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ENVIRONMENTAL REVIEW REPORT

FOR

CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT

COMMERCIAL-IN-CONFIDENCE

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1. INTRODUCTION

1.1. PROJECT BACKGROUND

1.1.1. Currently, the Hong Kong Police Force (HKPF) Hong Kong Island Police Vehicle Pound and Examination Centre (PVP&EC), the HKPF Centralised Case Property Store, the Food and Environmental Hygiene Department (FEHD) Depot, the Electrical and Mechanical Services Department (EMSD) Depot and the Government Laboratory (GL) Specialist Laboratory, are occupying temporary sites at different locations that require periodic extensions of their tenancy duration, whereas the temporary sites occupied by HKPF PVP&EC and the FEHD Depot at Quarry Bay have been earmarked for the development of the extension of Quarry Bay Park Phase II by the Leisure and Cultural Services Department (LCSD). In order to minimise the need of additional resources, such as increased travelling time and distance, for the operations of the abovementioned facilities, and to facilitate the development of the Quarry Bay Park Phase II, a permanent vehicle depot-cum-office building (hereinafter referred to as the "proposed Project") is needed.

1.1.2. An Environmental Impact Assessment (EIA) Study for the proposed Project has been carried out in 2015. The EIA Report (AEIAR-191/2015) has been approved in October 2015 and the Environmental Permits (EP) for construction and operation of the proposed Project (EP-505/2015 and EP-504/2015 respectively) have been issued in December 2015.

1.2. UPDATE OF THE PROJECT STATUS

1.2.1. After the issuance of the EPs in December 2015, additional users, namely HKPF Stores Management Division (SMD) Store and Government Logistics Department (GLD) Transport Pool, are proposed to be accommodated in the proposed Project also, due to the following reasons:

- The storage space occupied by HKPF SMD in GLD Government Logistics Centre was temporarily on-loan from GLD, who formally requested SMD the surrender of the storage space back to GLD. As similar to that described in *Section 1.1.1*, incorporation of HKPF SMD store in the proposed Project can minimise the need of additional resources for the operation of HKPF SMD.
- The GLD Transport Pool (Pool) is located at the basement of Wan Chai Tower. To tie in with the redevelopment program of the Wan Chai Government Offices Compound (i.e. Revenue Tower, Immigration Tower and Wan Chai Tower), the Pool has to be relocated in a timely manner. The Pool provides transport support to various bureaux/departments. Offices of most of the users, including High Court Judges at Admiralty and senior officials in Central Government Offices at Tamar, are located on Hong Kong Island. Incorporation of the Pool in the proposed

Project can facilitate the efficient mobilization and deployment of vehicles and personnel.

1.2.2. In order to accommodate the additional users and their usages, two additional storeys shall be required to include in the proposed Project, comprising an eight-storey building (with a mezzanine floor above Level 3). As such, the proposed building height shall become +67.8mPD. The EMSD vehicle depot will be 2,200m^2 (excluding Driveway) and relocated at Level 6. Further elaboration to describe the proposed Project with the abovementioned additions is provided in *Section 2*.

1.3. NEED OF VARIATIONS TO THE CURRENT EP

1.3.1. According to part B of the current EPs, the scale and scope of the proposed Project are specified as follows:

- **EP-505/2015:** "*Construction of a six-storey vehicle depot-cum-office building (with a mezzanine floor above Level 3), including EMSD depot with facilities for government vehicle repair and maintenance and parking of government vehicles when not in operation.*"
- **EP-504/2015:** "*... to operate an EMSD vehicle depot of 2,200 m^2 at Level 5 of the Chai Wan Government Complex.*"

1.3.2. In view of the abovementioned change in development parameter, the following variations of the current EPs are considered necessary with justifications presented in subsequent sections:

(a) **EP-505/2015, Part B, Scale and Scope of Designated Project:** Amend to read "*Construction of an **eight**-storey vehicle depot-cum-office building (with a mezzanine...*"

(b) **EP-505/2015, Figure 2:** Update the elevation plan of the proposed Project to be consistent with the latest design.

(c) **EP-504/2015, Part B, Scale and Scope of Designated Project:** Amend "*... to operate an EMSD vehicle depot of 2,200m^2 at Level **6** of the Chai Wan Government...*"

(d) **EP-504/2015, Figure 2:** Update the elevation plan of the proposed Project to be consistent with the latest design.

(e) **EP-504/2015, Figure 3:** Update the general layout plan of the EMSD vehicle depot in the proposed Project to be consistent with the latest design.

1.4. APPROACH USED TO JUSTIFY THE APPLICATION FOR VARIATION OF EP

1.4.1. An environmental review (ER) is carried out to evaluate the potential environmental impacts arising from the variation of the abovementioned development parameters of the proposed Project, and propose mitigation measures if necessary.

1.4.2. The ER Report (ERR) is targeted to demonstrate that, with necessary mitigation measures, there is no pollution or discharges or waste generation, attributable to the variation of the development parameters, likely to violate guidelines or criteria set out in the Technical Memorandum under the Environmental Impact Assessment Process (EIAO-TM).

1.4.3. Pursuant to Section 13(5) of the EIA Ordinance, an EP can be amended without calling for an environmental impact assessment report, provided that there is no material change to the environmental impact of the project with the mitigation measures in place and the project complies with the requirements described in the EIAO-TM.

1.4.4. For this reason, this ER is not intended to be a full EIA to update or replace the original approved EIA Report. Instead, the level of assessment details in this ER has been tailored to a point that it is sufficient to demonstrate the criteria mentioned in *Section 1.4.2* can be met to enable the application for variation of the EP.

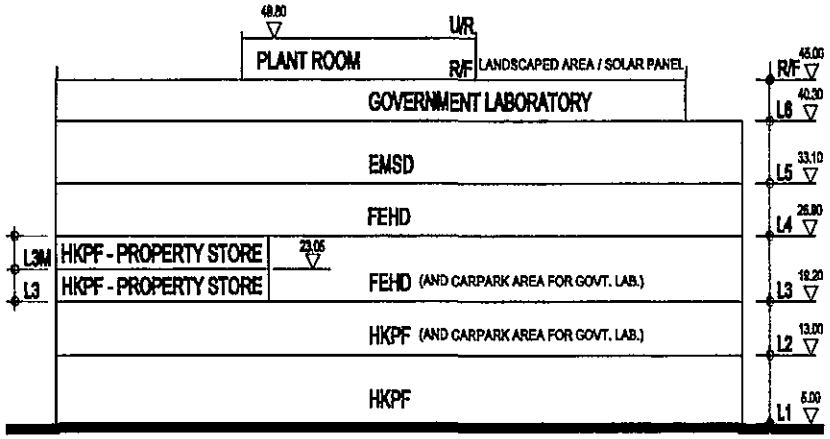
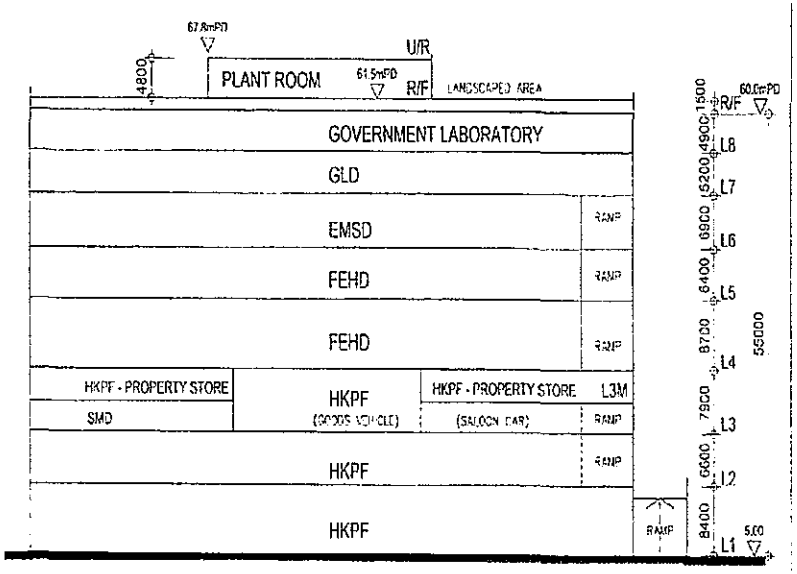
2. OUTLINE OF THE PROPOSED PROJECT

2.1. INTRODUCTION

2.1.1. The proposed design of the proposed Project (hereafter named as "the Proposed Scheme") has largely followed the design in the approved EIA Report, AEIAR-191/2015 (hereafter named as "the EIA Scheme").

2.1.2. A comparison of the planning and development parameters for the Proposed Scheme for this ER and the EIA Scheme is outlined in ***Table 2-1*** below.

Table 2-1 Design Parameters of the "EIA Scheme" and "Proposed Scheme"

Design Parameter	EIA Scheme	Proposed Scheme
Project Scope	- Construction and operation of a six-storey government complex and vehicle depot (with a mezzanine floor above Level 3) for the HKPF, FEHD, EMSD and GL with the following facilities: (i) The HKPF Hong Kong Police Vehicle Pound & Examination Centre (PVP&EC); (ii) a HKPF centralised case property store; (iii) a FEHD vehicle depot serving Hong Kong Island East; (iv) the EMSD Hong Kong Vehicle Depot; and (v) a specialist laboratory for the GL.	- Construction and operation of an eight-storey government complex and vehicle depot (with a mezzanine floor above Level 3) for the HKPF, FEHD, EMSD, GLD and GL with the following facilities: (i) The HKPF Hong Kong Police Vehicle Pound & Examination Centre (PVP&EC); (ii) a HKPF centralised case property store; (iii) a HKPF SMD storage space; (iv) a FEHD vehicle depot serving Hong Kong Island East; (v) the EMSD Hong Kong Vehicle Depot; (vi) a GLD Transport Pool; and (vii) a specialist laboratory for the GL.
Major Development Parameter	**Parameters** / **Details** Site Area: Approximate 7006 m^2 Site Coverage: 80% Gross Floor Area (GFA): Approx. 28,025 m^2 Construction Floor Area (CFA): 38,000 m^2 Plot Ratio: 4	**Parameters** / **Details** Site Area: Approximate 7006 m^2 Site Coverage: 70% GFA: Approx. 40,985 m^2 CFA: 43,800 m^2 Plot Ratio: 5.85
Elevation Drawing and Building Height	As shown in ***Figure 2.1***. 	As shown in ***Figure 2.2***. 

Design Parameter	EIA Scheme	Proposed Scheme
Layout Plan	As shown in ***Figure 2.1***. **a. the HKPF PVP&EC of 5,200 m^2 on Level 1 and 2** ➢ Vehicle examination area accommodates an inspection pit, a roller brake tester and load simulator, a vehicle lift, and a level floor examination area; ➢ Area of staff including offices, discussion room, lecture room, guard room and locker/ changing room; ➢ A brake test strip and a brake test ramp; and ➢ Store and workshop **b. a vehicle depot under the FEHD of 4,600 m^2 or as appropriate on Level 3 and 4** ➢ Parking spaces with minimum headroom of 4 m for 70 vehicles of various sizes with inclusion of circulation space; ➢ Vehicle washing bay for 1 vehicle with high pressure water jet guns and drainage facilities ➢ Water refilling bay for 2 vehicles; ➢ Office area; and ➢ Security guard booth. **c. the HKPF Centralised Case Property Store for the storage of case property for Crime Formations on Level 3 and 3M (about 1,942 m^2)** ➢ Storage Space. **d. a permanent depot under the EMSD of 2,200 m^2 on Level 5** ➢ Vehicle repair area and parking area; ➢ Battery charging room; ➢ Vehicle washing bay for two vehicles with petrol interceptor; ➢ Lubricant storage/lubricant dosing equipment/ chemical waste storage; ➢ Air compressor room; ➢ Tyre charger and tyre balancer area; ➢ Waste oil tank; ➢ Waste water sedimentation tanks; and ➢ Office area and ancillary area. **e. a specialist laboratory under the GL of about 2,160 m^2 on Level 6.** ➢ Testing laboratory area;	As shown in ***Figure 2.2***. **a. the HKPF PVP&EC of 3,945 m^2 on Level 1, 2 and part of Level 3** ➢ Same as previous EIA Scheme. **b. a HKPF SMD storage space on the remaining part of Level 3 (about 1,015 m^2)** ➢ Storage Space. **c. the HKPF centralised case property store for the storage of case property for Crime Formations on the whole of Level 3M (about 1,942 m^2);** ➢ Same as previous EIA Scheme. **d. a vehicle depot under the FEHD of 2,366 m^2 on Level 4 and 5** ➢ Same as previous EIA Scheme. **e. a permanent depot under the EMSD of 2,200 m^2 on Level 6** ➢ Same as previous EIA Scheme. **f. a GLD Transport Pool of 1,750 m^2 on Level 7** ➢ 48 no. Parking spaces; and ➢ Vehicle washing bay. **g. a specialist laboratory under the GL of about 2,497 m^2 on Level 8** ➢ Same as previous EIA Scheme.

<table>
<tr><th>Design Parameter</th><th>EIA Scheme</th><th>Proposed Scheme</th></tr>
<tr><td></td><td>➢ Storage rooms;
➢ Offices, changing rooms and meeting room;
➢ Dangerous good stores for Categories 2, 3. and 5 dangerous goods; and
➢ Parking spaces</td><td></td></tr>
<tr><td>Project Implementation Programme</td><td>a. Construction Commencement: Mid 2016
b. Construction Completion: Late 2018
c. Operation year: 2018</td><td>a. Construction Commencement: Early 2020
b. Construction Completion: Late 2022/ Early 2023
c. Operation year: 2023</td></tr>
<tr><td>Concurrent Projects</td><td><table><tr><th rowspan="2">Concurrent Projects</th><th colspan="2">Potential Cumulative Impacts</th></tr><tr><th>Construction Phase</th><th>Operation Phase</th></tr><tr><td>Planned THEi New Campus (construction tentatively between the third quarter of 2013 and the third quarter of 2016; operation phase from the third quarter of 2016)</td><td>✓</td><td>✓</td></tr><tr><td>Existing EMSD Hong Kong Workshop at Chai Wan (EP-442/2012)</td><td>×</td><td>×</td></tr><tr><td>Existing New World First Bus Permanent Depot at Chai Wan (EP-052/2000)</td><td>×</td><td>✓</td></tr><tr><td>Existing Headquarter and Bus Maintenance Depot in Chai Wan (EP-107/2001)</td><td>×</td><td>✓</td></tr></table></td><td>As shown in Figure 2.3.
<table><tr><th rowspan="2">Concurrent Projects</th><th colspan="2">Potential Cumulative Impacts</th></tr><tr><th>Construction Phase</th><th>Operation Phase</th></tr><tr><td>Existing THEi New Campus</td><td>×</td><td>✓</td></tr><tr><td>Existing EMSD Hong Kong Workshop at Chai Wan (EP-442/2012)</td><td>×</td><td>×</td></tr><tr><td>Existing New World First Bus Permanent Depot at Chai Wan (EP-052/2000)</td><td>×</td><td>✓</td></tr><tr><td>Existing Headquarter and Bus Maintenance Depot in Chai Wan (EP-107/2001)</td><td>×</td><td>✓</td></tr><tr><td>Planned Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ) (construction from the second quarter of 2020 to End 2024 tentatively)</td><td>✓</td><td>✓</td></tr><tr><td>Planned HKHA Public Rental Housing Development at Wing Tai Road (construction from Oct 2016 to Dec 2020)</td><td>✓</td><td>✓</td></tr></table></td></tr>
<tr><td>Construction Method</td><td>a. Site formation, excavation and filling:
- Conventional methods include site clearance, excavation and backfilling of topsoil, construction of haul road and utilities laying and landscape works

b. Foundation: Conventional Steel-H Piles

c. Main Building Construction: Conventional bottom-up reinforced concrete construction with beam-slab</td><td>Same as Previous.</td></tr>
</table>

<table>
<tr><th>Design Parameter</th><th>EIA Scheme</th><th>Proposed Scheme</th></tr>
<tr><td>Operation Hours of the Project</td><td>
<table>
<tr><th>Facilities</th><th>Operation Hours</th></tr>
<tr><td>HKPF PVP&EC</td><td>Mon – Sun, 24 hrs</td></tr>
<tr><td>HKPF Centralised Case Property Store</td><td>Irregular operation hours due to operational needs</td></tr>
<tr><td>FEHD Depot</td><td>Mon – Sun, 0600 – 2330 hrs</td></tr>
<tr><td>GL Specialist Laboratory</td><td>Mon – Fri, 0800 – 1800 hrs</td></tr>
<tr><td>EMSD Depot</td><td>Mon – Fri, 0800 – 1800 hrs</td></tr>
</table>
</td><td>
<table>
<tr><th>Facilities</th><th>Operation Hours</th></tr>
<tr><td>HKPF PVP&EC</td><td>Same as previous</td></tr>
<tr><td>HKPF Centralised Case Property Store</td><td>08:00 to 18:00
(may be opened outside normal operation hours to suit operational needs)</td></tr>
<tr><td>FEHD Depot</td><td rowspan="3">Same as previous</td></tr>
<tr><td>GL Specialist Laboratory</td></tr>
<tr><td>EMSD Depot</td></tr>
<tr><td>GLD Transport Pool</td><td>Mon – Sun, 0600 – 2400 hrs</td></tr>
<tr><td>HKPF SMD</td><td>Mon – Fri, 0800 – 1800 hrs (3 times a week)
(may be extended to 24 hours a day for exceptional cases)</td></tr>
</table>
</td></tr>
<tr><td>Number of Staff Working in the Proposed Project</td><td>
<table>
<tr><th rowspan="2">Facilities</th><th colspan="3">Total Number of Staff Working at Chai Wan Government Complex and Vehicle Depot</th></tr>
<tr><th>Day
(0800 - 1800 hrs)</th><th>Evening
(1800 – 0200 hrs)</th><th>Night
(0200 – 0800 hrs)</th></tr>
<tr><td>HKPF PVP&EC</td><td>7</td><td>1</td><td>1</td></tr>
<tr><td>HKPF Centralised Case Property Store</td><td>21</td><td>0</td><td>0</td></tr>
<tr><td>FEHD Depot</td><td>80 + 3 (station in office during each shift)</td><td>41 + 3 (station in office during each shift)</td><td>0</td></tr>
<tr><td>GL Specialist Laboratory</td><td>36</td><td>0</td><td>0</td></tr>
<tr><td>EMSD Depot</td><td>33</td><td>0</td><td>0</td></tr>
<tr><td>Total</td><td colspan="3">226</td></tr>
</table>
</td><td>
<table>
<tr><th rowspan="2">Facilities</th><th colspan="3">Total Number of Staff Working at Chai Wan Government Complex and Vehicle Depot</th></tr>
<tr><th>Day
(0800 - 1800 hrs)</th><th>Evening
(1800 – 0200 hrs)</th><th>Night
(0200 – 0800 hrs)</th></tr>
<tr><td>HKPF PVP&EC</td><td>7</td><td>1</td><td>1</td></tr>
<tr><td>HKPF Centralised Case Property Store</td><td>21</td><td>0</td><td>0</td></tr>
<tr><td>FEHD Depot</td><td>80 + 3 (station in office during each shift)</td><td>41 + 3 (station in office during each shift)</td><td>0</td></tr>
<tr><td>GL Specialist Laboratory</td><td>60</td><td>0</td><td>0</td></tr>
<tr><td>EMSD Depot</td><td>33</td><td>0</td><td>0</td></tr>
<tr><td>GLD Transport Pool</td><td>56</td><td>4</td><td>0</td></tr>
<tr><td>HKPF SMD</td><td>10</td><td>0</td><td>0</td></tr>
<tr><td>Total</td><td colspan="3">320</td></tr>
</table>
</td></tr>
<tr><td>Number of Parking Space</td><td>
<table>
<tr><th>Facilities</th><th>Parking Space</th></tr>
<tr><td>HKPF PVP&EC</td><td>134</td></tr>
<tr><td>HKPF Centralised Case Property Store</td><td>0</td></tr>
<tr><td>FEHD Depot</td><td>70</td></tr>
<tr><td>GL Specialist Laboratory</td><td>6</td></tr>
<tr><td>EMSD Depot</td><td>50</td></tr>
<tr><td>Total</td><td>260</td></tr>
</table>
</td><td>
<table>
<tr><th>Facilities</th><th>Parking Space</th></tr>
<tr><td>HKPF PVP&EC</td><td>134</td></tr>
<tr><td>HKPF Centralised Case Property Store</td><td>0</td></tr>
<tr><td>FEHD Depot</td><td>70</td></tr>
<tr><td>GL Specialist Laboratory</td><td>14</td></tr>
<tr><td>EMSD Depot</td><td>50</td></tr>
<tr><td>GLD Transport Pool</td><td>48</td></tr>
<tr><td>HKPF SMD</td><td>0</td></tr>
<tr><td>Total</td><td>316</td></tr>
</table>
</td></tr>
</table>

Design Parameter	EIA Scheme	Proposed Scheme

Vehicle Repair/ Testing Equipment and Activities

HKPF PVP&EC	EMSD Depot	FEHD Depot	GL Specialist Laboratory
Braking Test (on grade)	Braking test (for vehicles other than motorcycle)	Vehicle washing	Vehicle parking
Braking Test (on slope)	Braking test (for motorcycle)	Water refilling in vehicle	Chemical testing
Braking test (for vehicles other than motorcycle)	Speedometer test (for motorcycle)	Vehicle parking	
Use of compressed air, e.g. screw driving	Tyre balancing		
Hammering	Tyre changing		
Vehicle Parking	Hammering		
Vehicle lifting	Use of compressed air, e.g. screw driving		
Vehicle examination (in pit)	Vehicle washing		
Vehicle examination (on ground)	Vehicle lifting		
	Engine testing		
	Vehicle parking		
	Chemical mixing, e.g. lubricant mixing		
	Battery charging		
	Chemical refilling, e.g. lubricant refilling		

HKPF PVP&EC	EMSD Depot	FEHD Depot	GL Specialist Laboratory	GLD Transport Pool	HKPF SMD
Braking Test (on grade)	Braking test (for vehicles other than motorcycle)	Vehicle washing	Vehicle parking	Vehicle parking	/
Braking Test (on slope)	Braking test (for motorcycle)	Water refilling in vehicle	Chemical testing	Vehicle washing (manual)	
Braking test (for vehicles other than motorcycle)	Speedometer test (for motorcycle)	Vehicle parking			
Use of compressed air, e.g. screw driving	Tyre balancing				
Hammering	Tyre changing				
Vehicle Parking	Hammering				
Vehicle lifting	Use of compressed air, e.g. screw driving				
Vehicle examination (in pit)	Vehicle washing				
Vehicle examination (on ground)	Vehicle lifting				
Braking test (for motorcycle)	Engine testing				
	Vehicle parking				
	Chemical mixing, e.g. lubricant mixing				
	Battery charging				
	Chemical refilling, e.g. lubricant refilling				
	Bench Grinder				
	Drill Stand				

Correspondences on confirmation of equipment and activities by future operators are given in **Appendix 4.3.**

3. AIR QUALITY IMPACT ASSESSMENT

3.1. INTRODUCTION

3.1.1. The approved EIA Report identified potential air quality impact during construction and operation phase of the proposed Project. Air quality impact, odour and volatile chemicals emissions assessments were conducted. With proper implementation of the recommended mitigation measures during construction and operation of the proposed Project, no adverse air quality impact is anticipated.

3.1.2. This section presents the potential implications on air quality impact assessment for the Proposed Project with respect to the changes proposed, as detailed in Chapter 1 and Chapter 2 of this ER after the approval of the earlier EIA report.

3.2. REVIEW ENVIRONMENTAL LEGISLATION, STANDARDS AND GUIDELINES

3.2.1. The environmental legislation and guidelines as stated in the approved EIA Report regarding air quality impact assessment is still applicable to this ER.

3.3. DESCRIPTION OF EXISTING ENVIRONMENT

Background

3.3.1. Site visit was conducted in June 2018. The existing environment conditions described in the approved EIA Report are still valid in this ER. The dominant air pollution sources are still the road traffic emissions from Shing Tai Road, Island Eastern Corridor (IEC) and Wing Tai Road Flyover and to a lesser extent from Sheung On Street, Sheung Tat Street and Sheung Mau Street.

Air Quality in Eastern District

3.3.2. The nearest EPD air quality monitoring station (AQMS) with similar characteristics to the study area is still Eastern AQMS at Sai Wan Ho Fire Station at 20 Wai Hang Street, Sai Wan Ho. Its latest 5 years of air quality data has been updated from Year 2009 – 2013 to Year 2014 - 2018 to depict the trend of the localised air quality. The recent five years (2014 - 2018) monitoring data are exhibited in ***Table 3-1*** to demonstrate historical situations.

Table 3-1 Background Air Quality at Eastern Air Quality Monitoring Station

Pollutant	Averaging Time	5-year Average Concentration 2014-2018 (μg/m3)[1]	AQO Concentration limit (μg/m3)[2]
SO_2	24-hour	17.6 (4th high)	125 [Number of exceedances allowed: 3]
PM_{10}	Annual	33.6	50
$PM_{2.5}$	Annual	21.6	35
NO_2	Annual	<u>45.2</u>	40
O_3	8-hour	147 (10th high)	160 [Number of exceedances allowed: 9]

Notes:
[1] Monitoring result(s) exceeding the AQO is/are underlined.

3.3.3. The 5-year annual average concentration of all pollutant parameters complied with the current AQOs, except NO_2. Although an exceedance has been observed in 5-year annual average concentration of NO_2, it is noticed that the concentration value has been decreased in comparison with the 5-year annual average (between Year 2009 and Year 2013) concentration of NO_2 which is presented in the approved EIA Report. It is believed that annual average NO_2 concentration would further decrease continuously due to the implementation of more stringent emission standard for vehicle in coming years.

3.4. LIST OF CONCURRENT PROJECTS

3.4.1. There are several concurrent projects in the vicinity of the Project site, as summarised in ***Table 2-1***. The list was based on the best available information received at the time of assessment.

Concurrent Projects During Construction

3.4.2. With reference to the approved EIA Report, the construction works for the Technological and Higher Education Institute of Hong Kong (THEi) New Campus at adjacent western boundary of the site is completed in year 2016. Since the construction of the proposed Project has been postponed, the construction of the THEi New Campus is not the concurrent project during construction.

3.4.3. Meanwhile, there will be concurrent construction of the planned Water Services Department and Correctional Services Department Headquarters (WSDCSDHQ) and planned HKHA public rental housing development at Wing Tai Road with the construction of the proposed Project.

Concurrent Projects During Operation

3.4.4. For the concurrent projects during the operation phase of the proposed Project, vehicular emissions from the open road traffic were assessed by CALINE 4 in the approved EIA Report and it is still applicable to this ER.

3.5. IDENTIFICATION OF AIR SENSITIVE RECEIVERS

3.5.1. As stated in the approved EIA Report, Air Sensitive Receivers (ASRs) were identified in accordance with Annex 12 of the EIAO-TM within 500m assessment area.

3.5.2. Two additional planned ASRs were identified with reference to the latest best available information at the time of preparation of this ER. Confirmations have been obtained from various government departments in July 2018 on the planned developments. These planned developments include Planned HKHA public rental housing development at Wing Tai Road and WSDCSDHQ at Chong Fu Road as shown in ***Figure 3.1***.

3.5.3. For the planned WSDCSDHQ, it is located at about 55m to the northwest of the proposed Project. The construction works of the planned WSDCSDHQ will be commenced in early 2020 tentatively with the targeted completion in late 2024. Although the WSDCSDHQ is not rely on opened window for ventilation (Ref.: Preliminary Technical Assessment (reference No.0252551)), the WSDCSDHQ is near to the Project site. For a conservative approach, WSDCSDHQ is considered as a representative ASR (ASR ID: ASR 31) for the air quality impact assessment.

3.5.4. The planned HKHA public rental housing development at Wing Tai Road is located to the south of the proposed Project with an approximate separation distance of 430m from the Site Boundary. The construction works of the planned HKHA public rental housing development was commenced in October 2016 with the targeted completion in late 2020. Therefore, the HKHA public rental housing development is considered as a representative ASR (ASR ID: ASR 32) for the air quality impact assessment.

3.5.5. According to the assessment results of the approved EIA Report, the highest concentration levels of the key pollutants were located at 1.5mAG. Therefore, the highest concentration levels of ASR 31 and ASR 32 would be located at 1.5mAG. In this connection, the list of representative ASRs and corresponding assessment heights as presented in approved EIA Report had been updated in this ER and summarised in the table below.

Table 3-2 Representative Air Sensitive Receivers

ASR ID	Description	Approx. Horizontal Distance to Project Site (m)	Approx. Building Height (m)	Assessment Heights (mAG)	Existing (E) or Planned (P)	Land Use
ASR 1	Metro Recreational Club Chai Wan Depot Club House (MTR Facilities)	210	6	1.5 5	E	Recreational
ASR 2	Heng Fa Chuen Lutheran Day Nursery	435	6	1.5 5	E	Educational
ASR 3	Heng Fa Chuen Block 1	465	48	1.5 5 10	E	Residential
ASR 4	Heng Fa Chuen Block 50	300	66	1.5 5 10	E	Residential
ASR 5	Heng Fa Chuen Playground	215	-	1.5	E	Recreational
ASR 6	Government Logistics Centre	135	48	1.5 5 10	E	Government
ASR 7	NWFB Depot	50	40	1.5 5 10	E	Industrial
ASR 8	Hong Kong Institute of Vocational Education (Chai Wan) - Academic Block	145	18	1.5 5 10	E	Educational

ASR ID	Description	Approx. Horizontal Distance to Project Site (m)	Approx. Building Height (m)	Assessment Heights (mAG)	Existing (E) or Planned (P)	Land Use
ASR 9	Knight Court Flat A & B	180	72	1.5 5 10	E	Residential
ASR 10	Knight Court Flat C & D	160	72	1.5 5 10	E	Residential
ASR 11	Citybus Depot	55	12	1.5 5 10	E	Industrial
ASR 12	EMSD Workshop	190	-	1.5	E	Industrial
ASR 13	Wing Tai Road Garden	295	-	1.5	E	Recreational
ASR 14	Pamela Youde Nethersole Eastern Hospital - Block F	430	66	1.5 5 10	E	Community
ASR 15	Pamela Youde Nethersole Eastern Hospital - East Block	440	27	1.5 5 10	E	Community
ASR 16	Tsui Wan Estate Playground	340	-	1.5	E	Recreational
ASR 17	Tsui Shou House, Tsui Wan Estate	345	93	1.5 5 10	E	Residential

ASR ID	Description	Approx. Horizontal Distance to Project Site (m)	Approx. Building Height (m)	Assessment Heights (mAG)	Existing (E) or Planned (P)	Land Use
ASR 18	Endeavourers Chan Cheng Kit Wan Kindergarten	340	3	1.5	E	Educational
ASR 19	Tsui Ching House, Hang Tsui Court	410	75	1.5 5 10	E	Residential
ASR 20	Tsui Wan Nursing Home Limited	400	3	1.5	E	Community
ASR 21	Tsui Wan Estate Shopping Complex	425	9	1.5 5	E	Commercial
ASR 22	S.K.H Li Fook Hing Secondary School	455	18	1.5 5 10	E	Educational
ASR 23	TWGHs & LKWFSL Mrs Fung Yiu Hing Memorial Primary School	455	18	1.5 5 10	E	Educational
ASR 24	Chai Wan Fire Station	440	15	1.5 5 10	E	Government
ASR 25	Chai Wan Industrial City Phase II	300	71	1.5 5 10	E	Industrial
ASR 26	Ming Pao Industrial Centre Block B	390	84	1.5 5	E	Industrial

ASR ID	Description	Approx. Horizontal Distance to Project Site (m)	Approx. Building Height (m)	Assessment Heights (mAG)	Existing (E) or Planned (P)	Land Use
				10		
ASR 27	Safety Godown Industrial Building	315	53	1.5 5 10	E	Industrial
ASR 29	Planned Pet Garden at Sheung On Street	255	-	1.5	P	Recreational
ASR 30	Existing THEi New Campus	200	63	1.5 5 10	E	Educational
ASR 31	WSDCSDHQ	55	Pending	1.5 5 10	P	Government
ASR 32	HKHA public rental housing development	438	Pending	1.5 5 10	P	Residential

3.6. IDENTIFICATION OF POTENTIAL SOURCES OF IMPACTS

Construction Phase

3.6.1. As advised by ArchSD, the construction methodology will be the same as stated in the approved EIA Report. It is anticipated that no major earthworks nor construction of basement structure works. Only minor excavation works would be anticipated for the construction of the concrete footing for the support of the building structure and the underground plumbing and drainage works. Since the amount of construction and demolition materials generated would be minimal, impacts from the transportation of dusty materials would be negligible.

3.6.2. In addition, dust potentially generated as a result of the concreting works for the footing and concrete floor slab would be insignificant as the concrete will be pre-mixed and transferred to the Project site by concrete lorry mixers.

Operation Phase

3.6.3. The cumulative pollutant-emitting activities within the study area has been reviewed by site surveys in June 2018, September 2019 and desktop study, including:

- Pollutant in the Atmosphere and the Transport over Hong Kong (PATH) model;
- Road traffic emissions from all road links within the 500 m from the boundary of the Project site, including IEC, Wing Tai Road, Shing Tai Road, Sheung Mau Street and Sheung On Street etc.;
- Vehicular gaseous emissions within the proposed Project;
- Idling gaseous emissions within the proposed Project;
- Odour emissions within the proposed Project;
- Volatile chemical emissions within the proposed Project; and
- Marine emissions within the assessment area. Based on the site surveys in September 2019, no major marine activity was identified. Therefore, adverse air quality impact due to the marine emissions to the ASRs is not anticipated.

3.7. IMPACT ASSESSMENT

Construction Phase

3.7.1. The potential dust emission sources would be mainly from the construction work activities of the excavation and wind erosion at the work site. As the size of the work site is limited and the excavation is minor such that the amount of excavated materials generated would be small, no adverse dust impact would be anticipated at the representative ASRs with the implementation of sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation and good site practices.

3.7.2. Under the Regulation of Air Pollution Control (Non-road Mobile Machinery) (Emission), non-road mobile machinery, except those exempted, are required to comply with the prescribed emission standards. Also, only approved or exempted non-road mobile machinery with a proper label are allowed to be used in the construction site. The Contractor is required to ensure the adopted machines or non-road vehicle under the Project could meet the prescribed emission standards and requirement. Therefore, gaseous emission from diesel-fuelled construction equipment would be minor and would not cause any adverse air quality impact.

Operation Phase

3.7.3. The cumulative air quality impact assessment has been reconducted. The assessment methodology and parameters were adopted in the approved EIA Report have been reviewed and presented as below.

Pollutant in the Atmosphere and the Transport over Hong Kong (PATH)

3.7.4. The PATH model which was adopted in the approved EIA Report was released by EPD in December 2012. Meanwhile, the PATH model from EPD has been updated and launched in December 2015. Thus, the PATH data at the concerned grids had been reviewed.

3.7.5. The grid spacing for each of the grid was 1.5km x 1.5km for the previous PATH model which was adopted in the approved EIA Report, whereas, grid spacing in the latest PATH model is 1km x 1km for each. Therefore, the concerned grids and the associated concentration levels of the key pollutants had been updated in this ER. ***Table 3-3*** shows the updated PATH for the concerned grid (46,28), (47,27), (47,28) and (47,29). The Project site and ASRs are fall within the grid (46,28) and (47,28), thus the grid of (46,28) and (47,28) were adopted in this ER.

Table 3-3 Updated PATH for Concerned Pollutant

Pollutant	Averaging Time	Concentration (ug/m3)	Concentration (ug/m3)	Concentration (ug/m3)	Concentration (ug/m3)
		Grid 46,28	Grid 47,27	Grid 47,28	Grid 47,29
NO_2	1-hour (Criteria: 200ug/m3)	80.2	72.4	85.3	98.7
	Annual (Criteria: 40ug/m3)	11.7	9.3	10.2	11.9
PM_{10}	24-hour (Criteria: 100ug/m3)	73.1	67.8	68.0	70.7
	Annual (Criteria: 50ug/m3)	31.5	29.7	30.1	31.4
$PM_{2.5}$	24-hour (Criteria: 75ug/m3)	54.8	50.8	51.0	53.0

Pollutant	Averaging Time	Concentration (ug/m3)	Concentration (ug/m3)	Concentration (ug/m3)	Concentration (ug/m3)
		Grid 46,28	Grid 47,27	Grid 47,28	Grid 47,29
	Annual (Criteria: 35ug/m3)	22.4	21.1	21.4	22.3

Vehicular Emissions from Open Roads

3.7.6. Due to the commencement of the operation has been postponed from Year 2018 to Year 2023, the traffic projections within 15 years upon the completion of the Proposed Project had been updated and endorsed by Transport Department (TD). The TD's endorsement letter is shown in ***Appendix 4.7b***.

3.7.7. In comparison of traffic data between the approved EIA Report and this ER, the traffic flow, composite of vehicle speed and classes had been changed while the number of road links and corresponding road types remain unchanged. As advised by Traffic Consultant, the traffic growth rates have been updated based on the latest available planning data from Planning Department. The updated growth rates in this ER are less than the previously adopted growth rates in the approved EIA Report.

3.7.8. In view of the updated traffic data, the vehicular emission from the open road traffic has been reassessed by EMFAC-HK model and CALINE4 to evaluate the air quality impact. Sensitivity test was conducted to determine the worst-case scenario within 15 years after the occupancy of the Proposed Project, namely 2023, 2028 and 2038. The sensitivity test, updated emission data for model input and the road index are shown in ***Appendix 3.1***.

3.7.9. The EMFAC-HK Model which was employed in the approved EIA Report was version 2.6. Meanwhile, the latest version 4.1 of EMFAC-HK Model was released by EPD in January 2019. The base emission factors, speed correction factors and regime growth rates in the EMFAC-HK model have been updated. Therefore, EMFAC-HK version 4.1 was adopted in this ER to derive the most updated emission factors.

Dispersion Model for Simulation of the Emission from the Project Site

3.7.10. For simulation of the emission from vehicular travelling and vehicular idling activities within the Project Site by dispersion model, the dispersion model of ISCST 3 was adopted in the approved EIA Report. Meanwhile, the updated dispersion model of AERMOD was released and replaced the model of ISCST 3. Therefore, the dispersion model of AERMOD was adopted in this ER to evaluate the air quality impact for the concerned emission sources from the Project Site to the concerned ASRs.

3.7.11. The surface characteristics and the meteorological data of the study area are required for dispersion model – AERMOD simulation of the concerned emission sources. The input file of surface characteristics and the meteorological data for AERMOD are generated by AERMET model in SFC format and PEL format, respectively.

3.7.12. Determinations of land uses and surface characteristics are presented in ***Appendix3.2***, ***Figure 3.2a*** and ***Figure 3.2b***.

Emissions Induced by Vehicular Travelling within the Proposed Project in Year 2023

3.7.13. As mentioned in ***Table 2-1*** in ***Section 2***, due to change of layout plan, additional carparking space will be provided under the latest proposed scheme. Moreover, additional number and locations of emission opening locations have been provided.

3.7.14. The updated diurnal traffic flow, including the breakdown of the hourly in and out traffic volume, which has been verified with the HKPF, EMSD, FEHD, GLD and GL and given in ***Appendix 3.3***.

3.7.15. Meanwhile, the following assumptions described in the approved EIA Report are still valid:

- The travelling speed of 5 kph for all vehicles
- Longest travelling distance of 1000m for all vehicles
- 1 cold start for each trip per vehicle

3.7.16. The emission factors had been updated based on the latest information of vehicular travelling within the Project Site under the proposed scheme. Details of emission rate calculation and estimated location of volume sources are shown in ***Appendix 3.3*** and ***Figure 3.3*** respectively. The input information for AERMOD is attached in ***Appendix 3.5***.

Emissions Induced by Vehicular Idling Activities within the proposed Project in Year 2023

3.7.17. Air pollutant emissions from idling vehicles with their started engines would be one of the potential sources during operation of the proposed Project. The total number of vehicles within the Project Site has increased. The vehicle inventory is given in ***Appendix 3.4***.

3.7.18. As confirmed by FEHD, EMSD, HKPF and GLD, the idling activities (i.e. vehicle washing by vehicle washing machine, vehicle repair and testing) and the hourly maximum number of services at the same time described in the approved EIA Report are still valid. And the location of exhaust fans for vehicular idling emission are same as location as shown in the approved EIA Report. It is therefore the idling emission impacts in approved EIA Report were already on a conservative side.

3.7.19. With reference to the report of Road Tunnels: Vehicle Emissions and Air Demand for Ventilation has been updated by the PIARC Technical Committee on Road Tunnel Operation, the equation of calculating the emission rate for NOx and particulate matters (i.e. PM_{10} and $PM_{2.5}$) has been updated. Therefore, the calculation of emission rate for the key pollutants had been updated accordingly. The calculated emission rate of the key pollutants which was adopted in the approved EIA Report were higher than the updated emission rate in this ER. Details of emission rate calculation and estimated location of

volume sources are shown in ***Appendix 3.4*** and ***Figure 3.3*** respectively. The input information for AERMOD is attached in ***Appendix 3.5***.

Odour Emissions within the proposed Project

3.7.20. As advised by FEHD, the proposed arrangement for RCVs and associated mitigation measures for odour emission (i.e. carefully arrange traffic routing of RCVs, RCVs equipped with metal tailgate cover and deodourising system with an odour removal efficiency of 85% or above to control the spread of odour) are the same as described in the approved EIA Report.

3.7.21. Moreover, all the proposed arrangement and odour control measures for RCV as stated in the approved EIA Report will remain unchanged. All refuse collected in the district has been fully off-loaded in the designated refuse disposal points and the RCVs have been well rinsed in the transfer station/ disposal site before departure. Extensive cleansing and clearance of refuse residual inside the compactor of the RCVs would not be carried out within the proposed Project, where only washing of the body shell of RCVs would be taken place either at the manual washing bay or passing through the automatic vehicle washing machine. All RCVs will be wiped dry before leaving proposed Project. Other daily operations include vehicle parking and water refilling for the street washing vehicles. Since there will be no maintenance work in the entire depot area, opening of the RCVs' compactor is not anticipated. Between 0600 and 2300 hours every day, a maximum of 8 RCVs/ hour is expected to move in the proposed Project, where a total of 16 RCVs moving in per day. Having regard to the sufficient parking spaces, queuing of RCVs at the entrance is not expected. After 2300 hours, vehicle washing and other operational activities would be very limited. Traffic routing of RCVs will also be carefully arranged to avoid nuisance to surrounding sensitive areas.

3.7.22. In this connection, potential odour impact imposed to the surrounding sensitive areas, including staff and workers of the proposed Project, is not anticipated.

Volatile Chemical Emissions within the proposed Project

3.7.23. As confirmed with the GL, no additional testing activities and the type of organic and inorganic chemicals involved and their corresponding estimated emission rates in the testing as described in the approved EIA Report are still valid.

3.7.24. Furthermore, the activated charcoal filter as well as acid scrubber will be provided for volatile chemicals emission control. The emission control measures are the same as described in the approved EIA Report. The laboratory tests will be conducted in biological safety cabinet (BSC) and fumehoods to provide personnel, sample and environmental protection. Exhaust air in BSC will be treated before discharge to the atmosphere. In this connection, impact due to the volatile chemicals emissions of the proposed Project is considered negligible.

Cumulative Impacts

3.7.25. Based on the aforementioned changes, the air quality impact assessment has been reconducted with the latest information and the latest local models. The predicted overall

cumulative 1-hour and annual average concentration of NO_2 and 24-hour and annual average concentrations of PM10 and PM2.5 at 1.5m are given in the contour drawing, ***Figure 3.4***.

3.7.26. The maximum predicted concentration for each concerned pollutant between the approved EIA Report and this ER are presented in **Table 3-4**. It is noted that the predicted air quality impacts are below the AQO limit, and thus no non-compliance was found from this ER and the conclusion of approved EIA Report remain unchanged. Therefore, adverse air quality impact due to the Project is not anticipated.

Table 3-4 Summary Maximum Predicted Concentration for Approved EIA Report and ER Report

Pollutant	Averaging Time	Approved EIA Report	ER Report
NO_2	1-hour (Criteria: 200ug/m^3)	153.9	145.3
	Annual (Criteria: 40ug/m^3)	28.2	28.9
PM_{10}	24-hour (Criteria: 100ug/m^3)	73.8	73.3
	Annual (Criteria: 50ug/m^3)	39.4	31.7
$PM_{2.5}$	24-hour (Criteria: 75ug/m^3)	55.5	55.0
	Annual (Criteria: 35ug/m^3)	28.0	23.2

3.8. CONCLUSION

3.8.1. To conclude, potential air quality impacts during the operation phase of the proposed Project would be dominated by the vehicular emissions from the nearby open roads.

3.8.2. Modelling results show that the predicted maximum 1-hour and annual average of NO_2 and maximum daily and annual average PM2.5 and PM10 concentrations at the representative ASRs complied with the prevailing AQOs.

3.8.3. Conclusions on the cumulative impacts in approved EIA Report were already on a conservative side and the results are considered to be valid and applicable to the current updated project scheme and project commencement year.

4. NOISE

4.1. INTRODUCTION

4.1.1. The approved EIA Report identified construction noise, road traffic noise and fixed plant noise as the potential noise issues during the construction and operation of the proposed Project. Through the proper implementation of the recommended mitigation measures, noise impact can be controlled and is not likely to exceed the corresponding assessment criteria.

4.1.2. This section presents the potential implications on the noise impact assessment for the proposed Project with respect to the changes proposed, as detailed in Chapter 1 and Chapter 2 of this ER, after the approval of the EIA report.

4.2. REVIEW OF ENVIRONMENTAL LEGISLATION

4.2.1. The environmental legislation as stated in the approved EIA Report regarding noise assessment is still applicable to this ER.

4.3. DESCRIPTION OF SURROUNDING ENVIRONMENT

Baseline Conditions

4.3.1. The baseline condition described in the approved EIA Report is still valid in this ER. Site visit was conducted in July 2018. The dominant noise sources in the vicinity of the study area are still the traffic noise mainly from Shing Tai Road, Island East Corridor (IEC) and Wing Tai Road Flyover and to a lesser extent from Sheung On Street, Sheung Tat Street and Sheung Mau Street. There are also two bus maintenance depots operated by Citybus Limited and New World First Bus Services Limited.

Noise Sensitive Receivers

4.3.2. Two additional planned Noise Sensitive Receivers (NSRs) were identified with reference to the latest best available information at the time of preparation of this ER. Confirmations have been obtained from various government departments in July 2018 on the planned developments. These planned developments include the HKHA public rental housing development at Wing Tai Road and Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ) at Chong Fu Road as shown in ***Figure 2.3***.

4.3.3. For the planned WSDCSDHQ, it is located at about 50m to the northwest of the proposed Project. The construction will be commenced in early 2020 tentatively with the targeted completion in year 2024. With reference to the *Preliminary Technical Assessment* (reference No.0252551) for the WSDCSDHQ, central A/C system and fixed glazing windows will be provided to the office units and dental clinic such that they will

not rely on opened windows for ventilation. As such, it is not a representative noise sensitive receiver for the noise assessment.

4.3.4. For the planned HKHA public rental housing development at Wing Tai Road, it is located to the south of the proposed Development with an approximate separation distance of 420m from the Site Boundary. In view of the considerably long separation distance from the proposed Development, the planned public rental housing development is not considered as a representative NSR for the noise assessment.

4.3.5. All NSRs described in the approved EIA Report are still applicable in this ER, except for NSR 8 THEi New Campus. Construction of THEi New Campus has already been completed. Site photos of the NSRs identified in the approved EIA Report are given in ***Appendix 4.1***. As observed during site visit in June 2018, fixed window and central A/C system are provided at the THEi campus, which does not rely on opened windows for ventilation in general. Photos showing the provision of fixed window at facades are given in ***Appendix 4.1***. Since no written confirmation regarding the reliance of opened window for ventilation can be obtained from the operator, THEi is still considered as a representative NSR for the noise assessment as a conservative approach. The corresponding Noise Assessment Points (NAPs) (NAP 801, NAP 802) are therefore still valid. For the ease of reference, the same NSR identifications used in the approved EIA Report have been retained in this ER. Location of these NSRs and NAPs are illustrated in ***Figure 4.1*** and ***Table 4-1***.

Table 4-1 Changes of NSRs (NAPs) for Noise Assessment

Name of Building	NSR (NAP)	Description
Heng Fa Chuen Block 50	NSR 1 (NAP 101)	-
Hong Kong Institute of Vocational Education (IVE) (Chai Wan) - Academic Block	NSR 2 (NAP 201, NAP 202)	-
Knight Court Flat C & D [1]	NSR 3 (NAP 301)	-
Tsui Shou House, Tsui Wan Estate	NSR 4 (NAP 401)	-
Endeavourers Chan Cheng Kit Wan Kindergarten	NSR 5 (NAP 501)	-
Tsui Fuk House, Tsui Wan Estate	NSR 6 (NAP 601)	-
Tsui Hong House, Tsui Wan Estate	NSR 7 (NAP 701)	-
Technological and Higher Education Institute of Hong Kong (THEi) New Campus	NSR 8 (NAP 801, NAP 802)	-
Planned WSDCSDHQ	/	Not rely on opened window for ventilation.
HKHA Public Rental Housing Development at Wing Tai Road	/	Outside 300m assessment area.

Notes:
[1] The eastern façade of Knight Court are provided with windows with special key lock for cleansing purpose only (i.e. not relying on such windows for ventilation).

4.4. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

4.4.1. The proposed Project does not involve the construction of new road. Vehicles entering and leaving the proposed Project may potentially increase the traffic noise levels at the NSRs and is evaluated in this section. Comparing to the EIA Scheme, around 35% increase of no. of vehicles associated with the proposed Project is expected due to the inclusion of two addition usages. The scope for the traffic noise impact assessment includes the road networks surrounding the representative NSRs identified in this noise assessment which are approximately within 300m from the site boundary. The proposed Ingress/ Egress traffic routing as agreed by various future users are shown in ***Plate 4.1***. There is no update on the traffic routing.

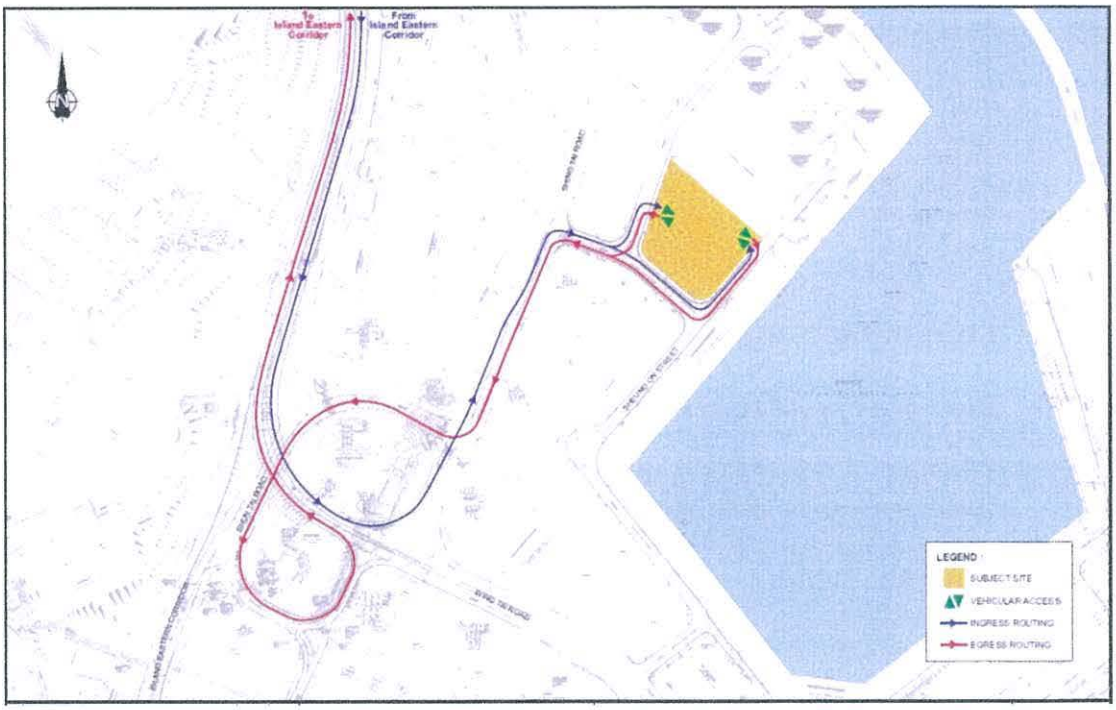


Plate 4.1 Ingress/ Egress traffic routing

4.4.2. As confirmed by Highways Department (HyD) in May 2019, the extent of road sections paved with noise reducing materials which have been considered in the Road Traffic Noise Impact Assessment in the approved EIA is still valid. Confirmation by HyD on the extent of low noise road surfacing, i.e. Polymer Modified Friction Course (PMFC), is given in ***Appendix 4.8***.

4.4.3. The tentative commencement of the operation is postponed from 2018 to 2023. In order to assess the significance of the noise contribution from the development with proposed changes, the assessment year shall be within 15 years upon tentative commencement of the operation, i.e. 2023. Gradual natural increase in traffic flow is expected in the coming 15 years and thus Year 2038 is determined to be the assessment year in which the traffic flow will be the highest. Traffic forecast data are given in ***Appendix 4.7a*** and letter to Transport Department (TD) on the use of the abovementioned traffic forecast for this

NIA is presented in ***Appendix 4.7b***. As shown in ***Appendix 4.7c***, the predicted road traffic flow of the proposed Project at AM Peak and PM Peak are 59 vehicles at 0800 to 0900 hours and 37 vehicles at 1500 to 1600 hours respectively.

4.4.4. Same assessment methodology was adopted as in the approved EIA Report. Potential road traffic noise impact associated with the proposed Project, with the proposed changes, was determined by comparing the predicted road traffic noise levels during peak hours, under "with Project" and "without Project" scenarios. Any increase in noise impact of 1.0dB(A) or above due to the road traffic generated by the Project will be considered as significant change. As confirmed by the future users, the predicted AM and PM peaks of the road traffic caused by the proposed Project are at 0800- 0900 hours and 1500- 1600 hours respectively, which is considered as the worst case scenario.

4.4.5. The predicted overall traffic noise levels at NAPs during both AM and PM peaks in Year 2038 for the "with project" and "without project" scenarios are summarized in ***Appendix 4.2***. The assessment results indicated that noise contribution from the road traffic generated by the proposed Project will be in the range of 0.0 dB(A) to 0.2 dB(A) at all NAPs. The noise contribution is considered insignificant. The operation of the proposed Project is anticipated to have no significant contribution to road traffic noise impact on the NSRs.

4.5. FIXED PLANT NOISE ASSESSMENT

Review of Fixed Plant Inventory

4.5.1. Similar to the findings in the approved EIA Report, major fixed noise sources include operational noise from vehicle repair/ testing activities, Mechanical ventilation and air conditioning system (MVAC) equipment and other fixed noise emitting equipment. The fixed plant inventory is given in ***Appendix 4.5***.

4.5.2. Two additional users and usages are to be accommodated, namely HKPF SMD and GLD Transport Pool. As shown in *Section 2* and confirmed by HKPF, HKPF SMD will be used for storage purpose only. No vehicle repair/ testing activities and other noisy activity will be carried out in the HKPF SMD, while only vehicle parking and vehicle washing (manual) will be carried out at GLD Transport Pool as confirmed.

4.5.3. Vehicle repair/ testing activities to be carried out at the HKPF PVP&EC, EMSD and FEHD Depots as detailed in the approved EIA Report are confirmed to be valid by future users. The operation details of vehicle repair/ testing activities including types, operation modes, quantities, frequency, operation duration etc., were reviewed and updated by the future users. They were updated and considered in the quantitative assessment. The relevant correspondences are given in ***Appendix 4.3a***. All of the vehicle repair / testing activities will be carried out within the covered area. The operation hours of the proposed Project are shown in *Section 2*, i.e. 0600-2400 from Monday to Sunday and 0800-1800 from Monday to Friday for GLD Transport Pool and HKPF SMD respectively, where the operation hours for other user departments detailed in the approved EIA report are still valid to this ER.

4.5.4. Compared with the EIA Scheme, additional vehicle repair/ testing activities are identified at HKPF PVP&EC and EMSD Depot, which include braking test (for motorcycle) at HKPF PVP&EC, bench grinder and drill stand at EMSD Depot as shown in ***Section 2***. These activities are considered as potential fixed noise sources in the assessment.

4.5.5. Additional MVAC equipment is identified for the two additional uses. Similar to the EIA Scheme, MVAC equipment and other fixed noise sources will be enclosed within plant rooms except the outdoor units of the air conditioning system on roof. This equipment was included in the quantitative assessment for assessing the impact.

Fixed Plant Noise Assessment Criteria

4.5.6. The results of the prevailing background noise surveys conducted in 2014/ 2015 were considered valid and representative. The fixed plant noise assessment criteria proposed in the approved EIA report were adopted in the ER.

Assessment Methodology

4.5.7. The operation details of vehicle repair/ testing activities to be carried out in the proposed project, including types, operation modes, quantities, frequency, operation duration etc., as reviewed and updated by the future users are considered in the quantitative assessment for day/ evening and night-time periods.

4.5.8. Sound power levels (SWLs) associated with the identified noise sources adopted in fixed noise assessment in the approved EIA Report are still valid in this ER.

4.5.9. For the newly identified vehicle repair/ testing activities (i.e. bench grinder and drill stand at EMSD Depot), on-site noise measurements have been conducted to obtain SWLs of the grinding and drilling activities. Sound Pressure Levels (SPLs) obtained during survey were then converted to SWLs with reference to ISO 3746. Comparison had been made with the SWLs estimated for the proposed models according to the equipment catalogues obtained from various user departments in July 2018 and the larger values are adopted in this assessment as conservative. The detailed noise measurement report is shown in ***Appendix 4.4***. For the motorcycle braking test at HKPF PVP & EC, the SWL of the same equipment at EMSD detailed in the approved EIA Report was adopted.

4.5.10. Corrections for tonality, intermittency or impulsiveness for each MVAC equipment and other fixed noise sources and vehicle repair/ testing activity as adopted in the approved EIA Report are still valid.

4.5.11. A correction of + 3 dB(A) for impulsiveness will be applied to hammering activities. A correction of + 6 dB(A) will be applied to water pumps and transformers as a conservative assumption. The corrections for tonality, impulsiveness and intermittency are not applied to the rest of the MVAC equipment and other fixed noise sources and vehicle repair/ testing activities. A correction of – 10 dB(A) are adopted if the external louvres and fixed plant are totally screened by barriers or building outside the project or building structures of the project. A correction of – 5 dB(A) are applied to the fixed noise sources within plant rooms (other than ventilation fans, transformers, generators, PAUs and chillers). The shielding effect due to the THEi New Campus is also taken into

consideration in this study. The drawings showing the locations of identified fixed noise sources and shielding effects are given in ***Figure 4.2*** and ***Figure 4.3*** respectively.

4.5.12. SPLs at NAPs are calculated based on distance attenuation, tonality correction, impulsiveness correction, intermittency correction, percentage on-time correction, barrier correction, quantity correction and façade correction.

Prediction and Evaluation of Fixed Noise Impact

4.5.13. The predicted maximum fixed plant noise levels at the NAPs at representative floors (high, mid and low zones) are presented in ***Table 4-2***. Detailed calculations of fixed plant noise impact assessment and the maximum allowable SWL of each equipment, which should not be exceeded in order to comply with the fixed plant noise assessment criteria, are presented in ***Appendix 4.5***. The predicted noise levels at NAPs comply with both day/ evening time and night-time fixed plant noise assessment criteria.

Table 4-2 Summary of Predicted Fixed Plant Noise Levels at NAPs

NAP ID	Level	Assessment Height (m)	Predicted Maximum Noise Level, $L_{eq\ (30mins)}$ dB(A)		ANL, $L_{eq\ (30mins)}$ dB(A)	
			Day-time & Evening	Night-time	Day-time & Evening	Night-time
NAP 101	1/F	8.7	57	50	57	50
	10/F	35.7	48	42		
	21/F	68.7	48	42		
NAP 201	1/F	6.4	63	No operation in night-time	64	No operation in night-time
	3/F	12.4	63			
	6/F	21.4	63			
NAP 202	1/F	6.4	50	No operation in night-time	64	No operation in night-time
	3/F	12.4	50			
	6/F	21.4	50			
NAP 301	1/F	10.2	51	44	58	55
	12/F	43.2	51	44		
	24/F	79.2	51	44		
NAP 401	1/F	8.4	57	50	65	55
	15/F	50.4	57	50		
	30/F	95.4	57	50		
NAP 501	G/F	5.4	57	No operation in night-time	65	No operation in night-time
NAP 601	1/F	8.9	56	49	65	55
	15/F	50.9	56	49		
	30/F	95.9	56	49		
NAP 701	1/F	8.4	47	41	65	55
	15/F	50.4	47	41		
	30/F	95.4	55	42		
NAP 801	5/F	26.8	61	No operation in night-time	65	No operation in night-time
	9/F	43.6	61			
	13/F	60.2	61			

NAP ID	Level	Assessment Height (m)	Predicted Maximum Noise Level, $L_{eq\ (30mins)}$ dB(A)		ANL, $L_{eq\ (30mins)}$ dB(A)	
			Day-time & Evening	Night-time	Day-time & Evening	Night-time
NAP 802	5/F	26.8	50	No operation in night-time	65	No operation in night-time
	9/F	43.6	50			
	13/F	60.2	50			

Proposed Mitigation Measures

4.5.14. Mitigation measures proposed in the approved EIA Report on Vehicle Repair/ Testing Activities and MVAC equipment and other fixed noise sources remain valid in this ER.

Residual Impact

4.5.15. With the MVAC and other fixed noise sources properly selected with mitigation measures where necessary to meet the maximum allowable SWLs while vehicle repair/ testing activities to be carried out under the covered area of the proposed Project and avoiding such works to be carried out during night-time as far as practicable, no adverse fixed noise impact is anticipated.

4.6. CONSTRUCTION NOISE ASSESSMENT

Review of Construction Plant Inventory

4.6.1. As advised by ArchSD, the construction methodology and construction plant inventory will be the same as the one adopted in the construction noise impact assessment in the approved EIA Report. As shown in ***Appendix 4.6a and 4.6b***, the preliminary construction is expected to last for about 35 months from Jan 2020 to Nov 2022. The construction activities are expected to be conducted during normal daytime working hours only (i.e. 0700 to 1900 hours on any day not being a Sunday or general holiday).

4.6.2. Concurrent projects were also taken into account in the construction noise impact assessment. The construction of WSDCSDHQ was the concurrent project within the study area during the construction phase of the proposed Project. Quantitative construction noise impact assessment was conducted with respect to the construction programmes to evaluate the cumulative construction noise impact to the nearby NSRs. The plant inventory for the construction of WSDCSDHQ for different work stages has been reviewed and confirmed by ArchSD, the project proponent of WSDCSDHQ. The anticipated works for the planned WSDCSDHQ are shown in ***Table 4-3***. Location of notional sources and the agreed plant inventory for WSDCSDHQ are shown in ***Figure 4.4*** and ***Appendix 4.3b*** respectively.

Table 4-3 Anticipated Activities of Planned WSDCSDHQ

Anticipated Activities	Anticipated Construction Period	Anticipated Construction work of the Project
Site Formation, Excavation and Filling	From Nov 2020 to Oct 2021	Excavation and filling, ground compression (Levelling and compressing), sheet piling and pile caps & ground beam construction
Superstructure	From Nov 2021 to end of 2024	Falsework and formwork, rebar fixing and concreting work

Assessment Methodology

4.6.3. Methodology for assessing noise impacts from the construction activities associated with the proposed Project is developed based on the GW-TM which is the same with the one adopted in the approved EIA Report.

Assessment Criteria

4.6.4. Noise impacts arising from general construction activities other than percussive piling between 0700 and 1900 hours on any day not being a Sunday or general holiday are assessed against the standards set out in the EIAO-TM as summarized below.

Use	Noise Standards, $L_{eq(30mins)}$ dB(A)
Domestic premises, hotels and hostels	75
Education institutions, kindergartens, nurseries and all others where voice communication is required	70 65 (during examination period)

Prediction and Evaluation of Construction Noise Impact

4.6.5. The unmitigated construction noise impact from the proposed Project alone and the cumulative construction noise impact were assessed and evaluated based on the best available information in the ER.

4.6.6. No examination will be scheduled at the kindergarten (NSR 5). The examination schedules for academic year 2018-2019 provided by the IVE (Chai Wan) (NSR 2) and THEi (NSR 8) are listed in ***Table 4-4***. Examination periods at NSR 2 and NSR 8 will last for around 25 and 27 days respectively in each academic year.

Table 4-4 Examination Schedule of IVE (Chai Wan) and THEi for Academic Year 2018-2019

Examination Period (Academic Year 2018-2019)	No. of Days (including Saturdays)		
	IVE (Chai Wan) (NSR 2)	THEi (NSR 8)	Total
Sept 2018	0	0	0
Oct 2018	0	0	0
Nov 2018	0	0	0
Dec 2018	0	10	10
Jan 2019	9	0	9
Feb 2019	0	0	0
Mar 2019	0	0	0
Apr 2019	0	0	0
May 2019	9	10	19
Jun 2019	0	0	0
Jul 2019	7	3	10
Aug 2019	0	4	4

4.6.7. The construction of THEi New Campus has been completed. The shielding provided by the THEi New Campus was considered in this assessment.

4.6.8. ***Table 4-5*** and ***Table 4-6*** summarize the predicted construction noise levels due to the Project only and predicted cumulative construction noise levels respectively. The calculations are provided in ***Appendix 4.6a***.

4.6.9. Generally, during construction of the proposed Project, exceedance during examination period is predicted at NAP 201 and NAP 801 under unmitigated scenario with a maximum of 5 dB and 2 dB respectively.

4.6.10. For the cumulative construction noise impact, the preliminary construction plant inventory for construction of WSDCSDHQ has been obtained as shown in ***Appendix 4.3b*** and taken into consideration. During foundation and main building construction, exceedance of 2 dB is also predicted during normal school days for NAP 201 under unmitigated scenario.

Table 4-5 Predicted Construction Noise Levels at Representative NAPs during Normal Daytime Working Hours due to the Project Only for Unmitigated Scenario

NAP ID	Description	ANL, dB(A)	Predicted Maximum Construction Noise Level, dB(A) [3]		
			Site Formation, Excavation and Filling	Foundation	Main Building Construction
NAP 101	Heng Fa Chuen Block 50	75	63	63	63
NAP 201	Hong Kong Institute of Vocational Education (Chai Wan) - Academic Block	70/65 [1]	**70**	**70**	**70**
NAP 202			55	55	55
NAP 301	Knight Court Flat C & D	75	59	59	59
NAP 401	Tsui Shou House, Tsui Wan Estate	75	63	63	63
NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	70 [2]	63	63	63
NAP 601	Tsui Fuk House, Tsui Wan Estate	75	62	62	62
NAP 701	Tsui Hong House, Tsui Wan Estate	75	62	62	62
NAP 801	THEi New Campus (i.e. Classrooms from 5/F onwards)	70/65 [1]	**67**	**67**	**67**
NAP 802			55	55	55

Notes:

[1] Construction noise criteria for schools are 70 dB(A) at normal school days and 65 dB(A) during examinations.

[2] No examinations will be scheduled at Endeavourers Chan Cheng Kit Wan Kindergarten and only construction noise criteria for school at normal school days will be applied.

[3] Noise levels exceeding the construction noise criteria are **bolded.**

Table 4-6 Predicted Cumulative Construction Noise Levels at Representative NAPs during Normal Daytime Working Hours for the Unmitigated Scenario

NAP ID	Description	ANL, dB(A)	Predicted Maximum Construction Noise Level, dB(A) [2]
NAP 101	Heng Fa Chuen Block 50	75	71
NAP 201	Hong Kong Institute of Vocational Education (Chai Wan) - Academic Block	70/65 [1]	**72**
NAP 202			65
NAP 301	Knight Court Flat C & D	75	69

NAP ID	Description	ANL, dB(A)	Predicted Maximum Construction Noise Level, dB(A) [2]
NAP 401	Tsui Shou House, Tsui Wan Estate	75	65
NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	70 [3]	65
NAP 601	Tsui Fuk House, Tsui Wan Estate	75	64
NAP 701	Tsui Hong House, Tsui Wan Estate	75	64
NAP 801	THEi New Campus (i.e. Classrooms from 5/F onwards)	70/65 [1]	**69**
NAP 802			61

Notes:

[1] Construction noise standards for schools are 70 dB(A) at normal school days and 65 dB(A) during examinations.

[2] Noise levels exceeding the construction noise standards are **bolded**.

[3] No examinations will be scheduled at Endeavourers Chan Cheng Kit Wan Kindergarten and only construction noise standards for school at normal school days were applied.

Proposed Mitigation Measures

4.6.11. Mitigation measures are required for the NSRs at which unmitigated construction noise levels are predicted to exceed the corresponding construction noise standards as shown in ***Table 4-6***.

4.6.12. Construction noise mitigation measures proposed in this assessment are the same as those proposed in the approved EIA Report. All practicable noise mitigation measures will be implemented to minimize the construction noise impact due to the proposed Project, which are summarized below:

- Selection and optimisation of construction programmes, such as avoidance of simultaneous operation of noisy powered mechanical equipment (PME), and/or reduction in the percentage on-time of PME during noise sensitive periods such as school examination period;
- Use of quality powered mechanical equipment (QPME) and quiet working methods;
- Use of movable at-source noise mitigation measures such as movable noise barriers, noise enclosures, noise jacket and mufflers;
- Implementation of good site practices to limit noise from construction site; and
- Preparation of Construction Noise Management Plan before construction commencement.

Assessment of Construction Noise Impact with the Application of Mitigation Measures

4.6.13. ***Table 4-7*** and ***Table 4-8*** summarize the predicted construction noise levels due to the Project only and cumulative construction noise levels at NAPs under mitigated scenario respectively, the detailed calculations are shown in ***Appendix 4.6b***.

4.6.14. For the "Due to the Project Only" scenario, with the implementation of the abovementioned mitigation measures, during site formation, excavation and filling of the proposed Project, residual impacts of maximum of 4 dB and 1 dB at NAP 201 and NAP 801 are predicted during examination period.

4.6.15. With consideration of concurrent WSDCSDHQ during foundation and main building construction of the proposed Project under mitigated scenario, the predicted construction noise levels at the representative NSRs shall comply with construction noise standard, except NSR2 (NAP201). Exceedance of 5 dB is expected during examination period. The duration of the exceedance is expected to be around 25 days per year.

4.6.16. In view of the residual impact anticipated at NAP 201 when WSDCSDHQ is taking in place concurrently during the examination period, similar with the approved EIA Report, the construction noise impact due to the project will be minimized with the implementation of all practicable noise mitigation measures where necessary. The timing and sequencing of various construction activities shall be carefully arranged according to the actual site work situation, in order to minimize noise nuisance to NSRs during examination. Adequate time is allowed for construction for limiting the concurrent activities and avoiding parallel operation of noisy PME. The contractor shall obtain the school calendar for academic years in the rest of the construction period for reference when scheduling their construction works. Construction works would be scheduled after examination as far as practicable so as to reduce impact to the adjacent schools. A Construction Noise Management Plan shall be provided by the Contractor before commencement of the construction to avoid noise exceedance.

Table 4-7 Predicted Construction Noise Levels at Representative NAPs under Mitigated Scenario due to the Project Only

NAP ID	Description	ANL, dB(A)	Predicted Maximum Construction Noise Level, dB(A) [3]		
			Site Formation, Excavation and Filling	Foundation	Main Building Construction
NAP 101	Heng Fa Chuen Block 50	75	62	58	58
NAP 201	Hong Kong Institute of Vocational Education (Chai Wan) - Academic Block	70/65 [1]	**69**	65	65
NAP 202			54	50	50
NAP 301	Knight Court Flat C & D	75	58	54	54
NAP 401	Tsui Shou House, Tsui Wan Estate	75	62	58	58

NAP ID	Description	ANL, dB(A)	Predicted Maximum Construction Noise Level, dB(A) [3]		
			Site Formation, Excavation and Filling	Foundation	Main Building Construction
NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	70 [2]	62	58	58
NAP 601	Tsui Fuk House, Tsui Wan Estate	75	61	57	57
NAP 701	Tsui Hong House, Tsui Wan Estate	75	61	57	57
NAP 801	Planned THEi New Campus (i.e. Classrooms from 5/F onwards)	70/65 [1]	**66**	62	62
NAP 802			54	50	50

Notes:
[1] Construction noise criteria for schools are 70 dB(A) at normal school days and 65 dB(A) during examinations.
[2] No examinations will be scheduled at Endeavourers Chan Cheng Kit Wan Kindergarten and only construction noise criteria for school at normal school days will be applied.
[3] Noise levels exceeding the construction noise criteria are **bolded**.

Table 4-8 Predicted Cumulative Construction Noise Levels at Representative NAPs under Mitigated Scenario

NAP ID	Description	ANL, dB(A)	Predicted Maximum Construction Noise Level, dB(A) [2]
NAP 101	Heng Fa Chuen Block 50	75	70
NAP 201	Hong Kong Institute of Vocational Education (Chai Wan) - Academic Block	70/65 [1]	**70**
NAP 202			64
NAP 301	Knight Court Flat C & D	75	69
NAP 401	Tsui Shou House, Tsui Wan Estate	75	62
NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	70 [3]	62
NAP 601	Tsui Fuk House, Tsui Wan Estate	75	61
NAP 701	Tsui Hong House, Tsui Wan Estate	75	61
NAP 801	Planned THEi New Campus (i.e. Classrooms from 5/F onwards)	70/65 [1]	**66**
NAP 802			60

Notes:

[1] Construction noise standards for schools are 70 dB(A) at normal school days and 65 dB(A) during examinations.
[2] Noise levels exceeding the construction noise standards are **bolded**.
[3] No examinations will be scheduled at Endeavourers Chan Cheng Kit Wan Kindergarten and only construction noise standards for school at normal school days were applied.

4.7. CONCLUSION

4.7.1. With the two additional floors of the proposed Project including two additional user departments, i.e. HKPF SMD and GLD Transport Pool, noise impact during construction and operation are assessed.

Construction Phase

4.7.2. Construction of WSDCSDHQ is the concurrent project during the construction of the proposed Project and it is taken into consideration for the construction noise impact assessment.

4.7.3. With reference to the updated programme, the construction period is increased to 35 months and there will be no changes on the construction method.

4.7.4. With the implementation of the recommended mitigation measures, adverse construction noise impact is not anticipated except at NSR 2 and NSR8. Exceedance of construction noise standard at NSR 8 resulted only from site formation, excavation and filling works and during examination period. The duration of exceedance is expected to be 10 days. For NSR 2, it is located close to the site and the WSDCSDHQ, it is predicted to expose to construction noise levels exceeding the relevant noise standard during examination period throughout the construction period of the proposed Project. The duration of the exceedance is expected to be around 25 days per year. It is recommended that a more detailed construction planning, which includes the arrangement on work sequence and plant locations, etc. before actual construction work should be undertaken by the Contractor, and practicable noise mitigation measures should be implemented according to the actual site condition and constraints, in order to reduce the construction noise impact. The Contractor should keep close liaison with the nearby educational institutions to obtain the examination schedule and should control noise from their construction works such as avoiding concurrent operation of noisy PME, and /or reduction in the percentage on-time of PME during school examination periods. A Construction Noise Management Plan shall be provided by the Contractor before commencement of the construction to avoid noise exceedance.

Operation Phase

4.7.5. Additional fixed noise sources due to the incorporation of two additional floors are identified, i.e. additional MVAC and other fixed noise source and vehicle repair / testing activities as confirmed by future users. Additional road traffic flow is also anticipated.

4.7.6. As confirmed by the two additional users, HKPF SMD will be used for storage purpose only and no vehicle repair/ testing activities and other noisy activities will be carried out at HKPF SMD, while vehicle parking and vehicle washing (manual) will be carried out at GLD Transport Pool. Additional vehicle repair/ testing activities will be carried out in the depot as confirmed by EMSD. They are included for the fixed plant noise assessment.

4.7.7. With the implementation of the mitigation measures for vehicle repair / testing activities (such as vehicle repair / testing activities to be carried out under the covered area during daytime and evening as far as possible) and the MVAC and other fixed noise sources

properly selected with mitigation measures where necessary to meet the maximum allowable SWLs, adverse fixed noise impact on the NSRs is not anticipated during operation phase.

4.7.8. A comparison of the noise levels for the "with project" and "without project" scenarios predicted for year 2038 (i.e. the worst case scenarios) indicated that traffic noise contribution from the road traffic generated by the proposed Project will be insignificant. Therefore, operation of the proposed Project will have no significant contribution to road traffic noise impact on the nearby NSRs.

4.7.9. In view of the changes abovementioned, there is no variation that would materially be different from the framework design or operational parameters described and implied in the approved EIA Report. Provided that the recommendations set out in this section are properly implemented, no unacceptable impacts during construction and operation of the proposed Project would be anticipated.

5. WATER QUALITY AND SEWERAGE IMPACT ASSESSMENT

5.1. INTRODUCTION

5.1.1. The approved EIA Report (AEIAR-191/2015) identified construction site run-off, sewage from workforce and potential risk of chemical spillage as the potential water pollution sources during the construction and operation of the proposed Project. Through the proper implementation of the recommended mitigation measures, adverse water quality impact is not anticipated.

5.1.2. This section reviews the water quality impacts from the proposed Project due to the project changes after the approval of the EIA Report. The potential water quality and sewerage impacts during construction and operation of the proposed Project are assessed. Standards, guidelines and legislation and recommended mitigation measures described in the approved EIA Report are reviewed to assess their present applicability and are updated where necessary.

5.2. REVIEW ON ENVIRONMENTAL LEGISLATION

5.2.1. The environmental legislations as stated in the approved EIA Report regarding water quality and sewerage impact assessment are still applicable to this ER.

5.3. DESCRIPTION OF SURROUNDING ENVIRONMENT

Baseline Conditions

5.3.1. A desktop study was conducted to review the latest information on the water systems and the respective catchments for this ER. No change is identified comparing to the approved EIA Report. According to the latest DSD drainage record plan, there are existing sewerage networks in the vicinity of the proposed Project serving the concern sewerage catchments. As shown in ***Figure 5.1***, the existing gravity public sewers have pipe diameters ranging from 225mm to 600mm running along Sheung On Street and Sheung Ping Street. These sewers are then connected into the 2,100mm trunk sewer discharging into the DSD Preliminary Treatment Works (PTW) at the downstream end.

5.3.2. Based on the best available info at the time of the ER, no committed or planned sewerage networks, sewage treatment or disposal facilities are identified in the vicinity of the proposed Project.

5.3.3. According to the latest available information provided by the corresponding authorities in August 2018, population data remains unchanged for the surrounding environments, including Government Logistics Centre, New World First Bus Depot and Citybus Chai Wan Depot. Sewage from these developments and the proposed Project will be discharged at the sewer along Sheung On Street. Estimation on the sewage generation from the abovementioned developments are still valid and will be adopted in hydraulic assessment.

5.3.4. Two existing public stormwater drainage systems, i.e. along Sheung Mau Street and along Sheung On Street North, were identified nearby the Project site according to the latest DSD drainage record plan. As reviewed, no updates are identified.

Water Sensitive Receivers

5.3.5. Owing to the unchanged nature of the proposed Project and environmental conditions, Water Sensitive Receivers (WSRs) identified in the approved EIA Report are still applicable to this ER.

Planned Development

5.3.6. There are two planned developments with reference to the latest best available information at the time of preparation of this ER, namely the HKHA public rental housing development at Wing Tai Road and Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ) at Chong Fu Road. Sewage generation from these developments is anticipated.

5.3.7. The HKHA public rental housing development at Wing Tai Road will be located at the downstream of the Project site, which is beyond the original study catchment adopted from the approved EIA Report. Sewage generated from the HKHA public rental housing development is expected to be discharged to the gravity sewer with a diameter of 2,100mm along Wing Tai Road. According to the approved EIA Report, in terms of the 2,100mm public sewer, 14.8% of its total capacity was taken. In other words, generous capacity is remained to cater for the discharge generated from the small scaled HKHA public rental housing development. Therefore, it is not included in the quantitative assessment of this ER.

5.3.8. As shown in ***Figure 5.1***, discharge from WSDCSDHQ is expected to connect to the 1,200mm sewer along Shing Tai Road, which ultimately connect to the 2,100mm sewer along Wing Tai Road. In order to evaluate the cumulative impact on the public sewerage system, the sewage generated from WSDCSDHQ is incorporated into the quantitative assessment by assuming 100% full capacity of the 1,200mm sewer.

5.4. CONSTRUCTION OF THE PROPOSED PROJECT

5.4.1. Pollution sources identified in the approved EIA Report are still valid. With the implementation of adequate control for construction phase sewage as specified in the approved EIA Report, adverse water quality impacts on water system are not anticipated.

5.5. OPERATION OF THE PROPOSED PROJECT

5.5.1. Additional storage spaces (without chemical or DGs provisions) and vehicle parking spaces will be provided for HKPF SMD and GLD Transport Pool, while the office activities and vehicle repair/ testing activities at HKPF PVP&EC, HKPF Centralised Case Property Store, EMSD Depot, FEHD Depot and GL Specialist Laboratory as detailed in the approved EIA Report are still valid as confirmed by the future users. Pollution sources identified from the approved EIA Report are still valid. Sewage will be discharged to the public sewer along Sheung On Street.

5.5.2. Compared to the EIA Scheme, increased staff population and additional planned developments are expected, the potential cumulative impacts due to proposed Project are evaluated with latest available information on population and sewage generating activities in the hydraulic assessment.

Population Data

5.5.3. Number of staffs working in the proposed Project is increased and shown in ***Table 5-1*** below.

Table 5-1 Total Number of Staff Working in the Proposed Project

Departments	Total Number of Staff Working at Chai Wan Government Complex and Vehicle Depot	
	approved EIA Report	ER
HKPF (PVP & EC, Centralised Case Property Store, SMD)	30	40
FEHD Depot	127	127
EMSD Depot	33	33
GL Specialist Laboratory	36	60
GLD Depot	N/A	60
Total	**226**	**320**

Sewage Generating Activities in Proposed Project

5.5.4. The sewage generating activities to be carried out in the proposed Project are summarised in ***Table 5-2*** and the estimated quantity of water use from staffs at office and Depot as well as vehicle washing and maintenance are shown in ***Appendix 5.1***.

Table 5-2 Summary of Sewage Generating Activities

Departments	Sewage Generating Activities at Chai Wan Government Complex and Vehicle Depot	
	approved EIA Report	ER
HKPF PVP & EC	Vehicle Repair / testing	Vehicle Repair / testing
HKPF Centralised Case Property Store	N/A	N/A
FEHD Depot	Daily vehicle washing (Automated vehicle washing machine + manual wash)	Daily vehicle washing (Automated vehicle washing machine + manual wash)
EMSD Depot	- Vehicle Repair / testing, - daily vehicle washing (manual wash)	- Vehicle Repair / testing, - daily vehicle washing (manual wash)
GL Specialist Laboratory	N/A	N/A
GLD Depot	/	Daily vehicle washing (manual wash)

Departments	Sewage Generating Activities at Chai Wan Government Complex and Vehicle Depot	
	approved EIA Report	ER
HKPF SMD	/	N/A

HKPF PVP & EC

- **Vehicle repair / testing** – According to latest available information provided by HKPF, vehicle repair / testing information remain unchanged comparing to the approved EIA Report.

FEHD Depot

- **Automatic vehicle washing machine** – According to the latest available information provided by FEHD, quantity and operation information remain unchanged comparing to the approved EIA Report.
- **Vehicle washing bay for manual washing** – According to latest available information provided by FEHD, quantity and operation information remain unchanged comparing to the approved EIA Report.

EMSD Depot

- **Vehicle washing bay for manual washing** – According to latest available information provided by EMSD, quantity and operation information remain unchanged comparing to the approved EIA Report.
- **Vehicle repair / testing** – According to latest available information provided by EMSD, repair / testing information remain unchanged comparing to the approved EIA Report.

GLD Depot

- **Vehicle washing bay for manual washing** – It is an additional activity to be included in the assessment for this ERR. The operation information provided by GLD are considered in the assessment. It is advised by GLD that a maximum of about 24 vehicles would use the manual vehicle washing bay per day. There will be no reuse of wastewater on site.

HKPF SMD

- It is an additional department to be included in the proposed development. The operation information provided by HKPF are considered in the assessment. It is advised by HKPF that only storage area would be provided with 10 staffs. The sewage generated by the staffs working in the proposed Project is included in the assessment for this ERR. There shall be no other activities which will generate sewage.

Potential Impact on Public Sewers and Sewerage Facilities

5.5.5. A hydraulic assessment, which takes into account the sewage discharge from the surrounding developments, has been conducted in the approved EIA Report to evaluate the water quality impact due to the accommodation of additional uses. Same assessment methodology will be adopted in this ER. According to the Sewerage Manual (SM) and the Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF), peaking factor of 8 and catchment inflow factor of 1.1 are still applicable to the hydraulic assessment of this ER. The hydraulic assessment is updated and provided in ***Appendix 5.1***.

5.5.6. The daily sewage generated by the Subject Site is estimated according to the GESF. The average dry weather flows (ADWF) is estimated to be 238.36m^3/d and the peak wet weather flow (PWWF) is estimated to be 2,097.57m^3/d (0.0243m^3/s), which includes the stormwater allowances in order to provide a conservative basis for the performance assessment of the sewerage facilities.

5.5.7. ***Table 5-3*** summarized the capacities of the existing 225mm diameter gravity sewer and the downstream 400mm, 600mm, 2,100mm diameter gravity sewers. While comparing with the estimation in the approved EIA Report, an 8.1% increase to the immediate 225mm sewer is anticipated due to the increase in employee population and additional activities of the proposed Project. The percentage increase in capacities of the downstream 400mm, 600mm and 2,100mm diameter gravity sewer are estimated to be 5.1%, 2.9% and 0.1% respectively. The hydraulic assessment (***Appendix 5.1***) has shown that the sewerage system has adequate capacity to cater for the increase in sewage generation associated with the proposed Project and planned development.

Table 5-3 Capacities of Sewerage System

Pipe Size (mm)	Area served	approved EIA Report		ER	
		Sewage generation (m^3/s) (1)	Percent of flow to capacity (%)	Sewage generation (m^3/s) (1, 2)	Percent of flow to capacity (%) (2)
225	Proposed Project, Government Logistics Centre, New World First Bus Depot	0.0214	59.9%	0.0243 (+13.6%)	68.0% (+8.1%)
400		0.0375	66.5%	0.0404 (+7.7%)	71.6% (+5.1%)
600	Proposed Project, Government Logistics Centre, New World First Bus Depot, Citybus Chai Wan Depot	0.0446	43.3%	0.0475 (+6.5%)	46.2% (+2.9%)
2100		1.3688	14.8%	1.3717 (+0.2%)	14.9% (+0.1%)

Notes:

(1) Peaking factors including stormwater allowance were considered.

(2) Percentage in blanket indicated the percentage changed from the approved EIA Report to this ER.

5.5.8. The increase in sewage generation induced by the additional employee population is considered insignificant to the abovementioned gravity sewers since the sewerage system remain in sufficient capacity to cater for such increase. Therefore, significant impact to the receiving sewerage networks and the associated sewage treatment and disposal facilities arose from the modifications of the proposed Project is not anticipated. Additional mitigation works to the sewerage networks, sewage treatment and disposal facilities are not required.

Potential Impact on Public Stormwater System

5.5.9. Similar to the approved EIA Report, no maintenance activity will be carried out on roof floor. No fertilizers or pesticides will be routinely used in landscape area. Run-offs from the proposed Project will be properly treated prior to discharge into the public sewer system to ensure the compliance with WPCO-TM. No adverse water quantity and quality impact on the public stormwater drainage system and nearby water bodies and WSR is anticipated.

5.6. CONCLUSION

5.6.1. The hydraulic assessment demonstrated that the sewerage system has adequate capacity to cater for the increase in sewage generation associated with the proposed Project with modifications.

5.6.2. Though there will be a proposed increase in number of floors and staff population, the proposed Project will be designed, constructed and operated in line with the information as described in the approved EIA Report.

5.6.3. There is no variation that would materially be different from the framework design or operational parameters described and implied in the approved EIA Report. Therefore, no unacceptable water quality impact would be envisaged arising from the proposed variation.

6. LANDSCAPE AND VISUAL IMPACT ASSESSMENT

6.1. INTRODUCTION

6.1.1. As identified in the approved EIA Report (AEIAR-191/2015), the potential sources of landscape impact of the proposed Project during construction and operation phase mainly arisen from site clearance (i.e. removal of existing vegetation) and the presence of the permanent structure of the proposed Project and its operation respectively.

6.1.2. As identified in the approved EIA Report, the potential sources of visual impact of the proposed Project during construction and operation phase mainly arisen from the operation of site works (i.e. site clearance work, stockpiling of construction equipment, etc.) and the presence of permanent structure of the proposed Project respectively.

6.1.3. Through the proper implementation of the recommended mitigation measures, the landscape and visual impact from the proposed Project under the EIA Scheme is considered as acceptable with mitigation measures as identified in the approved EIA Report.

6.1.4. This section reviews the landscape and visual impact from the proposed Project due to the changes in development parameters mentioned in *Section 1.2* after the approval of the EIA Report. It follows the criteria and guidelines as stated in EIAO Guidance Note (GN) No. 8/2010, Annexes 10 and 18 of the Technical Memorandum on Environmental Impact Assessment Ordinance (EIAO-TM).

6.2. ENVIRONMENTAL LEGISLATION, STANDARDS AND GUIDELINES

6.2.1. The environmental legislation, standards and guidelines stated in the approved EIA Report for landscape and visual impact (LVIA) are listed below and they are still applicable to this ER.

- Environmental Impact Assessment Ordinance (EIAO) (Cap.499);
- EIA Study Brief No. ESB-267/2014, particularly clause 3.4.10 and Appendix F;
- EIAO-TM, particularly Annex 10 and 18;
- EIAO GN No. 8/2010 "Preparation of Landscape and Visual Impact Assessment under the Environmental Impact Assessment Ordinance";
- Town Planning Ordinance (Cap.131);
- Study on Landscape Value Mapping of Hong Kong;
- Hong Kong Planning Standards and Guidelines Chapter 4 Recreation, Open Space and Greening, and Chapters 11 Urban Design Guidelines;
- Chai Wan Outline Zoning Plan (OZP) No. S/H20/23;
- DEVB TC(W) No. 2/2012 Allocation of Space for Quality Greening on Roads;

- WBTC No. 7/2002 Tree Planting in Public Works;
- DEVB TC(W) No. 6/2015 Maintenance of Vegetation and Hard Landscape Features;
- Guidelines on Tree Transplanting (September 2014) issued by Greening, Landscape and Tree Management (GLTM) Section of Development Bureau;
- Guidelines on Tree Preservation during Development (April 2015) issued by GLTM Section of Development Bureau;
- WBTC No. 29/2004 Registration of Old and Valuable Trees and the Guidelines for Preservation; and
- DEVB TC(W) No. 7/2015 Tree Preservation.

