:00	72.0	69.6	71.8
27-Feb-18	13:30	60.6	62.1	61.3
5-Mar-18	13:00	65.0	64.0	62.8
10-Mar-18	13:45	72.3	70.8	71.1
16-Mar-18	10:25	65.5	67.2	66.0
22-Mar-18	13:00	61.6	63.7	64.9
28-Mar-18	14:35	72.1	68.1	66.9
3-Apr-18	9:40	71.1	67.8	72.0
9-Apr-18	13:35	67.7	70.8	68.6
14-Apr-18	11:05	72.2	70.5	67.6
20-Apr-18	9:30	63.8	64.2	64.9
26-Apr-18	10:35	67.9	70.7	69.8
2-May-18	13:00	72.0	69.2	67.9
7-May-18	13:30	75.6	75.3	76.1
12-May-18	13:00	66.5	68.7	72.1
18-May-18	13:10	72.7	73.6	69.8
24-May-18	13:10	71.2	70.3	68.6
30-May-18	14:00	60.6	62.4	61.7
5-Jun-18	13:35	63.3	65.2	62.0
11-Jun-18	12:10	67.9	69.6	67.4
15-Jun-18	10:45	70.5	68.6	66.1
21-Jun-18	13:00	60.0	58.8	61.7
27-Jun-18	10:30	68.6	69.9	65.8
3-Jul-18	13:30	58.9	60.4	61.6
9-Jul-18	9:45	70.6	67.2	68.8
13-Jul-18	13:20	61.7	62.2	60.9
19-Jul-18	11:35	67.7	69.8	72.6
25-Jul-18	11:25	67.5	68.1	67.2
31-Jul-18	11:35	72.3	69.2	71.8
6-Aug-18	11:25	66.2	69.8	71.1
11-Aug-18	10:35	72.5	73.3	70.1
17-Aug-18	14:02	67.3	65.4	66.1
23-Aug-18	13:50	68.2	69.7	70.1
29-Aug-18	11:20	68.6	70.3	68.1
4-Sep-18	13:50	69.9	70.2	68.1
10-Sep-18	13:30	66.1	63.9	64.8

15-Sep-18	10:30	65.4	67.2	67.8
21-Sep-18	13:55	66.7	68.0	65.7
27-Sep-18	11:45	71.6	69.7	72.4
3-Oct-18	11:25	65.9	67.1	63.1
9-Oct-18	11:05	62.9	64.5	63.3
15-Oct-18	10:55	67.2	65.3	68.2
20-Oct-18	13:10	71.1	71.5	70.7
5-Nov-18	10:15	58.9	61.7	62.5
10-Nov-18	13:12	70.9	71.5	71.2
16-Nov-18	10:15	66.1	64.0	62.8
22-Nov-18	10:50	66.5	64.9	65.6
28-Nov-18	9:35	67.2	64.9	67.8
4-Dec-18	10:30	70.2	68.8	71.7
10-Dec-18	10:15	61.1	62.8	64.6
15-Dec-18	10:35	65.6	64.9	66.7
21-Dec-18	9:30	65.2	64.9	65.5
27-Dec-18	14:05	66.5	64.3	62.9
2-Jan-19	10:00	59.6	62.7	61.1
7-Jan-19	13:00	63.6	60.2	58.4
12-Jan-19	10:15	67.6	67.2	65.7
18-Jan-19	12:30	65.8	66.2	65.6
24-Jan-19	12:20	65.7	66.3	65.6
30-Jan-19	11:00	62.5	63.5	63.3
2-Feb-19	9:55	62.2	62.9	64.6
8-Feb-19	14:35	58.5	59.7	60.6
12-Feb-19	13:05	62.9	65.1	59.9
18-Feb-19	9:45	56.2	56.5	58.6
23-Feb-19	10:10	67.8	66.4	68.6
1-Mar-19	13:30	56.2	58.7	56.4
7-Mar-19	15:00	58.6	59.7	61.1
13-Mar-19	11:20	68.1	67.9	70.1
19-Mar-19	14:30	69.6	67.4	65.8
25-Mar-19	13:05	66.6	64.2	62.1
30-Mar-19	10:25	62.0	62.7	61.0
3-Apr-19	10:05	58.2	59.7	61.3
9-Apr-19	10:05	62.3	61.3	63.5
13-Apr-19	13:15	71.3	70.8	71.9
18-Apr-19	10:00	59.9	61.9	63.3
24-Apr-19	9:30	57.2	58.6	58.3
30-Apr-19	13:00	58.2	58.6	57.9
6-May-19	13:00	58.1	58.8	59.7
11-May-19	13:05	58.6	61.3	62.7
17-May-19	14:05	63.6	64.2	61.5
23-May-19	9:00	58.4	56.9	57.4
29-May-19	14:05	58.5	59.4	57.8
4-Jun-19	10:45	62.7	65.2	66.8
10-Jun-19	13:15	71.1	71.8	71.3
15-Jun-19	14:05	31.3	62.9	65.5
20-Jun-19	11:05	62.5	59.7	65.0
26-Jun-19	13:30	58.9	60.3	61.2
2-Jul-19	9:55	67.2	66.5	65.9
8-Jul-19	10:05	72.9	73.3	73.7
13-Jul-19	10:15	66.7	65.8	70.4
19-Jul-19	13:30	69.6	67.2	68.4

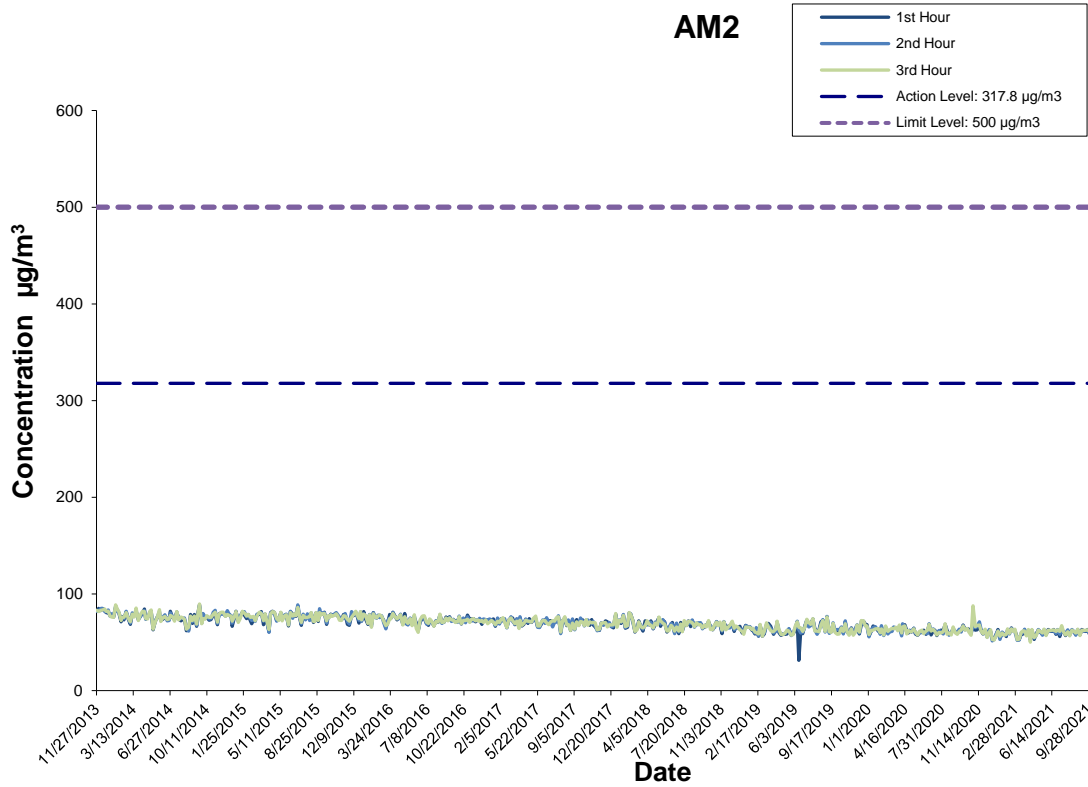
25-Jul-19	13:20	73.7	74.2	74.5
31-Jul-19	9:50	64.1	62.5	61.7
6-Aug-19	10:00	60.1	58.4	61.6
12-Aug-19	13:10	62.8	61.7	60.9
17-Aug-19	10:10	71.3	69.0	67.9
23-Aug-19	13:09	72.9	73.6	72.4
29-Aug-19	13:35	62.1	60.7	61.2
4-Sep-19	13:05	76.5	76.8	76.1
10-Sep-19	13:15	60.2	59.2	60.9
16-Sep-19	10:12	61.2	60.5	60.2
21-Sep-19	10:35	67.5	70.2	69.6
27-Sep-19	13:15	61.1	62.7	60.2
3-Oct-19	9:30	62.1	63.1	58.1
9-Oct-19	13:00	61.1	62.8	58.5
15-Oct-19	13:45	62.0	66.0	65.0
21-Oct-19	10:15	60.3	58.7	61.1
26-Oct-19	10:20	70.7	72.2	69.3
1-Nov-19	14:10	60.8	60.3	60.7
7-Nov-19	11:00	58.5	59.2	57.1
13-Nov-19	11:00	64.8	64.4	63.8
19-Nov-19	10:00	58.5	59.1	57.3
25-Nov-19	10:00	62.9	65.0	60.7
30-Nov-19	10:15	65.9	68.3	67.7
6-Dec-19	11:00	58.6	59.5	60.7
12-Dec-19	13:05	67.9	71.8	72.5
18-Dec-19	13:30	71.9	69.4	72.0
24-Dec-19	11:30	68.4	67.2	66.9
28-Dec-19	10:10	68.2	65.7	66.9
3-Jan-20	14:15	56.7	55.6	57.8
8-Jan-20	14:14	60.7	61.6	62.2
15-Jan-20	14:05	66.7	65.1	62.7
21-Jan-20	14:50	65.5	66.3	63.9
24-Jan-20	14:00	64.1	64.5	63.9
30-Jan-20	14:00	61.6	63.7	64.2
4-Feb-20	14:00	60.1	58.4	59.9
8-Feb-20	10:35	65.5	67.1	63.8
14-Feb-20	11:00	59.1	56.8	57.6
20-Feb-20	11:35	65.2	63.7	66.7
26-Feb-20	14:00	60.3	58.7	61.1
3-Mar-20	14:00	61.2	61.0	62.8
9-Mar-20	13:00	62.2	61.2	64.5
14-Mar-20	10:25	65.3	66.0	63.9
20-Mar-20	11:15	64.6	64.9	65.6
26-Mar-20	11:09	64.7	62.8	61.9
31-Mar-20	14:10	66.2	65.7	67.7
6-Apr-20	11:10	58.5	56.7	59.7
9-Apr-20	10:15	66.9	69.1	65.7
15-Apr-20	10:05	68.3	65.8	66.9
21-Apr-20	14:00	62.2	60.2	58.6
25-Apr-20	10:20	59.5	60.9	62.2
29-Apr-20	13:35	61.9	62.7	60.8
5-May-20	14:00	60.6	60.8	60.9
11-May-20	10:00	64.5	64.4	63.9
16-May-20	10:00	58.6	59.1	60.6

22-May-20	13:10	57.2	58.3	57.7
28-May-20	10:10	59.7	60.6	61.1
3-Jun-20	13:05	61.1	59.8	62.6
9-Jun-20	13:00	62.6	60.6	58.8
15-Jun-20	13:00	58.2	59.7	61.5
20-Jun-20	10:25	61.7	58.8	62.7
24-Jun-20	13:20	68.6	69.3	68.4
30-Jun-20	10:15	57.7	62.1	61.4
6-Jul-20	11:10	61.8	64.0	63.3
11-Jul-20	10:30	62.7	60.8	61.1
17-Jul-20	13:00	56.8	59.1	57.6
23-Jul-20	13:10	61.5	62.3	60.1
29-Jul-20	11:30	62.5	60.8	59.4
4-Aug-20	11:40	62.2	58.7	60.9
10-Aug-20	10:10	68.6	67.9	69.2
15-Aug-20	10:05	62.2	60.7	58.4
21-Aug-20	13:05	58.2	57.1	59.5
27-Aug-20	13:10	59.6	60.6	57.6
2-Sep-20	14:10	62.6	64.1	65.8
8-Sep-20	13:15	61.2	60.9	59.7
14-Sep-20	14:10	59.0	60.7	58.4
19-Sep-20	10:15	62.3	63.5	61.1
25-Sep-20	13:30	62.6	60.7	62.4
30-Sep-20	13:30	67.9	67.1	66.8
6-Oct-20	13:55	63.7	63.0	62.7
12-Oct-20	13:20	64.3	63.5	64.1
17-Oct-20	9:45	63.5	62.0	60.6
23-Oct-20	13:05	58.8	59.1	57.2
29-Oct-20	13:10	68.1	67.2	87.6
4-Nov-20	13:15	62.6	65.1	66.3
10-Nov-20	14:30	63.0	66.2	67.5
16-Nov-20	13:05	68.2	71.1	67.9
21-Nov-20	10:45	62.0	63.6	61.7
27-Nov-20	13:05	58.5	60.2	59.0
3-Dec-20	10:20	62.7	61.0	63.5
9-Dec-20	14:45	58.3	55.4	54.9
15-Dec-20	11:45	62.5	63.3	60.6
19-Dec-20	10:35	61.1	59.8	62.8
23-Dec-20	11:30	53.3	51.4	52.8
29-Dec-20	11:30	53.3	53.1	52.4
4-Jan-21	14:00	58.5	59.1	57.4
9-Jan-21	10:15	63.3	61.9	61.4
15-Jan-21	10:10	54.4	53.1	56.2
21-Jan-21	14:45	58.8	60.6	59.4
27-Jan-21	10:00	58.2	58.6	57.3
2-Feb-21	13:35	55.9	57.1	58.4
6-Feb-21	12:20	63.3	61.8	63.9
11-Feb-21	13:05	60.3	58.5	59.1
17-Feb-21	14:55	64.8	64.3	64.0
22-Feb-21	11:00	61.5	62.7	61.3
27-Feb-21	9:45	62.2	60.7	63.5
5-Mar-21	10:35	54.8	51.9	52.7
11-Mar-21	10:30	52.7	52.4	53.4
17-Mar-21	13:00	58.5	59.9	60.6
23-Mar-21	10:00	58.5	59.9	61.8
27-Mar-21	11:05	62.9	63.5	61.4
1-Apr-21	10:00	57.5	58.4	56.6
7-Apr-21	10:00	59.6	61.4	63.3
12-Apr-21	14:00	53.4	52.4	50.1



