



**CONTRACT NO: HY/2019/18**

**WANCHAI DEVELOPMENT PHASE II AND CENTRAL  
WANCHAI BYPASS  
SAMPLING, FIELD MEASUREMENT AND TESTING WORKS  
(STAGE 4)**

**ENVIRONMENTAL PERMIT NO. EP-376/2009 AND FURTHER  
ENVIRONMENTAL PERMIT NO. FEP-01/376/2009 AND  
FEP-02/376/2009**

**FINAL ENVIRONMENTAL MONITORING & AUDIT REVIEW  
REPORT**

**FOR WDII PROJECT WORKS FOR ROAD P2 UNDER CEDD**

**CLIENTS:**

**Civil Engineering and Development  
Department**

**and**

**Highways Department**

**PREPARED BY:**

**Lam Geotechnics Limited**

19/F, Remex Centre  
42 Wong Chuk Hang Road,  
H.K.

Telephone: (852) 2882-3939  
Facsimile: (852) 2882-3331  
E-mail: [info@lamenviro.com](mailto:info@lamenviro.com)  
Website: <http://www.lamenviro.com>

**CERTIFIED BY:**

Raymond Dai  
Environmental Team Leader

19 December 2023

19 December 2023

AECOM Asia Company Limited  
12/F Tower 2 Grand Central Plaza  
138 Shatin Rural Committee Road  
Shatin New Territories  
Hong Kong

By Post and Fax (2691 2649)

Attention: Mr. Conrad Ng

Dear Mr. Ng,

**Re: Wan Chai Development Phase II - Central-Wan Chai Bypass  
Final Environmental Monitoring and Audit Report for EP-376/2009,  
FEP-01/376/2009 and FEP-02/376/2009**

Reference is made to the Environmental Team's submission of the captioned Final Environmental Monitoring and Audit (EM&A) Report received by email on 19 December 2023 for our review and comment.

Please be informed that we have no adverse comment on the captioned submission. We write to verify the captioned submission in accordance with Condition 10.5 of the EM&A Manual.

Thank you very much for your attention and please do not hesitate to contact the undersigned should you have any queries.

Yours sincerely,



David Yeung  
Independent Environmental Checker

c.c.	CEDD	Attn: Ms. Maggie Wong	by fax: 2301 1277
	AECOM	Attn: Mr. Samson Lo	by fax: 2587 1877
	AECOM	Attn: Mr. Francis Leong/ Stephen Lai	by fax: 2691 2649
	Lam	Attn: Mr. Raymond Dai	by fax: 2882 3331

**TABLE OF CONTENTS**

**1 INTRODUCTION.....1**

    1.1 Scope of the Report .....1

    1.2 Structure of the Report .....1

**2 PROJECT BACKGROUND .....2**

    2.1 Background .....2

    2.2 Scope of the Project and Site Description.....2

    2.3 Project Organization and Contact Personnel .....2

**3 MONITORING REQUIREMENTS.....4**

    3.1 Noise Monitoring.....4

    3.2 Air Quality Monitoring .....6

**4 MONITORING RESULTS .....8**

    4.1 Noise Monitoring Results .....8

    4.2 Air Quality Monitoring Results .....10

    4.3 Waste Monitoring Results .....11

**5 ENVIRONMENTAL SITE AUDIT.....12**

**6 COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION .....13**

**7 CONCLUSION .....14**

    7.1 Construction of the Project .....14

    7.2 EM&A Programme .....14

**LIST OF FIGURES**

- Figure 2.1 Project Layout**
- Figure 3.1 Locations of Environmental Monitoring Stations**

**LIST OF APPENDICES**

- Appendix 3.0 Layouts of Representative Noise and Air Sensitive Receivers**
- Appendix 3.1 Action and Limit Level**
- Appendix 4.0 Event Action Plans**
- Appendix 4.1 Noise Monitoring Graphical Presentations**
- Appendix 4.2 Air Quality Monitoring Graphical Presentations**
- Appendix 5.1 Environmental Mitigation Implementation Schedule**
- Appendix 6.1 Complaint Log**

**EXECUTIVE SUMMARY**

- i. This is the Final Environmental Monitoring and Audit (EM&A) Review Report prepared by Lam Geotechnics Limited for Wan Chai Development Phase II and Central-Wan Bypass – Sampling, Field Measurement and Testing work under EM&A manual for Environmental Permit no. EP-376/2009. This report presents the environmental monitoring and audit findings during the period of May 2015 to November 2023.

Major construction works under taken during construction phase monitoring programme

- ii. The key purpose of the study area encompasses the Wan Chai harbourfront area. The area starts at the boundary of Central Reclamation Phase III (CRIII) at the west and connects to the existing Hung Hing Road at the east. The scope of the project includes:
  - A dual 2-lane primary distributor road, Road P2, approximately 0.6km in length; and
  - Other new primary and district distributor roads connecting to the slip roads of the Central-Wan Chai Bypass with a total length of approximately 0.7km.
- iii. The project also contains Schedule 2 DP that, under the EIAO, require Environmental Permits (EPs) to be granted by the DEP before they may be either constructed or operated. Below table summarises the DP under this Project.

Item	Designated Project	EIAO Reference
DP2	Road P2 and other roads which are classified as primary/district distributor roads	Schedule 2, Part I, A.1

- iv. The designated project work II (DP2) was awarded to China State – Build King Joint Venture HK/2012/08 (Contract Title: Wan Chai Development Phase II Central – Wan Chai Bypass at Wan Chai West) as part of the Project works by the Civil Engineering and Development Department (CEDD). The construction work under Contract no. HK/2012/08 was commenced on 13 May 2015.

Environmental Monitoring and Audit Works

- v. Summary table of the impact monitoring activities is listed below:

Noise Monitoring Station	Commencement Date	Suspension Date
M1a – Harbour Road Sports Centre / Footbridge for Harbour Road Sports Centre	19 May 2015	23 March 2019

Air Quality Monitoring Station	Commencement Date	Suspension Date
CMA5a / CMA5b – Children Playgrounds opposite to Pedestrian Plaza / Pedestrian Plaza	18 May 2015	26 March 2019
CMA 6a-WDII PRE Office	18 May 2015	26 March 2019

Waste Management

- vi. No waste generation were reported under EP-376/2009.

Complaints, Notifications of Summons and Successful Prosecutions

- vii. No environmental complaints were received in the reporting period. No notification of summons and successful prosecutions were received in the reporting period.

Site Inspections and Audit

- viii. The weekly site inspections were conducted according to EM&A manual requirement throughout the construction period. No non-compliance from the site audits was recorded throughout the reporting period.

Conclusion

- ix. The EM&A programme were found to be effective in monitoring impacts arising from the Project. The findings of the environmental monitoring program suggest that no adverse impacts on sensitive receivers at the designated monitoring locations were brought about the Project.
- x. In conclusion the Project was environmentally acceptable in terms of air quality and noise impact.

## 1 Introduction

### 1.1 Scope of the Report

- 1.1.1. Lam Geotechnics Limited (LGL) has been appointed under Contract HY/2019/18 – Wan Chai Development Phase II and Central Wan Chai Bypass – Sampling, Field Measurement and Testing works (Stage 4) to work as the Environmental Team (ET) under Environmental Permit nos. FEP-01/376/2009 and FEP-02/376/2009 of Environmental Permit no. EP-376/2009 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for Wan Chai Development phase II and Central-Wan Chai Bypass (Register No.: AEIAR-125/2008) and in the EM&A Manual of the approved EIA Report for Central-Wan Chai Bypass and Island Eastern Corridor Link (Register No. AEIAR-041/2001).
- 1.1.2. SCL Contractor has been granted a further environmental permit (FEP-03/376/2009) on 02 June 2020 to undertake the construction of part of other part of the Road P2 and other roads which are classified as primary/district distributor roads which are implemented and reported by a separate ET/IEC of SCL Contractor.
- 1.1.3. This report presents the environmental monitoring and audit findings during the period of May 2015 to November 2023 covers the work areas FEP-01/376/2009 and FEP-02/376/2009 of EP-376/2009, as listed in **Section 1.1.1**.

### 1.2 Structure of the Report

- Section 1 Introduction** – details the scope and structure of the report.
- Section 2 Project Background** – summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.
- Section 3 Monitoring Requirements** – summarizes all monitoring parameters, monitoring methodology and equipment, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.
- Section 4 Monitoring Results** – summarizes the monitoring results and exceedances recorded throughout the monitoring programme.
- Section 5 Environmental Site Audit** – summarizes the findings of site inspections undertaken during the construction period, with a review of any relevant follow-up actions during the construction period.
- Section 6 Complaints, Notification of summons and Prosecution** – summarizes the cumulative statistics on complaints, notification of summons and prosecution.
- Section 7 Conclusion**

## 2 Project Background

### 2.1 Background

2.1.1. Wan Chai Development phase II and Central-Wan Chai Bypass (hereafter called “the Project”) are Designated Project (DP) under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). The Environmental Impact Assessment (EIA) Report for Wan Chai Development phase II and Central-Wan Chai Bypass (Register No.: AEIAR-125/2008) has been approved on 11 December 2008.

### 2.2 Scope of the Project and Site Description

2.2.1. The design and construction of Wan Chai Development Phase II and Central Wanchai Bypass involves the construction and operation of primary and district distributor roads is shown in **Figure 2.1**.