6.3. PLANNING AND DEVELOPMENT CONTROL FRAMEWORK

6.3.1. A review of the proposed variation in development parameter of the proposed Project and the surroundings has been undertaken.

6.3.2. Owing to the unchanged nature and location of the proposed Project, which is surrounded by areas zoned as "Government, Institution or Community (G/IC(2))" on the latest Chai Wan Outline Zoning Plan (OZP) No. S/H20/23 where Government buildings and public bus depots have been developed, the proposed Project satisfies the planning intention and is consistent with the visual character of the area.

6.3.3. With the proposed two additional storeys, the proposed Project has building height of +67.8 mPD, which complies with the height restriction of 70.0 mPD as stipulated on the OZP for the Project site. The building height of the proposed Project is also within the range of building heights of the surrounding developments, which is between 19.6 mPD and 71.0 mPD.

6.3.4. In accordance with the approved EIA Report, there are mitigation measures of tree planting and shrubs provision on Level 1 along the subject site boundary. These mitigation measures are consistent with the recommendation in *Section 6.2.41* of the Urban Design Guideline in *Hong Kong Planning Standards and Guidelines*, which recommends to provide landscape areas along streets to soften hard edges and to reduce heat build-up of street environment.

6.3.5. There is no specific requirement on landscape strategy, landscape framework, designed view corridors, open space network and landscape link for the proposed Project.

6.3.6. Outline Development Plan (No. D/H20A/1A), neighbouring OZPs (i.e. Nos. S/H18/10 and S/TKO/25) and planning briefs have also been reviewed. For the two potential developments anticipated in the approved EIA Report, WSDCSDHQ will be established at Chong Fu Road, which was used as open car park during the EIA study, while the land at the junction of Shing Tai Road and Sheung Mau Street is still being used as car park. In addition, three planned developments are identified in the vicinity of the Project site, namely (i) construction of pet garden at Sheung On Street, (ii) a public rental housing development at Wing Tai Road, and (iii) the greenery of Triangular Garden next to Heng Fa Chuen Bus Terminal at the junction of Shing Tai Road and Chong Fu Road.

6.3.7. However, there is no programme or detail regarding the greenery work at Triangular Garden and the potential development at the junction of Shing Tai Road and Sheung Mau Street at the current stage. While these two projects will not be assessed in this ER and the LVIA for these locations are based upon the existing condition, the landscape and visual impact on WSDCSDHQ, the pet garden, and the public rental housing development are assessed in this ER.

6.4. ASSESSMENT METHODOLOGY

Landscape Baseline Review and Impact Assessment

6.4.1. The assessment methodology adopted in the approved EIA Report is still applicable to this ER.

6.4.2. A baseline study of the existing landscape resources (LRs) and landscape character areas (LCAs) was conducted in 5th July 2018 based on desktop study and field surveys to update the existing landscape elements that contribute to landscape character of the study area, which is within 500m from the Project site boundary in accordance with the approved EIA Report.

6.4.3. The tree survey within the Project site and its immediately adjacent areas is updated to review the landscape resources and quality with respect to the tree species characters, ecological/conservation value, health and structure conditions of the existing trees of the Site.

6.4.4. Potential impacts arisen from the construction and operation stages of the proposed Project are assessed by the significance of landscape impact, which is derived from the combined analysis of the magnitude of change and the sensitivity of the LRs/LCAs to the change as shown in ***Table 6-1*** below.

Table 6-1 Significance of Landscape and Visual Impact

Magnitude of Change		Sensitivity of Resource		
		Low	**Medium**	**High**
	Large	Moderate Impact	Moderate/Significant Impact	Significant Impact
	Intermediate	Slight/Moderate Impact	Moderate Impact	Moderate/Significant Impact
	Small	Slight Impact	Slight/Moderate Impact	Moderate Impact
	Negligible	Insubstantial Impact	Insubstantial Impact	Insubstantial Impact

Visual Baseline Review and Impact Assessment

6.4.5. The assessment methodology adopted in the approved EIA Report is still applicable to this ER.

6.4.6. In accordance with the approved EIA Report, the assessment area in the ER is focused within the Primary Visual Envelop (VE), which comprises of areas that are relatively

closer to the Project site, and is defined as the zone of visual influence (ZVI). The ZVI is the same as that identified in the approved EIA Report, except with a slight extension to the north to cover the planned WSDCSDHQ.

6.4.7. Potential visual impacts arisen from the construction and operation phases of the proposed Project are assessed. The significance of visual impact is derived from the combined analysis of the magnitude of change and the sensitivity of the VSRs to the change as shown in ***Table 6-1*** above.

Photomontage

6.4.8. The visual impacts and the proposed mitigation measures are demonstrated using photomontage to illustrate existing viewing conditions and the viewing conditions during operation phase (Day 1 to Year 10) from key VSRs in relation to other developments and prominent visual features.

6.4.9. Owing to the unchanged location of the proposed Project and no key development in massive scale with high visual sensitivity is established in the immediate surrounding of the Project site, the key viewpoints (i.e. vantage point) adopted in the approved EIA Report are still considered representative and are selected to update the photomontages for this ER (refer to ***Figure 6.6***).

6.5. BASELINE STUDY

Existing Landscape Resources (LRs)

6.5.1. In comparison to the approved EIA Report, no major change to LR5 (i.e. residential/architectural planting) is identified except LR5-2 that is located near the basketball court of Yue Wan Estate to the East of Hang Tsui Court. Due to the development of public rental housing as mentioned in *Section 6.3.7*, the basketball court was demolished and the landscape resource LR5-2 was removed and replaced by landscape resource LR6-3 (i.e. Open Space/Vacant Land/Construction site). Yet, it is considered that the overall amenity value and sensitivity of LR5 are not affected as compared with that concluded in the approved EIA Report, given that proper greenery will be provided for the public rental housing development for compliance with the requirement as stipulated in the Practice Note for Authorised Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-152.

6.5.2. Due to the establishment of THEi New Campus, the vacant land and the associated naturally-established vegetation, which was identified as part of LR6-1 and LR7-1 respectively in the approved EIA Report, were replaced by the new healthy vegetation in THEi New Campus, which becomes a new landscape resource under LR5-7.

6.5.3. With reference to the baseline landscape study in the approved EIA Report, no change to other LRs is identified, and the amenity value and sensitivity of all LRs remain unchanged.

Landscape Resources (LRs) with Planned Developments

6.5.4. The pet garden at Sheung On Street, the public rental housing development at Wing Tai Road, and the WSDCSDHQ will be established in early-2019, end-2020 and end-2024 respectively according to the latest best available information at the time of preparation of this ER. However, as no design details of these projects are available, the landscape resources at these locations are assessed under the current condition of the areas, which are the same those identified in the approved EIA Report, in the baseline study.

6.5.5. ***Figure 6.1*** displays the extent of various types of existing landscape resources within the study area.

6.5.6. Sensitivity of the existing landscape resources are listed in ***Table 6-4***.

Landscape Character Areas (LCAs)

6.5.7. Due to the construction of public rental housing at Wing Tai Road, the original "community/residential urban landscape" (i.e. LCA2) identified in the approved EIA Report was converted to "open car parks/maintenance workshops/vacant land landscape" (i.e. LCA7). Since the construction site is small in size, the change of LCA is considered negligible to the overall landscape character. With reference to the baseline landscape study in the approved EIA Report, no change to other LCAs of the study area is identified. The sensitivities of all landscape character areas remain unchanged.

6.5.8. ***Figure 6.2*** displays the various types of existing landscape character within the study area.

Existing Trees within Project Site

6.5.9. In accordance with DEVB TC(W) No. 7/2015, trees with trunk diameters that are less than 0.95m at the height of 1.3m above ground level are excluded from the survey. A total of 31 tree species were identified within or close to the Project site boundary as included in ***Appendix 6.1***. 30 numbers of the surveyed trees were non-native species such as *Bombax ceiba* and *Carica papaya*, while 1 number of native species, *Broussonetia papyrifera*, was found at the Eastern corner of the Project site. Of the 31 surveyed trees, 6 trees (or ~ 19 % of the surveyed trees) were found to have poor tree form but generally in fair health condition, 2 trees (or ~ 6 % of the surveyed trees) were found to have fair tree form but generally in poor health condition, 3 trees (or ~ 10 % of the surveyed trees) were found to be in poor health and tree forms, 7 trees (or ~ 23 % of the surveyed trees) were found in generally fair health and tree form, and 13 trees (or ~ 42 % of the surveyed trees) were found in good health and form. ***Table 6-2*** summarises the tree species composition in the latest tree survey.

Table 6-2 Tree Species Composition within Survey Area

Scientific Name	Chinese Common Name	Species Origin	No. of Trees	% of Trees
Bombax ceiba	木棉	Exotic	17	54.8%
Broussonetia papyrifera	構樹	Native	1	3.2%
Callistemon viminalis	串錢柳	Exotic	1	3.2%

Carica papaya	木瓜	Exotic	2	6.5%
Melaleuca quinquenervia	白千層	Exotic	4	12.9%
Spathodea campanulata	火焰木	Exotic	6	19.4%
		Total	**31**	**100.0%**

6.5.10. No registered or potential Old and Valuable Trees (OVT) were recorded during the tree survey and no rare or protected species were encountered. Detailed information of the surveyed trees is presented in the Tree Assessment Schedule in ***Appendix 6.1***.

6.5.11. Of the 31 surveyed trees, 9 trees would be of direct conflict with the proposed Project, including 6 trees located within the Project footprint. Among these 9 trees, 2 trees belong to the exotic tree species, *Carica papaya*, that are common with low amenity value, 4 trees belong to the exotic tree species, *Bombax ceiba*, that are common with medium amenity value, 1 tree belong to the native species, *Broussonetia papyrifera*, that is in poor form and health due to inadequate maintenance, and 1 tree belong to the exotic species, *Melaleuca quinquenervia*, that is in poor form due to inadequate maintenance. The remaining 1 tree is *Spathodea campanulata* located outside the South-eastern boundary of the Project site that is in poor form and health. The tree recommendation for all surveyed trees is shown in ***Figure 6.3***. According to DEVB TC(W) No. 7/2015, these trees are undesirable for transplanting and thus proposed for felling due to the poor health or form and low landscape or ecological value.

Existing Visual Context

Visual Character and Resources

6.5.12. Given that there is no change to the nature of the proposed Project and the location of Project site, the proposed Project remains compatible with the visual character of the surrounding environment in accordance with the approved EIA Report.

6.5.13. In comparison with the baseline visual study in the approved EIA Report, the visual character of the lot of the public rental housing development at Wing Tai Road was converted from "residential developments" to "open car park/ vacant land/ construction sites" due to the construction activity. In general, no major change to the overall visual character and key visual resources within the ZVI or 500m from the boundary of the Project site is identified.

6.5.14. In line with the approved EIA Report, ridgelines and cargo handling basin/ harbour area are considered as the most sensitive resources among the identified key visual resources and have high amenity value to the VSRs. The visual system between VSRs and the visual resources, such as the sensitivity and the ability to accommodate change, of the proposed Project is assessed in this ER.

6.5.15. The key visual characters and resources within ZVI or 500m from the boundary of the Project site are indicated in ***Figure 6.4***.

Key Visual Sensitive Receivers (VSRs)

6.5.16. The key groups of visual sensitive receivers (VSRs) identified in the approved EIA Report are still applicable to this ER, with additional VSRs for the planned developments identified in *Section 6.3.7*. ***Figure 6.5*** shows the locations of the identified VSRs.

6.5.17. Two VSRs are added for the two new planned developments, namely an occupational VSR at the WSDCSDHQ and a recreational VSR at the pet garden at the junction of Sheung On Street and Sheung Ping Street.

VSR-O8: Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ)

6.5.18. Since the planned WSDCSDHQ will commence operation tentatively after the operation of the proposed Project commences, VSR-O8 is therefore be included in the assessment for operation phase only.

6.5.19. These VSRs are the occupational users of the WSDCSDHQ on the Southern and South-eastern façade of the building. The existing view of these VSRs shall be dominated by the building structures at the foreground with the harbour area and the natural hill slope across the harbour at the back. As these VSRs are mostly workers who are expected to have fewer chances to view the Project site when they are at work, their visual perceptions are not very important and do not have a significant effect on their quality of life. Therefore, the sensitivities of these VSRs to visual change are considered to be **low**.

VSR-C1: Pet Garden

6.5.20. The planned pet garden will commence operation tentatively during the construction of the proposed Project commences, VSR-C1 is therefore be included in the assessment for both construction and operation phase.

6.5.21. These VSRs are the recreational users of the pet garden. The existing view of these VSRs is dominated by the marine vessels in the cargo handling basin at the foreground with the Project site visible in background. These VSRs may experience partial to glimpse views of the Project site while the views are substantially blocked by the existing settlement and vessels in the cargo handling area. Given that these VSRs are expected to focus in the interaction with pet, the sensitivities of these VSRs to visual change are considered to be **low**.

6.5.22. ***Table 6-3*** summarises the identified VSRs and their sensitivity to change.

Table 6-3 Identified VSRs and their Sensitivity to Change

ID	Description	Value & Quality of Existing View	Availability and Amenity of Alternate Views	Degree of Visibility	Estimated population of Viewers	Frequency of View	Sensitivity to Change
Visible Area with Residential VSRs							
VSR-R1	Residents of Tsui Wan Estate (Tsui Shou House, Tsui Hong House, Tsui Fuk House)	Fair to Good	Yes, High	Low to Medium	Intermediate	Intermittent	High
VSR-R2	Residents of Knight Court	Fair to Good	Yes, High	Low to Medium	Few	Intermittent	High
VSR-R3	Residents of Pamela Youde Nethersole Eastern Hospital – Blocks E, F, G	Fair to Good	Yes, High	High	Intermediate	Intermittent	Medium
Visible Area with Occupational VSRs							
VSR-O1	Staff of Chai Wan Industrial City (Phase I and II), Cornell Centre	Fair to Good	Yes, High	Low to Medium	Intermediate	Occasional	Low
VSR-O2	Staff of Yiko Industrial Building, Paramount Building, Ming Pao Industrial Centre (Block A and B)	Good	Yes, High	Low to Medium	Intermediate	Occasional	Low
VSR-O3	Staff of Chivas Godown, Safety Godown Industrial Building, Kerry Godown (Chai Wan)	Fair to Good	Yes, High	Medium to High	Intermediate	Occasional	Low
VSR-O4	Staff of Marine Department Chai Wan Public Cargo Working Area	Good	Yes, High	Low	Intermediate	Occasional	Low
VSR-O5	Staff of Pamela Youde Nethersole Eastern Hospital – East Block	Fair to Good	Yes, High	Medium	Intermediate	Rare	Low
VSR-O6	Staff and Students of Hong Kong Institute of Vocational Education (Chai Wan)	Fair to Good	Yes, High	Low to Medium	Intermediate	Occasional	Low

ID	Description	Value & Quality of Existing View	Availability and Amenity of Alternate Views	Degree of Visibility	Estimated population of Viewers	Frequency of View	Sensitivity to Change
VSR-O7	Staff and Students of Planned THEi New Campus	Fair to Good	Yes, High	Low to Medium	Intermediate	Occasional	Low
VSR-O8	Staff of Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ)	Fair	Yes, High	Medium	Intermediate	Rare	Low
Visible Area with Travelling VSRs							
VSR-T1	Travellers at Sheung On Street	Fair	Yes, High	Medium	Few	Rare	Low
VSR-T2	Travellers at Sheung Mau Street	Fair to Good	Yes, High	Medium	Few	Rare	Low
VSR-T3	Travellers at Sheung Tat Street	Fair	Yes, High	Medium	Few	Rare	Low
VSR-T4	Travellers at Shing Tai Road	Fair	Yes, High	Medium	Few	Rare	Low
VSR-T5	Travellers at Ka Yip Street	Fair to Good	Yes, High	Medium	Intermediate	Rare	Low
Visible Area with Recreational VSRs							
VSR-C1	Users of Pet Garden	Fair	Yes, High	Low	Few	Occasional	Low
Visible Area with both Travelling and Occupational VSRs							
VSR-P1	Users/Staffs of ExxonMobil Petrol-cum-LPG Filling Station	Fair to Good	Yes, High	Medium	Few	Occasional	Low

6.6. LANDSCAPE IMPACT ASSESSMENT

6.6.1. Owing to the unchanged scope of the proposed Project, potential impact is anticipated to be restricted to the landscape resources within the Project site (i.e. LR7-2 and LCA7) and the roadside planting along the boundary of the Project site (i.e. LR4-4 and LCA2) as similar to the approved EIA Report.

Construction Phase

6.6.2. According to the tree survey, 9 trees would be of direct conflict with the proposed Project, which is less than that identified in the approved EIA Report (i.e. 12 trees). The resulting magnitudes of landscape change for both LR4-4 and LR7-2 from the proposed tree felling are considered as adversely small. Hence, slight adverse impacts are anticipated for LR4-4 and LR7-2 during construction phase.

6.6.3. Due to the minor loss of greenery within the Project site and at the site boundary, the magnitudes of change for LCA2 and LCA7 are considered as adversely small. As a result of low sensitivity and small magnitude of change, slight adverse impacts are anticipated for LCA2 and LCA7 during the construction of the proposed Project.

6.6.4. As identified in the approved EIA Report, the magnitudes of change for other LRs are considered as negligible since there is no direct change on these LRs due to the construction of the proposed Project. There is also no direct change to the setting and landscape character of other LCAs due to the construction of the proposed Project. Therefore, except LR4-4, LR7-2, LCA2 and LCA7, the significance of landscape impact arisen from the proposed Project during construction phase is considered as insubstantial for all LRs and LCAs.

6.6.5. In this connection, the Proposed Scheme of the proposed Project would not induce additional landscape impact beyond those assessed in the approved EIA Report during construction phase.

Operation Phase

6.6.6. As identified the approved EIA Report, there are existing large trees surrounding the Project site to screen out the loss of small portion of LR4-4 and LR7-2 that will be occupied by the driveway and the permanent structure of the proposed Project. Hence, the magnitudes of change for LR4-4 and LR7-2 during operation phase are considered as adversely small due to the screening by the retained trees along the Project site boundary. Therefore, the impacts arisen from the proposed Project during operation phase for LR4-4 and LR7-2 are considered as slightly adverse.

6.6.7. Due to the loss of greenery from the proposed tree felling in LCA2 and LCA7 is considered minor in nature, the magnitudes of change are also considered as small. As a result, slight adverse impacts are anticipated for LCA2 and LCA7 during operation phase.

6.6.8. For other LRs, the magnitudes of change are considered as negligible since there is no direct conflict between the operation of the proposed Project and the landscape resources. Therefore, other than LR4-4, LR7-2, LCA2 and LCA7, the significance of landscape

impact arisen from the proposed Project during operation phase is considered as insubstantial for all LRs and LCAs.

6.6.9. In this connection, the Proposed Scheme of the proposed Project would not induce additional landscape impact beyond those assessed in the approved EIA Report during operation phase.

6.7. VISUAL IMPACT ASSESSMENT

Visual Impact without Mitigation during Construction Phase

6.7.1. Given that there are no major change to the overall visual character and visual resources within the ZVI as mentioned in *Section 6.5.13*, and the source of impact remains the same as that identified in the approved EIA Report and provided in *Section 6.1.1*, the visual impact identified in the approved EIA Report on VSRs during construction phase remains valid for this ER, except the new VSR, i.e. VSR-C1.

VSR-C1: Pet Garden

6.7.2. The existing view of the Project site, which is dominated by the sea view and marine vessels in the cargo handling basin at the foreground with the Project site visible in background, will change to a construction site that remains substantially blocked by the existing settlement and vessels in the cargo handling area. However, due to the small scale of the proposed Project and the existing use of the Project site as temporary work site with low visual amenity value, these VSRs are easily distracted by the open sky view that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during construction phase.

Visual Impact without Mitigation during Operation Phase

VSR-R1: Residents of Tsui Wan Estate (Tsui Shou House, Tsui Hong House, Tsui Fuk House)

6.7.3. Under the Proposed Scheme of the proposed Project, the corridor of open harbour view, which is of much higher amenity value as compared to that of the Project site, is not affected. As the hard structure of the proposed Project remains partially blocked by the existing Citybus Depot and roadside vegetation, the magnitude of change remains **adversely small** and the resulting visual impact is **moderately adverse** during operation phase.

VSR-R2: Residents of Knight Court

6.7.4. Under the Proposed Scheme, the proposed Project, which is on the Southeast of these VSRs, has no significant blockage on the view corridor of the open harbour view, which is on the Northeast of these VSRs and is of much higher amenity value and more attractive as compared to that of the Project site. While the residents at low level are dominated and substantially obstructed by the existing roadside vegetation on Shing Tai Road and the MTR viaduct, the residents at medium to high level can continue to enjoy the sky view and

the harbour view. The magnitude of change remains **adversely small** and the resulting visual impact is **moderately adverse** during operation phase.

VSR-R3: Residents of Pamela Youde Nethersole Eastern Hospital – Blocks E, F, G

6.7.5. As shown in ***Figure 6.6a***, the existing view of the Project site is dominated by the open sky view, the building structures near the Project site, and the natural hill slopes at the foreground and across the harbour. Under the Proposed Scheme of the proposed Project, the view corridor of the hill slopes, which is of much higher amenity value as compared to that of the Project site, is not affected. As the hard structure of the proposed Project is substantially obstructed by the existing trees on the natural hill slope at the foreground, the Hong Kong Institute of Vocational Education (Chai Wan) and the Citybus Depot, and these VSRs are easily distracted by the view of open sky and hill slope landscape, the magnitude of change remains **adversely small** and the resulting visual impact is **slightly or moderately adverse** during operation phase.

VSR-O1: Chai Wan Industrial City (Phase I and II), Cornell Centre

6.7.6. Given that the existing view of the Project site is dominated by the sea view of the cargo handling basin, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. No prominent visual intrusion is anticipated from the Proposed Scheme of the proposed Project. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during operation phase.

VSR-O2: Yiko Industrial Building, Paramount Building, Ming Pao Industrial Centre (Block A and B)

6.7.7. Given that the existing view of the Project site is dominated by the sea view of the cargo handling basin, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. No prominent visual intrusion is anticipated from the Proposed Scheme of the proposed Project. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during operation phase.

VSR-O3: Chivas Godown, Safety Godown Industrial Building, Kerry Godown (Chai Wan)

6.7.8. Given that the existing view of the Project site is dominated by the cargo handling basin, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. No prominent visual intrusion is anticipated from the Proposed Scheme of the proposed Project. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during operation phase.

VSR-O4: Marine Department Chai Wan Public Cargo Working Area

6.7.9. Given that the existing view of the Project site is dominated by the sea view of the cargo handling area, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. No prominent visual intrusion is anticipated from the Proposed Scheme of the proposed Project. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during operation phase.

VSR-O5: Pamela Youde Nethersole Eastern Hospital – East Block

6.7.10. The existing view of the Project site is dominated by the open sky view, the building structures near the Project site, and the natural hill slopes at the foreground and across the harbour. Under the Proposed Scheme of the proposed Project, the view corridors of open sky and hill slopes, which are of much higher amenity value as compared to that of the Project site, are not affected. As the hard structure of the proposed Project is obstructed by the existing trees on the natural hill slope at the foreground, the Hong Kong Institute of Vocational Education (Chai Wan) and the Citybus Depot, and these VSRs are easily distracted by the view of open sky and hill slope landscape, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during operation phase.

VSR-O6: Hong Kong Institute of Vocational Education (Chai Wan)

6.7.11. The existing view of the Project site, which is dominated by roadside vegetation and MTR tracks and viaduct, will be replaced by the hard structure of the proposed Project that has partial to substantial obstruction by the MTR viaduct and the roadside vegetation. Under the Proposed Scheme, the proposed Project will not cause substantial obstruction to the sky view. In addition, these VSRs are easily distracted by the roadside vegetation on Shing Tai Road that will not be blocked by the proposed Project and is more prominent with higher amenity value than that from the Project site. Therefore, with consideration of their close proximity to the Project site, the magnitude of change is **adversely intermediate** and the resulting visual impact is **slightly or moderately adverse** during operation phase.

VSR-O7: THEi New Campus

6.7.12. The existing view of the Project site is dominated by building structures, harbour area and natural hill slope. Given that the view corridor of the harbour area is partially obstructed by the existing Government Logistics Centre on Chong Fu Road that has similar building height as of the proposed Project already, the Proposed Scheme of the proposed Project will not affect the view corridor of harbour area or induce visual intrusion. Also, the Proposed Scheme will not affect the view corridor of the hill slope landscape, which is of much higher amenity value as compared to that of the hard structure of the proposed Project and will be more attractive to these VSRs. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during operation phase.

VSR-O8: Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ)

6.7.13. Since the WSDCSDHQ will operate after proposed Project is established, these VSRs are not anticipated to experience the any change of view. Therefore, the magnitude of change is **negligible** and the resulting visual impact is **insubstantial** during operation phase.

VSR-T1: Travellers at Sheung On Street

6.7.14. Under the Proposed Scheme of the proposed Project, these VSRs remain to have a variety of alternative views, such as the sea view of the cargo handling basin and roadside vegetation, that will not be blocked by the proposed Project and are considered to be more prominent with higher amenity value than that of the hard structure of the proposed Project. Therefore, with consideration of their occasionally view of the Project site, the magnitude of change is **adversely intermediate** and the resulting visual impact is **slightly or moderately adverse** during operation phase.

VSR-T2: Traveller at Sheung Mau Street

6.7.15. Under the Proposed Scheme of the proposed Project, these VSRs remain easily distracted by roadside trees and the sea view of the cargo handling basin that will not be blocked by the proposed Project and have higher amenity values. Therefore, with consideration of their occasionally view of the Project site, the magnitude of change is **adversely intermediate** and the resulting visual impact is **slightly or moderately adverse** during operation phase.

VSR-T3: Travellers at Sheung Tat Street

6.7.16. Under the Proposed Scheme of the proposed Project, the views of these VSRs remain easily distracted by roadside trees, which will not be blocked by the proposed Project and have higher amenity value than that of the hard structure of the proposed Project, when travelling along Sheung Tat Street. Therefore, with consideration of their occasionally view of the Project site, the magnitude of change is **adversely intermediate** and the resulting visual impact is **slightly or moderately adverse** during operation phase.

VSR-T4: Travellers at Shing Tai Road

6.7.17. Under the Proposed Scheme of the proposed Project, the views of these VSRs remain easily distracted by roadside trees, which will not be blocked by the proposed Project and have higher amenity value than that of the hard structure of the proposed Project, when travelling along Shing Tai Road. Therefore, with consideration of their occasionally view of the Project site, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during operation phase.

VSR-T5: Travellers at Ka Yip Street

6.7.18. Under the Proposed Scheme of the proposed Project, the views of these VSRs remain easily distracted by the sea view of the cargo handling basin, which will not be blocked by the proposed Project and has higher amenity value than that of the hard structure of the

proposed Project, when travelling along Ka Yip Street due to the small scale of the proposed Project and its existing low amenity value. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during operation phase.

VSR-C1: Pet Garden

6.7.19. Due to the small scale of the proposed Project and its existing low amenity value, the sea view of the cargo handling basin and the open sky view will not be blocked by the proposed Project, even with the two additional floors. These VSRs remain easily distracted by the open sky view and the sea view that are more prominent with higher amenity value than that of the Project site. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during construction phase.

VSR-P1: Users/Staffs of ExxonMobil Petrol-cum-LPG Filling Station

6.7.20. Under the Proposed Scheme of the proposed Project, these VSRs remain easily distracted by the roadside vegetation on Sheung Mau Street and the sea view of the cargo handling basin that will not be blocked by the proposed Project and are more prominent with higher amenity value than that of the Project site. Therefore, with consideration of their occasionally view of the Project site, the magnitude of change is **adversely intermediate** and the resulting visual impact is **slightly or moderately adverse** during operation phase.

Potential Visual Impact without Mitigation

6.7.21. The potential visual impact without mitigation measures for individual VSRs are derived from the sensitivities and magnitude of changes in accordance with ***Table 6-1*** and are summarised in ***Table 6-7***.

6.8. MITIGATION MEASURES

6.8.1. The mitigation measures identified in the approved EIA Report for construction and operation phase are still valid, except with the minor updates on the compensatory planting (i.e. OM1) and green roof (i.e. OM3).

OM1 – Compensatory Planting

6.8.2. Compensatory planting should be provided in the landscape area on Level 1 for the 9 trees that are proposed to be felled. The planting would follow the requirements as stipulated in DEVB TC(W) No. 7/2015, such as the provision of compensatory trees of heavy-standard size in a ratio of 1:1 in terms of number and aggregate diameter at breast height (DBH). A preliminary compensatory planting plan is provided in ***Figure 6.7***. The planting location and the type of compensatory plant species will be reviewed and confirmed during detailed design stage.

OM3 – Green Roof

6.8.3. A multi-patch landscape area should be provided on the roof of the proposed building to soften the impact of the built structure. An area of approximately 2750m^2 of shrub, which

comprises of a mix of native and ornamental species, is proposed to be provided to enhance the aesthetics of views for those viewing the roof. The type of shrub species will be confirmed during detailed design stage.

6.9. RESIDUAL IMPACTS AFTER MITIGATION

Landscape Impact during Construction Phase

6.9.1. As mentioned in *Section 6.6.5*, the Proposed Scheme of the proposed Project will not induce additional impact beyond those identified in the approved EIA Report.

6.9.2. Therefore, in accordance with the approved EIA Report, LR4-4, LR7-2, LCA2 and LCA7 would experience insubstantial residual impact from the proposed tree felling and construction activities with proper implementation of the proposed mitigation measures, such as control of construction programme and erection of site hoarding to screen-off construction activities.

Landscape Impact during Operation Phase

6.9.3. As mentioned in *Section 6.6.9*, the Proposed Scheme of the proposed Project will not induce additional impact beyond those identified in the approved EIA Report.

6.9.4. Therefore, as assessed in the approved EIA Report, the magnitude of change at LR4-4, LR7-2, LCA2 and LCA7 would be reduced to negligible when the planting becomes mature in Year 10. The residual landscape impact in operation phase is insubstantial when the mitigation measures are established.

Visual Impact with Mitigation during Construction Phase

VSR-C1: Pet Garden

6.9.5. With mitigation, the existing view of these VSRs, which is dominated by the sea view and marine vessels in the cargo handling basin at the foreground with the Project site visible in background, will change to a construction site with screen hoarding and temporary landscape planting. These VSRs are easily distracted by the open sky view and sea view that will not be blocked by the proposed Project and are more prominent with higher amenity value than that from the Project site. Therefore, the magnitude of change is **adversely small** and the resulting visual impact is **slightly adverse** during construction phase.

Visual Impact with Mitigation during Operation Phase

6.9.6. With mitigation, the existing view of the Project site will be replaced by the hard structure of the proposed Project with pre-mature landscape planting and green roof in Day 1 of operation.

VSR-R1: Residents of Tsui Wan Estate (Tsui Shou House, Tsui Hong House, Tsui Fuk House)

6.9.7. Since the hard structure of the proposed Project with mitigation remains partially blocked by the existing Citybus Depot and roadside vegetation, the visual impacts on these VSRs are **moderately adverse** in Day 1 of operation. As the landscape plantings of the proposed Project matures in Year 10 of operation, thereby having better screening effect on the hard structure together with the partial viewing blockage by the existing Citybus Depot and roadside vegetation, the visual impact is expected to be **slightly adverse** in Year 10 of operation.

VSR-R2: Residents of Knight Court

6.9.8. The proposed Project with mitigation has no significant blockage on the view corridor of the open harbour view. While the residents at low level are dominated and substantially obstructed by the existing roadside vegetation on Shing Tai Road and the MTR viaduct, the residents at medium to high level can continue to enjoy the sky view and the harbour view. The visual impacts on these VSRs are **moderately adverse** in Day 1 of operation. As the landscape plantings of the proposed Project matures in Year 10 of operation, thereby having better screening effect on the hard structure together with the partial viewing blockage by the MTR viaduct and roadside vegetation, the visual impact is expected to be **slightly adverse** in Year 10 of operation.

VSR-R3: Residents of Pamela Youde Nethersole Eastern Hospital – Blocks E, F, G

6.9.9. As the hard structure of the proposed Project with mitigation is substantially obstructed by the existing trees on the natural hill slope at the foreground, the Hong Kong Institute of Vocational Education (Chai Wan) and the Citybus Depot, and these VSRs are easily distracted by the views of open sky and hill slope landscape, the visual impacts on these VSRs are **slightly or moderately adverse** in Day 1. of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project together with the slight viewing blockage by the Hong Kong Institute of Vocational Education (Chai Wan) and the Citybus Depot. Given the relatively long viewing distance, the visual impact is expected to be **slightly adverse** in Year 10 of operation.

VSR-O1: Chai Wan Industrial City (Phase I and II), Cornell Centre

6.9.10. Given that the existing view of the Project site is dominated by the sea view of the cargo handling basin, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. No prominent visual intrusion is anticipated from the Proposed Scheme of the proposed Project with mitigation. The visual impacts on these VSRs are **slightly adverse** in Day 1 of operation. When the landscape planting matures, the hard structure of the proposed Project will still be partially visible even with the partial to substantial obstruction by the vessels in the cargo handling basin and existing settlements. Nonetheless, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value. The visual impact will remain **slightly adverse** in Year 10 of operation.

VSR-O2: Yiko Industrial Building, Paramount Building, Ming Pao Industrial Centre (Block A and B)

6.9.11. Given that the existing view of the Project site is dominated by the sea view of the cargo handling basin, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. No prominent visual intrusion is anticipated from the Proposed Scheme of the proposed Project with mitigation. The visual impacts on these VSRs are **slightly adverse** in Day 1 of operation. When the landscape planting matures, the hard structure of the proposed Project will still be partially visible even with the partial to substantial obstruction by the vessels in the cargo handling basin and existing settlements. Nonetheless, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value. The visual impact will remain **slightly adverse** in Year 10 of operation.

VSR-O3: Chivas Godown, Safety Godown Industrial Building, Kerry Godown (Chai Wan)

6.9.12. Given that the existing view of the Project site is dominated by the cargo handling basin, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. No prominent visual intrusion is anticipated from the Proposed Scheme of the proposed Project with mitigation. The visual impacts on these VSRs are **slightly adverse** in Day 1 of operation. When the landscape planting matures, the hard structure of the proposed Project will still be partially visible even with the slight to partial obstruction by the vessels in the cargo handling basin and existing settlements. Nonetheless, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value. The visual impact will remain **slightly adverse** in Year 10 of operation.

VSR-O4: Marine Department Chai Wan Public Cargo Working Area

6.9.13. Given that the existing view of the Project site is dominated by the sea view of the cargo handling area, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. No prominent visual intrusion is anticipated from the Proposed Scheme of the proposed Project with mitigation. The visual impacts on these VSRs are **slightly adverse** in Day 1 of operation. When the landscape planting matures, the hard structure of the proposed Project will still be slightly visible even with the substantial obstruction by the vessels and existing fencing of the works area in the cargo handling basin. Nonetheless, these VSRs are easily distracted by the sea view of the cargo handling basin that will not be blocked by the proposed Project and is more prominent with higher amenity value. The visual impact will remain **slightly adverse** in Year 10 of operation.

VSR-O5: Pamela Youde Nethersole Eastern Hospital – East Block

6.9.14. As the hard structure of the Proposed Scheme of the proposed Project with mitigation is obstructed by the existing trees on the natural hill slope at the foreground, the Hong Kong Institute of Vocational Education (Chai Wan) and the Citybus Depot, and these VSRs are easily distracted by the views of open sky and hill slope landscape, the visual impacts on these VSRs are **slightly adverse** in Day 1 of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project together with the partial viewing blockage by the existing roadside vegetation and the Citybus Depot. Given the relatively long viewing distance, the visual impact is expected to be **insubstantial** in Year 10 of operation.

VSR-O6: Hong Kong Institute of Vocational Education (Chai Wan)

6.9.15. The Proposed Scheme of the proposed Project with mitigation will not cause substantial obstruction to the sky view. These VSRs are easily distracted by the roadside vegetation on Shing Tai Road that will not be blocked by the proposed Project and is more prominent with higher amenity value than that of the Project site. The visual impacts on these VSRs are **slightly or moderately adverse** in Day 1 of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project together with the partial to substantial viewing blockage by the MTR viaduct and the roadside vegetation, which will not be blocked by the proposed Project. The visual impact is expected to be **slightly adverse** in Year 10 of operation.

VSR-O7: THEi New Campus

6.9.16. The Proposed Scheme of the proposed Project with mitigation will not affect the view corridors of harbour area or hill slope landscape, which are of much higher amenity value as compared to that of the hard structure of the proposed Project and will be more attractive to these VSRs. The visual impacts on these VSRs are **slightly adverse** in Day 1 of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project, which will still be slightly to partially visible due to the partial to substantial viewing blockage by the roadside vegetation and Citybus Depot. The visual impact will remain **slightly adverse** in Year 10 of operation.

VSR-O8: Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ)

6.9.17. Since the WSDCSDHQ will operate after proposed Project is established, these VSRs are not anticipated to experience the any change of view regardless of the implementation of mitigation measures. Therefore, the magnitude of change is **negligible** and the resulting visual impact is **insubstantial** during operation phase.

VSR-T1: Travellers at Sheung On Street

6.9.18. With mitigation, these VSRs remain to have a variety of alternative views, such as the sea views of the cargo handling basin and roadside vegetation, that will not be blocked by the proposed Project and are considered to be more prominent with higher amenity value than that of the hard structure of the proposed Project. The visual impacts on these VSRs are

slightly or moderately adverse in Day 1 of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project, which will still be visible by these VSRs, complementing the partial viewing blockage by the existing roadside vegetation. Since the views from these VSRs are on occasional basis and there are a variety of alternative views that are more prominent with higher amenity value, the visual impact is expected to be **slightly adverse** in Year 10 of operation.

VSR-T2: Traveller at Sheung Mau Street

6.9.19. With mitigation, these VSRs remain easily distracted by roadside trees and the sea view of the cargo handling basin that will not be blocked by the proposed Project and have higher amenity values. The visual impacts on these VSRs are **slightly or moderately adverse** in Day 1 of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project, which will still be visible by these VSRs, complementing the partial viewing blockage by the existing roadside vegetation. Since the views from these VSRs are on occasional basis and these VSRs are easily distracted by roadside trees and the sea view of the cargo handling basin that have higher amenity value, the visual impact is expected to be **slightly adverse** in Year 10 of operation.

VSR-T3: Travellers at Sheung Tat Street

6.9.20. With mitigation, the views of these VSRs remain easily distracted by roadside trees, which will not be blocked by the proposed Project and have higher amenity value than that of the hard structure of the proposed Project. The visual impacts on these VSRs are **slightly or moderately adverse** in Day 1 of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project, which will still be partially visible by these VSRs, complementing the partial viewing blockage by the existing roadside vegetation. Since the views from these VSRs are on occasional basis and these VSRs are easily distracted by the roadside vegetation that has higher amenity value, the visual impact is expected to be **slightly adverse** in Year 10 of operation.

VSR-T4: Travellers at Shing Tai Road

6.9.21. With mitigation, the views of these VSRs remain easily distracted by roadside trees, which will not be blocked by the proposed Project and have higher amenity value than that of the hard structure of the proposed Project. The visual impacts on these VSRs are **slightly or moderately adverse** in Day 1 of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project, which will still be partially visible by these VSRs, complementing the partial viewing blockage by the existing roadside vegetation. Since the views from these VSRs are on occasional basis and these VSRs are easily distracted by the roadside vegetation that has higher amenity value, the visual impact is expected to be **slightly adverse** in Year 10 of operation.

VSR-T5: Travellers at Ka Yip Street

6.9.22. With mitigation, the views of these VSRs remain easily distracted by the sea view of the cargo handling basin, which will not be blocked by the proposed Project and has higher amenity value than that of the hard structure of the proposed Project. The visual impacts

on these VSRs are **slightly adverse** in Day 1 of operation. When the landscape planting matures, the hard structure of the proposed Project will still be partially visible even with the partial to substantial obstruction by the vessels in the cargo handling basin and existing settlements. Since the views from these VSRs are on occasional basis and these VSRs are easily distracted by the sea view, the visual impact will remain **slightly adverse** in Year 10 of operation.

VSR-C1: Pet Garden

6.9.23. With mitigation, these VSRs remain easily distracted by the open sky view and the sea view that are more prominent with higher amenity value than that of the Project site. The visual impacts on these VSRs are **slightly adverse** in Day 1 of operation. When the landscape planting matures, the hard structure of the proposed Project will still be partially visible even with the substantial obstruction by the vessels in the cargo handling basin and existing settlements. Since the views from these VSRs are on occasional basis and these VSRs are easily distracted by the sky view and sea view, the visual impact will remain **slightly adverse** in Year 10 of operation.

VSR-P1: Users/Staffs of ExxonMobil Petrol-cum-LPG Filling Station

6.9.24. With mitigation, these VSRs remain easily distracted by the roadside vegetation on Sheung Mau Street and the sea view of the cargo handling basin that will not be blocked by the proposed Project and are more prominent with higher amenity value than that of the Project site. The visual impacts on these VSRs are **slightly or moderately adverse** in Day 1 of operation. In Year 10 of operation, the matured planting will further screen off the hard structure of the proposed Project together with the partial viewing blockage by the existing roadside vegetation on Sheung Mau Street. Since the views from these VSRs are on occasional basis and these VSRs are easily distracted by roadside vegetation and the sea view, the visual impact is expected to be **slightly adverse** in Year 10 of operation.

6.9.25. The residual impacts for LRs, LCAs and VSRs after implementation of mitigation measures are summarised in ***Table 6-4***, ***Table 6-5***, ***Table 6-6*** and ***Table 6-7***.

6.10. CUMULATIVE IMPACT

6.10.1. Cumulative landscape and visual impacts of the proposed Project with other projects in the vicinity during the construction and operation phase are assessed. It is identified that the planned WSDCSDHQ, the planned pet garden and the public rental housing development are the only planned projects in the vicinity.

6.10.2. With consideration that the planned pet garden and the planned public rental housing development will be established during both construction and operation phase of the proposed Project as mentioned in *Section 6.5.4*, both projects form part of the landscape and visual baseline and have been included in the impact assessment.

6.10.3. As mentioned in *Section 6.5.4*, the planned WSDCSDHQ will be established after the operation of the proposed Project commences. Therefore, it has been assessed in the landscape and visual impact assessment for operation phase.

6.10.4. Relevant Outline Development Plans, neighbouring OZP planning brief have also been reviewed. No other committed or planned development is identified.

6.11. ENVIRONMENTAL MONITORING AND AUDIT

6.11.1. Although the proposed Project would result in the felling of 6 trees within the Project site and 3 trees on the North-western boundary of the Project site, EM&A work is considered not necessary in general as identified in the approved EIA Report, provided that a Tree Preservation and Removal Proposal (TPRP) would be prepared during detailed design stage in accordance with DEVB TC(W) No. 7/2015 to seek for approval of tree felling. Subject to the tree felling approval conditions as required by the approval authorities, monitoring of the compensatory planting after establishment will be conducted, if required.

6.12. CONCLUSION

6.12.1. Under the Proposed Scheme, the proposed Project would have no impact on any landscape resources and landscape character area within the study area except for the 9 trees that are of direct conflict with the proposed Project and therefore proposed to be felled. With proper implementation of the proposed mitigation measures identified in the approved EIA Report, such as the provision of landscape area and compensatory planting, the magnitude of change would be minimised and therefore the residual landscape impact would be insubstantial.

6.12.2. The anticipated visual impacts from the Proposed Scheme of the proposed Project are generally slightly to moderately adverse during construction phase. Following the completion of construction activities, the landscape planting and green roof of the proposed Project act as visual screen to visual sensitive receivers as well as enhance the visual quality and amenity value by the provision of a more greenery view to the neighbourhood as compared to the existing condition of the Project site, which consists of temporary works area with exposed soil and trees in poor health condition. The residual visual impact in operation phase is slightly adverse to insubstantial in general.

6.12.3. Comparing the original setting of the Project site prior to the proposed Project, where trees in poor health and form with low amenity value are located, the overall landscape character and visual quality of the Project site would be improved with the provision of landscape design, including the incorporation of hard landscape design and the provision of landscape planting on Level 1 and green roof. Therefore, the landscape character and visual quality of the Project site have been complemented and the landscape and visual impact from the Proposed Scheme of the proposed Project is considered as acceptable with mitigation measures.

6.12.4. This LVIA demonstrated that the Proposed Scheme of the proposed Project would not induce incomparable landscape and visual impact with that presented in the approved EIA Report. Therefore, there is no variation that would materially be different from the framework design or operational parameters described and implied in the approved EIA Report.

Table 6-4 Magnitude of Change of LRs and Significance of Landscape Impacts during Construction and Operation Phase

LR ID	Landscape Resources	Sensitivity	Reversibility of Change	Magnitude of Change		Significance of Impact (Unmitigated)		Mitigation Measures	Significance of Impact (Mitigated)		
				Construction Phase	Operation Phase	Construction Phase	Operation Phase		Construction Phase	Day 1 of Operation	Year 10 of Operation
LR1 Natural Woodland											
LR1-1	North-eastern side of Pamela Youde Nethersole Eastern Hospital	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR2 Vegetated Engineered Slope											
LR2-1	North-eastern side of Pamela Youde Nethersole Eastern Hospital	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR3 Park/Recreation											
LR3-1	Chai Wan Park	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR3-2	Wing Tai Road Garden	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR3-3	Tsui Wan Estate Playgrounds, Tennis Court and Sitting-Out Area	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR3-4	Yue Wan Estates Playground	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial

LR ID	Landscape Resources	Sensitivity	Reversibility of Change	Magnitude of Change		Significance of Impact (Unmitigated)		Mitigation Measures	Significance of Impact (Mitigated)		
				Construction Phase	Operation Phase	Construction Phase	Operation Phase		Construction Phase	Day 1 of Operation	Year 10 of Operation
LR3-5	Heng Fa Chuen Playgrounds, Football Field and Sitting-Out Area	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR4 Roadside Plantings											
LR4-1	Island Eastern Corridor	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR4-2	Shun Tai Road	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR4-3	Wing Tai Road	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR4-4	Sheung On Street	Medium	Irreversible	Small	Small	Slight	Slight	CM1; CM2; CM3; OM1; OM2; OM3	Insubstantial	Insubstantial	Insubstantial
LR4-5	Chong Fu Road, Sheung Mau Street, Sheung Tat Street and Shing Tai Road	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR4-6	Ka Yip Street and Sun Yip Street	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR5 Residential/Architectural Planting											
LR5-1	Tsui Wan Estate	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR5-2	*Not used*										

LR ID	Landscape Resources	Sensitivity	Reversibility of Change	Magnitude of Change		Significance of Impact (Unmitigated)		Mitigation Measures	Significance of Impact (Mitigated)		
				Construction Phase	Operation Phase	Construction Phase	Operation Phase		Construction Phase	Day 1 of Operation	Year 10 of Operation
LR5-3	Tsui Lok Estate	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR5-4	Roof of Hang Tsui Court Carpark	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR5-5	Heng Fa Chuen	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR5-6	Chai Wan IVE	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR5-7	THEi New Campus	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR6 Open Space/Vacant Land/Construction Site											
LR6-1	Bounded by Sheung Ping Street, Sheung On Street and Wing Tai Road	Low	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR6-2	Bounded by Shing Tai Road, Sheung Tat Street, and Sheung Mau Street	Low	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR6-3	Construction Site of Public Rental Housing at Wing Tai Road	Low	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial

LR ID	Landscape Resources	Sensitivity	Reversibility of Change	Magnitude of Change		Significance of Impact (Unmitigated)		Mitigation Measures	Significance of Impact (Mitigated)		
				Construction Phase	Operation Phase	Construction Phase	Operation Phase		Construction Phase	Day 1 of Operation	Year 10 of Operation
LR7 Open Space Vegetation											
LR7-1	Bounded by Shing Tai Road, Sheung Ping Street, Sheung On Street and Wing Tai Road	Low	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR7-2	Bounded by Shing Tai Road, Sheung Tat Street, Sheung Mau Street, and Sheung On Street	Low	Irreversible	Small	Small	Slight	Slight	CM1; CM2; CM3; OM1; OM2; OM3	Insubstantial	Insubstantial	Insubstantial
LR7-3	Near the intersection of Shing Tai Road and Chong Fu Road	Low	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LR8 Cargo Handling Basin											
LR8-1	Chai Wan Cargo Handling Basin	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial

Table 6-5 Magnitude of Change for LCAs and Significance of Landscape Impacts during Construction and Operation Phase

LR ID	Landscape Resources	Sensitivity	Reversibility of Change	Magnitude of Change		Significance of Impact (Unmitigated)		Mitigation Measures	Significance of Impact (Mitigated)		
				Construction Phase	Operation Phase	Construction Phase	Operation Phase		Construction Phase	Day 1 of Operation	Year 10 of Operation
LCA1	Hillside Landscape	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LCA2	Community/ Residential Urban Landscape	Medium	Irreversible	Small	Small	Slight	Slight	CM1; CM2; CM3; OM1; OM2; OM3	Insubstantial	Insubstantial	Insubstantial
LCA3	Park Landscape	High	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LCA4	Industrial Urban Landscape	Low	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LCA5	Railway Viaduct Landscape	Low	n/a	Negligible	Negligible	Insubstantial	Insubstantial	/	Insubstantial	Insubstantial	Insubstantial
LCA6	Marine Landscape	Medium	n/a	Negligible	Negligible	Insubstantial	Insubstantial		Insubstantial	Insubstantial	Insubstantial
LCA7	Open Car Parks/ Maintenance Workshops/ Vacant Land Landscape	Low	Irreversible	Small	Small	Slight	Slight	CM1; CM2; CM3; OM1; OM2; OM3	Insubstantial	Insubstantial	Insubstantial

Table 6-6 Magnitude of Change for VSRs during Construction and Operation Phase

Visual Sensitive Receivers	Compatibility of the proposed Project with Surrounding Landscape	Duration of Impact		Scale of Development in relation to Surrounding Baseline Conditions	Reversibility of Change	Shortest Viewing Distance (m)	Potential Blockage of View	Magnitude of Change	
		Construction Phase	Operation Phase					Construction Phase	Operation Phase
Visible Area with Residential VSRs									
VSR-R1: Residents of Tsui Wan Estate (Tsui Shou House, Tsui Hong House, Tsui Fuk House)	High	Medium	Long	Small	Irreversible	345	Slight	Adversely Small	Adversely Small
VSR-R2: Residents of Knight Court	High	Medium	Long	Small	Irreversible	161	Partial to Substantial	Adversely Small	Adversely Small
VSR-R3: Residents of Pamela Youde Nethersole Eastern Hospital – Blocks E, F, G	High	Medium	Long	Small	Irreversible	414	Slight	Adversely Small	Adversely Small
Visible Area with Occupational VSRs									
VSR-O1: Staff of Chai Wan Industrial City (Phase I and II), Cornell Centre	High	Short	Short	Small	Irreversible	300	Substantial	Adversely Small	Adversely Small
VSR-O2: Staff of Yiko Industrial Building, Paramount Building, Ming Pao Industrial Centre (Block A and B)	High	Short	Short	Small	Irreversible	397	Substantial	Adversely Small	Adversely Small

Visual Sensitive Receivers	Compatibility of the proposed Project with Surrounding Landscape	Duration of Impact		Scale of Development in relation to Surrounding Baseline Conditions	Reversibility of Change	Shortest Viewing Distance (m)	Potential Blockage of View	Magnitude of Change	
		Construction Phase	Operation Phase					Construction Phase	Operation Phase
VSR-O3: Staff of Chivas Godown, Safety Godown Industrial Building, Kerry Godown (Chai Wan)	High	Short	Short	Small	Irreversible	273	Partial	Adversely Small	Adversely Small
VSR-O4: Staff of Marine Department Chai Wan Public Cargo Working Area	High	Short	Short	Small	Irreversible	16	Substantial	Adversely Small	Adversely Small
VSR-O5: Staff of Pamela Youde Nethersole Eastern Hospital – East Block	High	Short	Short	Small	Irreversible	444	Partial	Adversely Small	Adversely Small
VSR-O6: Staff and Students of Hong Kong Institute of Vocational Education (Chai Wan)	High	Short	Short	Small	Irreversible	147	Substantial	Adversely Intermediate	Adversely Intermediate
VSR-O7: Staff and Students of THEi New Campus	High	Short	Short	Small	Irreversible	167	Partial to Substantial	Adversely Small	Adversely Small

Visual Sensitive Receivers	Compatibility of the proposed Project with Surrounding Landscape	Duration of Impact		Scale of Development in relation to Surrounding Baseline Conditions	Reversibility of Change	Shortest Viewing Distance (m)	Potential Blockage of View	Magnitude of Change	
		Construction Phase	Operation Phase					Construction Phase	Operation Phase
VSR-O8: Staff of Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ)	High	n/a	Short	Small	Irreversible	130	Partial	Negligible	Negligible
Visible Area with Travelling VSRs									
VSR-T1: Travellers at Sheung On Street	High	Short	Short	Small	Irreversible	Immediate	Partial	Adversely Intermediate	Adversely Intermediate
VSR-T2: Travellers at Sheung Mau Street	High	Short	Short	Small	Irreversible	Immediate	Partial	Adversely Intermediate	Adversely Intermediate
VSR-T3: Travellers at Sheung Tat Street	High	Short	Short	Small	Irreversible	Immediate	Partial	Adversely Large	Adversely Intermediate
VSR-T4: Travellers at Shing Tai Road	High	Short	Short	Small	Irreversible	70	Partial	Adversely Small	Adversely Small
VSR-T5: Travellers at Ka Yip Street	High	Short	Short	Small	Irreversible	238	Substantial	Negligible	Adversely Small
Visible Area with Recreational VSRs									
VSR-C1: Users of Pet Garden	High	Short	Short	Small	Irreversible	270	Slight	Adversely Small	Adversely Small

Visual Sensitive Receivers	Compatibility of the proposed Project with Surrounding Landscape	Duration of Impact		Scale of Development in relation to Surrounding Baseline Conditions	Reversibility of Change	Shortest Viewing Distance (m)	Potential Blockage of View	Magnitude of Change	
		Construction Phase	Operation Phase					Construction Phase	Operation Phase
Visible Area with both Travelling and Occupational VSRs									
VSR-P1: Users/Staffs of ExxonMobil Petrol-cum-LPG Filling Station	High	Short	Short	Small	Irreversible	20	Substantial	Adversely Intermediate	Adversely Intermediate

Table 6-7 Significance of Visual Impacts during Construction and Operation Phase

Visual Sensitive Receivers	Sensitivity of VSRs	Magnitude of Change		Significance of Impact (Unmitigated)		Mitigation Measures	Significance of Impact (Mitigated)		
		Construction Phase	Operation Phase	Construction Phase	Operation Phase		Construction Phase	Day 1 of Operation	Year 10 of Operation
Visible area with residential VSRs									
VSR-R1	High	Adversely Small	Adversely Small	Moderately Adverse	Moderately Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Moderately Adverse	Moderately Adverse	Slightly Adverse
VSR-R2	High	Adversely Small	Adversely Small	Moderately Adverse	Moderately Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Moderately Adverse	Moderately Adverse	Slightly Adverse
VSR-R3	Medium	Adversely Small	Adversely Small	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	Slightly Adverse
Visible area with occupational VSRs									
VSR-O1	Low	Adversely Small	Adversely Small	Slightly Adverse	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly Adverse	Slightly Adverse	Slightly Adverse
VSR-O2	Low	Adversely Small	Adversely Small	Slightly Adverse	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly Adverse	Slightly Adverse	Slightly Adverse
VSR-O3	Low	Adversely Small	Adversely Small	Slightly Adverse	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly Adverse	Slightly Adverse	Slightly Adverse

Visual Sensitive Receivers	Sensitivity of VSRs	Magnitude of Change		Significance of Impact (Unmitigated)		Mitigation Measures	Significance of Impact (Mitigated)		
		Construction Phase	Operation Phase	Construction Phase	Operation Phase		Construction Phase	Day 1 of Operation	Year 10 of Operation
VSR-O4	Low	Adversely Small	Adversely Small	Slightly Adverse	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly Adverse	Slightly Adverse	Slightly Adverse
VSR-O5	Low	Adversely Small	Adversely Small	Slightly Adverse	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly Adverse	Slightly Adverse	Insubstantial
VSR-O6	Low	Adversely Intermediate	Adversely Intermediate	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	Slightly Adverse
VSR-O7	Low	Adversely Small	Adversely Small	Slightly Adverse	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly Adverse	Slightly Adverse	Slightly Adverse
VSR-O8	Low	Negligible	Negligible	Insubstantial	Insubstantial	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Insubstantial	Insubstantial	Insubstantial
Visible area with travelling VSRs									
VSR-T1	Low	Adversely Intermediate	Adversely Intermediate	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	Slightly Adverse
VSR-T2	Low	Adversely Intermediate	Adversely Intermediate	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	Slightly Adverse

Visual Sensitive Receivers	Sensitivity of VSRs	Magnitude of Change		Significance of Impact (Unmitigated)		Mitigation Measures	Significance of Impact (Mitigated)		
		Construction Phase	Operation Phase	Construction Phase	Operation Phase		Construction Phase	Day 1 of Operation	Year 10 of Operation
VSR-T3	Low	Adversely Large	Adversely Intermediate	Moderately Adverse	Slightly/ Moderately Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	Slightly Adverse
VSR-T4	Low	Adversely Small	Adversely Small	Slightly Adverse	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly Adverse	Slightly Adverse	Slightly Adverse
VSR-T5	Low	Negligible	Adversely Small	Insubstantial	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Insubstantial	Slightly Adverse	Slightly Adverse
Visible area with Recreational VSRs									
VSR-C1	Low	Adversely Small	Adversely Small	Slightly Adverse	Slightly Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly Adverse	Slightly Adverse	Slightly Adverse
Visible area with both travelling and occupational VSRs									
VSR-P1	Low	Adversely Intermediate	Adversely Intermediate	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	CM1; CM2; CM3; OM1; OM2; OM3; OM4	Slightly/ Moderately Adverse	Slightly/ Moderately Adverse	Slightly Adverse

7. WASTE MANAGEMENT IMPLICATION ASSESSMENT

7.1. INTRODUCTION

7.1.1. Based on the approved EIA Report (AEIAR-191/2015), the type, quantity and timing for the generation of waste during construction and operation phase have been assessed. Provided that the recommendations set out are properly implemented, adverse residual impact is not anticipated during construction and operation phase of the proposed Project.

7.1.2. This section reviews the solid waste management implication that may arise from the construction and operation phases due to the changes of the proposed Project after the approval of the EIA Report. This assessment will be based on the criteria and guidelines stated in Annexes 7 and 15 of the EIAO-TM for evaluating and assessing waste management implications.

7.2. RELEVANT ENVIRONMENTAL LEGISLATION, STANDARDS AND GUIDELINES

7.2.1. The legislations, relevant documents and guidelines governing waste management and disposal in Hong Kong as stated in the approved EIA Report are applicable for assessing potential waste management implications.

7.2.2. Some relevant documents and guidelines are updated and also applicable in assessing potential waste management implications:

- Section 4.1.3 of Chapter 4 of the Project Administration Handbook (PAH) for Civil Engineering Works, Management of Construction/Demolition Materials including Rocks replaced ETWB C(W) No. 33/2002, Management of Construction and Demolition Material Including Rock
- A Guide to the Chemical Waste Control Scheme, 2016 (EPD)

7.3. ASSESSMENT METHODOLOGY

7.3.1. The solid waste management assessment reviewed in this ER is carried out in accordance with Annex 7 and Annex 15 of the EIAO-TM.

7.3.2. The waste management hierarchy and opportunities for reducing waste generation adopted in the approved EIA Report remains valid, i.e. avoidance, minimisation, reuse, recycling, treatment and disposal.

7.3.3. The quantity, quality, type and timing of waste arising as a result of the construction and operation activities of the proposed Project and associated works are reviewed and updated based on their sequence and duration. Design, general layout, construction

methods and programme to minimise the generation of public fill/inert C&D materials are also considered.

7.3.4. The preliminary quantity of each type of waste, including general refuse and chemical waste, arising from the future operation of the proposed Project is also estimated in ***Section 7.5***.

7.4. IDENTIFICATION AND EVALUATION OF ENVIRONMENTAL IMPACTS

Construction Phase

7.4.1. In order to accommodate the additional users and usage, two additional storeys are proposed to be included in the proposed Project and the construction period is extended from 29 months to around 35 months. The Construction Floor Area (CFA) is also increased from 38,000m^2 to 43,800m^2. The thickness of pile cap is observed to be reduced from 3m to 2m.

7.4.2. The types of waste identified from the approved EIA Report remain valid to this ER, including construction and demolition (C&D) materials, C&D waste, chemical waste and general refuse.

Construction and Demolition (C&D) Material

7.4.3. The major sources of C&D materials identified from the approved EIA Report are still valid to this ER, which are excavated fill materials from topsoil and broken concrete from the removal of previously paved ground.

7.4.4. Similar to the approved EIA Report, conventional steel-H piling is proposed, which in turn minimises the waste to be generated from the excavation via drilling. An increase in piling depth is expected due to the two additional storeys, while the thickness of pile cap is reduced as confirmed by ArchSD. As such, a reduction in the generation of excavated fill material is expected. Since deep excavation from piling works is not anticipated, no excavated sediment is expected to be generated.

7.4.5. The quantity estimation of C&D materials that is anticipated to be diverted to public fill reception facilities during construction phase of the proposed Project are updated and presented in ***Table 7-1*** below. With the reduction of thickness in pile cap from 3m to 2m, the quantity in total excavated topsoil is reduced to 14,012m^3. One quarter of which (3,503m^3) is expected to be reused on site whereas the remaining 10,509m^3 will be recycled at public fill bank. 2,102m^3 of broken concrete will also be generated during site formation.

Table 7-1 Summary of C&D Materials Arising from the Proposed Project

Material Type and Potential Sources	Estimated Quantity (m^3)		Proposed Waste Management
	approved EIA Report	ER	
Excavated topsoil	15,764 (1)	10,509 (2)	To be disposed of at public fill reception facilities
	5,254 (1)	3,503 (2)	To be reused on site with proper sorting
Broken concrete from the removal of previously paved ground with a depth of 0.3 m during site formation	2,102	2,102	To be disposed of at public fill reception facilities
Total	**23,120**	**16,114**	

Notes:

(1) Excavate topsoil for 3m-deep pile cap

(2) Excavate topsoil for 2m-deep pile cap

7.4.6. The public fill reception facilities and transportation route for dump trucks during construction period proposed in the approved EIA Report remain valid to this ER, given in ***Figure 7.1***, i.e. Tseung Kwan O Area 137 Fill Bank through the Chai Wan Public Fill Barging Point (PFBP) at 11 Ka Yip Street, Chai Wan, Hong Kong.

7.4.7. The estimation on the transportation of C&D materials to public fill reception facilities is shown in ***Table 7-2***. The construction period will last for around 35 months and an average truck capacity is $7.5m^3$. C&D materials are expected to be exported on a regular basis. The estimated number of trucks per day is reduced from 4 to 2 trips due to the reduction of the estimated quantities of C&D materials and extension of construction period. In view of the reduced number of trucks per day, additional impact arising from transportation of C&D materials due to the changes of the proposed Project is not expected.

Table 7-2 Estimation of Transportation to Public Fill Reception Facilities

Description	Approved EIA Report	ER
Estimated quantity of C&D materials to public fill reception facilities (1)	17,866 m^3	12,611 m^3
Average truck capacity	7.5 m^3	7.5 m^3
Total number of trucks	2,382	1,682
Number of trucks per month (2)	82 (based on a 29-month construction period)	48 (based on a 35-month construction period)
Number of trucks per day	**4**	**2**

Notes:

(1) Sum of excavated soil and broken concrete from the removal of previously paved ground with a depth of 0.3 m during site formation

(2) Assumption of 6 working days per week

Construction and Demolition (C&D) Waste

7.4.8. Same as the approved EIA Report, C&D waste (non-inert material) will be separated from C&D materials on site. All segregated recyclable materials (e.g. metal) should be collected by recyclers. The remaining C&D waste will require disposal at South East New Territories (SENT) landfill through Island Eastern Corridor (IEC) by dump trucks.

7.4.9. Comparing to the EIA Scheme, slight increase in the generation of C&D waste (e.g. timber formwork, maintenance and packaging waste, other construction debris, etc.) is expected due to the increase in construction floor area. The quantity of C&D waste generated is expected to be 6,570m^3, given careful design, planning, site management and control of ordering procedure implemented.

7.4.10. The estimation on the transportation of C&D wastes to SENT landfill is presented in ***Table 7-3***. Given an average truck capacity of 7.5m^3, approximately 876 dump trucks would be undertaken over a 35-month construction period. Total number of dump trucks is increased. Due to the extended construction period, the estimated number of trip per day is reduced from 2 to 1. Therefore, impact arising from the increased traffic loading is also expected to be reduced and limited.

Table 7-3 Estimation of Transportation to SENT Landfill

Description	approved EIA Report	ER
Estimated quantity of C&D waste to SENT landfill	5,700 m^3	6,570 m^3
Average truck capacity	7.5 m^3	7.5 m^3
Total number of trucks	760	876
'Number of trucks per month (1)	26 (based on a 29-month construction period)	25 (based on a 35-month construction period)
Number of trucks per day	**2**	**1**

Notes:

(1) Assumption of 6 working days per week

Chemical Waste

7.4.11. The sources, types, and estimated quantity of chemical waste listed in the approved EIA Report are still valid to this ER. Given that the chemical waste generated are to be handled, stored, transported and disposed of in an appropriate manner, impacts such as potential hazard and spillage will not be anticipated.

General Refuse

7.4.12. The sources, types and disposal route of general refuse evaluated in the approved EIA Report are still valid to this ER. The general refuse will require disposal at the West New Territories (WENT) landfill through Island East Refuse Transfer Station in Chai Wan. For the estimated quantity of general refuse generated from site during construction phase, since no information regarding the number of on-site workers is available at this stage, same assumption of maximum no. of workers working simultaneously on site and

waste generation rate are adopted in this ER (i.e. 100 workers and 0.65 kg per person per day). The quantity of general refuse to be generated per day would be 65 kg per day. In view of the extended construction period from 29 to 35 months, the total general refuse generated would increase from around 57 tonnes to 69 tonnes, Given that the general refuse will be temporarily stored in enclosed bins or compaction units and will be collected on a regular basis, by performing proper on-site handling and storage as well as regular disposal of the wastes, no adverse impact is envisaged.

Operation Phase

7.4.13. Additional users, namely HKPF SMD Store and GLD Transport Pool, are proposed to be accommodated in the proposed Project. Additional storage spaces and vehicle parking spaces will be provided, while the office activities and vehicle repair/ testing activities at HKPF PVP&EC, HKPF Centralised Case Property Store, EMSD Depot, FEHD Depot and GL Specialist Laboratory as detailed in the approved EIA Report are still valid as confirmed by the future users.

General Refuse

7.4.14. There is an increase in occupancy population (226 to 320, equivalent to 42% increase). The nature of the proposed Project remains unchanged. The solid waste generated from the proposed Project consists of commercial wastes and industrial waste. According to Monitoring Solid Waste in Hong Kong, Statistics for Hong Kong 2017 (Solid Waste 2017), municipal wastes include Domestic Waste, Commercial Waste and Industrial Waste, the per capita disposal rate of commercial & industrial waste of 0.59kg/ person/ day in 2017, which is the highest since 2008, is adopted for evaluation. The total generation of general refuse would increase from 134kg/day to 189kg/day. Assuming current waste vehicles that can handle 9 ton per load, increase in number of truck for the increased waste generated during operation phase is not anticipated. As such, with the implementation of recommended measures as listed in the approved EIA Report, increase in occupancy population and waste generation will not impose significant impact to both land transportation and waste disposal facilities. Adverse impact arising from the increase in general refuse generated from the proposed Project is expected to be insignificant.

Chemical Waste

7.4.15. Operation activities generating chemical waste identified in the approved EIA Report remain valid to this ER, which include vehicle repair / testing activities. As confirmed by the future users, since there is no additional vehicle repair / testing activity to be carried out at SMD Store and GLD Transport Pool as well as no changes in the activities as identified from the approved EIA Report, the estimated types and quantities of chemical waste arisen from the approved EIA Report are still valid for this ER. With the implementation of proper management procedures, significant impacts such as potential hazard and spillage are not expected.

7.5. MITIGATION MEASURES

7.5.1. No significant increase in waste generation is expected during operation and construction due to the changes of the proposed Project after the approval of the EIA Report. Provided that all of the identified wastes are handled, transported and disposed of in strict accordance with the relevant legislative on a regular basis and suggested requirements as well as the recommended good site practices are properly implemented, no adverse environmental impact is expected during the construction and operation phases.

7.5.2. Mitigation measures identified in the approved EIA Report are still valid and applicable to this ER.

7.6. CONCLUSION

7.6.1. The type, quantity and timing for generating of waste during the construction phase and operation phase have been assessed based on the changes of the proposed Project after the approval of the EIA Report.

7.6.2. The duration of construction period, number of floor and staff population are increased, while same construction method to minimize waste generation is proposed. Storage spaces and vehicle parking spaces are the additional usages to be included in the proposed Scheme.

7.6.3. In view of the changes abovementioned, there is no variation that would materially be different from the framework design or operational parameters described and implied in the approved EIA Report. All waste produced from the proposed Project will either be recycled as useful products or disposed of in an environmentally acceptable manner. Provided that the recommendations set out in this section are properly implemented, no unacceptable impacts during construction and operation of the proposed Project would be anticipated.

8. LAND CONTAMINATION ASSESSMENT

8.1. INTRODUCTION

8.1.1. As identified in the approved EIA Report, there is no sign of land contamination due to past and current activities at the Project site, with reference to findings from reviewing historical and current land uses and site reconnaissance. Moreover, the operation of the proposed Project is not anticipated to lead to quantifiable adverse land contamination impacts with proper site practice for handling, storage, transportation, collection and disposal of Dangerous Goods (DGs), chemical and chemical waste.

8.1.2. This section reviews the land contamination implications that may potentially arise during construction and operation phases of the proposed Project due to the project changes after the approval of the EIA Report. The potential impacts are assessed in accordance with the guidelines as given in Section 3.1 and 3.2 of Annex 19 of the EIAO-TM as well as Clause 3.49 and Appendix E2 of the EIA Study Brief (No. ESB-2672014).

8.2. RELEVANT ENVIRONMENTAL LEGISLATION, STANDARDS AND GUIDELINES

8.2.1. The EPD publications stated in the approved EIA Report remain applicable to this ER and provide guidance in relation to land contamination assessment.

8.3. SITE APPRAISAL

8.3.1. Site appraisal has been conducted in July 2019 to validate the previous findings on the potential on-site and off-site activities that could contribute to land contamination at the Project site and its surroundings:

- Acquisition of information related to potential land contamination from the Environmental Compliance Division of EPD and FSD; and
- Records and photographs from site walkover.

Review of Site History

8.3.2. The project site is currently allocated as a works and staging area of the Drainage Services Department (DSD) and it is verified in the site visit conducted in July 2019.

8.3.3. Historical aerial photographs available up to year 2017 have been reviewed and incorporated into ***Figure 8.1*** to identify the potential historical activities that could result in contamination of site after the approval of the approved EIA Report, i.e. after 2014.

8.3.4. No changes on land use history has been recorded from 2014 to 2017.

Review of Environmental Information from Local Authorities

8.3.5. Correspondences from local authorities regarding the past land use history of the project site in relation to any possible land contamination issue for the time gap from the approval of the approved EIA Report to this ER, i.e. from 2014 to 2018 are provided in ***Appendix 8.3***. It is confirmed that there is no changes in land ownership and uses since 2014. The Project site is recently served as a DSD's temporary works and staging area. The relevant correspondence is also given in ***Appendix 8.3***.

8.3.6. Written correspondences from Environmental Protection Department (EPD) and Fire Services Department (FSD) confirmed that no record of incidents of spillage / leakage of chemical and registration of DGs was found at the site area from 2014 to 2018. There is also no record of registered chemical waste producers at the Project site as per inspection at EPD's Territory Control Office dated 10 May 2019.

Site Walkover

8.3.7. Site walkover was carried out on 15 July 2019. It was observed from the site appraisal that the site condition as described from the approved EIA Report remain valid, i.e. concrete pavement in good condition and storage of construction materials such as aggregate, drainage pipes, manhole covers, milled asphalt, etc. No storage of diesel and oils except a few sealed containers of lubricant were identified within the site boundary. Drip trays were provided for the sealed containers. Since the Project site was paved, infiltration of any oils / chemical from spillage / leakage incidents were found to be unlikely. Photo records are given in ***Appendix 8.2***.

8.3.8. Checklist of the site appraisal and photo records for current land use activities are provided in ***Appendix 8.1*** and ***Appendix 8.2*** respectively.

8.3.9. The site appraisal reveals that the present land use of the Project site is not anticipated to have caused spillage and leakage of chemical and DGs, and the concrete-paved ground is expected to have minimised possible land contamination. Moreover, no potential contamination arising from the past activities at the site was identified. Therefore, it would be concluded that subsequent soil and groundwater sampling and remediation at the construction phase (i.e. Step 3 to 6 of the land contamination assessment) is considered not necessary for the Project site.

8.4. POTENTIAL LAND CONTAMINATION SOURCES IN CONSTRUCTION PHASE

8.4.1. As confirmed by ArchSD, the construction method proposed in the approved EIA Report will still be adopted. Decrease in soil volume generated from excavation for piling works is expected. Nevertheless, as no major earthworks are required for site formation works of the proposed Project, the anticipated amount of excavated materials to be generated is limited to topsoil only. In view of the above, it is expected that the construction phase of the proposed Project will not lead to any potential land contamination issue.

8.5. POTENTIAL LAND CONTAMINATION SOURCES IN OPERATION PHASE

8.5.1. Additional storage spaces (without chemical or DGs provisions) and vehicle parking spaces will be provided for HKPF SMD and GLD Transport Pool, while the office activities and vehicle repair/ testing activities at HKPF PVP&EC, HKPF Centralised Case Property Store, EMSD Depot, FEHD Depot and GL Specialist Laboratory as detailed in the approved EIA Report are still valid as confirmed by the future users. As such, there will be no additional potential sources of land contamination during operation identified comparing to those identified in the approved EIA Report.

8.5.2. The estimated quantity of DGs are updated by the future users and reviewed in this ER. No additional DGs is anticipated. The operation of the proposed Project with additional users and usage is not anticipated to lead to quantifiable adverse land contamination impacts with proper site practice for handling, storage, transportation, collection and disposal of DGs, chemical and chemical waste.

8.6. PREVENTIVE MEASURES

8.6.1. Same as the approved EIA Report, no potential contamination arising from the past activities at the site was identified as abovementioned, mitigation measure is not required. The recommended preventive measures in the approved EIA Report are still valid and applicable to this ER.

8.7. CONCLUSION

8.7.1. The construction and operation of the proposed Project is not anticipated to lead to quantifiable adverse land contamination impacts with proper site practice for handling, storage, transportation, collection and disposal of DGs, chemical and chemical waste. The preventive measures and conclusion drawn in the approve EIA Report are still valid.

8.7.2. Land contamination assessment and any necessary remediation work will be required to be carried out by the Contractor if there is any sign of land contamination issued identified prior to or during the construction phase of the proposed Project. The land contamination assessment and associated remediation works must be in accordance with EPD publications in relation to land contamination assessment.

9. HAZARD TO LIFE ASSESSMENT

9.1. INTRODUCTION

9.1.1. The approved EIA Report concluded that the increase in risk induced by the additional population brought by the proposed Project satisfied the risk criteria set in Annex 4 of the EIAO-TM.

9.1.2. This section presents the potential implications on the hazard to life assessment in the ER to address the proposed Project's design changes after the approval of the earlier EIA report.

9.2. REVIEW ON ENVIRONMENTAL LEGISLATION

9.2.1. The environmental legislations as stated in the approved EIA Report regarding hazard to life assessment are still applicable to the ER.

9.3. REVIEW OF ASSESSMENT DATA

Information of the Proposed Project

9.3.1. Based on the latest information received from the Project Team, the current design parameters and programme are compared with the information in the approved EIA Report in the table below.

Table 9-1 Review of Project Information

Departments	Project Information	
	Approved EIA Report	**ER**
Stakeholders	HKPF, FEHD, EMSD and GL	HKPF, FEHD, EMSD, GLD and GL
Number of storey of proposed Government Complex	6 storeys	8 storeys
Construction year	2016	2020
Operation year	2018	2023
Population expected (including visitors)	240	335

Notes:
HKPF: Hong Kong Police Force, FEHD: Food and Environmental Hygiene Department, EMSD: Electrical and Mechanical Services Department, GLD: Government Logistic Department, GL: Government Laboratory

9.3.2. The construction year and operation year are set to 2020 and 2023 respectively.

Potential Hazardous Sources

9.3.3. The following potential hazardous sources were identified in the approved EIA Report:

Table 9-2 List of Potential Hazardous Source

Potential Hazardous Source	Location
Sinopec HK Oil Terminal Chai Wan	Chong Fu Road
Sinopec Petrol-cum-LPG Filling Station	Chong Fu Road
ExxonMobil Petrol-cum-LPG Filling Station	Sheung Mau Road
LPG Wagon Parking Site	At the junction of Sheung On Street and Sheung Ping Street
Diesel Storage in NWFB Depot	At the junction of Chong Fu Road and Sheung On Street
Diesel Storage in Citybus Depot	Shing Tai Road
DGs Storage in the Proposed Project	Sheung On Street

9.3.4. A review on the latest information of the potential hazardous sources is conducted in between June and August 2018 through:

- information requests to the operators of the installations;
- site survey; and
- desktop study.

9.3.5. A summary of the review is presented below:

Table 9-3 Summary of Information Review on Potential Hazardous Sources

Potential Hazardous Source	Information Update
Sinopec HK Oil Terminal Chai Wan	No feedback from the operator. Assuming no changes based on the observation in a site survey.
Sinopec Petrol-cum-LPG Filling Station	No feedback from the operator. No changes to the previous operation data based on a vehicle count and observation in a site survey.
ExxonMobil Petrol-cum-LPG Filling Station	No feedback from the operator. No changes to the previous operation data based on a vehicle count and observation in a site survey.
LPG Wagon Parking Site	No changes to the parking location and area are observed in a site survey
Diesel Storage in NWFB Depot	Information received from the operator confirms there are no changes

Potential Hazardous Source	Information Update
Diesel Storage in Citybus Depot	Information received from the operator confirms there are no changes
DGs Storage in the Proposed Project	Information received from the Project Team confirms there are no changes

9.3.6. There is no change to the DGs Storage and the nature of operation of the Proposed Project (additional GLD Department does not contribute new hazardous sources). By reviewing the previous HAZID workshop, the DG handling procedures, reviewing the existing safeguards and emergency response process are still considered valid.

9.3.7. The site survey on the study area and desktop study also confirm there are no additional potential hazardous sources as compared with the situation in the approved EIA Report.

Population Data

9.3.8. As mentioned in the previous section, the assessment years of the ER are updated to 2020 and 2023. The population data in the approved EIA Report are therefore updated accordingly to consider the changes in the study area including population growth and additional planned developments if any.

9.3.9. In order to estimate the baseline population in year 2018 and the future population for the study, information is obtained from:

- 2016 Population By-census;
- Outline Zoning Plan;
- Information request from the Planning Department;
- The Annual Traffic Census 2016; and
- Education Bureau.

9.3.10. According to 2016 Population By-census, household sizes of 3.1 and 2.9 people are estimated according to the average domestic household sizes of TPU 162 and TPU 163. A household size of 3.1 is adopted in the ER.

9.3.11. A negative domestic annual growth rate is estimated as per TPU 162 and TPU 163. A zero growth rate is adopted in the ER.

9.3.12. An annual employment growth rate of 0.35% is estimated as per 2014-based TPEDM published on Planning Department's website.

9.3.13. An annual growth rate of 2.9% for MTR passenger is estimated as per Annual Transport Digest on Transport Department's website.

9.3.14. According to Education Bureau, an average annual growth rate of primary school class size is 3.1% from 2015 to 2018, while the growth rate of secondary school class size is

-4.3%. An annual growth rate of 3.1% is adopted in this study for the population in both schools.

9.3.15. There are two planned developments including the Public Housing Development at Wing Tai Road and the Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ) at Chong Fu Road with reference to the latest best available information at the time of preparation of this ER. The population data in the planned developments are considered in the ER.

9.3.16. The detailed population data adopted in the ER is presented in ***Plate 9.1***, ***Table 9-6***, ***Table 9-7*** and ***Table 9-8***.

Meteorological Data

9.3.17. The meteorological data of the North Point Weather Station in 2013 was adopted in the approved EIA Report. In the ER, the average data of the North Point Weather Station between 2013 and 2017 is adopted.

Table 9-4 Day Time Weather Condition

Wind Direction	4.0B	2.0D	4.5D	7.5D	3.0E	2.0F	Total
0	2.45	0.39	1.30	0.06	0.56	2.30	7.06
30	1.08	0.11	0.57	0.03	0.28	0.14	2.22
60	3.94	0.49	1.67	0.39	0.54	0.45	7.48
90	30.39	1.52	14.94	7.06	2.56	1.62	58.09
120	0.63	0.24	0.20	0.00	0.19	0.49	1.76
150	0.05	0.03	0.01	0.00	0.00	0.02	0.12
180	0.21	0.07	0.00	0.00	0.00	0.02	0.30
210	0.64	0.11	0.03	0.00	0.01	0.05	0.85
240	6.11	0.54	1.27	0.25	0.35	0.46	8.99
270	7.38	0.68	1.75	0.30	0.55	0.59	11.26
300	0.24	0.05	0.03	0.00	0.02	0.10	0.44
330	0.64	0.14	0.27	0.01	0.16	0.16	1.41
Total	**53.77**	**4.41**	**22.04**	**8.13**	**5.24**	**6.40**	**100.00**

Table 9-5 Night Time Weather Condition

Wind Direction	4.0B	2.0D	4.5D	7.5D	3.0E	2.0F	Total
0	0.00	0.07	2.16	0.05	2.11	11.80	16.19
30	0.00	0.01	1.02	0.14	1.11	0.87	3.16
60	0.00	0.02	2.96	0.41	2.19	2.27	7.87
90	0.00	0.02	22.27	7.79	11.29	9.28	50.65
120	0.00	0.00	0.21	0.00	0.77	2.71	3.69
150	0.00	0.00	0.00	0.00	0.02	0.15	0.18

Wind Direction	4.0B	2.0D	4.5D	7.5D	3.0E	2.0F	Total
180	0.00	0.00	0.00	0.00	0.01	0.16	0.18
210	0.00	0.00	0.01	0.00	0.09	0.40	0.51
240	0.00	0.03	1.71	0.18	1.75	2.53	6.20
270	0.00	0.03	3.03	0.17	2.98	3.19	9.40
300	0.00	0.01	0.08	0.01	0.07	0.25	0.43
330	0.00	0.04	0.40	0.02	0.49	0.58	1.54
Total	**0.00**	**0.27**	**33.86**	**8.78**	**22.89**	**34.20**	**100.00**

9.4. REVIEW OF HAZARD IDENTIFICATION

9.4.1. Owing to the unchanged conditions of the hazardous sources, all hazardous scenarios identified from the approved EIA Report are still valid.

9.5. REVIEW OF FREQUENCY ASSESSMENT

9.5.1. Owing to the unchanged conditions of the hazardous sources, all event frequencies adopted in the approved EIA Report are still valid.

9.6. REVIEW OF CONSEQUENCE ANALYSIS

9.6.1. Owing to the unchanged conditions of the hazardous scenarios, all consequence including the source term modelling and physical effect modelling adopted in the approved EIA Report are still valid.

9.7. RISK ASSESSMENT

9.7.1. The changes as stated in the above sections are considered in the risk summation using a Quantitative Risk Assessment approach. Det Norske Veritas (DNV)'s simulation software SAFETI 6.7 is employed, which is the same as the software adopted in the approved EIA Report, to revisit the risk level induced by the changes.

Individual Risk Results

9.7.2. Owing to the unchanged conditions of the hazardous scenarios and event frequencies and as the individual risk contours are independent of the population sets, the individual risk results as shown in the approved EIA Report are still valid.

Societal Risk Results

9.7.3. The cumulative societal risk of the Operation Case (2023) in terms of an F-N curve is presented in ***Plate 9.2***, while the F-N data is provided in ***Table 9-9***. The PLL values are also shown in ***Table 9-10***. As observed from ***Plate 9.2***, the societal risk is slightly increased due to the introduction of the Proposed Project's additional population. The

F-N curve falls within the Acceptable region and the societal risk therefore complies with the risk criteria of Annex 4 of the EIAO-TM.

9.8. CONCLUSION

9.8.1. This section reviewed the design changes of the Proposed Project after the approval of the earlier EIA report. The cumulative societal risk posed by the nearby hazardous sources, after considering the additional population in the Proposed Project as well as the changes in population within the study area, was within the Acceptable region and risk criteria of Annex 4 of the EIAO-TM was satisfied.

9.8.2. The change induced by the Proposed Project's additional population did not lead to a violation of the individual and societal risk criteria. There was no significant change to the Proposed Project's environmental performance in the hazard to life aspect comparing to the approved EIA Report, the impact was therefore not considered as material changed.

Plate 9.1 Index Map for Population Data in Table 9-6

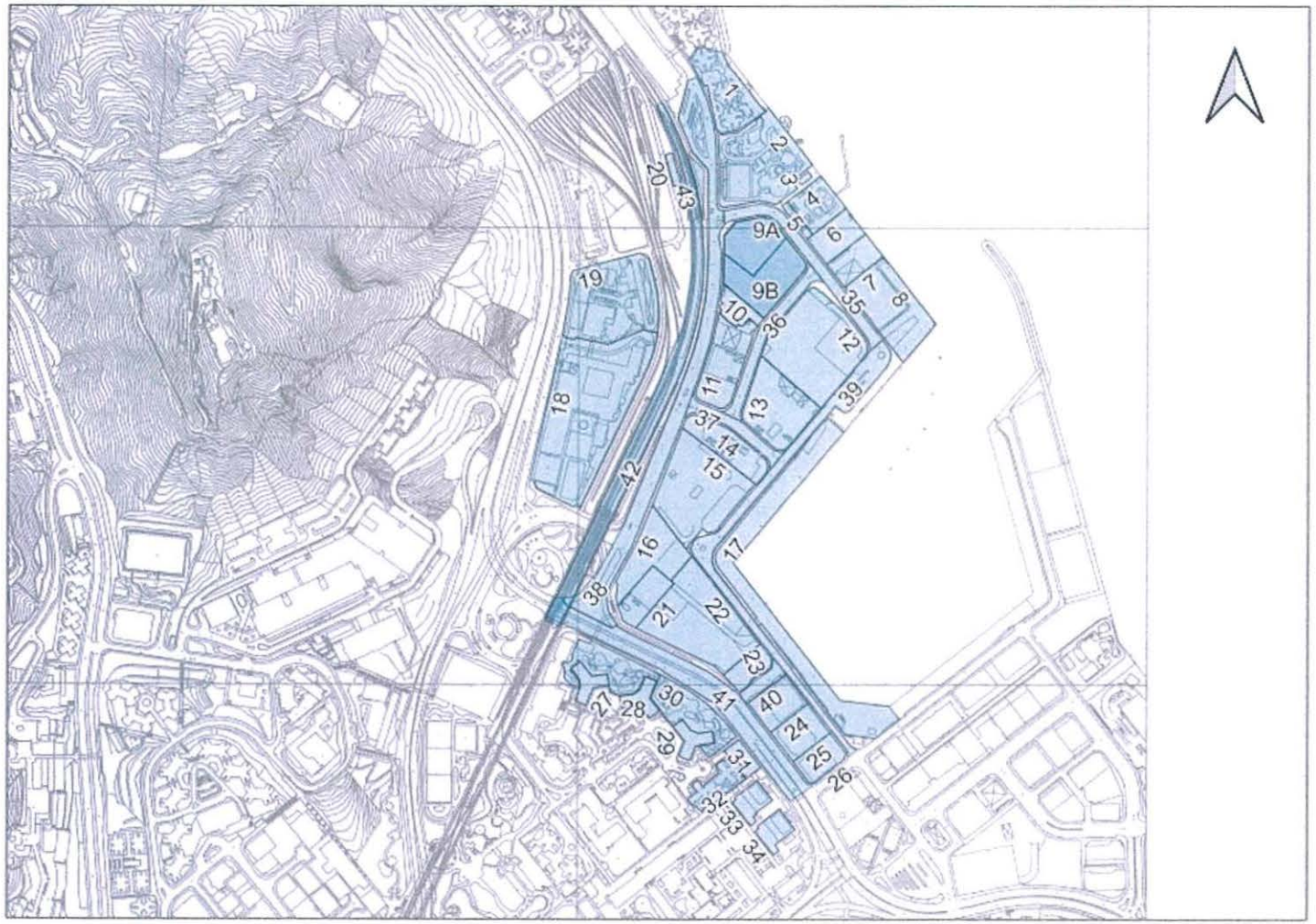


Table 9-6 Population Data

ID	Description	Category	Population 2018	Population 2020	Population 2023	Indoor Fraction	No. of Storey	Remarks
1	Heng Fa Chuen, Block 48,49,50	Residential	1512	1512	1512	95%	22	2520 people in Block 46-50 as per 2016 Population By-Census. Assume population is evenly distributed between 5 blocks.
2	Heng Fa Chuen Playground	Recreational	99	99	99	0%	0	An open space with an area of 9815 sq.m according to Outline Zoning Plan. Assume a density of 0.01 sq.m as per EIA-059/2001.
3	Seawater Pump House	Industrial	0	0	0	95%	1	Assume unmanned operation.
4	Sinopec Chai Wan Oil Depot	Industrial	23	23	23	95%	0	Conservative assumption as per AEIAR-191/2015.
5	Sinopec Filling Station	Filling Station	7	7	7	95%	0	Conservative assumption as per AEIAR-191/2015.
6	Waste Recycling Workshop	Workshop	12	12	12	10%	0	Conservative assumption as per AEIAR-191/2015.
7	Paper Recycling Workshop	Workshop	12	12	12	10%	1	Conservative assumption as per AEIAR-191/2015.
8	Government Logistic Center	Logistics Centre	145	147	148	95%	17	As per AEIAR-191/2015.
9A	Future CSD Headquarter	Construction / CSD HQ	19	100	701	10% / 95%	0 / 15	Construction work of WSD Headquarter will commence in 2020 and tentatively complete in 2023. Assume 100 construction workers in 2022 and full capacity of 701 people in 2023 when in operation as per information provided by the Project Team.