17-Apr-21	10:06	62.5	61.4	63.1
23-Apr-21	10:00	52.8	54.1	54.9
29-Apr-21	11:05	58.5	57.4	56.6
5-May-21	11:30	62.6	63.2	62.4
11-May-21	10:50	60.7	61.1	61.3
17-May-21	10:00	58.1	57.1	59.4
22-May-21	10:20	62.6	63.2	63.6
28-May-21	10:00	57.7	58.5	56.8
3-Jun-21	14:20	63.2	62.3	62.7
9-Jun-21	13:05	61.4	62.0	62.3
15-Jun-21	11:30	61.1	61.9	62.5
19-Jun-21	10:33	63.1	62.3	62.8
25-Jun-21	10:00	58.4	59.1	61.1
30-Jun-21	10:15	61.6	63.3	62.9
6-Jul-21	10:20	56.0	58.3	61.2
12-Jul-21	13:10	62.2	64.0	67.2
17-Jul-21	10:20	61.1	59.8	60.5
23-Jul-21	10:00	56.8	59.1	57.6
29-Jul-21	10:50	61.7	62.8	60.8
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
Minimum for the construction phase (Nov 13 to Sep 21)				31.3
Maximum for the construction phase (Nov 13 to Sep 21)				89.6
Average for the construction phase (Nov 13 to Sep 21)				69.3

## AM2



### Major construction activities carried during the construction phase

- Site clearance;
- Ground investigation;
- Construction of site accommodation;
- Tree felling and transplantation;
- Piling works;
- Pipe laying;
- Retaining wall construction;
- Excavation;
- Backfilling;
- Drainage;
- Temporary bridge construction;
- Bridge construction;
- Box culvert construction;
- Noise barrier construction;
- Noise barrier maintenance;
- Houses demolition;
- Soil nail;
- Footbridge demolition;
- House construction; and
- Bridge demolition;
- Sign gantry installation;
- Road pavement and resurfacing;
- Construction of hub room; and
- Landscape works.

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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

Project No.: 60307376

Date: Oct-22

Appendix E

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**APPENDIX F  
METEOROLOGICAL DATA FOR THE  
Construction Phase**

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### Monthly Extract of Meteorological Observations: 2013

Month	Hong Kong Observatory										Waglan Island^	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
11	1017.3	29.5	23.8	21.7	19.7	12.8	16.2	72	67	83.1	80	30.5
12	1019.6	24.9	18.6	16.1	14	9.2	8.6	63	40	88.3	30	24.6

### Monthly Extract of Meteorological Observations: 2014

Month	Hong Kong Observatory										Waglan Island^	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
1	1021.3	24.4	19.2	16.3	14.1	10.3	9.9	67	32	微量	40	22.9
2	1017.7	24.6	17.9	15.5	13.5	7.3	12.3	82	73	39.5	50	26.6
3	1017.1	27.6	20.9	18.7	17	13.9	15.7	83	77	207.6	60	24.1
4	1013.4	29	24.9	22.6	21	17.5	20	86	72	132.4	80	20.6
5	1009.5	32.8	28.6	26.4	24.6	18.8	23.7	86	82	687.3	240#	24.3#
6	1003.8	33.7	31.5	29	27	25.2	25	80	77	436.6	230	18.9
7	1005.3	34.2	32.6	29.8	27.6	25.9	25.9	80	70	260.5	220.0	18.2
8	1007	34.6	32	29.0	26.8	22.9	25.3	81	67	548.2	240	17.7
9	1008.4	34.1	32	29	27	25.2	24.5	77	57	140.6	80	17.4
10	1014.6	31.4	28.9	26.2	24.3	22.8	20.4	71	54	109.8	100	24.3
11	1017	28.6	24.6	22.6	21.2	18.1	18.5	78	63	31.1	90	25
12	1021.7	23.9	18.5	16.3	14.2	10.7	9.9	67	67	44.7	20	30.4

### Monthly Extract of Meteorological Observations: 2015

Month	Hong Kong Observatory										Waglan Island^	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
1	1021.2	23.9	18.9	16.4	14.5	10.3	11.2	72	45	41.7	50	24.3
2	1019.4	23.8	19.5	17.5	15.9	11	13.4	78	74	32	40	22.2
3	1017.7	28.3	22	19.9	18.5	14.8	17.1	85	83	28.4	50	22.6
4	1014.1	31.9	26.7	23.6	21.4	15.9	19.2	77	63	64.5	20	18.2
5	1008.7	32.6	29.9	27.5	25.5	22.6	24.5	85	84	513	210	20.1
6	1007.3	34.2	32.3	29.7	27.7	25.6	25.7	80	69	302.1	220	20.3
7	1004.2	34.4	31.8	29.1	27.2	23.9	25	79	75	406.2	210.0	20.4
8	1006.1	36.3	32.1	29.3	27.2	24.9	25	78	65	143.3	220	12.8
9	1010.2	32.9	31.1	28.4	26.6	24.5	24.1	78	61	87.9	60	20
10	1014.4	31.7	28.5	26	24.2	18.5	21.4	77	64	168.3	80	23
11	1017.5	30.3	26.1	24	22.4	15.3	20	79	66	22.8	80	27.7
12	1020.8	25.1	20.3	18.6	17.1	11.3	14	76	77	64.3	20	26

### Monthly Extract of Meteorological Observations: 2016

Month	Hong Kong Observatory										Waglan Island^	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
1	1020.4	24.3	17.8	16	14.4	3.1	13	83	79	266.9	60	29.4
2	1022.2	25.9	18.2	15.5	13.4	9.4	10.4	74	68	24.8	20	21.3
3	1017.7	25.9	20	17.5	15.7	10	14.5	84	79	148.7	50	22.8
4	1011.6	29.1	26	23.6	21.9	19.8	21.6	89	84	211.4	40	17.1
5	1009.7	32.1	29.1	26.7	24.9	20.4	23.6	83	78	233.6	70	20.2
6	1007.7	35.5	32.4	29.4	27.5	24.1	25.8	82	70	347.4	220#	18.5#
7	1007	35.6	32.6	29.8	27.4	24.7	25.7	79	63	175.9	230#	19.3#
8	1002.8	34.4	31	28.4	26.5	24.5	25.2	84	72	532.7	60	17.1

9	1007.1	34.9	30.4	27.9	26.1	22.8	23.9	79	72	323.1	80	18.8
10	1010.7	32.4	29.1	26.8	25	22	22.9	80	74	624.4	70	26.3
11	1017	29.2	24.5	22.3	20.3	12.8	18.3	79	68	131.3	70	27
12	1019.5	25.9	21.8	19.6	17.7	11.5	13.9	70	62	6.6	60	26.6

### Monthly Extract of Meteorological Observations: 2017

Month	Hong Kong Observatory										Waglan Island <sup>^</sup>	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
1	1019.8	25.5	20.6	18.5	17	13.6	14.7	79	66	7.8	70	26.4
2	1020.5	25.5	20	17	14.9	10.6	12.2	75	65	19.9	60	26.8
3	1016.4	27.6	21.7	19.3	17.3	13.8	15.7	81	80	48	60	26.5
4	1013.2	30.7	26.2	23.3	21.2	15.5	19.8	81	69	58.8	70	20.1
5	1010.5	31.6	28.6	26	24.2	22.6	22.5	82	77	399.3	80	18.6
6	1006.7	34.1	31.3	28.8	27.2	24.3	25.6	83	78	656	240	23
7	1006.8	34.8	31.4	28.7	26.9	24.4	25.5	83	79	570	90.0	22.1
8	1006.3	36.6	32.1	29.3	27.3	24	25.3	80	70	489.1	230	20.6
9	1009.1	34.1	31.9	29	27.2	25.3	25	80	65	192.4	080#	17.4
10	1012.7	33.5	29	26.3	24.4	19	20.4	71	57	99.6	70	32.9
11	1016.6	28.4	24.4	22.2	20.5	15.5	17.6	76	74	31.2	60	28.8
12	1020.6	23.2	20.1	17.8	16	9.8	11.2	66	54	微量	70	29.4

### Monthly Extract of Meteorological Observations: 2018

Month	Hong Kong Observatory										Waglan Island <sup>^</sup>	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
1	1018.4	25.5	18.5	16.1	14.1	7.8	11.7	77	69	62.2	60	29.5
2	1019.7	26.2	18.7	16	13.9	6.8	10.4	70	73	4.5	50	23.7
3	1016.1	27.9	24.4	20.8	18.6	11.1	16.2	76	56	22.7	60	20.8
4	1014.1	30.6	26.9	23.6	21.7	16.1	19.4	78	71	28.1	70	16.1
5	1010.5	35.4	31.7	28.3	26.1	22.1	23.7	77	62	57.5	220	20.2
6	1004.8	35.1	31.3	28.6	26.8	24.4	24.7	80	79	458.8	230#	24.6#
7	1004	34.3	31.8	29.1	27	25	25.4	81	77	341.1	90.0	24.2
8	1001.9	34.2	31	28.6	26.7	24.6	25.5	84	84	615.1	230	19.9
9	1008.8	35.1	31	28	26	23.6	23.7	78	68	383.3	090#	19.5#
10	1015.5	31.4	28	25.3	23.4	20.9	18.7	69	59	104.3	80	24.3
11	1017.2	28	24.8	22.9	21.4	17	18.6	78	79	73.4	70	29.1
12	1019.9	27.1	21.3	19.2	17.6	10.3	14.8	76	75	11.9	360	25.7

### Monthly Extract of Meteorological Observations: 2019

Month	Hong Kong Observatory										Waglan Island <sup>^</sup>	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
1	1021.3	24.5	20.4	18.1	16.4	11.4	13.7	76	68	4.7	60	22.8
2	1018.1	26.7	22.6	20.1	18.4	14.1	17.5	85	82	68.7	60	23.4
3	1015.2	27.8	23.3	21	19.4	15.1	18.2	84	81	186.5	60	24.5
4	1012.1	31.5	27.2	24.7	22.9	18.9	21.7	84	76	185.8	70	21.6
5	1009.5	32.3	27.2	25.3	23.7	18.9	22.7	86	83	234.6	70	25.9
6	1005.8	33.3	31.5	29	27	24.6	25.7	83	79	429.1	220#	21.0#
7	1004.6	35	32.1	29.5	27.7	24.5	25.9	81	79	328.5	230.0	24.2
8	1003.3	35.1	31.9	29.0	26.9	22.9	25.6	82	73	596.4	240	23.1
9	1009.6	33.5	31.8	28.7	26.6	24.9	23.1	73	50	198.9	80	20.1
10	1014.8	33.2	29.5	26.6	24.6	20.3	21.2	73	49	149.5	80	24.6
11	1017.1	29.3	26.1	23	21	17	16.8	69	37	微量	70	25.9
12	1020.2	27.3	21.9	19.1	17	12.7	12.9	69	54	13.5	70	26.1

## Monthly Extract of Meteorological Observations: 2020

Month	Hong Kong Observatory										Waglan Island^	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
1	1019.4	26	21.2	18.6	16.8	10.8	14	76	65	14.8	60	26.1
2	1021	28.1	21.4	18.5	16.6	10.3	14.5	78	65	79.8	60	25.5
3	1015.3	28.5	23.8	21.3	19.7	16.5	18.5	84	79	41.3	60	22.2
4	1016.3	30.3	25.1	22	20	16.1	17.7	78	70	77.8	70	21.2
5	1008.6	33.5	30.4	27.7	25.9	23.6	24.5	83	77	352.5	220	18.3
6	1007.6	35	32.3	29.6	27.8	24.1	25.4	79	76	397.2	220#	21.6#
7	1007.3	35.3	33.3	30.2	28.3	25.9	25.5	76	73	125.4	230.0	21.0
8	1006.3	34.4	32.2	29.0	26.9	24.9	25.4	82	73	448.4	90	17.8
9	1009.1	34.2	31.2	28.4	26.6	25.2	25.3	84	78	708.8	80	19.4
10	1013.4	32.5	29.2	26.0	23.7	21.1	18.4	64.0	72.0	23.5	90.0	18.3
11	1017.9	30.5	27.4	23.9	21.6	16	16	63	62	0.2	90	14.5
12	1020.2	26.1	21.0	18.0	15.3	7.7	9.8	60.0	65.0	0.4	10.0	14.9

## Monthly Extract of Meteorological Observations: 2021

Month	Hong Kong Observatory										Waglan Island^	
	Mean Pressure (hPa)	Air Temperature					Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean Daily Max (deg. C)	Mean (deg. C)	Mean Daily Min (deg. C)	Absolute Daily Min (deg. C)						
1	1020.7	25.4	19.8	16.2	13.3	6.6	5.4	52	48	Trace	90	13.9
2	1017.3	27.1	23.9	20	17	14.1	13.2	67	39	82.4	90	14.5
3	1015.5	30.3	25.9	22.5	20.4	15.4	17.1	72	62	5.5	90	16.7
4	1013.5	32	28	24.7	22.5	19	19.2	72	68	24.7	90	17.7
5	1009.3	35.3	33	29.4	27	22.6	23.8	72	74	85.8	210	16.0
6	1005.7	34.8	32.2	29.4	27	23.5	24.5	76	82	395.5	210	16.7
7	1004.5	35.9	33.4	30.2	27.7	24.6	24.9	74	72	430.9	100.0	15.0
8	1006.2	34.7	32.5	29.4	27.2	24.2	24.6	76	80	158.5	230	13.0
9	1009.5	36.5	33.4	30.1	27.6	25.4	24.4	72	70	79.0	100	12.0