2.2.2. The key purpose of the study area encompasses the Wan Chai harbourfront area. The area starts at the boundary of Central Reclamation Phase III (CRIII) at the west and connects to the existing Hung Hing Road at the east. The scope of the project includes:

- A dual 2-lane primary distributor road, Road P2, approximately 0.6km in length; and
- Other new primary and district distributor roads connecting to the slip roads of the Central-Wan Chai Bypass with a total length of approximately 0.7km.

2.2.3. The project also contains Schedule 2 DP that, under the EIAO, require Environmental Permits (EPs) to be granted by the DEP before they may be either constructed or operated. **Table 2.1** summarises the DP under this Project. **Figure 2.1** shows the locations of this Schedule 2 DP.

**Table 2.1 Schedule 2 Designated Projects under this Project**

Item	Designated Project	EIAO Reference
DP2	Road P2 and other roads which are classified as primary/district distributor roads	Schedule 2, Part I, A.1

2.2.4. The designated project work II (DP2) was awarded to China State – Build King Joint Venture HK/2012/08 (Contract Title: Wan Chai Development Phase II Central – Wan Chai Bypass at Wan Chai West) as part of the Project works by the Civil Engineering and Development Department (CEDD). The construction work under Contract no. HK/2012/08 was commenced on 13 May 2015.

### 2.3 Project Organization and Contact Personnel

2.3.1. Civil Engineering and Development Department and Highway Department are the overall project controllers for the Wan Chai Development Phase II and Central-Wan Chai Bypass respectively. For the construction phase of the Project, Project Engineer, Contractor(s),

Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.

2.3.2. The proposed project organization, key parties and roles are summarized in **Table 2.2**:

**Table 2.2 Contact Details of Key Parties and Roles**

Party	Role
CEDD	Project Proponent / Permit Holder
AECOM	Engineer's Representative for WDII
China State - Build King JV	Contractor of Contract no. HK/2012/08 (the permit holder of FEP-01/376/2009 and FEP-02/376/2009)
Ramboll Hong Kong Limited	Independent Environmental Checker
Lam Geotechnics Limited	Environmental Team

2.3.3 Contract HK/2012/08 under CEDD is the main works contract to construct part of the Road P2 and other roads as indicated in Figure 2.1, has been granted FEP-01/376/2009 and FEP-02/376/2009 on 31 March 2015 and 01 August 2016 respectively. The construction works were commenced on 13 May 2015.

2.3.4 As confirmed by Engineer's Representative, Contract HK/2012/08 had completed construction works on 31 March 2020 and the corresponding FEP-01/376/2009 and FEP-02/376/2009 were surrendered on 06 April 2020.



### 3 Monitoring Requirements

#### 3.1 Noise Monitoring

##### Noise Monitoring Stations

- 3.1.1 The noise monitoring stations for the Project are listed in **Table 3.1** and shown in **Figure 3.1**. Corresponding noise sensitive receivers as identified in EIA can be referred to **Appendix 3.0**. **Appendix 3.1** shows the established Action/Limit Levels for the monitoring works.

**Table 3.1 Noise Monitoring Station**

Station	Description
M1a*	Harbour Road Sports Centre / Footbridge for Harbour Road Sports Centre (M1a)* Rooftop of Wan Chai Ferry Pier (M1b, alternative to M1a due to Shatin Central Link construction)**

Remark\*: With respect to the demolition of Ex-Harbour Road Sports Centre, the respective noise monitoring station M1a – Harbour Road Sports Centre were finely adjusted to the Footbridge for Harbour Road Sports after May 2017.  
 Remark\*\*: The monitoring station M1a was relocated as M1b – Rooftop of Wan Chai Ferry Pier on 2 November 2020.

##### Noise Monitoring Parameters, Frequency and Duration

- 3.1.2 The construction noise level was measured in terms of the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ).  $L_{eq}$  (30 minutes) was used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays. For all other time periods,  $L_{eq}$  (5 minutes) was employed for comparison with the Noise Control Ordinance (NCO) criteria. Supplementary information for data auditing, statistical results such as L10 and L90 were also obtained for reference.
- 3.1.3 Noise monitoring was carried out at all the designated monitoring stations. The monitoring frequency depended on the scale of the construction activities. The following is an initial guide on the regular monitoring frequency for each station on a weekly basis when noise generating activities were underway:
- One set of measurements between 0700 and 1900 hours on normal weekdays.
- 3.1.4 If construction works were extended to include works during the hours of 1900 – 0700 as well as public holidays and Sundays, additional weekly impact monitoring was carried out during respective restricted hour's periods.

##### Monitoring Equipment

- 3.1.5 As referred to the Technical Memorandum <sup>TM</sup> issued under the NCO, sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1)

and 804: 1985 (Type 1) specifications were used for carrying out the noise monitoring. Immediately prior to and following each noise measurement the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0 dB.

- 3.1.6 Noise measurements was not carried out in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed was checked with a portable wind speed meter capable of measuring the wind speed in m/s.

### 3.2 Air Quality Monitoring

#### Air Quality Monitoring Stations

3.2.1 The air monitoring stations for the Project are listed in **Table 3.2** and shown in **Figure 3.1**. Corresponding air sensitive receivers as identified in EIA can be referred to **Appendix 3.0**. **Appendix 3.1** shows the established Action/Limit Levels for the monitoring works.

**Table 3.2 Air Monitoring Station**

Station ID	Monitoring Location	Description
CMA5b	Pedestrian Plaza	Wan Chai
CMA6a	WDII PRE Office	Wan Chai

#### Air Monitoring Parameters, Frequency and Duration

- 3.2.2 One-hour and 24-hour TSP levels were measured to indicate the impacts of construction dust on air quality. The 24-hour TSP level was measured by following the standard high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.
- 3.2.3 All relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and any other local atmospheric factors affecting or affected by site conditions, etc., were recorded down in detail.
- 3.2.4 For regular impact monitoring, the sampling frequency of at least once in every six-days, was strictly observed at all the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six-days was undertaken when the highest dust impact occurred.

#### Sampling Procedure and Monitoring Equipment

- 3.2.5 High volume samplers (HVSs) in compliance with the following specifications were used for carrying out the 1-hour and 24-hour TSP monitoring:
- 0.6 – 1.7 m<sup>3</sup> per minute adjustable flow range;
  - equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
  - installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
  - capable of providing a minimum exposed area of 406 cm<sup>2</sup>;
  - flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;

- equipped with a shelter to protect the filter and sampler;
- incorporated with an electronic mass flow rate controller or other equivalent devices;
- equipped with a flow recorder for continuous monitoring;
- provided with a peaked roof inlet;
- incorporated with a manometer;
- able to hold and seal the filter paper to the sampler housing at horizontal position;
- easily changeable filter; and
- capable of operating continuously for a 24-hour period.

3.2.6 Initial calibration of dust monitoring equipment was conducted upon installation and thereafter at bi-monthly intervals. The transfer standard was traceable to the internationally recognized primary standard and be calibrated annually. The concern parties such as IEC was properly document the calibration data for future reference. All the data was converted into standard temperature and pressure condition.

#### Laboratory Measurement / Analysis

- 3.2.7 A clean laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments to handle the dust samples collected, was available for sample analysis, and equipment calibration and maintenance. The laboratory was HOKLAS accredited.
- 3.2.8 An alternative non-HOKLAS accredited laboratory was set-up for carrying out the laboratory analysis, the laboratory equipment was approved by the ER on 8 February 2011 and the measurement procedures were witnessed by the IEC. Any measurement performed by the laboratory was demonstrated to the satisfaction of the ER and IEC. IEC was regularly audit to the measurement performed by the laboratory to ensure the accuracy of measurement results.
- 3.2.9 Filter paper of size 8" x 10" was labelled before sampling. It was a clean filter paper with no pinholes, and conditioned in a humidity-controlled chamber for over 24-hours and pre-weighed before used for the sampling.
- 3.2.10 After sampling, the filter paper loaded with dust was kept in a clean and tightly sealed plastic bag. The filter paper was then returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance was regularly calibrated against a traceable standard.
- 3.2.11 All the collected samples were kept in a good condition for 6 months before disposal.

#### 4 Monitoring Results

4.0.1 The Event Action Plan for construction noise, air quality and water quality are presented in **Appendix 4.0**.

#### 4.1 Noise Monitoring Results

4.1.1 The noise monitoring limit level exceedances in reporting period is summarized in **Table 4.1** below.

**Table 4.1 Summary of noise limit level exceedances**

Year	Limit level	M1a	Total
2015	Non-Project related	5	5
	Project related	0	
2016	Non-Project related	17	17
	Project related	0	
2017	Non-Project related	17	17
	Project related	0	
2018	Non-Project related	5	5
	Project related	0	
2019	Non-Project related	0	0
	Project related	0	

4.1.2 The major construction activities involved site preparation works, excavation, utilities and drainage works in 2015 (since May 2015). Total 5 limit level exceedance was recorded in the reporting period. After the investigation, the exceedances were concluded as non-project related. No action level exceedance were confirmed from noise complaints received in 2015.

4.1.3 The major construction activities involved utilities and drainage works in 2016. Total 17 limit level exceedance was recorded in the reporting period. After the investigation, the exceedances were concluded as non-project related. No action level exceedance were confirmed from noise complaints received in 2016.

4.1.4 The major construction activities involved drainage and road works in 2017. Total 17 limit level exceedances were recorded in the reporting period. After the investigation, the exceedances were concluded as non-project related. No action level exceedance related to noise complaint was recorded in 2017.