ID	Description	Category	Population 2018	Population 2020	Population 2023	Indoor Fraction	No. of Storey	Remarks
9B	Future WSD Headquarter	Construction / WSD HQ	19	100	1912	10% / 95%	0 / 15	Construction work of WSD Headquarter will commence in 2020 and tentatively complete in 2023. Assume 100 construction workers in 2022 and full capacity of 1912 people in 2023 when in operation as per information provided by the Project Team.
10	HKE Heng Fa Chuen Substation	Industrial	4	5	5	95%	7	As per AEIAR-191/2015.
11	Car park C	Car Park	20	20	20	0%	0	Conservative assumption.
12	NWFB Permanent Depot	Bus Depot	624	629	635	95%	5	As per AEIAR-191/2015.
13	Construction Site / Government Complex	Construction / Govt. Complex	50	100	335	10% / 95%	1 / 8	Site currently occupied by Contractors of DSD Project as a site office. The Government Complex and Vehicle Depot will be constructed in the period of 2020 to 2022 and operated in 2023. Assuming 100 construction workers in 2020. The population in operation year as per Project team.
14	Esso Filling Station	Filling Station	23	23	23	0%	1	As per AEIAR-191/2015.
15	Citybus Chai Wan Depot	Bus Depot	371	374	378	95%	7	As per AEIAR-191/2015.
16	Technological and Higher Education Institute of Hong Kong	THEi	2200	2200	2200	95%	1	As advised by THEi, a maximum of 2000 students and 200 staffs during daytime and 200 students and 20 staffs during night time.

ID	Description	Category	Population 2018	Population 2020	Population 2023	Indoor Fraction	No. of Storey	Remarks
17	Chai Wan Public Cargo Working Area Marine Department	Workshop	54	55	55	10%	0	As per AEIAR-191/2015.
18	HKE IVE Chai Wan	School	5587	6035	6597	95%	8	According to VTC's website, there are 37719 full time students and 12564 part time students in 9 HKIVE schools in school year 2017/18. Assume number of student is equal among 9 schools. Assume 100 staff and an annual growth rate of 3.1% in number of student. http://statistics.vtc.edu.hk/summary2/IVE/IVEEnrol/IVEEnrolMain.jsp?ins=ive&pages=enrol&type=enrol&by4=sum&lang=chi
19	Knight Court	Residential	314	315	315	95%	25	Comprising 2 blocks with 25 floor each and there are 2 flats per floor according to EIA-191/2015. Assuming an average household size of 3.1 as per 2016 Population By-Census.
20	MTR Chai Wan Depot	MTR	110	111	112	95%	1	As per AEIAR-191/2015.
21	EMSD HK Workshop	Industrial	85	86	87	95%	1	Information according to approved EIA-202/2012: The operation time of the workshop is 0800 to 2100. Daily in/out traffic is 50 no. of vehicles and no. of staff in day time is 40, night time is 10. Assume 1 person per vehicle for repairing and 45 no. of vehicles in day time and 5 no. of vehicles in night time for repairing.
22	Car park B	Car Park	37	37	37	0%	0	Approximate 120 parking slots as per site inspection. Assuming a maximum 30% of car owners appear at the same time, 1 person per vehicle and 1 security guard.

ID	Description	Category	Population 2018	Population 2020	Population 2023	Indoor Fraction	No. of Storey	Remarks
23	LCSD Pet Garden	Car Park / Recreational	16	16	16	0%	0	As per AEIAR-191/2015.
24	Chai Wan Industrial Center, Phase 2	Industrial	1873	1874	1874	95%	22	As per AEIAR-191/2015.
25	Chai Wan Industrial Center, Phase 1	Industrial	1903	1903	1903	95%	22	As per AEIAR-191/2015.
26	Cornell Center	Industrial	1392	1392	1392	95%	22	As per AEIAR-191/2015.
27	Tsui Hong House	Residential	1821	1821	1821	95%	31	As per AEIAR-191/2015.
28	Tsui Shou House	Residential	1758	1758	1758	95%	31	As per AEIAR-191/2015.
29	Tsui Fuk House	Residential	1912	1912	1912	95%	31	As per AEIAR-191/2015.
30	Playground	Recreational	60	60	60	0%	0	As per AEIAR-191/2015.
31	Hang Tsui Court Indoor Carpark	Residential	48	48	48	95%	6	As per AEIAR-191/2015.
32	Hang Tsui Court	Residential	2101	2101	2101	95%	34	As per AEIAR-191/2015.
33	HKHA Residential Project	School	100	100	2480	95%	1	Site reserved for residential purpose, with 800 flats to be provided in 2020/21. Assuming 100 construction worker in 2020 and full in-take of 800 flats with an average household size of 3.1 in 2023. https://www.legco.gov.hk/yr17-18/chinese/panels/hg/papers/hg20171204cb1-284-3-c.pdf

ID	Description	Category	Population 2018	Population 2020	Population 2023	Indoor Fraction	No. of Storey	Remarks
34	Chai Wan Faith Love Lutheran School	School	384	453	492	95%	1	14 classes and 30 teachers in 2017/18. Assume 15 other staff. http://www.chsc.hk/psp2017/sch_detail.php?lang_id=2&sch_id=42&return_page=sch_list.php%3Flang_id%3D2%26search_mode%3D%26frmMode%3Dpagebreak%26sch_name%3DElchk%2BFaith%2BLove%2BLutheran%2BSchool%26sort_id%3D-1
35	Chong Fu Road	Road	54	54	54	0%	0	Population estimated from Traffic Flow Forecast plus 50 pedestrians
36	Sheung Tat Street	Road	52	52	52	0%	0	Population estimated from Traffic Flow Forecast plus 50 pedestrians
37	Sheung Mau Street	Road	53	53	53	0%	0	Population estimated from Traffic Flow Forecast plus 50 pedestrians
38	Shing Tai Road	Road	75	75	75	0%	0	Population estimated from Traffic Flow Forecast plus 50 pedestrians
39	Sheung On Street	Road	62	62	62	0%	0	Population estimated from Traffic Flow Forecast plus 50 pedestrians
40	Sheung Ping Street	Road	52	52	52	0%	0	Population estimated from Traffic Flow Forecast plus 50 pedestrians
41	Wing Tai Road	Road	98	98	98	0%	0	Population estimated from Traffic Flow Forecast plus 50 pedestrians
42	MTR Island Line	Island Line	155	165	180	0%	0	As per the information provided by MTRC.
43	Greenery of Triangular Area	Recreational	10	10	10	0%	0	Conservative assumption.

Table 9-7 Temporal Changes in Population

Category	Time Period			
	Weekday Day (Mon-Fri 0700-1900 hrs)	Weekday Night (Mon-Fri 1900-0700 hrs)	Weekend Day (Sat-Sun 0700-1900 hrs)	Weekend Night (Sat-Sun 1900-0700 hrs)
Commercial	100%	10%	40%	5%
Industrial	100%	10%	40%	5%
Residential	25%	100%	70%	100%
Recreational	50%	5%	100%	5%
Car Park	100%	10%	50%	10%
School	100%	1%	100%	1%
THEi [1]	100%	10%	50%	1%
Workshop	100%	10%	100%	10%
Bus Depot	100%	10%	100%	10%
Govt. Complex [1]	100%	15%	31%	13%
Logistics Centre [2]	100%	5%	50%	5%
EMSD Workshop	100%	18%	100%	18%
Filling Station	100%	50%	100%	50%
CSD HQ [2]	100%	35%	18%	16%
WSD HQ [2]	100%	6%	6%	6%
MTR [2]	100%	23%	100%	23%
Island Line [3]	100%	100%	60%	60%

Notes:

[1] As per information requests

[2] As per Project Team's information

[3] Based on information request and assumptions

Table 9-8 MTR Population Calculation

As per MTR's information:

Time Period	Description	Passenger Flow (psg/hr)
Weekday peak hour	Mon-Fri	12600
Weekday non-peak hour	Mon-Fri	4700
Weekend peak hour	Sat-Sun	7200
Weekend non-peak hour	Sat-Sun	7600

Time Period	Passenger Flow (psg/hr) Note 1	Average Speed (km/hr)	Length of track (km)	No. of passenger (psg)
Weekday day	12600	60	0.74	155
Weekday night	12600	60	0.74	155
Weekend day	7600	60	0.74	94
Weekend night	7600	60	0.74	94

Note:

1. The maximum peak hour flows among weekday and weekend from MTR are adopted conservatively for the calculations .

Weekday day passenger = 12600 / 60 × 0.74 = 155 people
Weekday night passenger = 12600 / 60 × 0.74 = 155 people
Weekend day passenger = 7600 / 60 × 0.74 = 94 people
Weekend night passenger = 7600 / 60 × 0.74 = 94 people

Table 9-9 F-N Data

Cumulative Risk

Cumulative Case – 2023 without Project workers		Cumulative Case – 2023 with Project workers and all offsite population	
No. of Fatalities	**Frequency (/year)**	**No. of Fatalities**	**Frequency (/year)**
1	6.33E-06	1	6.31E-06
2	3.24E-06	2	3.22E-06
3	2.45E-06	3	2.44E-06
4	1.96E-06	4	1.97E-06
5	1.60E-06	5	1.60E-06
6	1.40E-06	6	1.41E-06
8	1.04E-06	8	1.03E-06
10	8.77E-07	10	8.77E-07
12	6.86E-07	12	7.03E-07
15	6.14E-07	15	6.17E-07
20	4.65E-07	20	4.90E-07
25	3.19E-07	25	3.18E-07
30	2.69E-07	30	2.69E-07
40	2.17E-07	40	2.17E-07
50	1.16E-07	50	1.68E-07
60	9.53E-08	60	9.52E-08
80	6.75E-08	80	8.08E-08
100	2.07E-08	100	2.12E-08
120	1.81E-08	120	1.87E-08

Cumulative Risk

Cumulative Case – 2023 without Project workers		Cumulative Case – 2023 with Project workers and all offsite population	
No. of Fatalities	**Frequency (/year)**	**No. of Fatalities**	**Frequency (/year)**
150	1.56E-08	150	1.61E-08
200	6.09E-09	200	6.59E-09
250	4.34E-09	250	4.77E-09
300	3.37E-09	300	3.70E-09
400	2.40E-09	400	2.54E-09
500	1.96E-09	500	2.01E-09
600	1.58E-09	600	1.60E-09
800	1.22E-09	800	1.22E-09
1000	8.78E-10	1000	8.78E-10
1200	6.22E-10	1200	6.22E-10

Table 9-10 PLL Values

ExxonMobil Petrol-cum-LPG Filling Station					
Cumulative Case – 2023 without Project workers			**Cumulative Case – 2023 with Project workers and all offsite population**		
Event	**PLL (/year)**	**% of total PLL**	**Event**	**PLL (/year)**	**% of total PLL**
Cold catastrophic and partial failure of LPG road tanker (50% inventory)	6.14E-06	34.2%	Cold catastrophic and partial failure of LPG road tanker (50% inventory)	6.27E-06	34.4%
Guillotine failure of liquid-inlet pipework (50% inventory)	5.14E-06	28.6%	Guillotine failure of liquid-inlet pipework (50% inventory)	5.15E-06	28.3%
Cold catastrophic and partial failure of LPG road tanker (full inventory)	2.74E-06	15.2%	Cold catastrophic and partial failure of LPG road tanker (full inventory)	2.83E-06	15.6%
Guillotine failure of liquid-inlet pipework (full inventory)	1.53E-06	8.5%	Guillotine failure of liquid-inlet pipework (full inventory)	1.53E-06	8.4%
Cold catastrophic and partial failure of LPG storage vessel (60% inventory)	9.88E-07	5.5%	Cold catastrophic and partial failure of LPG storage vessel (60% inventory)	1.03E-06	5.6%
Others	1.43E-06	8.0%	Others	1.41E-06	7.7%
Total	**1.80E-05**	**100%**	**Total**	**1.82E-05**	**100%**

Sinopec Petrol-cum-LPG Filling Station

Cumulative Case – 2023 without Project workers			**Cumulative Case – 2023 with Project workers and all offsite population**		
Event	**PLL (/year)**	**% of total PLL**	**Event**	**PLL (/year)**	**% of total PLL**
Guillotine failure of liquid-inlet pipework (50% inventory)	5.99E-06	33.2%	Guillotine failure of liquid-inlet pipework (50% inventory)	5.99E-06	33.4%
Cold catastrophic and partial failure of LPG road tanker (50% inventory)	4.48E-06	24.8%	Cold catastrophic and partial failure of LPG road tanker (50% inventory)	4.48E-06	24.5%
Cold catastrophic and partial failure of LPG road tanker (full inventory)	2.15E-06	11.9%	Cold catastrophic and partial failure of LPG road tanker (full inventory)	2.15E-06	12.0%
Guillotine failure of liquid-inlet pipework (full inventory)	1.92E-06	10.6%	Guillotine failure of liquid-inlet pipework (full inventory)	1.92E-06	10.7%
Cold catastrophic and partial failure of LPG storage vessel (60% inventory)	1.51E-06	8.4%	Cold catastrophic and partial failure of LPG storage vessel (60% inventory)	1.51E-06	8.4%
Others	2.00E-06	11.1%	Others	2.00E-06	11.1%
Total	**1.80E-05**	**100%**	**Total**	**1.80E-05**	**100%**

Sinopec HK Oil Terminal Chai Wan

Cumulative Case – 2023 without Project workers			**Cumulative Case – 2023 with Project workers and all offsite population**		
Event	**PLL (/year)**	**% of total PLL**	**Event**	**PLL (/year)**	**% of total PLL**
Cold catastrophic failure of marine vessel fuel tank due to striking	2.17E-06	41.8%	Cold catastrophic failure of marine vessel fuel tank due to striking	2.17E-06	41.8%
Instantaneous single fuel tank failure	1.77E-06	34.1%	Instantaneous single fuel tank failure	1.77E-06	34.1%
Cold catastrophic failure, cold partial failure and BLEVE of LPG cylinder	6.79E-07	13.1%	Cold catastrophic failure, cold partial failure and BLEVE of LPG cylinder	6.79E-07	13.1%
Rupture of jetty loading hose during marine vessel unloading	5.40E-07	10.4%	Rupture of jetty loading hose during marine vessel unloading	5.40E-07	10.4%
Full bore rupture of fixed pipeline from fuel oil to jetty	2.68E-08	0.5%	Full bore rupture of fixed pipeline from fuel oil to jetty	2.68E-08	0.5%
Others	2.52E-09	0.05%	Others	2.52E-09	0.05%
Total	**5.18E-06**	**100%**	**Total**	**5.18E-06**	**100%**

LPG Wagon Parking Site

Cumulative Case – 2023 without Project workers			**Cumulative Case – 2023 with Project workers and all offsite population**		
Event	**PLL (/year)**	**% of total PLL**	**Event**	**PLL (/year)**	**% of total PLL**
Cold catastrophic failure, cold partial failure and BLEVE of LPG cylinder	2.66E-07	93.7%	Cold catastrophic failure, cold partial failure and BLEVE of LPG cylinder	2.66E-07	93.7%
Cold catastrophic failure and cold partial failure of petrol tanker	1.78E-08	6.3%	Cold catastrophic failure and cold partial failure of petrol tanker	1.78E-08	6.3%
Total	**2.83E-07**	**100%**	**Total**	**2.83E-07**	**100%**

NWFB Depot

Cumulative Case – 2023 without Project workers			**Cumulative Case – 2023 with Project workers and all offsite population**		
Event	**PLL (/year)**	**% of total PLL**	**Event**	**PLL (/year)**	**% of total PLL**
Smoke from pool fire of diesel tanker rupture and leak	1.48E-07	80.6%	Smoke from pool fire of diesel tanker rupture and leak	1.92E-07	84.3%
Diesel tanker rupture and leak	3.56E-08	19.4%	Diesel tanker rupture and leak	3.56E-08	15.7%
Total	**1.84E-07**	**100%**	**Total**	**2.28E-07**	**100%**

Citybus Depot

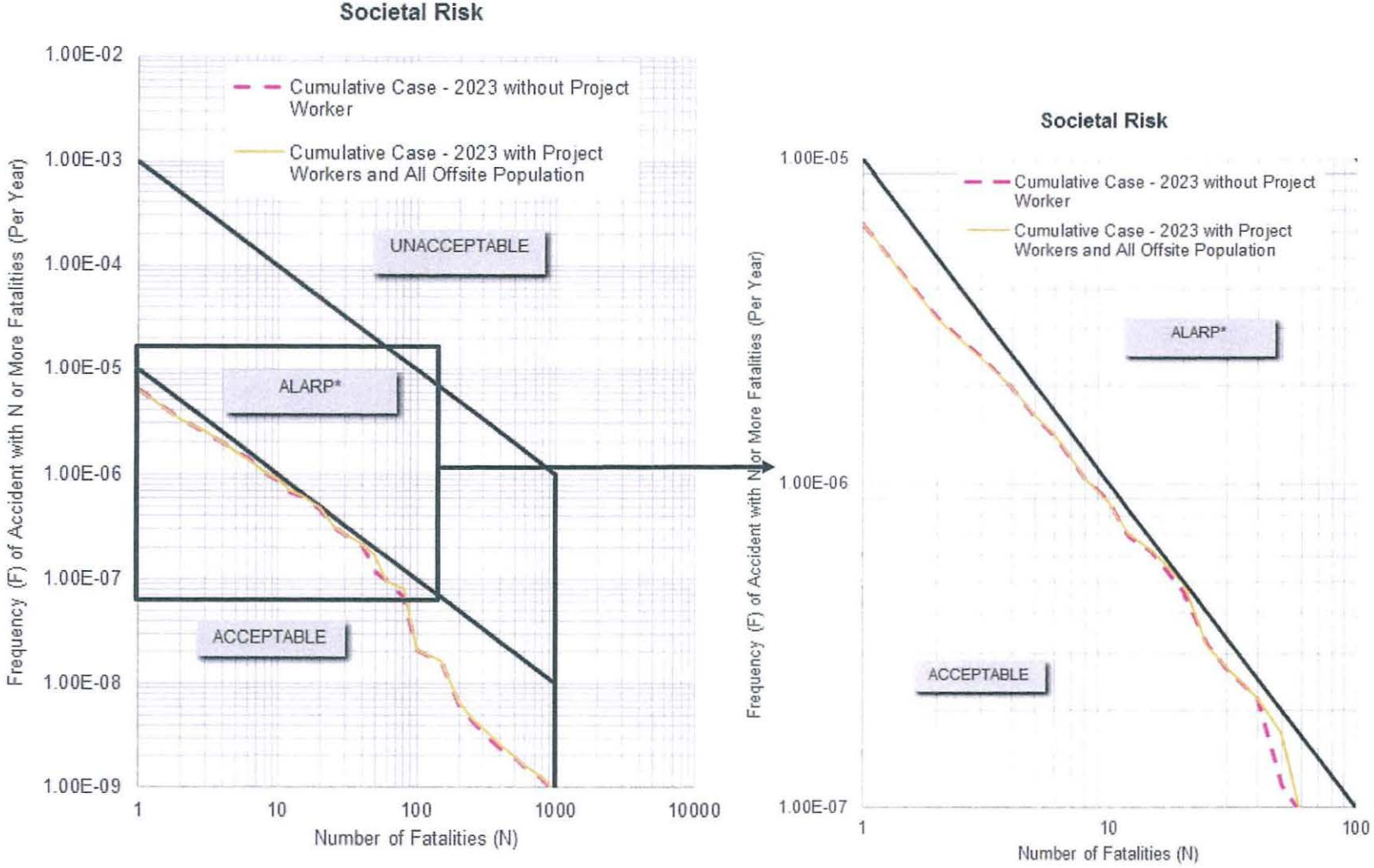
Cumulative Case – 2023 without Project workers			Cumulative Case – 2023 with Project workers and all offsite population		
Event	**PLL (/year)**	**% of total PLL**	**Event**	**PLL (/year)**	**% of total PLL**
Smoke from pool fire of diesel tanker rupture and leak	1.96E-07	94.5%	Smoke from pool fire of diesel tanker rupture and leak	1.97E-07	94.5%
Diesel tanker rupture and leak	1.14E-08	5.5%	Diesel tanker rupture and leak	1.14E-08	5.5%
Total	**2.08E-07**	**100%**	**Total**	**2.08E-07**	**100%**

Cumulative Risk

Cumulative Case – 2023 without Project workers			Cumulative Case – 2023 with Project workers and all offsite population		
Event	**PLL (/year)**	**% of total PLL**	**Event**	**PLL (/year)**	**% of total PLL**
ExxonMobil – Cold catastrophic and partial failure of LPG road tanker (50% inventory)	6.14E-06	14.7%	ExxonMobil – Cold catastrophic and partial failure of LPG road tanker (50% inventory)	6.27E-06	14.9%
Sinopec – Guillotine failure of liquid-inlet pipework (50% inventory)	5.99E-06	14.3%	Sinopec – Guillotine failure of liquid-inlet pipework (50% inventory)	5.99E-06	14.2%
ExxonMobil – Guillotine failure of liquid-inlet pipework (50% inventory)	5.14E-06	12.3%	ExxonMobil – Guillotine failure of liquid-inlet pipework (50% inventory)	5.15E-06	12.2%
Sinopec – Cold catastrophic and partial failure of LPG road tanker (50% inventory)	4.48E-06	10.7%	Sinopec – Cold catastrophic and partial failure of LPG road tanker (50% inventory)	4.48E-06	10.5%
ExxonMobil – Cold catastrophic and partial failure of LPG road tanker (full inventory)	2.74E-06	6.5%	ExxonMobil – Cold catastrophic and partial failure of LPG road tanker (full inventory)	2.83E-06	6.7%

Cumulative Risk					
Cumulative Case – 2023 without Project workers			**Cumulative Case – 2023 with Project workers and all offsite population**		
Event	**PLL (/year)**	**% of total PLL**	**Event**	**PLL (/year)**	**% of total PLL**
Others	1.74E-05	41.5%	Others	1.74E-05	41.4%
Total	**4.19E-05**	**100%**	**Total**	**4.21E-05**	**100%**

Plate 9.2 Cumulative Societal Risk of Operation Case



10. EVALUATION OF MATERIAL CHANGES

10.1. DEFINITION OF MATERIAL CHANGES

10.1.1. The environmental impact of a designated project is considered to be materially changed in the environmental performance requirements set out in the EIA report for the project may be exceeded or violated even with mitigation measure in place. The material change shall refer to significant changes only.

10.1.2. Under Section 6.1 of the EIAO-TM, changes under the following circumstances are regarded as material changes:

- A change to physical alignment, layout or design of the Project causing an environmental impact likely to affect existing or planned community, ecologically important areas or sites of cultural heritage;
- A physical change resulting in an increase in the extent of reclamation or dredging affecting water flow or quality likely to affect ecologically important areas, or disrupting sites of cultural heritage;
- An increase in pollution emissions or discharges or waste generation likely to violate guidelines or criteria in this technical memorandum without mitigation measures in place;
- An increase in throughput or scale of the project leading to physical additions or alterations that are likely to violate the guidelines or criteria in this technical memorandum without mitigation measures in place; or
- A change resulting in physical works that are likely to affect a rare, endangered or protected species, or an important ecological habitat, or a site of cultural heritage.

10.1.3. In view of the modification of layout design, the implications have been evaluated against the factors listed in Section 6 of the EIAO-TM to investigate if material changes will be triggered.

10.2. VERIFICATION

Changes to Physical Alignment, Layout or Design of the Project

10.2.1. There is no change to the physical alignment of the Project.

10.2.2. As presented in Sections 3 to 9, there is no change of environmental impact to the existing or planned community, ecologically important areas or sites of cultural heritage due to the slight modification of layout and design in the Proposed Scheme as compared with that assessed in the EIA report. It is therefore considered that the proposed variation does not constitute a material change.

Reclamation or Dredging

10.2.3. There will be no dredging or reclamation associated from the Proposed Scheme. It is therefore considered that the proposed variation will not constitute a material change.

Pollution Emissions or Discharges of Waste

10.2.4. As presented in Sections 3 to 9, there will be no increase in pollution emissions or discharges or waste generation from the Proposed Scheme that will induce environmental impact greater than that assessed in the EIA report or EP with mitigation measures in place.

10.2.5. The environmental review set out from Sections 3 to 9 indicates that there will be no increase in pollution emissions or discharges or waste generation from the Proposed Scheme that is likely to violate the guidelines or criteria in the EIAO-TM with mitigation measures in place. No further mitigation measures beyond that stipulated in the approved EIA Report is required. It is therefore considered that the proposed variation will not constitute a material change.

Physical Additions or Alterations

10.2.6. As presented in Sections 3 to 9, the Proposed Scheme will not increase the throughput or scale of the Project leading to physical additions or alterations that is likely to violate the guidelines or criteria in the EIAO-TM with mitigation measures in place. No further mitigation measures beyond that stipulated in the approved EIA Report is required. It is therefore considered that the proposed variation will not constitute a material change.

Rare, Endangered or Protected Species, Habitats and Cultural Heritage

10.2.7. The environmental review set out from Sections 3 to 9 indicates that the Proposed Scheme will not result in physical work that is likely to affect a rare, endangered or protected species, or an important ecological habitat, or a site of cultural heritage. It is therefore considered that the proposed variation will not constitute a material change.

10.3. CONCLUSION

10.3.1. This ER justifies that the proposed modification of the layout design:

- does not constitute material change in the environmental impact of the Project as defined under EIAO; and
- complies with the requirements described in the EIAO-TM.

10.3.2. If there are any deviations from the assumptions made in this ER that may result in adverse environmental impact, advice from the Environmental Assessment Group of EPD should be sought to confirm whether the change constitutes a material change in the Project or a variation to the EP will be needed.

11. CONCLUSION

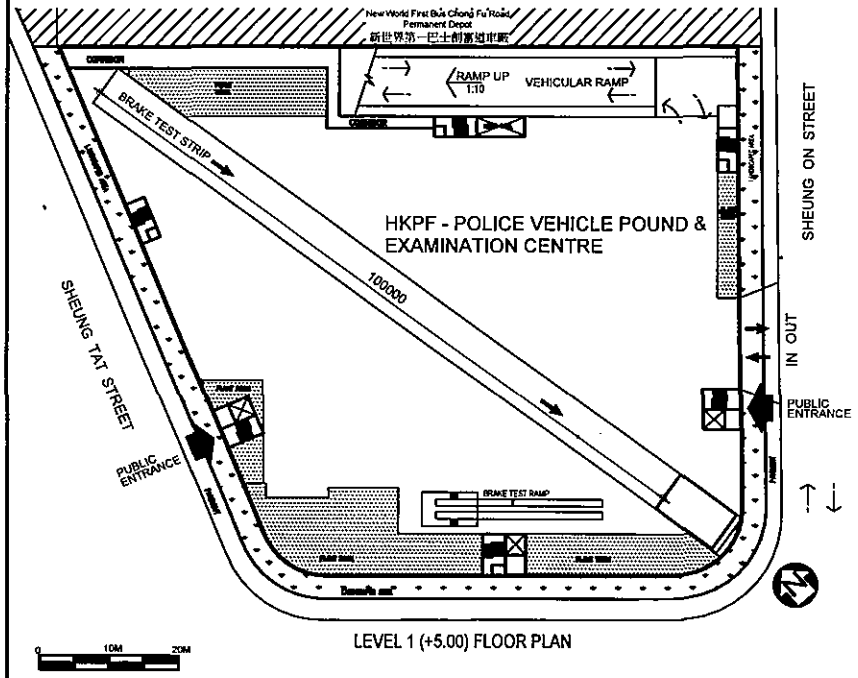
11.1.1. This ER Report is prepared to evaluate the potential environmental impacts arising from the variation of the development parameters of the proposed Project from the EIA Scheme to the Proposed Scheme, and proposes mitigation measures if necessary.

11.1.2. Throughout the foregoing sections, this ER demonstrates:

- the predicted air quality impact from the Proposed Scheme is comparable with that assessed in the EIA Scheme;
- the predicted noise impact from the Proposed Scheme is comparable with that assessed in the EIA Scheme;
- the predicted water quality and sewerage impact from the Proposed Scheme is comparable with that assessed in the EIA Scheme;
- potential landscape and visual impact associated with the Proposed Scheme is not incomparable with that presented in the EIA;
- potential environmental impact associated with the handling and disposal of waste generated from the Proposed Scheme is comparable with that presented in the EIA;
- potential land contamination associated with the Proposed Scheme does not violate the assessment result in the EIA;
- the predicted risk from the Proposed Scheme is comparable with that assessed in the EIA; and
- with implementation of the recommended mitigation measures specified in the approved EIA report, the overall predicted environmental impact from the Proposed Scheme is comparable to that assessed in the EIA.

11.1.3. Given that the potential environmental impacts arisen from the Proposed Scheme will be comparable to that presented and concluded in the approved EIA, with proper implementation of the specified management controls and proposed measures, the proposed modification will not result in adverse environmental impact that are described in Section 6.1 of the EIAO-TM, and therefore is not regarded as a material change in the Project under the EIAO.

Figures



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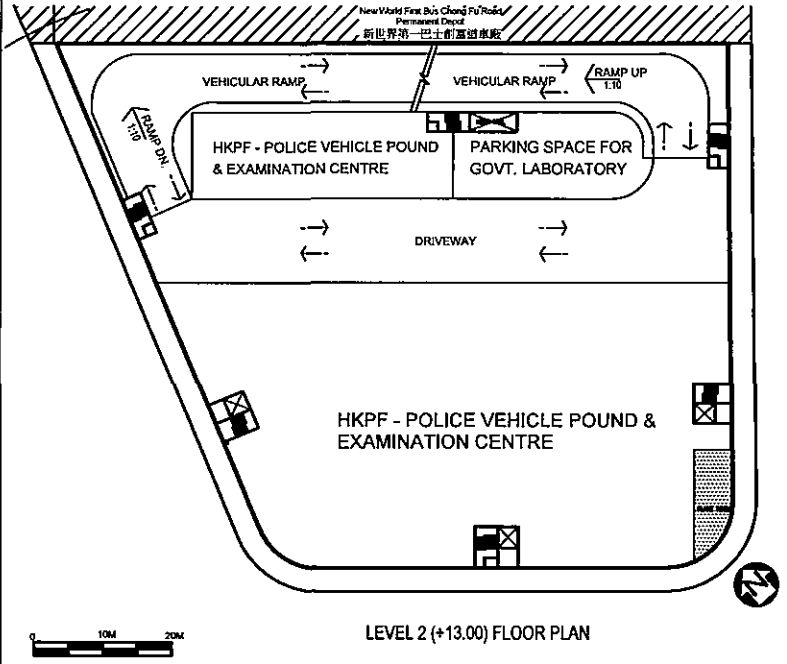

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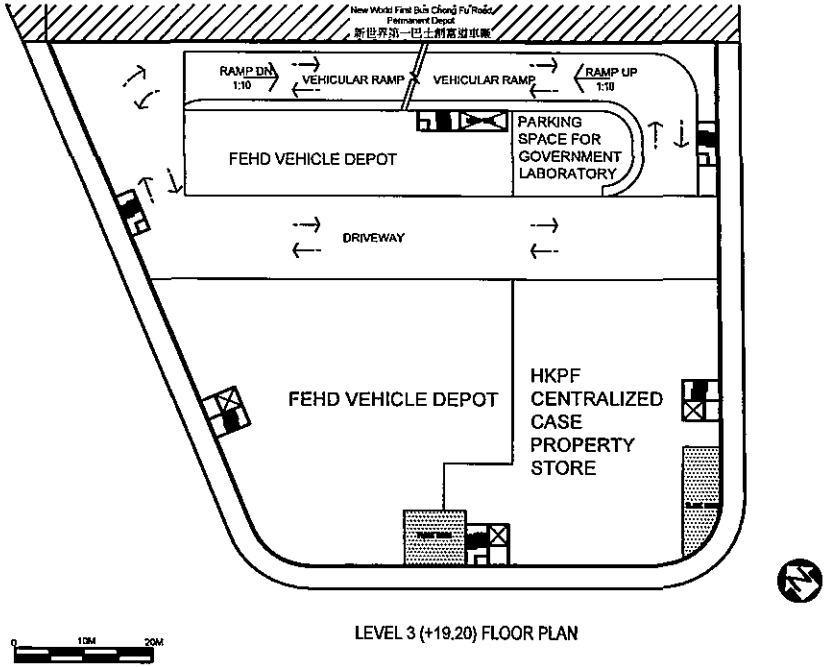

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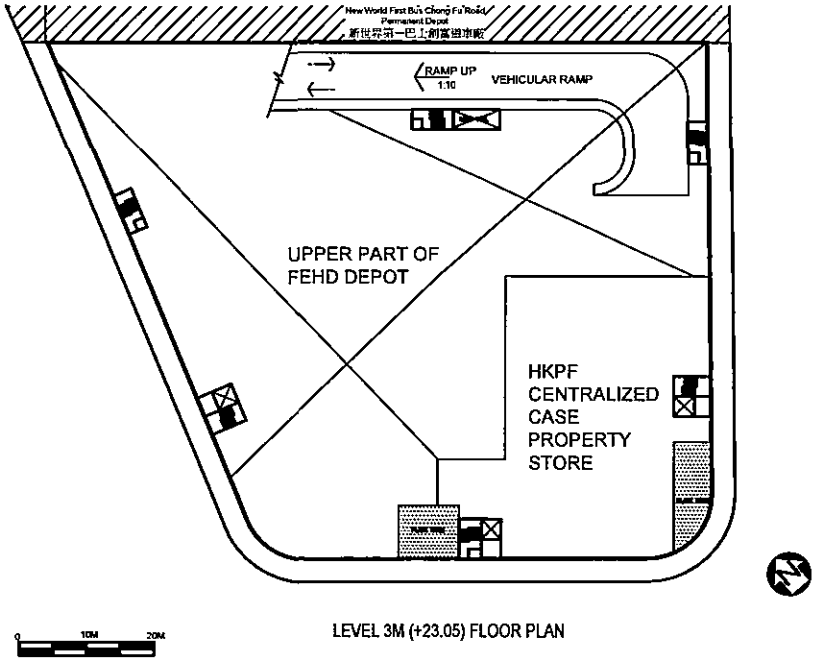

LEVEL 3M (+23.05) FLOOR PLAN

NOTES:

Consultant

Allied Environmental Consultants Limited
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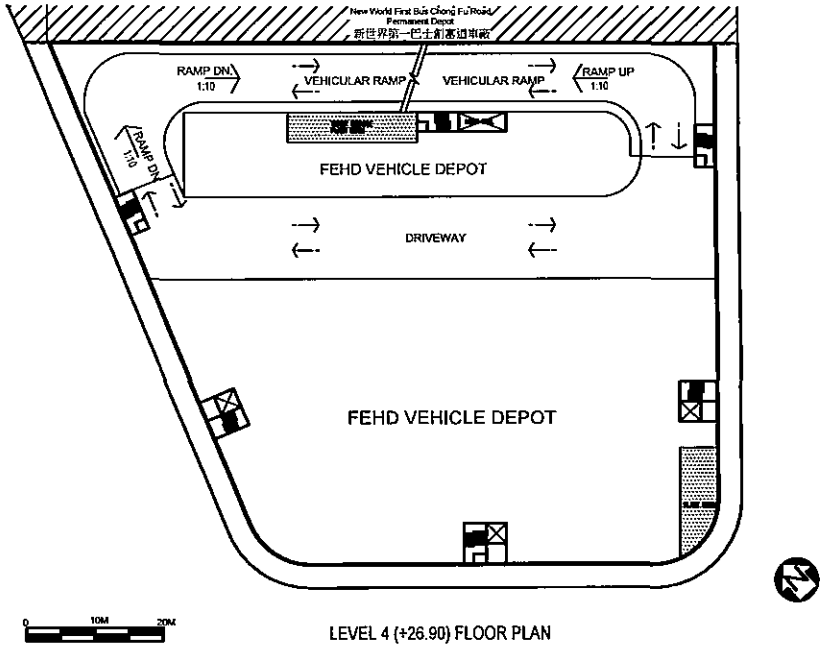
Project No.:	1158 (A)
File Name:	
Project:	Chai Wan Government Complex and Vehicle Depot
Drawing Title:	Preliminary Floor Plans (the EIA Scheme)
Drawing No.:	Figure 2.1a
Revision:	0
Scale:	As shown
Date:	February 2019



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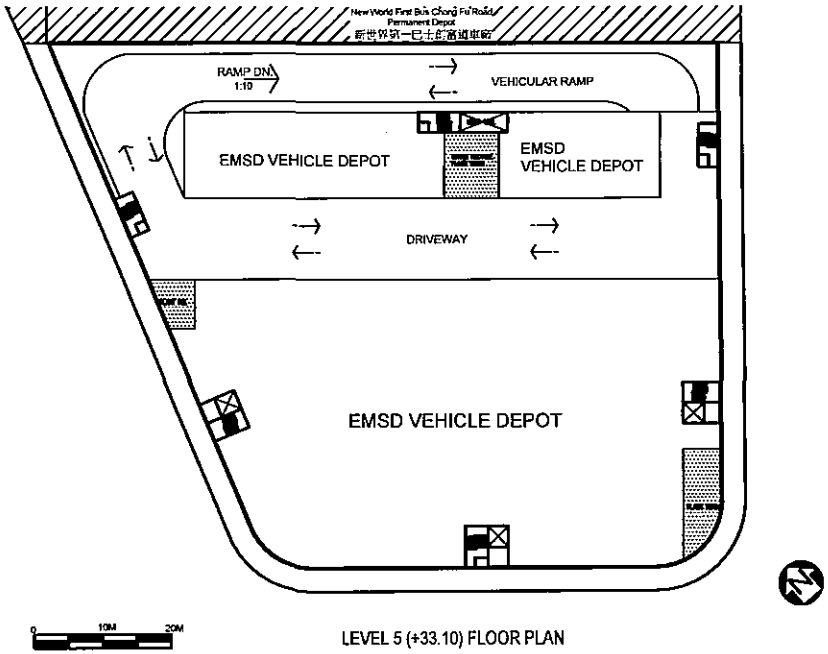

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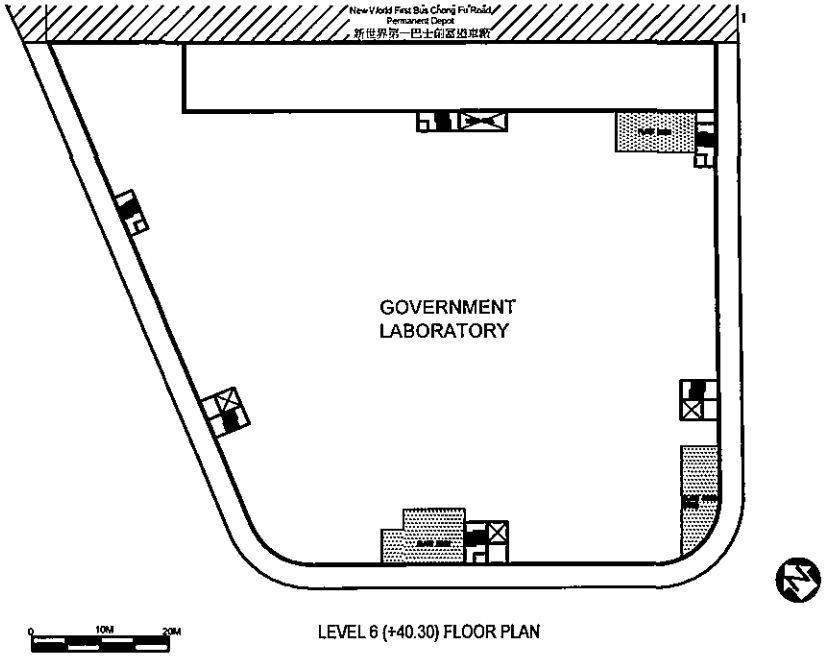

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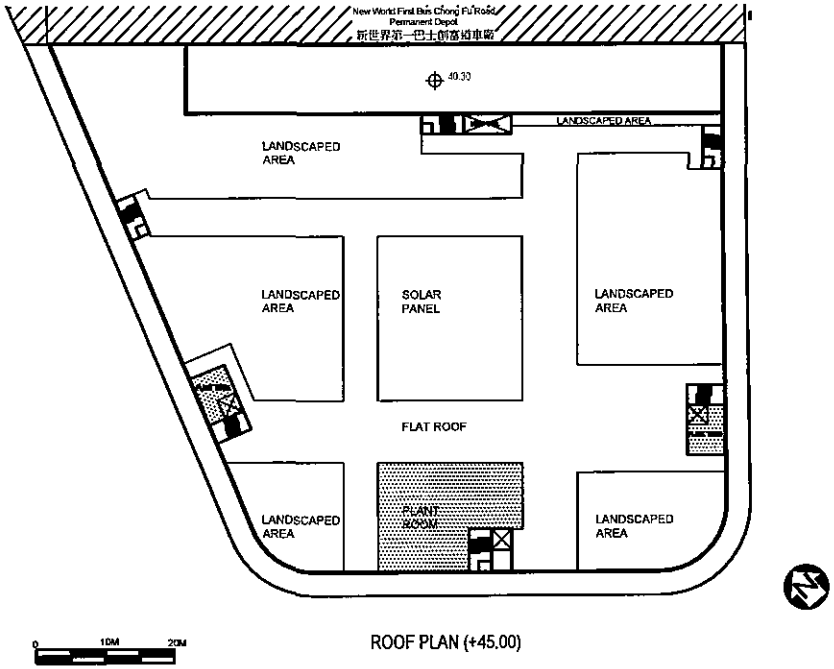

ROOF PLAN (+45.00)

NOTES:

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.:	1158 (A)
File Name:	
Project:	Chai Wan Government Complex and Vehicle Depot
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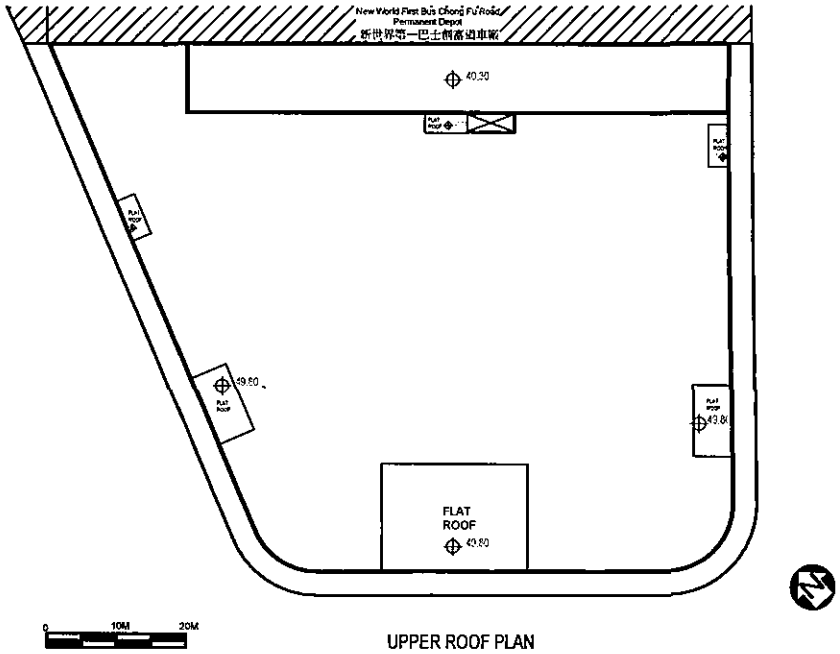
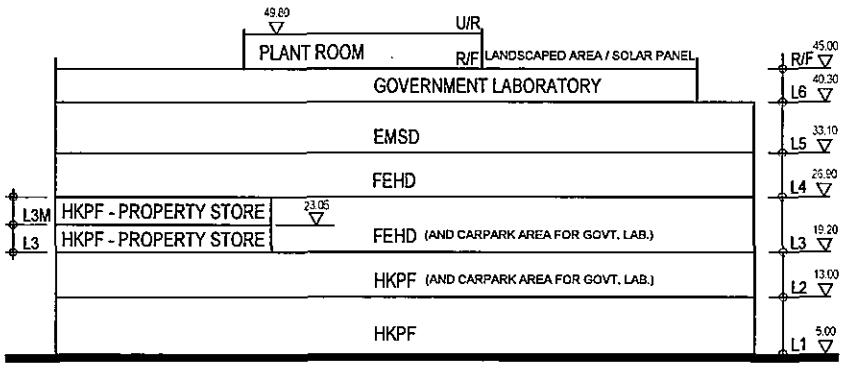
Drawing No.:	Figure 2.1b
Revision:	0
Scale:	As shown
Date:	February 2019



UPPER ROOF PLAN



ELEVATION PLAN

NOTES:

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.:	1158 (A)
File Name:	
Project:	Chai Wan Government Complex and Vehicle Depot
Drawing Title:	Preliminary Floor Plans (the EIA Scheme)
Drawing No.:	Figure 2.1c
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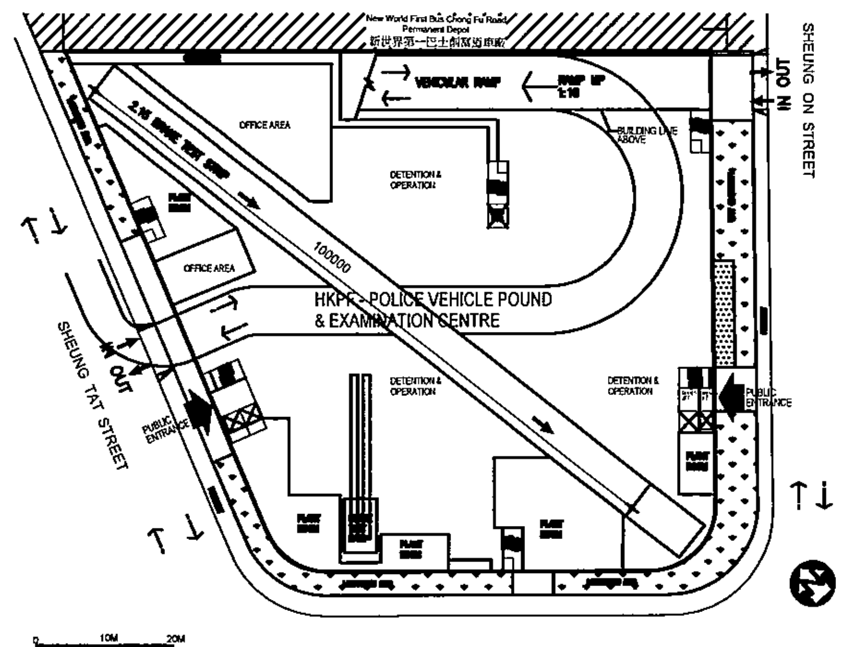
Date:	February 2019



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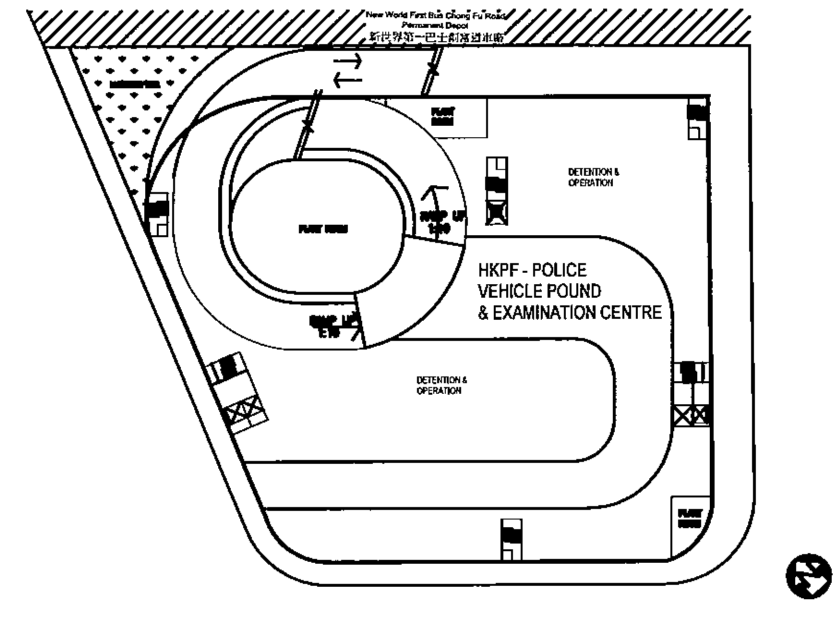

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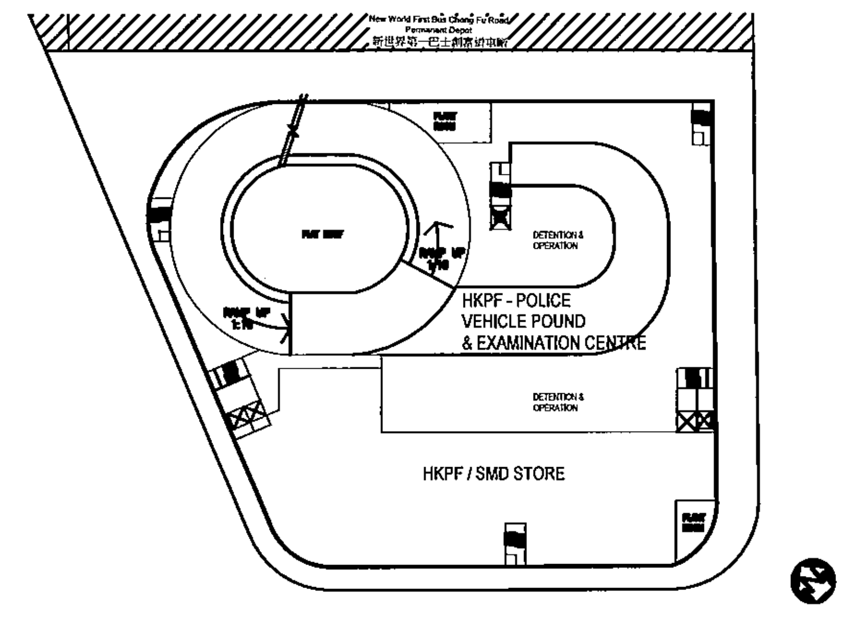

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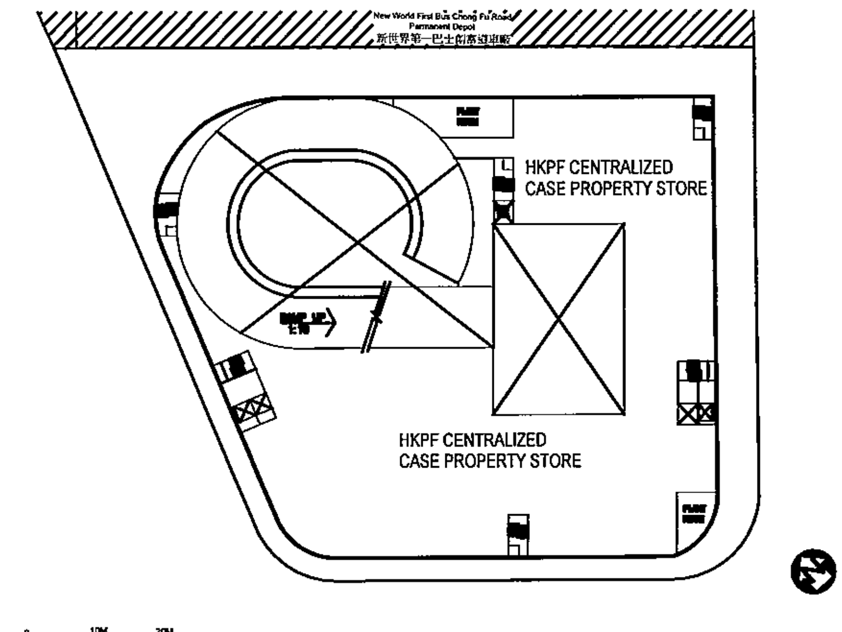


LEVEL 3M (+24.10) FLOOR PLAN

NOTES:

Consultant

AEC

Allied Environmental Consultants Limited

ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.: 1158(A)

File Name:

Project: Chai Wan Government Complex and Vehicle Depot

Drawing Title: Preliminary Floor Plans (the Proposed Scheme)

Drawing No.: Figure 2.2a

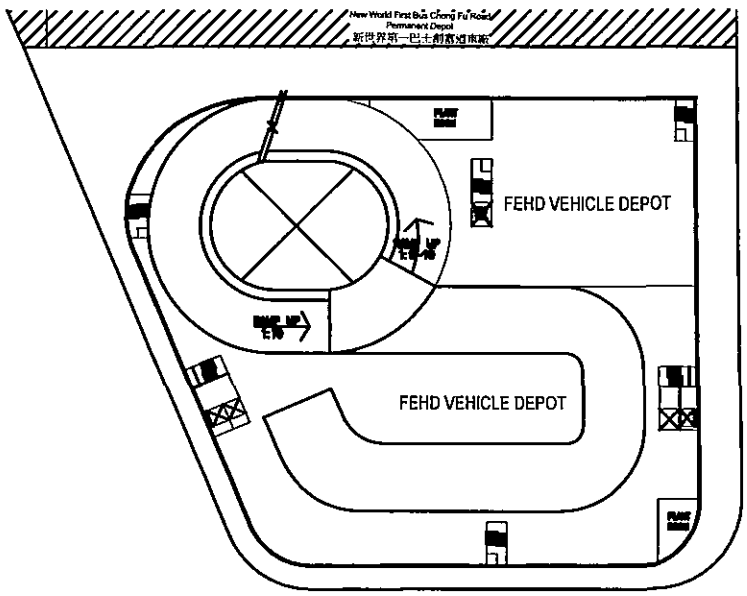
Revision: 0

Scale: As shown

Date: February 2019

UNLESS EXPRESSLY STATED.

ALLIED ENVIRONMENTAL CONSULTANTS LIMITED.



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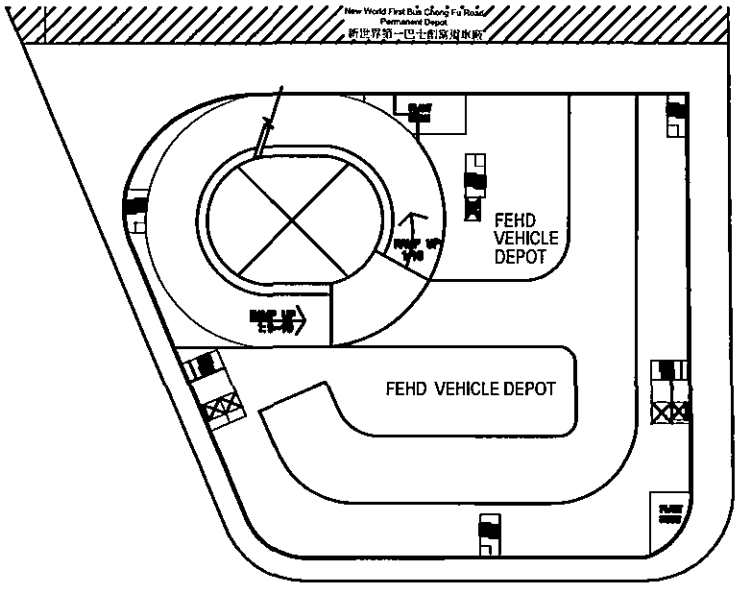

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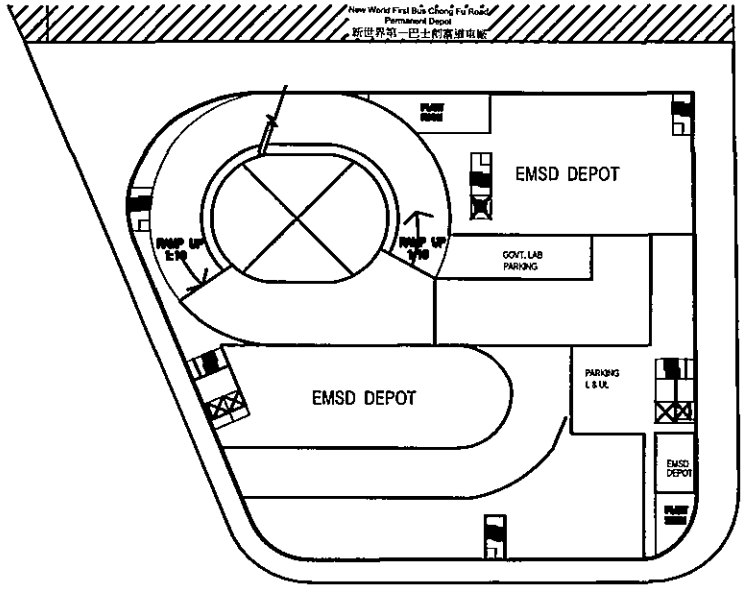

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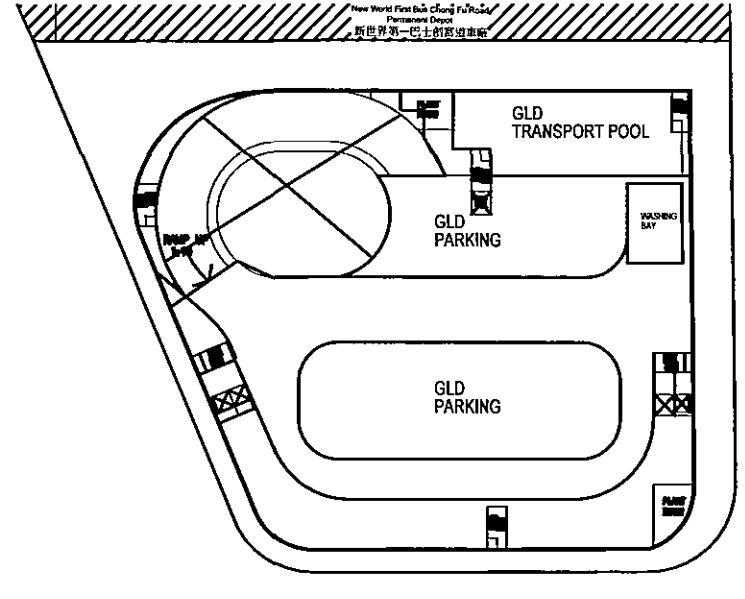

LEVEL 7 (+49.90) FLOOR PLAN

NOTES:

Consultant

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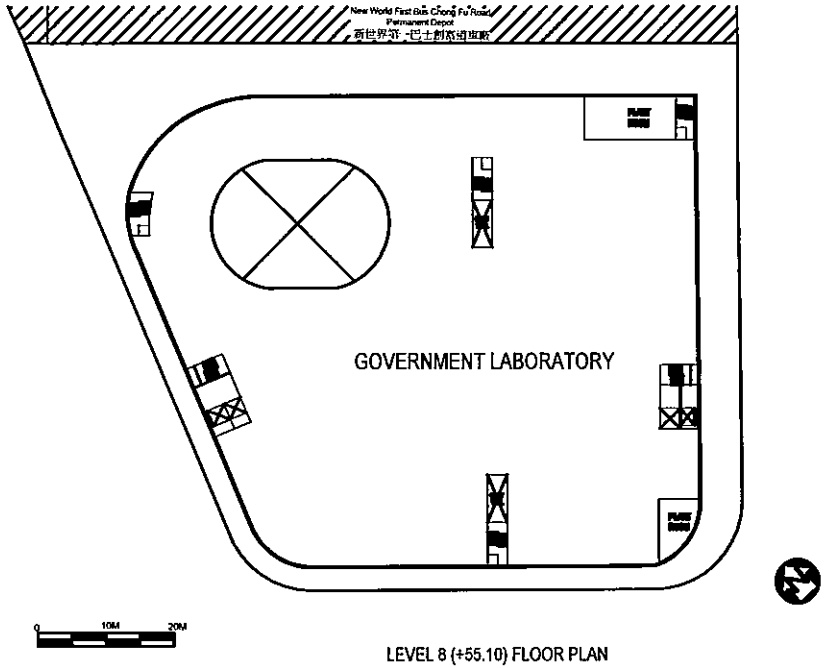
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.:	1158(A)
File Name:	
Project:	Chai Wan Government Complex and Vehicle Depot
Drawing Title:	Preliminary Floor Plans (the Proposed Scheme)
Drawing No.:	Figure 2.2b
Revision:	0
Scale:	As shown
Date:	February 2019



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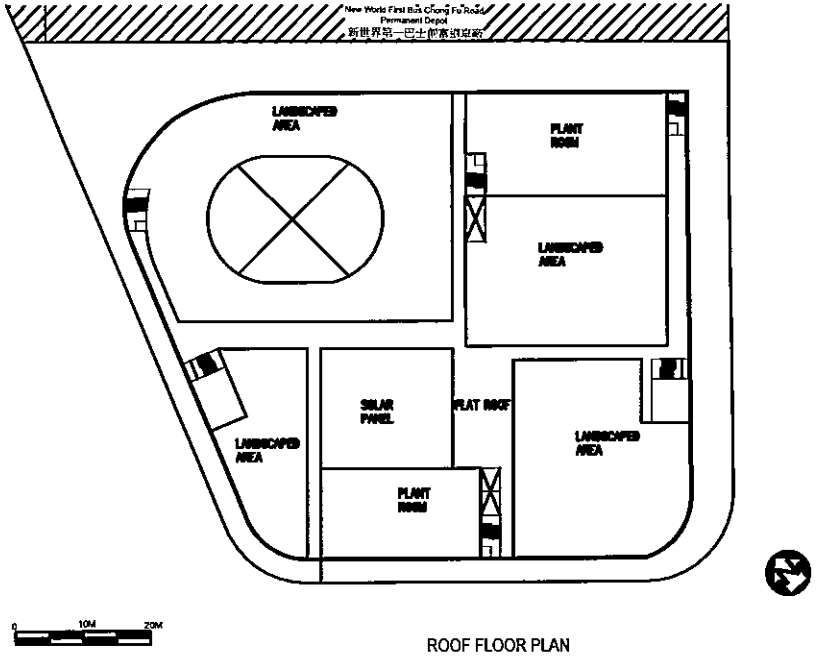
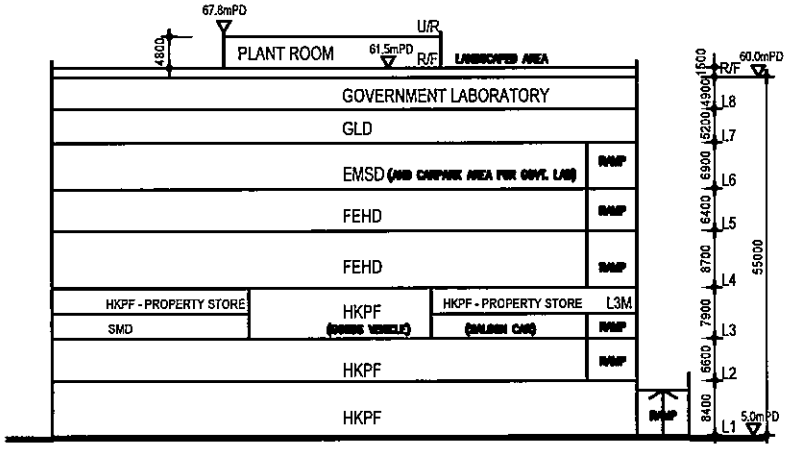


ROOF FLOOR PLAN



NOTES:

Consultant

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Project No.:	1158 (A)
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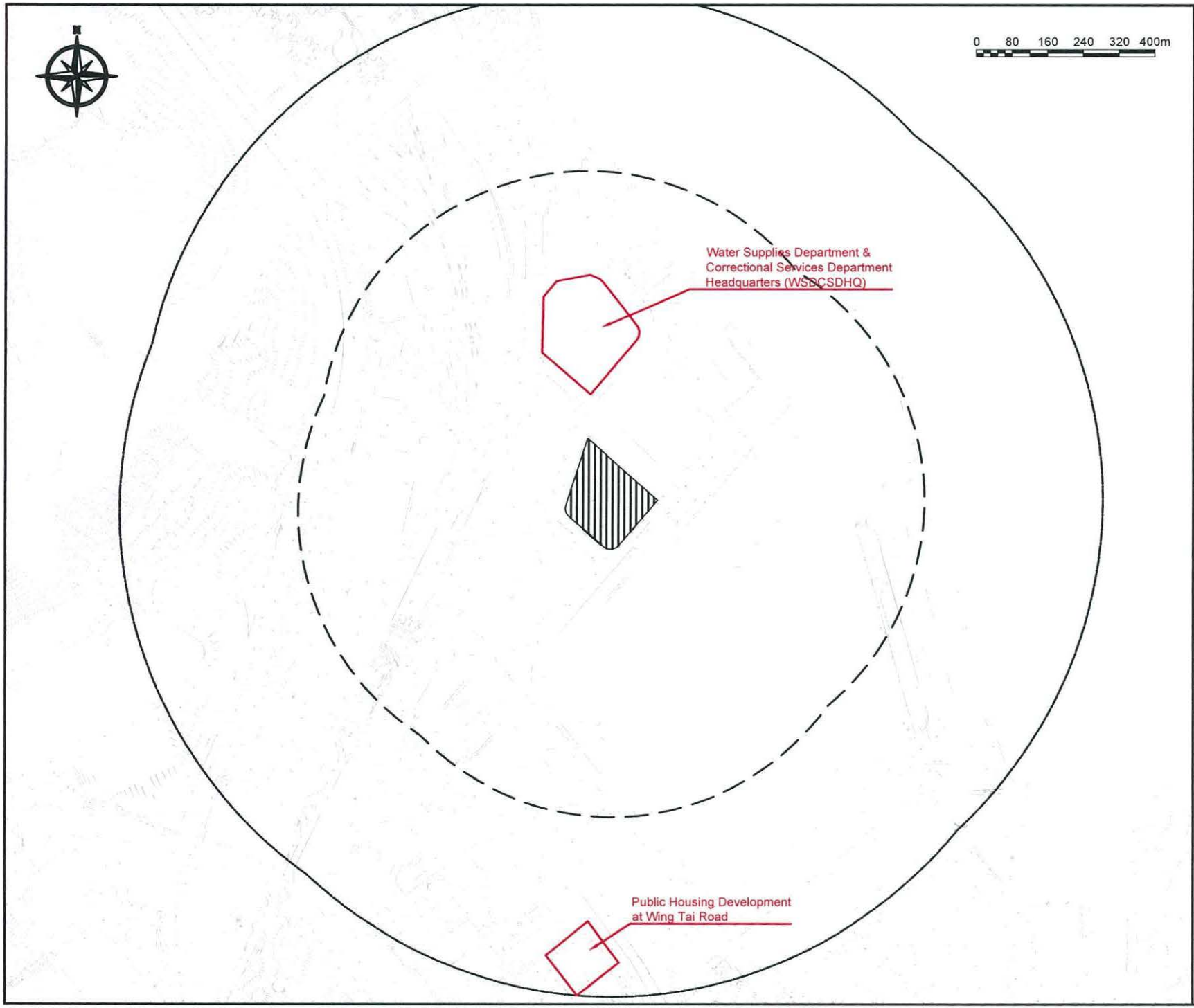

NOTES :

- 500m from Site Boundary
- 300m from Site Boundary
- Project Site
- Concurrent Projects

Consultant

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ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Additional Concurrent Projects for the Proposed Scheme
Drawing No :	Figure 2.3
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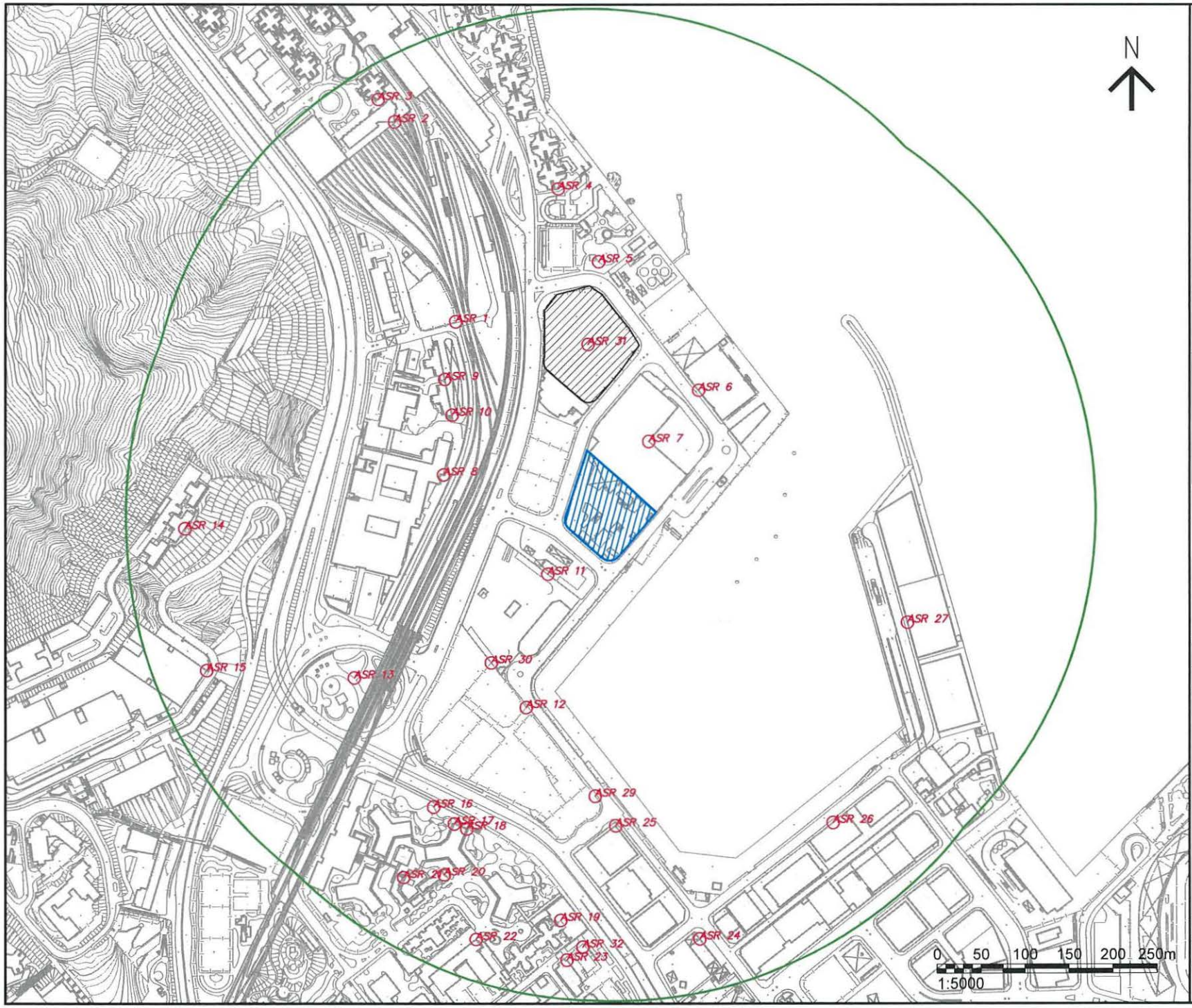


NOTES :

ASSESSMENT AREA

PROJECT SITE

AIR SENSITIVE RECEIVER

Consultant

Allied Environmental Consultants Limited

Project No. :	1158(A)
Drawing by :	CC

Project :

CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

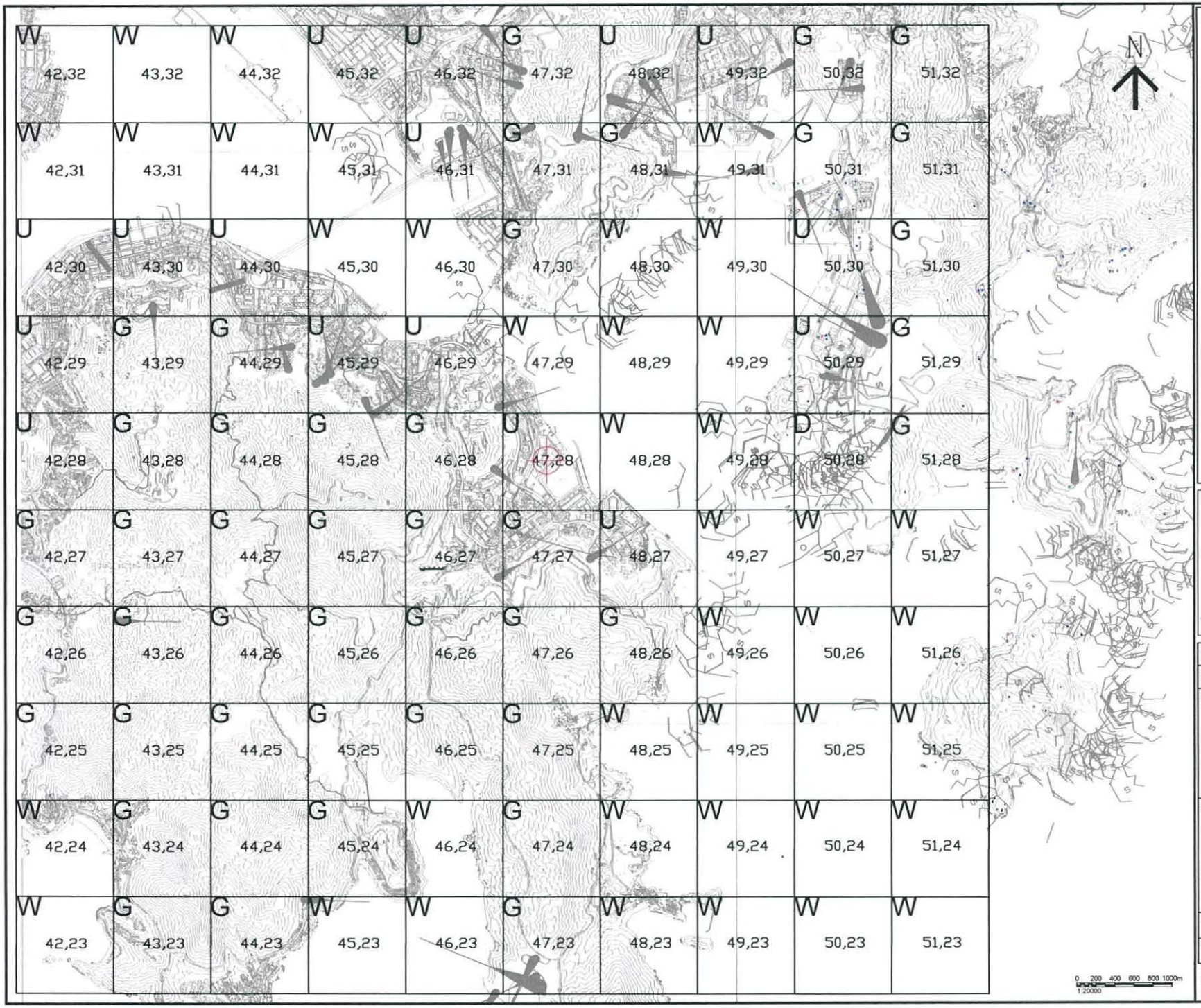
Drawing Title :

LOCATION OF AIR SENSITIVE RECEIVERS

Drawing No : FIGURE 3.1	Revision : 0
Scale : AS SHOWN	Date : 17 JUNE 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\06 Calculation & Modelling\AQIA_ERR\01 ASR & SOURCE\ASR & Source.dwg



NOTES :

- PROJECT SITE
- G GRASSLAND AREA
- U URBAN AREA
- W WATER AREA
- D DESERT SHRUBLAND AREA

Consultant

Allied Environmental Consultants Limited

ACOUSTICS · AIR QUALITY · ENVIRONMENTAL · ENGINEERS

Project No. :	1158(A)
Drawing by :	CC

Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
DETERMINATION OF SURFACE ROUGHNESS LENGTH OF THE LAND WITHIN 10 KM RADIUS

Drawing No : FIGURE 3.2a	Revision : 0
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\06 Calculation & Modelling\AQIA_ERR\06 AERMET\Surface Roughness.dwg

NOTES :

- PROJECT SITE
- GRASSLAND AREA
- URBAN AREA
- WATER AREA

Consultant

Allied Environmental Consultants Limited

ACOUSTICAL AND ENVIRONMENTAL CONSULTANTS

Project No. :	1158(A)
Drawing by :	CC

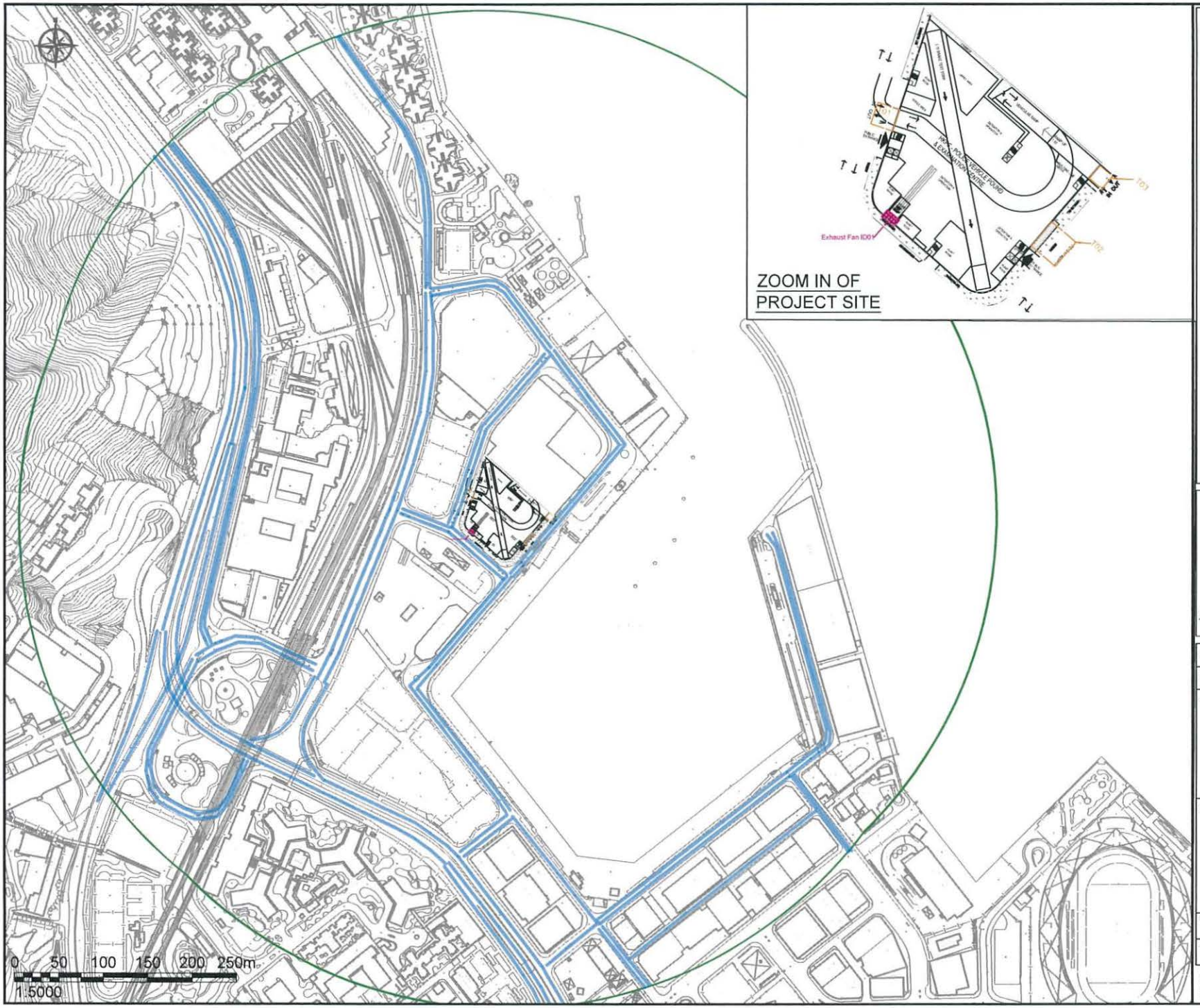
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
DETERMINATION OF SURFACE ROUGHNESS LENGTH OF THE LAND WITHIN 1 KM RADIUS

Drawing No : FIGURE 3.2b	Revision : 0
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\06 Calculation & Modelling\AQIA_ERR\06 AERMET\Surface Roughness.dwg



ZOOM IN OF PROJECT SITE

NOTES :

EMISSION OPENING FOR VEHICLE TRAVELING AT PROJECT SITE

EXHAUST FAN FOR VEHICLE IDLING ACTIVITY EMISSION AT PROJECT SITE

OPEN ROAD

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158 (A)
Drawing by :	CC

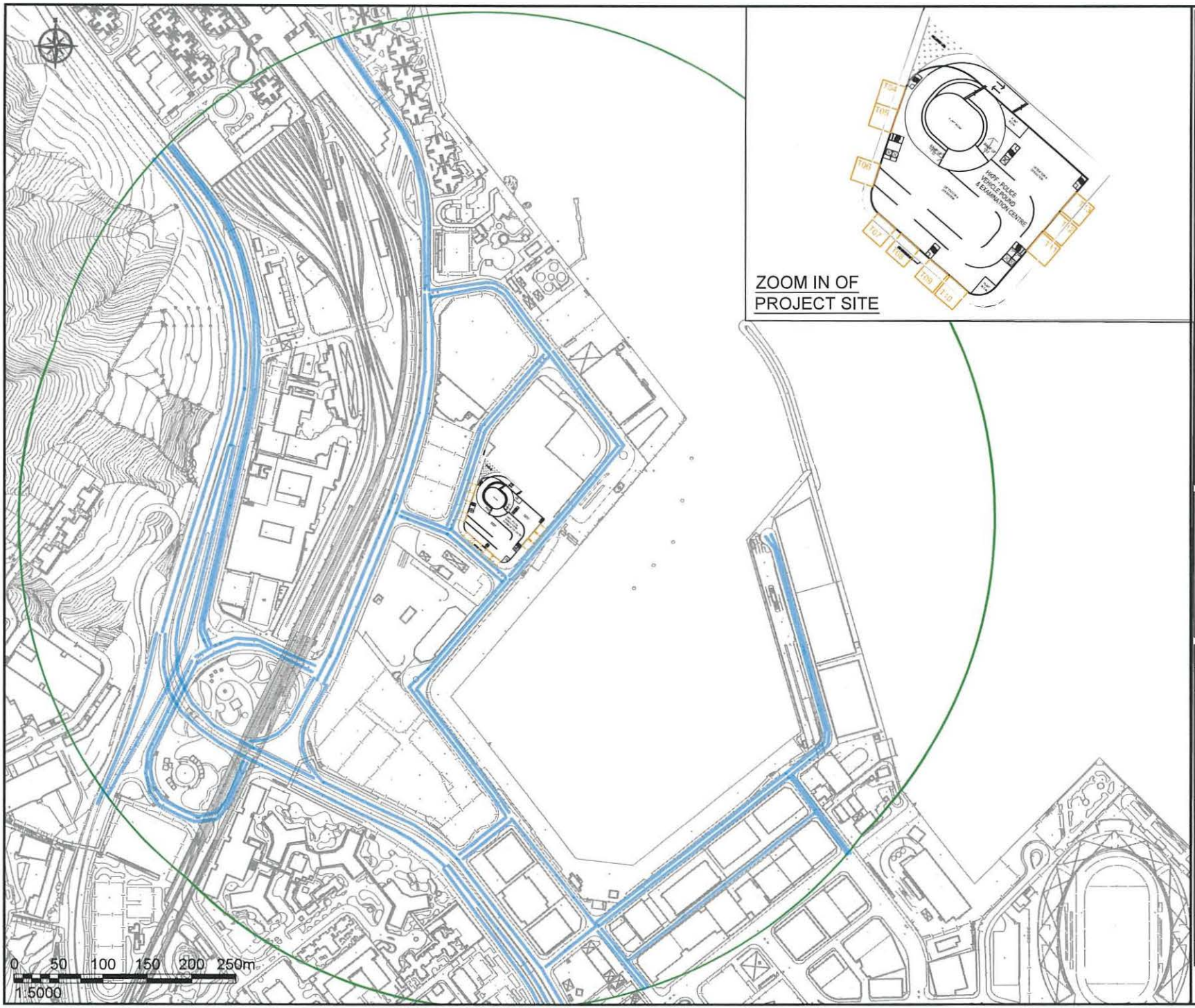
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
EMISSION SOURCE LOCATION

(CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT (LEVEL 1)

Drawing No : FIGURE 3.3a	Revision : 1
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297



ZOOM IN OF PROJECT SITE

NOTES

EMISSION OPENING FOR VEHICLE TRAVELING AT PROJECT SITE

OPEN ROAD

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158 (A)
Drawing by :	CC

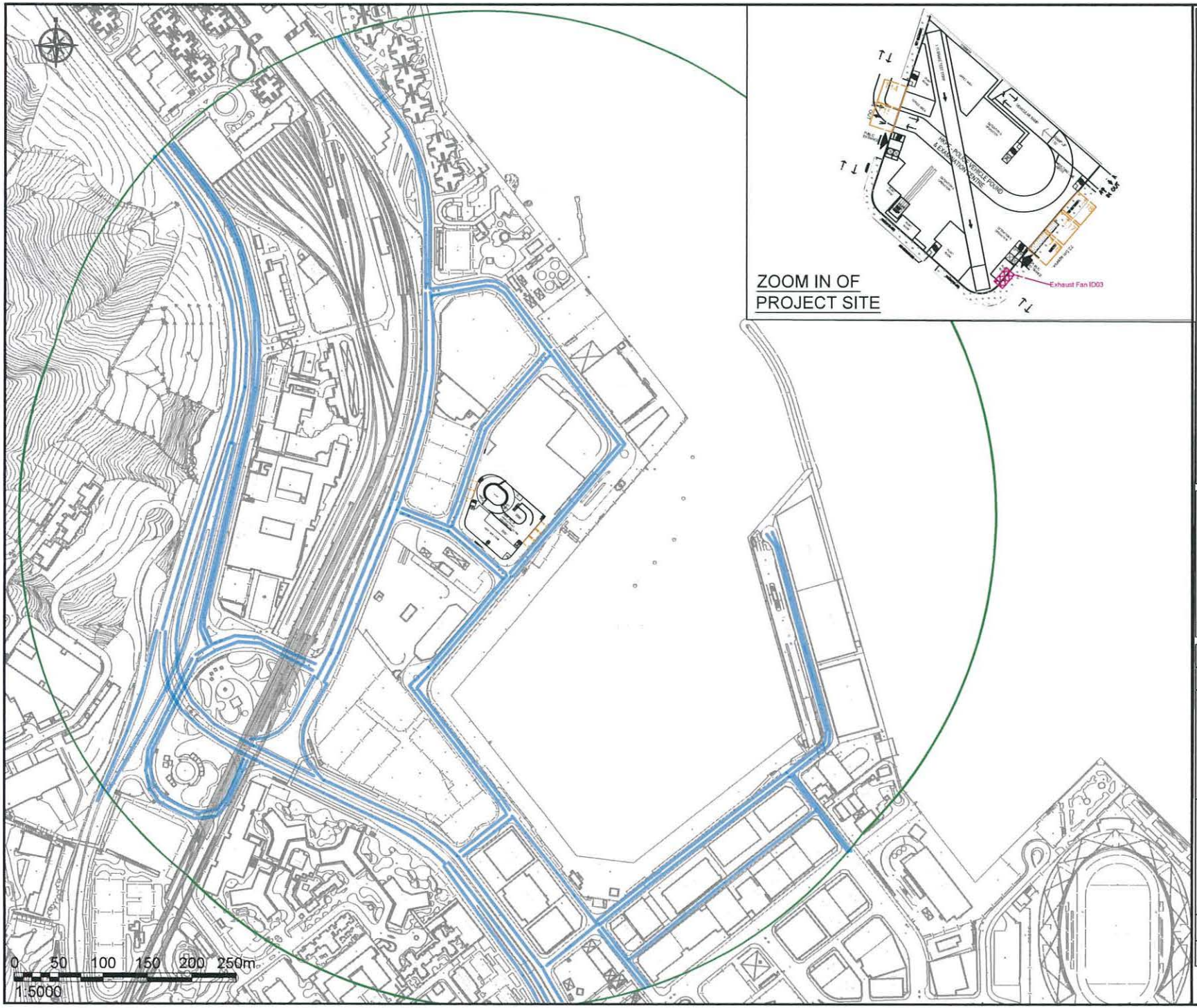
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
EMISSION SOURCE LOCATION

(CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT (LEVEL 2)

Drawing No : FIGURE 3.3b	Revision : 1
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297



ZOOM IN OF
PROJECT SITE

NOTES :

EMISSION OPENING FOR VEHICLE TRAVELING AT PROJECT SITE

OPEN ROAD

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158 (A)
Drawing by :	CC

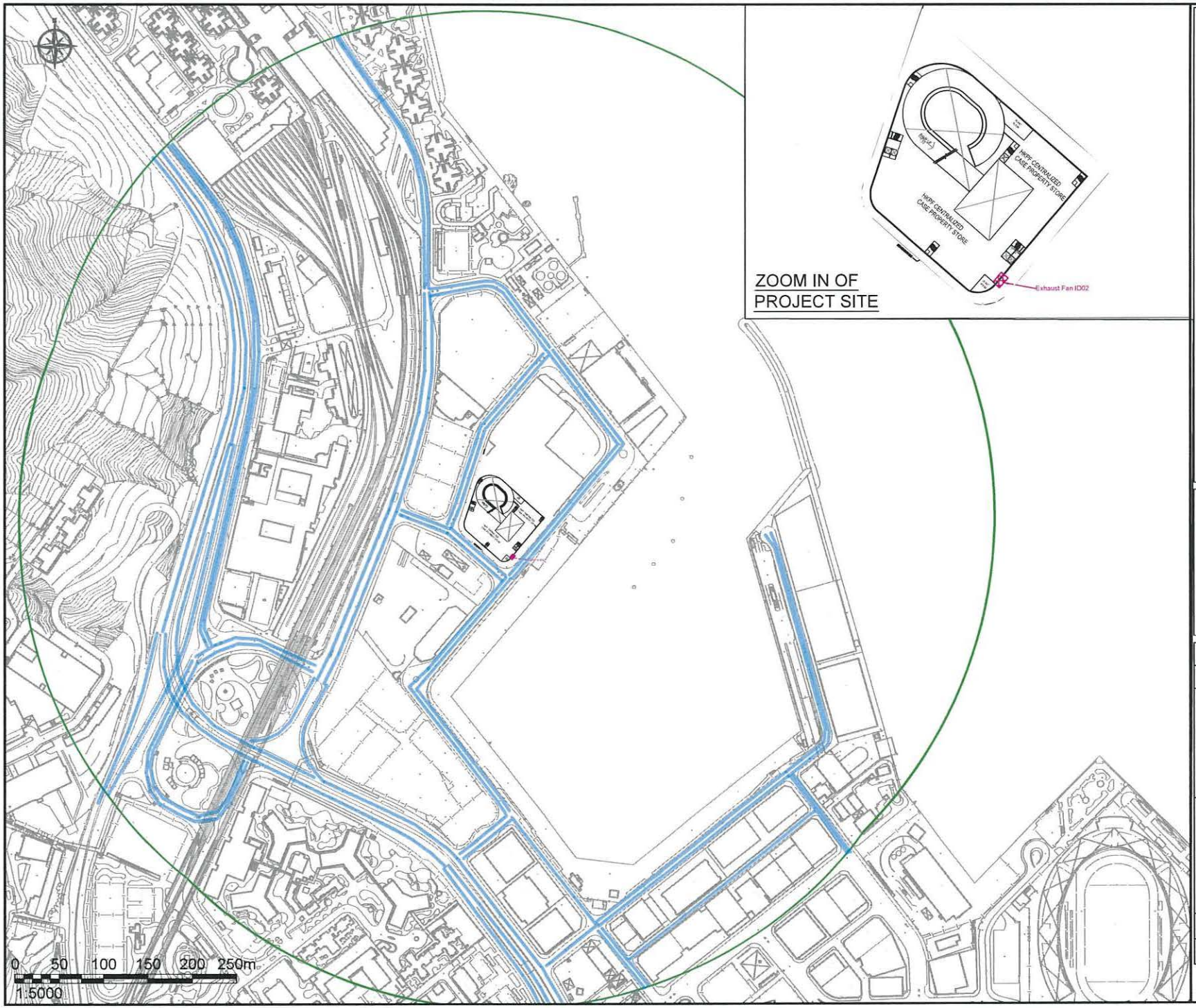
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
EMISSION SOURCE LOCATION

(CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT (LEVEL 3)

Drawing No : FIGURE 3.3c	Revision : 1
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297



ZOOM IN OF
PROJECT SITE

NOTES :

EXHAUST FAN FOR VEHICLE IDLING ACTIVITY EMISSION AT PROJECT SITE

OPEN ROAD

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158 (A)
Drawing by :	CC

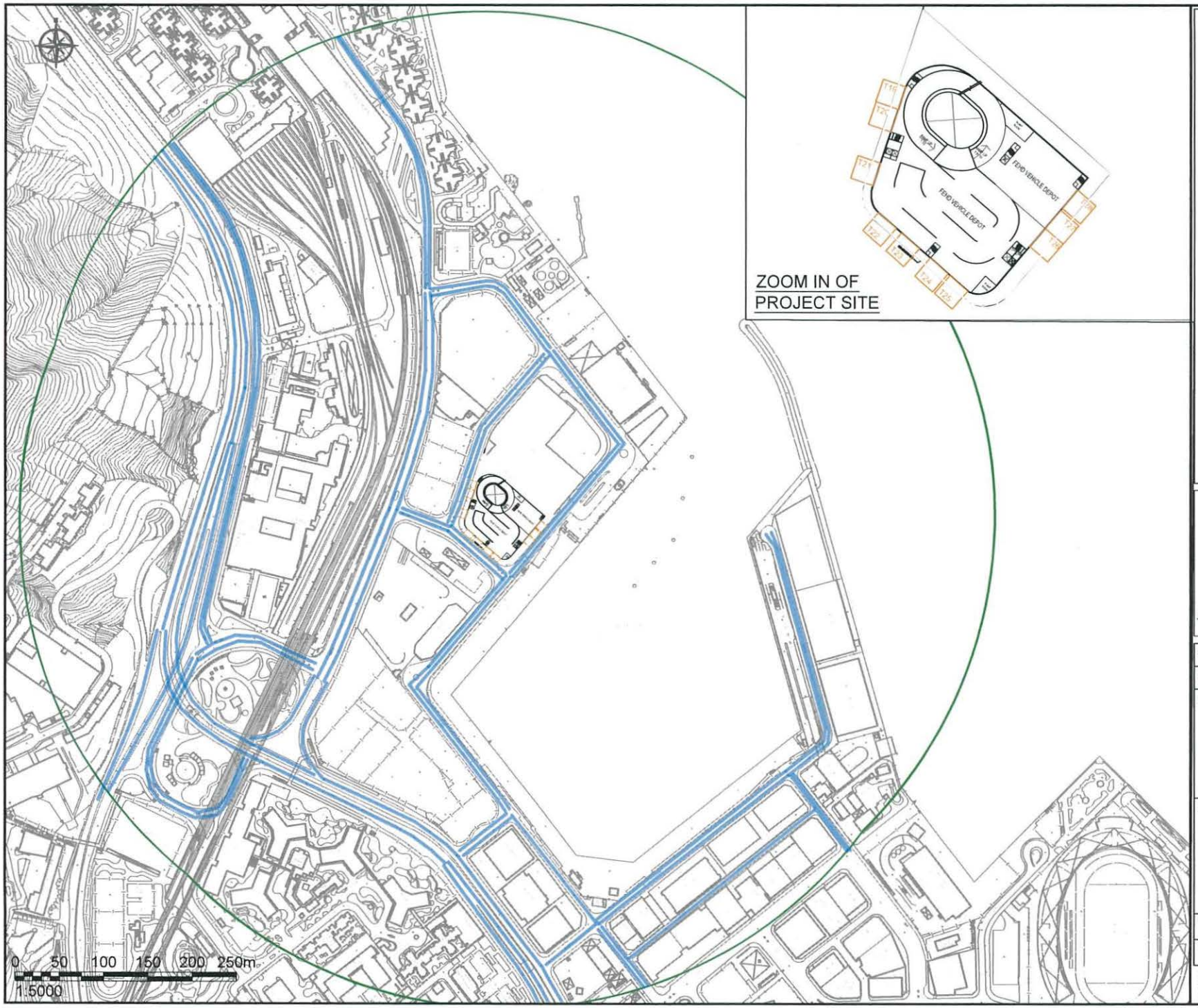
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
EMISSION SOURCE LOCATION

(CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT (LEVEL 3M)

Drawing No : FIGURE 3.3d	Revision : 1
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297



ZOOM IN OF
PROJECT SITE

NOTES :

EMISSION OPENING FOR VEHICLE TRAVELING AT PROJECT SITE

OPEN ROAD

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158 (A)
Drawing by :	CC

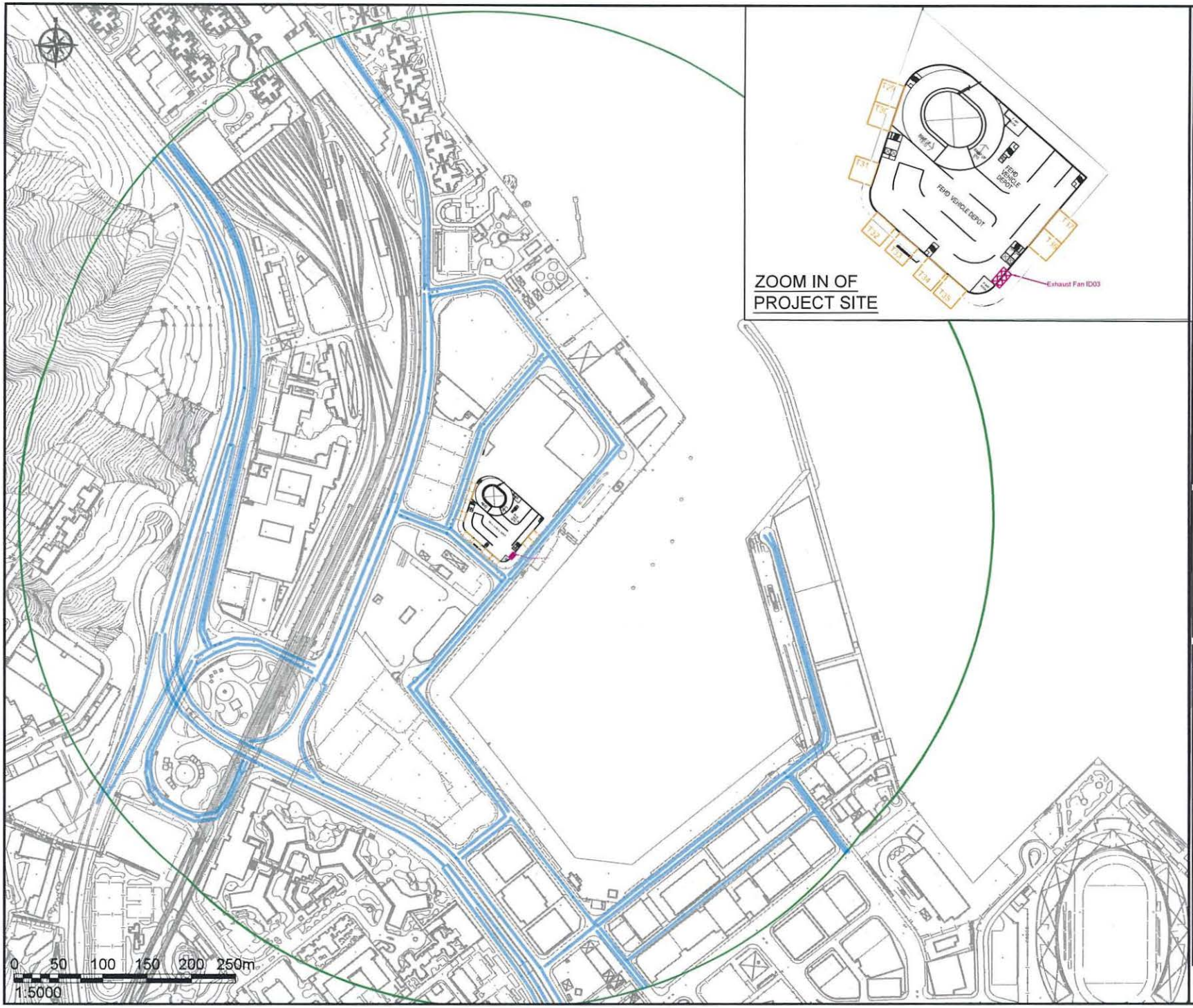
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
EMISSION SOURCE LOCATION

(CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT (LEVEL 4)

Drawing No. : FIGURE 3.3e	Revision : 1
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297



ZOOM IN OF
PROJECT SITE

NOTES :

EMISSION OPENING FOR VEHICLE TRAVELING AT PROJECT SITE

EXHAUST FAN FOR VEHICLE IDLING ACTIVITY EMISSION AT PROJECT SITE

OPEN ROAD

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
Drawing by :	CC

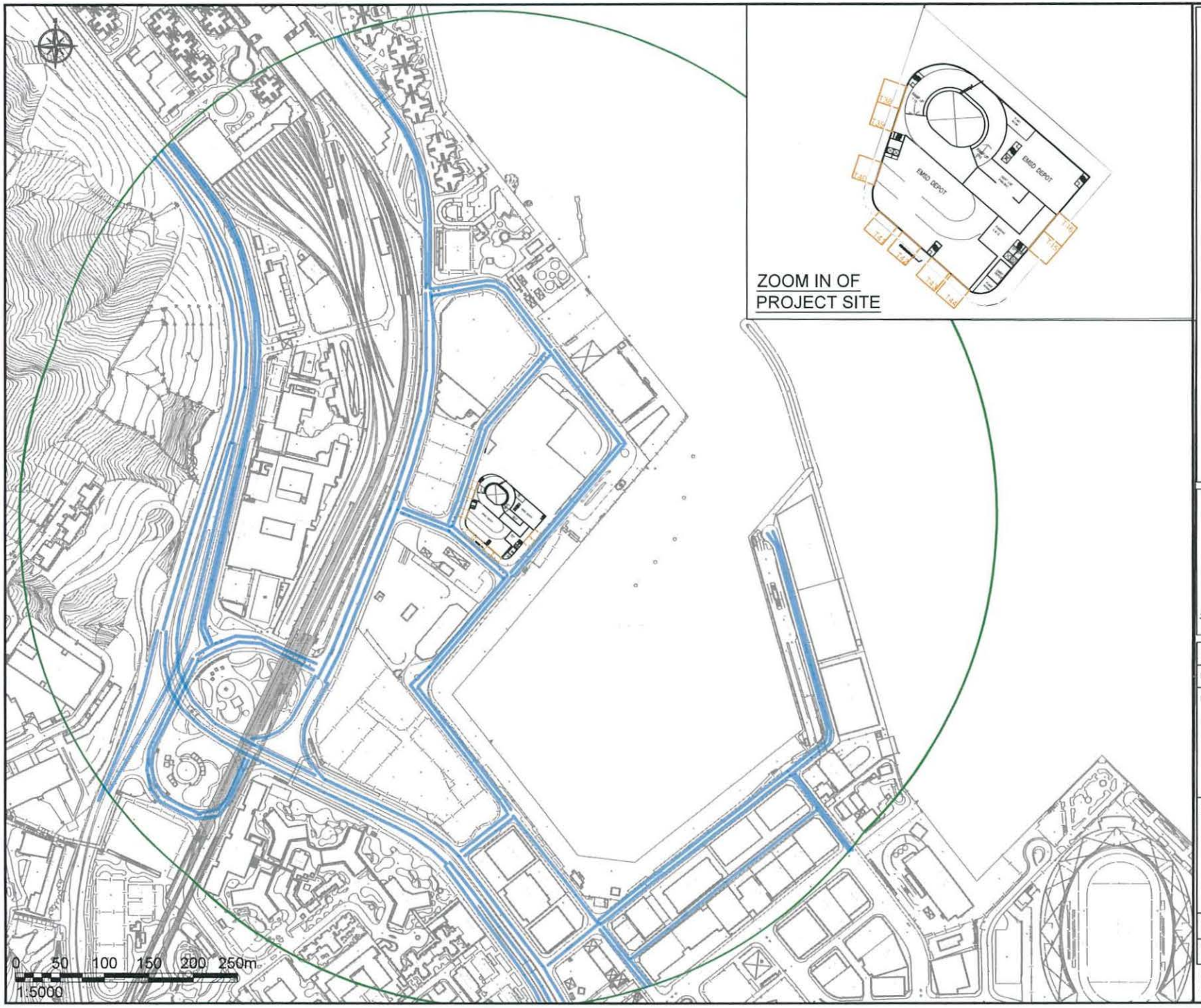
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
EMISSION SOURCE LOCATION

(CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT (LEVEL 5)

Drawing No : FIGURE 3.3f	Revision : 1
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297



NOTES :

EMISSION OPENING FOR VEHICLE TRAVELING AT PROJECT SITE

OPEN ROAD

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158 (A)
Drawing by :	CC

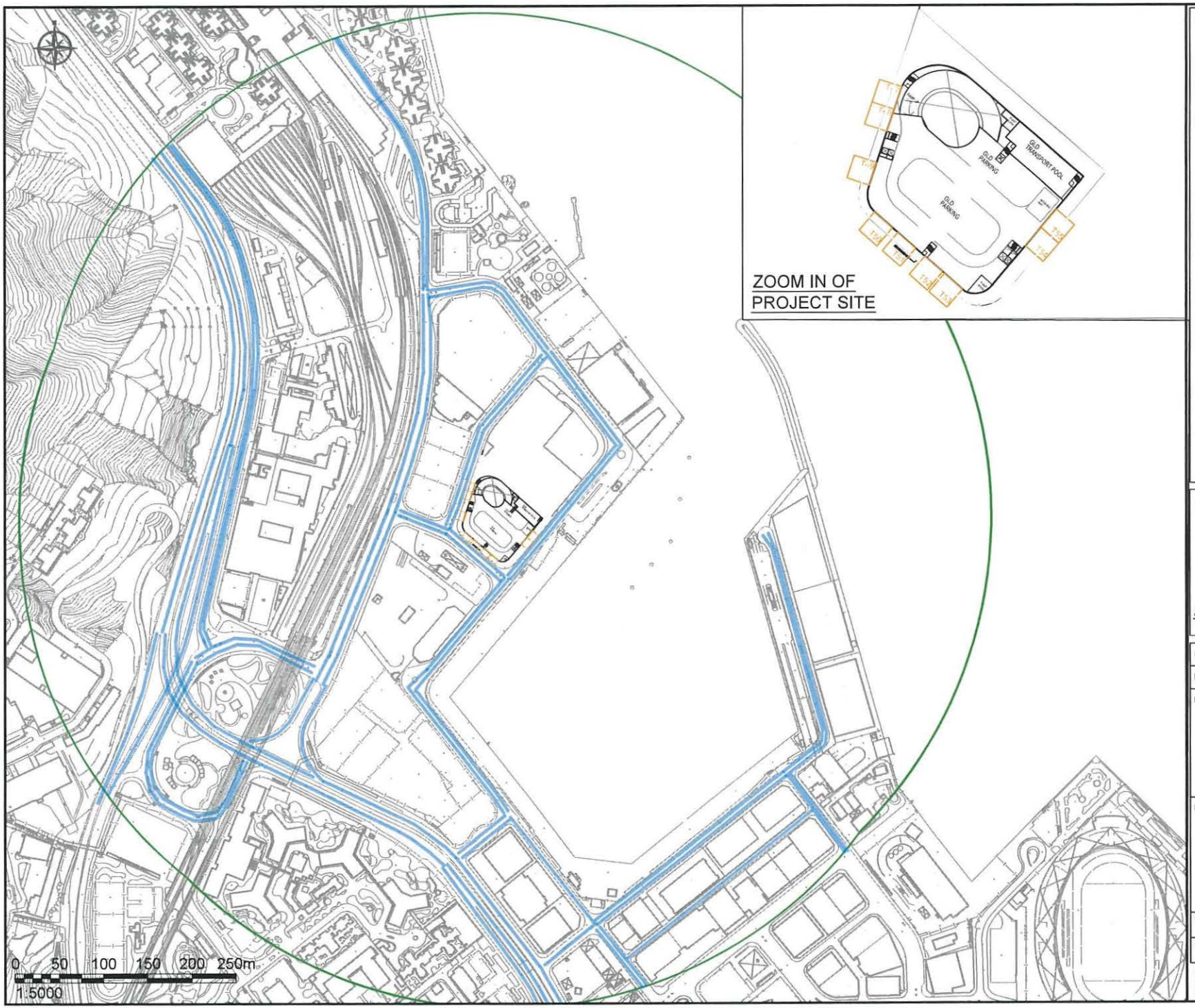
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
EMISSION SOURCE LOCATION

(CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT (LEVEL 6)

Drawing No : FIGURE 3.3g	Revision : 1
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297



ZOOM IN OF
PROJECT SITE

NOTES :

EMISSION OPENING FOR VEHICLE TRAVELING AT PROJECT SITE

OPEN ROAD

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158 (A)
Drawing by :	CC

Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
EMISSION SOURCE LOCATION

(CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT (LEVEL 7)

Drawing No : FIGURE 3.3h	Revision : 1
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

NOTES :

PROJECT SITE

X — NO_2 CONCENTRATION ($\mu g/m^3$)

ANNUAL NO_2 CONCENTRATION LIMIT: 40 $\mu g/m^3$

Consultant

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

Project No. :	1158(A)
Drawn By :	CC

Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
CONTOUR OF CUMULATIVE NO2 ANNUAL CONCENTRATION AT 1.5M ABOVE GROUND

Drawing No : FIGURE 3.4a	Revision : 2
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\05 Report\ERR\Figure\Issue 3\20190925\Figure 3.4a_Contour_Annual NO2.dwg

NOTES :

PROJECT SITE

NO_2 CONCENTRATION ($\mu g/m^3$)

19th HOURLY NO_2 CONCENTRATION LIMIT: 200 $\mu g/m^3$

Consultant

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

Project No. :	1158(A)
Drawn By :	CC

Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
CONTOUR OF CUMULATIVE NO2 19th HOURLY CONCENTRATION AT 1.5M ABOVE GROUND

Drawing No : FIGURE 3.4b	Revision : 2
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\05 Report\ERR\Figure\Issue 3\20190925\Figure 3.4b_Contour_Hourly NO2.dwg

NOTES :

PROJECT SITE

RSP CONCENTRATION ($\mu g/m^3$)

ANNUAL RSP CONCENTRATION
LIMIT: 50 $\mu g/m^3$

Consultant

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

Project No. :	1158(A)
Drawn By :	CC

Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
CONTOUR OF CUMULATIVE RSP ANNUAL CONCENTRATION AT 1.5M ABOVE GROUND

Drawing No. : FIGURE 3.4c	Revision : 2
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\05 Report\ERR\Figure\Issue 3\20190925\Figure 3.4c_Contour_Annual RSP.dwg

NOTES :

PROJECT SITE

RSP CONCENTRATION ($\mu g/m^3$)

10th DAILY RSP CONCENTRATION LIMIT: 100 $\mu g/m^3$

Consultant

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

Project No. :	1158(A)
Drawn By :	CC

Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
CONTOUR OF CUMULATIVE RSP 10th DAILY CONCENTRATION AT 1.5M ABOVE GROUND

Drawing No : FIGURE 3.4d	Revision : 2
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\05 Report\ERR\Figure\Issue 3\20190925\Figure 3.4d_Contour_Daily RSP.dwg

NOTES :

PROJECT SITE

X FSP CONCENTRATION ($\mu g/m^3$)

ANNUAL FSP CONCENTRATION
LIMIT: 35 $\mu g/m^3$

Consultant

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

Project No. :	1158(A)
Drawn By :	CC

Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
CONTOUR OF CUMULATIVE FSP ANNUAL CONCENTRATION AT 1.5M ABOVE GROUND

Drawing No : FIGURE 3.4e	Revision : 2
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\05 Report\ERR\Figure\Issue 3\20190925\Figure 3.4e_Contour_Annual FSP.dwg

NOTES :

PROJECT SITE

— X — FSP CONCENTRATION ($\mu g/m^3$)

10th DAILY FSP CONCENTRATION LIMIT: 75$\mu g/m^3$

Consultant

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

Project No. :	1158(A)
Drawn By :	CC

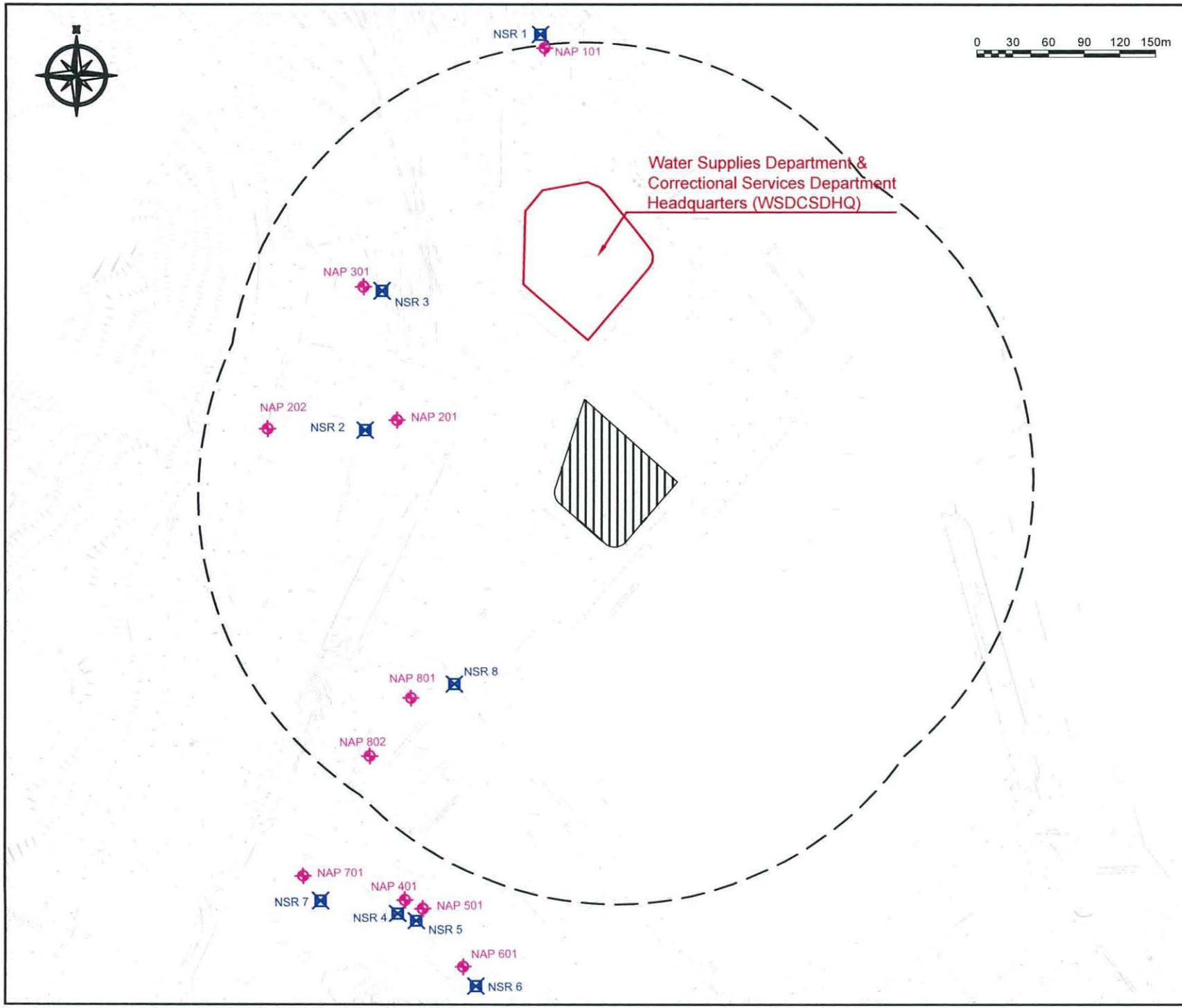
Project :
CHAI WAN GOVERNMENT COMPLEX & VEHICLE DEPOT AT SHEUNG TAK STREET

Drawing Title :
CONTOUR OF CUMULATIVE FSP 10th DAILY CONCENTRATION AT 1.5M ABOVE GROUND

Drawing No : FIGURE 3.4f	Revision : 2
Scale : AS SHOWN	Date : SEPT 2019

A3 420 x 297

FILENAME: Z:\1151-1200\1158(A)\05 Report\ERR\Figure\Issue 3\20190925\Figure 3.4f_Contour_Daily FSP.dwg



NOTES :

NAP 101 Noise Assessment Point

Noise Sensitive Receiver

300m from Site Boundary

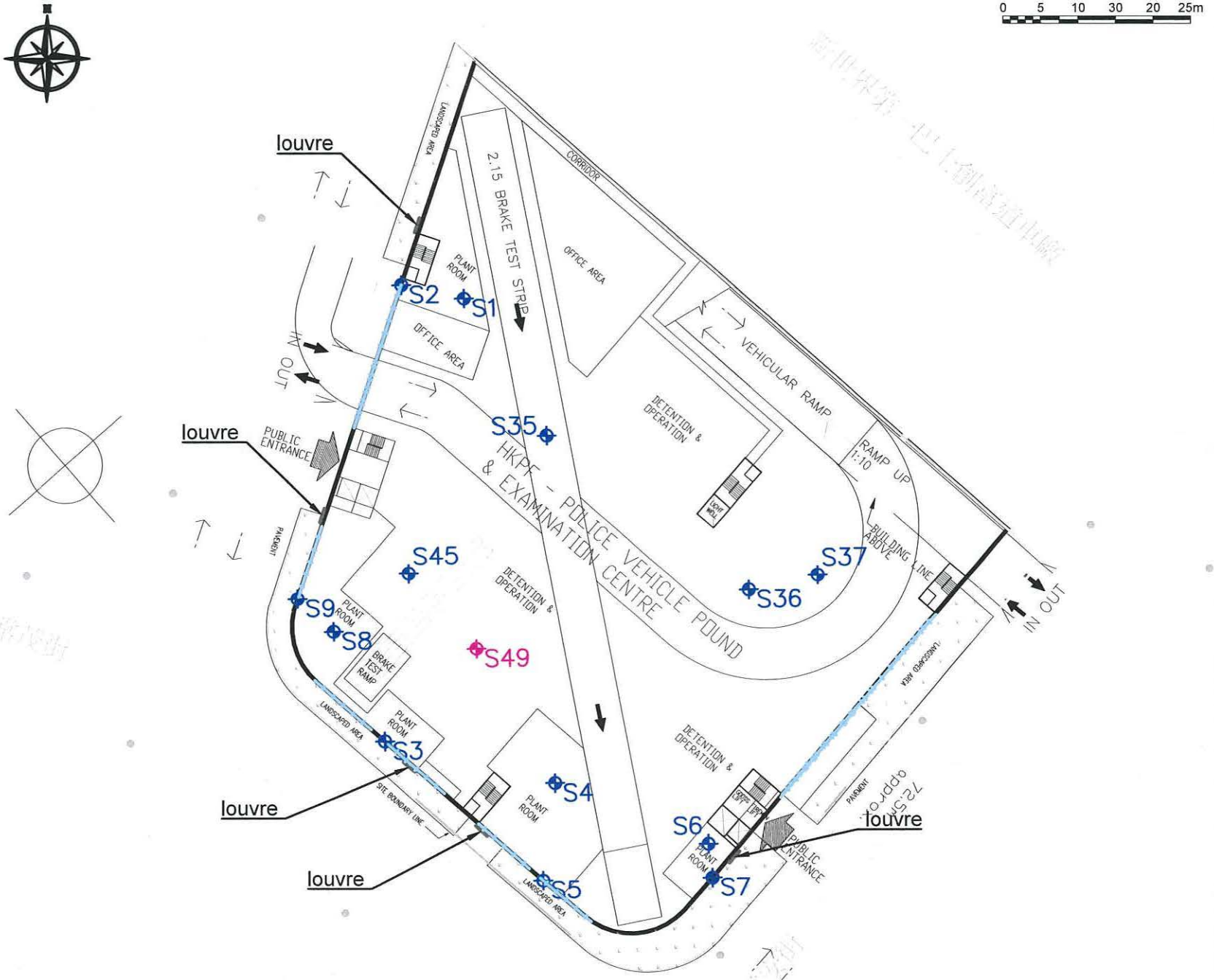
Project Site

Concurrent Projects

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Locations of Representative Noise Sensitive Receivers and Noise Assessment Points
Drawing No :	Figure 4.1
Revision :	0
Scale :	As shown
Date :	August 2018



NOTES :

S1 Key Noise Sources

S1 Key Noise Sources (newly added for the Proposed Scheme)

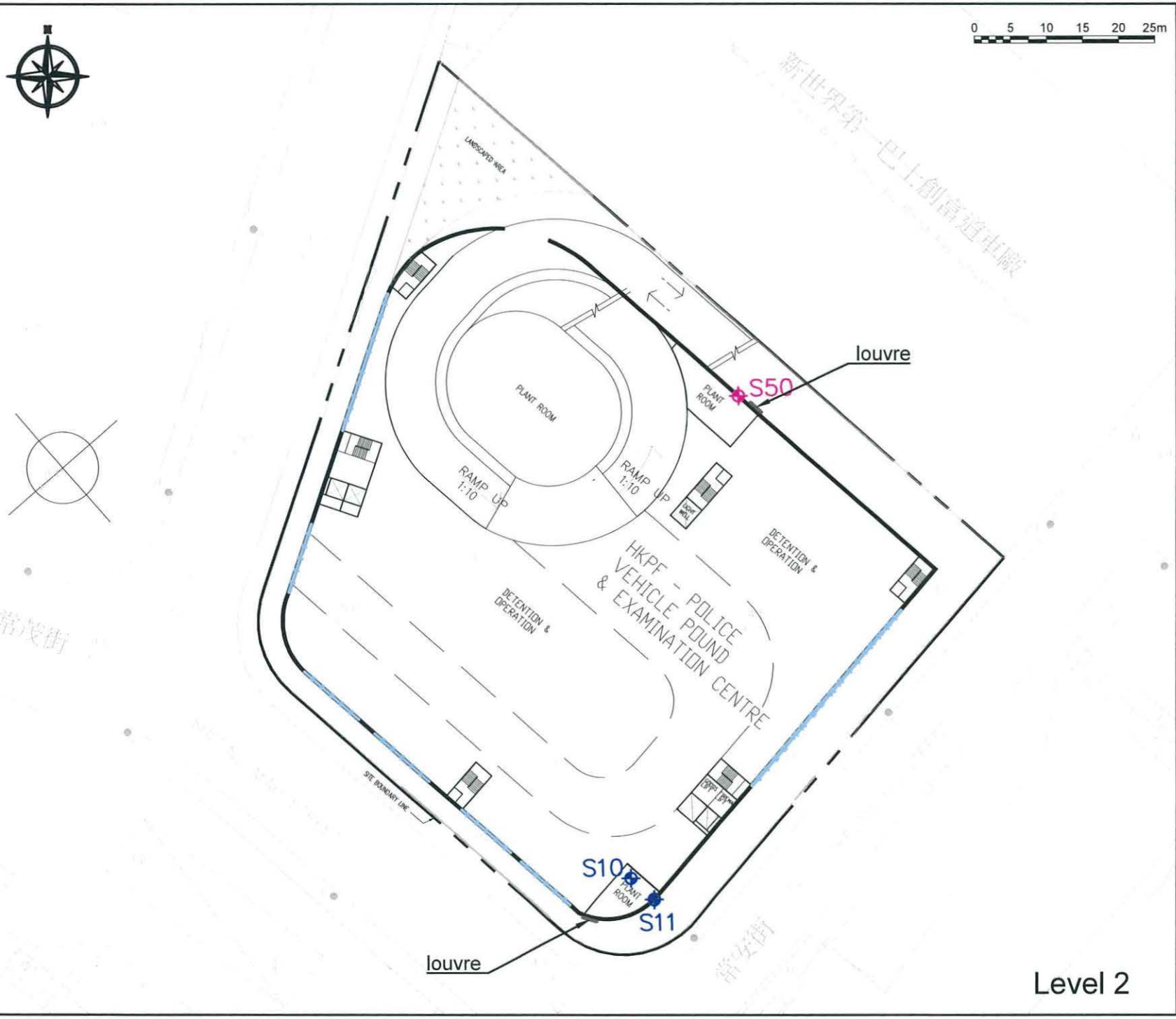
Louvre

Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No :	Figure 4.2a
Revision :	0
Scale :	As shown
Date :	February 2019



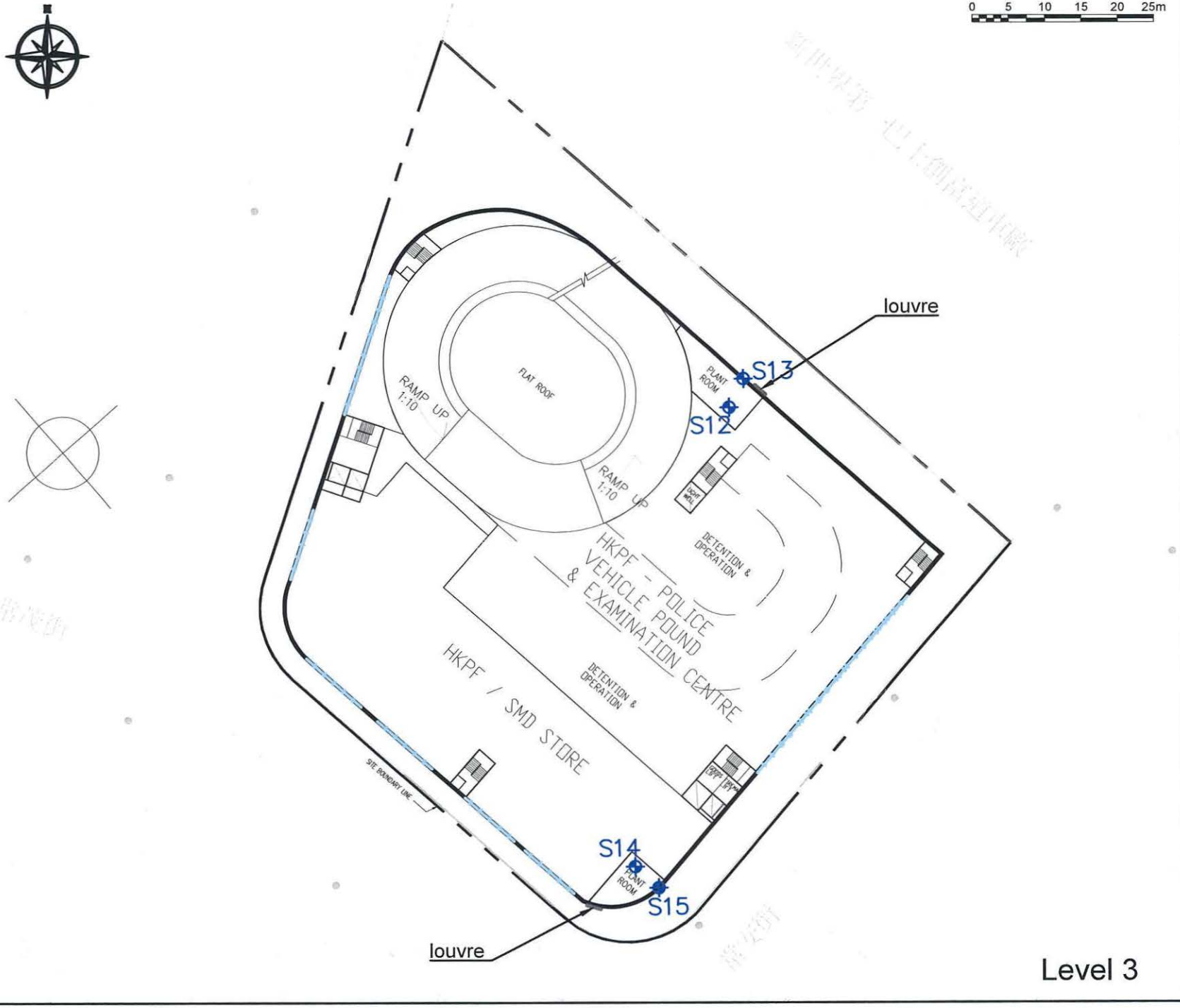
NOTES :

- S1 Key Noise Sources
- S1 Key Noise Sources (newly added for the Proposed Scheme)
- Louvre
- Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

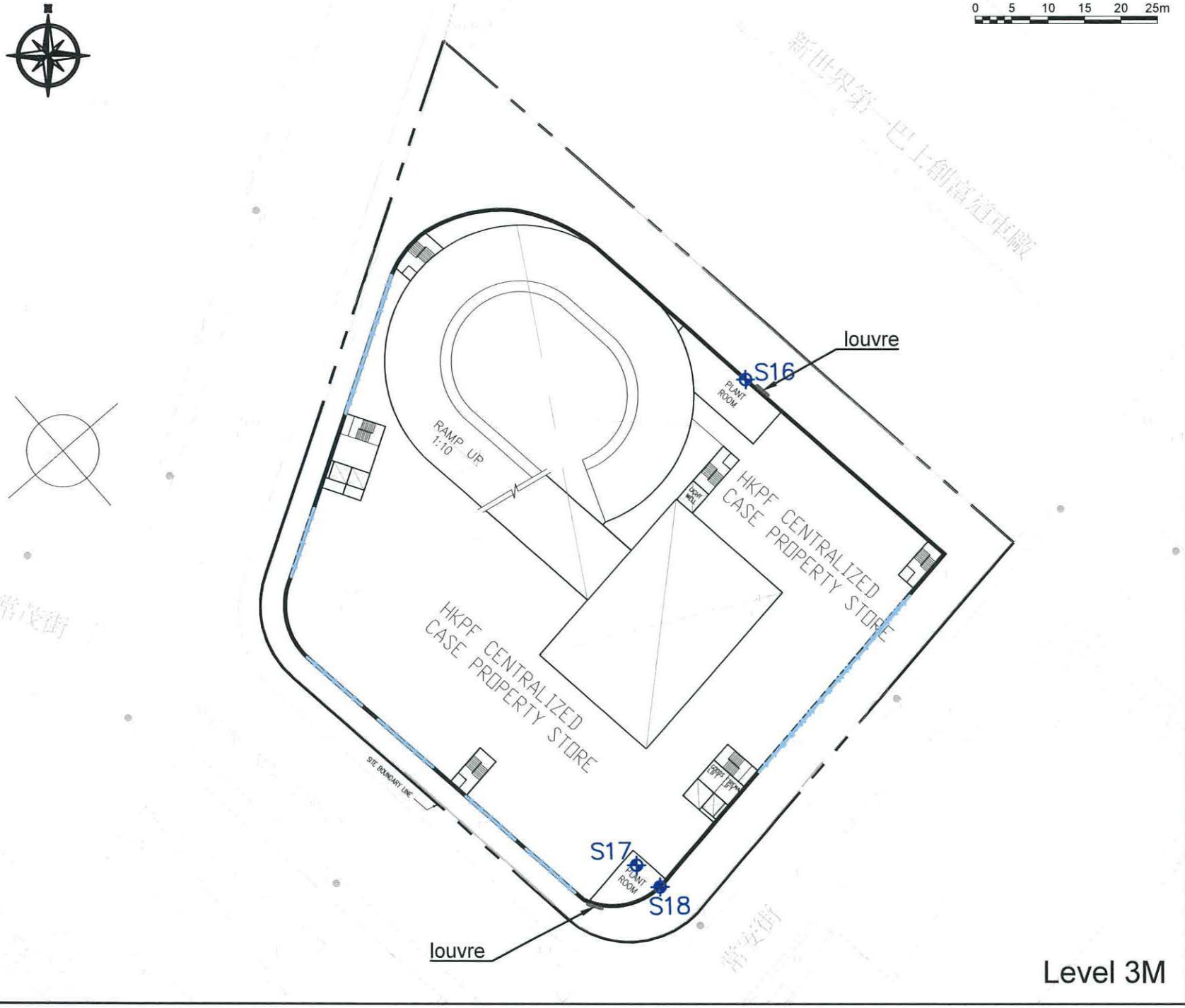
Project No.	1158 (A)
File Name	
Project	Chai Wan Government Complex and Vehicle Depot
Drawing Title	Location of Key Noise Sources within the Depot
Drawing No	Figure 4.2b
Revision	0
Scale	As shown
Date	February 2019



Consultant

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No. :	Figure 4.2c
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

S1 Key Noise Sources

S1 Key Noise Sources (newly added for the Proposed Scheme)

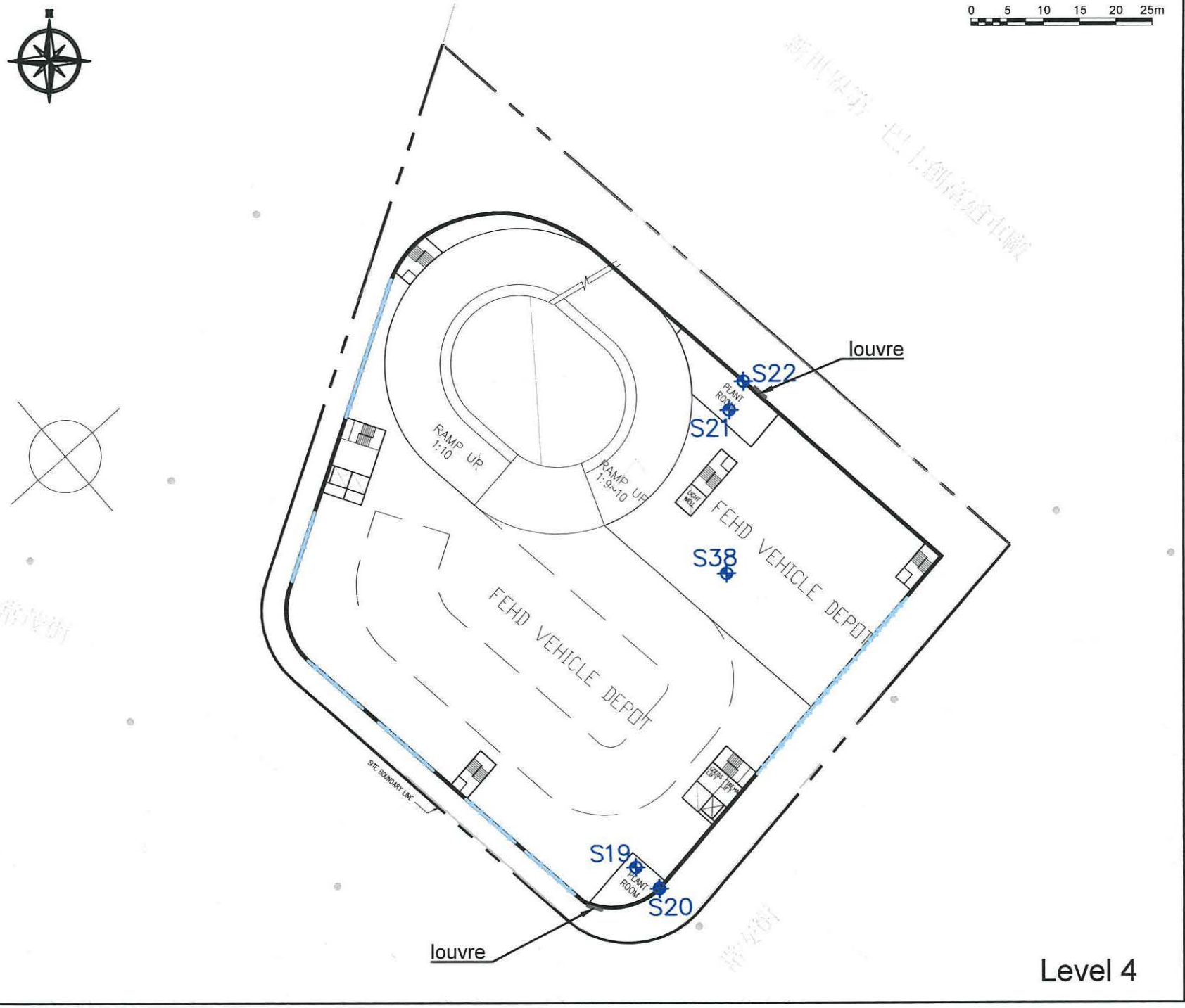
Louvre

Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No :	Figure 4.2d
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

S1 Key Noise Sources

S1 Key Noise Sources (newly added for the Proposed Scheme)

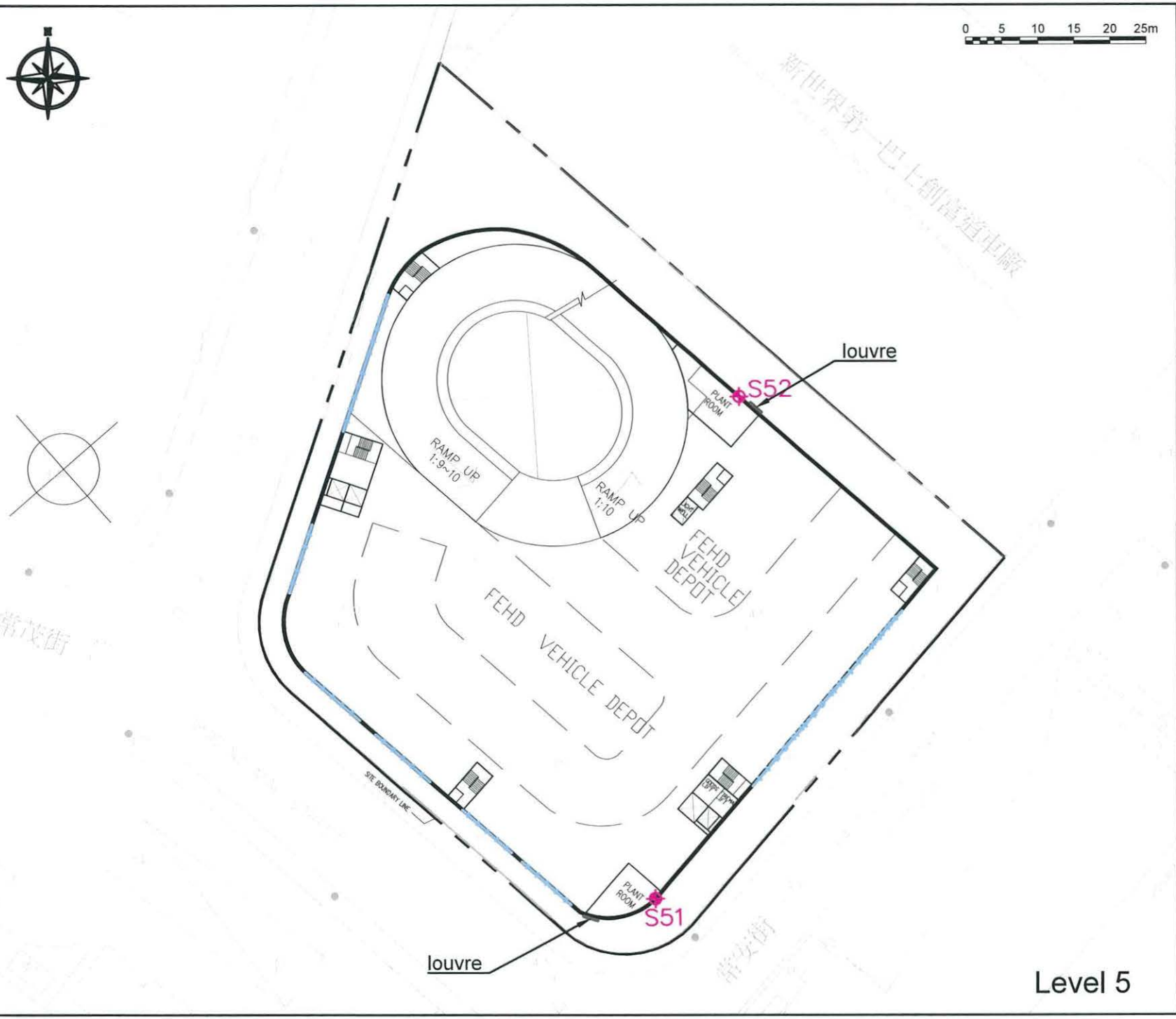
Louvre

Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No :	Figure 4.2e
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

S1 Key Noise Sources

S1 Key Noise Sources (newly added for the Proposed Scheme)

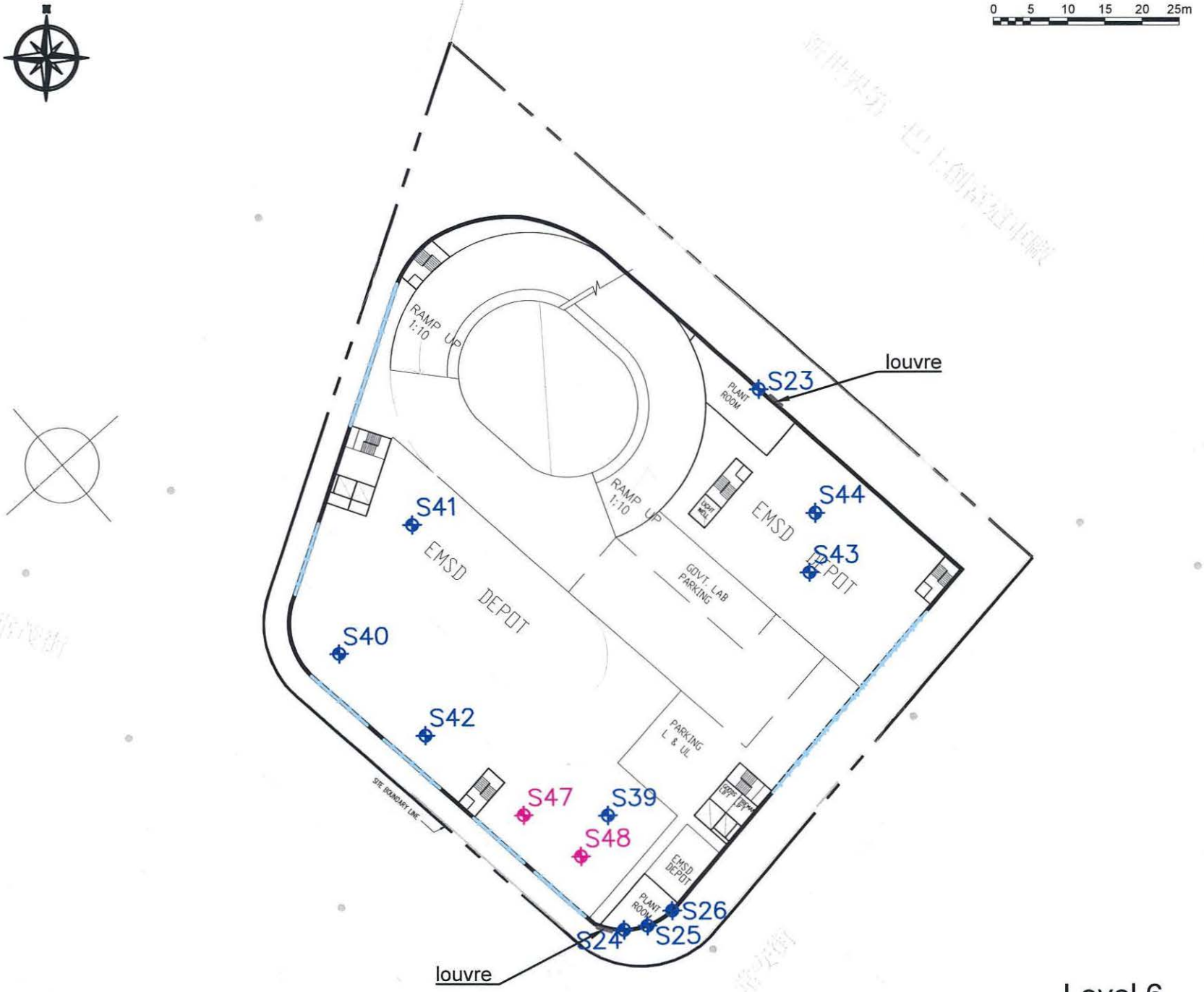
Louvre

Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No :	Figure 4.2f
Revision :	0
Scale :	As shown
Date :	February 2019



Level 6

NOTES :

S1 Key Noise Sources

S1 Key Noise Sources (newly added for the Proposed Scheme)

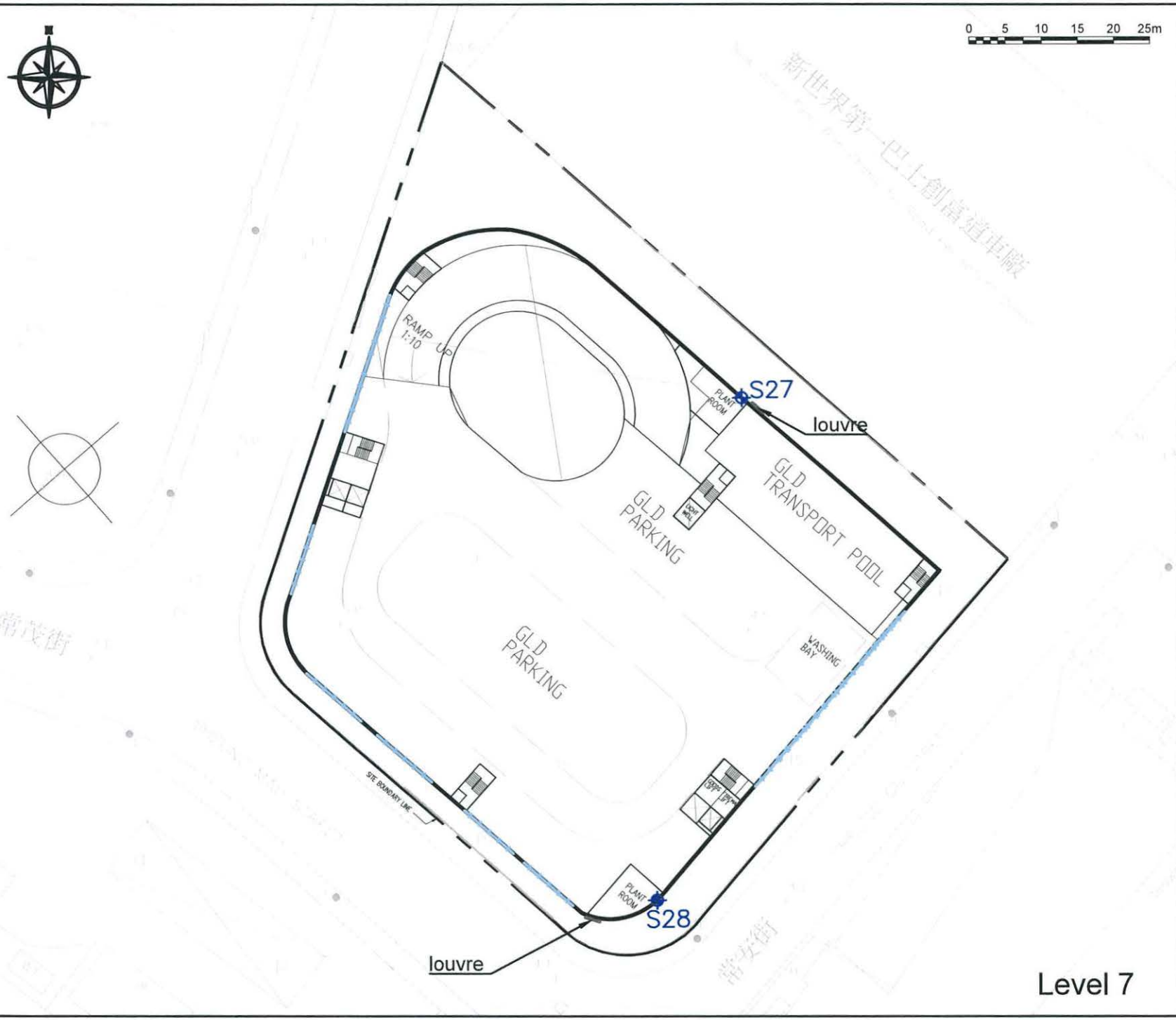
Louvre

Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No :	Figure 4.2g
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

S1 Key Noise Sources

S1 Key Noise Sources (newly added for the Proposed Scheme)

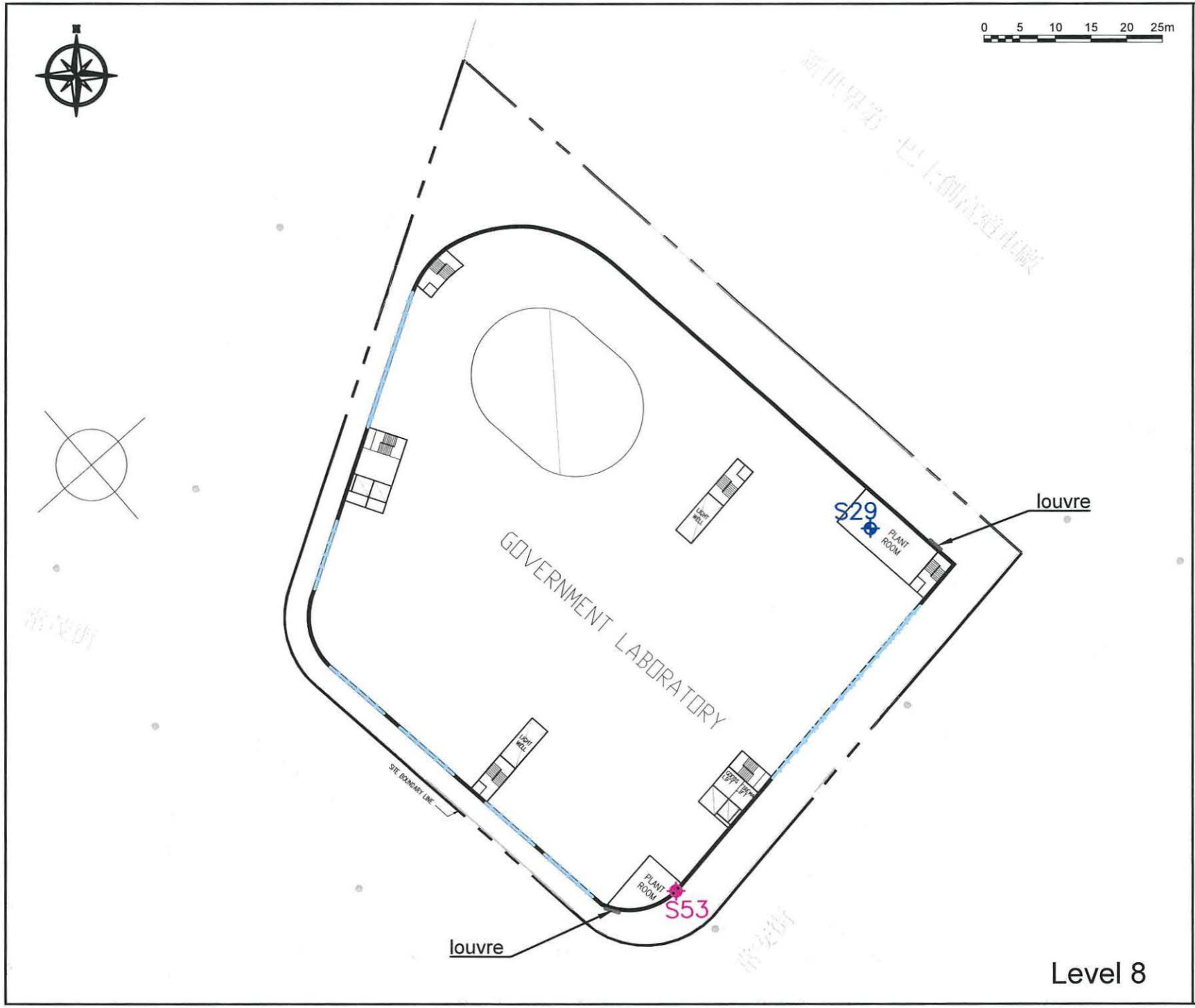
Louvre

Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No :	Figure 4.2h
Revision :	0
Scale :	As shown
Date :	February 2019



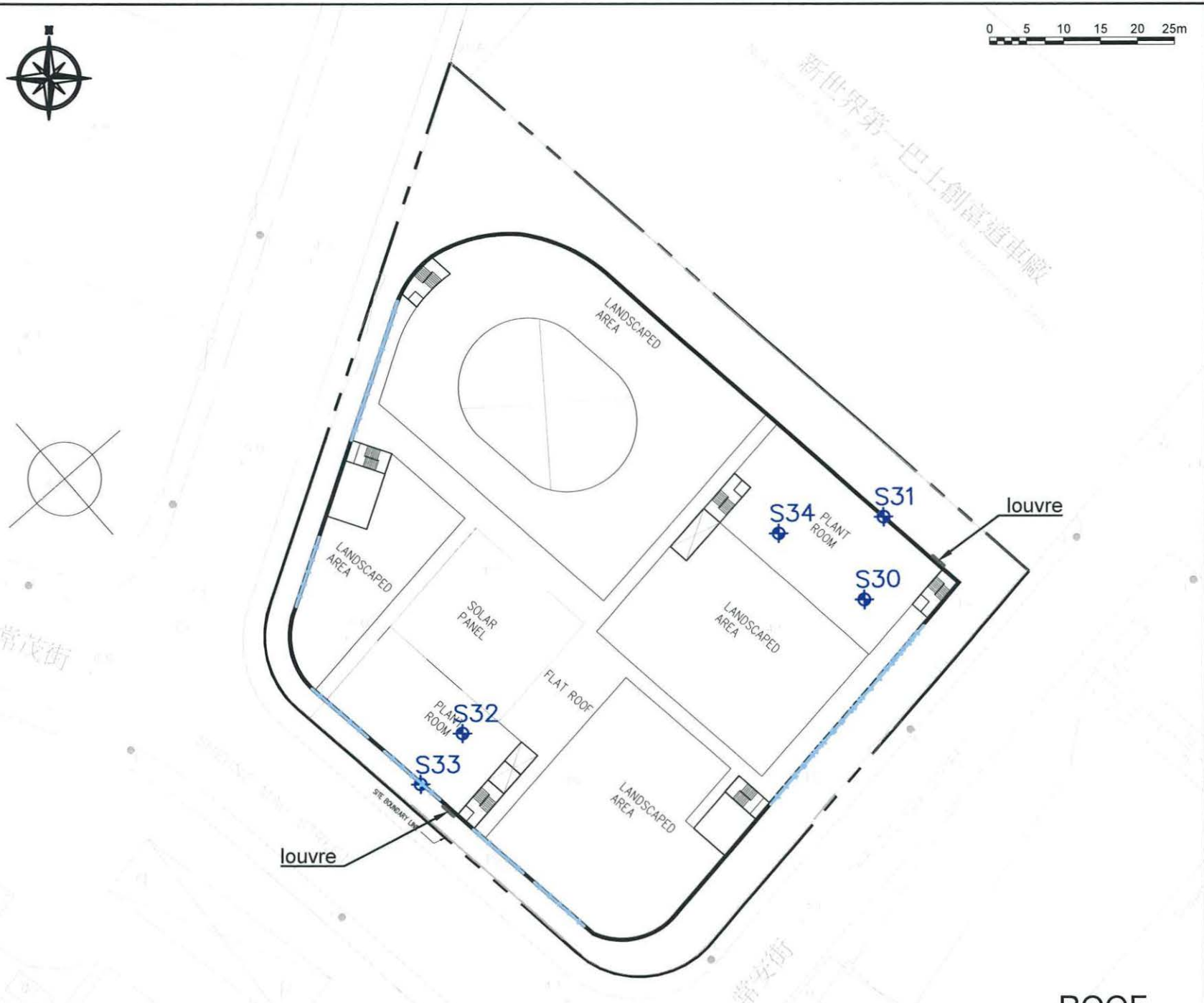
NOTES :

- S1 Key Noise Sources
- S1 Key Noise Sources (newly added for the Proposed Scheme)
- Louvre
- Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No :	Figure 4.2i
Revision :	0
Scale :	As shown
Date :	February 2019



ROOF

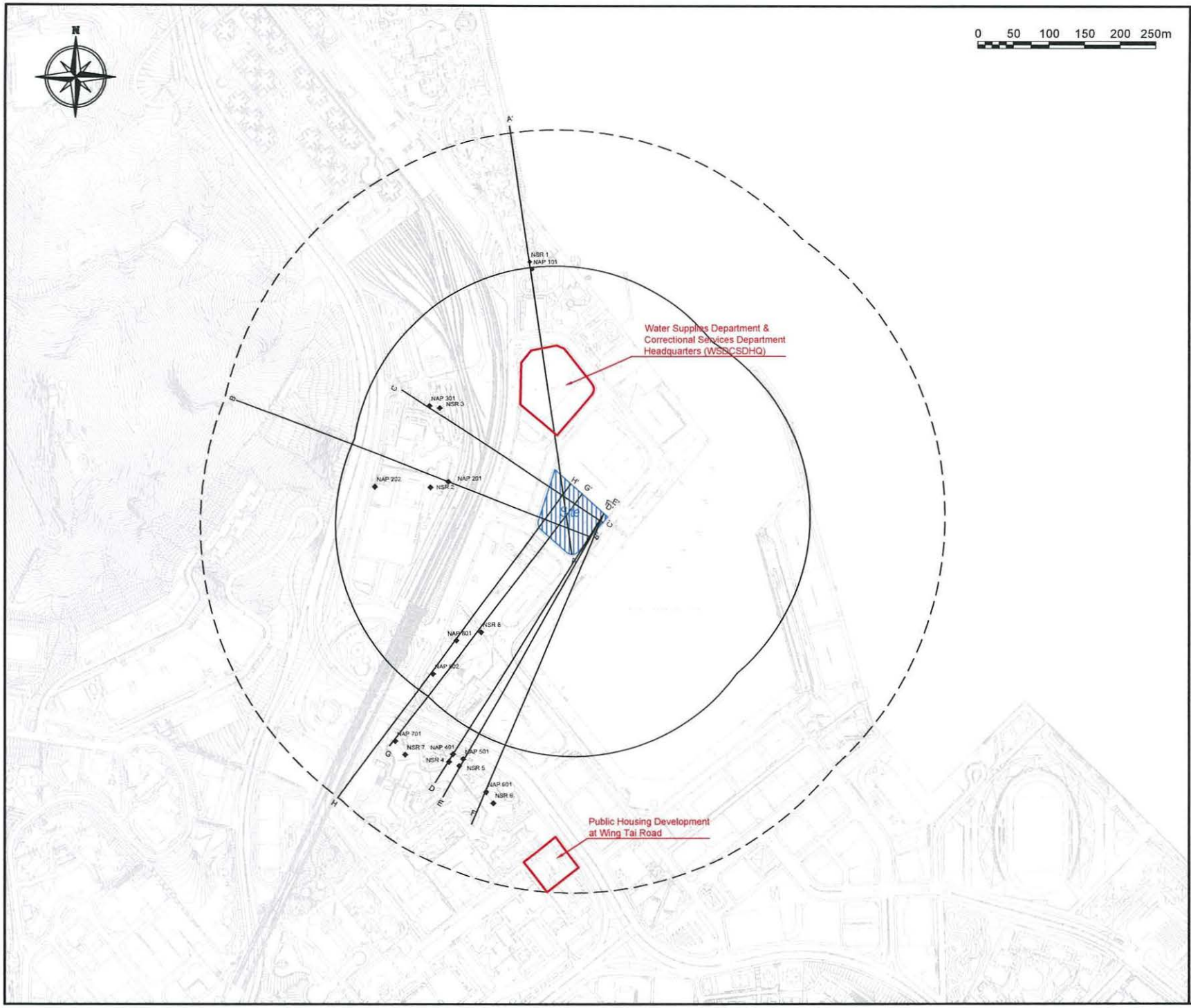
NOTES :

- S1 Key Noise Sources
- S1 Key Noise Sources (newly added for the Proposed Scheme)
- Louvre
- Openings

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Key Noise Sources within the Depot
Drawing No :	Figure 4.2j
Revision :	0
Scale :	As shown
Date :	February 2019



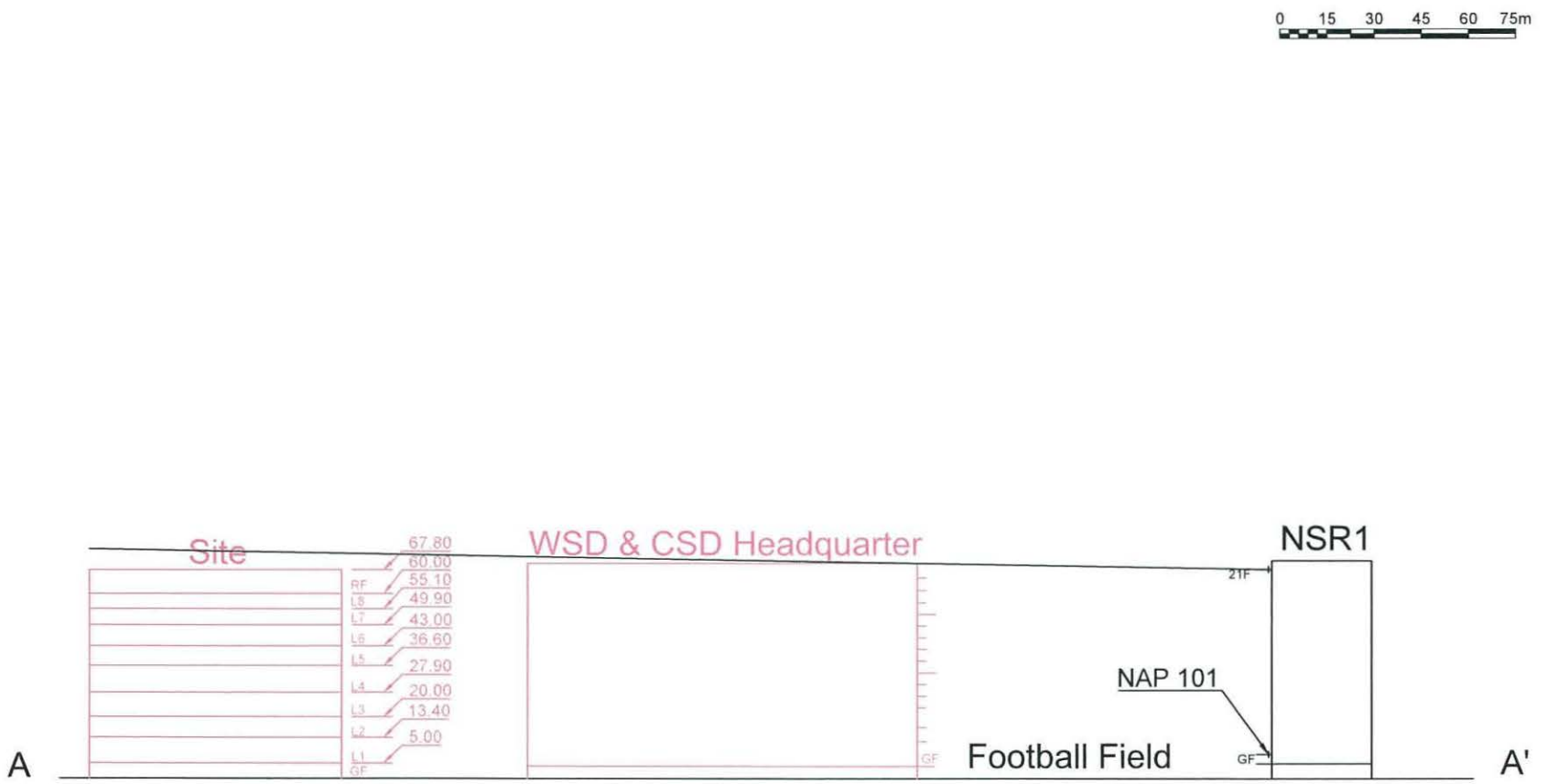
NOTES :

- Project Site
- 300m for Site Boundary
- 500m for Site Boundary
- Noise Assessment Point
- Concurrent Projects

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Sectional Drawing Showing the Shielding Effects
Drawing No :	Figure 4.3a
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

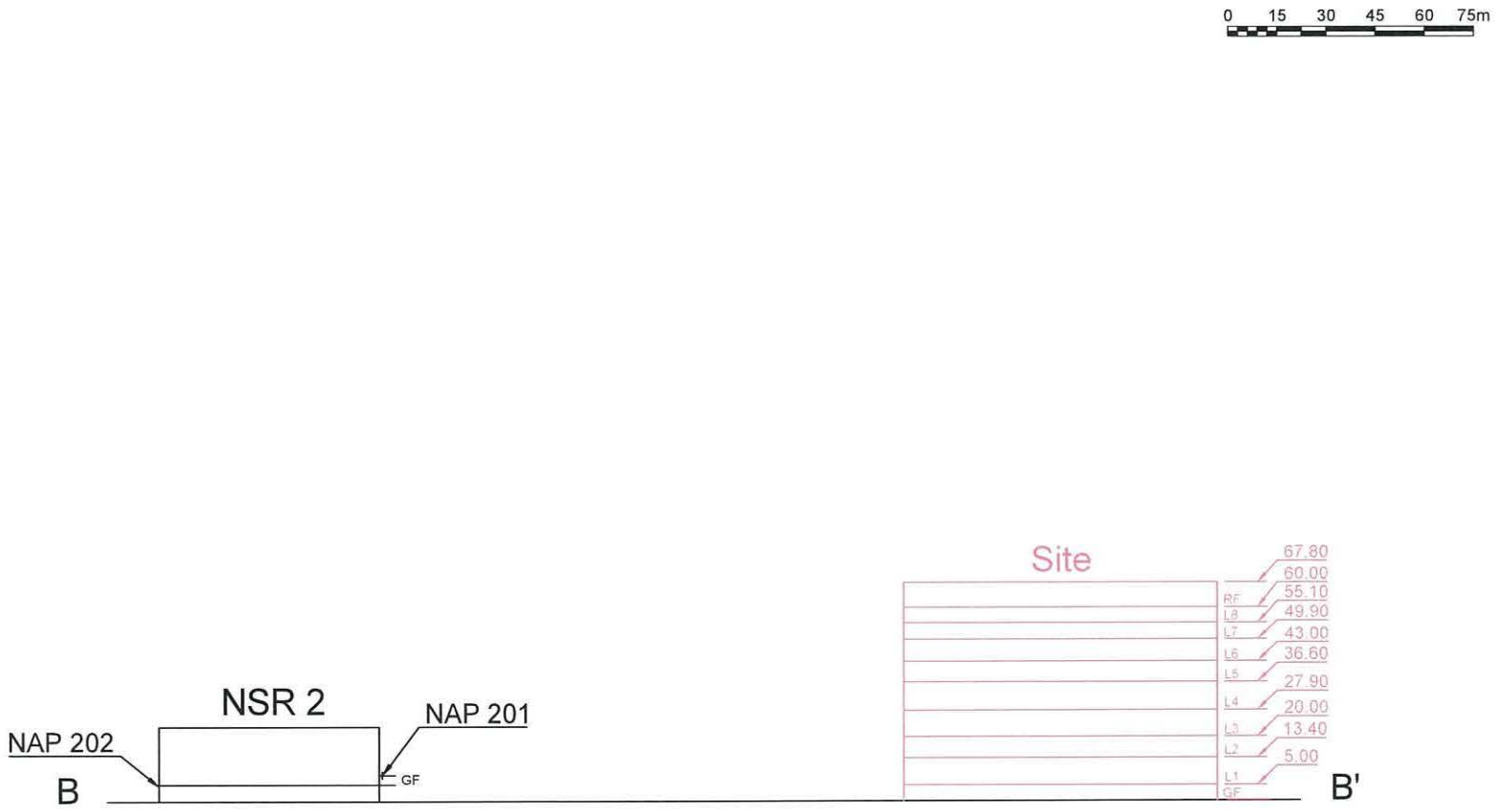
A — A' Section A - A'

revised for ERR

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Sectional Drawing Showing the Shielding Effects
Drawing No :	Figure 4.3b
Revision :	1
Scale :	As shown
Date :	May 2019



NOTES :

B — B' Section B - B'

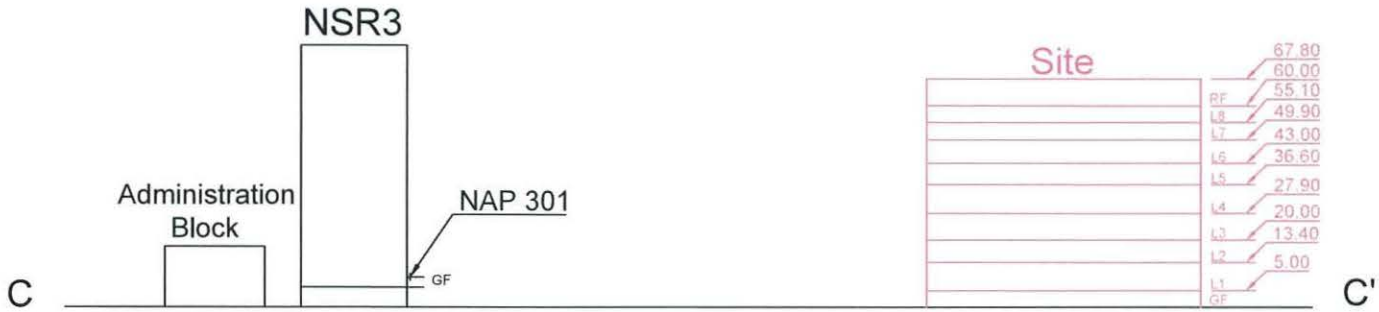
revised for ERR

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Sectional Drawing Showing the Shielding Effects
Drawing No :	Figure 4.3c
Revision :	0
Scale :	As shown
Date :	February 2019

0 15 30 45 60 75m



NOTES :

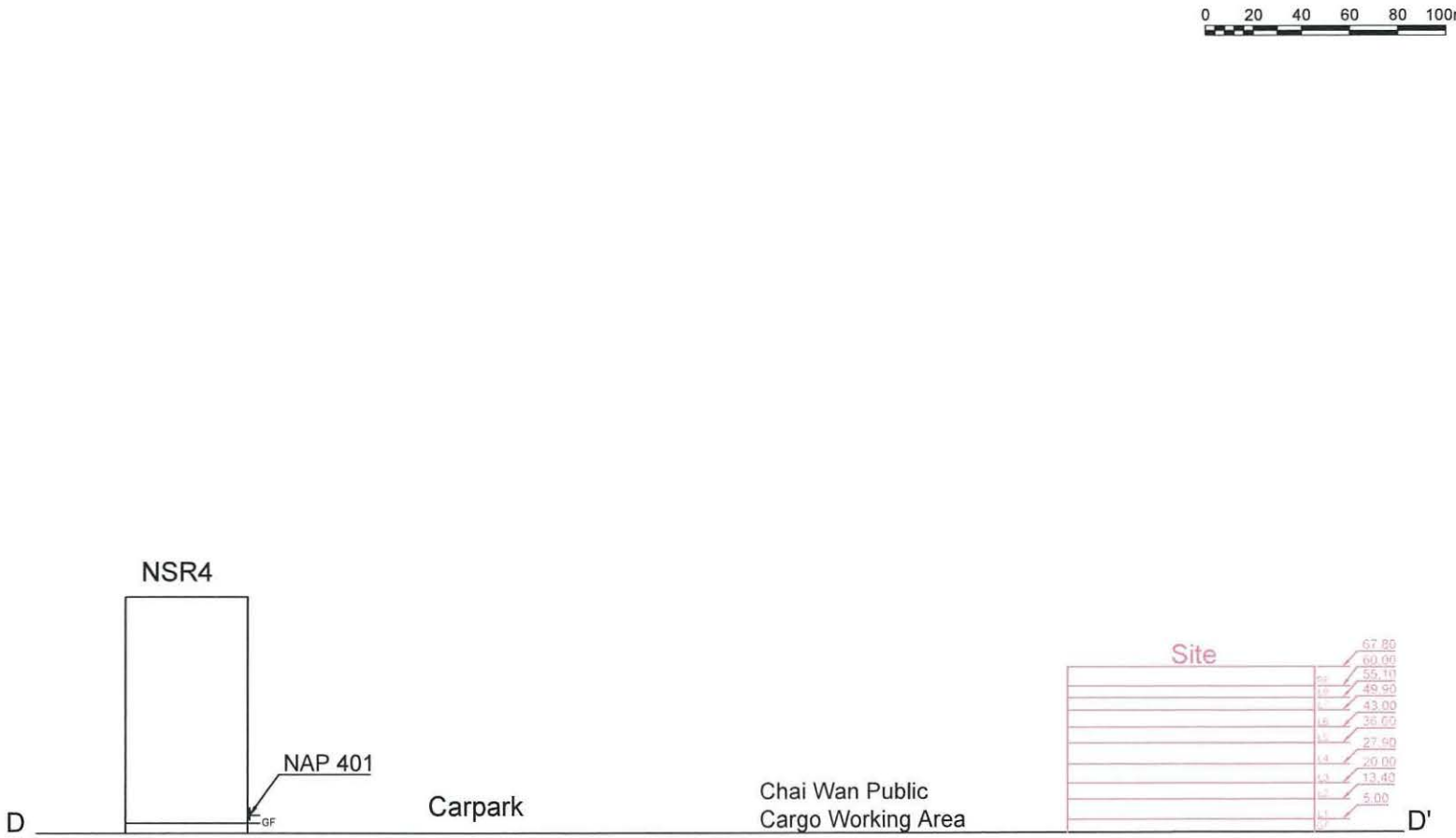
C — C' Section C - C'

revised for ERR

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Sectional Drawing Showing the Shielding Effects
Drawing No :	Figure 4.3d
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

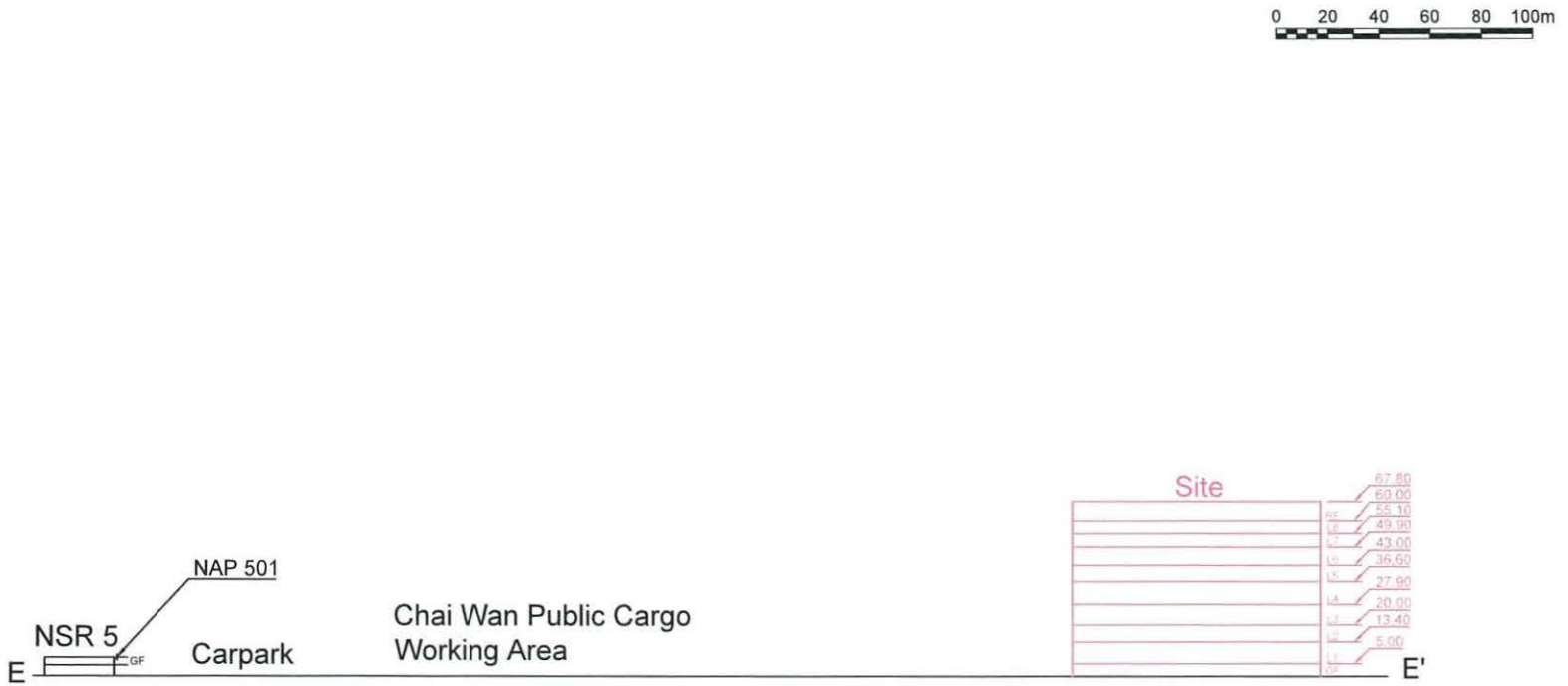
D — D' Section D - D'

revised for ERR

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Sectional Drawing Showing the Shielding Effects
Drawing No :	Figure 4.3e
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

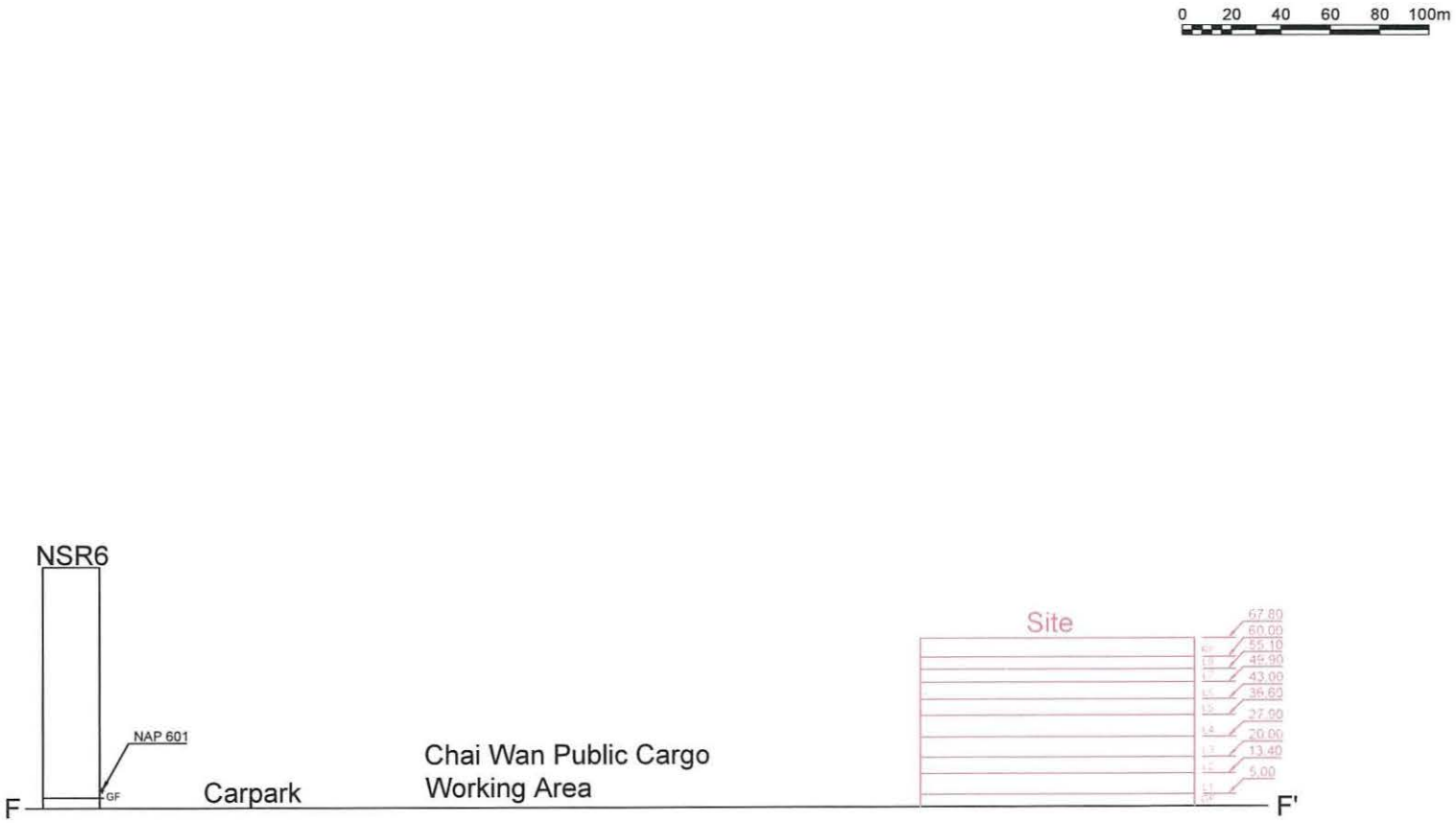
E — E' Section E - E'

revised for ERR

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Sectional Drawing Showing the Shielding Effects
Drawing No :	Figure 4.3f
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

F — F' Section F - F'