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

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**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,	Exceedance (Y/N)
	Start Time	Leq*	L10*	L90*		
27-Nov-13	14:52	66.0	68.3	61.1	75	N
3-Dec-13	15:00	69.1	71.7	65.0	75	N
9-Dec-13	14:30	69.2	72.4	66.8	75	N
20-Dec-13	13:30	72.9	75.8	70.6	75	N
24-Dec-13	14:55	67.3	68.1	64.7	75	N
30-Dec-13	11:00	68.2	70.5	64.0	75	N
9-Jan-14	15:07	66.4	68.7	64.1	75	N
15-Jan-14	14:20	68.1	70.1	65.7	75	N
21-Jan-14	10:15	70.1	72.2	68.0	75	N
27-Jan-14	15:45	71.3	73.0	69.0	75	N
5-Feb-14	13:30	69.8	71.5	65.0	75	N
14-Feb-14	14:30	67.9	69.0	64.3	75	N
20-Feb-14	15:50	67.9	69.6	65.5	75	N
26-Feb-14	13:21	67.9	70.1	64.5	75	N
4-Mar-14	14:30	68.7	70.0	66.6	75	N
10-Mar-14	14:50	64.9	68.3	61.2	75	N
21-Mar-14	14:00	67.9	69.6	64.3	75	N
27-Mar-14	14:30	67.2	69.6	64.5	75	N
2-Apr-14	14:01	66.8	69.5	62.2	75	N
8-Apr-14	10:40	69.6	71.9	66.8	75	N
14-Apr-14	13:15	68.8	71.2	66.9	75	N
17-Apr-14	15:27	68.7	70.3	66.2	75	N
23-Apr-14	15:37	69.3	71.6	67.2	75	N
29-Apr-14	14:22	68.1	69.8	65.8	75	N
9-May-14	15:00	67.1	68.5	65.0	75	N
15-May-14	15:08	67.8	69.3	65.4	75	N
21-Mar-14	14:00	67.9	69.6	64.3	75	N
27-Mar-14	14:30	67.2	69.6	64.5	75	N
6-Jun-14	11:20	71.8	73.3	68.5	75	N
12-Jun-14	11:04	69.2	70.8	66.3	75	N
18-Jun-14	13:40	68.5	69.7	66.7	75	N
24-Jun-14	11:25	67.3	69.0	65.1	75	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
4-Nov-14	13:02	71.2	74.8	69.6	75	N
10-Nov-14	14:00	69.8	72.0	67.5	75	N



21-Nov-14	11:37	65.9	68.0	61.9	75	N
27-Nov-14	14:12	64.7	66.9	62.0	75	N
3-Dec-14	13:40	69.2	71.1	66.6	75	N
9-Dec-14	14:10	69.6	71.9	67.5	75	N
15-Dec-14	10:08	68.8	71.3	65.0	75	N
23-Dec-14	14:35	69.0	71.5	66.0	75	N
29-Dec-14	14:45	68.2	70.3	65.4	75	N
9-Jan-15	11:05	68.1	70.0	66.0	75	N
15-Jan-15	14:30	70.3	72.1	67.4	75	N
21-Jan-15	11:21	68.6	70.4	63.2	75	N
27-Jan-15	11:30	68.1	71.5	65.3	75	N
2-Feb-15	11:16	70.6	72.0	67.2	75	N
13-Feb-15	14:28	69.3	71.6	66.8	75	N
17-Feb-15	14:20	69.7	71.0	66.8	75	N
23-Feb-15	14:45	67.2	69.1	65.0	75	N
27-Feb-15	11:00	70.6	72.2	67.4	75	N
5-Mar-15	13:14	66.9	68.5	64.2	75	N
11-Mar-15	9:50	67.8	69.6	63.5	75	N
17-Mar-15	11:29	67.5	69.2	65.3	75	N
23-Mar-15	10:45	69.1	72.0	68.0	75	N
2-Apr-15	14:00	69.4	71.7	68.0	75	N
8-Apr-15	11:30	69.4	71.5	67.5	75	N
13-Apr-15	14:55	68.0	69.5	66.2	75	N
24-Apr-15	13:31	68.5	70.1	66.4	75	N
30-Apr-15	10:00	70.6	72.3	67.0	75	N
6-May-15	11:00	69.8	71.5	67.0	75	N
12-May-15	14:17	69.8	71.5	67.1	75	N
22-May-15	10:34	64.9	71.7	69.2	75	N
28-May-15	10:01	69.7	72.2	68.0	75	N
3-Jun-15	10:35	69.3	71.5	66.5	75	N
9-Jun-15	15:05	68.9	70.5	66.2	75	N
15-Jun-15	13:09	69.4	72.5	67.2	75	N
25-Jun-15	10:49	69.2	70.8	65.9	75	N
30-Jun-15	10:30	69.2	71.5	67.0	75	N
6-Jul-15	10:00	69.2	71.4	67.1	75	N
10-Jul-15	13:20	69.0	70.5	66.5	75	N
16-Jul-15	9:48	69.5	71.8	65.9	75	N
22-Jul-15	9:57	68.4	70.4	66.3	75	N
28-Jul-15	9:50	70.2	73.1	68.0	75	N
3-Aug-15	13:25	68.5	69.5	66.0	75	N
14-Aug-15	10:00	70.2	73.6	68.5	75	N
18-Aug-15	14:00	69.6	73.2	66.8	75	N
28-Aug-15	14:00	70.2	73.6	68.1	75	N
1-Sep-15	14:30	69.3	71.0	69.3	75	N
9-Sep-15	14:17	69.6	72.4	68.2	75	N
15-Sep-15	14:35	70.1	72.3	68.5	75	N
21-Sep-15	15:00	69.2	71.0	69.2	75	N
30-Sep-15	10:50	68.4	70.2	66.7	75	N
7-Oct-15	15:40	68.7	70.5	66.9	75	N
13-Oct-15	13:49	69.8	72.6	68.2	75	N
19-Oct-15	13:30	70.2	71.1	66.9	75	N
28-Oct-15	14:00	70.6	72.0	67.3	75	N
3-Nov-15	14:30	69.7	72.0	67.0	75	N
9-Nov-15	13:15	69.6	72.3	67.0	75	N
20-Nov-15	14:00	69.1	71.5	66.5	75	N
26-Nov-15	15:00	68.6	70.0	66.5	75	N
2-Dec-15	10:15	68.6	70.5	66.0	75	N

8-Dec-15	14:42	70.0	72.2	66.8	75	N
14-Dec-15	15:49	68.7	70.2	66.4	75	N
24-Dec-15	14:35	69.0	71.5	66.5	75	N
28-Dec-15	14:36	70.2	72.4	68.7	75	N
6-Jan-16	14:06	71.0	73.1	69.5	75	N
12-Jan-16	11:20	69.8	71.5	67.5	75	N
18-Jan-16	10:50	69.0	71.5	66.5	75	N
29-Jan-16	11:10	68.6	71.2	63.4	75	N
3-Feb-16	14:40	69.5	71.3	67.5	75	N
12-Feb-16	10:36	69.2	71.1	66.0	75	N
17-Feb-16	10:48	69.6	71.1	68.9	75	N
22-Feb-16	10:06	69.2	74.0	66.4	75	N
4-Mar-16	10:45	69.6	71.5	67.4	75	N
10-Mar-16	11:05	69.8	73.4	65.9	75	N
16-Mar-16	11:00	70.6	74.8	67.5	75	N
21-Mar-16	10:10	71.4	74.5	67.2	75	N
24-Mar-16	11:19	68.8	70.1	64.6	75	N
30-Mar-16	15:49	67.3	69.8	72.9	75	N
5-Apr-16	11:00	68.8	70.4	64.9	75	N
11-Apr-16	10:02	69.6	72.4	65.2	75	N
22-Apr-16	11:15	69.2	71.4	65.4	75	N
28-Apr-16	10:35	69.8	72.0	68.5	75	N
4-May-16	13:10	71.8	74.9	68.8	75	N
9-May-16	10:15	68.8	71.0	66.5	75	N
19-May-16	15:02	69.8	72.1	66.3	75	N
25-May-16	11:35	69.1	72.0	68.0	75	N
31-May-16	14:05	70.8	72.5	67.0	75	N
6-Jun-16	11:45	66.8	69.5	64.0	75	N
17-Jun-16	13:10	69.8	72.3	64.2	75	N
23-Jun-16	15:19	69.8	71.9	67.2	75	N
29-Jun-16	15:08	68.9	70.5	67.0	75	N
5-Jul-16	9:26	68.9	71.4	66.7	75	N
11-Jul-16	15:45	69.5	72.0	68.0	75	N
21-Jul-16	16:14	69.8	72.4	68.1	75	N
27-Jul-16	11:20	69.0	71.0	66.5	75	N
2-Aug-16	12:55	68.8	70.0	63.4	75	N
8-Aug-16	15:20	70.4	72.5	68.2	75	N
19-Aug-16	11:29	70.9	72.4	68.2	75	N
25-Aug-16	15:29	70.9	72.5	68.2	75	N
31-Aug-16	9:54	69.6	71.2	66.4	75	N
5-Sep-16	10:03	68.9	70.0	65.9	75	N
15-Sep-16	14:30	69.9	71.5	63.0	75	N
21-Sep-16	13:00	69.7	71.1	66.8	75	N
27-Sep-16	14:20	68.8	70.5	66.0	75	N
3-Oct-16	13:50	70.1	73.2	68.4	75	N
14-Oct-16	13:30	69.9	71.5	67.2	75	N
20-Oct-16	14:02	70.3	72.0	67.5	75	N
26-Oct-16	13:00	69.6	72.0	68.0	75	N
1-Nov-16	14:18	63.6	67.2	58.6	75	N
7-Nov-16	14:10	69.2	73.1	65.6	75	N
18-Nov-16	11:02	69.2	70.5	65.5	75	N
24-Nov-16	15:10	70.1	73.2	66.5	75	N
30-Nov-16	13:30	69.4	71.0	66.0	75	N
6-Dec-16	14:00	68.9	70.5	66.3	75	N
12-Dec-16	11:20	69.2	71.0	67.0	75	N
23-Dec-16	14:08	69.0	70.2	65.9	75	N
29-Dec-16	11:10	69.2	72.4	66.5	75	N

3-Jan-17	14:15	68.1	69.8	65.0	75	N
9-Jan-17	10:15	70.2	71.8	68.3	75	N
20-Jan-17	13:00	68.5	70.0	66.0	75	N
26-Jan-17	13:03	68.8	70.3	66.3	75	N
1-Feb-17	13:59	69.7	72.4	68.0	75	N
6-Feb-17	10:54	69.8	71.0	64.5	75	N
16-Feb-17	13:15	68.9	70.3	65.2	75	N
22-Feb-17	15:00	69.7	71.4	67.2	75	N
28-Feb-17	9:58	69.8	71.5	65.0	75	N
6-Mar-17	14:00	70.0	74.2	67.8	75	N
17-Mar-17	14:20	68.8	70.0	66.5	75	N
23-Mar-17	10:50	67.5	69.0	66.0	75	N
29-Mar-17	10:35	67.5	69.0	64.5	75	N
7-Apr-17	13:30	67.0	69.0	65.0	75	N
12-Apr-17	14:49	70.9	72.5	68.3	75	N
18-Apr-17	13:59	69.6	70.5	66.5	75	N
24-Apr-17	14:40	69.0	71.0	66.5	75	N
4-May-17	13:10	69.2	73.6	64.0	75	N
10-May-17	11:15	69.7	72.9	63.5	75	N
16-May-17	14:05	69.7	71.3	67.2	75	N
22-May-17	13:10	67.7	69.0	64.5	75	N
2-Jun-17	13:30	70.2	74.6	62.8	75	N
6-Jun-17	9:57	69.8	71.5	66.0	75	N
12-Jun-17	13:00	69.4	73.8	62.6	75	N
23-Jun-17	9:50	69.6	72.6	62.8	75	N
29-Jun-17	13:15	68.7	73.6	62.4	75	N
4-Jul-17	13:10	68.9	73.6	61.2	75	N
10-Jul-17	13:02	69.6	73.0	64.3	75	N
21-Jul-17	14:03	69.4	71.5	66.5	75	N
27-Jul-17	13:55	68.8	70.5	66.5	75	N
2-Aug-17	13:00	70.0	73.6	66.2	75	N
8-Aug-17	14:20	69.2	71.0	66.7	75	N
14-Aug-17	14:17	70.0	72.0	66.0	75	N
25-Aug-17	14:01	69.9	71.0	66.0	75	N
31-Aug-17	15:05	66.5	68.1	63.6	75	N
6-Sep-17	14:17	66.0	69.5	71.0	75	N
12-Sep-17	13:10	66.2	70.6	74.2	75	N
18-Sep-17	14:01	70.4	72.0	64.5	75	N
29-Sep-17	14:10	70.4	73.9	67.5	75	N
4-Oct-17	10:05	68.5	70.0	64.5	75	N
9-Oct-17	10:10	70.1	74.2	63.2	75	N
19-Oct-17	15:00	67.9	69.5	65.2	75	N
25-Oct-17	15:20	67.3	68.9	65.1	75	N
30-Oct-17	11:09	70.9	72.3	67.2	75	N
10-Nov-17	14:46	69.8	71.1	65.6	75	N
16-Nov-17	14:40	69.6	71.0	67.0	75	N
22-Nov-17	11:09	69.8	71.7	67.2	75	N
28-Nov-17	14:38	69.4	70.5	67.3	75	N
4-Dec-17	10:30	69.7	72.6	64.2	75	N
15-Dec-17	13:30	69.8	71.7	67.2	75	N
21-Dec-17	11:30	67.8	70.0	65.5	75	N
27-Dec-17	14:30	68.8	70.0	66.0	75	N
2-Jan-18	10:30	68.4	70.0	66.5	75	N
12-Jan-18	10:20	70.6	73.6	67.2	75	N
18-Jan-18	11:20	65.7	66.4	64.3	75	N
24-Jan-18	14:10	69.3	71.8	67.0	75	N
30-Jan-18	13:20	67.7	69.0	63.5	75	N