4.1.5 The major construction activities involved drainage, road and asphalt paving works in 2018. Total 5 limit level exceedances were recorded in the reporting period. After the investigation,

the exceedances were concluded as non-project related. No action level exceedance related to noise complaint was recorded in 2018.

- 4.1.6 The major construction activities involved drainage, road and landscaping works in 2019. No limit level exceedance was recorded in scheduled noise monitoring in the reporting period. No action level exceedance were confirmed from noise complaints received in 2019.
- 4.1.7 Details of graphical presentation of noise monitoring result can refer to **Appendix 4.1**. The complaint investigation shall refer to **Appendix 4.1**.

**4.2 Air Quality Monitoring Results**

4.2.1 The air quality monitoring exceedances in reporting period is summarized in **Table 4.2**.

**Table 4.2 Summary of air quality exceedances**

Year	Parameter	CMA 5b	CMA 6a	Total
2015	24hr TSP	0	0	0
	1hr TSP	0	0	
2016	24hr TSP	1LL	0	6
	1hr TSP	5AL	0	
2017	24hr TSP	3AL / 1LL	0	22
	1hr TSP	14AL / 4LL	0	
2018	24hr TSP	0	0	1
	1hr TSP	1AL	0	
2019	24hr TSP	0	0	1
	1hr TSP	1AL	0	

4.2.2 The major construction activities involved site preparation works, excavation, utilities and drainage works in 2015 (since May 2015). No exceedance was recorded in the reporting period.

4.2.3 The major construction activities involved utilities and drainage works in 2016. Total 1 limit level of 24hr TSP and 5 action level of 1hr TSP exceedances were recorded in the reporting period. After the investigation, the exceedances were concluded as non-project related.

4.2.4 The major construction activities involved drainage and road works in 2017. Total 3 action level and 1 limit level of 24hr TSP whereas 14 action level and 4 limit level of 1hr TSP exceedances were recorded in the reporting period. After the investigation, the exceedances were concluded as non-project related.

4.2.5 The major construction activities involved drainage, road and asphalt paving works in 2018. Total 1 action and no limit level of 1hr TSP was recorded in the reporting period. After the investigation, the exceedances were concluded as non-project related.

4.2.6 The major construction activities involved drainage, road and landscaping works in 2019. Total 1 action level and no limit level of 1hr TSP exceedances was recorded in the reporting period. After the investigation, the exceedances were concluded as non-project related.

4.2.7 Details of graphical presentation of air monitoring result can referred to **Appendix 4.2**.



#### **4.3 Waste Monitoring Results**

4.3.1 No waste generation were reported for FEP-01/376/2009 and FEP-02/376/2009 under EP-376/2009.



## 5 Environmental Site Audit

- 5.0.1 Site audit was carried out by representatives of the Contractor, Engineer and ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The representative of the IEC joined the site inspections once per month.
- 5.0.2 No non-compliance was recorded during the site inspections throughout the construction period. Observations and recommendations recorded during the site inspections were summarized in each of the EM&A reports.
- 5.0.3 According to EIA Study Report, Environmental Permit and EM&A Manual of the Project, the mitigation measures detailed in the documents were recommended to be implemented during the construction phase. A summary of the Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix 5.1**.

### 5.1 Landscape Monitoring

- 5.1.1 As confirmed by ER, all landscape works for FEP-01/376/2009 and FEP-02/376/2009 under EP-376/2009 were completed during constructions phase; 12-month Landscape Establishment Monitoring on planting works by ET in quarterly basis as per requirement under the EM&A manual has been completed.
- 5.1.2 The planting works for FEP-01/376/2009 and FEP-02/376/2009 associated with EP-376/2009 were monitored during the 12-month Establishment Landscape Monitoring period to ensure the compliance with the intended aims of the measures.
- 5.1.3 Shrubs planting, new trees, transplanted trees and compensatory trees planted were provided as per the design in the operation landscape plan submitted under EP-376/2009.
- 5.1.4 5-year Long-term Operation Landscape Monitoring for the part of project under WDII project works associated with EP-376/2009 has been carried out and the implementation are summarized in **Table 5.1**.

**Table 5.1 Summary Table of Landscape Monitoring Implementation**

FEP No.	Contract No. & Title	Landscape Establishment Monitoring implementation	Long-term Landscape Operation Monitoring implementation <sup>1</sup>
FEP-01/376/2009, FEP-02/376/2009	Contract No. HK/2012/08: Wan Chai Development Phase II- Central-Wan Chai Bypass at Wan Chai West	January 2020 – January 2021 (completed by ET)	January 2020 – January 2024 (completed by ET) February 2024 (to be completed by LCSD)

**6 Complaints, Notification of Summons and Prosecution**

- 6.0.1 No complaints were recorded with respect to construction of Road P2 in the reporting period.
- 6.0.2 No summons nor successful prosecutions were recorded in the reporting period.
- 6.0.3 The details of cumulative complaint log and updated summary of complaints are presented in **Appendix 6.1**.
- 6.0.4 Cumulative statistic on complaints and successful prosecutions are summarized in **Table 6.1** and **Table 6.2** respectively.

**Table 6.1 Cumulative Statistics on Complaints**

Reporting Period	No. of Complaints
May 2015 (construction commencement) to Nov 2023	0
<b>Total</b>	<b>0</b>

**Table 6.2 Cumulative Statistics on Successful Prosecutions**

Environmental Parameters	Cumulative No. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

**7 Conclusion**

**7.1 Construction of the Project**

- 7.0.1 The Project was implemented in accordance with the conditions stipulated in the Environmental Permits.
- 7.0.2 Construction works of all the contracts under the Project were completed with FEP surrender application submitted. The details are summarized in **Table 7.1**.

**Table 7.1 Details of Individual Contracts under the Project**

Contract No.	Associated DP(s)	Date of Work Completion Date (with FEP surrender) / Substantial Completion Date
HK/2012/08	DP2	Construction works was completed with FEP-01/376/2009 & FEP-02/376/2009 surrendered by contractor and found in order by EPD on 06 April 2020.

Remarks: SCL Contractor has granted FEP-03/376/2009 on 2 June 2020 to undertake the construction of part of the Road P2 under EP376/2009. EM&A works associated with FEP-03/376/2009 shall be implemented and reported by a separate ET/IEC of SCL Contractor.

**7.2 EM&A Programme**

Validity of EIA Predictions

- 7.2.1 It is predicted in the EIA reports that with the implementation of the recommended mitigation measures, there would be no unacceptable nor residual noise, air and water quality impacts arising from the Project-related construction works.

Comments on Overall EM&A programme

- 7.2.2 The mitigation measures detailed in the Environmental Permit, the EM&A Manual and the EIA report were implemented throughout the whole project period. With the environmental monitoring and site inspection to directly ensure the timely implementation of mitigation measures during the Project, the environmental performance of the Project was acceptable. Analysis of all EM&A data collected throughout the construction periods also demonstrated the environmental acceptability of the Project.
- 7.2.3 The overall performance of the monitoring methodology adopted and environmental management system in this Project was effective.

Overall EM&A Data

- 7.2.4 Baseline and impact air and noise monitoring were carried out according to the requirements in the EM&A Manual. The monitoring data analysis shown that the environmental conditions generally return to baseline condition.