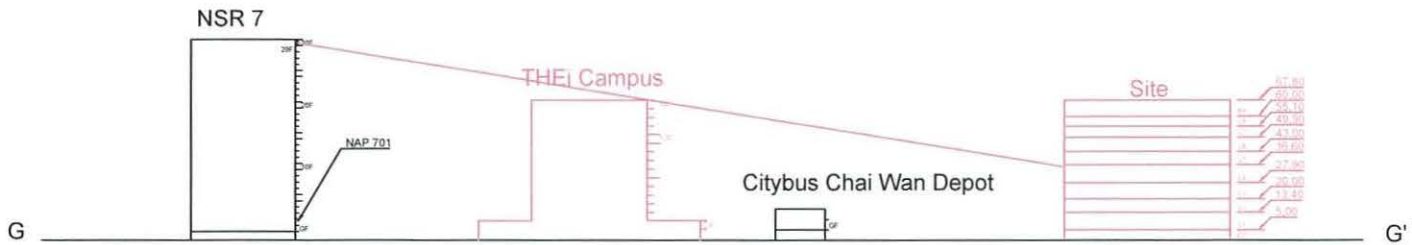
revised for ERR

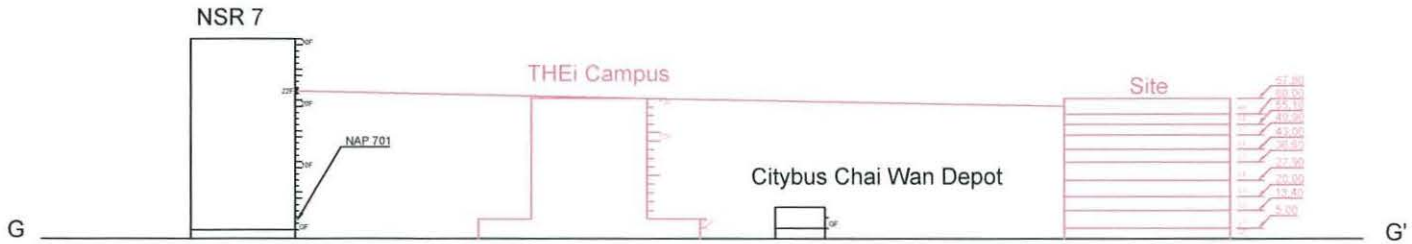
Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Sectional Drawing Showing the Shielding Effects
Drawing No :	Figure 4.3g
Revision :	0
Scale :	As shown
Date :	February 2019

0 25 50 75 100 125m





NOTES :

G — G' Section G - G'

revised for ERR

Consultant

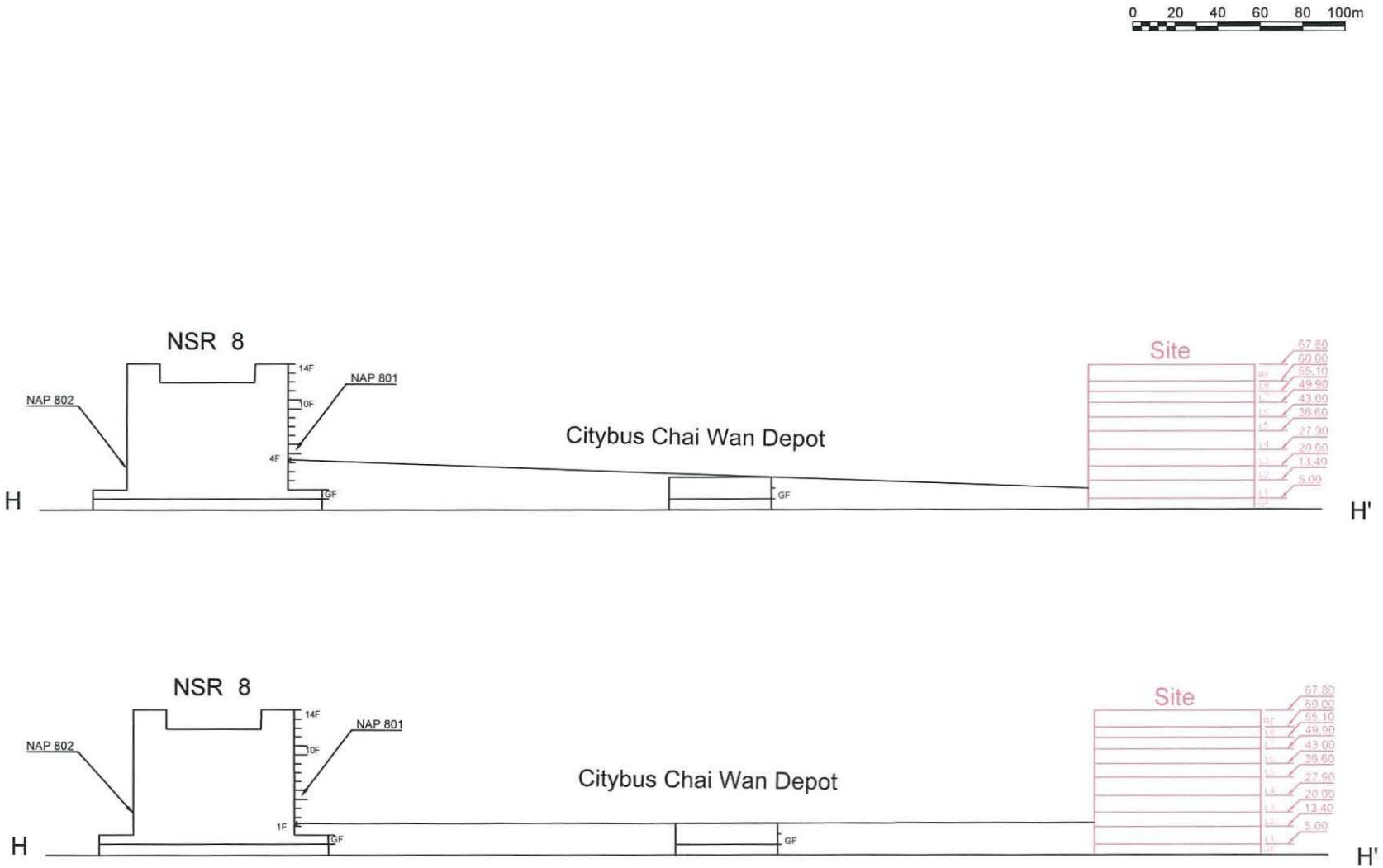
Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158 (A)
File Name :	

Project :
Chai Wan Government Complex and Vehicle Depot

Drawing Title :
Sectional Drawing Showing the Shielding Effects

Drawing No. : Figure 4.3h	Revision : 0
Scale : As shown	Date : February 2019



NOTES :

H — H' Section H - H'

revised for ERR

Consultant

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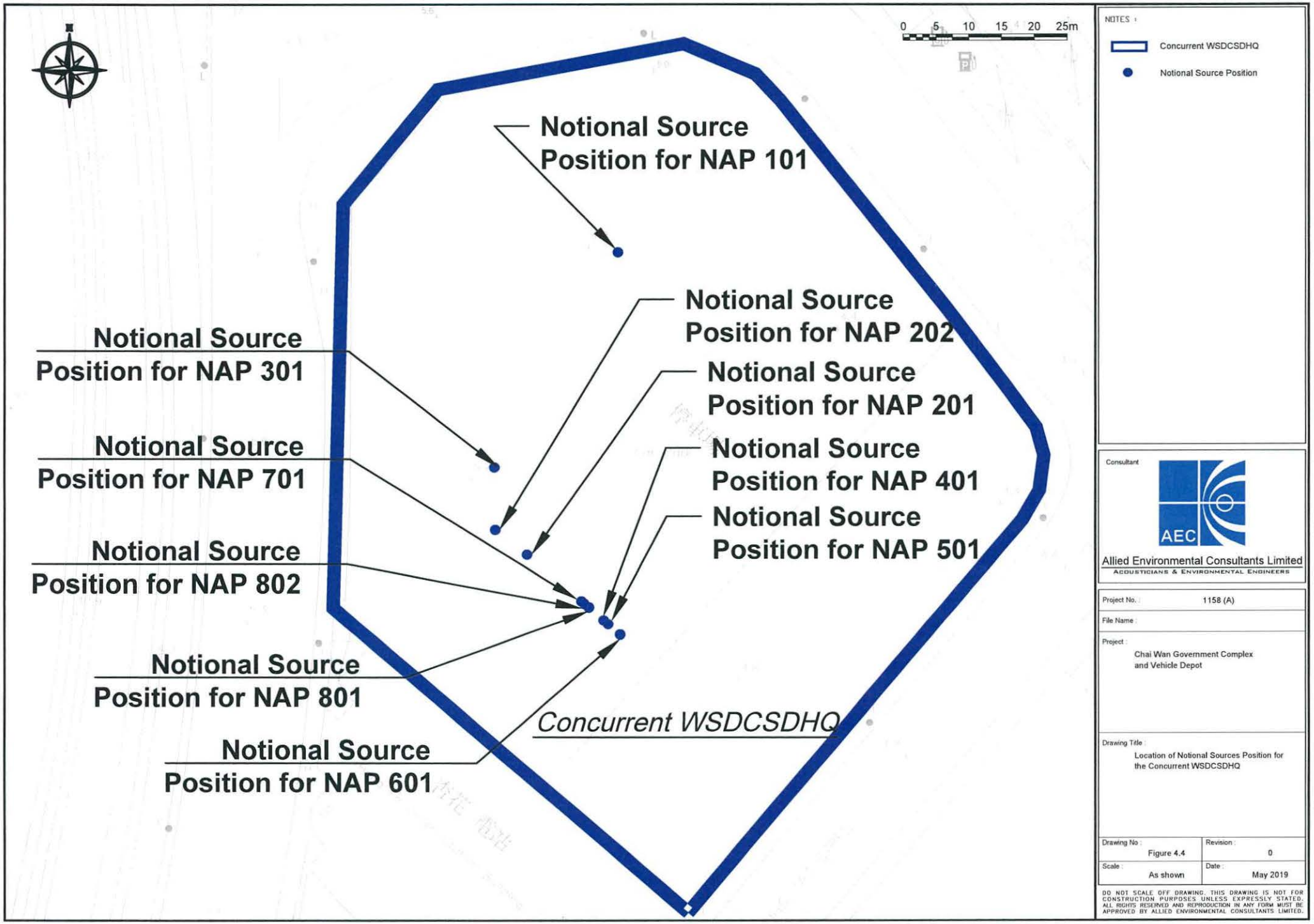
Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Sectional Drawing Showing the Shielding Effects
Drawing No :	Figure 4.3i
Revision :	0
Scale :	As shown
Date :	February 2019



NOTES :

- Concurrent WSDCSDHQ
- Notional Source Position

Consultant

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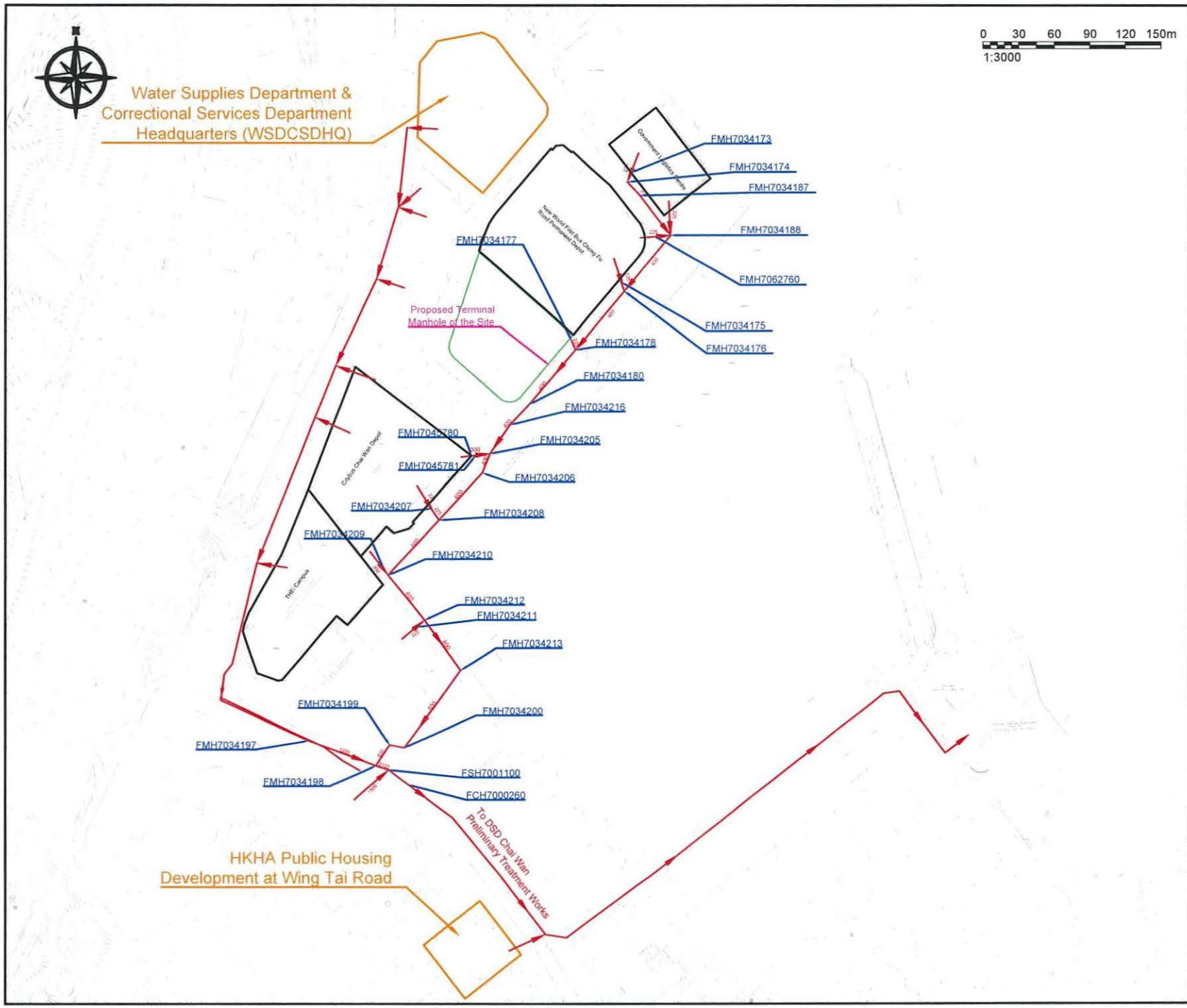
Project No. :	1158 (A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Location of Notional Sources Position for the Concurrent WSDCSDHQ
Drawing No :	Figure 4.4
Revision :	0
Scale :	As shown
Date :	May 2019



NOTES :

- Site Boundary
- Existing Sewer
- Proposed Sewer
- Surrounding Developments
- Concurrent Projects

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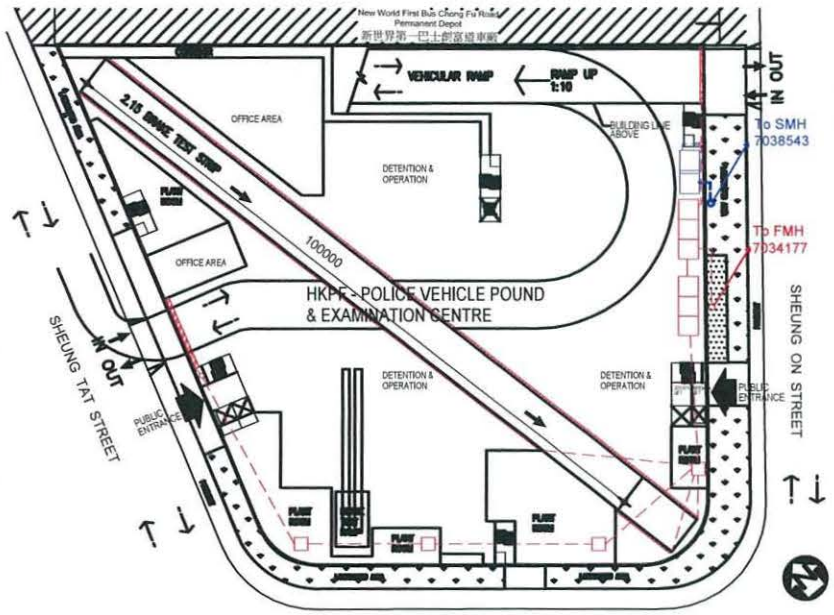
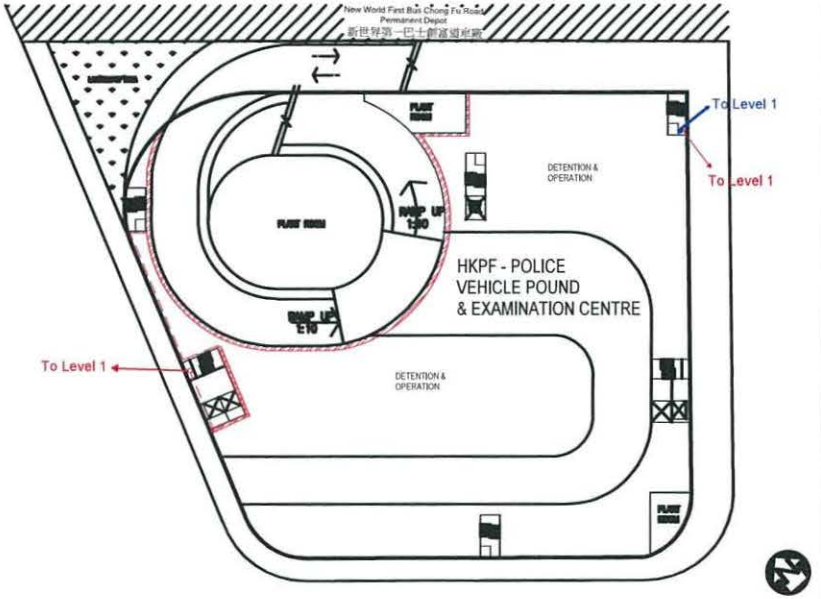
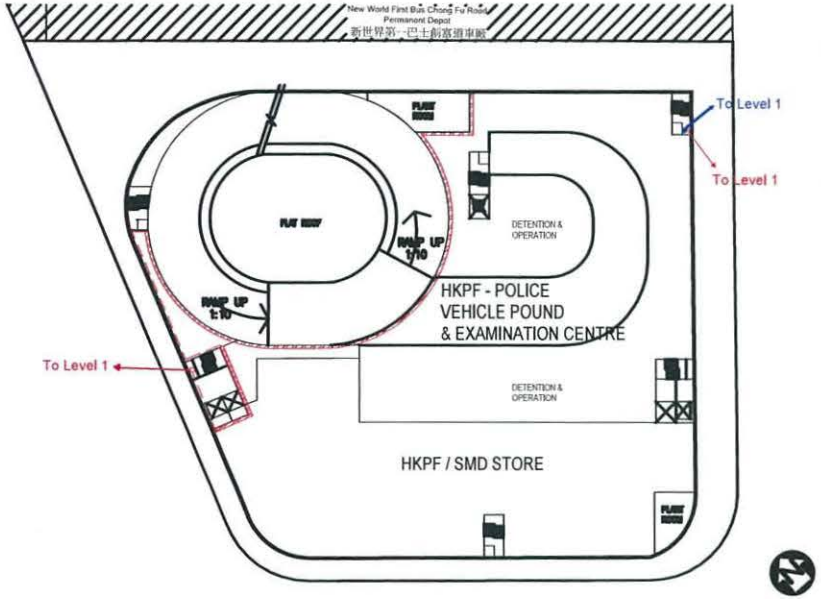
Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Proposed Sewerage Layout Plan
Drawing No :	Figure 5.1
Revision :	0
Scale :	As shown
Date :	February 2019



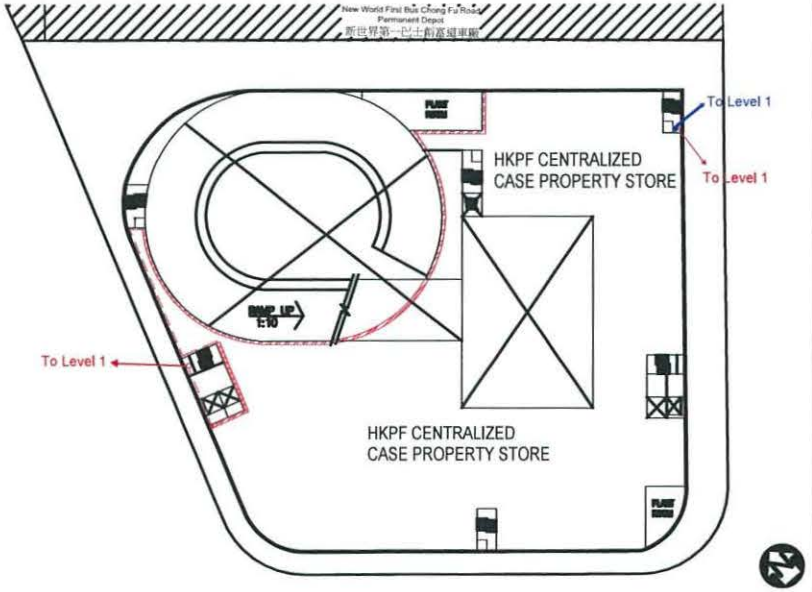
LEVEL 1 (+5.00) FLOOR PLAN



LEVEL 2 (+13.40) FLOOR PLAN



LEVEL 3 (+20.00) FLOOR PLAN



LEVEL 3M (+24.10) FLOOR PLAN

NOTES:

- Workshop Drainage
- Stormwater Drainage
- Petrol Interceptor
- Connection Pipe
- Silt Trap

Consultant

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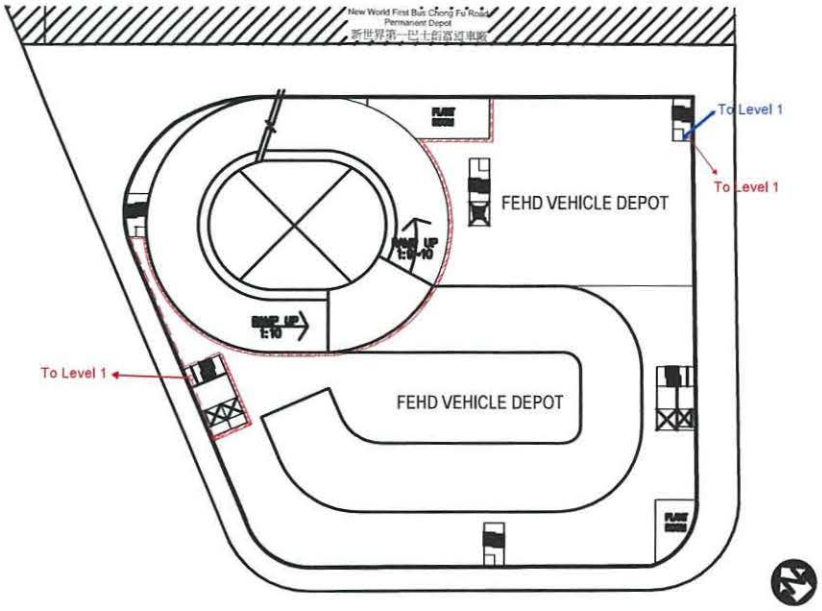
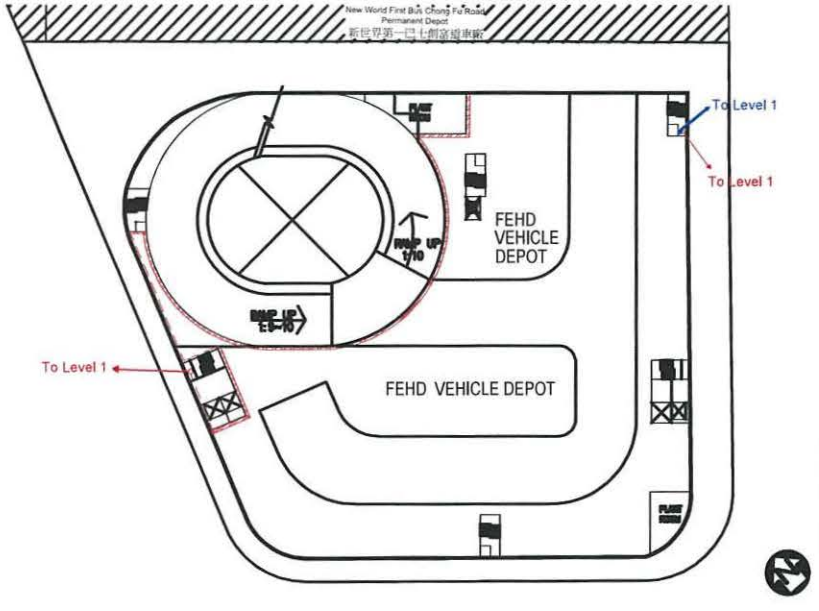
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

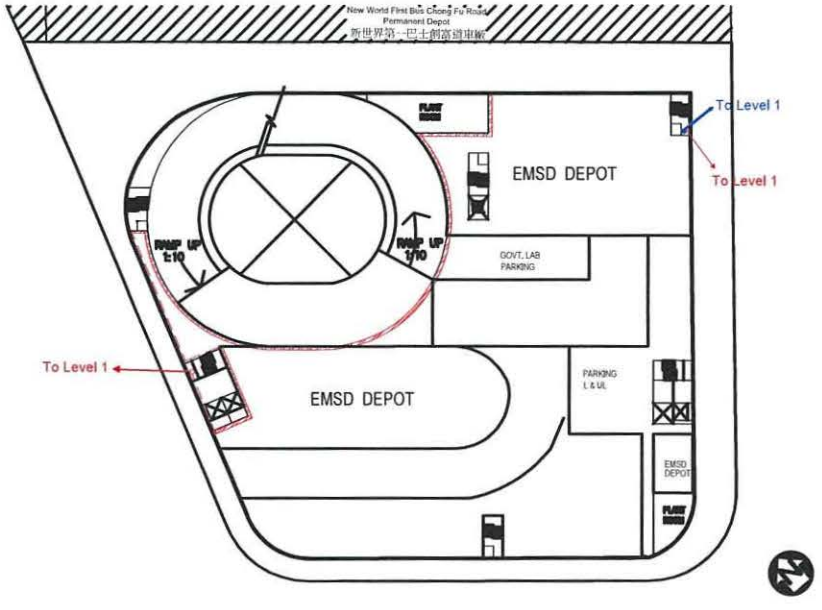
Project No.:	1158(A)
File Name:	
Project:	Chai Wan Government Complex and Vehicle Depot
Drawing Title:	Preliminary Layout for Drainage System
Drawing No.:	Figure 5.2a
Revision:	0
Scale:	NTS
Date:	Feburary 2019



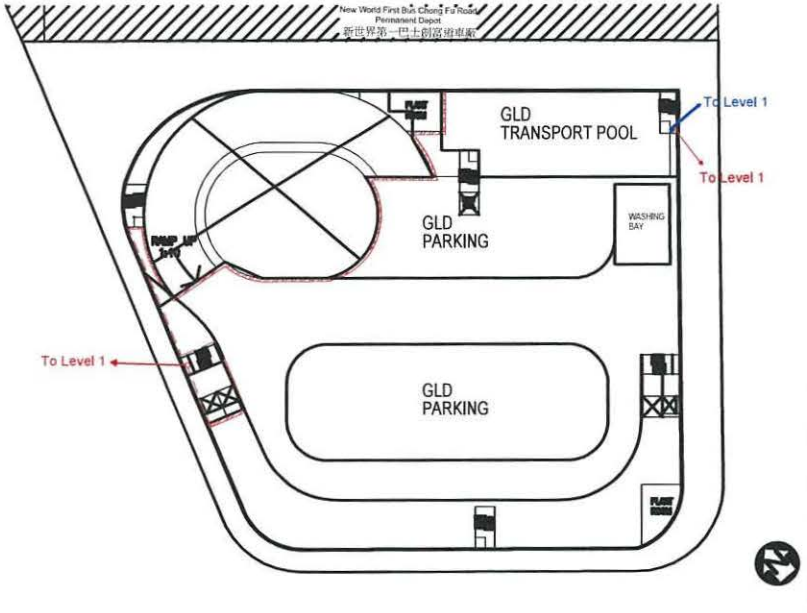
LEVEL 4 (+27.90) FLOOR PLAN



LEVEL 5 (+36.60) FLOOR PLAN



LEVEL 6 (+43.00) FLOOR PLAN



LEVEL 7 (+49.90) FLOOR PLAN

NOTES:

- Workshop Drainage
- Stormwater Drainage
- Petrol Interceptor
- Connection Pipe
- Silt Trap

Consultant

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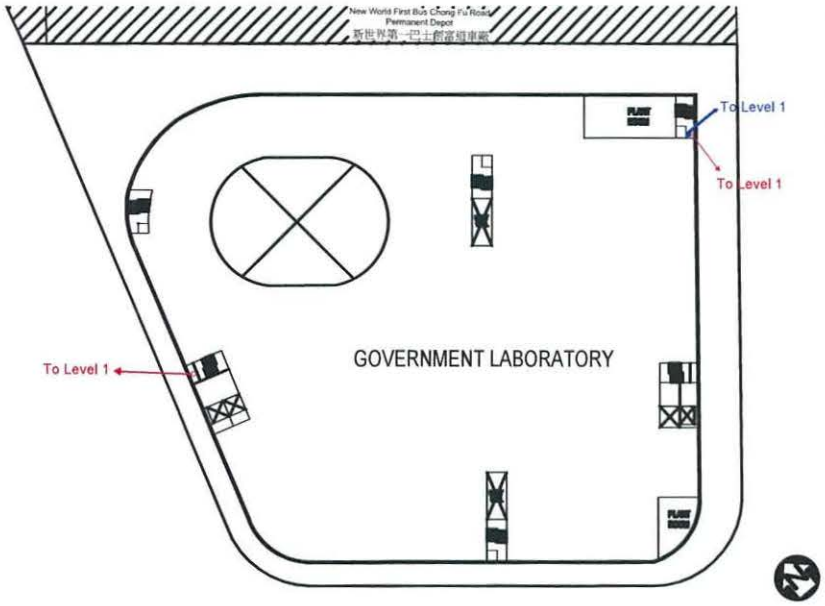
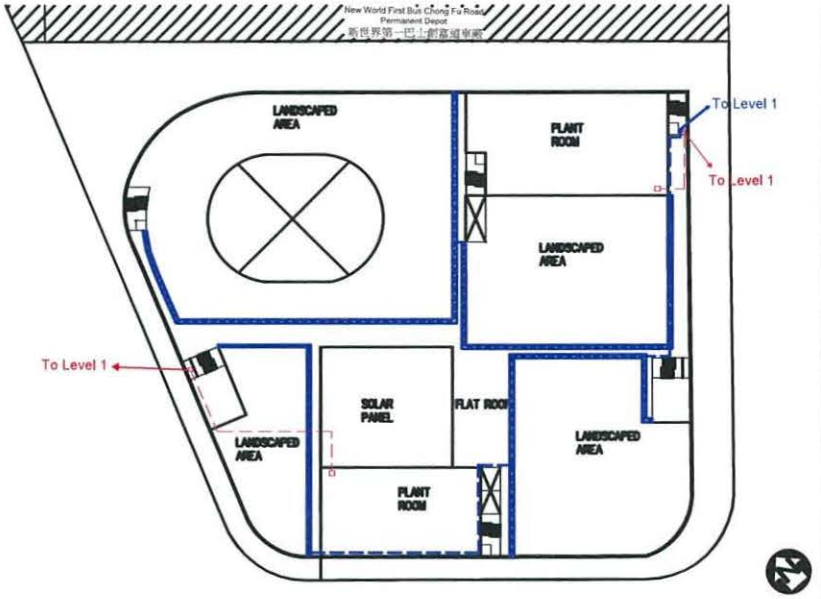
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.:	1158(A)
File Name:	
Project:	Chai Wan Government Complex and Vehicle Depot
Drawing Title:	Preliminary Layout for Drainage System
Drawing No.:	Figure 5.2b
Revision:	0
Scale:	NTS
Date:	February 2019



LEVEL 8 (+55.10) FLOOR PLAN



ROOF FLOOR PLAN

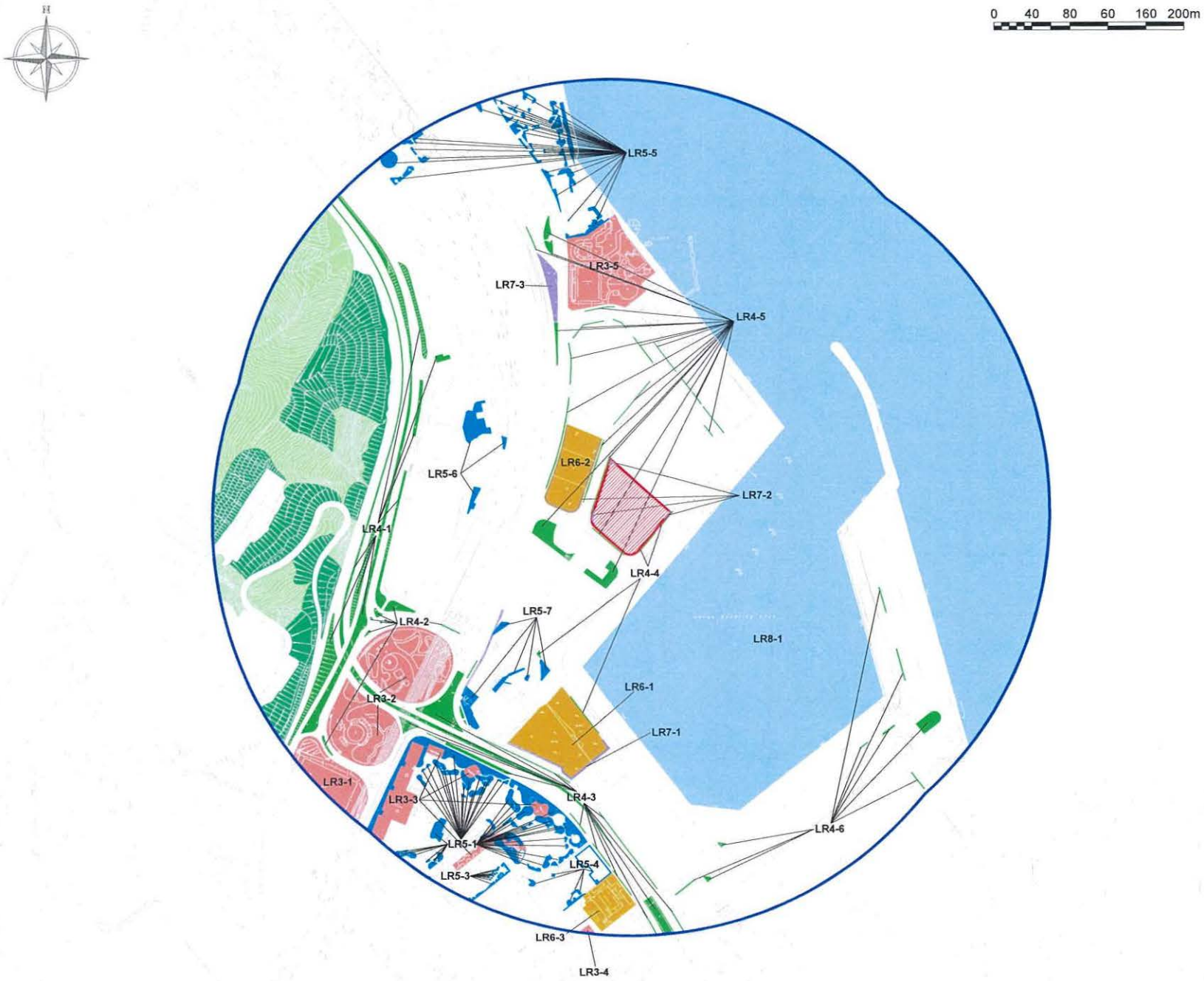
NOTES:

- Workshop Drainage
- Stormwater Drainage
- Petrol Interceptor
- Connection Pipe
- Silt Trap

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.:	1158(A)
File Name:	
Project:	Chai Wan Government Complex and Vehicle Depot
Drawing Title:	Preliminary Layout for Drainage System
Drawing No.:	Figure 5.2c
Revision:	0
Scale:	NTS
Date:	February 2019



NOTES :

- Project Site
- Study Area

LR1 - Natural Woodland
- LR1-1 North-eastern side of Pamela Youde Nethersole Eastern Hospital

LR2 - Vegetated Engineered Slope
- LR2-1 North-eastern side of Pamela Youde Nethersole Eastern Hospital

LR3 - Park/Recreation
- LR3-1 Chai Wan Park
- LR3-2 Wing Tai Road Garden
- LR3-3 Tsui Wan Estate Playgrounds, Tennis Court and Sitting-Out Area
- LR3-4 Yue Wan Estates Playground
- LR3-5 Heng Fa Chuen Playgrounds, Football Field and Sitting-Out Area

LR4 - Roadside Plantings
- LR4-1 Island Eastern Corridor
- LR4-2 Shun Tai Road
- LR4-3 Wing Tai Road
- LR4-4 Sheung On Street
- LR4-5 Chong Fu Road, Sheung Mau Street, Sheung Tat Street and Shing Tai Road
- LR4-6 Ka Yip Street and Sun Yip Street

LR5 - Residential/ Architectural Planting
- LR5-1 Tsui Wan Estate
- *LR5-2 (Not Used)*
- LR5-3 Tsui Lok Estate
- LR5-4 Roof of Hang Tsui Court Car Park
- LR5-5 Heng Fa Chuen
- LR5-6 Hong Kong Institute of Vocational Education (Chai Wan)
- LR5-7 THEi New Campus

LR6 - Open Space/ Vacant Land
- LR6-1 Bounded by Shing Tai Road, Sheung Ping Street, Sheung On Street and Wing Tai Road
- LR6-2 Bounded by Shing Tai Road, Sheung Tat Street and Sheung Mau Street
- LR6-3 Construction Site of Public Rental Housing at Wing Tai Road

LR7 - Open Space Vegetation
- LR7-1 Bounded by Shing Tai Road, Sheung Ping Street, Sheung On Street and Wing Tai Road
- LR7-2 Bounded by Shing Tai Road, Sheung Tat Street and Sheung Mau Street
- LR7-3 Near the intersection of Shing Tai Road and Chong Fu Road

LR8 - Cargo Handling Basin
- LR8-1 Chai Wan Cargo Handling Basin

Consultant

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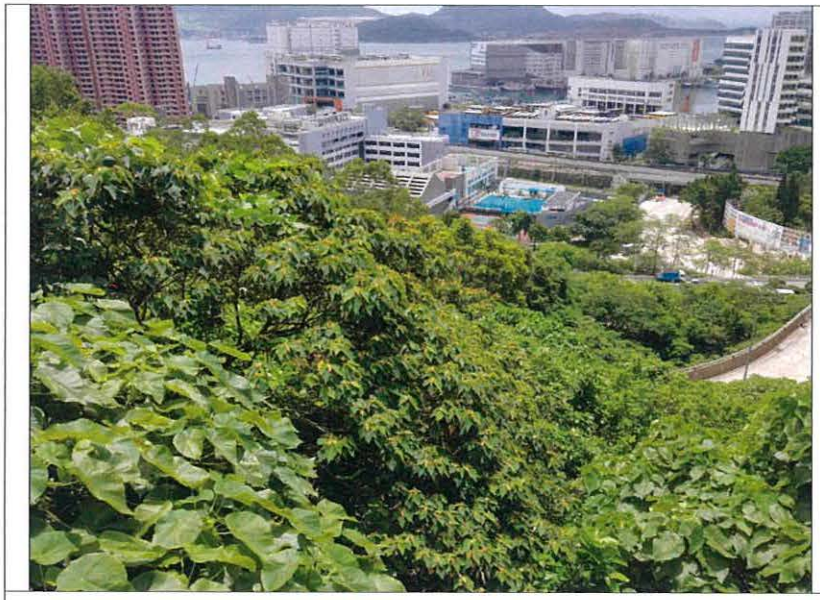
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Resources
Drawing No :	Figure 6.1a
Revision :	0
Scale :	As shown
Date :	December 2018



LR1

LR1 & LR2

LR3-1

LR3-2

NOTES :

Consultant

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ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Resources
Drawing No :	Figure 6.1b
Revision :	0
Scale :	NTS
Date :	December 2018

LR3-3

LR3-4

LR3-5

LR4-1

NOTES :

Consultant

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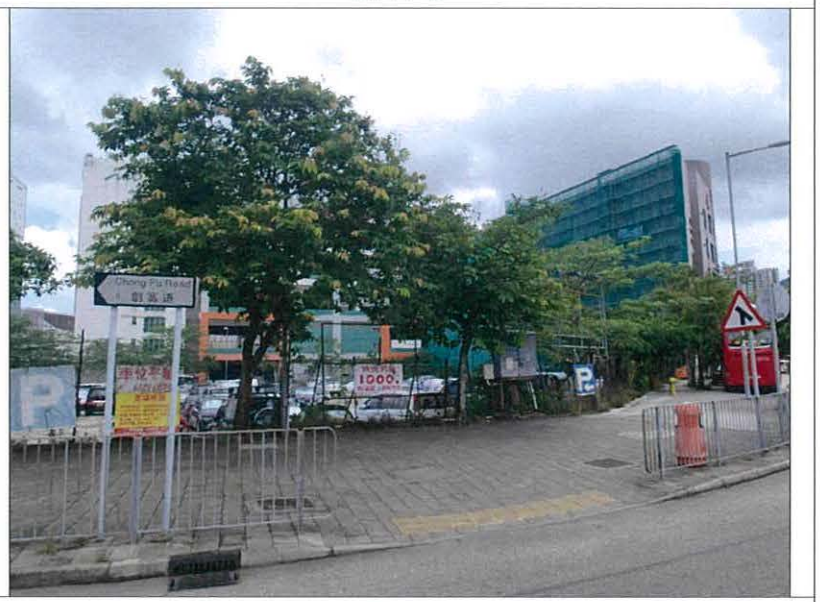
Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Resources
Drawing No :	Figure 6.1c
Revision :	0
Scale :	NTS
Date :	December 2018

LR4-2

LR4-3

LR4-4



LR4-5

NOTES :

Consultant

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Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Resources
Drawing No :	Figure 6.1d
Revision :	0
Scale :	NTS
Date :	December 2018

LR4-6

LR5-1

LR5-3

LR5-4

NOTES :

Consultant

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ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Resources
Drawing No :	Figure 6.1e
Revision :	0
Scale :	NTS
Date :	December 2018

LR5-5

LR5-6

LR5-7

LR6-1

NOTES :

Consultant

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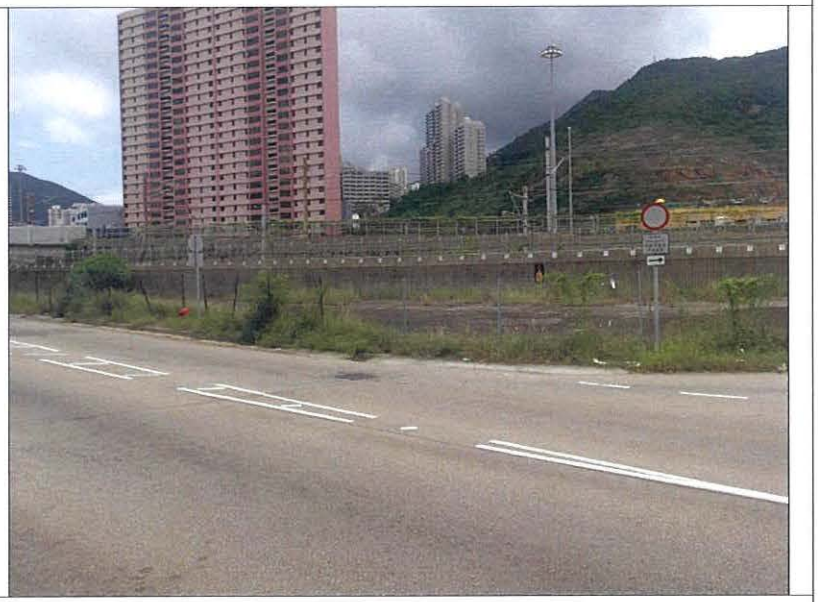
Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Resources
Drawing No :	Figure 6.1f
Revision :	0
Scale :	NTS
Date :	December 2018

LR6-2 & LR7-2

LR6-3

LR7-1



LR7-3

NOTES :

Consultant

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ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Resources
Drawing No :	Figure 6.1g
Revision :	0
Scale :	NTS
Date :	December 2018

LR8-1

NOTES :

Consultant

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ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Resources
Drawing No :	Figure 6.1h
Revision :	0
Scale :	NTS
Date :	December 2018

NOTES :

- Project Site
- Study Area
- LCA1 - Hillside Landscape
- LCA2 - Community/Residential Urban Landscape
- LCA3 - Park Landscape
- LCA4 - Industrial Urban Landscape
- LCA5 - Railway Viaduct Landscape
- LCA6 - Marine Landscape
- LCA7 - Open Car Parks/ Maintenance Workshops/ Vacant Land

Consultant

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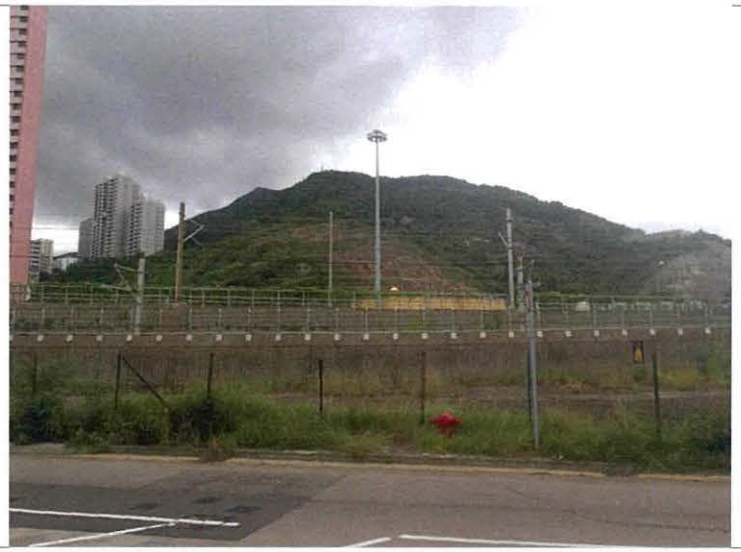
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Character Areas
Drawing No :	Figure 6.2a
Revision :	0
Scale :	As shown
Date :	December 2018

LCA1



LCA1

LCA2

LCA2 & LCA5

NOTES :

Consultant

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ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Character Areas
Drawing No :	Figure 6.2b
Revision :	0
Scale :	NTS
Date :	December 2018

LCA3

LCA3

LCA4

LCA4 & LCA6

NOTES :

Consultant

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Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Character Areas
Drawing No :	Figure 6.2c
Revision :	0
Scale :	NTS
Date :	December 2018

LCA4 & LCA6

LCA7

LCA7

NOTES :

Consultant

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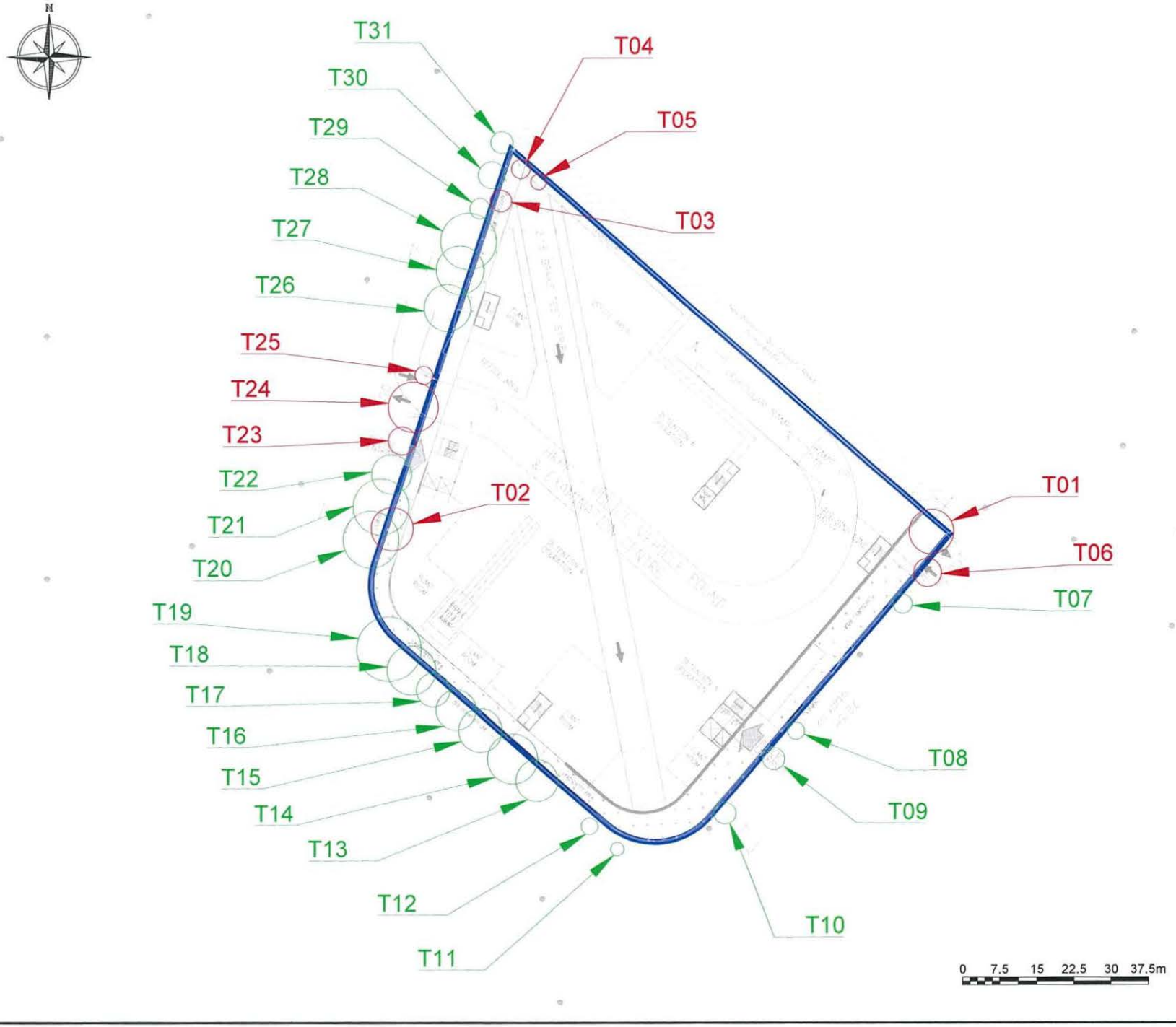
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Baseline Landscape Character Areas
Drawing No. :	Figure 6.2d
Revision :	0
Scale :	NTS
Date :	December 2018



NOTES :

Site Boundary

Tree to be felled

Tree to be retained

Consultant

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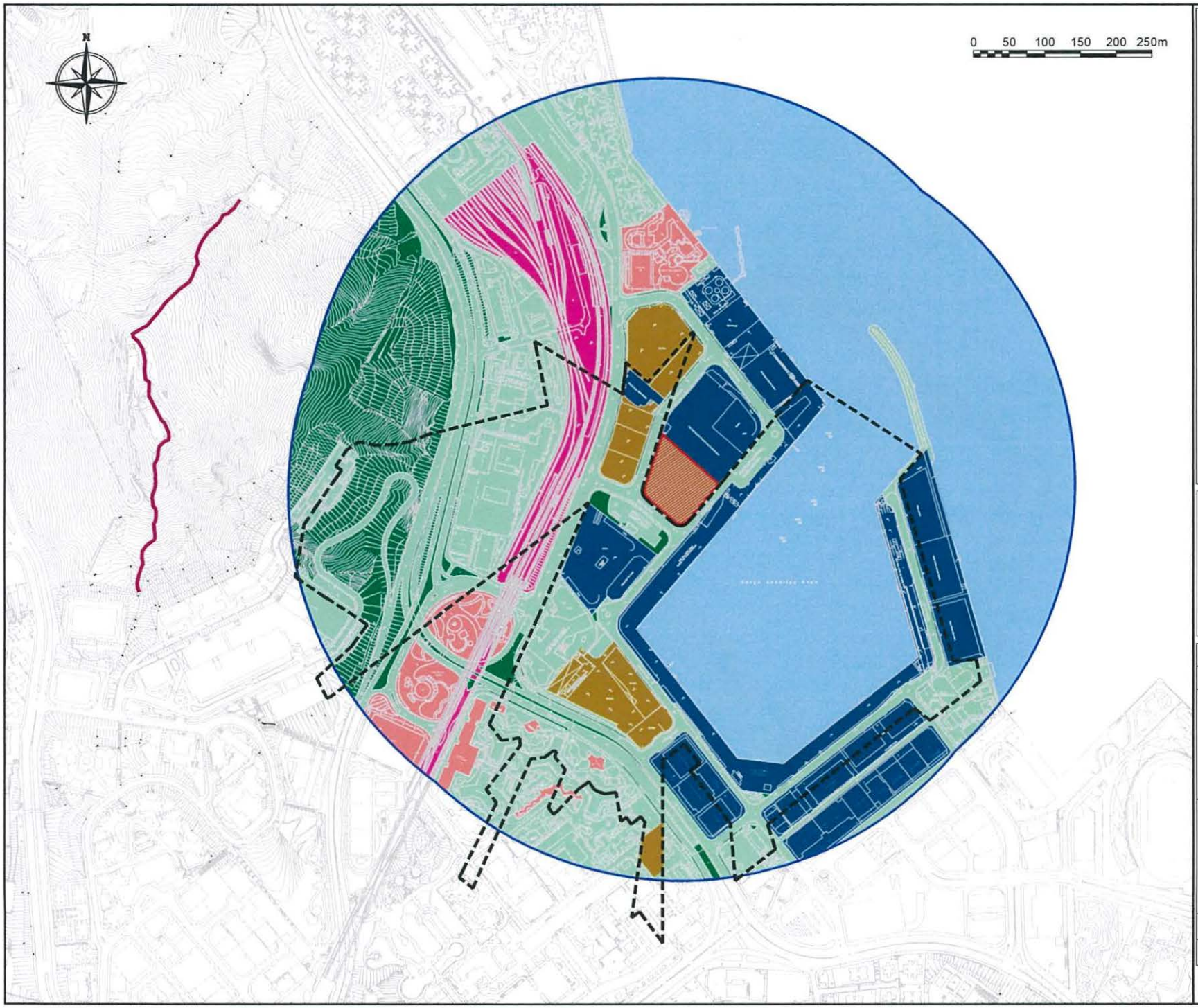
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Tree Recommendation Plan
Drawing No :	Figure 6.3
Revision :	0
Scale :	As shown
Date :	December 2018



Notes:

- Project Site
- 500m from Site Boundary
- Zone of Visual Influence (ZVI)
- Industrial Buildings
- Urban Developments
- Ridgelines
- Open Space (i.e. parks)
- Open Carparks/ Vacant Lands/ Construction Sites
- Vegetation/ Green Slopes
- MTR Viaducts
- Cargo Handling Basin/ Harbour

Consultant

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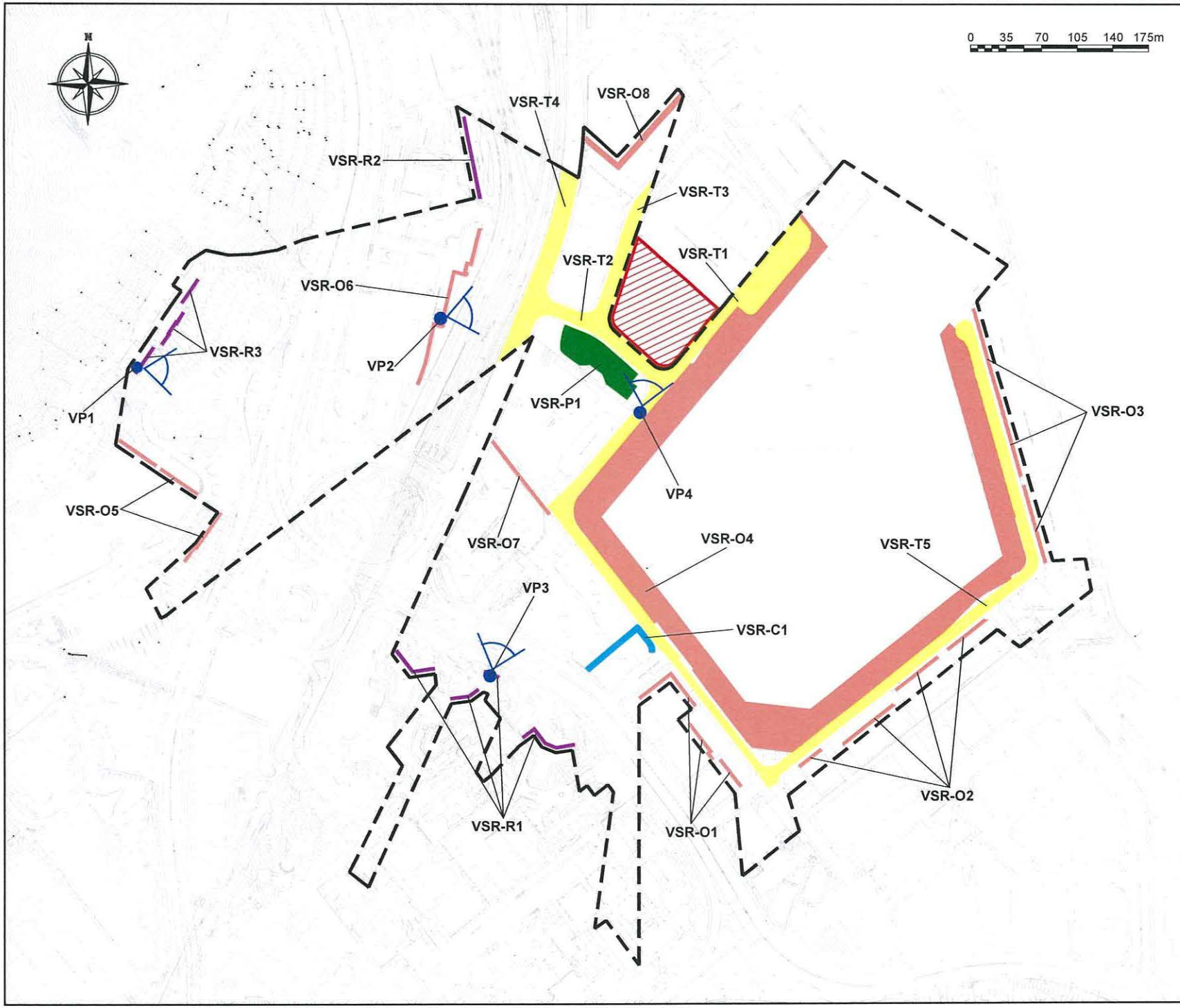
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Key Visual Characters and Resources
Drawing No :	Figure 6.4
Revision :	0
Scale :	As shown
Date :	December 2018



Notes:

- Project Site
- Zone of Visual Influence (ZVI)
- Key View Points
- Visible Area with Residential VSRs
  - VSR-R1 Residents of Tsui Wan Estate
  - VSR-R2 Residents of Knight Court
  - VSR-R3 Residents of Pamela Youde Nethersole Eastern Hospital - Blocks E, F, G
- Visible Area with Occupational VSRs
  - VSR-O1 Staff of Chai Wan Industrial City, Cornell Centre
  - VSR-O2 Staff of Yiko Industrial Building, Paramount Building, Ming Pao Industrial Centre
  - VSR-O3 Staff of Chivas Godown, Safety Godown Industrial Building, Kerry Godown
  - VSR-O4 Staff of Marine Department Chai Wan Public Cargo Working Area
  - VSR-O5 Staff of Pamela Youde Nethersole Eastern Hospital - East Block
  - VSR-O6 Staff and Students of Hong Kong Institute of Vocational Education (Chai Wan)
  - VSR-O7 Staff and Students of Planned THEi New Campus
  - VSR-O8 Staff of Water Supplies Department and Correctional Services Department Headquarters (WSDCSDHQ)
- Visible Area with Travelling VSRs
  - VSR-T1 Travellers at Sheung On Street
  - VSR-T2 Travellers at Sheung Mau Street
  - VSR-T3 Travellers at Sheung Tat Street
  - VSR-T4 Travellers at Shing Tai Road
  - VSR-T5 Travellers at Ka Yip Street
- Visible Area with Recreational VSRs
  - VSR-C1 Users of Pet Garden
- Visible Area with both Travelling and Occupational VSRs
  - VSR-P1 Users/Staffs of ExxonMobil Petrol-cum-LPG Filling Station

Consultant

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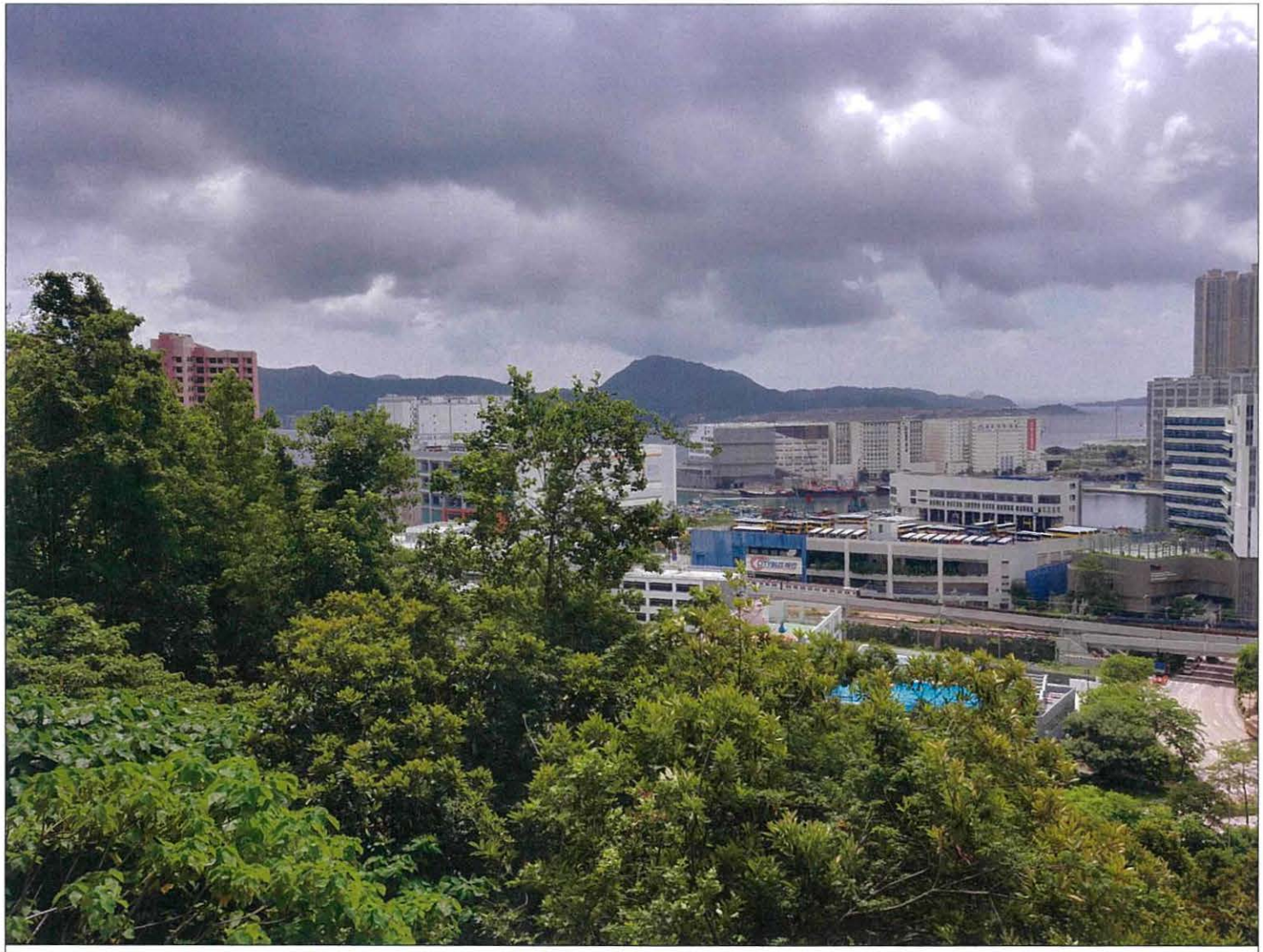
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Visual Sensitive Receivers and Key View Points
Drawing No :	Figure 6.5
Revision :	0
Scale :	As shown
Date :	December 2018



VP1: Block E of Pamela Youde Nethersole Eastern Hospital Senior Civil Servants Quarters

Existing Condition

NOTES:

Consultant

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ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 1 of 4)
Drawing No :	Figure 6.6a
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297

VP1: Block E of Pamela Youde Nethersole Eastern Hospital Senior Civil Servants Quarters

Unmitigated Impact at Day 1

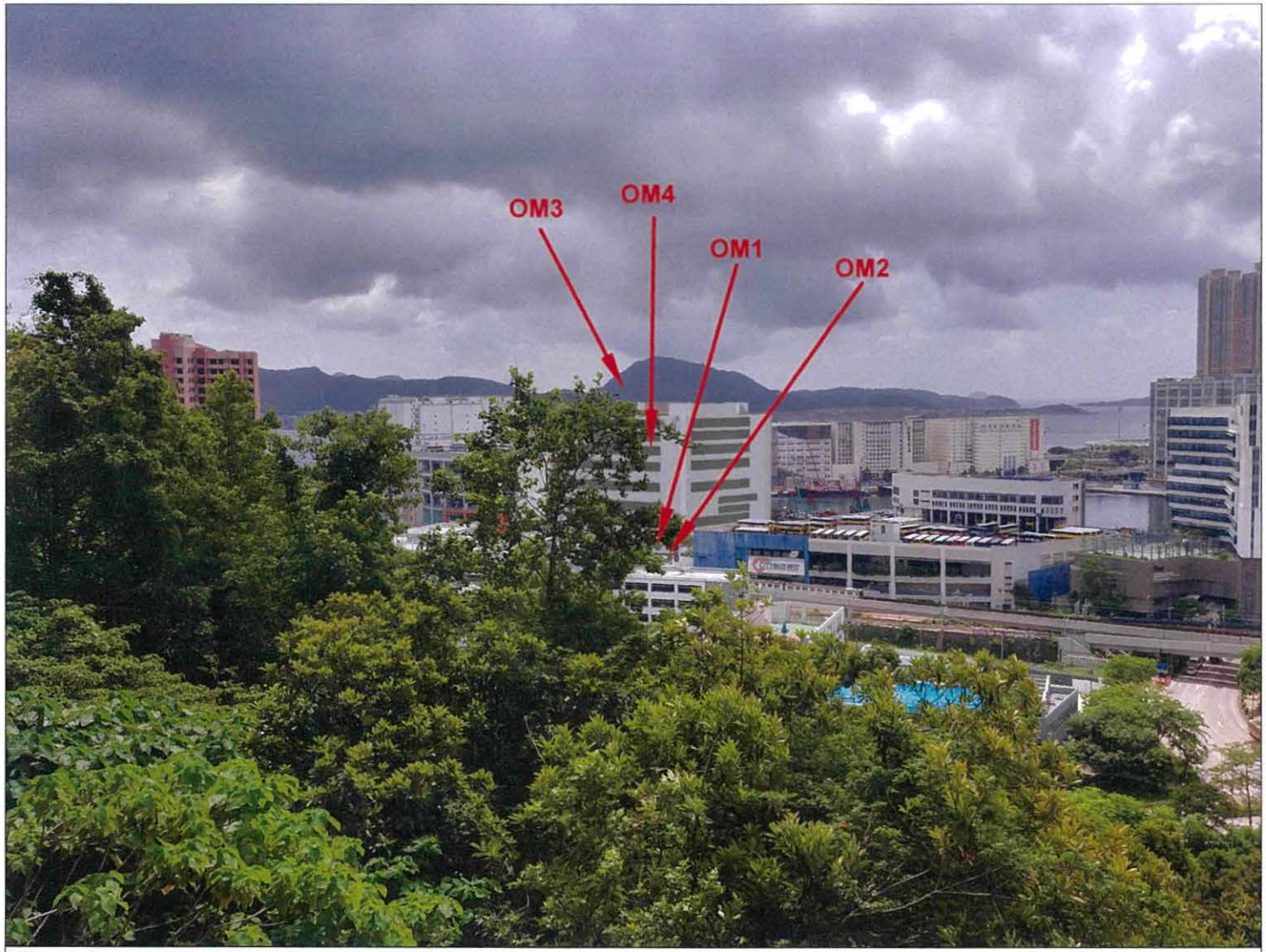
NOTES:

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 2 of 4)
Drawing No :	Figure 6.6a
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297



VP1: Block E of Pamela Youde Nethersole Eastern Hospital Senior Civil Servants Quarters

Mitigated Impact at Day 1

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

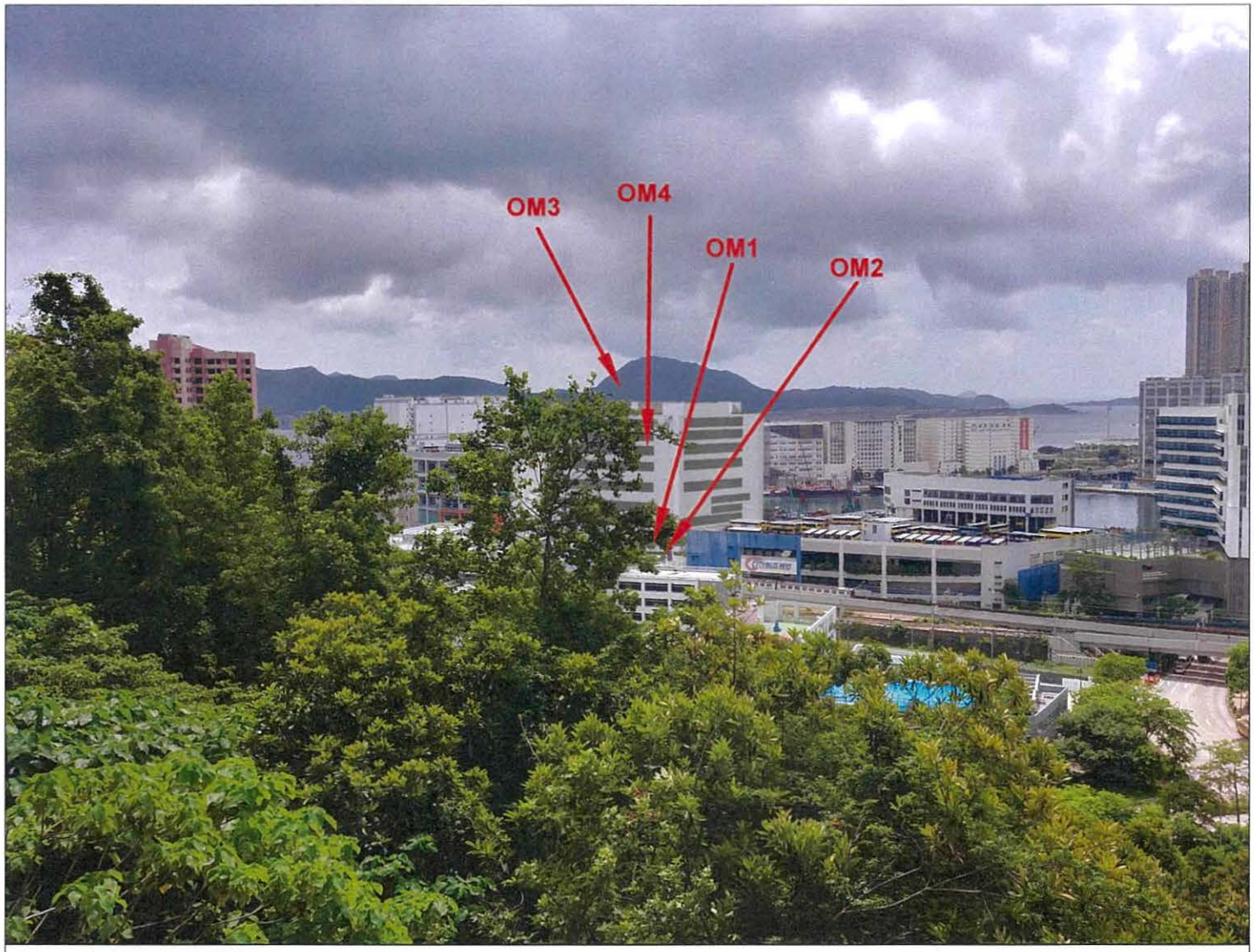
(Details refer to Section 7.8 of EIA Report)

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No.	1158(A)
File Name	
Project	Chai Wan Government Complex and Vehicle Depot
Drawing Title	Photomontage (Sheet 3 of 4)
Drawing No.	Figure 6.6a
Revision	0
Scale	NTS
Date	December 2018

A3 420 x 297



VP1: Block E of Pamela Youde Nethersole Eastern Hospital Senior Civil Servants Quarters

Residual Impact at Year 10

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

(Details refer to Section 7.8 of EIA Report)

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 4 of 4)
Drawing No :	Figure 6.6a
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297

VP2: Hong Kong Institute of Vocational Education (Chai Wan)

Existing Condition

NOTES:

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.	1158(A)
File Name	
Project	Chai Wan Government Complex and Vehicle Depot
Drawing Title	Photomontage (Sheet 1 of 4)
Drawing No.	Figure 6.6b
Revision	0
Scale	NTS
Date	December 2018

A3 420 x 297

VP2: Hong Kong Institute of Vocational Education (Chai Wan)

Unmitigated Impact at Day 1

NOTES:

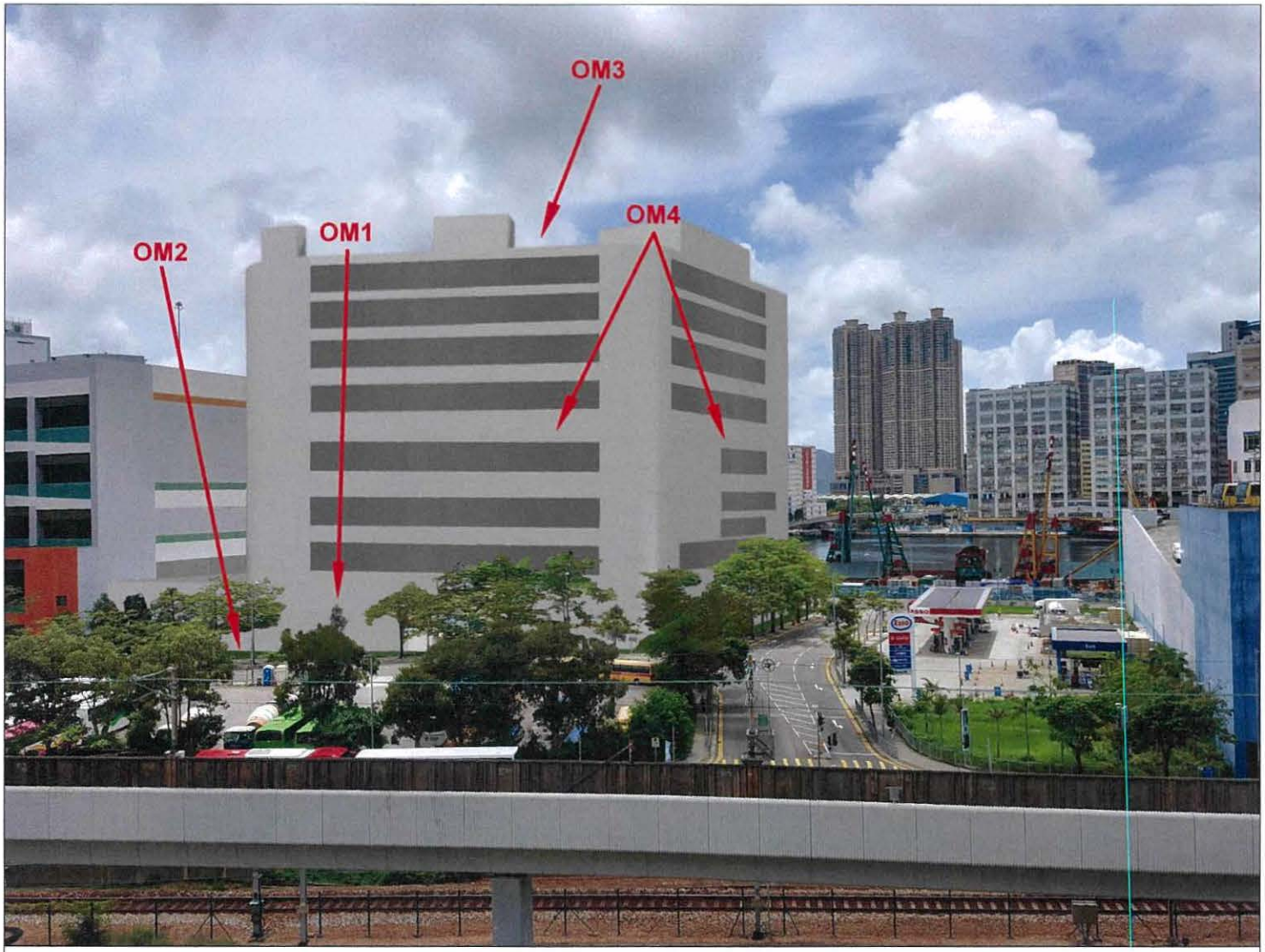
Consultant

Allied Environmental Consultants Limited

ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 2 of 4)
Drawing No :	Figure 6.6b
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297



VP2: Hong Kong Institute of Vocational Education (Chai Wan)

Mitigated Impact at Day 1

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

(Details refer to Section 7.8 of EIA Report)

Consultant

Allied Environmental Consultants Limited

ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No.:	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 3 of 4)
Drawing No :	Figure 6.6b
Revision :	0
Scale :	NTS
Date :	December 2018

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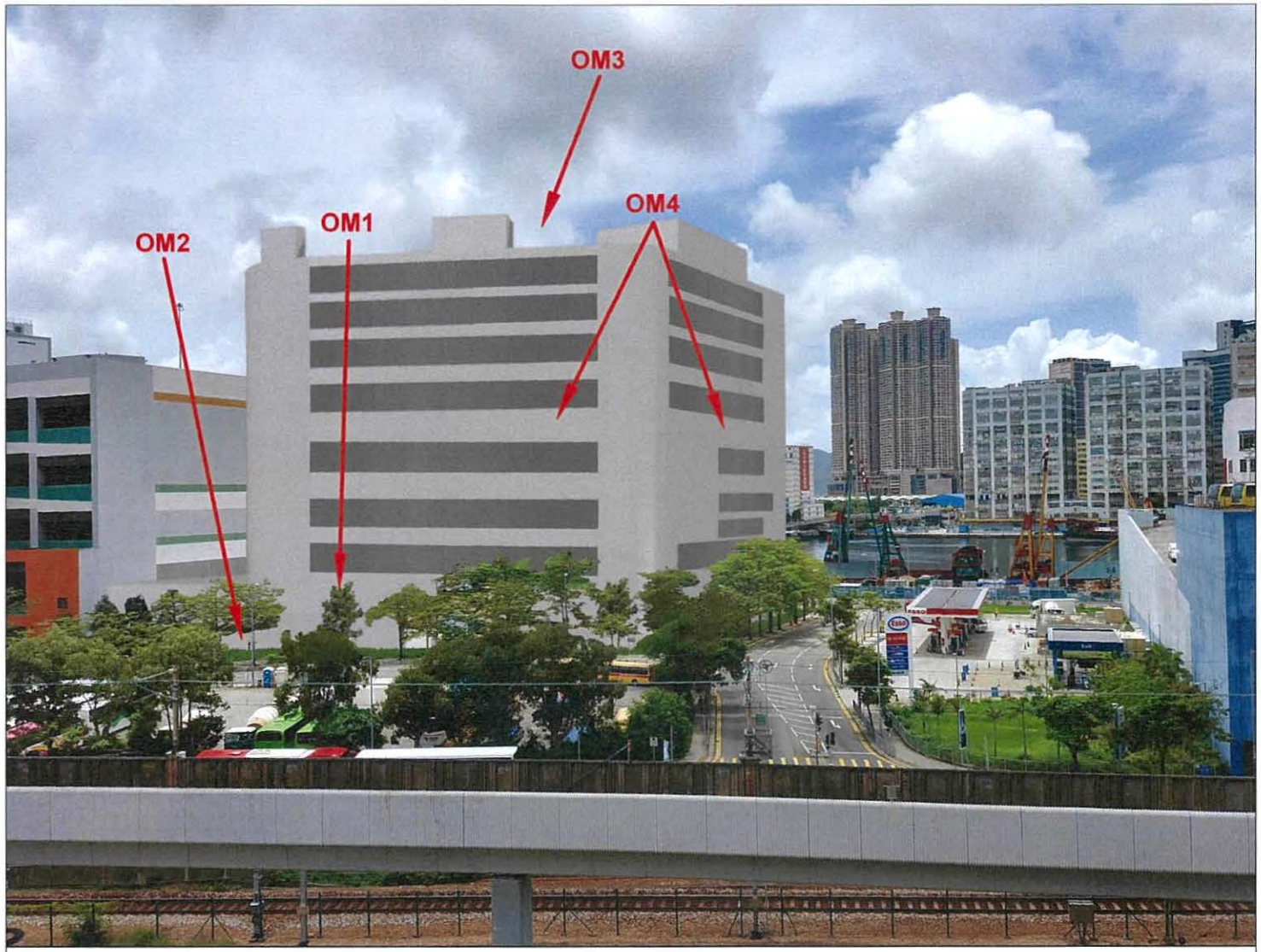

VP2: Hong Kong Institute of Vocational Education (Chai Wan)

Residual Impact at Year 10

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

(Details refer to Section 7.8 of EIA Report)

Consultant

Allied Environmental Consultants Limited

ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 4 of 4)
Drawing No :	Figure 6.6b
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297

VP3: Tsui Shou House, Tsui Wan Estate (5/F)
Existing Condition

NOTES:

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 1 of 8)
Drawing No :	Figure 6.6c
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297

VP3: Tsui Shou House, Tsui Wan Estate (5/F)

Unmitigated Impact at Day 1

NOTES:

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 2 of 8)
Drawing No :	Figure 6.6c
Revision :	0
Scale :	NTS
Date :	December 2018

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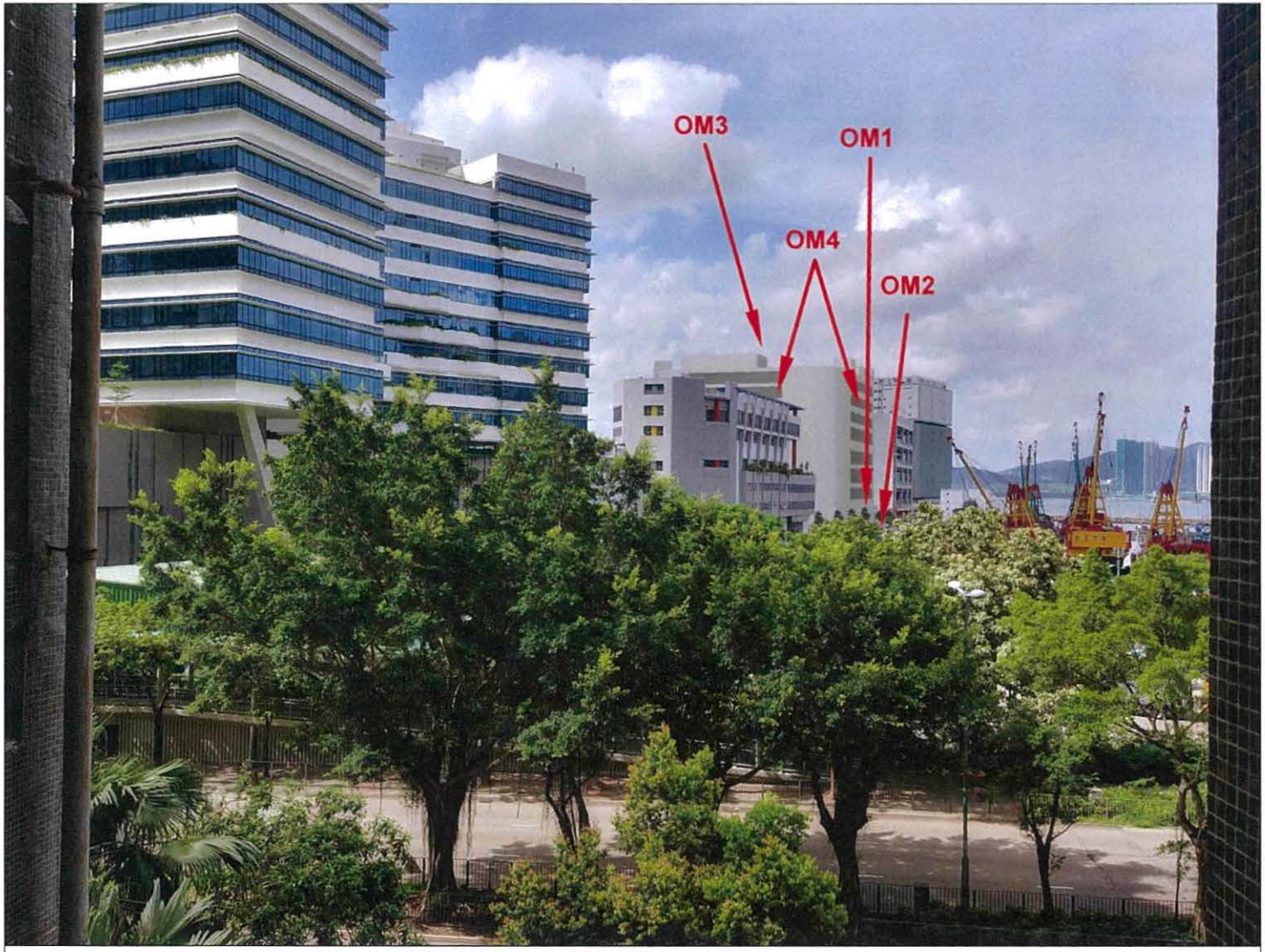

VP3: Tsui Shou House, Tsui Wan Estate (5/F)

Mitigated Impact at Day 1

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

(Details refer to Section 7.8 of EIA Report)

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 3 of 8)
Drawing No :	Figure 6.6c
Revision :	0
Scale :	NTS
Date :	December 2018

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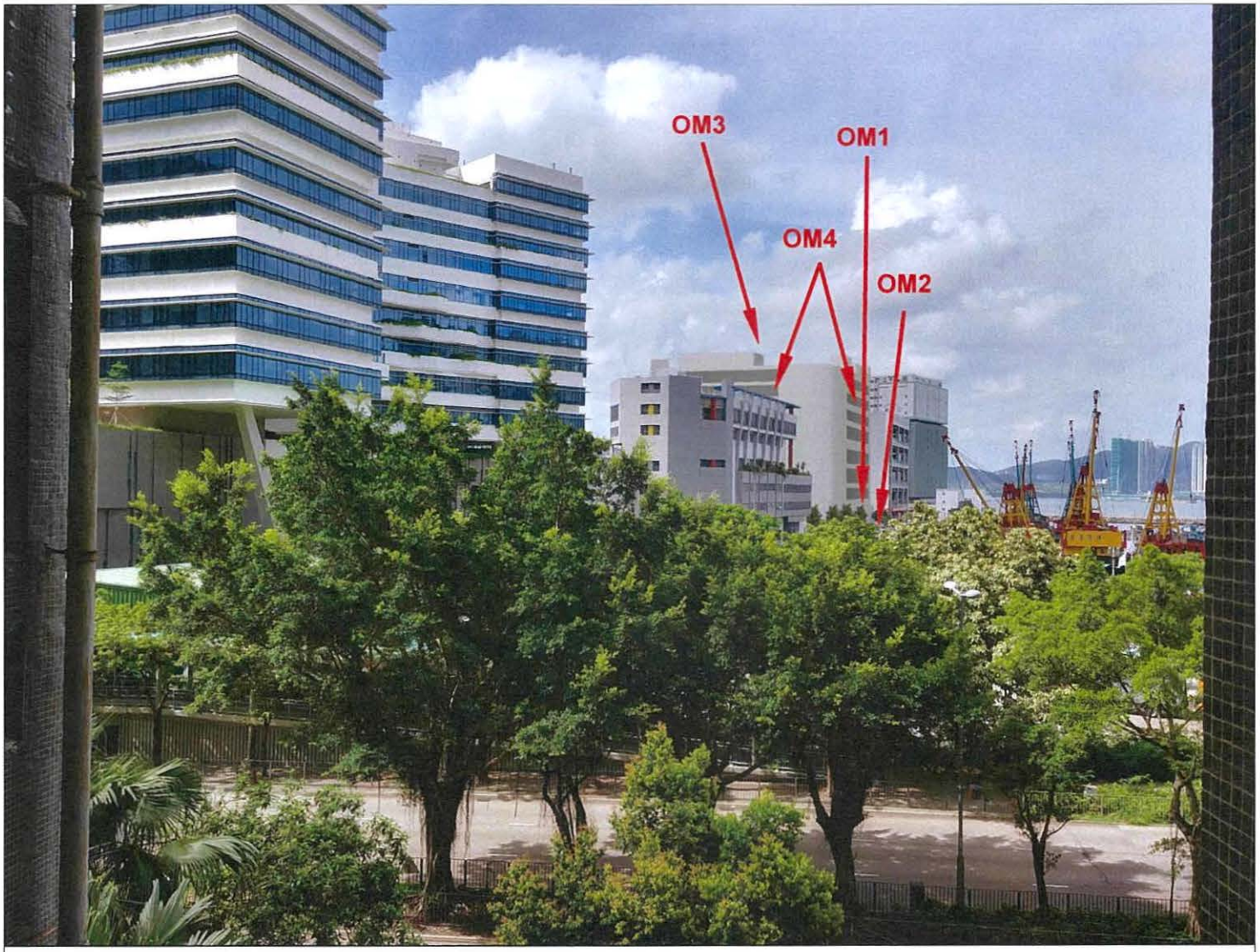

VP3: Tsui Shou House, Tsui Wan Estate (5/F)

Residual Impact at Year 10

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

(Details refer to Section 7.8 of EIA Report)

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 4 of 8)
Drawing No :	Figure 6.6c
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297

VP3: Tsui Shou House, Tsui Wan Estate (27/F)

Existing Condition

NOTES

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No.	1158(A)
File Name	
Project	Chai Wan Government Complex and Vehicle Depot
Drawing Title	Photomontage (Sheet 5 of 8)
Drawing No.	Figure 6.6c
Revision	0
Scale	NTS
Date	December 2018

A3 420 x 297

VP3: Tsui Shou House, Tsui Wan Estate (27/F)

Unmitigated Impact at Day 1

NOTES:

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 6 of 8)
Drawing No :	Figure 6.6c
Revision :	0
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Date :	December 2018