5-Feb-18	13:35	70.8	72.3	68.7	75	N
15-Feb-18	13:30	67.7	69.5	65.5	75	N
21-Feb-18	14:10	70.2	73.9	66.2	75	N
27-Feb-18	14:30	66.5	68.0	64.5	75	N
5-Mar-18	14:00	66.0	68.0	64.0	75	N
16-Mar-18	11:30	67.6	69.2	65.3	75	N
22-Mar-18	14:00	67.7	69.0	65.0	75	N
28-Mar-18	15:35	67.8	69.5	65.2	75	N
3-Apr-18	9:53	68.3	69.8	66.2	75	N
9-Apr-18	15:00	69.2	71.1	66.3	75	N
20-Apr-18	10:15	68.2	70.5	65.6	75	N
26-Apr-18	10:15	69.5	71.1	67.2	75	N
2-May-18	13:30	69.2	72.0	65.6	75	N
7-May-18	14:25	67.4	69.8	65.7	75	N
18-May-18	14:10	68.9	70.5	65.8	75	N
24-May-18	15:30	68.2	70.6	66.0	75	N
30-May-18	13:55	67.4	69.0	65.0	75	N
5-Jun-18	14:45	67.9	69.3	65.5	75	N
11-Jun-18	13:12	70.6	74.3	66.2	75	N
21-Jun-18	13:20	66.6	67.5	64.0	75	N
27-Jun-18	10:10	71.2	74.6	67.8	75	N
3-Jul-18	14:10	66.8	70.0	64.5	75	N
9-Jul-18	10:08	70.0	76.2	66.5	75	N
19-Jul-18	14:18	67.9	69.6	65.2	75	N
25-Jul-18	10:25	69.7	71.4	67.2	75	N
31-Jul-18	13:35	68.8	70.5	65.9	75	N
6-Aug-18	13:05	68.6	70.3	65.9	75	N
17-Aug-18	14:49	68.9	71.5	66.3	75	N
23-Aug-18	13:45	67.6	69.2	65.5	75	N
29-Aug-18	13:25	63.1	65.0	60.5	75	N
4-Sep-18	15:05	67.7	69.0	65.2	75	N
10-Sep-18	14:20	66.8	69.5	65.0	75	N
21-Sep-18	14:45	67.2	69.0	65.0	75	N
27-Sep-18	11:35	69.7	72.3	66.9	75	N
3-Oct-18	11:45	69.4	71.0	66.5	75	N
9-Oct-18	11:20	66.5	68.5	64.0	75	N
15-Oct-18	9:52	69.5	71.8	67.2	75	N
24-Oct-18	15:00	68.3	70.4	66.8	75	N
30-Oct-18	14:15	68.2	69.8	66.1	75	N
5-Nov-18	11:05	67.8	69.5	64.0	75	N
16-Nov-18	11:05	66.4	67.5	64.0	75	N
22-Nov-18	16:05	67.5	69.3	65.0	75	N
28-Nov-18	10:25	69.7	71.4	67.2	75	N
4-Dec-18	11:20	64.4	66.0	62.0	75	N
10-Dec-18	10:15	61.0	62.0	57.5	75	N
21-Dec-18	10:15	68.6	70.2	66.9	75	N
27-Dec-18	14:20	68.0	70.0	66.0	75	N
2-Jan-19	10:20	64.3	66.5	62.5	75	N
7-Jan-19	13:25	64.9	66.5	62.5	75	N
18-Jan-19	13:30	68.6	70.3	66.9	75	N
24-Jan-19	10:05	68.4	70.0	66.5	75	N
30-Jan-19	10:15	65.6	67.1	64.1	75	N
8-Feb-19	14:35	66.9	67.5	64.5	75	N
12-Feb-19	15:15	68.8	70.3	65.9	75	N
18-Feb-19	14:10	68.7	70.2	66.8	75	N
1-Mar-19	14:20	69.4	70.5	67.6	75	N
7-Mar-19	15:15	68.8	70.5	66.0	75	N

13-Mar-19	14:30	70.1	72.4	67.9	75	N
19-Mar-19	15:20	67.1	68.5	66.0	75	N
25-Mar-19	14:00	67.1	68.5	63.5	75	N
3-Apr-19	11:00	68.4	69.5	65.0	75	N
9-Apr-19	11:00	68.1	69.5	66.0	75	N
18-Apr-19	10:55	66.7	68.5	64.0	75	N
24-Apr-19	10:00	64.8	66.5	62.7	75	N
30-Apr-19	13:30	68.6	70.2	66.9	75	N
6-May-19	13:20	66.7	67.5	63.5	75	N
17-May-19	15:00	66.8	69.5	64.0	75	N
23-May-19	14:00	68.7	70.4	66.5	75	N
29-May-19	14:20	65.5	66.5	63.0	75	N
4-Jun-19	10:50	68.7	70.4	66.8	75	N
10-Jun-19	14:25	67.8	69.5	65.5	75	N
20-Jun-19	13:25	68.8	70.6	65.2	75	N
26-Jun-19	14:15	68.9	70.4	66.3	75	N
2-Jul-19	11:40	69.7	72.4	68.1	75	N
8-Jul-19	11:05	67.3	69.5	66.0	75	N
19-Jul-19	14:20	67.1	68.5	63.0	75	N
25-Jul-19	14:20	66.4	68.5	64.0	75	N
31-Jul-19	11:05	66.8	68.7	64.1	75	N
6-Aug-19	10:20	66.7	68.0	64.5	75	N
12-Aug-19	14:20	53.4	54.1	51.5	75	N
23-Aug-19	14:24	67.6	69.5	65.5	75	N
29-Aug-19	14:30	68.0	69.0	65.0	75	N
4-Sep-19	14:15	67.1	69.0	65.5	75	N
10-Sep-19	14:00	65.8	67.0	63.0	75	N
16-Sep-19	11:29	69.7	71.2	69.7	75	N
27-Sep-19	14:00	66.6	67.5	63.5	75	N
3-Oct-19	10:15	70.6	72.5	68.4	75	N
9-Oct-19	13:55	67.7	69.0	65.0	75	N
15-Oct-19	14:45	68.0	70.0	62.0	75	N
21-Oct-19	11:15	69.8	71.2	67.8	75	N
1-Nov-19	15:30	68.5	69.1	67.2	75	N
7-Nov-19	14:00	67.4	69.0	62.5	75	N
13-Nov-19	10:15	67.9	68.5	67.0	75	N
19-Nov-19	14:00	65.3	65.5	63.0	75	N
25-Nov-19	14:00	66.6	67.5	63.5	75	N
6-Dec-19	10:00	66.3	67.0	63.5	75	N
12-Dec-19	14:10	69.8	71.2	67.3	75	N
18-Dec-19	13:15	70.1	72.5	68.1	75	N
24-Dec-19	9:55	70.2	72.3	68.1	75	N
3-Jan-20	13:30	66.4	67.5	64.0	75	N
9-Jan-20	15:05	66.8	67.5	65.0	75	N
15-Jan-20	14:55	67.5	68.5	64.0	75	N
21-Jan-20	15:20	68.2	69.6	65.4	75	N
24-Jan-20	13:30	68.1	68.8	67.3	75	N
30-Jan-20	15:00	65.4	66.5	62.0	75	N
4-Feb-20	14:15	65.1	66.5	63.0	75	N
14-Feb-20	13:30	69.7	71.2	67.5	75	N
20-Feb-20	14:00	67.2	68.8	65.0	75	N
26-Feb-20	14:50	70.3	71.6	68.5	75	N
3-Mar-20	14:45	66.2	68.0	64.9	75	N
9-Mar-20	14:00	66.8	68.0	63.0	75	N
20-Mar-20	10:30	69.3	69.9	68.1	75	N
26-Mar-20	14:30	69.7	72.4	67.2	75	N
31-Mar-20	15:05	66.8	68.7	65.0	75	N

6-Apr-20	13:00	64.7	66.0	62.5	75	N
15-Apr-20	11:10	68.8	70.4	68.8	75	N
21-Apr-20	13:30	66.7	67.5	64.5	75	N
29-Apr-20	15:05	68.5	69.8	66.0	75	N
5-May-20	14:55	66.5	68.5	59.0	75	N
11-May-20	11:10	68.3	69.1	67.2	75	N
22-May-20	13:35	66.4	67.5	63.5	75	N
28-May-20	11:30	66.7	67.5	63.0	75	N
3-Jun-20	13:50	65.4	66.5	62.5	75	N
9-Jun-20	14:00	66.5	67.5	63.0	75	N
15-Jun-20	13:50	67.1	68.5	62.5	75	N
24-Jun-20	14:40	67.2	68.0	63.5	75	N
30-Jun-20	11:20	67.9	69.0	65.0	75	N
6-Jul-20	10:20	67.9	68.7	67.2	75	N
17-Jul-20	13:50	68.3	70.4	66.6	75	N
23-Jul-20	14:00	67.4	68.0	65.5	75	N
29-Jul-20	13:35	66.8	68.5	65.0	75	N
4-Aug-20	13:50	66.3	68.2	64.6	75	N
10-Aug-20	13:10	66.3	67.5	63.5	75	N
21-Aug-20	13:50	66.7	67.5	64.5	75	N
27-Aug-20	13:35	65.5	67.0	63.0	75	N
2-Sep-20	14:25	67.1	68.5	64.0	75	N
8-Sep-20	14:50	69.7	71.4	67.2	75	N
14-Sep-20	15:05	65.8	67.0	63.0	75	N
25-Sep-20	13:50	67.1	68.0	63.0	75	N
30-Sep-20	14:31	66.2	68.0	64.5	75	N
6-Oct-20	13:20	70.5	72.1	69.2	75	N
12-Oct-20	14:25	69.3	70.1	68.1	75	N
23-Oct-20	13:45	67.1	68.5	63.5	75	N
29-Oct-20	14:40	69.7	71.4	67.2	75	N
4-Nov-20	14:05	66.8	67.5	64.0	75	N
10-Nov-20	14:30	66.2	67.5	63.0	75	N
16-Nov-20	14:10	65.4	66.5	62.5	75	N
27-Nov-20	13:45	65.3	66.5	62.0	75	N
3-Dec-20	11:15	66.3	68.5	65.0	75	N
9-Dec-20	14:00	66.9	67.2	66.5	75	N
15-Dec-20	14:20	67.8	69.0	65.5	75	N
23-Dec-20	10:30	56.8	57.1	56.4	75	N
29-Dec-20	10:40	56.1	56.3	55.9	75	N
4-Jan-21	14:50	66.7	67.5	65.5	75	N
15-Jan-21	11:00	65.9	66.5	61.5	75	N
21-Jan-21	15:50	64.9	66.0	62.0	75	N
27-Jan-21	9:20	66.3	68.4	64.8	75	N
2-Feb-21	14:20	65.4	66.5	62.1	75	N
11-Feb-21	14:00	66.4	67.5	63.0	75	N
17-Feb-21	13:30	67.1	67.9	66.3	75	N
22-Feb-21	10:50	66.9	68.5	64.2	75	N
5-Mar-21	11:30	59.7	60.9	58.9	75	N
11-Mar-21	14:00	59.2	59.9	58.1	75	N
17-Mar-21	15:14	67.1	68.5	64.5	75	N
23-Mar-21	10:45	65.8	67.1	64.0	75	N
1-Apr-21	10:50	62.5	66.5	65.7	75	N
7-Apr-21	10:45	66.0	67.5	64.0	75	N
12-Apr-21	11:00	58.9	60.4	59.7	75	N
23-Apr-21	10:48	66.4	68.2	63.5	75	N
29-Apr-21	13:00	63.4	64.0	61.0	75	N
5-May-21	14:05	67.1	68.5	64.5	75	N

11-May-21	13:05	68.1	69.5	65.0	75	N
17-May-21	10:50	64.7	66.5	61.0	75	N
28-May-21	11:00	66.3	67.0	63.0	75	N
3-Jun-21	13:30	65.2	67.0	63.6	75	N
9-Jun-21	14:05	66.4	68.0	63.7	75	N
15-Jun-21	13:35	67.3	69.0	65.2	75	N
25-Jun-21	10:50	64.1	65.3	61.2	75	N
30-Jun-21	11:00	63.6	65.1	62.2	75	N
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 Nov 13 to Sep 21		53.4	54.1	51.5		
Maximum for Nov 13 to Sep 21		72.6	76.2	74.2		
Average for Nov 13 to Sep 21		68.5	70.6	66.1		