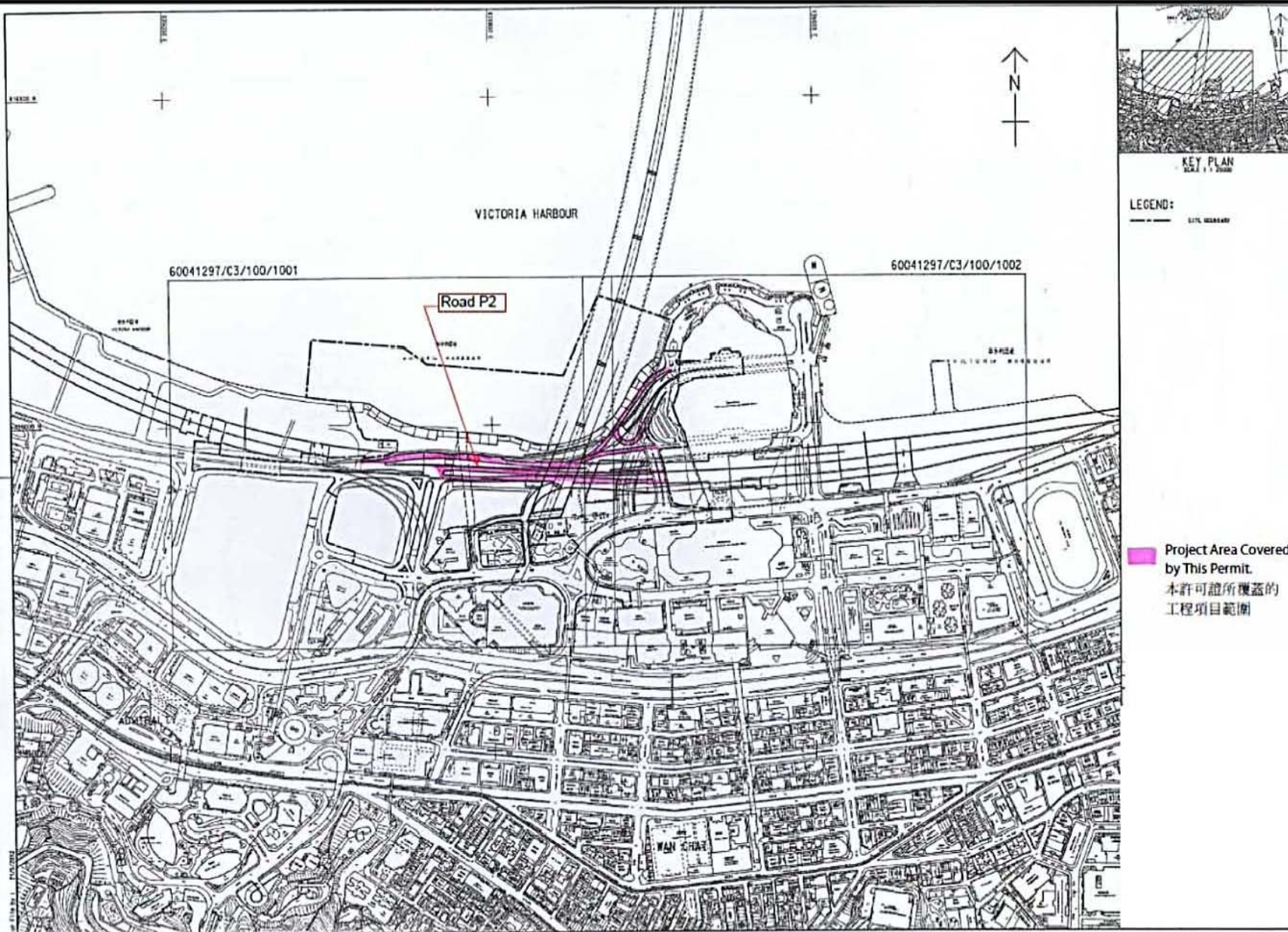
### Conclusions

- 7.2.5 The EM&A programme was found to be effective in monitoring impacts arising from the Project. The findings of the environmental monitoring programme suggest that no adverse impacts on sensitive receivers were brought about by the Project. In conclusion, the Project was environmentally acceptable in terms of noise, air quality and water discharge and waste disposal.
- 7.2.6 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.



**Figure 2.1**

**Project Layout**



**Project Title** : Road P2 and other roads which are classified as primary/district distributor roads (referred to as “DP2” in the WDII&CWB EIA Report)

工程項目名稱：P2 路及其他分類為主要幹路或地區幹路的道路(WDII&CWB 環評報告內稱“DP2”)

**Environmental Permit No.** : FEP-01/376/2009

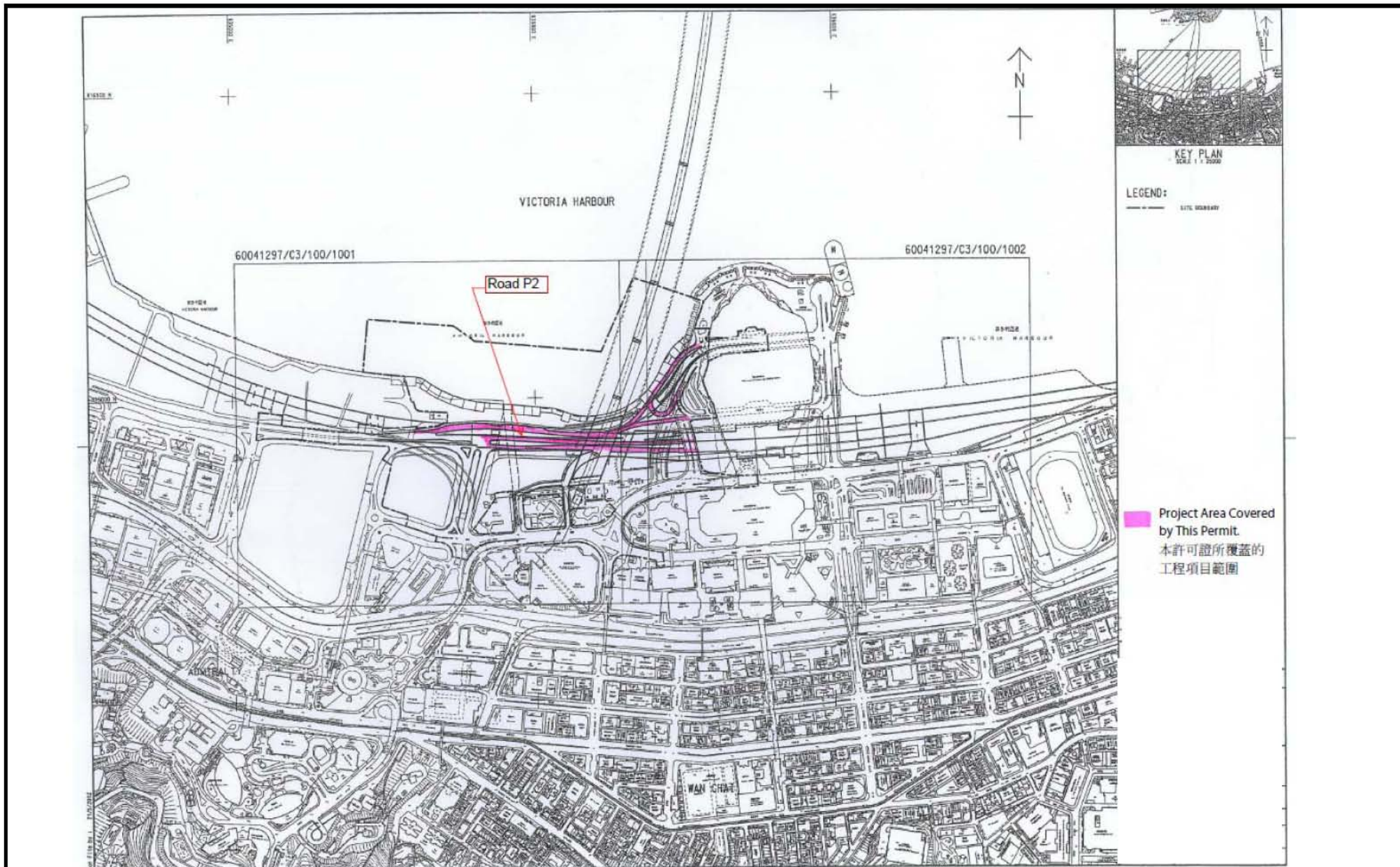
環境許可證編號 : FEP-01/376/2009

**Figure 1A : Location of the Project**

圖 1A: 工程項目位置圖

(This figure was prepared based on Figure 1b in the Application for Further Environmental Permit (Application No. FEP-161/2015))

(本圖是根據申請新的環境許可證(申請書編號 FEP-161/2015)內的圖 1b 編製)



Project Title : Road P2 and other roads which are classified as primary/district distributor roads (referred to as “DP2” in the WDII&CWB EIA Report)

工程項目名稱：p2 路及其他分類為主要幹路或地區幹路的道路(WDII&CWB 環評報告內稱“DP2”)

Environmental Permit No. : FEP-02/376/2009

環境許可證編號 : FEP-02/376/2009

Figure 1A : Location of the Project

圖 1A: 工程項目位置圖

(This figure was prepared based on Figure 1b in the Application for Further Environmental Permit (Application No.: FEP-170/2016)

(本圖是根據申請新的環境許可證(申請書編號 FEP-170/2016)內的圖 1b 編製)



**Figure 3.1**

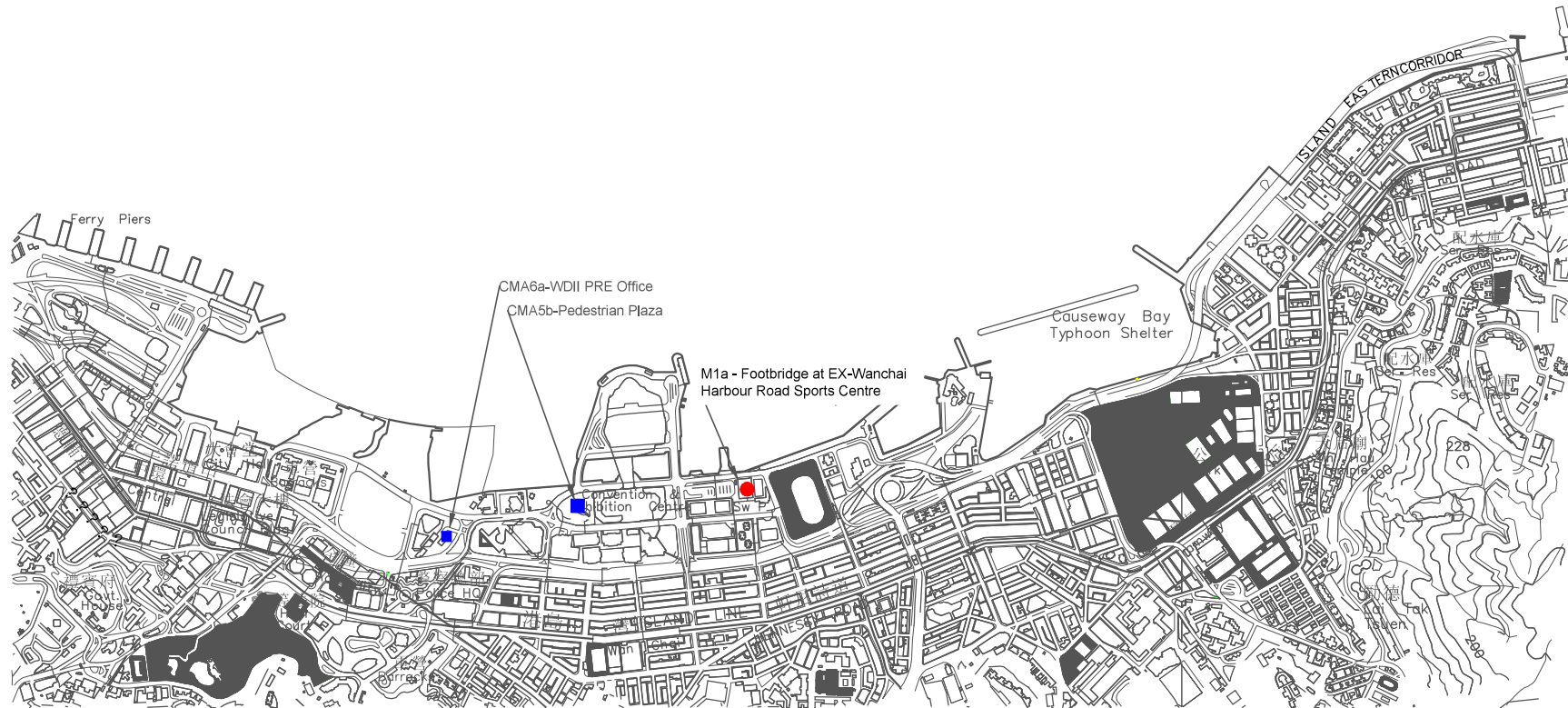
**Locations of Environmental Monitoring Stations**