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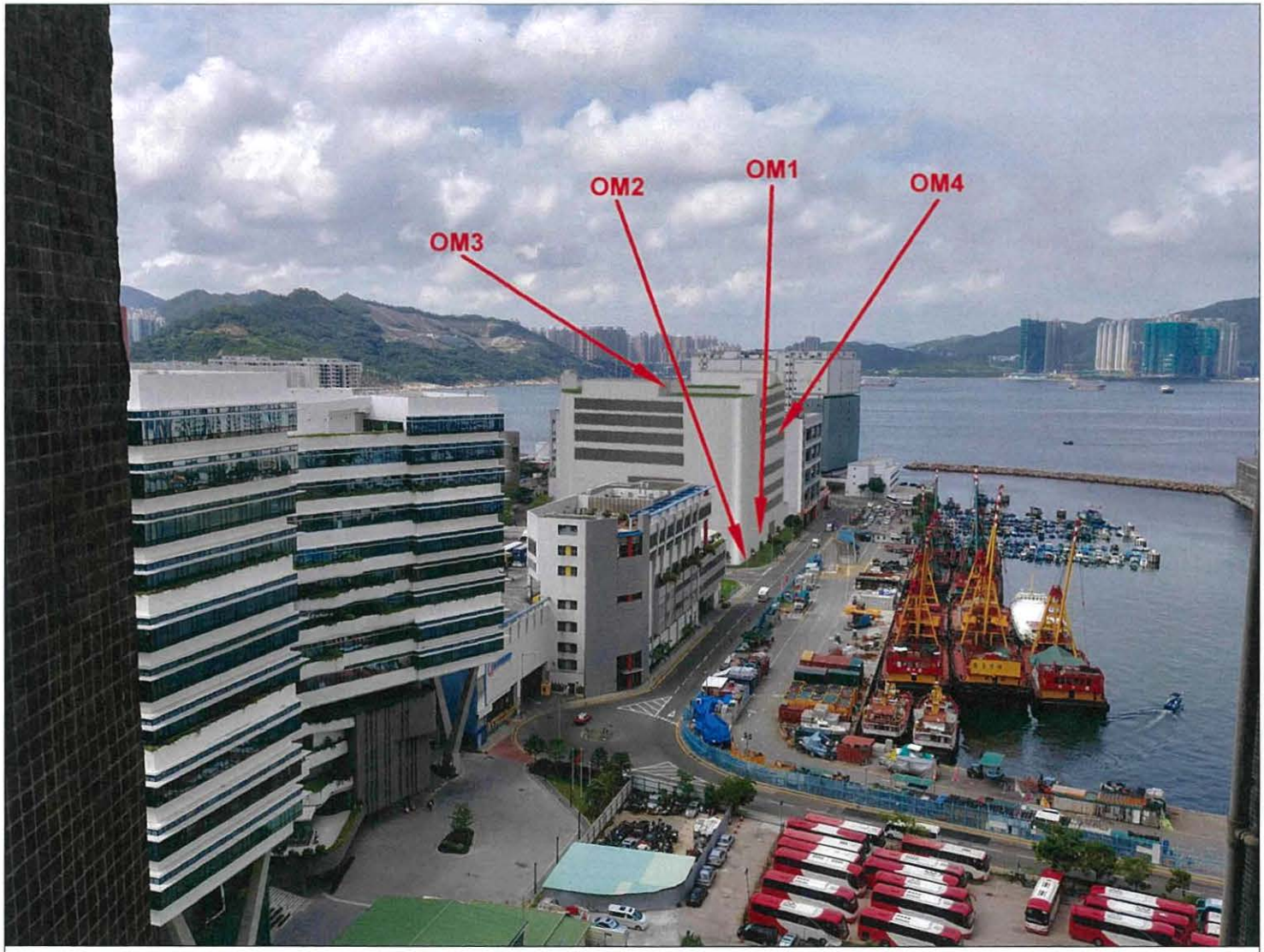


VP3: Tsui Shou House, Tsui Wan Estate (27/F)

Mitigated Impact at Day 1

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

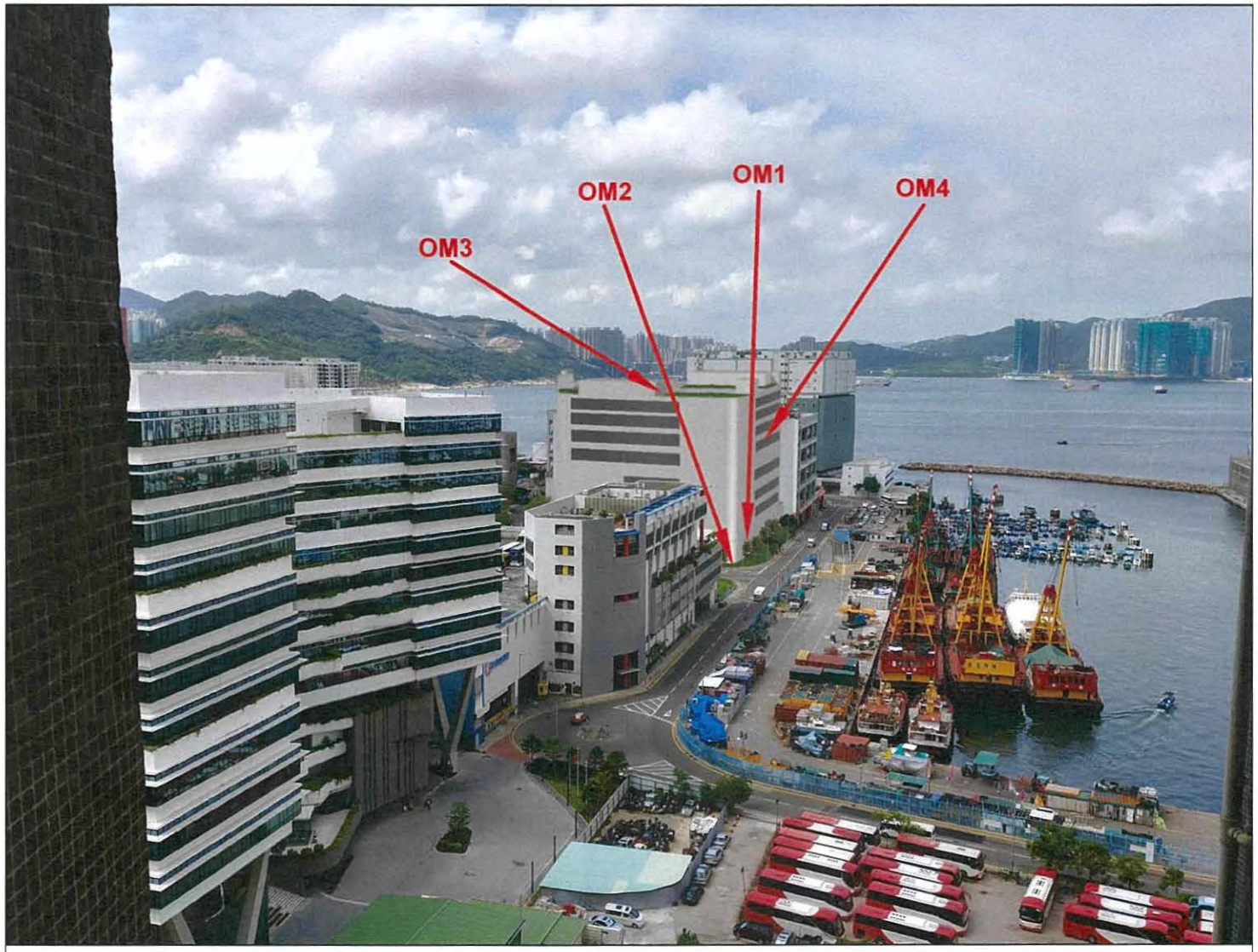
(Details refer to Section 7.8 of EIA Report)

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 7 of 8)
Drawing No :	Figure 6.6c
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297



VP3: Tsui Shou House, Tsui Wan Estate (27/F)

Residual Impact at Year 10

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

(Details refer to Section 7.8 of EIA Report)

Consultant

AEC

Allied Environmental Consultants Limited

ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 8 of 8)
Drawing No :	Figure 6.6c
Revision :	0
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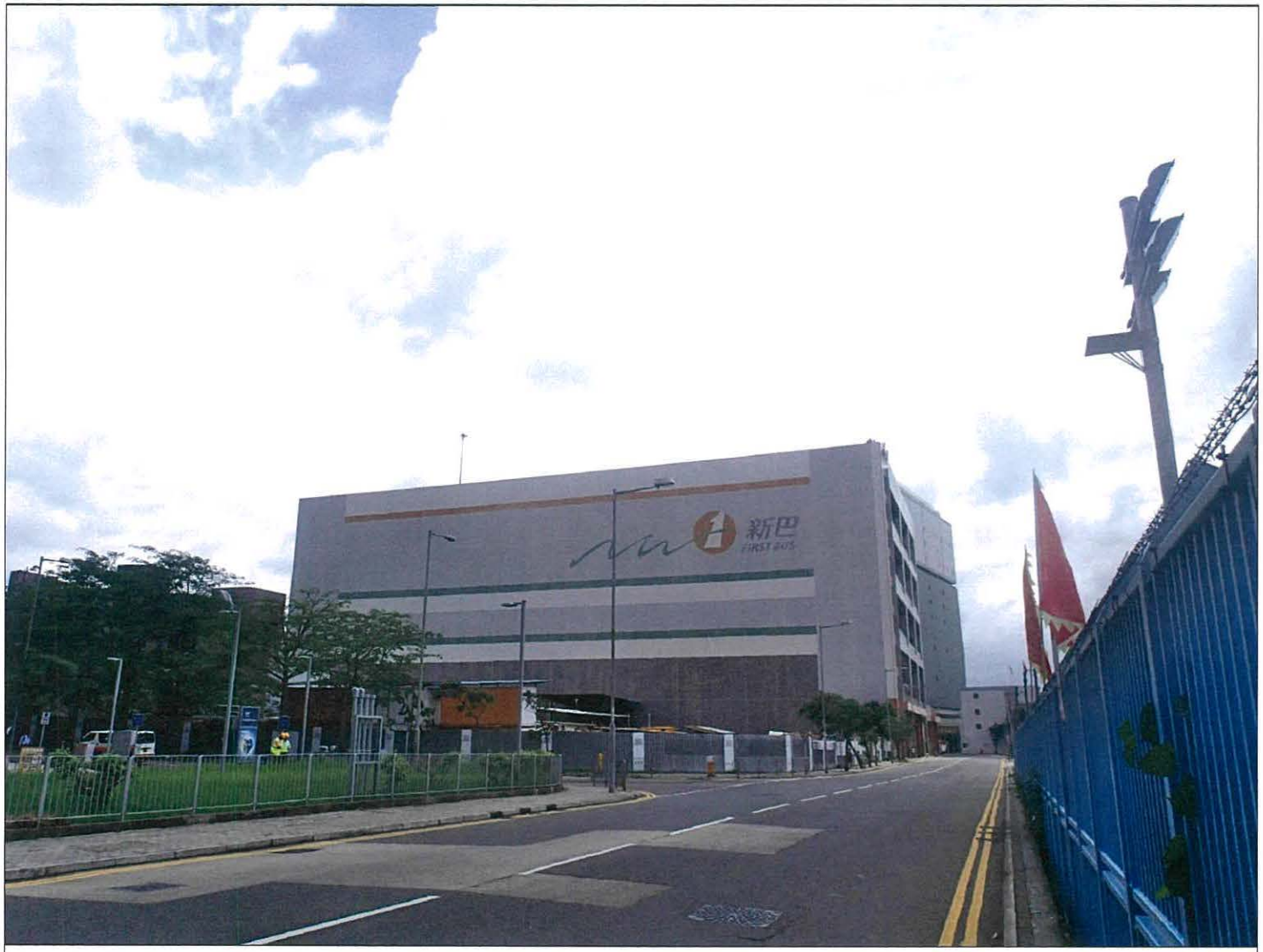
Date :	December 2018

A3 420 x 297



VP4: Sheung On Street

Existing Condition

NOTES:

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 1 of 4)
Drawing No : Figure 6.6d	Revision : 0
Scale : NTS	Date : December 2018

A3 420 x 297

VP4: Sheung On Street

Unmitigated Impact at Day 1

NOTES:

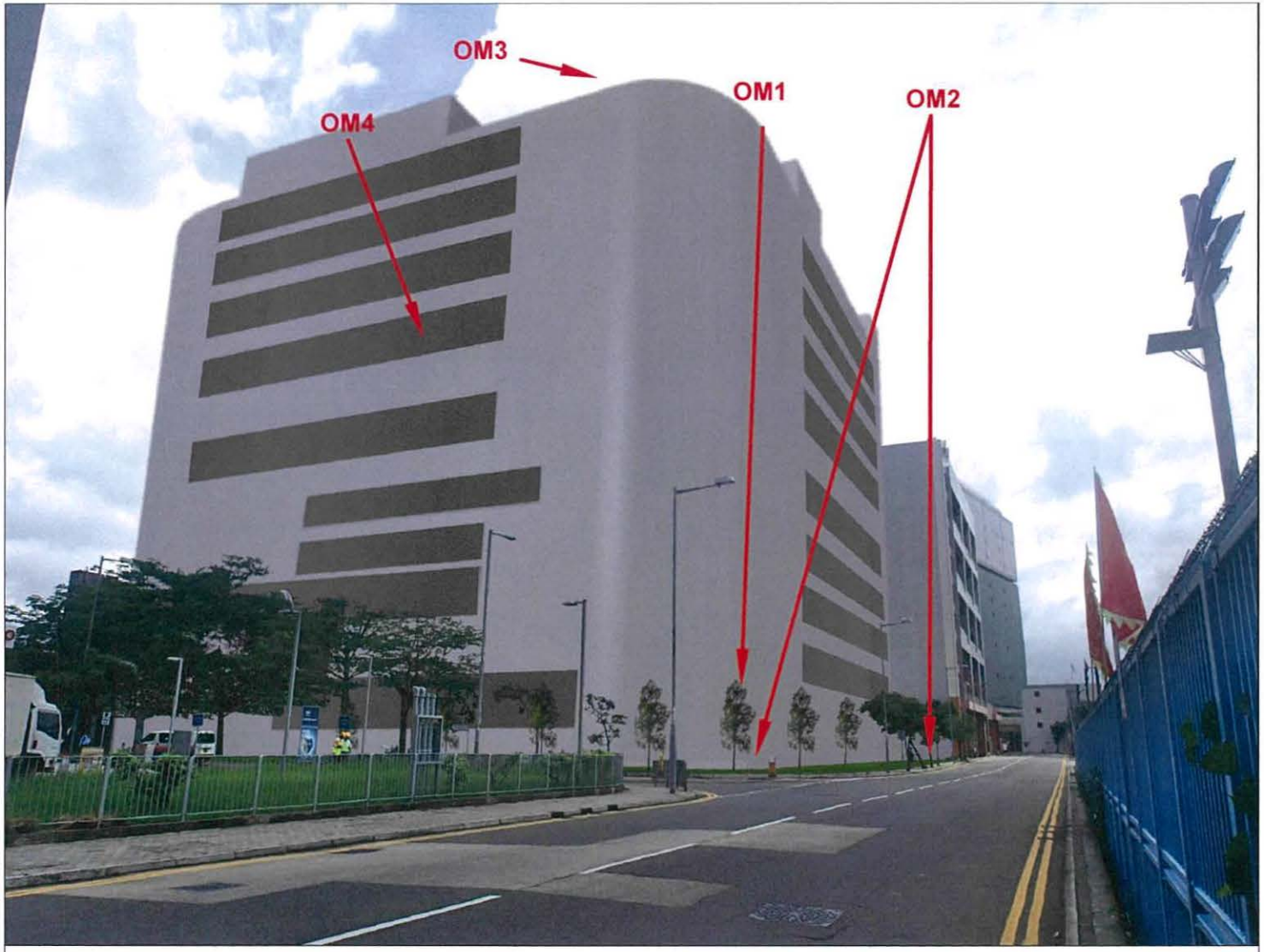
Consultant

Allied Environmental Consultants Limited

ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 2 of 4)
Drawing No :	Figure 6.6d
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297



VP4: Sheung On Street

Mitigated Impact at Day 1

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

(Details refer to Section 7.8 of EIA Report)

Consultant

Allied Environmental Consultants Limited

ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 3 of 4)
Drawing No :	Figure 6.6d
Revision :	0
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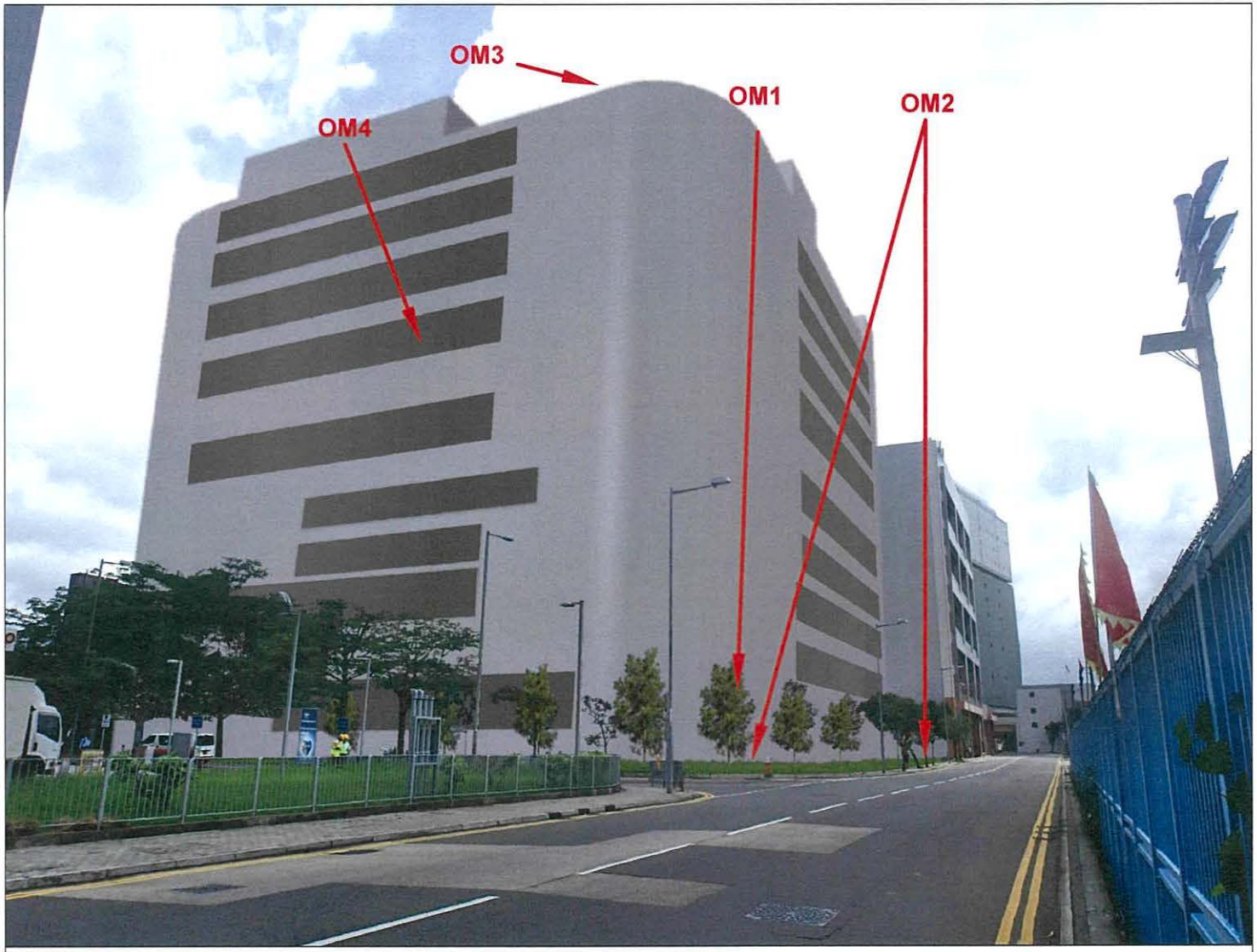
Date :	December 2018

A3 420 x 297



VP4: Sheung On Street

Residual Impact at Year 10

NOTES:

OM1 - Compensatory Planting

OM2 - Landscape Planting (other than compensatory planting) near Pedestrian Zone

OM3 - Green Roof

OM4 - Hard Landscape Design and Lighting Design

(Details refer to Section 7.8 of EIA Report)

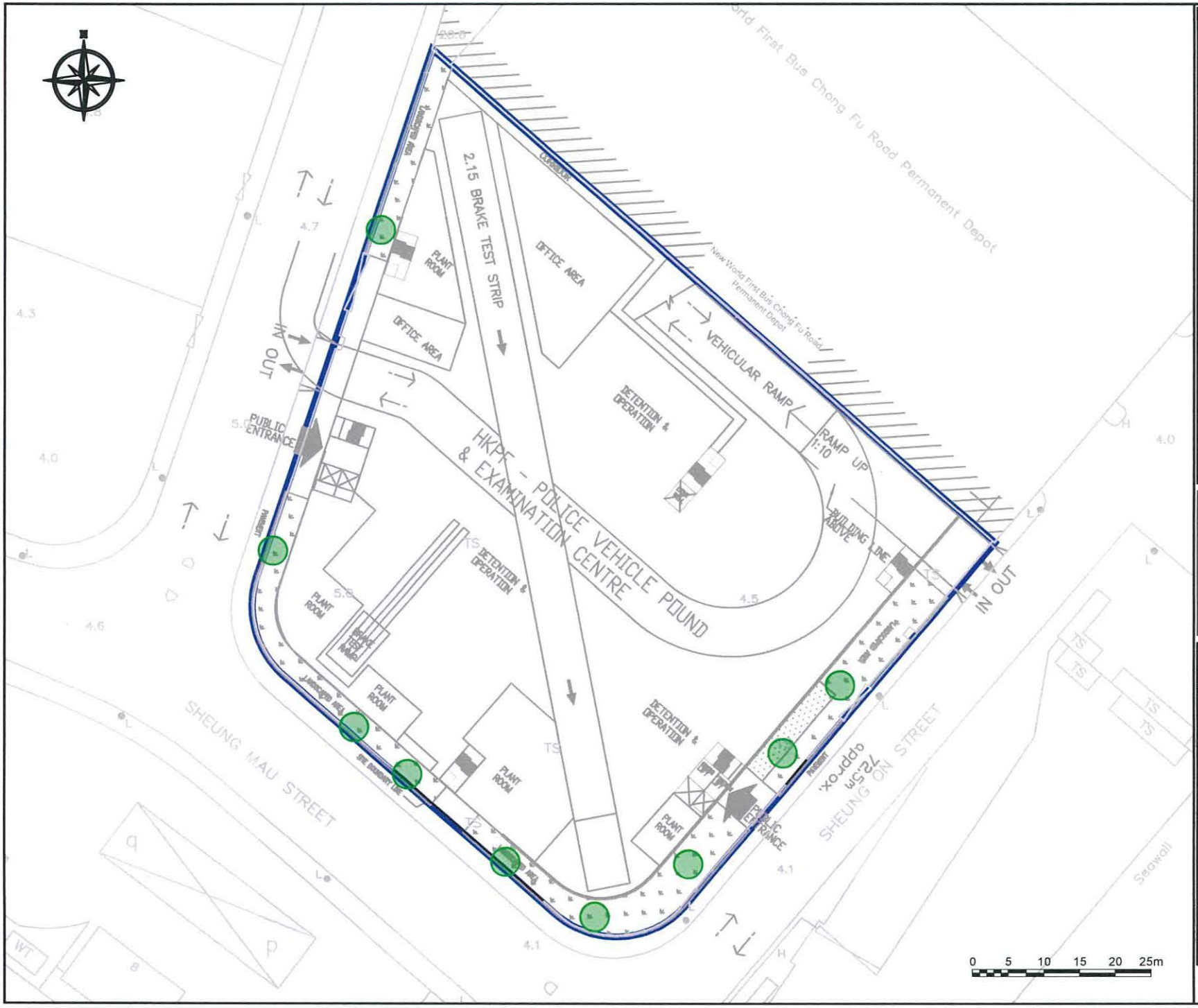
Consultant

Allied Environmental Consultants Limited

ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Photomontage (Sheet 4 of 4)
Drawing No :	Figure 6.6d
Revision :	0
Scale :	NTS
Date :	December 2018

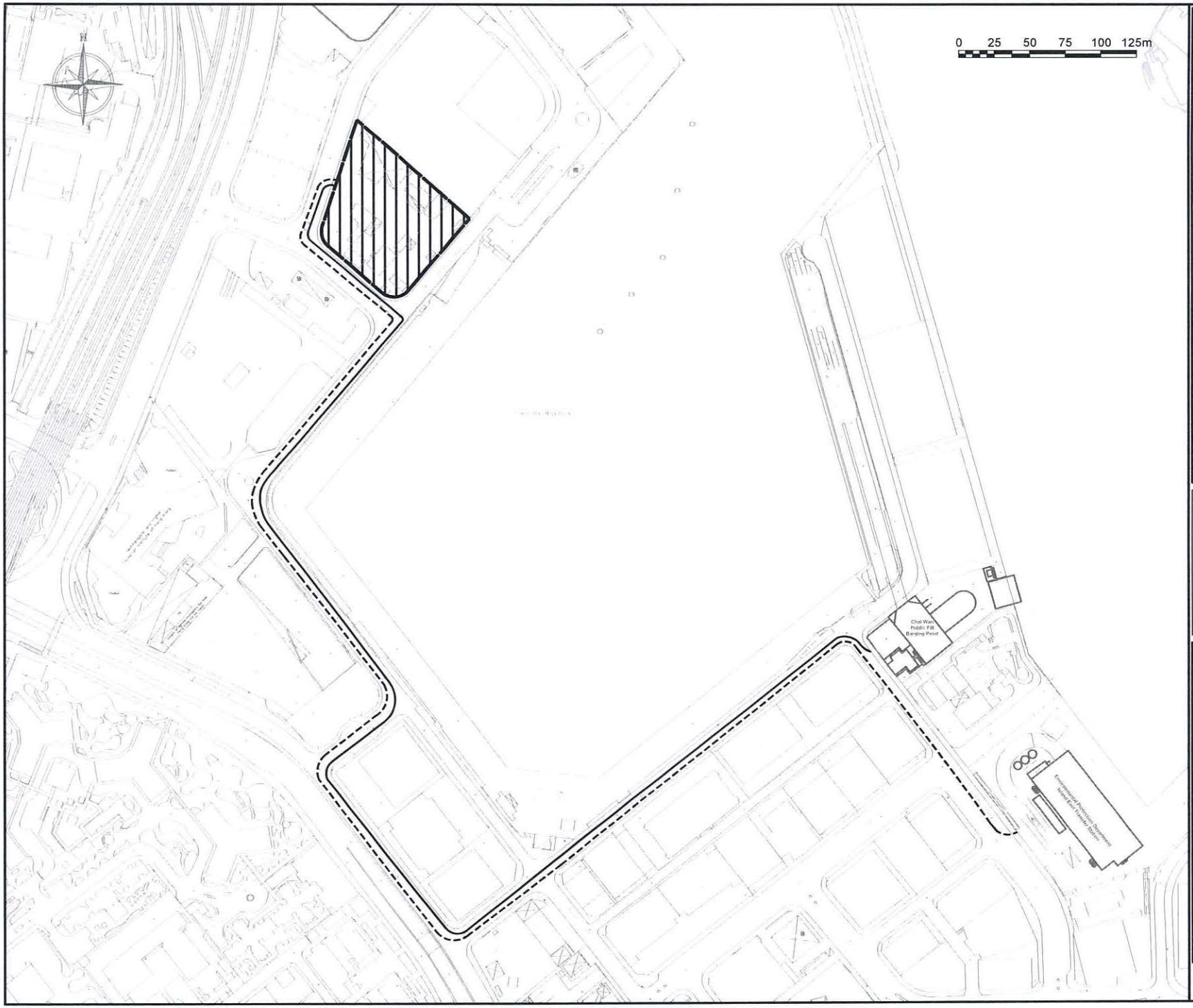
A3 420 x 297



Consultant

Allied Environmental Consultants Limited
Acoustic & Environmental Engineers

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Preliminary Compensatory Planting Plan
Drawing No : Figure 6.7	Revision : 0
Scale : As shown	Date : December 2018



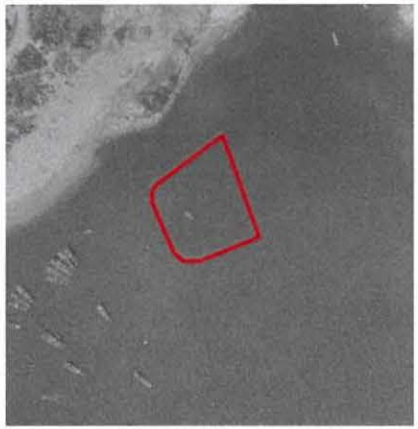
NOTES :

- Project Site
- Transportation Route of Dump Truck to Island East Refuse Transfer Station
- Transportation Route of Dump Truck to Chai Wan Public Fill Barging Point (PRBP)

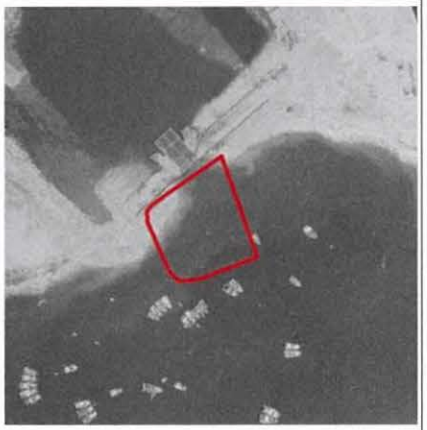
Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

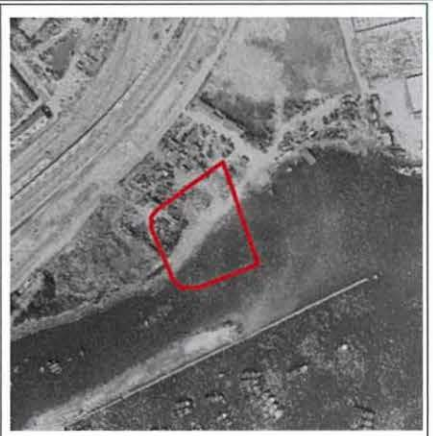
Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Proposed Transportation Routes of Dump Trucks
Drawing No :	Figure 7.1
Revision :	0
Scale :	As shown
Date :	December 2018



26th February 1975



14th September 1979



22nd October 1984

15th August 1989

5th May 1994

3rd November 1999

4th March 2004

1st June 2013

26th July 2017

NOTES :

Site boundary

Consultant

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

Project No.	1158(A)
File Name	
Project	Chai Wan Government Complex and Vehicle Depot
Drawing Title	Aerial Photograph Review
Drawing No.	Figure 8.1
Revision :	1
Scale :	NTS
Dat :	May 2019

Appendices

Appendix 3.1

Calculation of Emission Factors of Travelling Vehicles of Open Road

Methodology of Emission Rate Generation for Open Roads

- Traffic Data

  - Traffic forecast for Years 2023, 2028 and 2038 were prepared by the Traffic Consultant.
  - Traffic forecast including hourly forecast of weekday traffic flow, covering the 16 vehicle classes, on the major roads related to the Proposed Project.
  - Traffic data endorsed by Transport Department (TD) used in this assessment was obtained from a traffic survey.
  - Traffic flow of Year 2038, highest traffic flow, is adopted in this assessment for conservative approach.

- Determination of Vehicular Emission from Open Roads

The latest model version, EMFAC-HK V4.1, released by EPD was employed in this study. Input parameters and model assumptions made in EMFAC-HK model are summarised as follows.

a. Modelling Modes

EMFAC mode is adopted to generate emission factors in terms of grams of pollutant emitted per vehicle activity. The vehicle activity can be represented in terms of grams per kilometer or grams per hour, or grams per start, and depends on the emission process.

In EMFAC mode, the model calculates a matrix of emission factors for each vehicle class/technology combination. For the output files generated by the EMFAC mode, an additional input form allows users to customize their output and select specific temperature, relative humidity and travelling speed.

b. Vehicle Classes

In accordance with Appendix I of EMFAC-HK Guideline, all vehicles operating on roads included in the assessment are categorized into 16 vehicle classes as shown in ***Table A***.

Table A Vehicle Classification in EMFAC-HK

Index	Vehicle Class Description	EMFAC Code	Gross Vehicle Weight
1	Private Cars	PC	ALL
2	Taxi	Taxi	ALL

Index	Vehicle Class Description	EMFAC Code	Gross Vehicle Weight
3	Light Goods Vehicles (<= 2.5t)	LGV3	<=2.5t
4	Light Goods Vehicles (2.5 – 3.5t)	LGV4	>2.5-3.5t
5	Light Goods Vehicles (3.5 – 5.5t)	LGV6	>3.5-5.5t
6	Medium & Heavy Goods Vehicles (5.5 – 15t)	HGV7	>5.5-15t
7	Medium & Heavy Goods Vehicles (>=15t)	HGV8	>15t
8	Public Light Buses	PLB	ALL
9	Private Light Buses (<=3.5t)	PV4	<=3.5t
10	Private Light Buses (>3.5t)	PV5	>3.5t
11	Non-franchised Buses (<6.4t)	NFB6	<=6.36t
12	Non-franchised Buses (6.4 – 15t)	NFB7	>6.36-15t
13	Non-franchised Buses (>15t)	NFB8	>15t
14	Single Deck Franchised Buses	FBSD	ALL
15	Double Deck Franchised Buses	FBSD	ALL
16	Motor Cycles	MC	ALL

c. *Speed*

The speed average per hour for individual road has been adopted for this assessment.

d. *Daily Trips for Trunk Road, Primary Distributor and District Distributor*

It is assumed that zero trip in trunk road, primary distributor and district distributor since there will be no cold start under normal circumstance.

e. *Daily Trips for Local Distributor*

It is assumed that the number of trips would be equal to the number of cold starts in the road sections of local distributor. For Local Roads, the number of trips in the study area, Trip within study area, has been estimated as:

$$Trip_{within\ study\ area} = (Trip_{within\ HK}/VMT_{within\ HK}) \times VMT_{within\ study\ area}$$

$Trip_{within\ HK}$ is the default data of EMFAC-HK model. $VMT_{within\ HK}$ is the VMT of local roads in Hong Kong, which is estimated based on the default VMT data of EMFAC-HK model and the relevant data as published in the Annual Traffic Census 2018 by TD.

f. *Output Frequency*

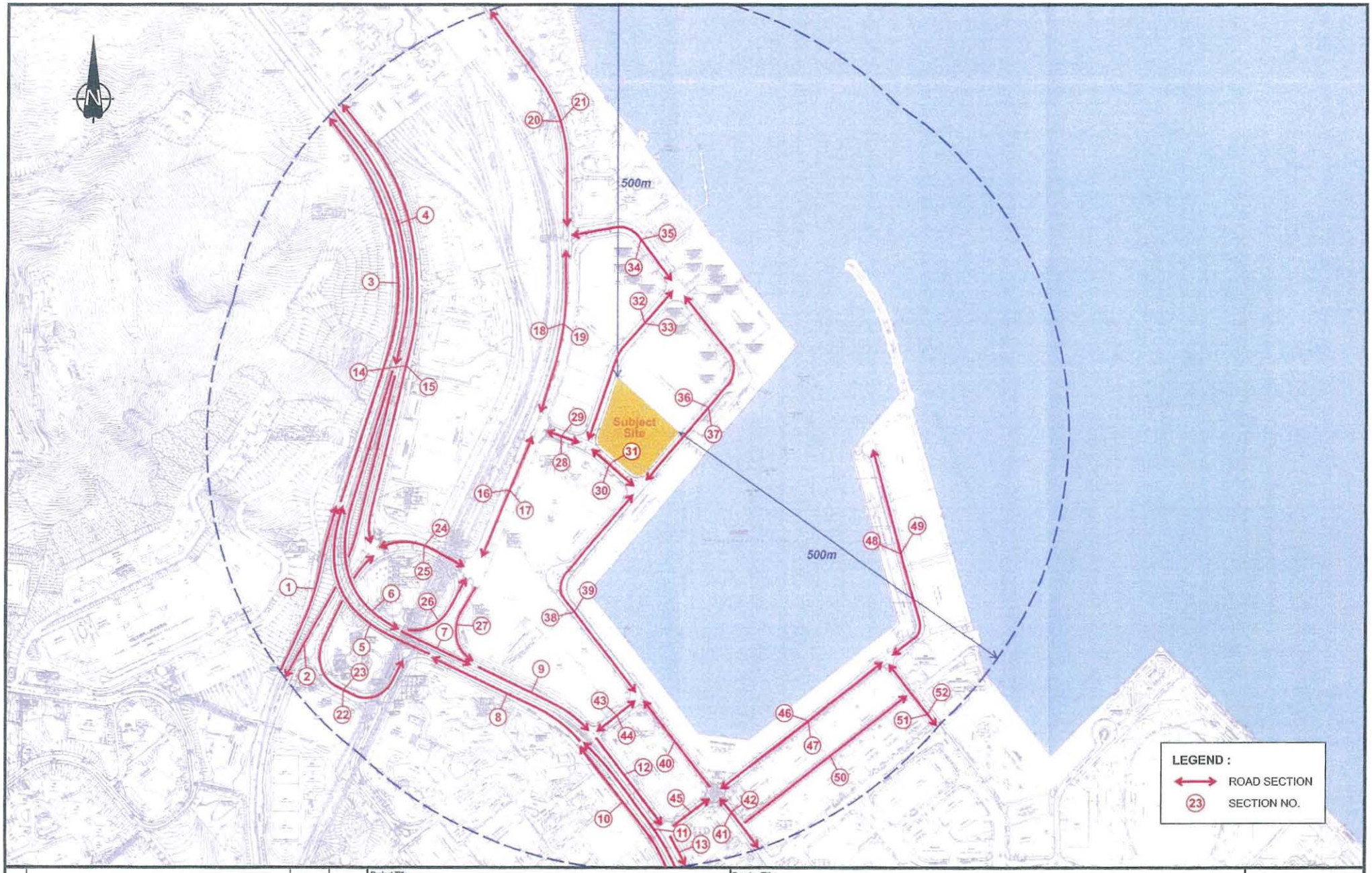
Hourly emission factors have been derived for 24hr hour diurnal variation.

g. Calculation of Emission Factors

In respect of the truck roads, primary sections and district distributors, only "Run Exhaust" has been considered as it characterizes continuous flow, whereas both "Start Exhaust" and "Run Exhaust" have been considered for the local distributors for the need to take into account cold start emissions.

Emission factors for each of the vehicle classes at each hourly specific temperature, relative humidity and speed are directly extracted from the data file. Composite emission factors are then calculated for each road sections in 24 hours diurnal traffic flows.

The calculated hourly emission factors in grams per miles per vehicle have been selected for the use in the modelling of the open roads to estimate the hourly NOx, RSP and FSP concentration.



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title: CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT - VARIATION EIA & TIA

Drawing Title: **INDEX PLAN**

Designed	Checked	Scale	Date	Drawing No.	Rev.
LAU	GPH	NTS	JUL 2018	6.1	-

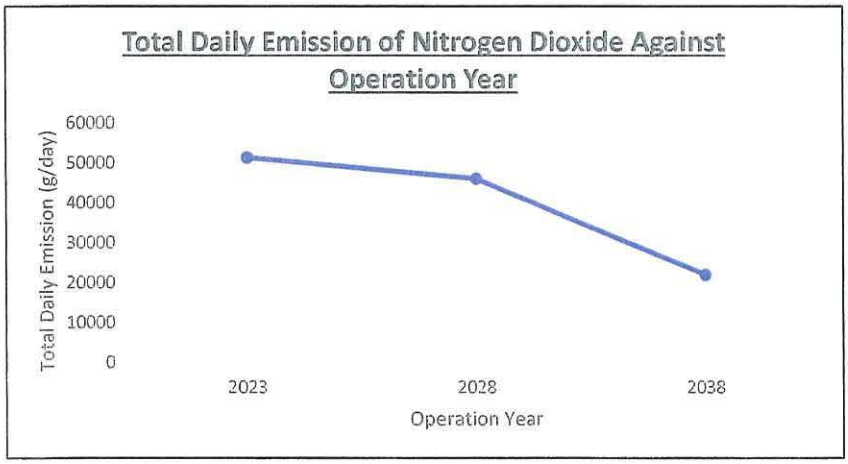
SYSTRA MVA

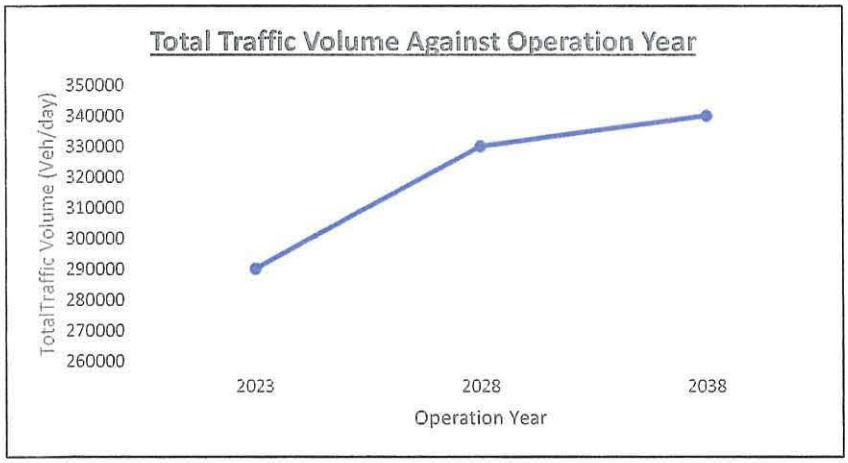
CHK50370610/TIA/F2.CDR/CKM/16JUL18

Summary of Total Pollutant Emissions for Determination of Worst Assessment Year

Operation Year	Total Daily Emission (g/day)#	TotalTraffic Volume (Veh/day)
	NOx (g/day)	
2023	51398.21879	290237.5
2028	46083.4114	330275.5
2038	21998.31025	340190.5

Traffic data of the operation year 2038 is adopted for calculation of all daily emission to present the worst case scenario.





24 hour Average Speed (Year 2023)

				Hour by Hour Average Speed (km/hr)																						
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
Island Eastern Corridor	1	EX	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Island Eastern Corridor	2	EX	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Island Eastern Corridor	3	EX	70	70	70	70	70	70	70	70	70	68	68	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Island Eastern Corridor	4	EX	70	70	70	70	70	70	70	70	70	66	67	68	70	70	70	70	69	68	68	70	70	70	70	70	70
Slip Road to IEC	5	PD	50	40	40	40	40	40	40	40	39	37	39	39	40	40	40	40	39	39	39	39	40	40	40	40	40
Slip Road from IEC	6	PD	50	40	40	40	40	40	40	40	37	35	37	37	38	37	37	38	37	37	36	37	39	40	40	40	40
Wing Tai Road	7	DD	50	29	30	30	30	30	30	28	26	25	26	26	27	27	27	27	26	26	26	26	27	28	28	28	29
Wing Tai Road	8	DD	50	28	29	30	30	30	30	28	25	23	24	25	26	25	25	25	25	25	24	25	26	27	27	27	28
Wing Tai Road	9	DD	50	29	29	30	30	30	30	28	26	24	25	26	26	26	26	26	25	25	25	25	26	27	28	28	28
Wing Tai Road	10	DD	50	30	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Wing Tai Road	11	DD	50	29	30	30	30	30	30	28	26	25	26	26	27	26	26	26	26	26	26	26	27	28	28	28	28
Wing Tai Road	12	DD	50	28	29	30	30	30	30	28	25	24	25	25	26	25	25	25	24	24	24	24	26	27	27	27	28
Wing Tai Road	13	DD	50	30	30	30	30	30	30	30	29	29	29	29	29	29	29	29	29	29	28	29	29	29	30	30	30
Shing Tai Road	14	LD	50	25	25	25	25	25	25	25	24	24	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Shing Tai Road	15	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Shing Tai Road	16	LD	50	25	25	25	25	25	25	24	23	22	22	23	23	23	23	23	22	22	22	22	23	24	24	24	24
Shing Tai Road	17	LD	50	25	25	25	25	25	25	25	24	24	24	24	24	24	24	24	24	24	23	24	24	25	25	25	25
Shing Tai Road	18	LD	50	25	25	25	25	25	25	25	24	23	23	24	24	24	24	24	23	23	23	23	24	24	25	25	25
Shing Tai Road	19	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Shing Tai Road	20	LD	50	24	25	25	25	25	25	24	22	21	21	22	22	22	22	22	21	21	21	21	22	23	23	23	24
Shing Tai Road	21	LD	50	25	25	25	25	25	25	25	24	23	24	24	24	24	24	24	24	24	24	24	24	24	25	25	25
Shun Tai Road	22	LD	50	24	25	25	25	25	25	24	23	22	23	23	23	23	23	23	22	22	22	22	23	24	24	24	24
Shun Tai Road	23	LD	50	25	25	25	25	25	25	25	24	24	24	25	25	25	25	24	24	24	24	24	25	25	25	25	25
Shun Tai Road	24	LD	50	25	25	25	25	25	25	25	25	24	25	25	25	25	25	25	24	24	24	24	25	25	25	25	25
Shun Tai Road	25	LD	50	25	25	25	25	25	25	25	25	24	25	25	25	25	24	24	24	24	24	24	25	25	25	25	25
Island Eastern Corridor Slip Road	26	DD	50	29	30	30	30	30	30	29	27	26	26	27	27	27	27	27	27	27	26	27	28	28	28	29	29
Shing Tai Road	27	LD	50	25	25	25	25	25	25	25	24	23	24	24	24	24	24	24	24	24	24	24	24	25	25	25	25
Sheung Mau Street	28	LD	50	25	25	25	25	25	25	25	24	24	25	25	25	25	24	24	24	24	24	24	25	25	25	25	25
Sheung Mau Street	29	LD	50	25	25	25	25	25	25	25	24	23	24	24	24	24	24	24	24	24	24	24	24	25	25	25	25
Sheung Mau Street	30	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	24	24	24	24	24	25	25	25	25	25
Sheung Mau Street	31	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	24	24	25	25	25	25	25	25
Sheung Tat Street	32	LD	50	25	25	25	25	25	25	25	25	24	24	25	24	25	25	25	25	24	24	25	25	25	25	25	25
Sheung Tat Street	33	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Chong Fu Road	34	LD	50	25	25	25	25	25	25	25	24	24	24	24	25	24	24	24	24	24	24	24	24	25	25	25	25
Chong Fu Road	35	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sheung On Street	36	LD	50	25	25	25	25	25	25	25	25	24	25	25	25	24	24	25	24	24	24	24	25	25	25	25	25
Sheung On Street	37	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	24	24	24	24	24	25	25	25	25	25
Sheung On Street	38	LD	50	25	25	25	25	25	25	25	24	24	24	24	24	24	24	24	24	24	24	24	25	25	25	25	25
Sheung On Street	39	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	24	24	25	25	25	25	25
Sheung On Street	40	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sheung On Street	41	LD	50	25	25	25	25	25	25	25	24	24	24	24	24	24	24	24	24	24	24	24	24	25	25	25	25
Sheung On Street	42	LD	50	23	24	25	25	25	25	23	21	20	20	21	21	20	20	20	19	19	18	19	20	21	22	22	23
Sheung Ping Street	43	LD	50	25	25	25	25	25	25	25	25	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sheung Ping Street	44	LD	50	25	25	25	25	25	25	25	24	24	24	24	24	24	24	24	23	23	23	23	24	24	24	24	25
Ka Yip Street	45	LD	50	24	25	25	25	25	25	24	22	21	21	22	22	22	22	22	21	21	21	21	22	23	23	23	24
Ka Yip Street	46	LD	50	24	25	25	25	25	25	24	21	20	21	22	22	22	22	22	21	22	21	22	22	23	23	23	24
Ka Yip Street	47	LD	50	25	25	25	25	25	25	25	24	24	24	24	24	24	24	24	24	24	23	24	24	24	25	25	25
Ka Yip Street	48	LD	50	25	25	25	25	25	25	25	24	23	24	24	24	23	23	23	23	23	22	23	23	24	24	24	25
Ka Yip Street	49	LD	50	25	25	25	25	25	25	25	23	23	23	23	24	23	23	23	23	23	22	23	23	24	24	24	24
Fung Yip Street	50	LD	50	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Sun Yip Street	51	LD	50	25	25	25	25	25	25	25	25	24	25	25	25	25	24	24	24	24	24	24	24	25	25	25	25
Sun Yip Street	52	LD	50	24	25	25	25	25	25	24	21	20	21	22	22	22	22	22	21	21	21	21	22	23	23	23	24
Road in Chai Wan Depot	CWD	LD	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																	Composite Emission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
Island Eastern Corridor	1	EX	70	0000-0100	204	39%	8%	0%	18%	7%	2%	5%	0%	0%	1%	0%	0%	0%	1%	12%	3%	100%	1.01899294	0.04544392	0.04182902
Island Eastern Corridor	1	EX	70	0100-0200	123	37%	8%	0%	18%	7%	2%	6%	0%	0%	2%	1%	1%	1%	1%	14%	3%	100%	1.11510504	0.05098797	0.04693203
Island Eastern Corridor	1	EX	70	0200-0300	84	36%	8%	0%	18%	7%	2%	6%	0%	0%	2%	0%	0%	1%	1%	14%	4%	100%	1.15470857	0.05373714	0.04945905
Island Eastern Corridor	1	EX	70	0300-0400	84	33%	8%	0%	18%	7%	2%	6%	0%	0%	2%	0%	0%	1%	1%	17%	4%	100%	1.27925143	0.05921524	0.05449905
Island Eastern Corridor	1	EX	70	0400-0500	84	32%	8%	0%	18%	7%	2%	6%	0%	0%	2%	0%	0%	1%	1%	18%	4%	100%	1.32672	0.06195429	0.05701905
Island Eastern Corridor	1	EX	70	0500-0600	129	30%	9%	0%	17%	7%	2%	5%	0%	1%	2%	1%	0%	1%	2%	19%	4%	100%	1.39019163	0.06517953	0.05998264
Island Eastern Corridor	1	EX	70	0600-0700	259	29%	8%	0%	17%	7%	2%	6%	0%	0%	2%	0%	0%	1%	1%	20%	4%	100%	1.43055583	0.06723398	0.06187367
Island Eastern Corridor	1	EX	70	0700-0800	494	27%	9%	0%	18%	7%	2%	6%	0%	0%	2%	0%	0%	0%	1%	22%	4%	100%	1.50887631	0.07051392	0.06489217
Island Eastern Corridor	1	EX	70	0800-0900	572	25%	9%	0%	17%	7%	2%	6%	0%	1%	2%	1%	0%	1%	1%	23%	4%	100%	1.57781958	0.0739972	0.06809594
Island Eastern Corridor	1	EX	70	0900-1000	561	28%	9%	0%	17%	7%	2%	6%	0%	0%	2%	1%	0%	1%	1%	21%	4%	100%	1.45960185	0.06870788	0.06323023
Island Eastern Corridor	1	EX	70	1000-1100	512	31%	8%	0%	18%	7%	2%	6%	0%	0%	2%	1%	0%	1%	1%	19%	4%	100%	1.36616406	0.06289594	0.05788375
Island Eastern Corridor	1	EX	70	1100-1200	464	34%	8%	0%	17%	7%	2%	6%	0%	0%	2%	1%	0%	1%	1%	16%	4%	100%	1.2442169	0.05712345	0.0525731
Island Eastern Corridor	1	EX	70	1200-1300	454	37%	8%	0%	18%	7%	2%	6%	0%	0%	2%	1%	0%	1%	1%	14%	4%	100%	1.13106009	0.05068335	0.04664916
Island Eastern Corridor	1	EX	70	1300-1400	447	40%	8%	0%	18%	7%	2%	5%	0%	0%	2%	1%	0%	1%	1%	11%	4%	100%	0.99943624	0.04437978	0.04085011
Island Eastern Corridor	1	EX	70	1400-1500	437	43%	8%	0%	18%	7%	2%	5%	0%	0%	1%	1%	0%	1%	0%	9%	3%	100%	0.8739189	0.03769373	0.03469986
Island Eastern Corridor	1	EX	70	1500-1600	472	46%	8%	0%	18%	7%	2%	5%	0%	0%	1%	1%	0%	1%	0%	6%	3%	100%	0.75150542	0.03141085	0.02891966
Island Eastern Corridor	1	EX	70	1600-1700	504	49%	8%	0%	18%	7%	2%	5%	0%	0%	1%	1%	1%	1%	0%	3%	3%	100%	0.62002286	0.02431429	0.02239111
Island Eastern Corridor	1	EX	70	1700-1800	495	53%	8%	0%	18%	7%	2%	4%	0%	0%	1%	1%	1%	1%	0%	1%	3%	100%	0.49304469	0.01713164	0.01578376
Island Eastern Corridor	1	EX	70	1800-1900	422	51%	8%	0%	18%	7%	2%	5%	0%	0%	1%	1%	0%	1%	0%	2%	3%	100%	0.57560303	0.02197573	0.02024
Island Eastern Corridor	1	EX	70	1900-2000	352	48%	8%	0%	18%	7%	2%	5%	0%	0%	1%	1%	1%	1%	0%	4%	3%	100%	0.66437909	0.02612682	0.02405818
Island Eastern Corridor	1	EX	70	2000-2100	316	47%	8%	0%	18%	7%	2%	5%	0%	0%	1%	1%	1%	1%	0%	6%	3%	100%	0.74005215	0.03027139	0.02787089
Island Eastern Corridor	1	EX	70	2100-2200	277	45%	8%	0%	18%	7%	2%	5%	0%	0%	1%	1%	0%	1%	0%	7%	4%	100%	0.79808173	0.03359076	0.0309239
Island Eastern Corridor	1	EX	70	2200-2300	242	43%	8%	0%	18%	7%	2%	5%	0%	0%	2%	1%	0%	1%	0%	9%	3%	100%	0.87658314	0.0376	0.03461289
Island Eastern Corridor	1	EX	70	2300-0000	245	40%	8%	0%	18%	7%	2%	5%	0%	0%	2%	1%	0%	1%	1%	10%	4%	100%	0.95881339	0.04234776	0.03897927
Island Eastern Corridor	2	EX	70	0000-0100	216	42%	9%	0%	19%	8%	1%	4%	0%	1%	5%	0%	0%	0%	0%	4%	6%	100%	0.64573259	0.02457407	0.02261407
Island Eastern Corridor	2	EX	70	0100-0200	129	42%	10%	0%	18%	8%	2%	5%	0%	1%	5%	1%	0%	1%	0%	3%	5%	100%	0.62788093	0.02434233	0.02240124
Island Eastern Corridor	2	EX	70	0200-0300	85	42%	11%	0%	18%	7%	1%	5%	0%	1%	6%	0%	0%	0%	0%	4%	6%	100%	0.60100894	0.02281035	0.02099012
Island Eastern Corridor	2	EX	70	0300-0400	84	43%	11%	0%	17%	7%	1%	5%	0%	1%	6%	0%	0%	0%	0%	4%	6%	100%	0.61013333	0.02295429	0.0211219
Island Eastern Corridor	2	EX	70	0400-0500	84	43%	12%	0%	17%	7%	1%	5%	0%	1%	6%	0%	0%	0%	0%	4%	5%	100%	0.60894095	0.02289143	0.02106857
Island Eastern Corridor	2	EX	70	0500-0600	128	42%	12%	0%	16%	6%	2%	5%	0%	2%	6%	1%	0%	1%	0%	3%	5%	100%	0.6216775	0.02385	0.02194625
Island Eastern Corridor	2	EX	70	0600-0700	256	42%	12%	0%	15%	6%	2%	5%	0%	1%	7%	0%	0%	0%	0%	3%	5%	100%	0.6418325	0.02447063	0.02251813
Island Eastern Corridor	2	EX	70	0700-0800	424	42%	13%	0%	14%	6%	2%	5%	0%	1%	7%	0%	0%	0%	0%	3%	5%	100%	0.6375166	0.02434943	0.02240679
Island Eastern Corridor	2	EX	70	0800-0900	550	42%	13%	0%	14%	6%	2%	5%	0%	1%	7%	1%	0%	1%	0%	3%	5%	100%	0.63753164	0.02424262	0.02230865
Island Eastern Corridor	2	EX	70	0900-1000	552	42%	12%	0%	15%	6%	2%	5%	0%	1%	7%	1%	0%	1%	0%	3%	5%	100%	0.63423884	0.02439942	0.02245275
Island Eastern Corridor	2	EX	70	1000-1100	510	42%	12%	0%	16%	6%	2%	5%	0%	1%	6%	0%	0%	1%	0%	3%	5%	100%	0.64558557	0.02452737	0.02257129
Island Eastern Corridor	2	EX	70	1100-1200	470	42%	11%	0%	17%	7%	2%	4%	0%	1%	6%	0%	0%	0%	0%	3%	5%	100%	0.63584681	0.02421719	0.02228562
Island Eastern Corridor	2	EX	70	1200-1300	471	42%	10%	0%	18%	7%	2%	4%	0%	1%	5%	0%	0%	0%	0%	3%	5%	100%	0.64602735	0.0243414	0.02240068
Island Eastern Corridor	2	EX	70	1300-1400	473	42%	9%	0%	19%	8%	1%	4%	0%	1%	5%	0%	0%	0%	0%	4%	5%	100%	0.64305962	0.02458757	0.02262732
Island Eastern Corridor	2	EX	70	1400-1500	475	42%	8%	0%	20%	8%	1%	4%	0%	1%	4%	0%	0%	0%	0%	4%	6%	100%	0.64341154	0.02445743	0.02250745
Island Eastern Corridor	2	EX	70	1500-1600	521	42%	8%	0%	21%	9%	1%	4%	0%	1%	4%	0%	0%	0%	0%	4%	6%	100%	0.64294019	0.02441858	0.02247186
Island Eastern Corridor	2	EX	70	1600-1700	564	42%	7%	0%	22%	9%	1%	4%	0%	1%	4%	0%	0%	0%	0%	4%	6%	100%	0.63973106	0.02431035	0.02237248
Island Eastern Corridor	2	EX	70	1700-1800	565	42%	6%	0%	23%	9%	1%	3%	0%	1%	3%	0%	0%	0%	0%	4%	6%	100%	0.64950796	0.02417926	0.02225218
Island Eastern Corridor	2	EX	70	1800-1900	481	42%	7%	0%	22%	9%	1%	4%	0%	1%	4%	0%	0%	0%	0%	4%	6%	100%	0.6516504	0.02463694	0.02267277
Island Eastern Corridor	2	EX	70	1900-2000	392	42%	7%	0%	21%	9%	1%	4%	0%	1%	4%	0%	0%	1%	0%	4%	6%	100%	0.65204939	0.02448327	0.02253143
Island Eastern Corridor	2	EX	70	2000-2100	347	42%	7%	0%	21%	8%	1%	4%	0%	1%	4%	0%	0%	0%	0%	4%	6%	100%	0.65378582	0.02460911	0.02264715
Island Eastern Corridor	2	EX	70	2100-2200	301	42%	8%	0%	20%	8%	1%	4%	0%	1%	4%	0%	0%	0%	0%	4%	6%	100%	0.65113781	0.02471442	0.02274445
Island Eastern Corridor	2	EX	70	2200-2300	260	42%	8%	0%	20%	8%	2%	4%	0%	1%	5%	0%	0%	0%	0%	3%	6%	100%	0.64756985	0.02446338	0.022512
Island Eastern Corridor	2	EX	70	2300-0000	258	42%	9%	0%	19%	8%	2%	4%	0%	1%	5%	0%	0%	0%	0%	3%	5%	100%	0.64784806	0.02474977	0.02277705
Island Eastern Corridor	3	EX	70	0000-0100	585	41%	18%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	1%	7%	3%	100%	0.77509115	0.03158641	0.02903603
Island Eastern Corridor	3	EX	70	0100-0200	357	39%	18%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	1%	7%	3%	100%	0.80669625	0.03314106	0.03051115
Island Eastern Corridor	3	EX	70	0200-0300	243	38%	18%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	8%	3%	100%	0.83893465	0.03457778	0.0318321
Island Eastern Corridor	3	EX	70	0300-0400	244	37%	18%	0%	15%	6%	2%	7%	0%	0%	1%	0%	0%	0%	0%	8%	3%	100%	0.87864984	0.03579148	0.03294885
Island Eastern Corridor	3	EX	70	0400-0500	247	36%	18%	0%	15%	6%	2%	6%	0%	0%	2%	0%	0%	0%	0%	9%	3%	100%	0.89479838	0.03667951	0.03376518
Island Eastern Corridor	3	EX	70	0500-0600	375	35%	19%	0%	15%	6%	2%	7%	0%	0%	2%	0%	0%	0%	1%	9%	3%	100%	0.91957376	0.03798927	0.03496917
Island Eastern Corridor	3	EX	70	0600-0700	766	34%	19%	0%	15%	6%	3%	7%	0%	0%	2%	0%	0%	0%	1%	9%	3%	100%	0.95923373	0.04008119	0.03689515
Island Eastern Corridor	3	EX	70	0700-0800	1301	32%	19%	0%	17%	7%	3%	7%	0%	0%	2%	0%	0%	0%	1%	10%	3%	100%	0.97337415	0.04034837	0.03714054
Island Eastern Corridor	3	EX	68	0800-0900	1705	32%	19%	0%	16%	7%	3%	7%	0%	0%	2%	0%	0%	0%	1%	10%	3%	100%	0.99883965	0.0414542	0.03813001
Island Eastern Corridor	3	EX	68	0900-1000	1660	33%	19%	0%	16%	7%	2%	7%	0%	0%	2%	0%	0%	0%	1%	10%	3%	100%	0.95448461	0.03980315	0.03661161
Island Eastern Corridor	3	EX	70	1000-1100	1497	35%	18%	0%	16%	6%	2%	7%	0%	0%	1%	0%	0%	0%	1%	9%	3%	100%	0.91759035	0.03765724	0.03466481
Island Eastern Corridor	3	EX	70	1100-1200	1348	37%	18%	0%	16%	6%	2%	6%	0%	0%	1%	0%	0%	0%	1%	8%	3%	100%	0.86484034	0.03550357	0.03268388
Island Eastern Corridor	3	EX	70	1200-1300	1323	39%	18%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	7%	3%	100%	0.8248565	0.0332717	0.03063133
Island Eastern Corridor	3	EX	70	1300-1400	1300	41%	17%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	6%	3%	100%	0.76540779	0.03084844	0.02840267
Island Eastern Corridor	3	EX	70	1400-1500	1280	43%	17%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	6%	3%	100%	0.72336271	0.02870965	0.02643591
Island Eastern Corridor	3	EX	70	1500-1600	1367	45%	16%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	5%	3%	100%	0.67179335	0.02639206	0.02430423
Island Eastern Corridor	3	EX	70	1600-1700	1444	47%	16%	0%	15%	6%	2%	5%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.61350343	0.02363563	0.02176894
Island Eastern Corridor	3	EX	70	1700-1800	1426	50%	15%	0%	14%	6%	2%	5%	0%	0%	0%	0%	0%	0%	0%	3%	3%	100%	0.55986958	0.02063983	0.01901326
Island Eastern Corridor	3	EX	70	1800-1900	1203	48%	16%	0%	14%	6%	2%	5%	0%	0%	0%	0%	0%	0%	0%	3%	2%	100%	0.59322266	0.02249246	0.02071819
Island Eastern Corridor	3	EX	70	1900-2000	1000	47%	16%	0%	14%	6%	2%	5%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.63451139	0.02418148	0.02227149
Island Eastern Corridor	3	EX	70	2000-2100	896	46%	17%	0%	15%	6%	2%	5%	0%	0%	1%	0%	0%	0%	0%	5%	2%	100%	0.66064089	0.02567304	0.02364321
Island Eastern Corridor	3	EX	70	2100-2200	795	45%	17%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	5%	3%	100%	0.68919507	0.02711889	0.02497288
Island Eastern Corridor	3	EX	70	2200-2300	691	43%	17%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	6%	3%	100%	0.72121887	0.02871456	0.02643983
Island Eastern Corridor	3	EX	70	2300-0000	698	42%	17%	0%	15%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	6%	3%	100%	0.74807725	0.03019095	0.02779805
Island Eastern Corridor	4	EX	70	0000-0100	777	44%	18%	0%	14%	6%	2%	4%	0%	1%	4%	1%	1%	1%	0%	3%	3%	100%	0.61657967	0.02351238	0.02164777
Island Eastern Corridor	4	EX	70	0100-0200	471	43%	18%	0%	13%	6%	2%	4%	0%	1%	4%	1%	1%	1%	0%	3%	3%	100%	0.61818633	0.02356382	0.02169478
Island Eastern Corridor	4	EX	70	0200-0300	315	43%	19%	0%	13%	5%	2%	4%	0%	1%	4%	1%	1%	1%	0%	3%	3%	100%	0.6275073	0.0242494	0.02232533
Island Eastern Corridor	4	EX	70	0300-0400	314	43%	19%	0%	12%	5%	2%	4%	0%	1%	4%	1%	1%	1%	0%	4%	3%	100%	0.63692994	0.02412841	0.02221401
Island Eastern Corridor	4	EX	70	0400-0500	319	43%	19%	0%	12%	5%	2%	5%	0%	1%	4%	1%	1%	1%	0%	3%	3%	100%	0.64395887	0.02491586	0.02293716
Island Eastern Corridor	4	EX	70	0500-0600	478	43%	19%	0%	12%	5%	2%	5%	0%	1%	4%	1%	1%	1%	0%	4%	3%	100%	0.64705071	0.02486226	0.0228887
Island Eastern Corridor	4	EX	70	0600-0700	970	43%	20%	0%	11%	5%	2%	5%	0%	1%	4%	1%	1%	1%	0%	4%	3%	100%	0.65042309	0.02503654	0.02304759
Island Eastern Corridor	4	EX	70	0700-0800	1622	42%	20%	0%	11%	5%	2%	5%	0%	1%	4%	1%	1%	1%	0%	4%	3%	100%	0.65947777	0.02552987	0.02350204
Island Eastern Corridor	4	EX	66	0800-0900	2140	43%	20%	0%	11%	4%	2%	5%	0%	1%	4%	1%	1%	1%	0%	4%	3%	100%	0.66709684	0.02579546	0.02369081
Island Eastern Corridor	4	EX	67	0900-1000	2107	43%	20%	0%	11%	5%	2%	5%	0%	1%	4%	1%	1%	1%	0%	4%	3%	100%	0.65376173	0.02542447	0.02335425
Island Eastern Corridor	4	EX	68	1000-1100	1928	43%	19%	0%	12%	5%	2%	5%	0%	1%	4%	1%	1%	1%	0%	4%	3%	100%	0.65299584	0.02485921	0.02286545
Island Eastern Corridor	4	EX	70	1100-1200	1757	43%	19%	0%	13%	5%	2%	4%	0%	1%	4%	1%	1%	1%	0%	3%	3%	100%	0.63655148	0.02432637	0.02239549
Island Eastern Corridor	4	EX	70	1200-1300	1746	43%	18%	0%	13%	5%	2%	4%	0%	1%	4%	1%	1%	1%	0%	3%	3%	100%	0.63949126	0.0241517	0.02223524
Island Eastern Corridor	4	EX	70	1300-1400	1726	43%	18%	0%	14%	6%	2%	4%	0%	1%	3%	1%	1%	1%	0%	3%	3%	100%	0.61766476	0.02335454	0.02150233
Island Eastern Corridor	4	EX	70	1400-1500	1703	44%	18%	0%	15%	6%	2%	4%	0%	1%	3%	1%	0%	1%	0%	3%	3%	100%	0.60865263	0.02281346	0.02100459
Island Eastern Corridor	4	EX	69	1500-1600	1843	44%	17%	0%	15%	6%	2%	4%	0%	1%	3%	0%	0%	1%	0%	3%	3%	100%	0.59962624	0.02228405	0.02051618
Island Eastern Corridor	4	EX	68	1600-1700	1981	44%	17%	0%	16%	7%	1%	4%	0%	1%	3%	0%	0%	0%	0%	3%	3%	100%	0.58876595	0.02168411	0.01994038
Island Eastern Corridor	4	EX	68	1700-1800	1955	44%	16%	0%	17%	7%	1%	4%	0%	1%	3%	0%	0%	0%	0%	3%	3%	100%	0.58786327	0.02116933	0.01946602
Island Eastern Corridor	4	EX	70	1800-1900	1654	44%	17%	0%	16%	7%	1%	4%	0%	1%	3%	0%	0%	0%	0%	3%	3%	100%	0.58565843	0.02147476	0.0197742
Island Eastern Corridor	4	EX	70	1900-2000	1365	44%	17%	0%	16%	6%	1%	4%	0%	1%	3%	0%	0%	1%	0%	3%	3%	100%	0.59593907	0.02178043	0.02005519
Island Eastern Corridor	4	EX	70	2000-2100	1223	44%	17%	0%	15%	6%	2%	4%	0%	1%	3%	0%	0%	1%	0%	3%	3%	100%	0.600063	0.0221376	0.02038343
Island Eastern Corridor	4	EX	70	2100-2200	1081	44%	17%	0%	15%	6%	2%	5%	0%	1%	3%	1%	0%	1%	0%	3%	3%	100%	0.61013609	0.02274738	0.02094481
Island Eastern Corridor	4	EX	70	2200-2300	924	44%	18%	0%	14%	6%	2%	4%	0%	1%	3%	1%	0%	1%	0%	3%	3%	100%	0.60874234	0.02291134	0.02109489
Island Eastern Corridor	4	EX	70	2300-0000	928	44%	18%	0%	14%	6%	2%	4%	0%	1%	3%	1%	0%	1%	0%	3%	3%	100%	0.60807545	0.02295674	0.02113654
Slip Road to IEC	5	PD	40	0000-0100	370	41%	22%	0%	14%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.85690854	0.02915849	0.02683978
Slip Road to IEC	5	PD	40	0100-0200	222	41%	23%	0%	14%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.85029045	0.02889081	0.02659315
Slip Road to IEC	5	PD	40	0200-0300	148	41%	23%	0%	14%	6%	3%	7%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.84960432	0.02833514	0.02608432
Slip Road to IEC	5	PD	40	0300-0400	149	40%	23%	0%	14%	6%	3%	7%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.86982443	0.0284102	0.02615302
Slip Road to IEC	5	PD	40	0400-0500	152	38%	24%	0%	14%	6%	3%	7%	0%	0%	1%	0%	0%	0%	0%	4%	3%	100%	0.88100316	0.02877684	0.02648526
Slip Road to IEC	5	PD	40	0500-0600	152	38%	24%	0%	14%	6%	3%	7%	0%	0%	1%	0%	0%	0%	0%	4%	3%	100%	0.88392526	0.02874737	0.02645789
Slip Road to IEC	5	PD	40	0600-0700	473	36%	24%	0%	14%	6%	3%	8%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.92829676	0.03045571	0.02803054
Slip Road to IEC	5	PD	39	0700-0800	887	35%	24%	0%	16%	7%	3%	7%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.94819542	0.0304991	0.02807846
Slip Road to IEC	5	PD	37	0800-0900	1134	35%	24%	0%	16%	6%	3%	7%	0%	0%	1%	0%	0%	0%	0%	4%	3%	100%	0.98914576	0.03158718	0.02906767
Slip Road to IEC	5	PD	39	0900-1000	950	36%	24%	0%	16%	6%	3%	7%	0%	0%	1%	0%	0%	0%	0%	4%	3%	100%	0.92886413	0.03017989	0.02778327
Slip Road to IEC	5	PD	39	1000-1100	855	37%	23%	0%	15%	6%	3%	7%	0%	0%	1%	0%	0%	0%	0%	4%	3%	100%	0.92661631	0.03009535	0.02770483
Slip Road to IEC	5	PD	40	1100-1200	769	39%	23%	0%	15%	6%	2%	7%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.88433866	0.02922495	0.02689853
Slip Road to IEC	5	PD	40	1200-1300	832	40%	22%	0%	14%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.87615257	0.02896274	0.0266578
Slip Road to IEC	5	PD	40	1300-1400	823	42%	22%	0%	14%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.85032364	0.02862822	0.02635219
Slip Road to IEC	5	PD	40	1400-1500	819	43%	21%	0%	14%	6%	2%	6%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.8416278	0.02845151	0.02619109
Slip Road to IEC	5	PD	39	1500-1600	881	44%	21%	0%	13%	6%	2%	6%	0%	0%	0%	0%	0%	0%	0%	4%	2%	100%	0.84152622	0.02879301	0.02651225
Slip Road to IEC	5	PD	39	1600-1700	860	46%	20%	0%	13%	5%	2%	6%	0%	0%	0%	0%	0%	0%	0%	4%	2%	100%	0.81004089	0.02803572	0.02581687
Slip Road to IEC	5	PD	39	1700-1800	932	49%	19%	0%	12%	5%	2%	5%	0%	0%	0%	0%	0%	0%	0%	4%	2%	100%	0.79360502	0.0273144	0.02515428
Slip Road to IEC	5	PD	39	1800-1900	847	47%	20%	0%	13%	5%	2%	5%	0%	0%	0%	0%	0%	0%	0%	4%	2%	100%	0.80679869	0.02792482	0.02571626
Slip Road to IEC	5	PD	40	1900-2000	711	46%	20%	0%	13%	5%	2%	6%	0%	0%	0%	0%	0%	0%	0%	4%	2%	100%	0.81193729	0.02767629	0.02547977
Slip Road to IEC	5	PD	40	2000-2100	571	46%	21%	0%	13%	5%	2%	6%	0%	0%	0%	0%	0%	0%	0%	4%	2%	100%	0.80910403	0.02747461	0.02529345
Slip Road to IEC	5	PD	40	2100-2200	505	45%	21%	0%	13%	5%	2%	6%	0%	0%	0%	0%	0%	0%	0%	4%	2%	100%	0.81734749	0.02775667	0.02555216
Slip Road to IEC	5	PD	40	2200-2300	512	44%	21%	0%	13%	5%	2%	6%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.82517969	0.02789563	0.02567844
Slip Road to IEC	5	PD	40	2300-0000	442	43%	22%	0%	13%	5%	2%	6%	0%	0%	1%	0%	0%	0%	0%	4%	2%	100%	0.83353846	0.02813864	0.02590061
Slip Road from IEC	6	PD	40	0000-0100	542	44%	22%	0%	12%	5%	2%	4%	0%	1%	3%	1%	1%	1%	0%	3%	2%	100%	0.78917284	0.02722362	0.02506066
Slip Road from IEC	6	PD	40	0100-0200	328	44%	22%	0%	11%	5%	2%	5%	0%	1%	3%	1%	1%	1%	0%	3%	2%	100%	0.80694585	0.02846244	0.02619902
Slip Road from IEC	6	PD	40	0200-0300	219	43%	22%	0%	11%	5%	2%	5%	0%	0%	3%	1%	1%	1%	0%	4%	2%	100%	0.82423233	0.02908274	0.02676895
Slip Road from IEC	6	PD	40	0300-0400	219	43%	22%	0%	11%	5%	2%	5%	0%	0%	3%	1%	1%	1%	0%	4%	2%	100%	0.84025352	0.02908274	0.02676895
Slip Road from IEC	6	PD	40	0400-0500	221	43%	22%	0%	10%	5%	2%	5%	0%	0%	3%	1%	1%	1%	0%	4%	2%	100%	0.8606219	0.03032181	0.02790805
Slip Road from IEC	6	PD	40	0500-0600	221	43%	22%	0%	10%	5%	2%	5%	0%	0%	3%	1%	1%	1%	0%	4%	2%	100%	0.8606219	0.03032181	0.02790805
Slip Road from IEC	6	PD	40	0600-0700	669	43%	22%	0%	10%	4%	2%	5%	0%	1%	3%	1%	1%	1%	0%	4%	3%	100%	0.86082224	0.03049854	0.02806816
Slip Road from IEC	6	PD	37	0700-0800	1230	43%	22%	0%	10%	4%	2%	5%	0%	1%	3%	1%	1%	2%	0%	4%	2%	100%	0.92443665	0.03254356	0.02995618
Slip Road from IEC	6	PD	35	0800-0900	1591	43%	22%	0%	10%	4%	2%	5%	0%	1%	3%	1%	1%	2%	0%	4%	2%	100%	0.96878852	0.03397618	0.03128607
Slip Road from IEC	6	PD	37	0900-1000	1346	43%	22%	0%	10%	4%	2%	5%	0%	1%	3%	1%	1%	2%	0%	4%	2%	100%	0.9099074	0.03214212	0.02958686
Slip Road from IEC	6	PD	37	1000-1100	1227	43%	22%	0%	11%	4%	2%	5%	0%	1%	3%	1%	1%	1%	0%	4%	2%	100%	0.90579338	0.03136376	0.02887104
Slip Road from IEC	6	PD	38	1100-1200	1114	43%	22%	0%	12%	5%	2%	4%	0%	1%	3%	1%	1%	1%	0%	4%	2%	100%	0.86111978	0.02977184	0.02739756
Slip Road from IEC	6	PD	37	1200-1300	1219	43%	21%	0%	12%	5%	2%	5%	0%	1%	3%	1%	1%	1%	0%	3%	2%	100%	0.87871137	0.02989796	0.02752397
Slip Road from IEC	6	PD	37	1300-1400	1212	44%	21%	0%	12%	5%	2%	4%	0%	1%	3%	1%	1%	1%	0%	3%	2%	100%	0.84514682	0.02888728	0.02659528
Slip Road from IEC	6	PD	38	1400-1500	1196	44%	21%	0%	13%	5%	2%	4%	0%	1%	3%	1%	1%	1%	0%	3%	2%	100%	0.80983761	0.02743412	0.02524802
Slip Road from IEC	6	PD	37	1500-1600	1298	44%	21%	0%	13%	5%	2%	4%	0%	1%	3%	1%	0%	1%	0%	3%	2%	100%	0.80423249	0.02690066	0.02476939
Slip Road from IEC	6	PD	37	1600-1700	1299	45%	20%	0%	14%	6%	2%	4%	0%	1%	3%	0%	0%	0%	0%	3%	2%	100%	0.78552624	0.02600764	0.02394865
Slip Road from IEC	6	PD	36	1700-1800	1388	45%	20%	0%	14%	6%	2%	4%	0%	1%	3%	0%	0%	0%	0%	3%	2%	100%	0.7902111	0.02543597	0.02343511
Slip Road from IEC	6	PD	37	1800-1900	1275	45%	21%	0%	13%	6%	2%	4%	0%	0%	3%	0%	0%	0%	0%	3%	2%	100%	0.77978885	0.02568231	0.02364981
Slip Road from IEC	6	PD	39	1900-2000	1070	45%	21%	0%	13%	5%	2%	4%	0%	0%	3%	0%	0%	1%	0%	3%	2%	100%	0.77077862	0.02549119	0.02347667
Slip Road from IEC	6	PD	40	2000-2100	862	45%	21%	0%	13%	5%	2%	4%	0%	0%	3%	0%	0%	1%	0%	3%	2%	100%	0.76269782	0.02544616	0.02342794
Slip Road from IEC	6	PD	40	2100-2200	762	44%	21%	0%	13%	5%	2%	5%	0%	1%	3%	1%	0%	1%	0%	3%	2%	100%	0.77539	0.02603749	0.02397094
Slip Road from IEC	6	PD	40	2200-2300	756	45%	21%	0%	12%	5%	2%	4%	0%	1%	3%	1%	1%	1%	0%	3%	2%	100%	0.77898561	0.02659048	0.02447915
Slip Road from IEC	6	PD	40	2300-0000	651	44%	21%	0%	12%	5%	2%	4%	0%	1%	3%	1%	1%	1%	0%	3%	2%	100%	0.78254037	0.02681414	0.02468461
Wing Tai Road	7	DD	29	0000-0100	350	42%	23%	0%	13%	5%	2%	5%	0%	0%	2%	0%	0%	1%	0%	3%	2%	100%	1.03733074	0.03375314	0.03106514
Wing Tai Road	7	DD	30	0100-0200	210	41%	23%	0%	13%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.01419657	0.03315505	0.030512
Wing Tai Road	7	DD	30	0200-0300	139	42%	23%	0%	12%	5%	2%	5%	0%	1%	3%	1%	0%	1%	0%	4%	2%	100%	0.99856	0.03311079	0.03047252
Wing Tai Road	7	DD	30	0300-0400	142	40%	23%	0%	12%	5%	2%	5%	0%	1%	3%	1%	1%	1%	0%	4%	3%	100%	1.0762862	0.03514028	0.03233352
Wing Tai Road	7	DD	30	0400-0500	141	40%	23%	0%	11%	5%	2%	5%	0%	1%	3%	1%	1%	1%	0%	4%	3%	100%	1.0695705	0.03523745	0.03242213
Wing Tai Road	7	DD	30	0500-0600	139	40%	24%	0%	12%	4%	2%	5%	0%	1%	3%	1%	1%	1%	0%	4%	3%	100%	1.07198849	0.03526101	0.03244317
Wing Tai Road	7	DD	28	0600-0700	420	40%	24%	0%	11%	5%	2%	5%	0%	1%	3%	1%	0%	1%	0%	5%	3%	100%	1.15785029	0.0388301	0.03574133

Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																	Composite Emission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
Wing Tai Road	7	DD	26	0700-0800	768	40%	24%	0%	10%	4%	2%	5%	0%	1%	4%	1%	1%	1%	0%	5%	3%	100%	1.238245	0.04151875	0.03922646
Wing Tai Road	7	DD	25	0800-0900	975	40%	25%	0%	10%	4%	2%	5%	0%	1%	4%	1%	1%	1%	0%	5%	3%	100%	1.29330297	0.04336722	0.03993075
Wing Tai Road	7	DD	26	0900-1000	838	40%	24%	0%	11%	4%	2%	5%	0%	1%	3%	1%	0%	1%	0%	5%	3%	100%	1.21969566	0.04103599	0.03778215
Wing Tai Road	7	DD	26	1000-1100	767	41%	24%	0%	11%	5%	2%	5%	0%	1%	3%	1%	0%	1%	0%	4%	3%	100%	1.19992344	0.03940068	0.03627974
Wing Tai Road	7	DD	27	1100-1200	699	41%	23%	0%	12%	5%	2%	5%	0%	1%	3%	1%	0%	1%	0%	4%	3%	100%	1.13798775	0.0373505	0.03438054
Wing Tai Road	7	DD	27	1200-1300	769	41%	23%	0%	13%	5%	2%	5%	0%	1%	2%	0%	0%	1%	0%	4%	2%	100%	1.11544676	0.03585311	0.03300455
Wing Tai Road	7	DD	27	1300-1400	769	42%	23%	0%	13%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.07181046	0.03428577	0.0315639
Wing Tai Road	7	DD	27	1400-1500	769	43%	22%	0%	14%	6%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.04079792	0.03260068	0.03001384
Wing Tai Road	7	DD	26	1500-1600	840	43%	22%	0%	15%	6%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.04637562	0.032268	0.02972381
Wing Tai Road	7	DD	26	1600-1700	842	43%	21%	0%	15%	6%	2%	5%	0%	0%	1%	0%	0%	0%	0%	2%	2%	100%	1.01798214	0.03105292	0.02860618
Wing Tai Road	7	DD	26	1700-1800	910	44%	21%	0%	16%	7%	2%	5%	0%	0%	1%	0%	0%	0%	0%	2%	2%	100%	0.99715921	0.02919859	0.02680233
Wing Tai Road	7	DD	26	1800-1900	842	44%	21%	0%	15%	6%	2%	5%	0%	0%	1%	0%	0%	0%	0%	2%	2%	100%	1.01586945	0.03059743	0.02818869
Wing Tai Road	7	DD	27	1900-2000	702	43%	21%	0%	15%	6%	2%	5%	0%	0%	1%	0%	0%	0%	0%	2%	2%	100%	1.00926838	0.03041915	0.02800934
Wing Tai Road	7	DD	28	2000-2100	559	43%	22%	0%	15%	6%	2%	5%	0%	0%	1%	0%	0%	0%	0%	3%	2%	100%	0.99868422	0.0307947	0.02835405
Wing Tai Road	7	DD	28	2100-2200	490	43%	22%	0%	14%	6%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.01434939	0.03174988	0.02923167
Wing Tai Road	7	DD	28	2200-2300	490	42%	22%	0%	14%	6%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.02772016	0.03248392	0.02990694
Wing Tai Road	7	DD	29	2300-0000	421	42%	22%	0%	14%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.01412447	0.03266128	0.03006024
Wing Tai Road	8	DD	28	0000-0100	461	39%	23%	0%	13%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.08606612	0.03460685	0.03186152
Wing Tai Road	8	DD	29	0100-0200	278	38%	23%	0%	13%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.08126331	0.03487597	0.03209957
Wing Tai Road	8	DD	30	0200-0300	187	38%	24%	0%	13%	5%	2%	5%	3%	1%	2%	1%	1%	1%	0%	4%	2%	100%	1.06273455	0.03423059	0.03149947
Wing Tai Road	8	DD	30	0300-0400	187	37%	24%	0%	13%	5%	2%	5%	3%	1%	2%	1%	1%	1%	0%	4%	2%	100%	1.09145497	0.03431102	0.0315739
Wing Tai Road	8	DD	30	0400-0500	190	37%	24%	0%	13%	5%	2%	6%	3%	1%	3%	1%	1%	1%	0%	4%	2%	100%	1.09877053	0.03481684	0.03202874
Wing Tai Road	8	DD	30	0500-0600	189	37%	24%	0%	13%	5%	2%	6%	3%	1%	3%	1%	1%	1%	0%	4%	2%	100%	1.10436317	0.0349672	0.03217693
Wing Tai Road	8	DD	28	0600-0700	570	36%	24%	0%	14%	6%	2%	6%	2%	1%	3%	0%	0%	1%	0%	4%	2%	100%	1.17563312	0.03712337	0.03417572
Wing Tai Road	8	DD	25	0700-0800	1049	36%	24%	0%	14%	6%	2%	6%	2%	0%	3%	0%	0%	0%	0%	4%	2%	100%	1.28877087	0.04017952	0.03700408
Wing Tai Road	8	DD	23	0800-0900	1340	35%	24%	0%	14%	6%	2%	6%	2%	1%	3%	0%	0%	1%	0%	4%	2%	100%	1.3894857	0.04297349	0.03953946
Wing Tai Road	8	DD	24	0900-1000	1141	36%	24%	0%	13%	6%	2%	6%	2%	1%	3%	0%	0%	1%	0%	4%	2%	100%	1.31790205	0.04141644	0.03814268
Wing Tai Road	8	DD	25	1000-1100	1038	37%	24%	0%	13%	5%	2%	6%	3%	0%	3%	0%	0%	0%	0%	4%	2%	100%	1.26500439	0.03934459	0.03623707
Wing Tai Road	8	DD	26	1100-1200	937	37%	24%	0%	13%	5%	2%	6%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.1981915	0.03774531	0.03475757
Wing Tai Road	8	DD	25	1200-1300	1023	38%	23%	0%	13%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.22536117	0.03830616	0.03528805
Wing Tai Road	8	DD	25	1300-1400	1013	39%	23%	0%	13%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.17873216	0.03719534	0.03426195
Wing Tai Road	8	DD	25	1400-1500	1004	40%	23%	0%	13%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.16453275	0.03685004	0.03394488
Wing Tai Road	8	DD	25	1500-1600	1087	41%	23%	0%	12%	5%	2%	5%	3%	0%	1%	0%	0%	0%	0%	3%	2%	100%	1.13255419	0.03591645	0.0330885
Wing Tai Road	8	DD	25	1600-1700	1076	42%	23%	0%	12%	5%	2%	5%	4%	0%	1%	0%	0%	0%	0%	3%	2%	100%	1.10042335	0.03508193	0.03232
Wing Tai Road	8	DD	24	1700-1800	1157	43%	22%	0%	12%	5%	2%	4%	4%	0%	1%	0%	0%	0%	0%	3%	2%	100%	1.13305003	0.03565317	0.0328502
Wing Tai Road	8	DD	25	1800-1900	1075	42%	23%	0%	12%	5%	2%	4%	4%	0%	1%	0%	0%	0%	0%	3%	2%	100%	1.10145578	0.03490381	0.03215643
Wing Tai Road	8	DD	26	1900-2000	898	42%	23%	0%	12%	5%	2%	5%	4%	0%	1%	0%	0%	0%	0%	3%	2%	100%	1.09502004	0.03435795	0.0316433
Wing Tai Road	8	DD	27	2000-2100	724	41%	23%	0%	12%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.08311028	0.03434696	0.03162232
Wing Tai Road	8	DD	27	2100-2200	686	41%	23%	0%	12%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.08585635	0.03449403	0.03174843
Wing Tai Road	8	DD	27	2200-2300	641	40%	23%	0%	12%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.10579719	0.03518577	0.03239363
Wing Tai Road	8	DD	28	2300-0000	550	40%	23%	0%	13%	5%	2%	5%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.07691753	0.03439622	0.03166778
Wing Tai Road	9	DD	29	0000-0100	411	40%	22%	0%	12%	5%	2%	5%	2%	1%	4%	0%	0%	1%	0%	4%	2%	100%	1.09956827	0.03690978	0.03396866
Wing Tai Road	9	DD	29	0100-0200	248	39%	22%	0%	11%	5%	2%	5%	2%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.12522581	0.03878774	0.03569419
Wing Tai Road	9	DD	30	0200-0300	163	39%	23%	0%	11%	5%	2%	5%	2%	1%	4%	1%	1%	1%	0%	4%	2%	100%	1.06286135	0.03584294	0.03297865
Wing Tai Road	9	DD	30	0300-0400	164	39%	23%	0%	11%	4%	2%	5%	2%	1%	4%	1%	1%	1%	0%	5%	2%	100%	1.11102927	0.03711902	0.0341522
Wing Tai Road	9	DD	30	0400-0500	166	39%	23%	0%	10%	4%	2%	5%	2%	1%	5%	1%	1%	1%	1%	5%	2%	100%	1.16762892	0.04077494	0.03751518
Wing Tai Road	9	DD	30	0500-0600	165	38%	23%	0%	10%	4%	2%	5%	2%	1%	5%	1%	1%	1%	1%	5%	2%	100%	1.17004024	0.04099297	0.03771539
Wing Tai Road	9	DD	28	0600-0700	496	38%	23%	0%	10%	4%	2%	5%	2%	1%	5%	1%	1%	1%	0%	5%	2%	100%	1.22356871	0.0422029	0.03884677
Wing Tai Road	9	DD	26	0700-0800	910	38%	24%	0%	9%	4%	2%	5%	2%	1%	5%	1%	1%	1%	0%	5%	2%	100%	1.30741609	0.04494541	0.04137987
Wing Tai Road	9	DD	24	0800-0900	1157	38%	24%	0%	9%	4%	2%	5%	2%	1%	6%	1%	1%	1%	0%	5%	2%	100%	1.40301068	0.04804204	0.04423523
Wing Tai Road	9	DD	25	0900-1000	992	38%	24%	0%	9%	4%	2%	5%	2%	1%	5%	1%	1%	1%	0%	5%	2%	100%	1.32397097	0.04552855	0.04192258
Wing Tai Road	9	DD	26	1000-1100	906	38%	23%	0%	10%	4%	2%	5%	2%	1%	5%	1%	1%	1%	0%	5%	2%	100%	1.28241201	0.0434423	0.03999841
Wing Tai Road	9	DD	26	1100-1200	824	39%	23%	0%	11%	4%	2%	5%	2%	1%	4%	1%	0%	1%	0%	5%	2%	100%	1.23774311	0.04173592	0.03842874
Wing Tai Road	9	DD	26	1200-1300	905	39%	22%	0%	11%	5%	2%	5%	2%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.22819394	0.04073123	0.03750559
Wing Tai Road	9	DD	26	1300-1400	905	40%	22%	0%	12%	5%	2%	5%	2%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.18587191	0.03923766	0.03613171
Wing Tai Road	9	DD	26	1400-1500	905	40%	22%	0%	13%	5%	2%	5%	2%	1%	3%	0%	0%	1%	0%	4%	2%	100%	1.16489671	0.03809786	0.03508331
Wing Tai Road	9	DD	25	1500-1600	986	41%	21%	0%	13%	6%	2%	5%	2%	1%	3%	0%	0%	0%	0%	4%	2%	100%	1.16509193	0.0374843	0.03452852
Wing Tai Road	9	DD	25	1600-1700	985	41%	21%	0%	14%	6%	2%	5%	2%	1%	3%	0%	0%	0%	0%	3%	2%	100%	1.13942644	0.03635184	0.03348857
Wing Tai Road	9	DD	25	1700-1800	1066	42%	20%	0%	15%	6%	2%	5%	2%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.13306837	0.03515872	0.03239084
Wing Tai Road	9	DD	25	1800-1900	984	41%	21%	0%	14%	6%	2%	5%	2%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.14245772	0.03603626	0.03319821
Wing Tai Road	9	DD	26	1900-2000	822	41%	21%	0%	14%	6%	2%	5%	2%	0%	3%	0%	0%	0%	0%	3%	2%	100%	1.1383091	0.03598871	0.03314455
Wing Tai Road	9	DD	27	2000-2100	658	41%	21%	0%	14%	6%	2%	5%	2%	1%	3%	0%	0%	0%	0%	3%	2%	100%	1.10826261	0.03545119	0.03263635
Wing Tai Road	9	DD	28	2100-2200	574	41%	21%	0%	13%	5%	2%	5%	2%	1%	3%	0%	0%	1%	0%	4%	2%	100%	1.08706314	0.03531624	0.03251484
Wing Tai Road	9	DD	28	2200-2300	574	40%	22%	0%	13%	5%	2%	5%	2%	1%	3%	1%	0%	1%	0%	4%	2%	100%	1.0998124	0.03597352	0.03311944
Wing Tai Road	9	DD	28	2300-0000	494	40%	22%	0%	12%	5%	2%	5%	2%	1%	3%	1%	0%	1%	0%	4%	2%	100%	1.11726154	0.03702769	0.03408777
Wing Tai Road	10	DD	30	0000-0100	99	39%	31%	0%	12%	5%	0%	1%	0%	1%	4%	1%	0%	1%	0%	2%	2%	100%	0.77543273	0.02273778	0.02093091
Wing Tai Road	10	DD	30	0100-0200	57	40%	33%	0%	12%	5%	0%	2%	0%	0%	4%	0%	0%	0%	0%	2%	2%	100%	0.69801263	0.01844772	0.01698526
Wing Tai Road	10	DD	30	0200-0300	39	38%	33%	0%	13%	5%	0%	0%	0%	0%	5%	0%	0%	0%	0%	3%	3%	100%	0.71584	0.01931077	0.01777231
Wing Tai Road	10	DD	30	0300-0400	40	38%	35%	0%	13%	5%	0%	0%	0%	0%	5%	0%	0%	0%	0%	3%	3%	100%	0.726836	0.018828	0.017328
Wing Tai Road	10	DD	30	0400-0500	39	36%	36%	0%	13%	5%	0%	0%	0%	0%	5%	0%	0%	0%	0%	3%	3%	100%	0.74159179	0.01914667	0.01762051
Wing Tai Road	10	DD	30	0500-0600	39	36%	36%	0%	13%	5%	0%	0%	0%	0%	5%	0%	0%	0%	0%	3%	3%	100%	0.74159179	0.01914667	0.01762051
Wing Tai Road	10	DD	30	0600-0700	123	33%	36%	0%	14%	6%	0%	1%	0%	1%	5%	1%	0%	1%	0%	2%	2%	100%	0.80101463	0.02116813	0.01949008
Wing Tai Road	10	DD	30	0700-0800	228	32%	36%	0%	14%	6%	0%	1%	0%	1%	5%	0%	0%	0%	0%	2%	1%	100%	0.81548702	0.02083158	0.01918246
Wing Tai Road	10	DD	29	0800-0900	295	31%	37%	0%	14%	6%	0%	1%	0%	1%	5%	1%	0%	1%	0%	2%	1%	100%	0.85660041	0.0219379	0.02020393
Wing Tai Road	10	DD	30	0900-1000	249	33%	36%	0%	14%	6%	0%	1%	0%	1%	5%	0%	0%	1%	0%	2%	1%	100%	0.83606616	0.0225388	0.02075438
Wing Tai Road	10	DD	30	1000-1100	224	35%	35%	0%	13%	5%	0%	1%	0%	1%	5%	0%	0%	0%	0%	2%	1%	100%	0.80114071	0.02070286	0.01906429
Wing Tai Road	10	DD	30	1100-1200	202	36%	34%	0%	13%	5%	0%	1%	0%	1%	4%	0%	0%	0%	0%	2%	1%	100%	0.79988594	0.02152896	0.01981861
Wing Tai Road	10	DD	30	1200-1300	218	38%	33%	0%	12%	5%	0%	1%	0%	1%	4%	0%	0%	0%	0%	2%	2%	100%	0.79678312	0.02179156	0.02006165
Wing Tai Road	10	DD	30	1300-1400	216	40%	31%	0%	12%	5%	0%	1%	0%	1%	4%	0%	0%	0%	0%	2%	2%	100%	0.77223852	0.02177852	0.02004593
Wing Tai Road	10	DD	30	1400-1500	211	42%	30%	0%	12%	5%	0%	1%	0%	0%	3%	0%	0%	0%	0%	2%	2%	100%	0.75610389	0.02162351	0.01990294
Wing Tai Road	10	DD	30	1500-1600	228	44%	29%	0%	11%	5%	0%	1%	0%	0%	3%	0%	0%	1%	0%	2%	3%	100%	0.7451193	0.02215509	0.02039018
Wing Tai Road	10	DD	30	1600-1700	225	46%	27%	0%	11%	4%	0%	1%	0%	0%	3%	0%	0%	1%	0%	3%	3%	100%	0.74737351	0.0232384	0.0213824
Wing Tai Road	10	DD	30	1700-1800	241	48%	26%	0%	10%	4%	0%	1%	0%	0%	2%	1%	0%	1%	0%	2%	3%	100%	0.74096133	0.02289793	0.02106755
Wing Tai Road	10	DD	30	1800-1900	224	46%	26%	0%	11%	4%	0%	1%	0%	0%	3%	0%	0%	1%	0%	3%	3%	100%	0.75075429	0.02337071	0.02150429
Wing Tai Road	10	DD	30	1900-2000	187	45%	28%	0%	11%	4%	1%	1%	0%	1%	3%	1%	1%	1%	0%	3%	3%	100%	0.75536428	0.02244449	0.0206554
Wing Tai Road	10	DD	30	2000-2100	154	44%	28%	0%	11%	5%	1%	1%	0%	1%	3%	1%	1%	1%	0%	3%	3%	100%	0.78987221	0.02363325	0.02174961
Wing Tai Road	10	DD	30	2100-2200	134	43%	29%	0%	11%	4%	1%	1%	0%	1%	3%	1%	1%	1%	0%	2%	2%	100%	0.76156776	0.02210388	0.02034627
Wing Tai Road	10	DD	30	2200-2300	136	42%	29%	0%	12%	5%	0%	1%	0%	1%	4%	1%	1%	1%	0%	2%	2%	100%	0.7657	0.02222824	0.02046116
Wing Tai Road	10	DD	30	2300-0000	118	41%	31%	0%	12%	5%	0%	1%	0%	1%	3%	1%	0%	1%	0%	3%	3%	100%	0.77690102	0.0231322	0.02128949
Wing Tai Road	11	DD	29	0000-0100	363	39%	21%	0%	13%	6%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.13347747	0.03683923	0.03390413
Wing Tai Road	11	DD	30	0100-0200	219	38%	21%	0%	13%	5%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.14486868	0.03810703	0.03506776
Wing Tai Road	11	DD	30	0200-0300	146	38%	21%	0%	13%	5%	3%	7%	3%	0%	1%	1%	0%	1%	0%	4%	2%	100%	1.13984658	0.03800219	0.03496877
Wing Tai Road	11	DD	30	0300-0400	146	38%	21%	0%	13%	5%	3%	7%	3%	0%	1%	1%	0%	1%	0%	4%	2%	100%	1.16205151	0.03800219	0.03496877
Wing Tai Road	11	DD	30	0400-0500	147	37%	21%	0%	14%	5%	3%	7%	3%	0%	2%	1%	0%	1%	0%	4%	2%	100%	1.16817633	0.03822367	0.03517279
Wing Tai Road	11	DD	30	0500-0600	149	37%	21%	0%	13%	5%	3%	7%	3%	1%	2%	1%	0%	1%	0%	4%	2%	100%	1.18194255	0.03882846	0.0357294
Wing Tai Road	11	DD	28	0600-0700	447	37%	21%	0%	13%	6%	3%	7%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.26567195	0.04127785	0.03799767
Wing Tai Road	11	DD	26	0700-0800	818	36%	21%	0%	14%	6%	3%	7%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.35344078	0.04372929	0.04026112
Wing Tai Road	11	DD	25	0800-0900	1046	36%	21%	0%	14%	6%	3%	8%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.41600092	0.04552092	0.04191725
Wing Tai Road	11	DD	26	0900-1000	892	37%	21%	0%	14%	6%	3%	7%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.33618224	0.04341417	0.03997184
Wing Tai Road	11	DD	26	1000-1100	814	37%	21%	0%	13%	6%	3%	7%	3%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.32739715	0.04268423	0.03930123
Wing Tai Road	11	DD	27	1100-1200	734	38%	21%	0%	13%	5%	3%	7%	4%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.25239695	0.04063542	0.0374073
Wing Tai Road	11	DD	26	1200-1300	804	38%	21%	0%	13%	5%	2%	7%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.27184139	0.04062908	0.03740498
Wing Tai Road	11	DD	26	1300-1400	795	39%	21%	0%	13%	5%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.22731874	0.03964418	0.03650596
Wing Tai Road	11	DD	26	1400-1500	793	40%	21%	0%	13%	5%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.21211682	0.03913947	0.03604177
Wing Tai Road	11	DD	26	1500-1600	859	40%	21%	0%	13%	5%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.17749327	0.03799786	0.03499194
Wing Tai Road	11	DD	26	1600-1700	852	41%	21%	0%	13%	5%	2%	5%	5%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.13781934	0.03667512	0.03377634
Wing Tai Road	11	DD	26	1700-1800	916	42%	22%	0%	12%	5%	2%	5%	5%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.1328538	0.03584384	0.03301188
Wing Tai Road	11	DD	26	1800-1900	850	41%	22%	0%	12%	5%	2%	5%	5%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.14028574	0.03652706	0.03364009
Wing Tai Road	11	DD	27	1900-2000	711	41%	22%	0%	13%	5%	2%	5%	5%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.13915094	0.03637558	0.03349243
Wing Tai Road	11	DD	28	2000-2100	569	41%	21%	0%	13%	5%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.11863817	0.03591367	0.03306685
Wing Tai Road	11	DD	28	2100-2200	500	40%	21%	0%	13%	5%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.12592608	0.03631168	0.03343232
Wing Tai Road	11	DD	28	2200-2300	503	40%	21%	0%	13%	5%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.14751046	0.03717948	0.03423078
Wing Tai Road	11	DD	28	2300-0000	434	39%	21%	0%	13%	5%	2%	6%	4%	0%	1%	0%	0%	0%	0%	4%	2%	100%	1.15813051	0.03780313	0.03480369
Wing Tai Road	12	DD	28	0000-0100	455	39%	22%	0%	12%	5%	2%	5%	4%	1%	3%	0%	0%	0%	0%	4%	2%	100%	1.09240264	0.03560756	0.03278101
Wing Tai Road	12	DD	29	0100-0200	272	38%	22%	0%	12%	5%	2%	5%	4%	1%	3%	0%	0%	0%	0%	4%	2%	100%	1.08974294	0.03607706	0.03320059
Wing Tai Road	12	DD	30	0200-0300	180	38%	23%	0%	12%	5%	2%	5%	4%	1%	3%	1%	1%	1%	0%	4%	2%	100%	1.05914667	0.03479733	0.032016
Wing Tai Road	12	DD	30	0300-0400	177	38%	23%	0%	11%	5%	2%	5%	5%	1%	3%	1%	1%	1%	0%	4%	2%	100%	1.07996023	0.03488633	0.03209672
Wing Tai Road	12	DD	30	0400-0500	177	37%	23%	0%	11%	5%	2%	5%	5%	1%	4%	1%	1%	1%	0%	4%	2%	100%	1.08265311	0.03516384	0.03235164
Wing Tai Road	12	DD	30	0500-0600	175	37%	23%	0%	11%	5%	2%	5%	5%	1%	4%	1%	1%	1%	0%	4%	2%	100%	1.08624091	0.03540663	0.03257417
Wing Tai Road	12	DD	28	0600-0700	528	36%	23%	0%	11%	5%	2%	5%	5%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.16770758	0.03816686	0.03513333
Wing Tai Road	12	DD	25	0700-0800	960	36%	24%	0%	11%	4%	2%	5%	5%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.2870815	0.0419625	0.0386415
Wing Tai Road	12	DD	24	0800-0900	1214	36%	24%	0%	10%	4%	2%	5%	5%	1%	4%	0%	0%	1%	0%	4%	2%	100%	1.3385853	0.04345713	0.0400145
Wing Tai Road	12	DD	25	0900-1000	1053	36%	24%	0%	11%	4%	2%	5%	5%	1%	4%	0%	0%	1%	0%	4%	2%	100%	1.27151028	0.04168722	0.03838845
Wing Tai Road	12	DD	25	1000-1100	976	37%	23%	0%	11%	5%	2%	5%	5%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.27067443	0.04110967	0.0378582
Wing Tai Road	12	DD	26	1100-1200	895	38%	23%	0%	11%	5%	2%	5%	5%	1%	4%	0%	0%	1%	0%	4%	2%	100%	1.19984358	0.03910597	0.03600572
Wing Tai Road	12	DD	25	1200-1300	994	38%	23%	0%	12%	5%	2%	5%	5%	1%	3%	0%	0%	1%	0%	4%	2%	100%	1.22748072	0.03928225	0.03617996
Wing Tai Road	12	DD	25	1300-1400	1006	39%	22%	0%	12%	5%	2%	5%	4%	1%	3%	0%	0%	0%	0%	4%	2%	100%	1.1961037	0.03865511	0.03560398
Wing Tai Road	12	DD	25	1400-1500	1015	39%	22%	0%	12%	5%	2%	5%	4%	0%	3%	0%	0%	0%	0%	4%	2%	100%	1.1814638	0.03802231	0.03502266
Wing Tai Road	12	DD	24	1500-1600	1120	40%	21%	0%	13%	5%	2%	5%	4%	1%	3%	0%	0%	0%	0%	4%	2%	100%	1.19963029	0.03882971	0.03557757
Wing Tai Road	12	DD	24	1600-1700	1132	41%	21%	0%	13%	5%	2%	5%	4%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.18233117	0.0380629	0.0350636
Wing Tai Road	12	DD	24	1700-1800	1239	41%	21%	0%	13%	5%	2%	5%	4%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.18625705	0.03743923	0.03449078
Wing Tai Road	12	DD	24	1800-1900	1137	41%	21%	0%	13%	5%	2%	5%	4%	0%	2%	0%	0%	0%	0%	3%	2%	100%	1.18199543	0.03764953	0.03468369
Wing Tai Road	12	DD	26	1900-2000	942	40%	21%	0%	13%	5%	2%	5%	4%	0%	2%	0%	0%	0%	0%	4%	2%	100%	1.13436586	0.03603414	0.0331842
Wing Tai Road	12	DD	27	2000-2100	749	40%	21%	0%	13%	5%	2%	5%	4%	1%	3%	0%	0%	0%	0%	4%	2%	100%	1.11626873	0.0358368	0.03299183
Wing Tai Road	12	DD	27	2100-2200	652	40%	22%	0%	12%	5%	2%	5%	4%	0%	3%	0%	0%	0%	0%	4%	2%	100%	1.12666724	0.03649816	0.0336
Wing Tai Road	12	DD	27	2200-2300	647	39%	22%	0%	12%	5%	2%	5%	4%	0%	3%	0%	0%	0%	0%	4%	2%	100%	1.13206677	0.03675796	0.03383864
Wing Tai Road	12	DD	28	2300-0000	550	39%	22%	0%	12%	5%	2%	5%	4%	1%	3%	0%	0%	1%	0%	4%	2%	100%	1.104336	0.03605149	0.03319156
Wing Tai Road	13	DD	30	0000-0100	172	47%	18%	0%	12%	5%	2%	5%	0%	1%	3%	1%	0%	1%	0%	4%	3%	100%	0.97595628	0.03362884	0.03094419
Wing Tai Road	13	DD	30	0100-0200	101	47%	19%	0%	12%	5%	2%	5%	0%	1%	3%	0%	0%	0%	0%	4%	3%	100%	0.93159287	0.03136158	0.02885703
Wing Tai Road	13	DD	30	0200-0300	65	48%	18%	0%	12%	5%	2%	5%	0%	0%	3%	0%	0%	0%	0%	5%	3%	100%	0.94383508	0.03237908	0.029792
Wing Tai Road	13	DD	30	0300-0400	65	46%	18%	0%	12%	5%	2%	5%	0%	0%	5%	0%	0%	0%	0%	5%	3%	100%	0.97978585	0.03313477	0.03048615
Wing Tai Road	13	DD	30	0400-0500	65	45%	18%	0%	12%	5%	2%	5%	0%	2%	5%	0%	0%	0%	0%	5%	3%	100%	0.98759877	0.03339077	0.03072246
Wing Tai Road	13	DD	30	0500-0600	64	44%	19%	0%	13%	5%	2%	5%	0%	2%	5%	0%	0%	0%	0%	5%	3%	100%	1.0023775	0.0338125	0.03111
Wing Tai Road	13	DD	30	0600-0700	195	43%	18%	0%	12%	5%	2%	5%	1%	1%	5%	1%	1%	1%	1%	5%	3%	100%	1.08751836	0.03771405	0.03469867
Wing Tai Road	13	DD	29	0700-0800	353	42%	18%	0%	12%	5%	2%	5%	1%	1%	5%	1%	0%	1%	0%	5%	3%	100%	1.11322652	0.03818198	0.03513537
Wing Tai Road	13	DD	29	0800-0900	443	42%	19%	0%	12%	5%	2%	5%	0%	1%	5%	0%	0%	1%	0%	5%	3%	100%	1.1253786	0.03835413	0.03529138
Wing Tai Road	13	DD	29	0900-1000	387	43%	19%	0%	12%	5%	2%	5%	1%	1%	5%	1%	0%	1%	0%	4%	3%	100%	1.08290398	0.03709767	0.03413581
Wing Tai Road	13	DD	29	1000-1100	363	44%	18%	0%	12%	5%	2%	5%	0%	1%	4%	1%	0%	1%	0%	4%	3%	100%	1.08829444	0.03700055	0.03404738
Wing Tai Road	13	DD	29	1100-1200	336	45%	18%	0%	12%	5%	2%	5%	0%	1%	4%	0%	0%	0%	0%	4%	3%	100%	1.0444181	0.03542667	0.03260048
Wing Tai Road	13	DD	29	1200-1300	377	46%	18%	0%	12%	5%	2%	5%	0%	1%	3%	0%	0%	1%	0%	4%	3%	100%	1.03715395	0.03510111	0.03230175
Wing Tai Road	13	DD	29	1300-1400	383	46%	18%	0%	12%	5%	2%	5%	0%	1%	3%	0%	0%	0%	0%	4%	3%	100%	0.99832146	0.03373744	0.03104752

Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																	CompositeEmission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
Wing Tai Road	13	DD	29	1400-1500	391	47%	18%	0%	12%	5%	2%	5%	0%	1%	3%	0%	0%	0%	0%	4%	3%	100%	0.98457985	0.03320512	0.03056123
Wing Tai Road	13	DD	29	1500-1600	432	48%	18%	0%	12%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	4%	3%	100%	0.95518074	0.03230815	0.02973667
Wing Tai Road	13	DD	29	1600-1700	439	49%	18%	0%	12%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	3%	100%	0.92573084	0.03115991	0.02868082
Wing Tai Road	13	DD	28	1700-1800	484	50%	18%	0%	12%	5%	2%	5%	0%	0%	1%	0%	0%	0%	0%	3%	2%	100%	0.94340661	0.03102545	0.02856727
Wing Tai Road	13	DD	29	1800-1900	443	50%	18%	0%	12%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	2%	100%	0.92695115	0.03100966	0.02854284
Wing Tai Road	13	DD	29	1900-2000	365	49%	18%	0%	12%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	4%	2%	100%	0.96348581	0.03213458	0.02957764
Wing Tai Road	13	DD	29	2000-2100	288	49%	18%	0%	12%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	3%	2%	100%	0.95416833	0.032135	0.02957833
Wing Tai Road	13	DD	30	2100-2200	251	48%	18%	0%	12%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	4%	3%	100%	0.95093036	0.03248765	0.02989578
Wing Tai Road	13	DD	30	2200-2300	247	48%	18%	0%	12%	5%	2%	5%	0%	0%	2%	0%	0%	0%	0%	4%	3%	100%	0.95773603	0.03287514	0.03025166
Wing Tai Road	13	DD	30	2300-0000	212	47%	18%	0%	12%	5%	2%	5%	0%	0%	3%	0%	0%	0%	0%	4%	3%	100%	0.98116302	0.03390038	0.03119472
Shing Tai Road	14	LD	25	0000-0100	45	64%	18%	0%	7%	2%	0%	2%	0%	0%	4%	0%	0%	0%	0%	0%	2%	100%	0.64376372	0.02128069	0.01956464
Shing Tai Road	14	LD	25	0100-0200	28	64%	18%	0%	7%	4%	0%	4%	0%	0%	4%	0%	0%	0%	0%	0%	0%	100%	0.72259018	0.02192373	0.02028038
Shing Tai Road	14	LD	25	0200-0300	18	72%	17%	0%	6%	0%	0%	0%	0%	0%	6%	0%	0%	0%	0%	0%	0%	100%	0.42961404	0.01592637	0.01477397
Shing Tai Road	14	LD	25	0300-0400	18	72%	17%	0%	6%	0%	0%	0%	0%	0%	6%	0%	0%	0%	0%	0%	0%	100%	0.43815384	0.01592637	0.01477397
Shing Tai Road	14	LD	25	0400-0500	20	70%	20%	0%	5%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	100%	0.43789146	0.01509251	0.01400265
Shing Tai Road	14	LD	25	0500-0600	20	70%	20%	0%	5%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	100%	0.43789146	0.01509251	0.01400265
Shing Tai Road	14	LD	25	0600-0700	67	66%	16%	0%	3%	1%	1%	1%	0%	1%	4%	1%	0%	1%	0%	0%	1%	100%	0.76568362	0.0269798	0.02485271
Shing Tai Road	14	LD	24	0700-0800	125	67%	18%	0%	2%	1%	1%	2%	0%	1%	4%	1%	1%	1%	0%	0%	2%	100%	0.73299577	0.02509045	0.02311819
Shing Tai Road	14	LD	24	0800-0900	164	68%	17%	0%	2%	1%	1%	2%	0%	1%	4%	1%	1%	1%	0%	0%	1%	100%	0.74088152	0.02601804	0.02399297
Shing Tai Road	14	LD	24	0900-1000	134	66%	17%	0%	3%	1%	1%	2%	0%	1%	4%	1%	1%	1%	0%	0%	1%	100%	0.73503149	0.02517235	0.02319771
Shing Tai Road	14	LD	25	1000-1100	119	65%	17%	0%	4%	2%	1%	3%	0%	1%	4%	1%	1%	1%	0%	0%	2%	100%	0.78327488	0.02580891	0.02376157
Shing Tai Road	14	LD	25	1100-1200	102	65%	17%	0%	5%	2%	1%	2%	0%	1%	4%	1%	1%	1%	0%	0%	1%	100%	0.77465467	0.02540318	0.02342726
Shing Tai Road	14	LD	25	1200-1300	107	63%	17%	0%	6%	3%	1%	3%	0%	1%	4%	1%	1%	1%	0%	0%	1%	100%	0.84904084	0.02670666	0.02462629
Shing Tai Road	14	LD	25	1300-1400	101	61%	17%	0%	7%	3%	1%	3%	0%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.87272638	0.02714382	0.02502374
Shing Tai Road	14	LD	25	1400-1500	96	59%	17%	0%	8%	3%	1%	3%	0%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.92061199	0.02802333	0.02582772
Shing Tai Road	14	LD	25	1500-1600	98	58%	16%	0%	9%	4%	1%	3%	0%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.93998807	0.02837338	0.02614911
Shing Tai Road	14	LD	25	1600-1700	91	57%	16%	0%	11%	4%	1%	3%	0%	0%	2%	1%	1%	1%	0%	0%	1%	100%	0.9807058	0.02895925	0.02668028
Shing Tai Road	14	LD	25	1700-1800	92	54%	16%	0%	13%	5%	1%	3%	0%	0%	2%	1%	1%	1%	0%	0%	1%	100%	1.04130196	0.02956396	0.02723354
Shing Tai Road	14	LD	25	1800-1900	89	55%	17%	0%	12%	4%	1%	3%	0%	0%	2%	1%	1%	1%	0%	0%	1%	100%	1.02258754	0.0293748	0.02705857
Shing Tai Road	14	LD	25	1900-2000	77	57%	17%	0%	10%	5%	1%	3%	0%	0%	3%	1%	0%	1%	0%	0%	1%	100%	0.95512202	0.02882368	0.02654533
Shing Tai Road	14	LD	25	2000-2100	65	57%	17%	0%	9%	5%	2%	3%	0%	0%	3%	2%	0%	2%	0%	0%	2%	100%	1.00007217	0.03074232	0.02829717
Shing Tai Road	14	LD	25	2100-2200	59	58%	17%	0%	8%	3%	2%	3%	0%	0%	3%	2%	0%	2%	0%	0%	2%	100%	1.0097617	0.03156564	0.02904745
Shing Tai Road	14	LD	25	2200-2300	61	59%	16%	0%	8%	3%	2%	3%	0%	0%	3%	2%	0%	2%	0%	0%	2%	100%	0.98162254	0.03102826	0.02855808
Shing Tai Road	14	LD	25	2300-0000	54	61%	17%	0%	7%	4%	2%	2%	0%	0%	4%	0%	0%	2%	0%	0%	2%	100%	0.87949756	0.02876528	0.02646605
Shing Tai Road	15	LD	25	0000-0100	36	50%	11%	0%	11%	6%	3%	6%	0%	0%	6%	3%	3%	3%	0%	0%	0%	100%	1.50689736	0.04421799	0.04077095
Shing Tai Road	15	LD	25	0100-0200	20	50%	15%	0%	10%	5%	0%	5%	0%	0%	5%	5%	0%	5%	0%	0%	0%	100%	1.48997849	0.04825497	0.04448793
Shing Tai Road	15	LD	25	0200-0300	13	54%	15%	0%	8%	8%	0%	8%	0%	0%	8%	0%	0%	0%	0%	0%	0%	100%	1.13026825	0.03248777	0.02998787
Shing Tai Road	15	LD	25	0300-0400	12	58%	17%	0%	8%	0%	0%	8%	0%	0%	8%	0%	0%	0%	0%	0%	0%	100%	1.04622162	0.02971508	0.02744686
Shing Tai Road	15	LD	25	0400-0500	12	58%	17%	0%	8%	0%	0%	8%	0%	0%	8%	0%	0%	0%	0%	0%	0%	100%	1.04354162	0.02971508	0.02744686
Shing Tai Road	15	LD	25	0500-0600	11	55%	18%	0%	9%	0%	0%	9%	0%	0%	9%	0%	0%	0%	0%	0%	0%	100%	1.12447514	0.03103685	0.02865826
Shing Tai Road	15	LD	25	0600-0700	40	48%	18%	0%	5%	3%	3%	8%	0%	3%	8%	3%	3%	3%	0%	0%	0%	100%	1.51281254	0.04367632	0.0402746
Shing Tai Road	15	LD	25	0700-0800	73	45%	16%	0%	5%	3%	3%	7%	0%	1%	8%	3%	3%	4%	0%	0%	1%	100%	1.67624004	0.05040846	0.046386
Shing Tai Road	15	LD	25	0800-0900	89	46%	18%	0%	4%	2%	2%	7%	0%	1%	8%	3%	2%	4%	0%	0%	1%	100%	1.65851553	0.05055756	0.04653787
Shing Tai Road	15	LD	25	0900-1000	79	47%	16%	0%	5%	3%	3%	6%	0%	1%	8%	4%	3%	4%	0%	0%	1%	100%	1.59436119	0.0487195	0.0448398
Shing Tai Road	15	LD	25	1000-1100	74	47%	15%	0%	7%	3%	3%	7%	0%	1%	7%	3%	3%	4%	0%	0%	1%	100%	1.64771209	0.04959407	0.04564072
Shing Tai Road	15	LD	25	1100-1200	68	49%	15%	0%	9%	3%	3%	6%	0%	1%	6%	3%	1%	3%	0%	0%	1%	100%	1.46339254	0.04396767	0.0404612
Shing Tai Road	15	LD	25	1200-1300	78	49%	13%	0%	9%	4%	3%	6%	0%	1%	6%	3%	3%	4%	0%	0%	0%	100%	1.61454125	0.04798702	0.04424014
Shing Tai Road	15	LD	25	1300-1400	78	50%	12%	0%	10%	5%	3%	6%	0%	1%	5%	3%	3%	3%	0%	0%	0%	100%	1.49923851	0.0438384	0.04042467
Shing Tai Road	15	LD	25	1400-1500	81	51%	11%	0%	12%	5%	2%	6%	0%	1%	5%	2%	1%	2%	0%	0%	0%	100%	1.43322488	0.04215567	0.03887989
Shing Tai Road	15	LD	25	1500-1600	91	51%	10%	0%	13%	5%	2%	5%	0%	1%	4%	2%	2%	3%	0%	0%	0%	100%	1.49410179	0.04455023	0.04108068
Shing Tai Road	15	LD	25	1600-1700	93	52%	9%	0%	14%	5%	2%	5%	0%	1%	4%	2%	2%	3%	0%	0%	0%	100%	1.47105078	0.04418295	0.04074469
Shing Tai Road	15	LD	25	1700-1800	102	52%	8%	0%	15%	6%	2%	6%	0%	1%	4%	2%	2%	3%	0%	0%	0%	100%	1.48238263	0.04373329	0.04033184
Shing Tai Road	15	LD	25	1800-1900	93	52%	8%	0%	14%	6%	2%	5%	0%	1%	4%	2%	2%	3%	0%	0%	0%	100%	1.49623557	0.04489004	0.04139502
Shing Tai Road	15	LD	25	1900-2000	75	52%	9%	0%	13%	5%	3%	5%	0%	1%	4%	3%	1%	3%	0%	0%	0%	100%	1.42650867	0.04211331	0.0388425
Shing Tai Road	15	LD	25	2000-2100	60	52%	10%	0%	13%	5%	2%	5%	0%	2%	5%	2%	2%	3%	0%	0%	0%	100%	1.42712748	0.04287584	0.03954387
Shing Tai Road	15	LD	25	2100-2200	51	51%	10%	0%	14%	6%	2%	6%	0%	0%	4%	2%	2%	4%	0%	0%	0%	100%	1.55605402	0.04662878	0.04299179
Shing Tai Road	15	LD	25	2200-2300	51	51%	10%	0%	12%	6%	2%	6%	0%	0%	6%	2%	2%	4%	0%	0%	0%	100%	1.55973063	0.04741718	0.04371744
Shing Tai Road	15	LD	25	2300-0000	43	51%	12%	0%	12%	5%	2%	7%	0%	0%	5%	2%	2%	2%	0%	0%	0%	100%	1.47829428	0.04274656	0.03942028
Shing Tai Road	16	LD	25	0000-0100	231	41%	20%	0%	7%	3%	1%	3%	5%	1%	6%	2%	1%	2%	0%	4%	1%	100%	1.99423002	0.05049708	0.04648544
Shing Tai Road	16	LD	25	0100-0200	199	42%	20%	0%	7%	3%	1%	3%	5%	1%	6%	2%	1%	2%	0%	4%	1%	100%	1.94581816	0.04912785	0.04523466
Shing Tai Road	16	LD	25	0200-0300	92	41%	21%	0%	7%	3%	1%	3%	5%	1%	7%	2%	1%	2%	0%	4%	1%	100%	1.95790099	0.04978521	0.04581793
Shing Tai Road	16	LD	25	0300-0400	93	42%	20%	0%	6%	3%	1%	3%	5%	1%	6%	2%	1%	2%	0%	4%	1%	100%	1.96506107	0.04941306	0.0454771
Shing Tai Road	16	LD	25	0400-0500	92	42%	20%	0%	7%	3%	1%	3%	4%	1%	5%	2%	2%	3%	0%	4%	1%	100%	2.08159723	0.05366147	0.0493836
Shing Tai Road	16	LD	25	0500-0600	92	43%	20%	0%	7%	2%	1%	3%	4%	1%	5%	2%	2%	3%	0%	4%	1%	100%	2.05763678	0.05311164	0.0488797
Shing Tai Road	16	LD	24	0600-0700	284	43%	19%	0%	6%	2%	1%	4%	5%	1%	6%	2%	2%	3%	0%	4%	1%	100%	2.07663088	0.05492729	0.05053277
Shing Tai Road	16	LD	23	0700-0800	518	43%	19%	0%	6%	3%	1%	4%	4%	1%	5%	3%	2%	3%	0%	4%	1%	100%	2.137816	0.05648331	0.05195918
Shing Tai Road	16	LD	22	0800-0900	688	44%	18%	0%	6%	3%	1%	4%	4%	1%	5%	3%	2%	3%	0%	4%	1%	100%	2.17855456	0.05806651	0.05339266
Shing Tai Road	16	LD	22	0900-1000	575	43%	19%	0%	7%	3%	1%	4%	5%	1%	5%	3%	2%	3%	0%	4%	1%	100%	2.14187486	0.05715585	0.05255286
Shing Tai Road	16	LD	23	1000-1100	525	42%	19%	0%	7%	3%	1%	4%	5%	1%	6%	2%	2%	3%	0%	4%	1%	100%	2.12720761	0.05528775	0.05084838
Shing Tai Road	16	LD	23	1100-1200	479	41%	19%	0%	8%	4%	1%	3%	5%	1%	6%	2%	1%	3%	0%	4%	1%	100%	2.06714309	0.05344481	0.04914692
Shing Tai Road	16	LD	23	1200-1300	529	40%	19%	0%	8%	3%	1%	4%	5%	1%	6%	2%	1%	2%	0%	4%	1%	100%	2.09771696	0.05353756	0.04922723
Shing Tai Road	16	LD	23	1300-1400	526	40%	20%	0%	8%	3%	1%	3%	5%	1%	6%	2%	1%	2%	0%	4%	1%	100%	2.05540417	0.05243186	0.04820893
Shing Tai Road	16	LD	23	1400-1500	512	40%	20%	0%	9%	4%	1%	3%	5%	1%	6%	2%	1%	2%	0%	4%	1%	100%	2.01403189	0.05070989	0.04662251
Shing Tai Road	16	LD	22	1500-1600	559	39%	20%	0%	10%	4%	1%	3%	6%	1%	7%	1%	1%	2%	0%	4%	1%	100%	2.06620203	0.05183682	0.04766573
Shing Tai Road	16	LD	22	1600-1700	561	39%	20%	0%	10%	4%	1%	2%	6%	1%	7%	1%	1%	1%	0%	4%	1%	100%	2.02430164	0.05025383	0.04620991
Shing Tai Road	16	LD	22	1700-1800	597	39%	21%	0%	10%	4%	1%	2%	6%	1%	7%	1%	1%	1%	0%	5%	1%	100%	2.0394346	0.04941445	0.04544027
Shing Tai Road	16	LD	22	1800-1900	543	39%	21%	0%	9%	4%	1%	3%	6%	1%	7%	1%	1%	1%	0%	5%	1%	100%	2.05281106	0.05078701	0.04670831
Shing Tai Road	16	LD	23	1900-2000	455	40%	21%	0%	9%	4%	1%	2%	6%	1%	7%	1%	1%	1%	0%	5%	1%	100%	2.00112134	0.04870237	0.04480443
Shing Tai Road	16	LD	24	2000-2100	367	41%	21%	0%	9%	4%	1%	2%	5%	1%	7%	1%	1%	2%	0%	4%	1%	100%	1.95033091	0.04828073	0.04444553
Shing Tai Road	16	LD	24	2100-2200	329	40%	20%	0%	9%	4%	1%	4%	5%	1%	7%	2%	1%	2%	0%	4%	1%	100%	2.02511601	0.05004211	0.04607641
Shing Tai Road	16	LD	24	2200-2300	318	42%	21%	0%	8%	3%	1%	3%	5%	1%	7%	2%	1%	2%	0%	4%	1%	100%	1.9866042	0.04981534	0.04587027
Shing Tai Road	16	LD	24	2300-0000	275	41%	20%	0%	8%	3%	1%	3%	5%	1%	7%	2%	1%	2%	0%	4%	1%	100%	2.01516838	0.05129228	0.04722315
Shing Tai Road	17	LD	25	0000-0100	105	30%	19%	0%	7%	3%	2%	6%	8%	2%	8%	1%	1%	2%	1%	10%	2%	100%	3.27168545	0.07658569	0.07041135
Shing Tai Road	17	LD	25	0100-0200	60	30%	20%	0%	7%	3%	2%	5%	7%	2%	8%	2%	2%	2%	0%	10%	2%	100%	3.07050907	0.0709364	0.06522592
Shing Tai Road	17	LD	25	0200-0300	41	29%	20%	0%	7%	2%	2%	5%	7%	2%	7%	2%	0%	2%	0%	10%	2%	100%	3.06618078	0.0727624	0.06686621
Shing Tai Road	17	LD	25	0300-0400	41	29%	20%	0%	7%	2%	2%	5%	7%	2%	7%	2%	0%	2%	0%	10%	2%	100%	3.10318716	0.0727624	0.06686621
Shing Tai Road	17	LD	25	0400-0500	40	30%	20%	0%	8%	3%	3%	5%	8%	3%	8%	3%	0%	3%	0%	8%	3%	100%	2.74562361	0.06615346	0.06078587
Shing Tai Road	17	LD	25	0500-0600	39	31%	21%	0%	8%	3%	3%	5%	8%	3%	8%	0%	0%	3%	0%	8%	3%	100%	2.73711769	0.06507227	0.05978858
Shing Tai Road	17	LD	25	0600-0700	129	30%	19%	0%	7%	3%	4%	9%	6%	2%	7%	1%	1%	2%	1%	7%	2%	100%	2.90383932	0.06886819	0.06333638
Shing Tai Road	17	LD	24	0700-0800	246	30%	19%	0%	13%	5%	2%	6%	6%	1%	7%	1%	1%	1%	0%	6%	1%	100%	2.60063705	0.06042535	0.05557764
Shing Tai Road	17	LD	24	0800-0900	306	31%	20%	0%	12%	5%	2%	6%	6%	1%	7%	1%	1%	1%	0%	6%	2%	100%	2.45547447	0.05816975	0.05346449
Shing Tai Road	17	LD	24	0900-1000	257	29%	20%	0%	11%	5%	2%	5%	6%	2%	7%	1%	1%	1%	0%	7%	2%	100%	2.62718139	0.06192692	0.05689711
Shing Tai Road	17	LD	24	1000-1100	233	30%	20%	0%	9%	4%	2%	6%	6%	1%	7%	1%	1%	1%	0%	8%	3%	100%	2.85446827	0.06671406	0.06128925
Shing Tai Road	17	LD	24	1100-1200	215	30%	19%	0%	10%	4%	2%	5%	7%	1%	7%	1%	1%	1%	0%	9%	2%	100%	2.98256686	0.06965652	0.06401036
Shing Tai Road	17	LD	24	1200-1300	235	30%	19%	0%	8%	4%	2%	5%	7%	1%	7%	1%	1%	2%	0%	10%	3%	100%	3.16236423	0.07364656	0.06766992
Shing Tai Road	17	LD	24	1300-1400	240	30%	18%	0%	9%	4%	2%	5%	7%	1%	7%	1%	1%	2%	0%	10%	2%	100%	3.2678071	0.07649628	0.07031782
Shing Tai Road	17	LD	24	1400-1500	251	29%	17%	0%	10%	4%	2%	5%	7%	1%	7%	1%	1%	2%	1%	11%	2%	100%	3.42904976	0.07956323	0.07314213
Shing Tai Road	17	LD	24	1500-1600	275	28%	16%	0%	9%	4%	2%	6%	7%	1%	7%	1%	1%	2%	1%	12%	3%	100%	3.62296406	0.08456547	0.07771355
Shing Tai Road	17	LD	24	1600-1700	271	29%	16%	0%	8%	3%	2%	5%	7%	1%	7%	1%	1%	2%	1%	13%	3%	100%	3.67093162	0.08549782	0.07857081
Shing Tai Road	17	LD	23	1700-1800	309	32%	15%	0%	7%	3%	2%	4%	7%	1%	7%	2%	1%	2%	1%	13%	3%	100%	3.75979853	0.08772287	0.08059337
Shing Tai Road	17	LD	24	1800-1900	263	29%	17%	0%	7%	3%	2%	5%	8%	2%	7%	2%	1%	2%	1%	14%	2%	100%	3.80142289	0.08750829	0.08045872
Shing Tai Road	17	LD	24	1900-2000	218	30%	17%	0%	7%	3%	2%	5%	7%	1%	7%	1%	1%	2%	1%	13%	2%	100%	3.79300536	0.08718084	0.08016245
Shing Tai Road	17	LD	25	2000-2100	172	30%	17%	0%	7%	3%	2%	5%	8%	1%	8%	2%	1%	2%	1%	13%	2%	100%	3.57333565	0.08147644	0.07491658
Shing Tai Road	17	LD	25	2100-2200	149	31%	17%	0%	7%	3%	2%	5%	7%	1%	7%	1%	1%	2%	1%	12%	2%	100%	3.47756893	0.08037443	0.07388926
Shing Tai Road	17	LD	25	2200-2300	152	30%	18%	0%	7%	3%	2%	5%	7%	1%	7%	1%	1%	2%	1%	12%	3%	100%	3.46319409	0.08042233	0.07389822
Shing Tai Road	17	LD	25	2300-0000	127	30%	18%	0%	7%	3%	2%	6%	7%	2%	8%	2%	1%	2%	1%	11%	2%	100%	3.30759955	0.07718704	0.0709387
Shing Tai Road	18	LD	25	0000-0100	124	38%	21%	0%	9%	4%	1%	2%	11%	1%	4%	1%	1%	2%	0%	6%	1%	100%	2.08405277	0.04863047	0.04476404
Shing Tai Road	18	LD	25	0100-0200	76	37%	21%	0%	9%	4%	0%	1%	12%	1%	4%	1%	1%	1%	0%	5%	1%	100%	1.99821636	0.0467552	0.04300929
Shing Tai Road	18	LD	25	0200-0300	50	36%	20%	0%	8%	4%	0%	2%	12%	0%	4%	2%	2%	2%	0%	6%	2%	100%	2.2534112	0.05407542	0.04970048
Shing Tai Road	18	LD	25	0300-0400	49	37%	20%	0%	8%	4%	0%	2%	12%	0%	4%	2%	2%	2%	0%	6%	0%	100%	2.30545386	0.05339444	0.04918682
Shing Tai Road	18	LD	25	0400-0500	48	35%	21%	0%	8%	4%	0%	2%	13%	0%	4%	2%	2%	2%	0%	6%	0%	100%	2.34495096	0.05419067	0.04991735
Shing Tai Road	18	LD	25	0500-0600	48	35%	21%	0%	8%	4%	0%	2%	13%	0%	4%	2%	2%	2%	0%	6%	0%	100%	2.34495096	0.05419067	0.04991735
Shing Tai Road	18	LD	25	0600-0700	147	34%	21%	0%	9%	4%	1%	1%	12%	1%	5%	2%	1%	2%	1%	6%	1%	100%	2.35065006	0.05539564	0.05097938
Shing Tai Road	18	LD	24	0700-0800	270	33%	21%	0%	9%	4%	0%	1%	12%	1%	5%	2%	1%	3%	0%	6%	1%	100%	2.45590701	0.05855278	0.05388738
Shing Tai Road	18	LD	23	0800-0900	342	33%	21%	0%	9%	4%	1%	1%	12%	1%	5%	2%	1%	3%	0%	6%	1%	100%	2.54211362	0.06056905	0.05571628
Shing Tai Road	18	LD	23	0900-1000	296	34%	21%	0%	9%	4%	1%	1%	11%	1%	5%	2%	1%	2%	0%	6%	1%	100%	2.47129654	0.05907805	0.0543398
Shing Tai Road	18	LD	24	1000-1100	271	35%	21%	0%	9%	4%	1%	1%	11%	1%	4%	2%	1%	2%	0%	6%	1%	100%	2.38735544	0.05629784	0.05181575
Shing Tai Road	18	LD	24	1100-1200	249	36%	21%	0%	9%	4%	0%	2%	12%	1%	4%	2%	1%	2%	0%	6%	1%	100%	2.30460021	0.05475277	0.05039227
Shing Tai Road	18	LD	24	1200-1300	273	37%	21%	0%	9%	4%	1%	1%	11%	1%	4%	1%	1%	1%	0%	6%	1%	100%	2.2189524	0.05189162	0.04774588
Shing Tai Road	18	LD	24	1300-1400	277	38%	21%	0%	9%	4%	1%	2%	11%	1%	4%	1%	1%	1%	0%	6%	1%	100%	2.16642801	0.05124648	0.04715521
Shing Tai Road	18	LD	24	1400-1500	279	39%	21%	0%	9%	4%	1%	2%	11%	1%	4%	1%	1%	1%	0%	6%	1%	100%	2.11606064	0.04978095	0.04578934
Shing Tai Road	18	LD	23	1500-1600	305	40%	21%	0%	9%	4%	1%	2%	11%	1%	3%	1%	1%	1%	0%	6%	1%	100%	2.0757646	0.04906107	0.04510909
Shing Tai Road	18	LD	23	1600-1700	308	41%	21%	0%	8%	4%	1%	2%	11%	1%	3%	1%	0%	1%	0%	5%	2%	100%	1.97318031	0.04697231	0.0431523
Shing Tai Road	18	LD	23	1700-1800	332	42%	21%	0%	8%	4%	1%	2%	11%	1%	3%	0%	0%	0%	0%	5%	2%	100%	1.91813627	0.04457782	0.04095624
Shing Tai Road	18	LD	23	1800-1900	308	41%	21%	0%	8%	4%	1%	2%	11%	1%	3%	0%	0%	1%	0%	5%	2%	100%	1.97233784	0.04664704	0.04285321
Shing Tai Road	18	LD	24	1900-2000	256	41%	21%	0%	9%	4%	1%	2%	11%	1%	3%	0%	0%	1%	0%	5%	2%	100%	2.02665457	0.04715047	0.04336608
Shing Tai Road	18	LD	24	2000-2100	203	40%	21%	0%	8%	3%	0%	2%	11%	0%	3%	0%	0%	1%	0%	5%	1%	100%	2.0454662	0.04819193	0.0443281
Shing Tai Road	18	LD	25	2100-2200	176	40%	21%	0%	9%	3%	1%	2%	11%	1%	3%	1%	1%	1%	1%	6%	1%	100%	2.06312244	0.04816493	0.04431984
Shing Tai Road	18	LD	25	2200-2300	176	39%	21%	0%	9%	3%	1%	2%	11%	1%	3%	1%	1%	1%	1%	6%	1%	100%	2.07962561	0.04869416	0.04480597
Shing Tai Road	18	LD	25	2300-0000	153	38%	21%	0%	8%	3%	1%	2%	11%	1%	4%	1%	1%	1%	1%	6%	1%	100%	2.16297735	0.0511371	0.04704243
Shing Tai Road	19	LD	25	0000-0100	79	32%	24%	0%	8%	4%	1%	3%	11%	1%	6%	1%	1%	1%	0%	5%	1%	100%	2.10469103	0.04878679	0.0448748
Shing Tai Road	19	LD	25	0100-0200	48	31%	25%	0%	8%	4%	0%	2%	10%	2%	6%	2%	0%	2%	0%	4%	2%	100%	1.93505055	0.04767535	0.04380981
Shing Tai Road	19	LD	25	0200-0300	31	32%	26%	0%	10%	3%	0%	3%	13%	0%	6%	0%	0%	0%	0%	6%	0%	100%	2.15880324	0.04599004	0.04237259
Shing Tai Road	19	LD	25	0300-0400	30	33%	27%	0%	10%	3%	0%	3%	10%	0%	7%	0%	0%	0%	0%	7%	0%	100%	2.19230427	0.04610971	0.04248368
Shing Tai Road	19	LD	25	0400-0500	30	37%	27%	0%	10%	3%	0%	3%	10%	0%	7%	0%	0%	0%	0%	3%	0%	100%	1.62111573	0.03537823	0.03261839
Shing Tai Road	19	LD	25	0500-0600	30	37%	27%	0%	10%	3%	0%	3%	10%	0%	7%	0%	0%	0%	0%	3%	0%	100%	1.62111573	0.03537823	0.03261839
Shing Tai Road	19	LD	25	0600-0700	96	33%	27%	0%	8%	3%	1%	2%	9%	1%	6%	1%	1%	1%	0%	4%	1%	100%	1.66924402	0.04244134	0.03905191
Shing Tai Road	19	LD	25	0700-0800	178	34%	27%	0%	8%	3%	1%	2%	10%	1%	7%	1%	1%	1%	0%	4%	1%	100%	1.83286842	0.04159461	0.03830168
Shing Tai Road	19	LD	25	0800-0900	229	34%	28%	0%	9%	3%	1%	2%	9%	1%	7%	1%	0%	1%	0%	3%	0%	100%	1.77516446	0.04048313	0.03728688
Shing Tai Road	19	LD	25	0900-1000	196	33%	27%	0%	9%	4%	1%	3%	10%	1%	7%	1%	1%	1%	0%	4%	1%	100%	1.86729317	0.04260542	0.03923373
Shing Tai Road	19	LD	25	1000-1100	176	33%	26%	0%	9%	3%	1%	2%	10%	1%	6%	1%	1%	1%	0%	5%	1%	100%	1.96136513	0.04429846	0.04078737
Shing Tai Road	19	LD	25	1100-1200	159	33%	25%	0%	8%	3%	1%	3%	11%	1%	6%	1%	1%	1%	0%	5%	1%	100%	2.04133003	0.04710978	0.04333493
Shing Tai Road	19	LD	25	1200-1300	176	32%	24%	0%	8%	3%	1%	3%	11%	1%	6%	1%	1%	1%	1%	5%	1%	100%	2.15525378	0.0498104	0.04582529
Shing Tai Road	19	LD	25	1300-1400	175	31%	23%	0%	8%	3%	1%	3%	11%	1%	6%	1%	1%	2%	1%	6%	1%	100%	2.30341996	0.05412808	0.04979526
Shing Tai Road	19	LD	25	1400-1500	174	31%	23%	0%	7%	3%	1%	3%	12%	1%	6%	1%	1%	2%	1%	6%	2%	100%	2.32029505	0.05495684	0.05052463
Shing Tai Road	19	LD	25	1500-1600	186	31%	23%	0%	8%	3%	1%	3%	13%	1%	5%	2%	1%	2%	1%	6%	2%	100%	2.41582059	0.0566794	0.05211442
Shing Tai Road	19	LD	25	1600-1700	185	30%	22%	0%	8%	3%	1%	3%	14%	1%	5%	2%	1%	2%	1%	6%	2%	100%	2.4308649	0.0576056	0.05293552
Shing Tai Road	19	LD	25	1700-1800	197	30%	21%	0%	8%	3%	1%	3%	14%	1%	5%	2%	1%	2%	1%	7%	2%	100%	2.6032495	0.06118718	0.05623729
Shing Tai Road	19	LD	25	1800-1900	185	30%	21%	0%	8%	3%	1%	3%	14%	1%	5%	2%	1%	2%	1%	7%	2%	100%	2.57888912	0.06131514	0.05634718
Shing Tai Road	19	LD	25	1900-2000	156	30%	21%	0%	8%	3%	1%	3%	13%	1%	5%	1%	1%	2%	1%	6%	2%	100%	2.51590755	0.05920711	0.05442259
Shing Tai Road	19	LD	25	2000-2100	123	31%	22%	0%	7%	3%	1%	3%	13%	1%	6%	2%	1%	2%	1%	7%	2%	100%	2.48496227	0.05855754	0.05384239

Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																	Composite Emission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
Shing Tai Road	19	LD	25	2100-2200	109	31%	23%	0%	7%	3%	1%	3%	13%	1%	6%	2%	1%	2%	0%	6%	2%	100%	2.37608912	0.05549855	0.05101446
Shing Tai Road	19	LD	25	2200-2300	109	31%	23%	0%	8%	4%	1%	3%	13%	1%	6%	1%	1%	2%	0%	6%	2%	100%	2.22852604	0.05223886	0.04801805
Shing Tai Road	19	LD	25	2300-0000	92	33%	24%	0%	8%	3%	1%	3%	12%	1%	5%	1%	1%	1%	0%	5%	1%	100%	2.15545819	0.04932072	0.04537727
Shing Tai Road	20	LD	24	0000-0100	195	45%	24%	0%	8%	3%	1%	2%	8%	1%	4%	1%	1%	1%	0%	4%	1%	100%	1.53050433	0.03610476	0.03324103
Shing Tai Road	20	LD	25	0100-0200	117	44%	24%	0%	8%	3%	1%	2%	8%	1%	3%	1%	0%	1%	0%	3%	1%	100%	1.51663391	0.03636165	0.03348518
Shing Tai Road	20	LD	25	0200-0300	77	44%	25%	0%	8%	4%	0%	1%	8%	1%	4%	0%	0%	0%	0%	4%	1%	100%	1.47255287	0.03374775	0.03105511
Shing Tai Road	20	LD	25	0300-0400	77	44%	25%	0%	8%	4%	0%	1%	8%	1%	4%	0%	0%	0%	0%	4%	1%	100%	1.49406565	0.03374775	0.03105511
Shing Tai Road	20	LD	25	0400-0500	78	44%	24%	0%	8%	4%	0%	1%	8%	1%	4%	0%	0%	1%	0%	4%	1%	100%	1.59048444	0.03798586	0.0349544
Shing Tai Road	20	LD	25	0500-0600	77	44%	25%	0%	8%	4%	0%	1%	8%	1%	4%	0%	0%	1%	0%	4%	0%	100%	1.59501532	0.03734355	0.03443602
Shing Tai Road	20	LD	24	0600-0700	234	43%	25%	0%	8%	3%	0%	1%	8%	1%	4%	0%	0%	1%	0%	4%	0%	100%	1.66868517	0.03905347	0.03598277
Shing Tai Road	20	LD	22	0700-0800	428	43%	25%	0%	8%	4%	0%	1%	8%	1%	4%	1%	0%	1%	0%	4%	0%	100%	1.69525456	0.03966027	0.03649045
Shing Tai Road	20	LD	21	0800-0900	543	42%	25%	0%	8%	3%	0%	1%	8%	1%	4%	1%	1%	1%	0%	4%	0%	100%	1.73347998	0.04057005	0.03735615
Shing Tai Road	20	LD	21	0900-1000	466	43%	25%	0%	8%	3%	0%	1%	8%	1%	4%	1%	0%	1%	0%	4%	0%	100%	1.71491272	0.04091561	0.03767123
Shing Tai Road	20	LD	22	1000-1100	429	43%	25%	0%	8%	3%	0%	1%	8%	1%	4%	1%	0%	1%	0%	4%	1%	100%	1.69534705	0.0399491	0.03674414
Shing Tai Road	20	LD	22	1100-1200	391	44%	24%	0%	8%	3%	1%	2%	8%	1%	4%	1%	1%	1%	0%	4%	1%	100%	1.6436808	0.03908905	0.03594958
Shing Tai Road	20	LD	22	1200-1300	426	45%	24%	0%	8%	3%	0%	1%	8%	1%	4%	0%	0%	0%	0%	4%	1%	100%	1.60653082	0.03819027	0.03511427
Shing Tai Road	20	LD	22	1300-1400	428	45%	24%	0%	8%	3%	0%	2%	8%	1%	4%	0%	0%	0%	0%	4%	1%	100%	1.59363401	0.03847157	0.03537339
Shing Tai Road	20	LD	22	1400-1500	431	45%	23%	0%	8%	3%	1%	2%	7%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.58831266	0.03862626	0.03550387
Shing Tai Road	20	LD	21	1500-1600	469	46%	23%	0%	7%	3%	1%	2%	7%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.5937923	0.03930349	0.03614493
Shing Tai Road	20	LD	21	1600-1700	468	47%	23%	0%	7%	3%	1%	2%	7%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.541417	0.03837922	0.03529475
Shing Tai Road	20	LD	21	1700-1800	509	47%	23%	0%	7%	3%	1%	2%	7%	1%	4%	0%	0%	0%	0%	3%	2%	100%	1.52352767	0.03752911	0.03449598
Shing Tai Road	20	LD	21	1800-1900	468	47%	23%	0%	7%	3%	1%	2%	7%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.52605653	0.03770501	0.03466245
Shing Tai Road	20	LD	22	1900-2000	392	46%	23%	0%	7%	3%	1%	2%	7%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.55414361	0.03755545	0.03451311
Shing Tai Road	20	LD	23	2000-2100	311	46%	23%	0%	7%	3%	1%	2%	7%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.5086979	0.03657638	0.03361174
Shing Tai Road	20	LD	23	2100-2200	275	45%	23%	0%	8%	3%	1%	2%	8%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.54699881	0.03739015	0.03437123
Shing Tai Road	20	LD	23	2200-2300	274	45%	23%	0%	8%	3%	1%	1%	8%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.53689181	0.03709809	0.03410177
Shing Tai Road	20	LD	24	2300-0000	234	45%	24%	0%	8%	3%	0%	2%	8%	1%	4%	0%	0%	0%	0%	3%	1%	100%	1.53912411	0.0368811	0.03396553
Shing Tai Road	21	LD	25	0000-0100	61	25%	25%	0%	3%	2%	2%	2%	23%	2%	10%	0%	0%	0%	0%	7%	2%	100%	2.28267605	0.04969498	0.04568275
Shing Tai Road	21	LD	25	0100-0200	38	24%	24%	0%	3%	3%	0%	3%	24%	3%	11%	0%	0%	0%	0%	8%	0%	100%	2.52373472	0.05445434	0.05015308
Shing Tai Road	21	LD	25	0200-0300	24	25%	25%	0%	4%	0%	0%	0%	25%	0%	13%	0%	0%	0%	0%	8%	0%	100%	2.44966316	0.05161189	0.04753503
Shing Tai Road	21	LD	25	0300-0400	24	25%	25%	0%	4%	0%	0%	0%	25%	0%	13%	0%	0%	0%	0%	8%	0%	100%	2.48438227	0.05161189	0.04753503
Shing Tai Road	21	LD	25	0400-0500	25	28%	24%	0%	4%	0%	0%	0%	24%	0%	12%	0%	0%	0%	0%	8%	0%	100%	2.3858259	0.05015444	0.04619849
Shing Tai Road	21	LD	25	0500-0600	25	28%	24%	0%	4%	0%	0%	0%	24%	4%	12%	0%	0%	0%	0%	4%	0%	100%	1.73752974	0.03783815	0.03487896
Shing Tai Road	21	LD	25	0600-0700	75	27%	25%	0%	4%	1%	0%	1%	23%	3%	11%	0%	0%	0%	0%	5%	0%	100%	2.02414602	0.04333484	0.03992945
Shing Tai Road	21	LD	24	0700-0800	141	27%	25%	0%	4%	1%	1%	1%	23%	2%	11%	0%	0%	0%	0%	6%	0%	100%	2.14294206	0.04622461	0.04257058
Shing Tai Road	21	LD	23	0800-0900	182	27%	25%	0%	4%	2%	1%	1%	22%	2%	11%	0%	0%	0%	1%	5%	0%	100%	2.0959555	0.0465035	0.04280806
Shing Tai Road	21	LD	24	0900-1000	153	27%	25%	0%	4%	1%	1%	1%	22%	2%	11%	0%	0%	0%	1%	5%	0%	100%	2.11146843	0.04688698	0.04317887
Shing Tai Road	21	LD	24	1000-1100	141	26%	25%	0%	4%	1%	1%	1%	23%	2%	11%	0%	0%	0%	1%	6%	1%	100%	2.22617855	0.04919859	0.04526495
Shing Tai Road	21	LD	24	1100-1200	127	25%	24%	0%	4%	2%	1%	2%	23%	2%	10%	0%	0%	0%	1%	6%	1%	100%	2.33449132	0.05180509	0.0476578
Shing Tai Road	21	LD	24	1200-1300	141	24%	23%	0%	4%	1%	1%	2%	23%	2%	10%	1%	0%	1%	1%	6%	1%	100%	2.46040711	0.05618733	0.05165407
Shing Tai Road	21	LD	24	1300-1400	140	24%	24%	0%	4%	1%	1%	2%	23%	1%	9%	1%	1%	1%	1%	7%	1%	100%	2.58997636	0.05885904	0.05411037
Shing Tai Road	21	LD	24	1400-1500	157	23%	23%	0%	4%	1%	1%	2%	23%	1%	9%	1%	1%	1%	1%	7%	1%	100%	2.62608044	0.05954547	0.05474022
Shing Tai Road	21	LD	24	1500-1600	149	23%	23%	0%	3%	1%	1%	3%	23%	1%	9%	1%	1%	1%	1%	8%	2%	100%	2.75707436	0.06261265	0.05753102
Shing Tai Road	21	LD	24	1600-1700	150	22%	23%	0%	3%	1%	1%	3%	23%	1%	8%	1%	1%	1%	1%	9%	3%	100%	2.8671143	0.06508128	0.05976474
Shing Tai Road	21	LD	24	1700-1800	162	22%	22%	0%	3%	1%	1%	3%	23%	1%	8%	1%	1%	1%	1%	9%	2%	100%	2.96627831	0.06782261	0.06229724
Shing Tai Road	21	LD	24	1800-1900	150	22%	22%	0%	3%	1%	1%	3%	23%	1%	8%	1%	1%	1%	1%	9%	3%	100%	2.93752199	0.06757301	0.062057
Shing Tai Road	21	LD	24	1900-2000	124	23%	23%	0%	3%	2%	1%	2%	23%	2%	8%	1%	1%	1%	1%	8%	2%	100%	2.80802854	0.06365064	0.05846888
Shing Tai Road	21	LD	24	2000-2100	102	23%	23%	0%	3%	1%	1%	3%	23%	2%	9%	1%	1%	1%	1%	8%	2%	100%	2.82685770	0.06486241	0.05960405
Shing Tai Road	21	LD	25	2100-2200	87	23%	23%	0%	3%	1%	1%	2%	23%	1%	9%	1%	0%	1%	0%	8%	2%	100%	2.67556506	0.0603249	0.05542157
Shing Tai Road	21	LD	25	2200-2300	89	24%	22%	0%	3%	1%	1%	2%	22%	2%	9%	1%	0%	1%	0%	8%	2%	100%	2.62757393	0.05946803	0.05463921
Shing Tai Road	21	LD	25	2300-0000	75	24%	24%	0%	4%	1%	1%	3%	23%	1%	9%	0%	0%	0%	0%	8%	1%	100%	2.55935904	0.05504949	0.05062405
Shun Tai Road	22	LD	24	0000-0100	121	34%	25%	0%	9%	4%	1%	2%	11%	1%	5%	1%	1%	2%	0%	4%	2%	100%	1.91405671	0.04552602	0.04185192
Shun Tai Road	22	LD	25	0100-0200	73	34%	23%	0%	10%	4%	1%	1%	10%	1%	5%	1%	1%	1%	0%	4%	1%	100%	1.87516593	0.04426121	0.04070933
Shun Tai Road	22	LD	25	0200-0300	49	35%	22%	0%	8%	4%	0%	2%	10%	2%	6%	2%	0%	2%	0%	4%	2%	100%	1.88692345	0.0473218	0.04349212
Shun Tai Road	22	LD	25	0300-0400	49	35%	22%	0%	8%	4%	0%	2%	10%	2%	6%	2%	0%	2%	0%	4%	2%	100%	1.91446762	0.0473218	0.04349212
Shun Tai Road	22	LD	25	0400-0500	48	35%	21%	0%	8%	4%	0%	2%	10%	2%	6%	2%	0%	2%	0%	4%	2%	100%	1.9342818	0.04830767	0.04439621
Shun Tai Road	22	LD	25	0500-0600	48	38%	21%	0%	8%	4%	0%	2%	8%	2%	6%	2%	0%	2%	0%	4%	2%	100%	1.89454206	0.04774049	0.04387907
Shun Tai Road	22	LD	24	0600-0700	142	38%	20%	0%	8%	4%	1%	2%	9%	1%	8%	1%	1%	1%	0%	4%	1%	100%	1.81146726	0.04491645	0.04131144
Shun Tai Road	22	LD	23	0700-0800	261	38%	20%	0%	8%	3%	1%	2%	9%	2%	8%	1%	1%	2%	0%	3%	1%	100%	1.89368656	0.04775846	0.04390707
Shun Tai Road	22	LD	22	0800-0900	327	39%	19%	0%	8%	3%	1%	2%	9%	2%	8%	1%	1%	1%	0%	3%	1%	100%	1.89642257	0.04775175	0.04390495
Shun Tai Road	22	LD	23	0900-1000	284	38%	20%	0%	8%	4%	1%	2%	9%	1%	8%	1%	1%	1%	0%	4%	1%	100%	1.88507922	0.04732573	0.04351373
Shun Tai Road	22	LD	23	1000-1100	265	37%	21%	0%	9%	4%	1%	2%	9%	2%	7%	1%	1%	2%	0%	4%	2%	100%	1.95834977	0.04843452	0.04450612
Shun Tai Road	22	LD	23	1100-1200	241	36%	22%	0%	9%	4%	1%	2%	10%	1%	6%	1%	1%	1%	0%	4%	2%	100%	1.91687981	0.04701017	0.04318565
Shun Tai Road	22	LD	23	1200-1300	266	35%	24%	0%	9%	4%	1%	2%	10%	1%	6%	1%	1%	2%	0%	4%	2%	100%	1.93892928	0.04718861	0.0433355
Shun Tai Road	22	LD	23	1300-1400	269	33%	25%	0%	9%	4%	1%	2%	10%	1%	5%	1%	1%	1%	0%	4%	2%	100%	1.97817104	0.04786146	0.04395447
Shun Tai Road	22	LD	23	1400-1500	271	32%	25%	0%	10%	4%	1%	2%	11%	1%	4%	1%	1%	1%	0%	4%	2%	100%	1.98058604	0.04760621	0.04369786
Shun Tai Road	22	LD	22	1500-1600	297	32%	27%	0%	10%	4%	1%	2%	11%	1%	4%	1%	1%	1%	0%	4%	2%	100%	1.98769325	0.04755379	0.04363466
Shun Tai Road	22	LD	22	1600-1700	300	30%	28%	0%	10%	4%	1%	2%	12%	1%	3%	1%	1%	1%	0%	4%	2%	100%	2.03690846	0.04804153	0.04408307
Shun Tai Road	22	LD	22	1700-1800	328	29%	28%	0%	10%	4%	1%	2%	12%	1%	3%	1%	1%	1%	0%	4%	3%	100%	2.04858206	0.04749719	0.04355854
Shun Tai Road	22	LD	22	1800-1900	301	30%	28%	0%	10%	4%	1%	2%	12%	1%	3%	1%	1%	1%	0%	4%	3%	100%	2.04766062	0.0481167	0.04413365
Shun Tai Road	22	LD	23	1900-2000	251	30%	27%	0%	10%	4%	1%	2%	12%	1%	4%	1%	1%	1%	0%	4%	2%	100%	2.03844759	0.04722687	0.04333605
Shun Tai Road	22	LD	24	2000-2100	199	31%	27%	0%	10%	4%	1%	2%	11%	1%	4%	1%	1%	2%	1%	4%	3%	100%	1.95581471	0.04617382	0.04239522
Shun Tai Road	22	LD	24	2100-2200	171	32%	26%	0%	10%	4%	1%	2%	11%	1%	4%	1%	1%	1%	0%	4%	2%	100%	1.88271797	0.04376528	0.04019107
Shun Tai Road	22	LD	24	2200-2300	172	33%	26%	0%	10%	4%	1%	2%	11%	1%	5%	1%	1%	1%	0%	4%	2%	100%	1.87958011	0.04399069	0.0403995
Shun Tai Road	22	LD	24	2300-0000	148	33%	25%	0%	9%	4%	1%	2%	11%	1%	5%	1%	1%	1%	0%	4%	2%	100%	1.9044701	0.04516156	0.04149472
Shun Tai Road	23	LD	25	0000-0100	49	49%	10%	0%	10%	4%	2%	8%	0%	0%	2%	2%	2%	2%	0%	6%	2%	100%	2.46218194	0.0625187	0.05748785
Shun Tai Road	23	LD	25	0100-0200	29	52%	10%	0%	10%	3%	3%	7%	0%	0%	3%	0%	0%	0%	0%	7%	3%	100%	2.25863179	0.05503078	0.05052647
Shun Tai Road	23	LD	25	0200-0300	19	53%	11%	0%	11%	5%	5%	5%	0%	0%	5%	0%	0%	0%	0%	5%	0%	100%	1.98971697	0.04788945	0.0441515
Shun Tai Road	23	LD	25	0300-0400	19	53%	11%	0%	11%	5%	5%	5%	0%	0%	5%	0%	0%	0%	0%	5%	0%	100%	2.01350191	0.04788945	0.0441515
Shun Tai Road	23	LD	25	0400-0500	19	53%	11%	0%	11%	5%	5%	5%	0%	0%	5%	0%	0%	0%	0%	5%	0%	100%	2.00929981	0.04788945	0.0441515
Shun Tai Road	23	LD	25	0500-0600	17	59%	12%	0%	6%	6%	6%	6%	0%	0%	6%	0%	0%	0%	0%	0%	0%	100%	1.1956973	0.03224834	0.02977217
Shun Tai Road	23	LD	25	0600-0700	64	52%	9%	0%	6%	3%	6%	14%	0%	0%	3%	2%	0%	2%	0%	2%	2%	100%	2.01140844	0.05525431	0.05084583
Shun Tai Road	23	LD	24	0700-0800	128	49%	8%	0%	16%	6%	3%	7%	0%	1%	4%	1%	1%	1%	0%	1%	2%	100%	1.55636782	0.04258583	0.03913964
Shun Tai Road	23	LD	24	0800-0900	157	54%	8%	0%	13%	5%	3%	7%	0%	1%	4%	1%	1%	1%	0%	0%	3%	100%	1.30277704	0.03821717	0.03508342
Shun Tai Road	23	LD	24	0900-1000	128	50%	9%	0%	14%	6%	2%	7%	0%	1%	4%	1%	1%	1%	0%	2%	4%	100%	1.60939346	0.04479232	0.04108567
Shun Tai Road	23	LD	25	1000-1100	115	50%	10%	0%	11%	4%	3%	8%	0%	1%	3%	1%	1%	1%	0%	3%	4%	100%	1.76869321	0.04775713	0.04378715
Shun Tai Road	23	LD	25	1100-1200	106	49%	9%	0%	13%	5%	3%	7%	0%	1%	3%	1%	1%	1%	0%	4%	4%	100%	1.92605981	0.05021067	0.04607295
Shun Tai Road	23	LD	25	1200-1300	119	49%	10%	0%	11%	5%	3%	7%	0%	1%	3%	1%	1%	2%	0%	5%	4%	100%	2.17599302	0.05634905	0.05169431
Shun Tai Road	23	LD	24	1300-1400	123	46%	10%	0%	14%	6%	2%	7%	0%	0%	2%	2%	1%	2%	0%	6%	3%	100%	2.35386374	0.05973419	0.05486326
Shun Tai Road	23	LD	24	1400-1500	133	41%	9%	0%	17%	7%	3%	7%	0%	0%	2%	2%	1%	2%	1%	7%	3%	100%	2.70335169	0.06694624	0.06150293
Shun Tai Road	23	LD	24	1500-1600	143	41%	10%	0%	15%	6%	3%	8%	0%	0%	1%	1%	1%	1%	1%	8%	3%	100%	2.89881015	0.07092928	0.0651409
Shun Tai Road	23	LD	24	1600-1700	142	41%	10%	0%	15%	6%	2%	6%	0%	0%	1%	1%	1%	2%	1%	9%	4%	100%	3.05998267	0.07492256	0.06881319
Shun Tai Road	23	LD	24	1700-1800	168	45%	10%	0%	15%	6%	2%	5%	0%	0%	0%	2%	1%	2%	1%	9%	4%	100%	2.90428379	0.07077172	0.06499891
Shun Tai Road	23	LD	24	1800-1900	132	42%	11%	0%	14%	6%	2%	6%	0%	0%	0%	2%	2%	2%	1%	10%	2%	100%	3.16731011	0.07630497	0.07015808
Shun Tai Road	23	LD	25	1900-2000	112	43%	11%	0%	13%	6%	3%	8%	0%	0%	1%	2%	1%	2%	1%	9%	2%	100%	3.03099114	0.07272428	0.06688152
Shun Tai Road	23	LD	25	2000-2100	84	46%	11%	0%	12%	5%	2%	6%	0%	0%	1%	1%	1%	2%	0%	10%	2%	100%	2.92871682	0.07052586	0.06482852
Shun Tai Road	23	LD	25	2100-2200	75	47%	11%	0%	12%	5%	3%	7%	0%	0%	1%	1%	1%	1%	0%	8%	3%	100%	2.65388199	0.06400424	0.05881437
Shun Tai Road	23	LD	25	2200-2300	73	48%	11%	0%	11%	4%	3%	7%	0%	0%	1%	1%	1%	1%	0%	7%	4%	100%	2.4536879	0.06109986	0.0560646
Shun Tai Road	23	LD	25	2300-0000	63	48%	11%	0%	11%	5%	3%	6%	0%	0%	2%	2%	2%	2%	0%	6%	3%	100%	2.39650027	0.05990947	0.05502106
Shun Tai Road	24	LD	25	0000-0100	100	31%	18%	0%	9%	4%	1%	2%	12%	2%	10%	2%	1%	2%	0%	5%	1%	100%	2.19711092	0.05374918	0.04945905
Shun Tai Road	24	LD	25	0100-0200	57	32%	18%	0%	9%	4%	0%	2%	12%	2%	11%	2%	2%	2%	0%	5%	2%	100%	2.1908949	0.05366974	0.04934293
Shun Tai Road	24	LD	25	0200-0300	39	31%	18%	0%	8%	3%	0%	3%	13%	3%	10%	3%	3%	3%	0%	5%	0%	100%	2.30780392	0.05677475	0.05229756
Shun Tai Road	24	LD	25	0300-0400	38	32%	16%	0%	8%	3%	0%	3%	13%	3%	11%	3%	3%	3%	0%	5%	0%	100%	2.38224035	0.05826882	0.05367382
Shun Tai Road	24	LD	25	0400-0500	37	32%	16%	0%	8%	3%	0%	3%	11%	3%	11%	3%	3%	3%	0%	5%	0%	100%	2.38530683	0.05869771	0.05406932
Shun Tai Road	24	LD	25	0500-0600	37	32%	16%	0%	8%	3%	0%	3%	11%	3%	11%	3%	3%	3%	0%	5%	0%	100%	2.38530683	0.05869771	0.05406932
Shun Tai Road	24	LD	25	0600-0700	114	32%	15%	0%	8%	4%	1%	3%	11%	2%	11%	3%	2%	4%	0%	5%	1%	100%	2.45010894	0.06234172	0.05737152
Shun Tai Road	24	LD	25	0700-0800	209	32%	14%	0%	8%	3%	1%	2%	11%	2%	11%	3%	2%	3%	0%	5%	0%	100%	2.48181424	0.06327738	0.05825669
Shun Tai Road	24	LD	24	0800-0900	262	32%	13%	0%	8%	3%	1%	2%	11%	2%	12%	3%	2%	3%	0%	5%	0%	100%	2.54067652	0.06528348	0.06009441
Shun Tai Road	24	LD	25	0900-1000	228	32%	14%	0%	8%	4%	1%	2%	11%	2%	11%	3%	2%	3%	0%	5%	0%	100%	2.42170161	0.06151267	0.05663492
Shun Tai Road	24	LD	25	1000-1100	210	32%	15%	0%	9%	3%	1%	2%	11%	2%	11%	2%	2%	3%	0%	5%	0%	100%	2.42866153	0.06059672	0.05578909
Shun Tai Road	24	LD	25	1100-1200	195	31%	16%	0%	9%	4%	1%	2%	12%	2%	11%	2%	2%	3%	1%	5%	1%	100%	2.346894	0.05882086	0.05412419
Shun Tai Road	24	LD	25	1200-1300	216	31%	17%	0%	9%	4%	1%	2%	12%	2%	10%	2%	1%	2%	0%	5%	1%	100%	2.26268796	0.05619141	0.05171023
Shun Tai Road	24	LD	25	1300-1400	219	31%	18%	0%	9%	4%	1%	2%	12%	2%	10%	2%	1%	2%	0%	5%	1%	100%	2.21292585	0.05518996	0.05078946
Shun Tai Road	24	LD	25	1400-1500	223	30%	19%	0%	9%	4%	1%	2%	12%	2%	9%	2%	1%	2%	0%	4%	1%	100%	2.18767511	0.05441182	0.05004922
Shun Tai Road	24	LD	24	1500-1600	244	30%	20%	0%	9%	4%	1%	2%	13%	2%	9%	2%	1%	2%	0%	5%	1%	100%	2.18937362	0.05428128	0.04992174
Shun Tai Road	24	LD	24	1600-1700	246	30%	20%	0%	9%	4%	1%	2%	13%	2%	9%	2%	1%	2%	0%	4%	2%	100%	2.13787338	0.05267803	0.04842445
Shun Tai Road	24	LD	24	1700-1800	267	30%	21%	0%	9%	4%	1%	2%	13%	1%	9%	1%	1%	1%	0%	4%	1%	100%	2.0512182	0.04964225	0.04563865
Shun Tai Road	24	LD	24	1800-1900	246	30%	21%	0%	9%	4%	1%	2%	13%	2%	9%	1%	1%	2%	0%	4%	2%	100%	2.0571654	0.05054375	0.0464615
Shun Tai Road	24	LD	25	1900-2000	205	30%	20%	0%	9%	4%	0%	2%	13%	1%	9%	1%	1%	2%	0%	4%	1%	100%	2.12577533	0.05178936	0.04762781
Shun Tai Road	24	LD	25	2000-2100	162	31%	20%	0%	9%	4%	1%	2%	12%	2%	9%	2%	1%	2%	0%	4%	1%	100%	2.06457161	0.05008852	0.04607732
Shun Tai Road	24	LD	25	2100-2200	141	30%	19%	0%	9%	4%	1%	2%	13%	2%	9%	1%	1%	2%	0%	4%	1%	100%	2.09294236	0.0513002	0.04716193
Shun Tai Road	24	LD	25	2200-2300	138	31%	19%	0%	9%	4%	1%	2%	12%	2%	9%	1%	1%	2%	0%	4%	1%	100%	2.10599925	0.05192997	0.04776043
Shun Tai Road	24	LD	25	2300-0000	120	31%	18%	0%	9%	3%	1%	2%	13%	2%	10%	2%	2%	3%	0%	5%	1%	100%	2.23042811	0.05464762	0.05029315
Shun Tai Road	25	LD	25	0000-0100	101	46%	20%	0%	9%	4%	2%	4%	0%	1%	3%	1%	1%	2%	0%	5%	3%	100%	1.98849639	0.05029451	0.04618511
Shun Tai Road	25	LD	25	0100-0200	61	46%	20%	0%	8%	3%	2%	5%	0%	0%	3%	2%	2%	2%	0%	5%	3%	100%	2.0148301	0.05107217	0.04688164
Shun Tai Road	25	LD	25	0200-0300	39	49%	21%	0%	8%	3%	3%	5%	0%	0%	3%	0%	0%	0%	0%	5%	3%	100%	2.02349593	0.05181833	0.04761419
Shun Tai Road	25	LD	25	0300-0400	38	50%	21%	0%	8%	3%	3%	5%	0%	0%	3%	0%	0%	0%	0%	3%	3%	100%	1.65072848	0.04431039	0.0407072
Shun Tai Road	25	LD	25	0400-0500	36	53%	19%	0%	8%	3%	3%	6%	0%	0%	3%	0%	0%	0%	0%	3%	3%	100%	1.45979455	0.03865208	0.0338576
Shun Tai Road	25	LD	25	0500-0600	36	53%	19%	0%	8%	3%	3%	6%	0%	0%	3%	0%	0%	0%	0%	3%	3%	100%	1.45979455	0.03865208	0.0338576
Shun Tai Road	25	LD	25	0600-0700	120	51%	18%	0%	9%	3%	3%	8%	0%	1%	3%	1%	1%	1%	0%	3%	1%	100%	1.57284768	0.04201182	0.03860478
Shun Tai Road	25	LD	24	0700-0800	230	50%	17%	0%	12%	5%	2%	5%	0%	1%	3%	1%	1%	1%	0%	3%	2%	100%	1.36497463	0.03632372	0.03338737
Shun Tai Road	25	LD	24	0800-0900	286	53%	16%	0%	10%	4%	2%	5%	0%	1%	3%	1%	1%	1%	0%	2%	3%	100%	1.20621043	0.03411551	0.03130913
Shun Tai Road	25	LD	25	0900-1000	240	50%	18%	0%	11%	4%	2%	5%	0%	1%	3%	1%	0%	1%	0%	2%	3%	100%	1.36402387	0.03699823	0.03394306
Shun Tai Road	25	LD	25	1000-1100	219	50%	18%	0%	9%	4%	2%	5%	0%	1%	3%	1%	0%	1%	0%	3%	4%	100%	1.5627881	0.04099734	0.03760215
Shun Tai Road	25	LD	25	1100-1200	206	48%	18%	0%	10%	4%	1%	4%	0%	0%	3%	1%	1%	1%	0%	3%	4%	100%	1.706397	0.04460468	0.04090322
Shun Tai Road	25	LD	25	1200-1300	231	46%	19%	0%	10%	4%	2%	4%	0%	0%	3%	1%	1%	1%	0%	4%	4%	100%	1.90918089	0.04869437	0.04466243
Shun Tai Road	25	LD	24	1300-1400	237	44%	19%	0%	11%	4%	2%	4%	0%	0%	3%	1%	1%	1%	0%	5%	3%	100%	2.09709554	0.05311702	0.04876371
Shun Tai Road	25	LD	24	1400-1500	251	41%	19%	0%	13%	5%	2%	5%	0%	0%	2%	1%	1%	1%	0%	6%	3%	100%	2.26656019	0.05600755	0.05142884
Shun Tai Road	25	LD	24	1500-1600	273	40%	19%	0%	12%	5%	2%	5%	0%	0%	2%	1%	1%	1%	0%	6%	4%	100%	2.3976803	0.058236	0.05437005
Shun Tai Road	25	LD	24	1600-1700	274	39%	20%	0%	12%	5%	2%	4%	0%	0%	2%	2%	1%	2%	0%	7%	4%	100%	2.47295748	0.06125946	0.05621115
Shun Tai Road	25	LD	24	1700-1800	315	41%	19%	0%	11%	5%	1%	3%	0%	0%	2%	1%	1%	2%	0%	7%	4%	100%	2.51789934	0.06183575	0.0567376
Shun Tai Road	25	LD	24	1800-1900	268	39%	20%	0%	11%	4%	1%	4%	0%	0%	2%	2%	1%	2%	0%	7%	3%	100%	2.56914773	0.06240986	0.05780552
Shun Tai Road	25	LD	25	1900-2000	223	40%	20%	0%	10%	4%	2%	5%	0%	0%	2%	1%	1%	2%	0%	7%	3%	100%	2.5316139	0.06154716	0.0565177
Shun Tai Road	25	LD	25	2000-2100	175	42%	21%	0%	10%	4%	2%	4%	0%	0%	2%	2%	1%	2%	1%	7%	3%	100%	2.38380564	0.05802098	0.05325365
Shun Tai Road	25	LD	25	2100-2200	150	43%	20%	0%	9%	4%	1%	4%	0%	1%	3%	2%	1%	1%	1%	7%	3%	100%	2.35038354	0.05811098	0.05335002
Shun Tai Road	25	LD	25	2200-2300	151	43%	20%	0%	9%	4%	1%	4%	0%	1%	3%	1%	1%	1%	0%	6%	4%	100%	2.24235872	0.05650179	0.05183425
Shun Tai Road	25	LD	25	2300-0000	125	45%	20%	0%	9%	4%	2%	4%	0%	1%	2%	2%	1%	2%	0%	6%	4%	100%	2.06104643	0.05371882	0.04743579
and Eastern Corridor Slip Rc	26	DD	29	0000-0100	191	49%	20%	0%	9%	4%	1%	3%	0%	1%	4%	2%	1%	2%	0%	3%	2%	100%	0.9665156	0.03472503	0.03196001
and Eastern Corridor Slip Rc	26	DD	30	0100-0200	117	49%	20%	0%	9%	3%	1%	3%	0%	1%	4%	2%	2%	2%	0%	3%	2%	100%	0.91230906	0.03376479	0.02923761
and Eastern Corridor Slip Rc	26	DD	30	0200-0300	79	48%	19%	0%	9%	4%	1%	4%	0%	1%	4%	3%	1%	3%	0%	3%	1%	100%	0.97974278	0.03544101	0.0326238
and Eastern Corridor Slip Rc	26	DD	30	0300-0400	79	48%	19%	0%	9%	4%	1%	4%	0%	1%	4%	3%	1%	3%	0%	3%	1%	100%	0.99858229	0.03544101	0.0326238