**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,	Exceedance (Y/N)
	Start Time	Leq	L10	L90		
27-Nov-13	15:44	64.4	66.4	61.0	70	N
3-Dec-13	14:05	64.4	66.2	62.1	70	N
9-Dec-13	14:00	65.0	68.3	61.2	70	N
20-Dec-13	14:30	69.7	73.6	67.4	70	N
24-Dec-13	15:10	65.2	67.0	63.0	70	N
30-Dec-13	10:05	62.2	63.8	60.0	70	N
9-Jan-14	14:12	64.2	65.9	62.3	65	N
15-Jan-14	13:52	64.1	66.4	61.2	65	N
21-Jan-14	9:50	63.3	64.8	60.1	70	N
27-Jan-14	15:25	62.9	64.0	59.5	70	N
5-Feb-14	14:30	62.3	64.0	59.5	70	N
14-Feb-14	13:45	62.1	63.6	60.2	65	N
20-Feb-14	15:10	63.7	65.3	60.9	65	N
26-Feb-14	13:02	63.8	65.1	61.1	65	N
4-Mar-14	13:40	62.9	64.0	59.0	70	N
10-Mar-14	14:00	69.6	72.4	66.5	70	N
21-Mar-14	13:05	64.1	66.0	60.0	70	N
27-Mar-14	13:35	63.6	64.9	60.0	70	N
2-Apr-14	14:01	66.8	69.5	62.2	75	N
8-Apr-14	10:40	69.6	71.9	66.8	75	N
14-Apr-14	13:15	68.8	71.2	66.9	75	N
17-Apr-14	15:27	68.7	70.3	66.2	75	N
23-Apr-14	15:37	69.3	71.6	67.2	75	N
29-Apr-14	14:22	68.1	69.8	65.8	75	N
9-May-14	14:15	60.6	62.0	57.5	70	N
15-May-14	14:12	65.7	67.8	62.4	70	N
21-May-14	14:10	65.2	66.9	63.7	70	N
27-May-14	14:00	60.6	62.0	57.5	70	N
6-Jun-14	10:26	65.8	67.3	63.3	70	N
12-Jun-14	10:11	66.3	67.9	64.1	65	Y
18-Jun-14	14:09	66.4	68.1	65.2	65	Y
24-Jun-14	10:18	65.0	66.5	62.4	65	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
4-Nov-14	14:00	63.0	66.4	61.0	70	N
10-Nov-14	13:10	60.0	61.5	57.5	70	N
21-Nov-14	13:00	63.0	65.6	60.8	70	N
27-Nov-14	13:20	62.8	64.1	59.8	70	N
3-Dec-14	14:32	63.9	65.4	60.1	70	N
9-Dec-14	13:10	60.1	61.4	57.5	70	N
15-Dec-14	11:21	64.5	66.7	61.3	70	N
23-Dec-14	13:50	60.0	61.5	57.0	70	N
29-Dec-14	14:00	66.7	68.4	64.8	70	N
9-Jan-15	10:15	60.1	61.4	56.5	65	N
15-Jan-15	13:12	66.7	68.5	63.1	65	Y
21-Jan-15	14:02	63.7	64.8	59.8	70	N
27-Jan-15	10:40	63.1	67.2	60.6	70	N
2-Feb-15	10:25	65.0	66.3	62.0	65	N
13-Feb-15	13:33	65.9	67.6	63.8	70	N
17-Feb-15	13:55	59.8	60.6	56.5	70	N
23-Feb-15	13:30	63.3	65.1	60.8	70	N
27-Feb-15	10:05	65.8	68.6	62.4	70	N
5-Mar-15	11:05	65.3	67.9	62.7	70	N
11-Mar-15	10:45	64.3	66.0	62.1	70	N
17-Mar-15	13:40	65.7	68.1	63.2	70	N
23-Mar-15	9:50	60.9	62.0	58.4	70	N
2-Apr-15	13:05	60.7	62.1	58.5	70	N
8-Apr-15	10:35	62.9	64.0	60.0	70	N
13-Apr-15	15:50	66.7	68.1	64.3	70	N
24-Apr-15	14:23	66.9	68.4	64.1	70	N
30-Apr-15	11:00	62.2	63.6	60.0	70	N
6-May-15	10:00	60.0	61.1	56.0	70	N
12-May-15	13:32	67.9	69.5	65.4	70	N
22-May-15	9:30	62.5	67.0	65.8	70	N
28-May-15	11:00	64.9	66.4	61.1	70	N
3-Jun-15	9:50	59.1	60.0	57.0	70	N
9-Jun-15	15:35	64.3	66.0	60.5	65	N
15-Jun-15	13:45	64.5	66.5	61.5	65	N
25-Jun-15	10:00	63.6	66.0	60.2	70	N
30-Jun-15	9:50	63.6	64.5	60.0	70	N
6-Jul-15	10:58	54.7	67.4	61.2	70	N
10-Jul-15	13:00	63.4	64.5	61.0	70	N
16-Jul-15	10:44	64.2	66.0	61.1	70	N
22-Jul-15	10:52	63.9	65.1	62.2	70	N
28-Jul-15	10:00	64.6	67.4	62.1	70	N
3-Aug-15	13:00	62.1	63.5	60.0	70	N
14-Aug-15	10:50	64.1	67.3	62.0	70	N
18-Aug-15	13:00	64.2	66.8	61.6	70	N
28-Aug-15	14:10	64.1	67.3	62.6	70	N

1-Sep-15	15:20	61.1	62.5	59.0	70	N
9-Sep-15	12:46	64.4	66.3	61.9	70	N
15-Sep-15	13:15	67.2	69.1	65.3	70	N
21-Sep-15	14:00	62.6	64.0	60.0	70	N
30-Sep-15	10:00	65.2	66.4	63.9	70	N
7-Oct-15	14:46	66.4	68.1	64.5	70	N
13-Oct-15	14:41	64.4	66.8	63.0	70	N
19-Oct-15	14:19	64.6	67.0	62.2	70	N
28-Oct-15	13:10	64.2	66.0	62.0	70	N
3-Nov-15	14:00	62.3	63.5	60.0	70	N
9-Nov-15	14:00	64.4	67.3	61.2	65	N
20-Nov-15	13:00	61.1	62.5	59.5	70	N
26-Nov-15	14:05	61.2	62.5	59.0	70	N
2-Dec-15	9:50	60.6	62.0	58.5	70	N
8-Dec-15	15:33	64.1	65.6	61.7	70	N
14-Dec-15	14:39	67.5	69.7	65.4	70	N
24-Dec-15	14:15	61.1	62.5	57.5	70	N
28-Dec-15	15:42	68.7	70.3	66.5	70	N
6-Jan-16	14:50	69.8	71.6	65.9	70	N
12-Jan-16	10:22	65.8	67.0	63.0	70	N
18-Jan-16	10:00	63.5	65.0	60.0	70	N
29-Jan-16	10:30	64.0	67.9	60.5	70	N
3-Feb-16	15:50	67.5	69.7	65.3	70	N
12-Feb-16	9:53	65.0	66.1	63.7	65	N
17-Feb-16	10:02	64.3	66.1	62.7	65	N
22-Feb-16	11:00	64.1	67.9	61.5	65	N
4-Mar-16	9:50	61.2	62.5	57.5	70	N
10-Mar-16	10:10	63.2	66.8	59.6	70	N
16-Mar-16	10:10	64.0	67.6	60.2	70	N
21-Mar-16	11:10	63.6	67.5	60.2	70	N
24-Mar-16	13:00	64.2	66.3	62.0	70	N
30-Mar-16	16:40	65.2	67.9	71.4	70	N
5-Apr-16	10:02	64.6	65.7	61.4	65	N
11-Apr-16	11:29	64.3	66.0	60.5	65	N
22-Apr-16	10:20	60.8	62.6	59.4	65	N
28-Apr-16	9:50	60.9	62.0	58.5	65	N
4-May-16	11:00	64.1	67.8	61.2	70	N
9-May-16	10:00	60.9	62.0	58.0	70	N
19-May-16	15:43	65.2	67.1	62.6	70	N
25-May-16	11:20	60.6	61.5	57.0	70	N
31-May-16	13:10	65.3	67.0	62.0	70	N
6-Jun-16	11:00	60.6	62.0	58.0	70	N
17-Jun-16	14:00	64.1	67.3	59.2	65	N
23-Jun-16	16:17	64.8	69.4	60.2	65	N
29-Jun-16	16:00	64.1	65.5	63.0	70	N
5-Jul-16	11:29	67.6	69.2	65.3	70	N
11-Jul-16	15:30	62.0	63.5	60.0	70	N
21-Jul-16	15:12	68.9	71.5	67.4	70	N
27-Jul-16	11:05	60.5	61.5	57.0	70	N
2-Aug-16	13:00	63.6	66.0	60.1	70	N

8-Aug-16	16:10	68.2	70.5	66.3	70	N
19-Aug-16	11:14	68.5	70.4	66.7	70	N
25-Aug-16	15:16	69.4	71.5	67.2	70	N
31-Aug-16	10:46	64.9	66.0	62.1	70	N
5-Sep-16	10:49	65.6	66.2	62.1	70	N
15-Sep-16	13:30	65.0	67.5	61.0	70	N
21-Sep-16	13:50	64.6	66.1	62.0	70	N
27-Sep-16	14:00	62.5	63.5	60.0	70	N
3-Oct-16	14:00	63.2	66.2	58.6	70	N
14-Oct-16	14:29	68.8	70.2	66.5	70	N
20-Oct-16	13:13	63.7	65.5	61.5	70	N
26-Oct-16	11:10	61.1	62.5	58.5	70	N
1-Nov-16	13:29	69.2	71.8	66.8	70	N
7-Nov-16	13:18	63.6	67.3	59.2	65	N
18-Nov-16	10:14	65.0	66.5	61.5	70	N
24-Nov-16	14:15	64.3	67.8	60.2	70	N
30-Nov-16	14:12	64.6	66.0	61.0	70	N
6-Dec-16	13:05	65.8	67.2	63.3	70	N
12-Dec-16	10:25	66.3	67.9	63.8	70	N
23-Dec-16	15:01	64.3	65.1	62.2	70	N
29-Dec-16	13:12	64.0	66.8	60.5	70	N
3-Jan-17	13:20	65.3	66.7	62.1	70	N
9-Jan-17	9:30	64.5	65.7	62.5	65	N
20-Jan-17	9:50	60.6	61.5	57.0	70	N
26-Jan-17	14:05	64.1	65.8	61.9	70	N
1-Feb-17	14:50	68.2	70.3	66.5	70	N
6-Feb-17	10:02	65.0	66.0	62.5	65	N
16-Feb-17	14:05	64.2	66.0	62.8	65	N
22-Feb-17	14:00	67.6	70.1	65.2	70	N
28-Feb-17	10:49	65.2	67.0	61.5	70	N
6-Mar-17	14:59	64.0	66.8	61.2	70	N
17-Mar-17	13:30	60.1	61.5	57.0	70	N
23-Mar-17	10:35	60.0	61.0	56.0	70	N
29-Mar-17	10:05	60.0	61.0	56.5	70	N
7-Apr-17	13:05	60.0	61.0	56.0	70	N
12-Apr-17	15:19	67.4	69.5	65.2	70	N
18-Apr-17	13:12	64.2	66.0	61.0	70	N
24-Apr-17	13:45	60.5	62.0	56.5	65	N
4-May-17	14:05	64.2	67.8	60.6	65	N
10-May-17	11:30	64.2	67.2	59.6	70	N
16-May-17	13:10	65.1	67.3	62.2	70	N
22-May-17	11:35	60.1	61.0	56.0	70	N
2-Jun-17	13:50	64.0	66.8	60.2	70	N
6-Jun-17	10:48	64.6	66.0	61.5	70	N
12-Jun-17	13:15	63.2	66.7	58.6	65	N
23-Jun-17	11:10	62.6	64.2	58.6	65	N
29-Jun-17	13:50	64.0	67.3	60.5	70	N
4-Jul-17	14:09	63.2	66.5	58.4	70	N
10-Jul-17	14:10	63.7	66.9	58.9	70	N
21-Jul-17	13:12	61.2	62.5	65.0	70	N

27-Jul-17	13:10	59.7	60.5	56.0	70	N
2-Aug-17	13:45	63.6	67.2	58.7	70	N
8-Aug-17	13:35	63.2	64.8	61.6	70	N
14-Aug-17	13:03	64.3	65.5	61.0	70	N
25-Aug-17	13:08	63.9	65.5	60.5	70	N
31-Aug-17	14:10	63.9	65.4	61.1	70	N
6-Sep-17	13:02	62.5	65.1	67.0	70	N
12-Sep-17	14:02	61.2	64.0	66.5	70	N
18-Sep-17	13:07	64.2	66.0	61.5	70	N
29-Sep-17	13:50	63.4	67.6	59.7	70	N
4-Oct-17	9:45	60.0	61.0	56.5	70	N
9-Oct-17	10:30	64.1	66.9	61.0	70	N
19-Oct-17	13:40	63.7	65.2	61.3	70	N
25-Oct-17	14:15	63.3	65.1	60.1	70	N
30-Oct-17	9:59	67.5	69.2	65.3	70	N
10-Nov-17	12:12	64.3	66.0	61.8	65	N
16-Nov-17	12:25	64.2	65.5	61.5	70	N
22-Nov-17	13:35	66.4	68.0	63.9	70	N
28-Nov-17	13:25	66.8	68.7	64.3	70	N
4-Dec-17	10:48	64.2	67.9	60.5	70	N
15-Dec-17	14:50	67.8	70.5	65.3	70	N
21-Dec-17	13:35	66.4	68.0	63.9	70	N
27-Dec-17	14:00	60.5	61.5	56.5	70	N
2-Jan-18	10:00	61.1	62.0	56.6	70	N
12-Jan-18	9:30	63.6	66.7	60.6	70	N
18-Jan-18	10:45	64.2	65.5	63.8	70	N
24-Jan-18	13:15	65.8	67.7	63.6	70	N
30-Jan-18	13:00	60.0	61.0	57.0	65	N
5-Feb-18	14:40	67.4	69.5	65.7	70	N
15-Feb-18	13:05	60.1	61.0	57.5	70	N
21-Feb-18	15:09	64.2	67.5	60.2	70	N
27-Feb-18	13:30	59.5	60.5	57.0	70	N
5-Mar-18	13:00	60.5	61.5	58.0	70	N
16-Mar-18	10:27	65.2	67.0	63.1	70	N
22-Mar-18	13:00	66.1	61.5	57.5	70	N
28-Mar-18	14:40	65.8	67.7	63.2	70	N
3-Apr-18	9:40	63.9	65.6	62.1	70	N
9-Apr-18	13:37	65.8	67.3	62.9	65	Y
20-Apr-18	9:30	65.4	67.3	62.7	70	N
26-Apr-18	10:30	65.6	67.3	61.5	70	N
2-May-18	14:19	64.0	67.3	60.5	70	N
7-May-18	13:35	63.3	66.1	60.8	70	N
18-May-18	13:15	64.7	65.8	62.9	70	N
24-May-18	14:25	64.5	66.1	62.2	70	N
30-May-18	13:05	60.0	61.0	57.0	70	N
5-Jun-18	13:40	63.7	65.6	61.8	70	N
11-Jun-18	14:10	64.2	66.9	60.6	65	N
21-Jun-18	13:00	59.8	60.5	56.5	65	N
27-Jun-18	10:30	63.2	66.7	59.6	70	N
3-Jul-18	13:30	60.0	61.0	56.5	70	N