**Legend**

● Noise Monitoring Station

■ Air Monitoring Station



**LOCATIONS OF AIR QUALITY AND NOISE MONITORING STATIONS**



## **Appendix 3.0**

### **Location plans of Representative Noise and Air Sensitive Receivers**

# N1,N2 - NSRs associated with FEP-01/376/2009 and FEP-02/376/2009



NSR	Description	Use	No. of Floors	NSR for Assessment			
				Road Traffic Noise	Construction Noise	Ventilation Shaft Noise	PTI and Helicopter Noise
N1	HKAPA (Open Arena)	Performing Arts Centre	G/F	✓	✓		
N2	Causeway Centre	Residential	42	✓	✓		✓
N3	Gloucester Road 169-170	Residential	12	✓	✓		
N4	Kam Kwok Building	Residential	18	✓			
N5	Hyde Centre	Residential	22	✓			
N6	Elizabeth House	Residential	21	✓	✓		
N7	Riviera Mansion	Residential	15	✓			
N8	Marco Polo Mansion	Residential	15	✓	✓		
N9	Viking Garden	Residential	25	✓			
N10	Victoria Court	Residential	18	✓			
N11	Mayson Garden	Residential	24	✓	✓		
N12	Gordon House	Residential	15	✓			
N13	Belle House	Residential	24	✓	✓		
N14	Hoi Tao Building	Residential	30	✓			
N15	Staff Quarters of FEHD	Residential	4	✓	✓	✓	
N16	Victoria Centre	Residential	30	✓			
N17	Harbour Heights	Residential	44	✓	✓		
N17-A	Harbour Heights	Residential	44	✓			
N18	City Garden, Block 10	Residential	27	✓	✓		
N18-A	City Garden, Block 11	Residential	27	✓			
N18-B	City Garden, Block 10	Residential	27	✓			
N19	City Garden, Block 7	Residential	27	✓			
N19-A	City Garden, Block 7	Residential	27	✓			
N20	Hong Kong Baptist Church Henrietta Secondary School	Educational Institution	6	✓	✓		
N21	Provident Centre, Block 1	Residential	25	✓			
N22	Provident Centre, Block 6	Residential	25	✓	✓		
N23	Provident Centre, Block 17	Residential	25	✓			
P1-A	Planned location for Re-provisioned Tin Hau Temple (West Facing Façade)	Temple	1	✓		✓	
P1-B	Planned location for Re-provisioned Tin Hau Temple (South Facing Façade)	Temple	1	✓			
P2	A land zoned as "CDA(1)" near Oil Street	CDA(1)	53	✓			
P3	A land zoned as CDA near Oil Street	CDA	34	✓			

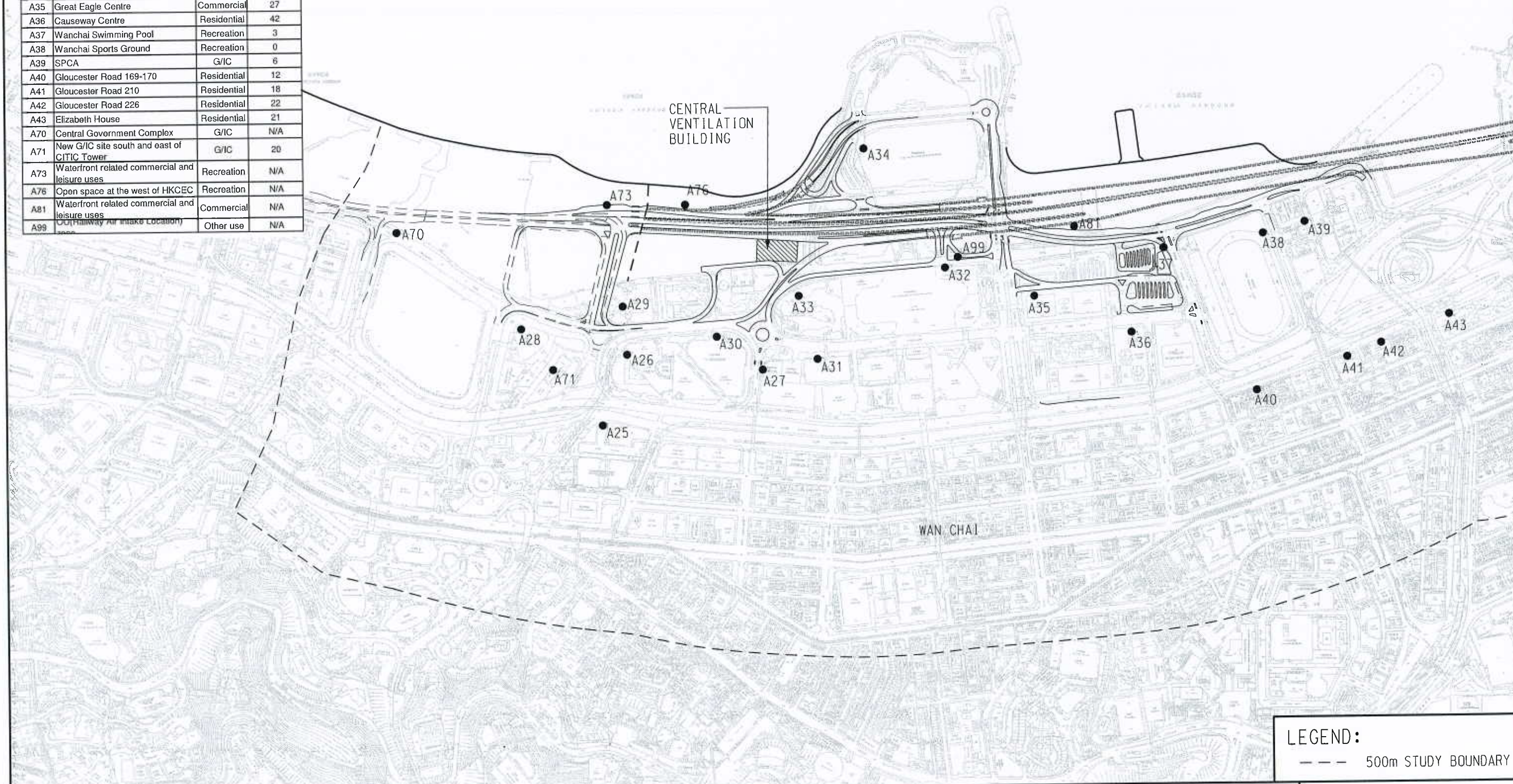


**LEGEND:**

- N1-N23 EXISTING NOISE SENSITIVE RECEIVER
- P1-P3 PLANNED NOISE SENSITIVE RECEIVER
- 300M STUDY BOUNDARY

ASRs	Location	Land Use	No. of Floors
A25	Police Headquarters	G/IC	7
A26	HK Academy for Performing Arts (Office/Performance Hall)	G/IC	9
A27	Arts Centre	G/IC	10
A28	Citic Tower	Commercial	42
A29	Servicemen's Guides Association	Commercial	3
A30	HK Academy for Performing Arts (Open Space)	G/IC	9
A31	Shui On Centre	Commercial	34
A32	Hong Kong Convention & Exhibition Centre (HKCEC)	Commercial	46
A33	Pedestrian plaza	Recreation	0
A34	HKCEC Extension	Commercial	8
A35	Great Eagle Centre	Commercial	27
A36	Causeway Centre	Residential	42
A37	Wanchai Swimming Pool	Recreation	3
A38	Wanchai Sports Ground	Recreation	0
A39	SPCA	G/IC	6
A40	Gloucester Road 169-170	Residential	12
A41	Gloucester Road 210	Residential	18
A42	Gloucester Road 226	Residential	22
A43	Elizabeth House	Residential	21
A70	Central Government Complex	G/IC	N/A
A71	New G/IC site south and east of CITIC Tower	G/IC	20
A73	Waterfront related commercial and leisure uses	Recreation	N/A
A76	Open space at the west of HKCEC	Recreation	N/A
A81	Waterfront related commercial and leisure uses	Commercial	N/A
A99	CC (Railway Air intake Location)	Other use	N/A

A26, A27, A29, A30, A31, A33, A34, A73, A76 - ASRs associated with FEP-01/376/2009 and FEP-02/376/2009