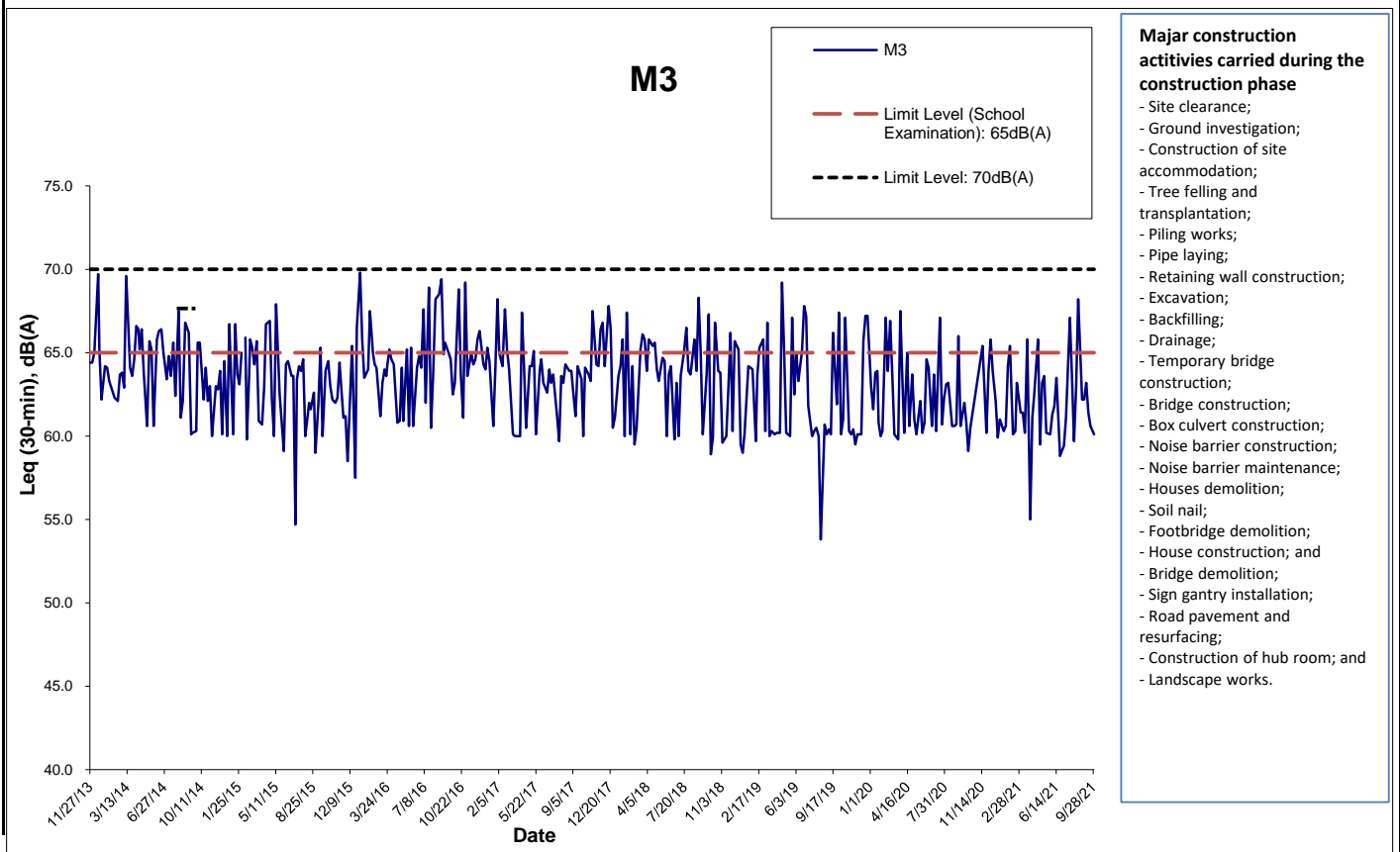
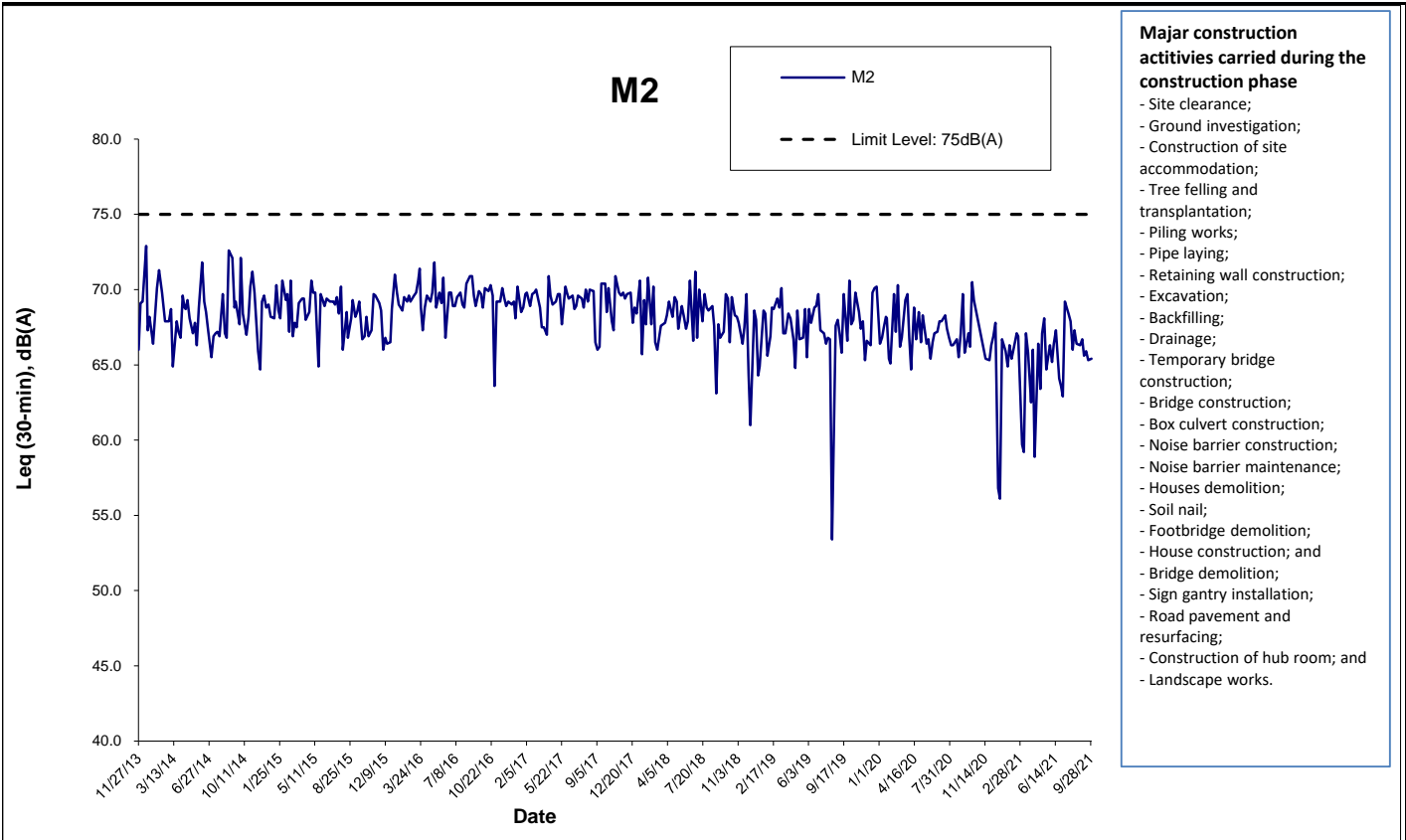
9-Jul-18	9:45	63.6	67.2	57.8	70	N
19-Jul-18	15:05	65.2	66.8	62.6	70	N
25-Jul-18	11:28	66.5	68.9	64.3	70	N
31-Jul-18	14:30	63.9	65.6	61.5	70	N
6-Aug-18	14:15	63.7	65.5	61.4	70	N
17-Aug-18	15:50	65.8	67.1	63.2	70	N
23-Aug-18	14:02	63.9	65.5	61.8	70	N
29-Aug-18	14:40	68.3	69.8	65.5	70	N
4-Sep-18	14:00	65.0	66.7	63.2	70	N
10-Sep-18	13:30	60.1	61.5	57.0	70	N
21-Sep-18	13:50	63.7	65.2	61.3	70	N
27-Sep-18	13:49	67.3	69.4	65.6	70	N
3-Oct-18	11:30	58.9	60.5	56.5	70	N
9-Oct-18	11:05	59.9	60.5	56.5	70	N
15-Oct-18	10:50	66.8	68.7	64.3	70	N
24-Oct-18	13:35	63.9	65.5	60.7	70	N
30-Oct-18	13:20	63.8	65.8	60.9	70	N
5-Nov-18	10:15	59.6	60.5	56.5	70	N
16-Nov-18	10:15	60.0	61.0	56.5	70	N
22-Nov-18	16:52	62.9	64.6	60.5	70	N
28-Nov-18	9:30	66.2	68.1	64.3	70	N
4-Dec-18	10:30	60.3	61.0	55.5	70	N
10-Dec-18	11:00	65.7	67.5	64.0	70	N
21-Dec-18	9:30	65.2	67.8	63.6	70	N
27-Dec-18	14:05	59.5	60.5	56.5	70	N
2-Jan-19	10:00	59.0	60.0	53.0	70	N
7-Jan-19	13:05	60.1	61.0	56.0	65	N
18-Jan-19	14:15	64.2	66.0	62.3	70	N
24-Jan-19	11:00	64.1	65.8	62.0	70	N
30-Jan-19	10:55	64.0	65.9	62.2	65	N
8-Feb-19	14:50	59.7	60.5	57.5	70	N
12-Feb-19	16:10	63.6	65.5	61.3	65	N
18-Feb-19	13:30	65.3	66.7	63.6	65	Y
1-Mar-19	13:30	65.8	66.5	62.7	70	N
7-Mar-19	15:00	60.3	61.0	56.5	70	N
13-Mar-19	13:05	66.8	68.9	64.2	70	N
19-Mar-19	14:30	60.0	61.0	55.0	70	N
25-Mar-19	13:05	60.3	61.0	54.5	70	N
3-Apr-19	10:05	60.1	61.0	54.5	70	N
9-Apr-19	10:05	60.2	61.0	57.5	70	N
18-Apr-19	10:00	60.2	61.0	56.5	70	N
24-Apr-19	9:20	69.2	71.3	67.8	70	N
30-Apr-19	14:15	65.1	66.9	63.7	70	N
6-May-19	13:00	60.2	61.5	56.5	70	N
17-May-19	14:05	60.0	61.0	56.5	70	N
23-May-19	14:45	67.1	69.0	64.0	70	N
29-May-19	14:05	62.5	63.5	60.0	70	N
4-Jun-19	13:00	65.0	66.3	62.3	70	N
10-Jun-19	13:20	63.3	66.0	61.5	65	N
20-Jun-19	14:35	65.1	66.8	63.5	65	Y

26-Jun-19	15:00	67.8	69.3	65.2	70	N
2-Jul-19	9:50	67.2	69.4	65.1	70	N
8-Jul-19	10:10	61.8	63.5	60.0	70	N
19-Jul-19	13:30	60.0	61.0	56.0	70	N
25-Jul-19	13:25	60.3	62.0	57.0	70	N
31-Jul-19	9:55	60.5	62.7	58.2	70	N
6-Aug-19	10:00	60.0	61.0	55.0	70	N
12-Aug-19	15:10	53.8	55.1	52.4	70	N
23-Aug-19	13:12	60.7	62.5	57.5	70	N
29-Aug-19	13:35	60.1	61.0	55.5	70	N
4-Sep-19	13:10	60.4	62.5	58.0	70	N
10-Sep-19	13:15	60.1	61.0	57.0	70	N
16-Sep-19	10:09	66.2	68.1	64.3	70	N
27-Sep-19	13:15	61.9	62.5	59.0	70	N
3-Oct-19	9:30	67.4	68.9	64.5	70	N
9-Oct-19	13:00	60.1	61.0	56.5	70	N
15-Oct-19	13:50	61.0	63.5	58.0	70	N
21-Oct-19	10:30	67.1	68.6	65.9	70	N
1-Nov-19	14:30	60.3	62.0	59.7	65	N
7-Nov-19	11:00	60.1	61.5	56.5	65	N
13-Nov-19	11:15	60.4	62.1	58.9	70	N
19-Nov-19	10:05	59.5	60.5	56.0	70	N
25-Nov-19	10:00	60.1	61.5	56.0	70	N
6-Dec-19	11:00	60.1	61.0	56.5	70	N
12-Dec-19	15:50	65.7	68.1	63.2	70	N
18-Dec-19	14:50	67.2	69.5	64.7	70	N
24-Dec-19	11:29	67.2	69.5	65.0	70	N
3-Jan-20	14:15	62.9	63.5	60.5	65	N
9-Jan-20	14:15	61.6	62.5	60.5	65	N
15-Jan-20	14:00	63.8	65.0	61.5	65	N
21-Jan-20	14:10	63.9	65.7	62.2	70	N
24-Jan-20	14:10	60.8	62.3	59.1	70	N
30-Jan-20	14:00	60.0	61.0	55.0	70	N
4-Feb-20	14:00	60.3	61.5	55.0	70	N
14-Feb-20	11:00	67.1	69.2	64.0	70	N
20-Feb-20	13:10	63.9	65.5	61.7	70	N
26-Feb-20	14:00	66.9	68.6	64.8	70	N
3-Mar-20	14:00	63.7	64.9	62.0	70	N
9-Mar-20	13:00	60.1	61.5	57.5	70	N
20-Mar-20	11:30	59.8	61.7	58.4	70	N
26-Mar-20	11:15	67.5	69.1	65.3	70	N
31-Mar-20	14:13	63.9	65.5	62.5	70	N
6-Apr-20	11:00	60.2	61.0	55.5	70	N
15-Apr-20	10:03	65.0	66.2	62.5	70	N
21-Apr-20	14:00	60.6	61.5	56.5	70	N
29-Apr-20	13:40	63.7	65.5	60.9	70	N
5-May-20	14:00	61.0	63.0	58.0	70	N
11-May-20	10:05	60.1	62.2	58.3	70	N
22-May-20	13:10	62.1	63.5	60.0	70	N
28-May-20	10:10	60.2	61.5	58.5	70	N

3-Jun-20	13:05	60.8	61.5	56.0	70	N
9-Jun-20	13:00	64.6	65.5	60.5	65	N
15-Jun-20	13:00	64.1	65.0	61.0	65	N
24-Jun-20	13:30	60.6	63.0	58.5	65	N
30-Jun-20	10:20	63.7	65.0	61.6	70	N
6-Jul-20	11:25	60.3	62.0	58.2	70	N
17-Jul-20	13:00	67.1	69.0	64.0	70	N
23-Jul-20	13:10	60.7	61.5	58.0	70	N
29-Jul-20	14:25	62.3	63.9	60.5	70	N
4-Aug-20	14:40	63.1	64.5	60.8	70	N
10-Aug-20	10:05	63.2	65.0	61.5	70	N
21-Aug-20	13:05	60.6	61.5	56.5	70	N
27-Aug-20	13:10	60.6	62.0	56.5	70	N
2-Sep-20	14:10	60.7	62.0	57.0	70	N
8-Sep-20	13:05	66.0	68.2	64.3	70	N
14-Sep-20	14:10	60.6	61.5	57.0	70	N
25-Sep-20	13:35	62.0	63.0	60.0	70	N
30-Sep-20	13:34	60.9	62.5	58.0	70	N
6-Oct-20	14:30	59.1	61.4	57.2	70	N
12-Oct-20	13:30	60.5	62.3	59.8	70	N
23-Oct-20	13:05	60.6	62.0	58.0	70	N
29-Oct-20	13:15	66.5	68.2	64.1	70	N
4-Nov-20	13:25	60.2	61.5	56.0	70	N
10-Nov-20	13:05	59.8	61.0	56.0	70	N
16-Nov-20	13:05	65.4	66.5	62.5	70	N
27-Nov-20	13:05	60.2	61.5	55.0	70	N
3-Dec-20	10:25	63.9	65.5	62.0	70	N
9-Dec-20	14:45	65.8	66.7	65.3	70	N
15-Dec-20	15:15	63.9	65.5	61.5	70	N
23-Dec-20	17:15	62.1	62.5	60.1	70	N
29-Dec-20	11:20	59.9	60.2	58.8	70	N
4-Jan-21	14:00	61.0	62.5	59.0	70	N
15-Jan-21	10:10	60.3	61.5	57.0	65	N
21-Jan-21	14:45	60.6	61.5	56.5	70	N
27-Jan-21	10:00	64.2	66.5	61.9	70	N
2-Feb-21	13:35	65.4	66.5	62.1	70	N
11-Feb-21	13:05	60.1	61.0	56.0	70	N
17-Feb-21	15:00	60.3	62.0	58.1	70	N
22-Feb-21	10:05	63.2	64.1	60.6	70	N
5-Mar-21	10:30	61.4	62.9	60.3	70	N
11-Mar-21	10:35	61.4	62.1	60.8	70	N
17-Mar-21	13:00	60.2	61.0	55.5	70	N
23-Mar-21	10:45	65.8	67.1	64.0	70	N
1-Apr-21	10:00	55.0	61.0	60.0	70	N
7-Apr-21	10:00	61.1	62.0	56.0	70	N
12-Apr-21	14:00	62.4	64.1	61.2	70	N
23-Apr-21	10:00	65.8	66.3	62.9	70	N
29-Apr-21	11:05	59.5	60.5	56.5	70	N
5-May-21	15:00	63.2	64.5	61.0	70	N
11-May-21	10:55	63.6	65.0	61.5	70	N
17-May-21	10:00	60.2	61.0	57.0	70	N

28-May-21	10:00	60.1	61.0	56.0	70	N
3-Jun-21	14:20	61.3	62.0	59.0	70	N
9-Jun-21	13:10	61.8	63.3	59.6	65	N
15-Jun-21	14:30	63.5	65.3	61.8	65	N
25-Jun-21	10:00	58.8	59.3	54.0	65	N
30-Jun-21	10:15	59.1	60.4	64.4	70	N
6-Jul-21	11:05	62.9	64.1	61.7	70	N
12-Jul-21	14:10	69.2	71.3	67.0	70	N
23-Jul-21	10:45	68.4	70.3	66.8	70	N
29-Jul-21	14:05	67.9	69.5	65.2	70	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 Nov 13 to Sep 21		53.8	55.1	52.4		
Maximum for Nov 13 to Sep 21		69.8	71.8	71.4		
Average for Nov 13 to Sep 21		64.2	66.2	61.9		





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

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**APPENDIX H  
Waste Amount Predicted in ERR  
&  
Waste Flow Table for Stage 1 and Stage 2**

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**Waste amount generated under Stage 1(Extracted from Quarterly Report)**

Stage 1 - Contract 1									
Construction Period	Inert C&D materials disposed of as public fill	Broken concrete	C&D wastes disposed as general refuse	Paper/cardboard packaging	Plastics	Metals	C&D materials reused on site	C&D materials reused in other projects	Chemical wastes
	( in m3)	( in m3)	( in m3)	(in kg)	(in kg)	(in kg)	( in m3)	( in m3)	(in L)
Nov09 - Jan10	1,399	0	3,697	0	0	0	3,553	0	0
Feb10 - Apr10	9,189	0	670	80,247	0	0	2,336	0	0
May10 - Jul10	4,447	0	816	0	0	76	2,857	0	1,800
Aug10 - Oct10	5,995	0	566	342	40	107,143	46,035	0	0
Nov10- Jan11	1,991	0	358	521	988	10,677	32,540	0	0
Feb11 - Apr11	486	0	423	454	38	42,493	104,250	21,470	0
May11 - Jul11	302	24	521	470	366	10,199	18,791	42,614	0
Aug11 - Oct11	88	48	430	470	3,626	40,747	20,973	19,580	2,400
Nov11 - Jan12	26	42	618	431	2,361	28	18,503	14,700	1,000
Feb12 - Apr12	108	3	319	337	6,183	22,074	8,759	8,670	1,200
May12 - Jul12	3,390	12	345	317	5,505	17	3,336	10,854	0
Aug12 - Oct12	638	6	299	351	10,650	29,187	5,344	3,994	0
Nov12- Jan13	882	250	319	438	5,508	79,712	4,893	2,893	2,200
Feb13 - Apr13	1,156	203	254	381	8,818	31,367	3,805	2,569	0
May13 - Jul13	989	16	274	395	7,751	27,870	6,086	1,236	800
Aug13 - Oct13	572	4	332	300	7,389	25,437	5,216	1,354	0
Nov13 - Jan14	531	146	410	286	8,852	36,741	4,653	2,556	0
Feb14 - Apr14	500	21	352	974	12,852	173,353	2,696	603	0
May14 - Jul14	404	0	404	199	7,190	0	1,143	360	800
*Aug14 - Sep14	75	0	105	87	12,075	184,483	557	0	0
Sum	33,168	775	11,512	87,000	100,192	821,604	296,326	133,453	10,200

Stage 1 - Contract 2									
Construction Period	Inert C&D materials disposed of as public fill	Broken concrete	C&D wastes disposed as general refuse	Paper/cardboard packaging	Plastics	Metals	C&D materials reused on site	C&D materials reused in other projects	Chemical wastes
	( in m3)	( in m3)	( in m3)	(in kg)	(in kg)	(in kg)	( in m3)	( in m3)	(in L)
Nov09 - Jan 10	0	0	0	0	0	0	0	0	0
Feb10 - Apr10	0	0	4,500	0	0	0	0	0	0
May10 - Jul10	4,560	0	756	0	0	0	0	0	0
Aug10 - Oct10	7,889	0	876	0	0	0	0	0	0
Nov10- Jan11	1,755	0	376	0	0	0	0	0	0
Feb11 - Apr11	1,200	0	380	0	0	0	0	0	0
May11 - Jul11	1,325	0	455	0	0	0	0	0	0
Aug11 - Oct11	594	0	315	0	0	0	0	0	0
Nov11 - Jan12	620	0	400	0	0	0	0	0	0
Feb12 - Apr12	895	0	2,495	0	0	0	0	0	0
May12 - Jul12	475	0	1,565	0	0	0	0	0	0
Aug12 - Oct12	675	0	1,785	0	0	0	0	0	0
Nov12- Jan13	640	0	1,130	240,000	0	0	0	0	0
Feb13 - Apr13	290	0	790	480	0	0	0	0	0
May13 - Jul13	1,100	0	945	0	0	0	0	0	0
Aug13 - Oct13	1,175	0	730	480	0	0	0	0	0
Nov13 - Jan14	590	0	680	0	0	0	0	260	0
Feb14 - Apr14	625	0	785	0	0	0	0	1,805	0
May14 - Jul14	48	0	595	0	0	0	0	4,705	0
*Aug14 - Sep14	35	0	305	0	0	0	0	0	0
Sum	24,491	0	19,863	240,960	0	0	0	6,770	0

\* Since the EM&A data for August and September 2014 was not required to submit quarterly report, the waste amount for these months is extracted from monthly report.

Total waste amount generated under Stage 1 (combined Contract 1 and Contract 2)								
Inert C&D materials disposed of as public fill	Broken concrete	C&D wastes disposed as general refuse	Paper/cardboard packaging	Plastics	Metals	C&D materials reused on site	C&D materials reused in other projects	Chemical wastes
( in m3)	( in m3)	( in m3)	(in kg)	(in kg)	(in kg)	( in m3)	( in m3)	(in L)
57,659	775	31,375	327,960	100,192	821,604	296,326	140,223	10,200

**Waste amount generated under Stage 2 (Extracted from Annual Report)**

<b>Stage 2 - Contract No. HY/2012/06</b>									
Construction Period	Inert C&D materials disposed of as public fill	Broken concrete	C&D wastes disposed as general refuse	Paper/cardboard packaging	Plastics	Metals	C&D materials reused on site	C&D materials reused in other projects	Chemical wastes
	( in m3)	( in m3)	( in m3)	(in kg)	(in kg)	(in kg)	( in m3)	( in m3)	(in L)
Nov-13 - Oct-14	10,986	0	965	507	0	28	3,560	7,274	0
Nov-14 - Oct-15	19,600	0	1,135	80,247	90	7,458	7,458	11,530	0
Nov-15 - Oct-16	7,048	0	865	796	5,045	21,346	12,171	7,897	0
Nov-16 - Oct-17	15,079	1,508	2,623	836	6,517	51,162	12,128	6,760	0
Nov-17 - Oct-18	13,077	887	1,065	764	8,522	35,452	16,755	12,144	0
Nov-18 - Oct-19	5,058	619	1,305	1,030	7,277	43,542	14,115	8,214	0
Nov-19 - Oct-20	5,439	784	1,165	308	0	63,965	2,313	1,987	0
Nov-20 - Sep 21	119	43	785	563	0	0	306	48	0
Sum	76,406	3,841	9,908	85,051	27,451	222,953	68,806	55,854	0

<b>Stage 2 - Contract No. 02/HY/2015</b>									
Construction Period	Inert C&D materials disposed of as public fill	Broken concrete	C&D wastes disposed as general refuse	Paper/cardboard packaging	Plastics	Metals	C&D materials reused on site	C&D materials reused in other projects	Chemical wastes
	( in m3)	( in m3)	( in m3)	(in kg)	(in kg)	(in kg)	( in m3)	( in m3)	(in L)
Nov-16 - Oct-17	1,068	12	0	8	9	0	0	0	0
Nov-17 - Oct-18	137	5	0	6	5	0	0	0	0
Sum	1,205	17	0	14	14	0	0	0	0

**ERR Prediction - Summary of waste material disposal off site during the Construction Phase of the Project (Extracted from Table 7.4 of ERR)**

Activity	Material Type	Estimated total volumes (Non reusable within site)
Ground preparatory works	Site clearance	(Measured in Area of vegetation) Coverage 19.6 Ha, (17,000 m3 Non-inert material)
	Demolition materials	3,000m3 (Inert: 2,000 m3, non-inert:1000 m3)
	Demolition of existing bituminous pavement	125,500 m3 (inert)
Earthworks	Excavated Materials - General Fill (Soft material, Grade III IV or V rock)	93,100m3 84,600 m3 (Inert) 8,500 m3 (Non-Inert)
	Excavation Materials - rock (Grade II or better)	25,900 m3 (inert)
General works	Construction waste	20,000m3 (Inert: 11,000 m3) (Non-inert: 9,000 m3)
	Chemical waste	450 litres/month
	General refuse (generated by site staff)	4,896 kg/week (Assumes max of 600 staff and a 6 day week and 1.36kg/person/day)
	Bentonite slurries	Dependent upon site practices

The prediction for waste generated during Operation Phase would not cover in this report.

**Application in Waste Management Hypothesis**

Items compared in Hypothesis	Estimated total volumes in ERR	Calculation	Result
Inert Waste	Demolition materials - 2000 m3	2,000 m3 + 125,500 m3 + 84,600 m3 + 25,900 m3 + 11,000 m3	249, 000 m3
	Demolition of existing bituminous pavement - 125,500 m3		
	Excavated Materials - General Fill (Soft material, Grade III IV or V rock) - 84,600 m3 (Inert waste)		
	Excavation Materials - rock (Grade II or better) - 25,900 m3		
	General works (Construction waste) - 11,000 m3 (Inert waste)		
Non - Inert Waste	Site clearance - 17,000 m3	17,000 m3 + 1,000 m3 + 8,500 m3 + 9,000 m3	35,500 m3
	Demolition materials - 1000 m3		
	Excavated Materials - General Fill (Soft material, Grade III IV or V rock) - 8,500 m3 (Non-Inert)		
	General works (Construction waste) - 9,000 m3 (Non-Inert waste)		
General refuse	General refuse (generated by site staff)	#1#2#3 (4,896kg/week x 613 weeks) / 1240 kg/m3	2,420 m3
Chemical Waste	Chemical Waste	#4 50 L/month x 143 months	64,350 L

# 1. 620 weeks (total construction period for Stage 1&2). As the Contractor recorded the amount of disposed of general refuse and non-inert waste in unit Cubic meter (m3), so the predicted amount of general refuse in ERR should be converted from kilogram (kg) to m3 with general refuse density at 1240 kg/m3.

# 2. As the Contractor recorded the amount of disposed of general refuse and non-inert waste in unit Cubic meter (m3), so the predicted amount of general refuse in ERR should be converted from kilogram (kg) to m3 with general refuse density at 1240 kg/m3.

#3. According to a report from Audit Commission (Section 5.19 at Government's efforts in managing municipal solid waste), from 1993 to 2011, the three landfills received waste with a total weight of 98.3 million tonnes, which had used up 79 million m3 of the total capacity of 139 million m3 of the three landfills. Accordingly, the weight-to-volume ratio during the period was 1.24 ton (1240kg) of waste: 1 m3 of landfill space, this ratio is adopted as general refuse density.