LEGEND:  
 --- 500m STUDY BOUNDARY

WAN CHAI DEVELOPMENT PHASE II - PLANNING AND ENGINEERING REVIEW

LOCATIONS OF REPRESENTATIVE AIR SENSITIVE RECEIVERS (WAN CHAI SECTION)

FIGURE 3.3

MAUNSELL | AECOM

Maunsell Consultants Asia Ltd



## **Appendix 3.1**

### **Action and Limit Level**



**Action and Limit Level**

***Action and Limit Level for Noise Monitoring***

<b>Time Period</b>	<b>Action Level</b>	<b>Limit Level</b>
07:00 - 19:00 hours on normal weekdays	When one documented complaint is received.	75 dB(A)

*Notes: If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.  
\*The Limit level shall be 70 dB(A) and 65 dB(A) for educational institute during normal teaching periods and school examination periods, respectively.*

***Action and Limit Level for Air Monitoring***

<b>Monitoring Locations</b>	<b>1-hour TSP Level in <math>\mu\text{g}/\text{m}^3</math></b>		<b>24-hour TSP Level in <math>\mu\text{g}/\text{m}^3</math></b>	
	Action Level	Limit Level	Action Level	Limit Level
<b>CMA5b</b> Pedestrian Plaza	339.7	500	209.9	260
<b>CMA6a</b> WDII PRE Site Office	333.0	500	207.1	260



## **Appendix 4.0**

### **Event and Action Plan**



Event/Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level being exceeded	<ol style="list-style-type: none"><li>1. Notify ER, IEC and Contractor;</li><li>2. Carry out investigation;</li><li>3. Report the results of investigation to the IEC, ER and Contractor;</li><li>4. Discuss with the IEC and Contractor on remedial measures required;</li><li>5. Increase monitoring frequency to check mitigation effectiveness.</li></ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none"><li>1. Review the investigation results submitted by the ET;</li><li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li><li>3. Advise the ER on the effectiveness of the proposed remedial measures.</li></ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none"><li>1. Confirm receipt of notification of failure in writing;</li><li>2. Notify Contractor;</li><li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li><li>4. Supervise the implementation of remedial measures.</li></ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>	<ol style="list-style-type: none"><li>1. Submit noise mitigation proposals to IEC and ER;</li><li>2. Implement noise mitigation proposals.</li></ol> <p>(The above actions should be taken within 2 working days after the exceedance is identified)</p>





EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit Level being exceeded	<ol style="list-style-type: none"> <li>1. Inform IEC, ER, Contractor and EPD;</li> <li>2. Repeat measurements to confirm findings;</li> <li>3. Increase monitoring frequency;</li> <li>4. Identify source and investigate the cause of exceedance;</li> <li>5. Carry out analysis of Contractor's working procedures;</li> <li>6. Discuss with the IEC, Contractor and ER on remedial measures required;</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. (The above actions should be taken within 2 working days after the exceedance is identified)</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 the ER accordingly. (The above actions should be taken within 2 working days after the exceedance is identified)</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. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Supervise the implementation of remedial measures;</li> <li>5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)</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 and ER within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Submit further proposal if problem still not under control;</li> <li>5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>



**Event / Action Plan for Construction Air Quality**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
<b>ACTION LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>Inform IEC and ER;</li> <li>Repeat measurement to confirm finding;</li> <li>Increase monitoring frequency to daily.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Notify Contractor.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Rectify any unacceptable practice;</li> <li>Amend working methods if appropriate.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>Identify source;</li> <li>Inform IEC and ER;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Discuss with IEC and Contractor on remedial actions required;</li> <li>If exceedance continues, arrange meeting with IEC and ER;</li> <li>If exceedance stops, cease additional monitoring.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>Supervise Implementation of remedial measures.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Submit proposals for remedial to ER within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)
<b>LIMIT LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>Inform ER, Contractor and EPD;</li> <li>Repeat measurement to confirm finding;</li> <li>Increase monitoring frequency to daily;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>Supervise implementation of remedial measures.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>Notify IEC, ER, Contractor and EPD;</li> <li>Identify source;</li> <li>Repeat measurement to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> </ol> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Ensure remedial measures properly implemented;</li> <li>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> (The above actions should be taken within 2 working days after the exceedance is identified)	<ol style="list-style-type: none"> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Resubmit proposals if problem still not under control;</li> <li>Stop the relevant portion of works as determined by the ER until the exceedance is abated. (The above actions should be taken within 2 working days after the exceedance is identified)</li> </ol>