[https://www.aud.gov.hk/pdf\\_e/e65ch01.pdf](https://www.aud.gov.hk/pdf_e/e65ch01.pdf)

#4. 143 months (total construction period for Stage 1&2)

## Environmental Impact Hypotheses Tested for Waste Management

Waste types	Inert waste (m3)			
*Actual amount (in m3)	Stage 1	Stage 2		
		HY2012/06	02/HY/2015	CV/2012/09
	58,434	80,247	1,222	112,002
		193,471		
251,905				
Prediction in ERR (in m3)	249,000			

\* Inert C&D materials disposed of as public fill + Broken concrete

Waste types	Non-inert waste and General Refuse			
*Actual amount (in m3)	Stage 1	Stage 2		
		HY2012/06	02/HY/2015	CV/2012/09
	31,375	9,908	0	8,465
		18,373		
49,748				
*Prediction in ERR (in m3)	Non-inert waste		General Refuse	
	35,500		2,420	
	37,920			

\* The amount of general refuse and non-inert waste were predicted separately in ERR, but the contractor treated non-inert waste and general refuse in the same method, which was disposed to landfill. The predicted amount of general refuse and non-inert waste in ERR should be summed during comparison.

Waste types	Chemical waste			
Actual amount (in L)	Stage 1	Stage 2		
		HY2012/06	02/HY/2015	CV/2012/09
	10,200	0	0	4,243
		4,243		
14,443				
Prediction in ERR (in L)	64,350			

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**APPENDIX I  
STATISTICS ON NON-COMPLIANCE,  
COMPLAINTS, NOTIFICATION OF  
SUMMONS AND SUCCESSFUL  
PROSECUTIONS**

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## Appendix H

### Statistics on Non-compliance, 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	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
<b>Non-compliance</b>	12 June 2014	<p>Noise exceedance was recorded on 12 June 2014. According to the monitoring personnel who carried out monitoring field works, road traffic noise was dominant during the noise monitoring period.</p> <p>During the course of noise measurement, construction works carried out at Wo Hop Shek Pedestrian and Cyclist Bridge were general site cleaning and ground investigation. The operation noise of a drilling rig was unlikely leading to the exceedance due to the presence of noise barriers along the boundary of the working area.</p> <p>After investigation, the noise exceedance was therefore considered non-project-related.</p>	Noise	<p>The Contractor was recommended to:</p> <ol style="list-style-type: none"> <li>1) Continue implementing existing noise mitigation measures;</li> <li>2) Consider rescheduling works to time out of the examination time slots to minimize noise disturbance; and</li> <li>3) Communicate with Fanling Government Secondary School to inform the School of potential noisy construction activities in advance when the exam period approaches.</li> </ol>	Closed	6



Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
18 June 2014	<p>Noise exceedance was recorded on 18 June 2014. According to the monitoring personnel who carried out monitoring field works, road traffic noise was dominant during the noise monitoring period.</p> <p>During the course of noise measurement, construction works carried out at Wo Hop Shek Pedestrian and Cyclist Bridge were driving sheet pile at pile caps and trial pit excavation. Though the aforementioned works were in progress, the works area was completely screened by the existing noise barriers and residential buildings at Dawning View. Thus, the construction noise from the Project work was unlikely to be dominant during the noise monitoring period.</p> <p>After investigation, the noise exceedance was therefore considered non-project-related.</p>	Noise	<p>The Contractor was recommended to:</p> <ol style="list-style-type: none"> <li>1) Continue implementing existing noise mitigation measures;</li> <li>2) Consider rescheduling works to time out of the examination time slots to minimize noise disturbance;</li> <li>3) Communicate with Fanling Government Secondary School to inform the School of potential noisy construction activities in advance when the exam period approaches; and</li> <li>4) Decrease the frequency of sheetpiling works especially during the exam period.</li> </ol>	Closed	

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
15 January 2015	<p>Noise exceedance was recorded on 18 June 2014. According to the monitoring personnel who carried out the monitoring field works, road traffic noise was dominant during the noise monitoring period.</p> <p>During the noise measurement, the construction works carried out included the laying of concrete blocks for W77A, and pile cap excavation and installation of temporary support for AW1.</p> <p>Though the aforementioned works were in progress, the works area was completely screened by the existing noise barriers and residential buildings at Dawning View. Thus, the construction noise from the Project work was unlikely to be dominant during the noise monitoring period.</p>	Noise	<p>The Contractor was recommended to:</p> <ol style="list-style-type: none"> <li>1) Continue implementing existing noise mitigation measures;</li> <li>2) Consider rescheduling works to time out of the examination time slots to minimize noise disturbance;</li> <li>3) Minimize the number of Powered Mechanical Equipments (PMEs) used each time; and</li> <li>4) Communicate with Fanling Government Secondary School to inform the School of potential noisy construction activities in advance when the exam period approaches.</li> </ol>	Closed	

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
	After investigation, the noise exceedance was therefore considered non-project-related.				
9 April 2018	<p>Noise exceedance was recorded on 9 April 2018. The construction works carried out during measurement were welding work, segment formwork, steel bar fixing and excavation. The PME's involved during the noise measurement were generator, lorry, excavator and dump truck. The number of plant operated during construction was considered to be minor and insignificant.</p> <p>The works area was completely screened by the existing noise barriers, existing elevated Pak Wo Road and residential buildings at Dawning View. Thus, the</p>	Noise	<p>The Contractor was recommended to:</p> <ol style="list-style-type: none"> <li>1) Continue implementing existing noise mitigation measures;</li> <li>2) Consider rescheduling works to time out of the examination time slots to minimize noise disturbance;</li> <li>3) Minimize the number of PME's used each time; and</li> <li>4) Communicate with Fanling Government Secondary School to inform the School of potential noisy construction activities in advance when the exam period approaches.</li> </ol>	Closed	

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
	<p>construction noise from the Project work was unlikely to be dominant during the noise monitoring period.</p> <p>After investigation, the noise exceedance was therefore considered non-project-related.</p>				
18 February 2019	<p>Noise exceedance was recorded on 18 February 2019. The construction works carried out during measurement were steel bar fixing and excavation. The PME involved during the noise measurement was excavator. The plant operated during construction was considered to be minor and insignificant.</p> <p>The works area was completely screened by the existing noise barriers, existing elevated Pak Wo Road and residential buildings at Dawning View. Thus, the construction noise from the Project work</p>	Noise	<p>The Contractor was recommended to:</p> <ol style="list-style-type: none"> <li>1) Continue implementing existing noise mitigation measures;</li> <li>2) Consider rescheduling works to time out of the examination time slots to minimize noise disturbance;</li> <li>3) Minimize the number of PMEs used each time; and</li> <li>4) Communicate with Fanling Government Secondary School to inform the School of potential noisy construction activities in advance when the exam period approaches.</li> </ol>	Closed	

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
	<p>was unlikely to be dominant during the noise monitoring period.</p> <p>After investigation, the noise exceedance was therefore considered non-project-related.</p>				
20 June 2019	<p>Noise exceedance was recorded on 20 June 2019. The construction works carried out during measurement formworking, roof installation and backfilling. The PME's involved during the noise measurement circular saws, grinder, drill, screw driver, excavator and dump truck.</p> <p>The works area was completely screened by the existing noise barriers, existing elevated Pak Wo Road and residential buildings at Dawning View. Thus, the construction noise from the Project work was unlikely to be dominant during the</p>	Noise	<p>The Contractor was recommended to:</p> <ol style="list-style-type: none"> <li>1) Continue implementing existing noise mitigation measures;</li> <li>2) Consider rescheduling works to time out of the examination time slots to minimize noise disturbance;</li> <li>3) Minimize the number of PME's used each time; and</li> <li>4) Communicate with Fanling Government Secondary School to inform the School of potential noisy construction activities in advance when the exam period approaches.</li> </ol>	Closed	

<b>Date Received</b>	<b>Subject</b>	<b>Parameter</b>	<b>Follow-up Action</b>	<b>Status</b>	<b>Total no. followed up by the ET since project commencement</b>
	<p>noise monitoring period.</p> <p>After investigation, the noise exceedance was therefore considered non-project-related.</p>				

	<b>Date Received</b>	<b>Subject</b>	<b>Parameter</b>	<b>Follow-up Action</b>	<b>Status</b>	<b>Total no. followed up by the ET since project commencement</b>
<b>Environmental complaints</b>	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.	Noise and Odour	<ol style="list-style-type: none"> <li>1.Extended the exhaust duct of drilling rig to a higher position for achieving a better gas dispersion and hence to reduce the impact to the neighbouring resident ;</li> <li>2.Reschedule of works to minimize noise disturbance to the neighbouring resident;</li> <li>3.To inspect the PMEs regularly and well maintained to ensure that they are operating efficiently and that exhaust emissions are not causing nuisance;</li> <li>4.Informing the nearby residents in advance (at least one day) of any noisy works to be carried out in the morning.</li> </ol>	Closed	10

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
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.	Air and Odour	<ol style="list-style-type: none"> <li>1. Extend the exhaust duct of drill rig to a higher position to achieve better gas dispersion to reduce the impact to the residents;</li> <li>2. Reschedule works to minimize disturbance to the residents;</li> <li>3. Inspect the machines regularly to ensure that they are operating efficiently and that exhaust emissions are not causing nuisance;</li> <li>4. Inform residents nearby in advance of any similar works;</li> <li>5. Confirm the implementation of dust mitigation measures during all construction and dusty activities to minimize fugitive dust generation;</li> <li>6. Maintain the frequency of environmental supervision (by the Contractor) to regularly review the adequacy and effectiveness of dust suppression measures to suit the</li> </ol>	Closed	



Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
			construction progress; 7. Inform the complainant before dusty activities are carried out; 8. Foster better public relations with the sensitive receivers and complainants nearby.		
23 October 2014	<p>EPD referred an air complaint on 24 October 2014.</p> <p>A resident complained against the excavation works of Tai Wo Service Road West between Nam Wah Po &amp; Tai Hang Tsuen, which have piled up high stockpiles, causing serious dust nuisance to his house.</p> <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>	Air	1. Reschedule works to minimize disturbance to the residents; 2. Confirm the implementation of dust mitigation measures during all construction and dusty activities to minimize fugitive dust generation; 3. Maintain the frequency of environmental supervision (by the Contractor) to regularly review the adequacy and effectiveness of dust suppression measures to suit the construction progress; 4. Inform the complainant before dusty activities are carried out; and 5. Foster better public relations with the	Closed	

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
			sensitive receivers and complainants nearby.		
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>	Water	<ol style="list-style-type: none"> <li>1.Enhance preventive measures for muddy water discharge;</li> <li>2.Maintain the frequency of environmental supervision including the visual inspection of the discharge of treated water (by the Contractor) to regularly review the adequacy and effectiveness of muddy water control to suit the construction progress;</li> <li>3.Foster better public relations with the sensitive receivers and complainants nearby;</li> <li>4.Maintain properly all wastewater treatment units; and</li> <li>5.Follow the Discharge License of the</li> </ol>	Closed	

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
			Project strictly.		
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>	Odour	<p>1.Reschedule works to minimize odour nuisance to the neighbouring residences;</p> <p>2.Inspect the PMEs regularly and maintain them well to ensure that they are operating efficiently and that exhaust emissions are not causing nuisance; and</p> <p>3.Inform the nearby residents in advance (at least one day) of construction works to be carried out.</p>	Closed	

<b>Date Received</b>	<b>Subject</b>	<b>Parameter</b>	<b>Follow-up Action</b>	<b>Status</b>	<b>Total no. followed up by the ET since project commencement</b>
5 January 2017 (Referred by the Contractor on 13 January 2017)	<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>	Air	<ol style="list-style-type: none"> <li>1.Ensure all dust suppression measures are properly implemented to minimize fugitive dust generation;</li> <li>2. Review the adequacy and effectiveness of dust suppression measures implemented for different construction activities and conditions regularly;</li> <li>3.Foster better public relations with the sensitive receivers and complainants nearby; and</li> <li>4.Increase the frequency of road surface cleansing if necessary.</li> </ol>	Closed	

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
22 May 2017 (Referred by the Contractor on 23 May 2017)	<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>	Noise	<ol style="list-style-type: none"> <li>1.Ensure valid CNP is applied for construction works that operate during restricted hours;</li> <li>2.Strictly follow all terms and conditions of a valid CNP;</li> <li>3.Communicate with operation team to draw their attention on relevant Noise Control Ordinance;</li> <li>4.Inspect the PMEs regularly and well maintain them to ensure that they are operating efficiently and in good condition</li> <li>5.Ensure all works and structures are secured at the end of each work day and</li> <li>6.Foster better public relations with the sensitive receivers and complainants nearby.</li> </ol>	Closed	

Date Received	Subject	Parameter	Follow-up Action	Status	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>	Noise	<ol style="list-style-type: none"> <li>1. Strictly follow all terms and conditions of a valid CNP;</li> <li>2. Communicate with operation team to draw their attention on relevant Noise Control Ordinance;</li> <li>3. Inspect the PMEs regularly and well maintain them to ensure that they are operating efficiently and in good condition;</li> <li>4. Display the copy of CNP at the construction site entry/exit area for public information;</li> <li>5. Review and relocate the position of fixed plant to minimize nuisance to the neighboring properties and public; and Foster better public relations with the sensitive receivers and complainants nearby.</li> </ol>		

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
<p>28 September 2019</p> <p>(Referred by the EPD on 28 October 2019)</p>	<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>	<p>Closed</p>	<p>28 September 2019</p> <p>(Referred by the EPD on 28 October 2019)</p>		

Date Received	Subject	Parameter	Follow-up Action	Status	Total no. followed up by the ET since project commencement
<p>28 October 2019</p> <p>(Referred by the EPD on 14 November 2019)</p>	<p>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.</p> <p>The complainant complained about dust and noise nuisance caused continuously by road construction works at Tai Wo Service Road West.</p>	<p>Closed</p>	<p>28 October 2019</p> <p>(Referred by the EPD on 14 November 2019)</p>		



	<b>Date Received</b>	<b>Subject</b>	<b>Status</b>	<b>Total no. followed up by the ET since project commencement</b>
<b>Notification of summons</b>	-	-	-	<b>0</b>
<b>Successful Prosecutions</b>	-	-	-	<b>0</b>

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

	<b>Date Received</b>	<b>Subject</b>	<b>Status</b>	<b>Total no. followed up by the ET since project commencement</b>
<b>Non-compliance</b>	-	-	-	0
<b>Environmental complaints</b>	-	-	-	0
<b>Notification of summons</b>	-	-	-	0
<b>Successful Prosecutions</b>	-	-	-	0