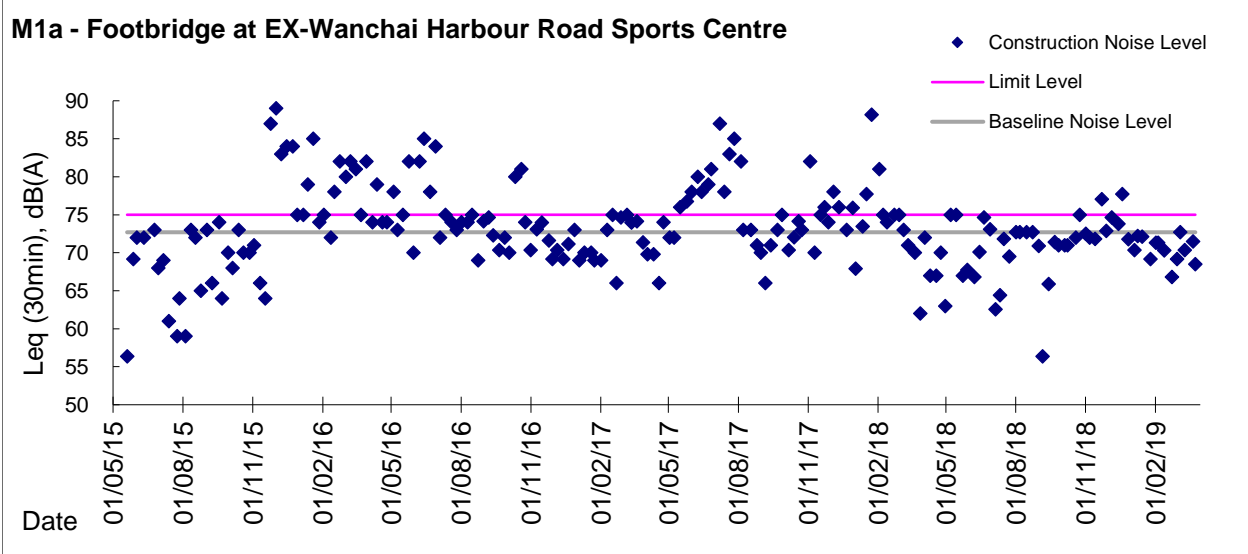
## **Appendix 4.1**

### **Noise Monitoring Graphical Presentations**



**Graphic Presentation of Noise Monitoring Result**

**Day Time (0700 - 1900hrs on normal weekdays)**



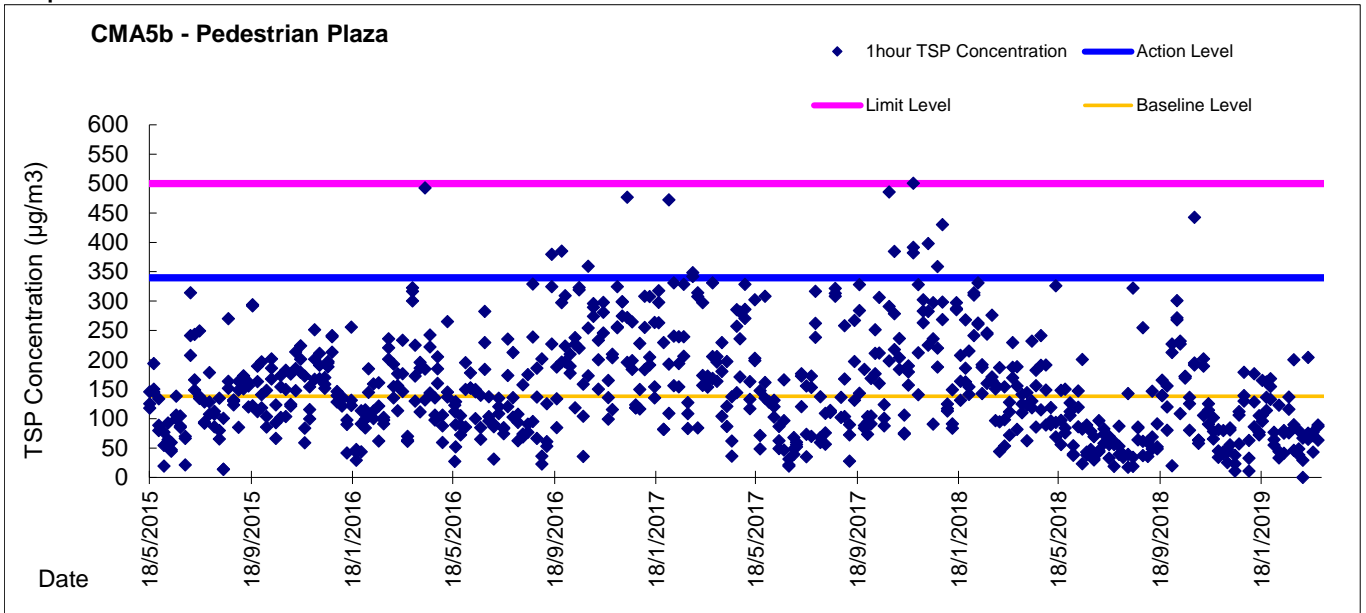


## **Appendix 4.2**

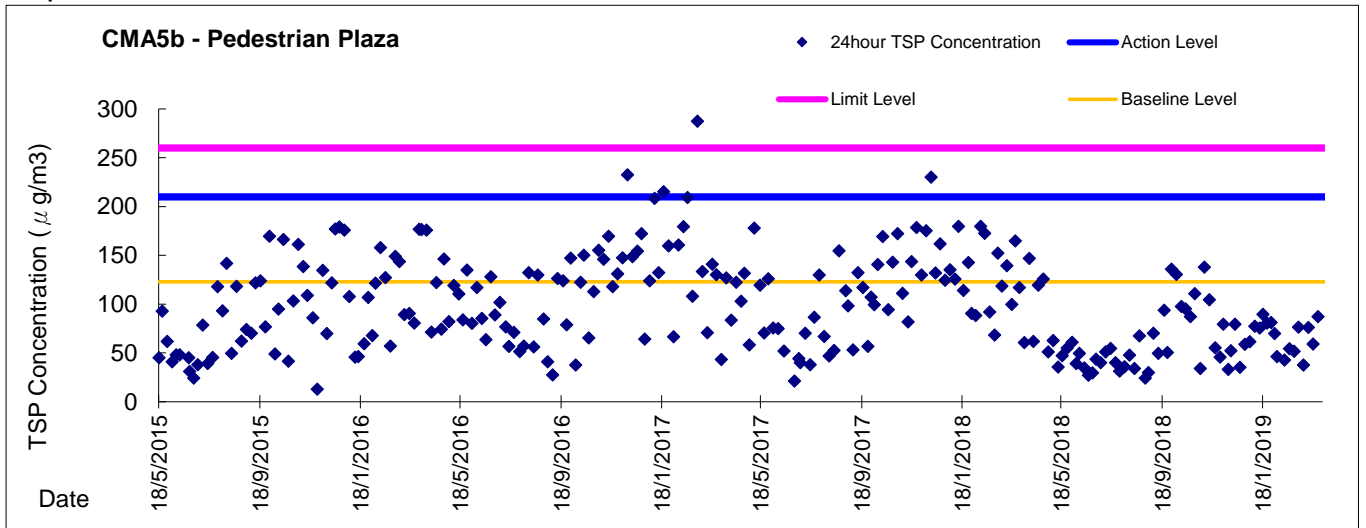
### **Air Quality Monitoring Results and Graphical Presentations**



Graphic Presentation of 1 hour TSP Result for EP-376/2009

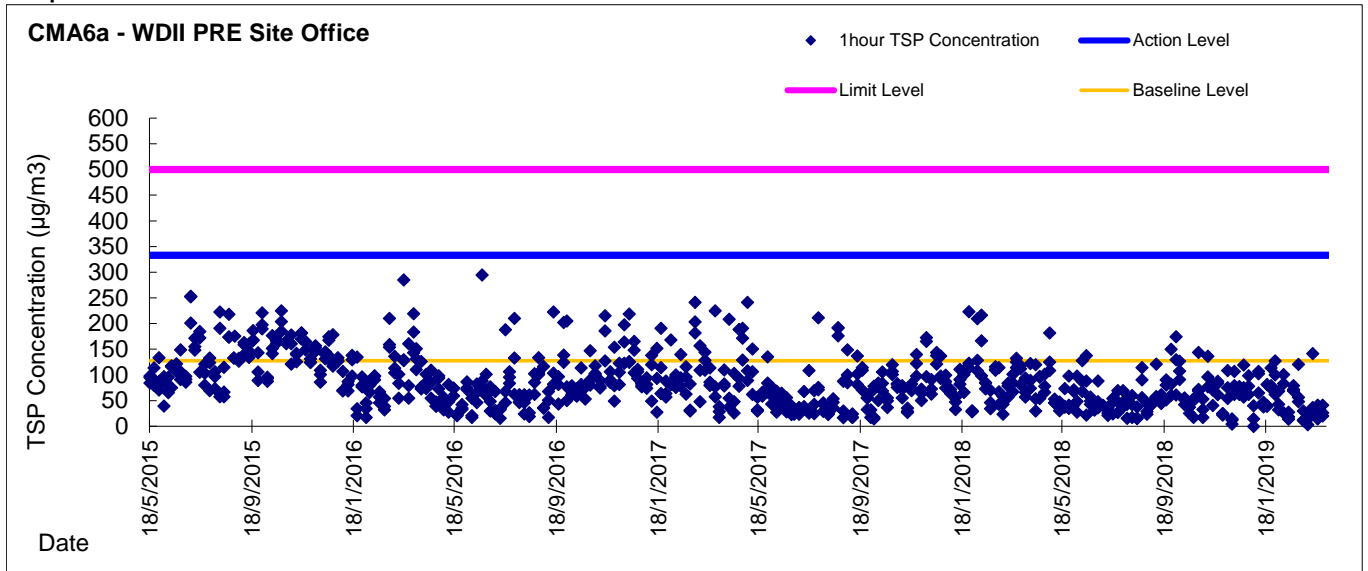


Graphic Presentation of 24 hour TSP Result for EP-376/2009

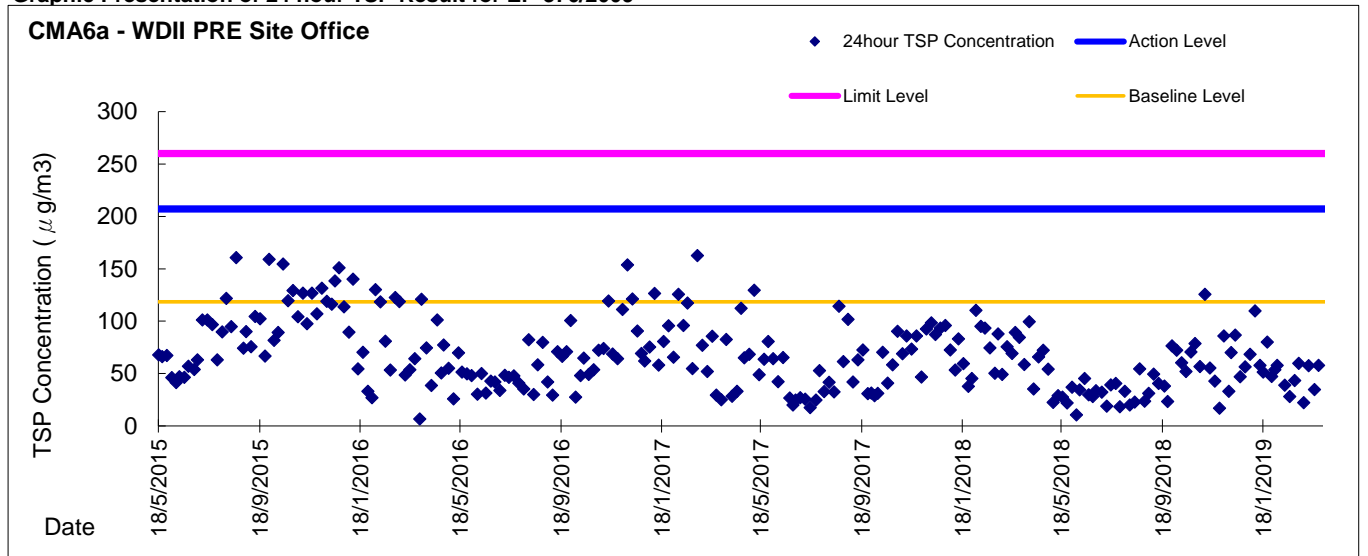




Graphic Presentation of 1 hour TSP Result for EP-376/2009



Graphic Presentation of 24 hour TSP Result for EP-376/2009





## **Appendix 5.1**

### **Environmental Mitigation Implementation Schedule**



**IMPLEMENTATION SCHEDULE OF THE PROPOSED MITIGATION MEASURES**

**Table A.1 Implementation Schedule for Air Quality Control**

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>Construction Phase</b>								
S3.6.5	Four times a day watering of the work site with active operations.	Work site / during construction	Contractor		√			EIAO-TM
S3.8.1	Implementation of dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation. The following mitigation measures, good site practices and a comprehensive dust monitoring and audit programme are recommended to minimise cumulative dust impacts. <ul style="list-style-type: none"> <li>Strictly limit the truck speed on site to below 10 km per hour and water spraying to keep the haul roads in wet condition;</li> <li>Watering during excavation and material handling;</li> <li>Provision of vehicle wheel and body washing facilities at the exit points of the site, combined with cleaning of public roads where necessary; and</li> <li>Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> </ul>	Work site / during construction	Contractor		√			
<b>Operational Phase</b>								
S3.6.53 – S3.6.54	The design parameters of the East and Central Ventilation Buildings as set in Tables 3.10 and 3.11 of Volume 1 of the WDII & CWB EIA Report.	East and Central Ventilation Buildings / During operation of the Trunk Road	HyD			√		
S3.10.2	Air quality monitoring for the operation performance of the East Ventilation Building and associated East Vent Shaft will be conducted.	East Vent Shaft / During operation of the East Ventilation Building and associated East Vent Shaft	HyD			√		EIAO-TM

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

**Table A.2 Implementation Schedule for Noise Control**

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>Construction Phase</b>								
S4.9.3	<p>Good Site Practice:</p> <ul style="list-style-type: none"> <li>Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program.</li> <li>Silencers or mufflers on construction equipment shall be utilized and shall be properly maintained during the construction program.</li> <li>Mobile plant, if any, shall be sited as far away from NSRs as possible.</li> <li>Machines and plant (such as trucks) that may be in intermittent use shall be shut down between works periods or shall be throttled down to a minimum.</li> <li>Plant known to emit noise strongly in one direction shall, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.</li> <li>Material stockpiles and other structures shall be effectively utilized, wherever practicable, in screening noise from on-site construction activities.</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO
S4.8.1 – S4.8.11	<p>Use of quiet powered mechanical equipment, movable noise barrier and temporary noise barrier for the following tasks:</p> <ul style="list-style-type: none"> <li>Slip road 8 tunnel</li> <li>Construction of diaphragm wall and substructures of the tunnel approach ramp</li> <li>Excavation</li> <li>Construction of slabs</li> <li>Backfill</li> </ul>	Work Sites / During Construction	Contractor		√			EIAO-TM, NCO

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<ul style="list-style-type: none"> <li>Demolition and construction of substructures for the IEC</li> <li>Demolition works of existing piers and crossheads of the marine section of the existing IEC</li> </ul> <p>Use of PME grouping for the following tasks:</p> <ul style="list-style-type: none"> <li>At-grade road construction</li> <li>Substructure for IECL connection</li> </ul>							
<b>Operation Phase</b>								
S4.8.12 – S4.8.23	<p>For Existing NSRs</p> <ul style="list-style-type: none"> <li>about 235m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC</li> <li>about 230m length of noise semi-enclosure with transparent panel covering the main carriageways (eastbound and westbound) of the CWB and IEC</li> <li>about 135m length of 5.5m high cantilevered noise barrier with 4.5m cantilever inclined at 45° with transparent panel on the eastbound slip road to the IEC (amended under EP-364/2009/A)</li> <li>about 95m length of 5.5m high cantilevered noise barrier with 1m cantilever inclined at 45° with transparent panel on the eastbound slip road to the IEC</li> <li>about 350m length of 3.5m high vertical noise barrier with transparent panel on the eastbound slip road to the IEC</li> <li>low noise road surfacing for the trunk road (except tunnel section and beneath the landscaped deck at the eastern portal area)) with speed limit of 70 km/hour</li> </ul>	Near North Point / Before commencement of operation of road project	HyD	√	√	√		EIAO-TM

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
	<p>For Future/Planned NSRs</p> <ul style="list-style-type: none"> <li>about 265m length of noise semi-enclosure with transparent panel covering the westbound slip road from the IEC</li> <li>The openable windows of the temple, if any, should be orientated so as to avoid direct line of sight to the existing Victoria Park Road as far as practicable.</li> </ul>	<p>In between the Electric Centre (next to City Garden) and CDA(1) site / Before occupation of Planned NSRs in CDA and CDA(1) sites.</p> <p>Near Causeway Bay Fire Station / During detailed design of the re-provisioned Tin Hau Temple</p>	<p>HyD</p> <p>Project Proponent for the re-provisioned Tin Hau Temple</p>	√	√ #			

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

# Only the steel frame for this section of noise semi-enclosure would be erected in advance during the construction of the westbound slip road.

**Table A.4 Implementation Schedule for Waste Management**

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>Construction Phase</b>								
S6.5.14	<b><i>Floating Refuse</i></b> During the construction phase, the project proponent's contractor will be responsible for the collection of any refuse within their works area. Floating booms will be provided on the water surface to confine the refuse from the working barges as well as to avoid the accumulation of pollutants within temporary embayment as mentioned in Table D9.3.	Work site / During the construction period	Contractor		√			
S6.6.1	<b><i>Good Site Practices</i></b> Recommendations for good site practices during the construction activities include: <ul style="list-style-type: none"> <li>• nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</li> <li>• training of site personnel in proper waste management and chemical waste handling procedures;</li> <li>• provision of sufficient waste disposal points and regular collection for disposal;</li> <li>• appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> <li>• regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; and</li> <li>• a recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites).</li> </ul>	Work site / During the construction period	Contractor		√			Waste Disposal Ordinance (Cap.354)

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.6.2	<p><i>Waste Reduction Measures</i></p> <p>Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> <li>• segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>• to encourage collection of aluminium cans, PET bottles and paper, separate labelled bins shall be provided to segregate these wastes from other general refuse generated by the work force;</li> <li>• any unused chemicals or those with remaining functional capacity shall be recycled;</li> <li>• use of reusable non-timber formwork, such as in casting the tunnel box sections, to reduce the amount of C&amp;D material.</li> <li>• prior to disposal of C&amp;D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill;</li> <li>• proper storage and site practices to minimise the potential for damage or contamination of construction materials; and</li> <li>• plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.</li> </ul>	Work site / During planning and design stage, and construction stage	Contractor	√	√			

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.6.4	<p><i>General Refuse</i></p> <p>General refuse shall be stored in enclosed bins or compaction units separate from C&amp;D material. A licensed waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&amp;D material.</p> <p>A collection area shall be provided where wastes can be stored and loaded prior to removal from site. An enclosed and covered area is recommended to reduce the occurrence of 'wind blow' light material.</p>	Work site / During the construction period	Contractor		√			Public Health and Municipal Services Ordinance (Cap. 132)
S6.6.5	<p><i>Chemical Wastes</i></p> <p>After use, chemical wastes (for example, cleaning fluids, solvents, lubrication oil and fuel) shall be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Spent chemicals shall be collected by a licensed collector for disposal at the CWTF or other licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</p>	Work site / During the construction period	Contractor		√			<p>Waste Disposal (Chemical Waste) (General) Regulation</p> <p>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</p>
S6.6.6	<p><i>Construction and Demolition Material</i></p> <p>C&amp;D material shall be sorted on-site into inert C&amp;D material (that is, public fill) and C&amp;D waste. All the suitable inert C&amp;D material shall be broken down to 250 mm in size for reuse as public fill in the WDII reclamation. C&amp;D waste, such as wood, glass, plastic, steel and other metals shall be reused or recycled and, as a last resort, disposed of to landfill. A suitable area shall be designated to facilitate the sorting process and a temporary stockpiling area will be required for the separated materials.</p>	Work site / During the construction period	Contractor		√			ETWB TCW No. 33/2002, 31/2004, 19/2005

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
S6.6.7	In order to monitor the disposal of public fill and C&D waste at public fill reception facilities and landfills, respectively, and to control fly tipping, a trip-ticket system shall be included as one of the contractual requirements and implemented by the Environmental Team undertaking the environmental monitoring and audit work. An Independent Environment Checker shall be responsible for auditing the results of the system.	Work site / During the construction period	Contractor and Independent Environmental Checker		√			ETWB TCW No. 31/2004
S6.6.8	<p><i>Bentonite Slurry</i></p> <p>The disposal of residual used bentonite slurry shall follow the good practice guidelines stated in ProPECC PN 1/94 “Construction Site Drainage” and listed as follows:</p> <ul style="list-style-type: none"> <li>• If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis.</li> <li>• If the used bentonite slurry is intended to be disposed of through the public drainage system, it shall be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the Technical Memorandum of Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters.</li> <li>• If the used bentonite slurry is intended to be disposed to public fill reception facilities, it will be mixed with dry soil on site before disposal.</li> </ul>	Work site / During the construction period	Contractor		√			ProPECC PN 1/94

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning



**Table A.5 Implementation Schedule for Land Contamination**

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>Construction and Operation Phase</b>								
S.7.1.1	As no potential contaminative land uses were identified within the Study Area, adverse land contamination impacts associated with the construction and operation of the Project is not expected. As such, environmental protection and mitigation measures are considered not necessary and will not be covered in this EM&A Manual.	-	-					-

\* Des - Design, C - Construction, O – Operation, and Dec - Decommissioning

**Table A.7 Implementation Schedule for Landscape and Visual**

WDII & CWB EIA Report Ref	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stages*				Relevant Legislation and Guidelines
				Des	C	O	Dec	
<b>Construction Phase</b>								
Table 10.5	CM1 Topsoil, where identified, shall be stripped and stored for re-use in the construction of the soft landscape works, where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM2 Existing trees to be retained on site shall be carefully protected during construction.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM3 Trees unavoidably affected by the works shall be transplanted where practical.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM4 Compensatory tree planting shall be provided to compensate for felled trees.	Work site / During Construction Phase	Contractor	√	√			EIAO TM
Table 10.5	CM5 Control of night-time lighting.	Work site / During Construction Phase	Contractor		√			EIAO TM
Table 10.5	CM6 Erection of decorative screen hoarding compatible with the surrounding setting.	Work site / During Construction Phase	Contractor		√			EIAO TM
<b>Operation Phase</b>								
Table 10.6, Figure 10.5.1-10.5.5	OM1 Aesthetic design of buildings and road-related structures, including viaducts, vent buildings, subways, footbridges and noise barriers and enclosure.	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM3 Buffer Tree and Shrub Planting to screen proposed roads and associated structures.	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM5 Aesthetic streetscape design.	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004
Table 10.6, Figure 10.5.1-10.5.5	OM6 Aesthetic design of roadside amenity areas.	Work site / During Design Stage and Operation Phases	HyD	√	√	√		ETWB TCW 2/2004

\*Des - Design, C - Construction, O – Operation, and Dec - Decommissioning



## **Appendix 6.1**

### **Complaint Log**



***Environmental Complaints Log***

<b>Complaint Log No.</b>	<b>Date of Complaint</b>	<b>Received From and Received By</b>	<b>Location of Complainant</b>	<b>Nature of Complaint</b>	<b>Outcome</b>	<b>Status</b>
--	--	--	--	--	--	--