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Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																	Composite Emission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
and Eastern Corridor Slip Rd	26	DD	30	0400-0500	79	48%	19%	0%	9%	4%	1%	4%	0%	1%	4%	3%	1%	3%	0%	3%	1%	100%	0.99515747	0.03544101	0.0326238
and Eastern Corridor Slip Rd	26	DD	30	0500-0600	81	48%	20%	0%	9%	4%	1%	4%	0%	1%	4%	2%	1%	2%	0%	2%	1%	100%	0.97802864	0.03464494	0.03189136
and Eastern Corridor Slip Rd	26	DD	29	0600-0700	247	48%	19%	0%	9%	4%	1%	4%	0%	0%	3%	2%	2%	3%	0%	2%	2%	100%	1.00172955	0.03526996	0.03245992
and Eastern Corridor Slip Rd	26	DD	27	0700-0800	462	47%	19%	0%	9%	4%	2%	4%	0%	1%	3%	3%	2%	3%	0%	2%	2%	100%	1.11177965	0.03901691	0.03592478
and Eastern Corridor Slip Rd	26	DD	26	0800-0900	615	48%	18%	0%	10%	4%	1%	4%	0%	0%	3%	3%	2%	3%	0%	2%	2%	100%	1.13568161	0.0395724	0.03645285
and Eastern Corridor Slip Rd	26	DD	26	0900-1000	508	48%	19%	0%	10%	4%	1%	4%	0%	1%	3%	2%	2%	3%	0%	2%	2%	100%	1.134024	0.04002513	0.03687103
and Eastern Corridor Slip Rd	26	DD	27	1000-1100	461	47%	19%	0%	10%	4%	1%	4%	0%	1%	3%	2%	2%	3%	0%	2%	2%	100%	1.11406574	0.03869176	0.03562314
and Eastern Corridor Slip Rd	26	DD	27	1100-1200	418	46%	18%	0%	11%	4%	1%	3%	0%	1%	4%	2%	1%	2%	0%	3%	2%	100%	1.0976574	0.03824547	0.03521202
and Eastern Corridor Slip Rd	26	DD	27	1200-1300	452	46%	19%	0%	10%	4%	2%	4%	0%	1%	4%	2%	1%	2%	0%	3%	2%	100%	1.12469668	0.03891984	0.03583507
and Eastern Corridor Slip Rd	26	DD	27	1300-1400	446	47%	19%	0%	10%	4%	1%	4%	0%	1%	4%	2%	1%	2%	0%	3%	2%	100%	1.07560889	0.03779035	0.03479553
and Eastern Corridor Slip Rd	26	DD	27	1400-1500	429	47%	19%	0%	10%	4%	1%	3%	0%	1%	5%	1%	1%	2%	0%	3%	2%	100%	1.04617581	0.03673894	0.03382705
and Eastern Corridor Slip Rd	26	DD	27	1500-1600	461	47%	19%	0%	11%	4%	1%	3%	0%	1%	5%	1%	1%	1%	0%	4%	2%	100%	1.04120616	0.03636441	0.03348547
and Eastern Corridor Slip Rd	26	DD	27	1600-1700	460	47%	19%	0%	11%	5%	1%	3%	0%	1%	5%	1%	1%	1%	0%	4%	2%	100%	1.01936367	0.03545586	0.03264966
and Eastern Corridor Slip Rd	26	DD	26	1700-1800	477	48%	19%	0%	11%	4%	1%	2%	0%	1%	6%	1%	0%	1%	0%	4%	2%	100%	1.02157263	0.03516572	0.03240128
and Eastern Corridor Slip Rd	26	DD	27	1800-1900	433	48%	20%	0%	9%	4%	1%	3%	0%	1%	6%	1%	0%	1%	0%	4%	1%	100%	1.00078636	0.0354988	0.03269276
and Eastern Corridor Slip Rd	26	DD	28	1900-2000	368	49%	20%	0%	9%	4%	1%	3%	0%	1%	5%	1%	1%	1%	0%	4%	1%	100%	0.99386052	0.0351587	0.03238247
and Eastern Corridor Slip Rd	26	DD	28	2000-2100	299	49%	19%	0%	10%	4%	1%	3%	0%	1%	5%	1%	1%	1%	0%	4%	1%	100%	0.9879338	0.03504	0.03227327
and Eastern Corridor Slip Rd	26	DD	28	2100-2200	274	46%	19%	0%	10%	4%	2%	4%	0%	1%	5%	1%	1%	1%	0%	4%	1%	100%	1.0803264	0.03834257	0.03530869
and Eastern Corridor Slip Rd	26	DD	29	2200-2300	267	49%	19%	0%	9%	4%	1%	3%	0%	1%	5%	1%	1%	1%	0%	3%	1%	100%	0.97778936	0.03490157	0.03213243
and Eastern Corridor Slip Rd	26	DD	29	2300-0000	230	49%	20%	0%	9%	4%	1%	3%	0%	1%	4%	1%	1%	2%	0%	3%	1%	100%	0.97066539	0.03461347	0.03186945
Shing Tai Road	27	LD	25	0000-0100	62	27%	19%	0%	5%	2%	2%	3%	13%	2%	13%	2%	2%	2%	0%	8%	2%	100%	2.75625069	0.06478349	0.05956842
Shing Tai Road	27	LD	25	0100-0200	38	26%	18%	0%	5%	3%	3%	3%	13%	3%	13%	3%	0%	3%	0%	8%	0%	100%	2.79696863	0.06729453	0.06197185
Shing Tai Road	27	LD	25	0200-0300	24	29%	21%	0%	4%	0%	0%	4%	13%	4%	13%	0%	0%	4%	0%	8%	0%	100%	2.85597818	0.07004807	0.06451225
Shing Tai Road	27	LD	25	0300-0400	24	29%	21%	0%	4%	0%	0%	4%	13%	4%	13%	0%	0%	4%	0%	8%	0%	100%	2.8925821	0.07004807	0.06451225
Shing Tai Road	27	LD	25	0400-0500	25	28%	20%	0%	4%	0%	0%	4%	12%	4%	12%	4%	0%	4%	0%	8%	0%	100%	2.8940402	0.07157895	0.06591896
Shing Tai Road	27	LD	25	0500-0600	26	27%	19%	0%	4%	0%	0%	4%	12%	4%	15%	4%	0%	4%	0%	8%	0%	100%	2.85656274	0.07131822	0.065679
Shing Tai Road	27	LD	25	0600-0700	76	26%	20%	0%	4%	1%	1%	4%	12%	3%	14%	3%	1%	3%	0%	7%	1%	100%	2.66407691	0.06528574	0.06005024
Shing Tai Road	27	LD	24	0700-0800	141	26%	20%	0%	3%	1%	1%	4%	11%	3%	15%	2%	1%	3%	1%	7%	1%	100%	2.89341191	0.07159034	0.06586851
Shing Tai Road	27	LD	23	0800-0900	181	27%	20%	0%	3%	1%	2%	4%	11%	3%	15%	3%	2%	3%	1%	7%	1%	100%	2.88579213	0.07201201	0.06625635
Shing Tai Road	27	LD	24	0900-1000	155	26%	20%	0%	3%	1%	1%	5%	11%	3%	14%	3%	2%	3%	1%	7%	1%	100%	2.87625241	0.07096989	0.06530205
Shing Tai Road	27	LD	24	1000-1100	139	27%	19%	0%	4%	1%	1%	4%	12%	3%	14%	2%	1%	3%	1%	7%	1%	100%	2.91753559	0.07183849	0.06609763
Shing Tai Road	27	LD	24	1100-1200	125	27%	19%	0%	4%	2%	2%	4%	12%	2%	14%	2%	2%	2%	1%	7%	1%	100%	2.85095365	0.06988361	0.06429468
Shing Tai Road	27	LD	24	1200-1300	138	27%	19%	0%	5%	2%	1%	4%	12%	2%	12%	1%	1%	2%	1%	8%	1%	100%	2.94488803	0.07075481	0.06506009
Shing Tai Road	27	LD	24	1300-1400	135	27%	19%	0%	5%	2%	1%	4%	13%	2%	12%	1%	1%	1%	1%	8%	1%	100%	2.89366239	0.06906196	0.06350261
Shing Tai Road	27	LD	24	1400-1500	134	28%	19%	0%	6%	2%	1%	4%	13%	2%	11%	1%	1%	1%	1%	8%	1%	100%	2.87917752	0.06862415	0.06309973
Shing Tai Road	27	LD	24	1500-1600	146	27%	18%	0%	6%	3%	1%	3%	13%	2%	11%	1%	1%	1%	1%	9%	2%	100%	2.95839534	0.07031505	0.06462404
Shing Tai Road	27	LD	24	1600-1700	145	28%	17%	0%	7%	3%	1%	3%	14%	2%	10%	1%	1%	1%	1%	9%	2%	100%	2.95736612	0.07004158	0.06437201
Shing Tai Road	27	LD	24	1700-1800	155	28%	17%	0%	8%	3%	1%	3%	14%	2%	10%	1%	1%	1%	1%	9%	2%	100%	2.92018008	0.06695858	0.06154355
Shing Tai Road	27	LD	24	1800-1900	142	27%	18%	0%	7%	3%	1%	4%	14%	2%	10%	1%	1%	1%	1%	9%	2%	100%	2.95139963	0.06830796	0.06277507
Shing Tai Road	27	LD	24	1900-2000	118	28%	18%	0%	7%	3%	2%	3%	14%	2%	10%	1%	1%	1%	1%	9%	2%	100%	3.02357105	0.06955492	0.06394531
Shing Tai Road	27	LD	25	2000-2100	96	27%	18%	0%	6%	3%	1%	4%	14%	2%	10%	1%	1%	1%	1%	8%	2%	100%	2.88727255	0.06775737	0.06227909
Shing Tai Road	27	LD	25	2100-2200	82	28%	18%	0%	6%	2%	1%	4%	13%	2%	11%	1%	1%	1%	0%	9%	1%	100%	2.79937138	0.06437788	0.05921959
Shing Tai Road	27	LD	25	2200-2300	84	27%	19%	0%	6%	2%	1%	4%	13%	2%	12%	1%	1%	1%	0%	8%	1%	100%	2.76408244	0.0636165	0.05852008
Shing Tai Road	27	LD	25	2300-0000	74	27%	19%	0%	5%	3%	1%	4%	12%	3%	12%	1%	1%	1%	0%	8%	1%	100%	2.77059979	0.06468848	0.05949743
Sheung Mau Street	28	LD	25	0000-0100	37	24%	22%	0%	14%	5%	3%	5%	0%	0%	8%	3%	3%	3%	0%	11%	0%	100%	3.44994995	0.07819294	0.07198195
Sheung Mau Street	28	LD	25	0100-0200	20	25%	20%	0%	15%	5%	0%	5%	0%	0%	10%	5%	0%	5%	0%	10%	0%	100%	3.37164139	0.08264266	0.07608313
Sheung Mau Street	28	LD	25	0200-0300	13	31%	23%	0%	15%	8%	0%	8%	0%	0%	8%	0%	0%	0%	0%	8%	0%	100%	2.59256229	0.05680968	0.05232534
Sheung Mau Street	28	LD	25	0300-0400	11	27%	18%	0%	18%	9%	0%	9%	0%	0%	9%	0%	0%	0%	0%	9%	0%	100%	3.01855313	0.06575911	0.06055527
Sheung Mau Street	28	LD	25	0400-0500	11	27%	18%	0%	18%	9%	0%	9%	0%	0%	9%	0%	0%	0%	0%	9%	0%	100%	3.01244404	0.06575911	0.06055527
Sheung Mau Street	28	LD	25	0500-0600	11	27%	18%	0%	18%	9%	0%	9%	0%	0%	9%	0%	0%	0%	0%	9%	0%	100%	3.01244404	0.06575911	0.06055527
Sheung Mau Street	28	LD	25	0600-0700	45	27%	11%	0%	11%	4%	6%	18%	0%	2%	7%	2%	2%	2%	0%	7%	0%	100%	3.48267576	0.08368953	0.07705944
Sheung Mau Street	28	LD	24	0700-0800	93	26%	9%	0%	25%	11%	3%	8%	1%	1%	6%	1%	1%	2%	0%	5%	0%	100%	2.84319367	0.06711939	0.06179592
Sheung Mau Street	28	LD	24	0800-0900	109	31%	8%	0%	22%	9%	3%	7%	1%	1%	6%	2%	1%	2%	0%	5%	2%	100%	2.56849728	0.06289263	0.05781483
Sheung Mau Street	28	LD	25	0900-1000	90	24%	11%	0%	23%	9%	2%	7%	1%	1%	7%	2%	1%	2%	0%	7%	2%	100%	2.89325215	0.06895127	0.06336663
Sheung Mau Street	28	LD	25	1000-1100	82	26%	13%	0%	18%	7%	3%	7%	1%	1%	7%	2%	1%	2%	0%	7%	2%	100%	3.00958159	0.07165837	0.06584586
Sheung Mau Street	28	LD	25	1100-1200	80	25%	15%	0%	18%	8%	3%	5%	1%	1%	6%	3%	1%	3%	0%	9%	3%	100%	3.11374963	0.07306221	0.0671297
Sheung Mau Street	28	LD	25	1200-1300	90	27%	18%	0%	16%	7%	2%	4%	0%	1%	7%	2%	1%	2%	1%	9%	2%	100%	3.1281829	0.0736123	0.06765283
Sheung Mau Street	28	LD	24	1300-1400	98	24%	18%	0%	18%	7%	1%	4%	0%	1%	6%	2%	2%	3%	1%	9%	2%	100%	3.275303	0.07799058	0.0716833
Sheung Mau Street	28	LD	24	1400-1500	110	22%	19%	0%	20%	8%	1%	4%	0%	1%	5%	2%	2%	3%	1%	10%	2%	100%	3.40621331	0.07888818	0.07251639
Sheung Mau Street	28	LD	24	1500-1600	122	21%	20%	0%	17%	7%	2%	5%	0%	1%	5%	2%	2%	2%	1%	11%	2%	100%	3.53559692	0.081921	0.0752723
Sheung Mau Street	28	LD	24	1600-1700	122	23%	23%	0%	16%	7%	1%	3%	0%	1%	5%	2%	2%	2%	1%	11%	2%	100%	3.4671853	0.07959802	0.07313702
Sheung Mau Street	28	LD	24	1700-1800	146	30%	22%	0%	15%	6%	1%	1%	0%	1%	4%	2%	1%	3%	1%	11%	3%	100%	3.18933923	0.07377781	0.06778072
Sheung Mau Street	28	LD	24	1800-1900	115	23%	25%	0%	15%	6%	1%	3%	0%	1%	5%	3%	2%	3%	1%	12%	1%	100%	3.64011308	0.08334792	0.07667434
Sheung Mau Street	28	LD	25	1900-2000	95	24%	24%	0%	13%	6%	2%	4%	0%	1%	5%	2%	2%	3%	1%	12%	1%	100%	3.54593998	0.08075868	0.07428306
Sheung Mau Street	28	LD	25	2000-2100	72	25%	24%	0%	13%	6%	1%	3%	0%	1%	6%	3%	1%	3%	1%	13%	1%	100%	3.614139	0.08269475	0.07604714
Sheung Mau Street	28	LD	25	2100-2200	60	27%	23%	0%	13%	5%	2%	3%	0%	2%	5%	3%	2%	3%	0%	12%	0%	100%	3.42250549	0.07753527	0.07138149
Sheung Mau Street	28	LD	25	2200-2300	60	27%	22%	0%	13%	5%	2%	3%	0%	2%	7%	2%	2%	3%	0%	12%	2%	100%	3.4114548	0.07826732	0.07196265
Sheung Mau Street	28	LD	25	2300-0000	48	25%	23%	0%	13%	6%	2%	4%	0%	2%	6%	2%	2%	2%	0%	10%	2%	100%	3.19873081	0.0725582	0.0666852
Sheung Mau Street	29	LD	25	0000-0100	117	49%	22%	0%	7%	3%	2%	4%	0%	1%	4%	2%	2%	3%	0%	3%	0%	100%	1.64050451	0.04331005	0.03993121
Sheung Mau Street	29	LD	25	0100-0200	73	49%	22%	0%	7%	3%	1%	4%	0%	1%	4%	1%	1%	3%	0%	3%	0%	100%	1.63759394	0.04360456	0.04020418
Sheung Mau Street	29	LD	25	0200-0300	47	51%	21%	0%	6%	2%	2%	4%	0%	0%	4%	2%	2%	2%	0%	2%	0%	100%	1.53935193	0.0410568	0.03785982
Sheung Mau Street	29	LD	25	0300-0400	47	51%	21%	0%	6%	2%	2%	4%	0%	0%	4%	2%	2%	2%	0%	2%	0%	100%	1.56119326	0.0410568	0.03785982
Sheung Mau Street	29	LD	25	0400-0500	48	52%	21%	0%	6%	2%	2%	4%	0%	0%	4%	2%	2%	2%	0%	2%	0%	100%	1.52812159	0.04051761	0.03736527
Sheung Mau Street	29	LD	25	0500-0600	48	52%	21%	0%	6%	2%	2%	4%	0%	0%	4%	2%	2%	2%	0%	2%	0%	100%	1.52812159	0.04051761	0.03736527
Sheung Mau Street	29	LD	25	0600-0700	158	50%	20%	0%	6%	3%	2%	5%	0%	1%	3%	3%	2%	3%	0%	3%	1%	100%	1.70340667	0.04592765	0.04227005
Sheung Mau Street	29	LD	24	0700-0800	290	51%	20%	0%	7%	3%	2%	5%	0%	1%	3%	2%	2%	3%	0%	2%	0%	100%	1.65463694	0.04517	0.04163291
Sheung Mau Street	29	LD	23	0800-0900	397	52%	18%	0%	8%	3%	2%	5%	0%	1%	3%	2%	2%	3%	0%	2%	1%	100%	1.66241262	0.04653929	0.04281724
Sheung Mau Street	29	LD	24	0900-1000	322	51%	19%	0%	7%	3%	2%	5%	0%	1%	3%	2%	2%	2%	0%	2%	1%	100%	1.63335087	0.04448736	0.04098899
Sheung Mau Street	29	LD	24	1000-1100	290	49%	20%	0%	8%	3%	2%	5%	0%	1%	3%	2%	1%	2%	0%	2%	1%	100%	1.70373651	0.04529819	0.0417273
Sheung Mau Street	29	LD	24	1100-1200	264	47%	20%	0%	10%	4%	2%	5%	0%	1%	3%	2%	2%	2%	0%	2%	1%	100%	1.672056	0.04428672	0.04078973
Sheung Mau Street	29	LD	24	1200-1300	287	46%	20%	0%	9%	4%	2%	6%	0%	1%	3%	2%	1%	2%	0%	2%	1%	100%	1.78731051	0.04644523	0.04277747
Sheung Mau Street	29	LD	24	1300-1400	279	46%	21%	0%	9%	4%	2%	5%	0%	1%	4%	2%	1%	2%	0%	3%	1%	100%	1.7092073	0.04485056	0.04130859
Sheung Mau Street	29	LD	24	1400-1500	265	45%	22%	0%	9%	4%	2%	4%	0%	1%	4%	2%	1%	2%	0%	3%	1%	100%	1.71848876	0.04500715	0.04144854
Sheung Mau Street	29	LD	24	1500-1600	283	44%	23%	0%	11%	4%	1%	4%	0%	1%	4%	2%	1%	2%	0%	2%	0%	100%	1.67438152	0.04306277	0.03967817
Sheung Mau Street	29	LD	24	1600-1700	281	43%	23%	0%	11%	5%	2%	4%	0%	1%	4%	2%	1%	2%	0%	2%	0%	100%	1.64863683	0.04193166	0.03863584
Sheung Mau Street	29	LD	24	1700-1800	292	42%	24%	0%	11%	4%	1%	3%	0%	1%	5%	2%	1%	2%	0%	3%	0%	100%	1.69998316	0.0427662	0.0394035
Sheung Mau Street	29	LD	24	1800-1900	258	45%	25%	0%	8%	4%	2%	4%	0%	1%	5%	2%	1%	2%	0%	3%	0%	100%	1.67113944	0.04235493	0.03904847
Sheung Mau Street	29	LD	24	1900-2000	223	46%	24%	0%	8%	4%	1%	4%	0%	1%	4%	2%	1%	2%	0%	3%	0%	100%	1.67099826	0.04281738	0.03947616
Sheung Mau Street	29	LD	25	2000-2100	184	46%	23%	0%	9%	3%	2%	4%	0%	1%	4%	2%	1%	2%	0%	3%	0%	100%	1.63244593	0.04166165	0.03841206
Sheung Mau Street	29	LD	25	2100-2200	169	44%	22%	0%	10%	4%	2%	6%	0%	1%	4%	2%	1%	2%	0%	2%	0%	100%	1.69570805	0.04294884	0.03959425
Sheung Mau Street	29	LD	25	2200-2300	162	48%	23%	0%	7%	3%	1%	4%	0%	1%	4%	2%	1%	2%	0%	2%	0%	100%	1.61098066	0.04245142	0.03914068
Sheung Mau Street	29	LD	25	2300-0000	142	48%	23%	0%	8%	3%	1%	4%	0%	1%	4%	2%	1%	2%	0%	3%	0%	100%	1.64719529	0.04265448	0.03932673
Sheung Mau Street	30	LD	25	0000-0100	37	27%	19%	0%	11%	5%	3%	8%	0%	3%	8%	3%	3%	3%	0%	8%	0%	100%	3.12166187	0.07396691	0.06810685
Sheung Mau Street	30	LD	25	0100-0200	22	27%	18%	0%	9%	5%	5%	9%	0%	0%	9%	5%	0%	5%	0%	9%	0%	100%	3.45731492	0.08566896	0.07887239
Sheung Mau Street	30	LD	25	0200-0300	12	33%	17%	0%	17%	8%	0%	8%	0%	0%	8%	0%	0%	0%	0%	8%	0%	100%	2.74819816	0.06154382	0.05668579
Sheung Mau Street	30	LD	25	0300-0400	11	36%	18%	0%	9%	9%	0%	9%	0%	0%	9%	0%	0%	0%	0%	9%	0%	100%	2.87518221	0.0649031	0.05977798
Sheung Mau Street	30	LD	25	0400-0500	10	30%	20%	0%	10%	10%	0%	10%	0%	0%	10%	0%	0%	0%	0%	10%	0%	100%	3.14110113	0.06987585	0.06434362
Sheung Mau Street	30	LD	25	0500-0600	10	30%	20%	0%	10%	10%	0%	10%	0%	0%	10%	0%	0%	0%	0%	10%	0%	100%	3.14110113	0.06987585	0.06434362
Sheung Mau Street	30	LD	25	0600-0700	37	31%	11%	0%	11%	3%	5%	12%	0%	3%	11%	3%	3%	3%	0%	5%	0%	100%	2.98310823	0.07426092	0.06839187
Sheung Mau Street	30	LD	25	0700-0800	70	31%	9%	0%	19%	7%	2%	7%	1%	1%	10%	3%	1%	3%	0%	6%	0%	100%	2.75128216	0.06794469	0.06257669
Sheung Mau Street	30	LD	25	0800-0900	84	34%	8%	0%	16%	7%	2%	6%	1%	2%	11%	2%	1%	2%	0%	5%	1%	100%	2.47251101	0.0626723	0.05766635
Sheung Mau Street	30	LD	25	0900-1000	74	29%	11%	0%	17%	7%	3%	7%	1%	1%	11%	3%	1%	3%	0%	5%	1%	100%	2.69063857	0.06744677	0.06204032
Sheung Mau Street	30	LD	25	1000-1100	69.5	29%	13%	0%	14%	6%	3%	8%	1%	1%	10%	3%	1%	3%	0%	6%	1%	100%	2.79655449	0.06955883	0.06397849
Sheung Mau Street	30	LD	25	1100-1200	69.5	28%	14%	0%	14%	6%	3%	7%	1%	1%	9%	3%	1%	3%	0%	7%	1%	100%	2.97695789	0.07252061	0.06669881
Sheung Mau Street	30	LD	25	1200-1300	79.5	28%	16%	0%	14%	6%	3%	8%	0%	1%	8%	3%	3%	4%	0%	8%	1%	100%	3.13064102	0.07600638	0.06991206
Sheung Mau Street	30	LD	25	1300-1400	87.5	26%	18%	0%	15%	6%	2%	7%	0%	1%	7%	3%	2%	3%	0%	7%	2%	100%	2.94019583	0.0718765	0.06608506
Sheung Mau Street	30	LD	24	1400-1500	97	24%	19%	0%	16%	6%	2%	8%	0%	1%	6%	3%	2%	3%	0%	7%	2%	100%	3.10400317	0.0746781	0.06866411
Sheung Mau Street	30	LD	24	1500-1600	110.5	24%	19%	0%	15%	6%	3%	9%	0%	1%	5%	3%	2%	4%	1%	7%	2%	100%	3.27524886	0.0806554	0.07414842
Sheung Mau Street	30	LD	24	1600-1700	116.5	24%	21%	0%	14%	6%	3%	7%	0%	1%	5%	3%	3%	3%	1%	8%	2%	100%	3.2456715	0.0792148	0.07282837
Sheung Mau Street	30	LD	24	1700-1800	138	27%	20%	0%	13%	6%	3%	7%	0%	1%	4%	3%	2%	4%	1%	7%	2%	100%	3.14177859	0.07679274	0.07060096
Sheung Mau Street	30	LD	24	1800-1900	113	23%	22%	0%	13%	6%	3%	7%	0%	1%	5%	4%	3%	4%	1%	8%	1%	100%	3.29520671	0.07945726	0.07309736
Sheung Mau Street	30	LD	25	1900-2000	91.5	25%	21%	0%	12%	6%	4%	8%	0%	1%	5%	3%	2%	3%	0%	8%	1%	100%	3.15927252	0.07497883	0.06897117
Sheung Mau Street	30	LD	25	2000-2100	71	25%	21%	0%	13%	6%	3%	7%	0%	1%	6%	3%	3%	4%	0%	7%	1%	100%	3.04972417	0.074122	0.06816498
Sheung Mau Street	30	LD	25	2100-2200	58	26%	21%	0%	12%	5%	3%	7%	0%	2%	7%	3%	2%	3%	0%	9%	0%	100%	3.21158016	0.07595084	0.06992856
Sheung Mau Street	30	LD	25	2200-2300	56.5	27%	19%	0%	12%	5%	4%	7%	0%	2%	7%	4%	2%	4%	0%	7%	1%	100%	2.99229027	0.07277434	0.06695949
Sheung Mau Street	30	LD	25	2300-0000	46	27%	20%	0%	13%	4%	2%	7%	0%	2%	7%	2%	2%	4%	0%	9%	1%	100%	3.20952184	0.07758825	0.07137643
Sheung Mau Street	31	LD	25	0000-0100	22.5	33%	9%	0%	13%	4%	0%	4%	0%	0%	0%	4%	4%	4%	0%	22%	0%	100%	5.26465032	0.11808321	0.1086794
Sheung Mau Street	31	LD	25	0100-0200	14.5	31%	7%	0%	14%	7%	0%	7%	0%	0%	0%	7%	0%	7%	0%	21%	0%	100%	5.29147647	0.12608232	0.11604484
Sheung Mau Street	31	LD	25	0200-0300	8	38%	13%	0%	13%	0%	0%	13%	0%	0%	0%	0%	0%	0%	0%	25%	0%	100%	5.40110627	0.11316482	0.10416953
Sheung Mau Street	31	LD	25	0300-0400	7	29%	14%	0%	14%	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	29%	0%	100%	6.20792282	0.12716327	0.11703353
Sheung Mau Street	31	LD	25	0400-0500	5	40%	0%	0%	20%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	20%	0%	100%	5.09944468	0.11060458	0.10183095
Sheung Mau Street	31	LD	25	0500-0600	5	40%	0%	0%	20%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	20%	0%	100%	5.09944468	0.11060458	0.10183095
Sheung Mau Street	31	LD	25	0600-0700	21.5	35%	5%	0%	9%	5%	5%	9%	0%	0%	0%	5%	5%	5%	0%	14%	5%	100%	4.37010864	0.1063611	0.09764672
Sheung Mau Street	31	LD	25	0700-0800	36.5	34%	3%	0%	12%	6%	3%	11%	0%	0%	3%	5%	3%	5%	0%	14%	1%	100%	4.44923717	0.1091988	0.10044609
Sheung Mau Street	31	LD	25	0800-0900	52.5	41%	2%	0%	14%	6%	4%	10%	0%	0%	2%	4%	2%	4%	0%	10%	3%	100%	3.48909586	0.08734108	0.08026759
Sheung Mau Street	31	LD	25	0900-1000	45	36%	4%	0%	14%	6%	2%	9%	0%	0%	2%	4%	2%	4%	0%	13%	2%	100%	4.11640886	0.09998181	0.09192044
Sheung Mau Street	31	LD	25	1000-1100	45.5	32%	4%	0%	16%	7%	2%	7%	0%	0%	2%	4%	2%	4%	0%	15%	2%	100%	4.45577163	0.10499009	0.09652177
Sheung Mau Street	31	LD	25	1100-1200	49	28%	6%	0%	19%	8%	2%	6%	0%	0%	0%	4%	2%	4%	2%	16%	2%	100%	4.70837083	0.11079745	0.10186556
Sheung Mau Street	31	LD	25	1200-1300	60.5	26%	7%	0%	17%	7%	3%	9%	0%	0%	0%	3%	2%	3%	2%	18%	2%	100%	5.07875249	0.11612554	0.10678773
Sheung Mau Street	31	LD	25	1300-1400	62	29%	6%	0%	18%	7%	2%	7%	0%	0%	0%	3%	2%	3%	2%	19%	2%	100%	5.03125991	0.11504813	0.10579987
Sheung Mau Street	31	LD	25	1400-1500	65.5	27%	8%	0%	17%	7%	2%	5%	0%	0%	0%	3%	3%	5%	2%	21%	2%	100%	5.41527274	0.12361979	0.1136825
Sheung Mau Street	31	LD	25	1500-1600	77	25%	8%	0%	20%	8%	1%	4%	0%	0%	0%	4%	3%	4%	1%	22%	1%	100%	5.4158247	0.12144055	0.11172322
Sheung Mau Street	31	LD	24	1600-1700	84	26%	8%	0%	20%	8%	1%	3%	0%	0%	0%	4%	2%	4%	1%	23%	1%	100%	5.47049759	0.12234277	0.11257619
Sheung Mau Street	31	LD	24	1700-1800	92.5	26%	10%	0%	18%	8%	1%	2%	0%	0%	0%	3%	2%	4%	1%	24%	1%	100%	5.67345515	0.12621861	0.11614598
Sheung Mau Street	31	LD	25	1800-1900	78	26%	10%	0%	16%	6%	1%	3%	0%	0%	0%	4%	3%	4%	1%	26%	0%	100%	5.86795539	0.12914528	0.11884596
Sheung Mau Street	31	LD	25	1900-2000	65	28%	9%	0%	16%	7%	2%	3%	0%	0%	0%	3%	3%	5%	2%	23%	0%	100%	5.59046413	0.12496456	0.11500308
Sheung Mau Street	31	LD	25	2000-2100	51	27%	8%	0%	16%	7%	2%	4%	0%	0%	0%	4%	2%	4%	2%	24%	0%	100%	5.67880837	0.12719707	0.11705903
Sheung Mau Street	31	LD	25	2100-2200	46	24%	9%	0%	16%	7%	4%	8%	0%	0%	0%	2%	2%	4%	2%	22%	0%	100%	5.70864467	0.12927969	0.11897383
Sheung Mau Street	31	LD	25	2200-2300	38.5	30%	8%	0%	13%	5%	3%	5%	0%	0%	0%	3%	3%	5%	3%	23%	0%	100%	5.81991574	0.13354073	0.1228986
Sheung Mau Street	31	LD	25	2300-0000	30.5	30%	10%	0%	14%	7%	3%	3%	0%	0%	0%	3%	3%	3%	0%	23%	0%	100%	5.32638489	0.11615868	0.10690303
Sheung Tat Street	32	LD	25	0000-0100	104.5	48%	21%	0%	7%	3%	2%	5%	0%	1%	5%	2%	2%	3%	0%	2%	0%	100%	1.61983039	0.04408539	0.04064507
Sheung Tat Street	32	LD	25	0100-0200	63.5	50%	20%	0%	6%	3%	2%	5%	0%	2%	5%	2%	2%	3%	0%	2%	0%	100%	1.54256839	0.0433564	0.03997805
Sheung Tat Street	32	LD	25	0200-0300	43	49%	21%	0%	7%	2%	2%	5%	0%	0%	5%	2%	2%	2%	0%	2%	0%	100%	1.65516227	0.04381728	0.04030644
Sheung Tat Street	32	LD	25	0300-0400	44	50%	20%	0%	7%	2%	2%	5%	0%	0%	5%	2%	2%	2%	0%	2%	0%	100%	1.64372524	0.04316633	0.03979928
Sheung Tat Street	32	LD	25	0400-0500	45	51%	20%	0%	7%	2%	2%	4%	0%	0%	4%	2%	2%	2%	0%	2%	0%	100%	1.60670363	0.04254431	0.03922867
Sheung Tat Street	32	LD	25	0500-0600	45	51%	20%	0%	7%	2%	2%	4%	0%	0%	4%	2%	2%	2%	0%	2%	0%	100%	1.60670363	0.04254431	0.03922867
Sheung Tat Street	32	LD	25	0600-0700	141.5	51%	20%	0%	6%	3%	1%	4%	0%	1%	4%	2%	1%	3%	0%	2%	1%	100%	1.57900623	0.04366568	0.04022316
Sheung Tat Street	32	LD	25	0700-0800	266.5	51%	20%	0%	6%	3%	2%	5%	0%	1%	4%	3%	2%	3%	0%	2%	0%	100%	1.66062808	0.04545307	0.04189551
Sheung Tat Street	32	LD	24	0800-0900	358.5	51%	19%	0%	7%	3%	2%	4%	0%	1%	4%	3%	2%	3%	0%	2%	0%	100%	1.68735864	0.04656783	0.04291417
Sheung Tat Street	32	LD	24	0900-1000	292	50%	20%	0%	7%	3%	2%	4%	0%	1%	4%	3%	2%	3%	0%	2%	0%	100%	1.68917011	0.0461525	0.0425343
Sheung Tat Street	32	LD	24	1000-1100	258.5	50%	20%	0%	7%	3%	2%	4%	0%	1%	4%	2%	2%	3%	0%	2%	0%	100%	1.68681606	0.04565932	0.04207731

Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																	Composite Emission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
Sheung Tat Street	32	LD	25	1100-1200	230	48%	20%	0%	8%	3%	2%	4%	0%	1%	4%	2%	2%	3%	0%	2%	0%	100%	1.6864775	0.04410381	0.0406377
Sheung Tat Street	32	LD	24	1200-1300	245.5	48%	20%	0%	8%	3%	2%	6%	0%	1%	5%	2%	2%	2%	0%	2%	0%	100%	1.7099118	0.04584193	0.04224029
Sheung Tat Street	32	LD	25	1300-1400	236	47%	20%	0%	8%	3%	2%	5%	0%	1%	5%	2%	1%	2%	0%	2%	0%	100%	1.61670221	0.04317869	0.03978717
Sheung Tat Street	32	LD	25	1400-1500	225.5	47%	21%	0%	8%	3%	2%	5%	0%	1%	5%	2%	1%	2%	0%	2%	0%	100%	1.63744353	0.04349196	0.04007318
Sheung Tat Street	32	LD	25	1500-1600	236	46%	21%	0%	9%	3%	2%	5%	0%	1%	6%	2%	1%	2%	0%	2%	0%	100%	1.62206005	0.04276342	0.03941473
Sheung Tat Street	32	LD	24	1600-1700	231	45%	21%	0%	9%	4%	2%	5%	0%	1%	6%	2%	1%	2%	0%	2%	0%	100%	1.66097682	0.04340786	0.04000548
Sheung Tat Street	32	LD	24	1700-1800	233.5	45%	22%	0%	9%	4%	2%	5%	0%	1%	6%	1%	1%	2%	0%	2%	0%	100%	1.64789274	0.04258704	0.03924996
Sheung Tat Street	32	LD	25	1800-1900	215	46%	22%	0%	8%	3%	2%	6%	0%	1%	6%	1%	1%	2%	0%	2%	0%	100%	1.64613991	0.04274931	0.03941439
Sheung Tat Street	32	LD	25	1900-2000	188	46%	22%	0%	8%	3%	2%	5%	0%	1%	6%	2%	1%	2%	0%	2%	0%	100%	1.63654531	0.04278407	0.0394471
Sheung Tat Street	32	LD	25	2000-2100	153	47%	22%	0%	7%	3%	2%	5%	0%	1%	5%	2%	1%	2%	0%	2%	0%	100%	1.58521606	0.0416873	0.03843907
Sheung Tat Street	32	LD	25	2100-2200	142	46%	20%	0%	8%	4%	3%	6%	0%	1%	5%	2%	1%	2%	0%	2%	0%	100%	1.71882304	0.04503868	0.04151786
Sheung Tat Street	32	LD	25	2200-2300	139.5	48%	22%	0%	6%	3%	2%	5%	0%	1%	5%	2%	1%	2%	0%	2%	0%	100%	1.60857204	0.04270345	0.0393739
Sheung Tat Street	32	LD	25	2300-0000	121.5	49%	21%	0%	7%	3%	2%	5%	0%	1%	5%	2%	2%	2%	0%	2%	0%	100%	1.65728979	0.04396444	0.04053396
Sheung Tat Street	33	LD	25	0000-0100	14	21%	7%	0%	7%	7%	0%	7%	0%	0%	7%	7%	0%	7%	0%	29%	0%	100%	6.70699784	0.15591132	0.1434683
Sheung Tat Street	33	LD	25	0100-0200	7	29%	14%	0%	14%	0%	0%	0%	0%	0%	14%	0%	0%	0%	0%	29%	0%	100%	5.52705691	0.11342613	0.10439353
Sheung Tat Street	33	LD	25	0200-0300	2	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	100%	8.59190324	0.17614781	0.16210076
Sheung Tat Street	33	LD	25	0300-0400	2	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	100%	8.66134112	0.17614781	0.16210076
Sheung Tat Street	33	LD	25	0400-0500	2	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	100%	8.64862112	0.17614781	0.16210076
Sheung Tat Street	33	LD	25	0500-0600	2	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	100%	8.64862112	0.17614781	0.16210076
Sheung Tat Street	33	LD	25	0600-0700	18	25%	6%	0%	6%	0%	11%	20%	0%	0%	6%	6%	0%	6%	0%	17%	0%	100%	5.50331558	0.13167317	0.12119454
Sheung Tat Street	33	LD	25	0700-0800	40	21%	2%	0%	23%	10%	3%	9%	0%	3%	8%	3%	3%	3%	0%	13%	0%	100%	4.15641257	0.09491596	0.08737255
Sheung Tat Street	33	LD	25	0800-0900	48	28%	2%	0%	18%	8%	2%	8%	0%	2%	8%	4%	2%	4%	0%	10%	2%	100%	3.78485895	0.09338724	0.08586042
Sheung Tat Street	33	LD	25	0900-1000	38	20%	3%	0%	19%	8%	3%	8%	0%	3%	8%	3%	3%	5%	0%	16%	3%	100%	4.77780091	0.11372115	0.1045201
Sheung Tat Street	33	LD	25	1000-1100	31.5	24%	3%	0%	14%	6%	4%	8%	0%	0%	10%	3%	3%	3%	0%	19%	3%	100%	5.11818013	0.11714809	0.1076392
Sheung Tat Street	33	LD	25	1100-1200	32.5	23%	6%	0%	15%	7%	3%	6%	0%	0%	6%	3%	3%	3%	0%	22%	3%	100%	5.36477224	0.12054411	0.11057905
Sheung Tat Street	33	LD	25	1200-1300	35.5	25%	6%	0%	13%	5%	3%	6%	0%	0%	6%	3%	3%	3%	3%	23%	3%	100%	5.6665937	0.12945074	0.11897543
Sheung Tat Street	33	LD	25	1300-1400	36.5	25%	5%	0%	16%	6%	3%	3%	0%	0%	5%	3%	3%	3%	3%	25%	1%	100%	5.84704704	0.13103609	0.12051064
Sheung Tat Street	33	LD	25	1400-1500	43	22%	7%	0%	18%	7%	1%	4%	0%	0%	5%	2%	2%	2%	2%	26%	1%	100%	5.94808166	0.13100621	0.12049082
Sheung Tat Street	33	LD	25	1500-1600	48.5	21%	6%	0%	15%	7%	1%	6%	0%	0%	4%	2%	2%	4%	2%	27%	2%	100%	6.54812292	0.14328039	0.13173027
Sheung Tat Street	33	LD	25	1600-1700	47.5	24%	8%	0%	14%	6%	0%	1%	0%	0%	4%	2%	2%	4%	2%	29%	2%	100%	6.41832145	0.14346885	0.1319003
Sheung Tat Street	33	LD	25	1700-1800	59	32%	7%	0%	13%	5%	0%	0%	0%	0%	3%	3%	2%	3%	2%	27%	3%	100%	5.84804801	0.13067572	0.12011974
Sheung Tat Street	33	LD	25	1800-1900	43	24%	9%	0%	12%	6%	0%	0%	0%	0%	5%	2%	2%	5%	2%	33%	0%	100%	6.92891076	0.15277647	0.14057787
Sheung Tat Street	33	LD	25	1900-2000	34.5	26%	9%	0%	10%	3%	1%	2%	0%	0%	6%	3%	3%	3%	3%	32%	0%	100%	6.88696695	0.15023754	0.13824654
Sheung Tat Street	33	LD	25	2000-2100	27	26%	7%	0%	11%	4%	0%	0%	0%	0%	4%	4%	4%	4%	4%	33%	0%	100%	7.16202272	0.15764164	0.14505429
Sheung Tat Street	33	LD	25	2100-2200	23	26%	9%	0%	9%	4%	0%	4%	0%	0%	4%	4%	4%	4%	0%	30%	0%	100%	6.64417054	0.14558944	0.13396837
Sheung Tat Street	33	LD	25	2200-2300	23.5	26%	9%	0%	9%	4%	0%	4%	0%	0%	4%	4%	4%	4%	0%	30%	2%	100%	6.52882274	0.14435228	0.13271095
Sheung Tat Street	33	LD	25	2300-0000	18	25%	6%	0%	11%	6%	0%	6%	0%	0%	6%	6%	0%	6%	0%	28%	3%	100%	6.30580556	0.14506307	0.13332917
Chong Fu Road	34	LD	25	0000-0100	166	51%	24%	0%	10%	4%	1%	3%	1%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.94568394	0.02505172	0.0231045
Chong Fu Road	34	LD	25	0100-0200	100	51%	25%	0%	10%	4%	1%	3%	0%	1%	3%	1%	0%	1%	0%	0%	0%	100%	0.93709178	0.02542366	0.02348246
Chong Fu Road	34	LD	25	0200-0300	67	51%	25%	0%	10%	4%	1%	3%	0%	0%	3%	0%	0%	1%	0%	0%	0%	100%	0.98194365	0.02659034	0.02455334
Chong Fu Road	34	LD	25	0300-0400	68	51%	25%	0%	10%	4%	1%	3%	0%	0%	3%	0%	0%	1%	0%	0%	0%	100%	0.9860633	0.02642247	0.02439993
Chong Fu Road	34	LD	25	0400-0500	69	51%	26%	0%	10%	4%	1%	3%	0%	0%	3%	0%	0%	1%	0%	0%	0%	100%	0.97975437	0.02609954	0.0240469
Chong Fu Road	34	LD	25	0500-0600	70	51%	26%	0%	10%	4%	1%	3%	0%	0%	3%	0%	0%	1%	0%	0%	0%	100%	0.96794749	0.02588434	0.02390452
Chong Fu Road	34	LD	25	0600-0700	217	50%	25%	0%	10%	4%	1%	3%	1%	0%	3%	1%	0%	1%	0%	0%	0%	100%	0.96563047	0.02542894	0.0234578
Chong Fu Road	34	LD	24	0700-0800	404	50%	25%	0%	10%	4%	1%	3%	1%	0%	3%	1%	0%	1%	0%	0%	0%	100%	0.98613628	0.02567364	0.02368267
Chong Fu Road	34	LD	24	0800-0900	522	49%	25%	0%	10%	4%	1%	3%	1%	1%	3%	1%	1%	1%	0%	0%	0%	100%	0.99772539	0.02580481	0.02380881
Chong Fu Road	34	LD	24	0900-1000	436	50%	25%	0%	10%	4%	1%	3%	1%	0%	3%	1%	0%	1%	0%	0%	0%	100%	0.99398778	0.02626627	0.02422972
Chong Fu Road	34	LD	24	1000-1100	393	50%	25%	0%	10%	4%	1%	3%	1%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.99484982	0.02596031	0.02394575
Chong Fu Road	34	LD	25	1100-1200	349	50%	25%	0%	10%	4%	1%	3%	1%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.96411757	0.02552468	0.02353962
Chong Fu Road	34	LD	24	1200-1300	372	51%	25%	0%	10%	4%	1%	3%	1%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.97980628	0.02584479	0.02383596
Chong Fu Road	34	LD	24	1300-1400	364	51%	24%	0%	10%	4%	1%	3%	1%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.97520408	0.02621583	0.02417982
Chong Fu Road	34	LD	24	1400-1500	353	51%	24%	0%	10%	4%	1%	3%	0%	1%	3%	1%	0%	1%	0%	0%	1%	100%	0.94675296	0.02535787	0.02339098
Chong Fu Road	34	LD	24	1500-1600	373	52%	24%	0%	10%	4%	1%	3%	0%	1%	3%	1%	0%	1%	0%	0%	1%	100%	0.92215181	0.0248126	0.02289153
Chong Fu Road	34	LD	24	1600-1700	364	52%	24%	0%	10%	4%	1%	3%	0%	1%	3%	1%	0%	1%	0%	0%	1%	100%	0.92349592	0.02506562	0.02312401
Chong Fu Road	34	LD	24	1700-1800	384	52%	23%	0%	10%	4%	1%	3%	0%	1%	3%	1%	0%	1%	0%	0%	1%	100%	0.93420011	0.02515535	0.02320902
Chong Fu Road	34	LD	24	1800-1900	361	52%	24%	0%	10%	4%	1%	3%	0%	1%	3%	1%	0%	1%	0%	0%	1%	100%	0.93208248	0.02523099	0.02327618
Chong Fu Road	34	LD	24	1900-2000	305	52%	24%	0%	10%	4%	1%	3%	0%	1%	3%	1%	0%	1%	0%	0%	1%	100%	0.94404236	0.0255056	0.02352339
Chong Fu Road	34	LD	25	2000-2100	248	52%	24%	0%	10%	4%	1%	3%	0%	1%	3%	0%	0%	1%	0%	0%	0%	100%	0.95222708	0.0255204	0.02354919
Chong Fu Road	34	LD	25	2100-2200	220	52%	24%	0%	10%	4%	1%	3%	0%	0%	3%	0%	0%	0%	0%	0%	0%	100%	0.91443995	0.02418115	0.0223136
Chong Fu Road	34	LD	25	2200-2300	224	51%	24%	0%	10%	4%	1%	3%	0%	0%	3%	0%	0%	1%	0%	0%	0%	100%	0.96088996	0.02580209	0.02380461
Chong Fu Road	34	LD	25	2300-0000	196	51%	24%	0%	10%	4%	1%	3%	1%	1%	3%	1%	1%	1%	0%	0%	1%	100%	0.92280456	0.02431985	0.02243687
Chong Fu Road	35	LD	25	0000-0100	31	19%	13%	0%	16%	6%	0%	3%	16%	3%	13%	3%	0%	3%	0%	3%	0%	100%	2.29879023	0.05860209	0.05397352
Chong Fu Road	35	LD	25	0100-0200	16	19%	13%	0%	19%	6%	0%	6%	19%	0%	13%	0%	0%	6%	0%	0%	0%	100%	2.16401193	0.06044637	0.05566873
Chong Fu Road	35	LD	25	0200-0300	11	18%	18%	0%	18%	9%	0%	0%	18%	0%	18%	0%	0%	0%	0%	0%	0%	100%	1.39186932	0.03269951	0.03019695
Chong Fu Road	35	LD	25	0300-0400	10	20%	10%	0%	20%	10%	0%	0%	20%	0%	20%	0%	0%	0%	0%	0%	0%	100%	1.48569275	0.03596946	0.03315064
Chong Fu Road	35	LD	25	0400-0500	11	18%	9%	0%	18%	9%	0%	0%	18%	0%	18%	0%	0%	9%	0%	0%	0%	100%	2.19099445	0.06581951	0.06060967
Chong Fu Road	35	LD	25	0500-0600	13	15%	8%	0%	15%	8%	0%	8%	23%	0%	15%	0%	0%	8%	0%	0%	0%	100%	2.49847344	0.07133651	0.06566511
Chong Fu Road	35	LD	25	0600-0700	43	14%	9%	0%	14%	7%	2%	5%	19%	2%	14%	5%	2%	5%	0%	2%	0%	100%	2.63552598	0.06888503	0.06342351
Chong Fu Road	35	LD	25	0700-0800	76	13%	8%	0%	14%	7%	1%	4%	20%	3%	16%	4%	3%	5%	0%	3%	0%	100%	2.70894178	0.07120276	0.06555562
Chong Fu Road	35	LD	25	0800-0900	100	13%	8%	0%	14%	6%	1%	4%	20%	3%	16%	4%	3%	5%	0%	3%	0%	100%	2.75565334	0.07151925	0.06584658
Chong Fu Road	35	LD	25	0900-1000	82	15%	9%	0%	15%	6%	1%	4%	20%	2%	16%	4%	2%	5%	0%	2%	0%	100%	2.57485689	0.06797016	0.06258368
Chong Fu Road	35	LD	25	1000-1100	75	15%	9%	0%	15%	7%	1%	4%	19%	3%	15%	4%	3%	4%	0%	3%	0%	100%	2.58252799	0.06606754	0.06083298
Chong Fu Road	35	LD	25	1100-1200	64	16%	11%	0%	16%	6%	2%	3%	19%	3%	14%	3%	2%	3%	0%	3%	0%	100%	2.44771755	0.06120654	0.05636305
Chong Fu Road	35	LD	25	1200-1300	70	17%	13%	0%	16%	7%	1%	3%	17%	3%	13%	3%	1%	3%	0%	3%	0%	100%	2.33493372	0.05768459	0.05312329
Chong Fu Road	35	LD	25	1300-1400	67	18%	13%	0%	16%	7%	1%	3%	16%	3%	12%	1%	1%	3%	0%	3%	0%	100%	2.31040398	0.05705077	0.05254075
Chong Fu Road	35	LD	25	1400-1500	65	20%	15%	0%	17%	8%	2%	3%	17%	2%	11%	2%	2%	2%	0%	2%	0%	100%	1.94713686	0.04680191	0.04311231
Chong Fu Road	35	LD	25	1500-1600	69	20%	17%	0%	17%	7%	1%	3%	16%	1%	10%	1%	1%	1%	0%	1%	0%	100%	1.8761498	0.04466509	0.04114628
Chong Fu Road	35	LD	25	1600-1700	65	23%	18%	0%	18%	8%	2%	3%	15%	2%	9%	0%	0%	0%	0%	2%	0%	100%	1.67010451	0.03742934	0.034495
Chong Fu Road	35	LD	25	1700-1800	68	24%	21%	0%	19%	7%	1%	3%	15%	1%	7%	0%	0%	0%	0%	1%	0%	100%	1.63602069	0.03540992	0.03263659
Chong Fu Road	35	LD	25	1800-1900	66	23%	20%	0%	18%	8%	2%	3%	15%	2%	9%	0%	0%	0%	0%	2%	0%	100%	1.66450999	0.03686223	0.03397234
Chong Fu Road	35	LD	25	1900-2000	53	23%	19%	0%	19%	8%	2%	2%	15%	2%	9%	0%	0%	0%	0%	2%	0%	100%	1.70146822	0.03701655	0.03411447
Chong Fu Road	35	LD	25	2000-2100	45	22%	18%	0%	18%	7%	0%	2%	16%	2%	11%	0%	0%	2%	0%	2%	0%	100%	1.90269679	0.04573738	0.04213867
Chong Fu Road	35	LD	25	2100-2200	40	20%	18%	0%	18%	8%	0%	3%	15%	3%	10%	3%	0%	3%	0%	3%	0%	100%	2.04392898	0.05010898	0.04615714
Chong Fu Road	35	LD	25	2200-2300	41	20%	15%	0%	17%	7%	0%	2%	17%	2%	12%	2%	0%	2%	0%	2%	0%	100%	2.0721312	0.05150145	0.04743016
Chong Fu Road	35	LD	25	2300-0000	37	19%	14%	0%	16%	8%	0%	3%	16%	3%	11%	3%	3%	3%	0%	3%	0%	100%	2.23720739	0.055376	0.05099817
Sheung On Street	36	LD	25	0000-0100	38.5	27%	18%	0%	18%	8%	0%	3%	3%	3%	10%	0%	0%	0%	0%	10%	0%	100%	2.87574745	0.06153295	0.05666882
Sheung On Street	36	LD	25	0100-0200	23.5	28%	17%	0%	17%	9%	0%	4%	4%	0%	13%	0%	0%	0%	0%	9%	0%	100%	2.69688668	0.05959695	0.05488666
Sheung On Street	36	LD	25	0200-0300	14	29%	21%	0%	21%	7%	0%	0%	0%	0%	14%	0%	0%	0%	0%	7%	0%	100%	2.21709487	0.04763982	0.04388722
Sheung On Street	36	LD	25	0300-0400	15	27%	20%	0%	20%	7%	0%	0%	7%	0%	13%	0%	0%	0%	0%	7%	0%	100%	2.23257262	0.0472905	0.04356408
Sheung On Street	36	LD	25	0400-0500	15	27%	20%	0%	20%	7%	0%	0%	7%	0%	13%	0%	0%	0%	0%	7%	0%	100%	2.22765529	0.0472905	0.04356408
Sheung On Street	36	LD	25	0500-0600	15	27%	20%	0%	20%	7%	0%	0%	7%	0%	13%	0%	0%	0%	0%	7%	0%	100%	2.22765529	0.0472905	0.04356408
Sheung On Street	36	LD	25	0600-0700	49.5	23%	20%	0%	18%	8%	2%	4%	4%	2%	10%	0%	0%	0%	0%	6%	2%	100%	2.3853707	0.05248365	0.04822796
Sheung On Street	36	LD	25	0700-0800	88.5	22%	20%	0%	18%	8%	1%	3%	5%	2%	11%	1%	0%	1%	0%	5%	2%	100%	2.22492582	0.05151993	0.04736007
Sheung On Street	36	LD	24	0800-0900	122.5	26%	20%	0%	19%	7%	1%	3%	4%	2%	11%	1%	1%	1%	0%	3%	2%	100%	2.00969735	0.04695398	0.0431252
Sheung On Street	36	LD	25	0900-1000	100	24%	20%	0%	18%	8%	1%	3%	4%	2%	11%	1%	0%	1%	0%	5%	2%	100%	2.2206122	0.05152915	0.04735305
Sheung On Street	36	LD	25	1000-1100	93.5	23%	18%	0%	20%	8%	1%	4%	3%	2%	11%	1%	0%	1%	0%	6%	2%	100%	2.52320399	0.05752858	0.05286409
Sheung On Street	36	LD	25	1100-1200	89	23%	17%	0%	21%	9%	1%	2%	3%	2%	10%	1%	0%	1%	0%	7%	2%	100%	2.51476538	0.05762987	0.05294923
Sheung On Street	36	LD	24	1200-1300	98.5	24%	16%	0%	19%	8%	2%	5%	2%	2%	9%	1%	0%	1%	1%	8%	2%	100%	2.97818643	0.06889812	0.06331654
Sheung On Street	36	LD	24	1300-1400	100	26%	15%	0%	19%	8%	1%	3%	2%	2%	9%	1%	0%	1%	1%	10%	2%	100%	3.14452991	0.07239239	0.06653582
Sheung On Street	36	LD	25	1400-1500	93.5	26%	15%	0%	18%	8%	1%	1%	1%	2%	10%	1%	0%	1%	1%	12%	2%	100%	3.28688257	0.07466036	0.06862265
Sheung On Street	36	LD	24	1500-1600	102	26%	15%	0%	20%	8%	0%	1%	1%	2%	10%	1%	0%	1%	1%	13%	1%	100%	3.42989184	0.07725265	0.07103694
Sheung On Street	36	LD	24	1600-1700	107	28%	13%	0%	20%	8%	0%	1%	1%	2%	8%	1%	0%	1%	1%	14%	1%	100%	3.62614933	0.08118565	0.07466265
Sheung On Street	36	LD	24	1700-1800	111.5	29%	13%	0%	19%	8%	0%	1%	0%	2%	9%	1%	1%	1%	1%	15%	1%	100%	3.83203365	0.08476181	0.07796852
Sheung On Street	36	LD	24	1800-1900	97	29%	14%	0%	17%	7%	0%	1%	0%	2%	9%	1%	0%	1%	1%	15%	1%	100%	3.83606386	0.08559262	0.0787421
Sheung On Street	36	LD	25	1900-2000	85	29%	14%	0%	17%	7%	0%	1%	1%	2%	9%	1%	0%	1%	1%	14%	1%	100%	3.60019427	0.08048801	0.07404083
Sheung On Street	36	LD	25	2000-2100	67	30%	15%	0%	17%	7%	0%	1%	1%	1%	9%	0%	0%	1%	1%	13%	1%	100%	3.52997676	0.07981455	0.07340292
Sheung On Street	36	LD	25	2100-2200	61	26%	15%	0%	19%	8%	1%	5%	2%	2%	10%	0%	0%	0%	0%	11%	2%	100%	3.21474287	0.07009027	0.06439167
Sheung On Street	36	LD	25	2200-2300	55.5	30%	16%	0%	16%	7%	0%	2%	2%	2%	11%	0%	0%	0%	0%	13%	2%	100%	3.16012752	0.06853007	0.06300489
Sheung On Street	36	LD	25	2300-0000	47.5	29%	17%	0%	18%	7%	0%	2%	2%	2%	11%	0%	0%	0%	0%	13%	0%	100%	3.17152554	0.06745384	0.06211639
Sheung On Street	37	LD	25	0000-0100	33	30%	9%	0%	15%	6%	0%	3%	15%	0%	6%	3%	0%	3%	0%	9%	0%	100%	3.04663058	0.07250893	0.0667689
Sheung On Street	37	LD	25	0100-0200	18	28%	11%	0%	17%	6%	0%	6%	17%	0%	6%	0%	0%	0%	0%	11%	0%	100%	3.21731621	0.06903406	0.06356793
Sheung On Street	37	LD	25	0200-0300	11	27%	9%	0%	18%	9%	0%	0%	18%	0%	9%	0%	0%	0%	0%	9%	0%	100%	2.71560697	0.05883547	0.05418436
Sheung On Street	37	LD	25	0300-0400	11	27%	9%	0%	18%	9%	0%	0%	18%	0%	9%	0%	0%	0%	0%	9%	0%	100%	2.75047122	0.05883547	0.05418436
Sheung On Street	37	LD	25	0400-0500	12	25%	8%	0%	17%	8%	0%	8%	17%	0%	8%	0%	0%	0%	0%	8%	0%	100%	3.04266821	0.06734585	0.06201566
Sheung On Street	37	LD	25	0500-0600	11	18%	9%	0%	18%	9%	0%	9%	18%	0%	9%	0%	0%	0%	0%	9%	0%	100%	3.30534051	0.0720886	0.06636967
Sheung On Street	37	LD	25	0600-0700	39	19%	8%	0%	15%	5%	5%	12%	21%	3%	8%	0%	0%	0%	0%	5%	0%	100%	2.88211258	0.06459834	0.05949119
Sheung On Street	37	LD	25	0700-0800	69	18%	7%	0%	25%	10%	2%	5%	20%	1%	7%	0%	0%	0%	0%	3%	0%	100%	2.24672072	0.04936571	0.0454719
Sheung On Street	37	LD	25	0800-0900	84	20%	8%	0%	23%	9%	1%	5%	21%	1%	7%	0%	0%	0%	0%	2%	1%	100%	2.08668676	0.04658932	0.04285254
Sheung On Street	37	LD	25	0900-1000	72	19%	8%	0%	23%	10%	1%	4%	21%	1%	7%	0%	0%	0%	0%	4%	1%	100%	2.33168321	0.05180254	0.04763414
Sheung On Street	37	LD	25	1000-1100	69.5	22%	9%	0%	18%	7%	2%	5%	19%	1%	7%	1%	0%	1%	0%	6%	1%	100%	2.67711193	0.06212844	0.057136
Sheung On Street	37	LD	25	1100-1200	69.5	24%	9%	0%	17%	7%	1%	3%	17%	1%	6%	1%	1%	1%	0%	7%	3%	100%	2.78852028	0.06471945	0.05943447
Sheung On Street	37	LD	25	1200-1300	77.5	27%	9%	0%	15%	6%	1%	4%	15%	1%	6%	1%	1%	1%	0%	8%	3%	100%	2.84507866	0.06579208	0.0604427
Sheung On Street	37	LD	25	1300-1400	84.5	28%	8%	0%	16%	6%	1%	4%	14%	1%	6%	1%	1%	2%	0%	8%	2%	100%	2.94954535	0.06960474	0.06399664
Sheung On Street	37	LD	24	1400-1500	93	28%	8%	0%	17%	6%	1%	3%	12%	1%	5%	2%	1%	2%	1%	10%	2%	100%	3.28863308	0.07823852	0.07194046
Sheung On Street	37	LD	24	1500-1600	106.5	30%	8%	0%	15%	6%	2%	4%	10%	1%	5%	2%	2%	3%	1%	10%	3%	100%	3.43684113	0.08332251	0.07655594
Sheung On Street	37	LD	24	1600-1700	108.5	33%	8%	0%	13%	6%	1%	2%	10%	1%	5%	2%	2%	3%	1%	11%	3%	100%	3.40311012	0.0823081	0.07563026
Sheung On Street	37	LD	24	1700-1800	127	38%	8%	0%	12%	5%	1%	2%	9%	1%	4%	2%	2%	3%	1%	11%	3%	100%	3.32283769	0.08107778	0.07450839
Sheung On Street	37	LD	24	1800-1900	105	34%	9%	0%	12%	5%	1%	2%	10%	1%	5%	3%	2%	3%	1%	11%	2%	100%	3.46511235	0.08347038	0.07674954
Sheung On Street	37	LD	25	1900-2000	85.5	34%	8%	0%	12%	5%	1%	3%	11%	1%	5%	2%	1%	2%	1%	12%	1%	100%	3.49658672	0.08212568	0.07555321
Sheung On Street	37	LD	25	2000-2100	65	34%	9%	0%	12%	5%	2%	3%	11%	2%	5%	2%	2%	3%	0%	11%	2%	100%	3.28059582	0.07721681	0.07101674
Sheung On Street	37	LD	25	2100-2200	56	32%	9%	0%	13%	5%	2%	2%	13%	2%	5%	2%	2%	2%	0%	11%	2%	100%	3.16274997	0.07270355	0.06684804
Sheung On Street	37	LD	25	2200-2300	55.5	31%	9%	0%	13%	5%	2%	4%	13%	2%	5%	2%	2%	2%	0%	9%	3%	100%	3.00499386	0.07069883	0.06495286
Sheung On Street	37	LD	25	2300-0000	44	31%	9%	0%	14%	5%	0%	2%	14%	0%	7%	2%	2%	2%	0%	9%	3%	100%	2.97459386	0.07114331	0.06531853
Sheung On Street	38	LD	25	0000-0100	49	18%	22%	0%	14%	6%	2%	6%	2%	2%	12%	2%	2%	2%	0%	6%	2%	100%	2.74826469	0.06500772	0.05974034
Sheung On Street	38	LD	25	0100-0200	30	20%	23%	0%	13%	7%	3%	7%	3%	3%	10%	0%	0%	3%	0%	7%	0%	100%	2.85892348	0.06759177	0.06223825
Sheung On Street	38	LD	25	0200-0300	18	22%	28%	0%	17%	6%	0%	6%	6%	0%	11%	0%	0%	0%	0%	6%	0%	100%	2.26472213	0.04835097	0.04453451
Sheung On Street	38	LD	25	0300-0400	18	22%	28%	0%	17%	6%	0%	6%	6%	0%	11%	0%	0%	0%	0%	6%	0%	100%	2.29516659	0.04835097	0.04453451
Sheung On Street	38	LD	25	0400-0500	18	22%	28%	0%	17%	6%	0%	6%	6%	0%	11%	0%	0%	0%	0%	6%	0%	100%	2.28993992	0.04835097	0.04453451
Sheung On Street	38	LD	25	0500-0600	18	22%	28%	0%	17%	6%	0%	6%	6%	0%	11%	0%	0%	0%	0%	6%	0%	100%	2.28993992	0.04835097	0.04453451
Sheung On Street	38	LD	25	0600-0700	62	18%	23%	0%	16%	6%	2%	5%	5%	2%	13%	2%	2%	2%	0%	5%	2%	100%	2.48071587	0.05757523	0.05292669
Sheung On Street	38	LD	24	0700-0800	112	18%	23%	0%	16%	7%	2%	5%	5%	3%	13%	1%	1%	1%	0%	4%	1%	100%	2.41053806	0.05476111	0.05035951
Sheung On Street	38	LD	24	0800-0900	144	17%	24%	0%	17%	7%	2%	5%	6%	2%	13%	1%	1%	1%	0%	4%	1%	100%	2.40199063	0.055078	0.05065905
Sheung On Street	38	LD	24	0900-1000	121	18%	23%	0%	17%	7%	2%	5%	5%	2%	12%	1%	1%	2%	0%	5%	1%	100%	2.49975396	0.05785371	0.05320803
Sheung On Street	38	LD	24	1000-1100	111	18%	23%	0%	16%	6%	2%	5%	5%	3%	13%	1%	1%	2%	0%	5%	1%	100%	2.48131126	0.05762418	0.05299266
Sheung On Street	38	LD	24	1100-1200	98	18%	23%	0%	15%	6%	2%	6%	4%	2%	12%	1%	1%	2%	0%	5%	1%	100%	2.61328023	0.06136883	0.0564322
Sheung On Street	38	LD	24	1200-1300	110	18%	23%	0%	15%	6%	3%	6%	3%	2%	12%	2%	1%	2%	0%	5%	2%	100%	2.70469675	0.06344293	0.05829611
Sheung On Street	38	LD	24	1300-1400	108	19%	23%	0%	15%	6%	3%	6%	3%	2%	11%	2%	1%	2%	0%	6%	2%	100%	2.69489973	0.06376196	0.05858944
Sheung On Street	38	LD	24	1400-1500	107	20%	22%	0%	15%	6%	3%	7%	2%	2%	11%	2%	2%	2%	0%	6%	2%	100%	2.73320597	0.06501109	0.05974001
Sheung On Street	38	LD	24	1500-1600	117	20%	22%	0%	14%	6%	3%	8%	1%	2%	11%	2%	2%	3%	0%	6%	3%	100%	2.86058918	0.06952668	0.06385722
Sheung On Street	38	LD	24	1600-1700	115	20%	22%	0%	14%	6%	3%	8%	1%	2%	10%	2%	2%	3%	0%	6%	3%	100%	2.87923607	0.07015288	0.06443212
Sheung On Street	38	LD	24	1700-1800	125	20%	22%	0%	14%	6%	3%	8%	0%	2%	10%	2%	2%	2%	1%	6%	2%	100%	3.03564644	0.07371491	0.06772071

Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																	Composite Emission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<= 2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
Sheung On Street	38	LD	24	1800-1900	114	20%	22%	0%	14%	6%	3%	8%	0%	2%	11%	2%	2%	3%	0%	6%	3%	100%	2.89937458	0.0703837	0.06464363
Sheung On Street	38	LD	25	1900-2000	96	20%	22%	0%	14%	6%	3%	8%	1%	2%	10%	2%	1%	2%	0%	6%	2%	100%	2.86555836	0.06778396	0.06229587
Sheung On Street	38	LD	25	2000-2100	78	19%	22%	0%	14%	6%	3%	8%	1%	3%	10%	1%	1%	3%	0%	6%	3%	100%	2.87878782	0.06864532	0.06306059
Sheung On Street	38	LD	25	2100-2200	66	20%	23%	0%	15%	6%	3%	8%	2%	2%	11%	2%	2%	2%	0%	6%	2%	100%	2.75036516	0.06348145	0.05836754
Sheung On Street	38	LD	25	2200-2300	67	19%	22%	0%	15%	6%	3%	7%	1%	1%	12%	1%	1%	1%	0%	6%	1%	100%	2.73770808	0.06350113	0.05838713
Sheung On Street	38	LD	25	2300-0000	59	19%	22%	0%	15%	7%	3%	7%	2%	2%	12%	2%	2%	2%	0%	5%	2%	100%	2.61500009	0.06163988	0.05666277
Sheung On Street	39	LD	25	0000-0100	34	26%	12%	0%	12%	3%	3%	6%	15%	0%	3%	3%	3%	3%	0%	12%	0%	100%	3.73545557	0.08485845	0.07811825
Sheung On Street	39	LD	25	0100-0200	18	28%	11%	0%	11%	6%	0%	6%	17%	0%	6%	0%	0%	6%	0%	11%	0%	100%	3.63305279	0.08790786	0.08093061
Sheung On Street	39	LD	25	0200-0300	10	30%	10%	0%	10%	10%	0%	10%	20%	0%	0%	0%	0%	0%	0%	10%	0%	100%	3.25356562	0.07167585	0.06618362
Sheung On Street	39	LD	25	0300-0400	11	27%	9%	0%	18%	9%	0%	9%	18%	0%	0%	0%	0%	0%	0%	9%	0%	100%	3.15138111	0.06757729	0.06222799
Sheung On Street	39	LD	25	0400-0500	11	27%	9%	0%	18%	9%	0%	9%	18%	0%	0%	0%	0%	0%	0%	9%	0%	100%	3.14476293	0.06757729	0.06222799
Sheung On Street	39	LD	25	0500-0600	10	20%	10%	0%	20%	10%	0%	10%	20%	0%	0%	0%	0%	0%	0%	10%	0%	100%	3.44391193	0.07281746	0.06703864
Sheung On Street	39	LD	25	0600-0700	35	17%	9%	0%	14%	6%	3%	9%	23%	0%	3%	3%	3%	3%	0%	9%	0%	100%	3.60605238	0.08231577	0.07577164
Sheung On Street	39	LD	25	0700-0800	58	16%	9%	0%	16%	7%	3%	9%	24%	0%	3%	2%	2%	2%	0%	9%	0%	100%	3.541276	0.07848527	0.07224722
Sheung On Street	39	LD	25	0800-0900	73	14%	10%	0%	15%	7%	3%	8%	25%	1%	4%	3%	1%	3%	0%	7%	0%	100%	3.33256727	0.0764312	0.07035966
Sheung On Street	39	LD	25	0900-1000	64	17%	9%	0%	16%	6%	3%	8%	23%	0%	3%	2%	2%	3%	0%	8%	0%	100%	3.40992955	0.07834076	0.07211709
Sheung On Street	39	LD	25	1000-1100	63	21%	10%	0%	14%	6%	3%	6%	21%	0%	3%	2%	2%	3%	0%	10%	0%	100%	3.57317975	0.08112584	0.07468103
Sheung On Street	39	LD	25	1100-1200	61	23%	10%	0%	13%	5%	2%	7%	20%	0%	3%	2%	2%	3%	0%	10%	2%	100%	3.52091661	0.08197501	0.07537351
Sheung On Street	39	LD	25	1200-1300	70	26%	10%	0%	11%	4%	1%	6%	17%	0%	4%	3%	1%	3%	0%	11%	1%	100%	3.66463022	0.08440768	0.07762558
Sheung On Street	39	LD	25	1300-1400	76	28%	11%	0%	11%	4%	1%	5%	16%	1%	4%	3%	1%	3%	1%	11%	1%	100%	3.51203376	0.0833947	0.07670586
Sheung On Street	39	LD	25	1400-1500	77	30%	10%	0%	10%	4%	1%	4%	14%	1%	4%	3%	1%	3%	1%	12%	1%	100%	3.58425412	0.08444297	0.07767233
Sheung On Street	39	LD	25	1500-1600	89	31%	11%	0%	9%	3%	1%	3%	12%	1%	3%	2%	2%	3%	1%	12%	2%	100%	3.66901222	0.0875091	0.08043873
Sheung On Street	39	LD	25	1600-1700	93	33%	11%	0%	9%	3%	1%	3%	12%	1%	3%	2%	2%	3%	1%	13%	2%	100%	3.69032592	0.08785975	0.08076873
Sheung On Street	39	LD	24	1700-1800	105	35%	11%	0%	8%	3%	1%	3%	10%	1%	4%	3%	2%	3%	1%	13%	2%	100%	3.75741625	0.08882829	0.08168439
Sheung On Street	39	LD	24	1800-1900	95	34%	12%	0%	8%	3%	1%	3%	11%	1%	3%	2%	2%	3%	1%	14%	2%	100%	3.8614585	0.09138918	0.08402709
Sheung On Street	39	LD	25	1900-2000	79	33%	11%	0%	9%	4%	1%	4%	11%	1%	4%	3%	1%	3%	1%	13%	1%	100%	3.67362984	0.0857641	0.07889193
Sheung On Street	39	LD	25	2000-2100	58	33%	12%	0%	9%	3%	2%	3%	12%	0%	3%	2%	2%	3%	0%	14%	2%	100%	3.79799794	0.08753687	0.08049202
Sheung On Street	39	LD	25	2100-2200	51	31%	12%	0%	10%	4%	2%	4%	14%	0%	4%	2%	2%	2%	0%	12%	2%	100%	3.43586445	0.07829513	0.07197671
Sheung On Street	39	LD	25	2200-2300	49	31%	10%	0%	10%	4%	2%	4%	14%	0%	4%	2%	2%	2%	0%	12%	2%	100%	3.55807017	0.08118114	0.07462634
Sheung On Street	39	LD	25	2300-0000	41	29%	10%	0%	10%	5%	2%	5%	15%	0%	2%	2%	2%	2%	0%	12%	2%	100%	3.66093464	0.08447408	0.0776306
Sheung On Street	40	LD	25	0000-0100	71	28%	24%	0%	13%	6%	1%	4%	11%	1%	8%	0%	0%	0%	0%	1%	1%	100%	1.54464898	0.03567399	0.03280615
Sheung On Street	40	LD	25	0100-0200	44	25%	23%	0%	14%	5%	2%	5%	11%	2%	9%	0%	0%	0%	0%	2%	2%	100%	1.75126049	0.04030041	0.037012
Sheung On Street	40	LD	25	0200-0300	27	26%	22%	0%	15%	7%	0%	4%	11%	0%	7%	0%	0%	0%	0%	4%	4%	100%	1.89721913	0.0436459	0.04000322
Sheung On Street	40	LD	25	0300-0400	26	27%	23%	0%	15%	4%	0%	4%	12%	0%	8%	0%	0%	0%	0%	4%	4%	100%	1.90860792	0.04279536	0.03921565
Sheung On Street	40	LD	25	0400-0500	26	27%	23%	0%	15%	4%	0%	4%	12%	0%	12%	0%	0%	0%	0%	0%	4%	100%	1.31847166	0.03232151	0.02958489
Sheung On Street	40	LD	25	0500-0600	25	28%	24%	0%	12%	4%	0%	4%	12%	0%	12%	0%	0%	0%	0%	0%	4%	100%	1.3021756	0.0326307	0.02986141
Sheung On Street	40	LD	25	0600-0700	76	25%	22%	0%	13%	5%	1%	4%	13%	1%	11%	0%	0%	0%	0%	1%	3%	100%	1.60056694	0.03742254	0.03434338
Sheung On Street	40	LD	25	0700-0800	140	24%	21%	0%	13%	6%	1%	4%	14%	2%	10%	1%	0%	1%	0%	1%	2%	100%	1.73085294	0.04157678	0.03819333
Sheung On Street	40	LD	25	0800-0900	175	24%	21%	0%	13%	5%	2%	4%	14%	2%	10%	1%	1%	1%	0%	2%	2%	100%	1.78268843	0.04201278	0.03858438
Sheung On Street	40	LD	25	0900-1000	155	25%	21%	0%	13%	5%	1%	5%	13%	2%	10%	1%	0%	1%	0%	2%	3%	100%	1.78067525	0.04273134	0.03923048
Sheung On Street	40	LD	25	1000-1100	147	25%	22%	0%	13%	5%	1%	4%	12%	2%	10%	1%	0%	1%	0%	2%	2%	100%	1.78273306	0.04207883	0.03866083
Sheung On Street	40	LD	25	1100-1200	137	26%	23%	0%	13%	5%	1%	4%	12%	1%	9%	0%	0%	1%	0%	2%	2%	100%	1.77239528	0.04181115	0.03840626
Sheung On Street	40	LD	25	1200-1300	156	26%	23%	0%	13%	5%	2%	4%	12%	2%	8%	0%	0%	1%	0%	2%	2%	100%	1.74237273	0.04063488	0.03733987
Sheung On Street	40	LD	25	1300-1400	163	26%	23%	0%	13%	6%	2%	5%	11%	2%	8%	0%	0%	1%	0%	2%	2%	100%	1.72419326	0.04061762	0.03732868
Sheung On Street	40	LD	25	1400-1500	162	28%	24%	0%	13%	6%	2%	5%	10%	1%	8%	0%	0%	0%	0%	2%	1%	100%	1.65864669	0.03782518	0.03479393
Sheung On Street	40	LD	25	1500-1600	185	28%	24%	0%	13%	5%	2%	5%	10%	2%	8%	0%	0%	0%	0%	2%	1%	100%	1.6801043	0.03810993	0.03506516
Sheung On Street	40	LD	25	1600-1700	191	28%	25%	0%	13%	5%	2%	5%	9%	2%	7%	0%	0%	0%	0%	2%	1%	100%	1.68294437	0.03824167	0.03518853
Sheung On Street	40	LD	25	1700-1800	211	29%	25%	0%	13%	5%	2%	5%	9%	1%	7%	0%	0%	0%	0%	2%	1%	100%	1.65168005	0.03713693	0.03417821
Sheung On Street	40	LD	25	1800-1900	193	28%	25%	0%	13%	5%	2%	5%	9%	2%	7%	0%	0%	0%	0%	2%	1%	100%	1.67842669	0.03792402	0.03489705
Sheung On Street	40	LD	25	1900-2000	156	29%	25%	0%	13%	5%	2%	5%	10%	1%	7%	0%	0%	0%	0%	2%	1%	100%	1.65986112	0.03732646	0.03433349
Sheung On Street	40	LD	25	2000-2100	123	28%	24%	0%	13%	6%	2%	5%	10%	2%	7%	0%	0%	0%	0%	2%	2%	100%	1.6036032	0.03667386	0.03371417
Sheung On Street	40	LD	25	2100-2200	107	28%	24%	0%	13%	6%	2%	5%	10%	2%	7%	0%	0%	0%	0%	2%	1%	100%	1.64285616	0.03705103	0.03409965
Sheung On Street	40	LD	25	2200-2300	106	27%	24%	0%	13%	6%	2%	5%	10%	2%	8%	0%	0%	0%	0%	2%	2%	100%	1.66155457	0.03808234	0.03499444
Sheung On Street	40	LD	25	2300-0000	88	27%	24%	0%	13%	6%	2%	5%	11%	1%	8%	0%	0%	0%	0%	2%	1%	100%	1.72902867	0.03905113	0.03592575
Sheung On Street	41	LD	25	0000-0100	60	18%	20%	0%	20%	8%	2%	3%	13%	2%	10%	0%	0%	0%	0%	2%	2%	100%	1.76427771	0.0395808	0.03637464
Sheung On Street	41	LD	25	0100-0200	35	17%	20%	0%	20%	9%	0%	3%	14%	3%	11%	0%	0%	0%	0%	3%	0%	100%	1.9074522	0.0416848	0.0384035
Sheung On Street	41	LD	25	0200-0300	20	20%	25%	0%	20%	10%	0%	0%	15%	0%	10%	0%	0%	0%	0%	0%	0%	100%	1.27677822	0.02736946	0.02523064
Sheung On Street	41	LD	25	0300-0400	20	20%	25%	0%	20%	10%	0%	0%	15%	0%	10%	0%	0%	0%	0%	0%	0%	100%	1.30173515	0.02736946	0.02523064
Sheung On Street	41	LD	25	0400-0500	20	20%	25%	0%	20%	10%	0%	0%	15%	0%	10%	0%	0%	0%	0%	0%	0%	100%	1.29771915	0.02736946	0.02523064
Sheung On Street	41	LD	25	0500-0600	21	19%	24%	0%	19%	10%	0%	0%	14%	0%	14%	0%	0%	0%	0%	0%	0%	100%	1.32733378	0.02915187	0.02687109
Sheung On Street	41	LD	25	0600-0700	65	20%	23%	0%	17%	8%	0%	0%	15%	2%	12%	0%	0%	0%	0%	2%	2%	100%	1.52542599	0.03373488	0.03100384
Sheung On Street	41	LD	24	0700-0800	119	19%	23%	0%	17%	7%	0%	0%	16%	3%	12%	1%	0%	1%	0%	2%	1%	100%	1.66373945	0.03801777	0.03495507
Sheung On Street	41	LD	24	0800-0900	149	19%	23%	0%	16%	7%	0%	0%	16%	2%	12%	1%	1%	1%	0%	1%	1%	100%	1.61517951	0.03641513	0.03348959
Sheung On Street	41	LD	24	0900-1000	129	19%	22%	0%	17%	7%	0%	1%	16%	2%	12%	1%	0%	1%	0%	2%	1%	100%	1.66322402	0.03836255	0.03527659
Sheung On Street	41	LD	24	1000-1100	123	19%	22%	0%	18%	7%	1%	1%	15%	2%	11%	1%	0%	1%	0%	2%	1%	100%	1.72828763	0.03939917	0.03622664
Sheung On Street	41	LD	24	1100-1200	114	18%	21%	0%	18%	8%	1%	2%	15%	2%	11%	1%	0%	1%	0%	2%	1%	100%	1.80444688	0.04163809	0.03828307
Sheung On Street	41	LD	24	1200-1300	125	18%	21%	0%	19%	8%	1%	2%	14%	2%	10%	1%	0%	1%	0%	2%	1%	100%	1.81670861	0.04157431	0.03822887
Sheung On Street	41	LD	24	1300-1400	129	18%	19%	0%	20%	9%	1%	3%	14%	2%	10%	1%	0%	1%	0%	2%	1%	100%	1.9652856	0.04514769	0.04151777
Sheung On Street	41	LD	24	1400-1500	132	18%	19%	0%	20%	8%	2%	3%	14%	2%	9%	1%	0%	1%	0%	2%	2%	100%	1.96010206	0.04521865	0.04154254
Sheung On Street	41	LD	24	1500-1600	147	18%	18%	0%	21%	9%	1%	4%	13%	2%	9%	1%	0%	1%	0%	2%	1%	100%	1.96738233	0.04562226	0.04192351
Sheung On Street	41	LD	24	1600-1700	148	18%	18%	0%	22%	9%	1%	5%	13%	1%	9%	1%	0%	1%	0%	3%	1%	100%	2.10820743	0.04872494	0.04477795
Sheung On Street	41	LD	24	1700-1800	166	17%	17%	1%	22%	9%	2%	5%	13%	2%	8%	1%	1%	1%	0%	2%	1%	100%	2.12815621	0.04835894	0.04444788
Sheung On Street	41	LD	24	1800-1900	151	17%	17%	0%	22%	9%	2%	5%	13%	1%	9%	1%	0%	1%	0%	3%	1%	100%	2.13056765	0.0489179	0.04495608
Sheung On Street	41	LD	24	1900-2000	125	18%	18%	0%	22%	9%	2%	4%	13%	2%	9%	1%	0%	1%	0%	2%	2%	100%	2.06952692	0.04758617	0.04371593
Sheung On Street	41	LD	25	2000-2100	98	17%	18%	0%	21%	9%	1%	4%	13%	2%	9%	0%	0%	1%	0%	2%	1%	100%	1.96421025	0.04499224	0.04138882
Sheung On Street	41	LD	25	2100-2200	83	18%	10%	0%	22%	8%	1%	4%	13%	1%	10%	0%	0%	0%	0%	2%	1%	100%	1.90293019	0.04180121	0.03844186
Sheung On Street	41	LD	25	2200-2300	83	18%	19%	0%	20%	8%	1%	4%	13%	2%	10%	0%	0%	0%	0%	2%	1%	100%	1.89345512	0.04185689	0.03849511
Sheung On Street	41	LD	25	2300-0000	70	19%	20%	0%	20%	9%	1%	3%	14%	1%	10%	0%	0%	0%	0%	1%	1%	100%	1.70449178	0.03813918	0.0350615
Sheung On Street	42	LD	23	0000-0100	190	26%	32%	0%	13%	5%	2%	4%	11%	0%	1%	1%	1%	1%	0%	4%	1%	100%	2.03427618	0.04427143	0.04068997
Sheung On Street	42	LD	24	0100-0200	113	26%	31%	0%	12%	5%	2%	4%	12%	0%	1%	1%	1%	1%	0%	4%	1%	100%	1.9930657	0.04312053	0.039669
Sheung On Street	42	LD	25	0200-0300	73	26%	30%	0%	12%	5%	1%	4%	11%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.03742382	0.04536089	0.04170772
Sheung On Street	42	LD	25	0300-0400	72	26%	29%	0%	13%	6%	1%	4%	11%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.0856943	0.0459909	0.042287
Sheung On Street	42	LD	25	0400-0500	72	25%	29%	0%	13%	6%	1%	6%	11%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.16627266	0.04801569	0.04414864
Sheung On Street	42	LD	25	0500-0600	69	26%	29%	0%	12%	4%	1%	6%	12%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.19052894	0.04879388	0.04486305
Sheung On Street	42	LD	23	0600-0700	198	26%	28%	0%	12%	5%	2%	6%	11%	0%	1%	1%	1%	2%	0%	4%	1%	100%	2.26952099	0.05070696	0.04661504
Sheung On Street	42	LD	21	0700-0800	361	26%	27%	0%	12%	5%	2%	6%	11%	0%	1%	1%	1%	1%	0%	4%	1%	100%	2.405085	0.05476614	0.05035077
Sheung On Street	42	LD	20	0800-0900	444	26%	27%	0%	12%	5%	2%	6%	11%	0%	1%	1%	1%	1%	0%	4%	1%	100%	2.47146374	0.05644874	0.05187371
Sheung On Street	42	LD	20	0900-1000	400	26%	28%	0%	12%	5%	2%	6%	11%	0%	1%	1%	1%	1%	0%	4%	1%	100%	2.38683128	0.05473184	0.05028757
Sheung On Street	42	LD	21	1000-1100	382	26%	29%	0%	12%	5%	2%	5%	11%	0%	1%	1%	1%	1%	0%	4%	1%	100%	2.27622992	0.05077911	0.04668608
Sheung On Street	42	LD	21	1100-1200	359	26%	30%	0%	13%	5%	2%	5%	11%	0%	1%	1%	1%	1%	0%	4%	1%	100%	2.20546534	0.04939439	0.04540793
Sheung On Street	42	LD	20	1200-1300	411	26%	30%	0%	13%	5%	2%	4%	11%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.23639086	0.04941803	0.0454156
Sheung On Street	42	LD	20	1300-1400	425	26%	31%	0%	13%	5%	1%	4%	11%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.15515292	0.04779125	0.04392112
Sheung On Street	42	LD	20	1400-1500	441	26%	32%	0%	13%	5%	1%	4%	11%	0%	1%	1%	0%	1%	0%	3%	1%	100%	2.08317285	0.04547881	0.04179614
Sheung On Street	42	LD	19	1500-1600	496	26%	33%	0%	13%	5%	1%	3%	11%	0%	1%	1%	0%	1%	0%	3%	1%	100%	2.08892088	0.04541659	0.0417593
Sheung On Street	42	LD	19	1600-1700	513	26%	33%	0%	13%	5%	1%	3%	11%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.06681541	0.04475912	0.04115617
Sheung On Street	42	LD	18	1700-1800	572	26%	34%	0%	13%	6%	1%	3%	11%	0%	1%	1%	0%	1%	0%	3%	1%	100%	2.07605713	0.04418216	0.04063285
Sheung On Street	42	LD	19	1800-1900	519	25%	34%	0%	13%	5%	1%	3%	11%	0%	1%	1%	0%	1%	0%	3%	1%	100%	2.0541242	0.04406365	0.04051697
Sheung On Street	42	LD	20	1900-2000	426	25%	33%	0%	13%	5%	1%	3%	11%	0%	1%	0%	0%	1%	0%	4%	1%	100%	2.07812164	0.044357	0.04077584
Sheung On Street	42	LD	21	2000-2100	335	25%	33%	0%	13%	5%	1%	3%	11%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.04440007	0.04379924	0.04027145
Sheung On Street	42	LD	22	2100-2200	286	26%	32%	0%	13%	5%	1%	3%	11%	0%	1%	1%	0%	1%	0%	3%	1%	100%	2.01335513	0.04333151	0.03983799
Sheung On Street	42	LD	22	2200-2300	281	26%	32%	0%	13%	5%	1%	4%	11%	0%	1%	1%	0%	1%	0%	4%	1%	100%	2.02884292	0.04378222	0.04025193
Sheung On Street	42	LD	23	2300-0000	234	26%	32%	0%	13%	5%	1%	4%	11%	0%	1%	1%	0%	1%	0%	3%	1%	100%	1.99229347	0.0436584	0.04013723
Sheung Ping Street	43	LD	25	0000-0100	29	31%	10%	0%	14%	3%	3%	7%	0%	3%	10%	3%	3%	3%	0%	7%	0%	100%	2.99187192	0.07440552	0.06852111
Sheung Ping Street	43	LD	25	0100-0200	17	35%	12%	0%	12%	6%	0%	6%	0%	0%	12%	6%	0%	6%	0%	6%	0%	100%	2.78801876	0.07684218	0.07076662
Sheung Ping Street	43	LD	25	0200-0300	11	36%	9%	0%	9%	9%	0%	9%	0%	0%	9%	0%	0%	9%	0%	9%	0%	100%	3.61242769	0.0980231	0.09025071
Sheung Ping Street	43	LD	25	0300-0400	12	33%	8%	0%	8%	0%	0%	8%	0%	0%	17%	8%	0%	8%	0%	8%	0%	100%	3.5699146	0.09880118	0.09096981
Sheung Ping Street	43	LD	25	0400-0500	12	33%	8%	0%	8%	0%	0%	8%	0%	0%	17%	8%	0%	8%	0%	8%	0%	100%	3.56244793	0.09880118	0.09096981
Sheung Ping Street	43	LD	25	0500-0600	12	33%	8%	0%	8%	0%	0%	8%	0%	0%	17%	8%	0%	8%	0%	8%	0%	100%	3.56244793	0.09880118	0.09096981
Sheung Ping Street	43	LD	25	0600-0700	41	32%	10%	0%	7%	2%	2%	7%	0%	2%	15%	5%	2%	5%	0%	10%	0%	100%	3.55593507	0.09014904	0.08300406
Sheung Ping Street	43	LD	25	0700-0800	81	30%	9%	0%	6%	2%	2%	7%	0%	2%	15%	5%	4%	6%	0%	10%	1%	100%	3.76022983	0.097202	0.08941886
Sheung Ping Street	43	LD	24	0800-0900	106	29%	8%	0%	6%	3%	3%	8%	0%	3%	15%	5%	4%	6%	1%	9%	1%	100%	3.83981775	0.10008864	0.09208323
Sheung Ping Street	43	LD	25	0900-1000	87	30%	9%	0%	7%	2%	2%	7%	0%	2%	15%	5%	3%	6%	1%	9%	1%	100%	3.657533	0.09595201	0.08827497
Sheung Ping Street	43	LD	25	1000-1100	73	32%	10%	0%	8%	3%	3%	7%	0%	3%	14%	4%	3%	5%	0%	8%	1%	100%	3.35608001	0.08713723	0.08015723
Sheung Ping Street	43	LD	25	1100-1200	64	31%	9%	0%	9%	3%	3%	6%	0%	3%	13%	5%	3%	5%	0%	8%	2%	100%	3.21351329	0.08317955	0.0765049
Sheung Ping Street	43	LD	25	1200-1300	65	32%	11%	0%	11%	5%	3%	6%	0%	2%	12%	3%	3%	5%	0%	8%	0%	100%	3.1754996	0.08006219	0.07372224
Sheung Ping Street	43	LD	25	1300-1400	59	34%	12%	0%	14%	5%	2%	7%	0%	2%	10%	3%	2%	3%	0%	7%	0%	100%	2.84042178	0.07148777	0.06583891
Sheung Ping Street	43	LD	25	1400-1500	56	34%	13%	0%	14%	7%	2%	5%	0%	2%	9%	4%	2%	4%	0%	5%	0%	100%	2.580835	0.06616934	0.06094525
Sheung Ping Street	43	LD	25	1500-1600	57	33%	14%	0%	18%	7%	2%	5%	0%	2%	7%	2%	2%	4%	0%	5%	0%	100%	2.51481649	0.06283414	0.05787574
Sheung Ping Street	43	LD	25	1600-1700	52	35%	15%	0%	21%	8%	2%	6%	0%	0%	4%	2%	2%	2%	0%	4%	0%	100%	2.18545653	0.05251365	0.04837954
Sheung Ping Street	43	LD	25	1700-1800	49	37%	18%	0%	24%	10%	2%	4%	0%	0%	2%	0%	0%	0%	0%	2%	0%	100%	1.5781512	0.0347188	0.03201322
Sheung Ping Street	43	LD	25	1800-1900	50	36%	16%	0%	22%	8%	2%	6%	0%	0%	4%	2%	0%	2%	0%	2%	0%	100%	1.85087888	0.04618559	0.04256432
Sheung Ping Street	43	LD	25	1900-2000	45	33%	16%	0%	20%	9%	2%	4%	0%	0%	4%	2%	2%	2%	0%	4%	0%	100%	2.31300982	0.05500087	0.05066373
Sheung Ping Street	43	LD	25	2000-2100	38	34%	13%	0%	18%	8%	3%	5%	0%	0%	5%	3%	3%	3%	0%	5%	0%	100%	2.53329587	0.06130907	0.05646846
Sheung Ping Street	43	LD	25	2100-2200	35	31%	14%	0%	17%	6%	3%	6%	0%	0%	9%	3%	3%	3%	0%	6%	0%	100%	2.67364348	0.06496691	0.05988105
Sheung Ping Street	43	LD	25	2200-2300	36	33%	14%	0%	14%	6%	3%	6%	0%	3%	8%	3%	3%	3%	0%	6%	0%	100%	2.58173913	0.06371218	0.05868412
Sheung Ping Street	43	LD	25	2300-0000	33	33%	12%	0%	12%	6%	3%	6%	0%	3%	9%	3%	3%	3%	0%	6%	0%	100%	2.73126686	0.06829913	0.0629041
Sheung Ping Street	44	LD	25	0000-0100	74	30%	19%	0%	12%	5%	1%	5%	18%	0%	3%	1%	0%	1%	0%	3%	1%	100%	1.95916297	0.04672313	0.04297281
Sheung Ping Street	44	LD	25	0100-0200	41	32%	20%	0%	12%	5%	2%	5%	20%	0%	2%	0%	0%	0%	0%	2%	0%	100%	1.76661037	0.0389054	0.03585898
Sheung Ping Street	44	LD	25	0200-0300	29	28%	17%	0%	14%	7%	3%	7%	17%	0%	3%	0%	0%	0%	0%	3%	0%	100%	2.12939091	0.0471535	0.04344203
Sheung Ping Street	44	LD	25	0300-0400	28	25%	18%	0%	14%	7%	4%	7%	18%	0%	4%	0%	0%	0%	0%	4%	0%	100%	2.2327442	0.04829557	0.04448919
Sheung Ping Street	44	LD	25	0400-0500	27	26%	15%	0%	15%	7%	4%	7%	19%	0%	4%	0%	0%	0%	0%	4%	0%	100%	2.28230557	0.0500843	0.04613694
Sheung Ping Street	44	LD	25	0500-0600	25	24%	16%	0%	16%	8%	4%	8%	20%	0%	4%	0%	0%	0%	0%	0%	0%	100%	1.77300033	0.03999922	0.03685983
Sheung Ping Street	44	LD	25	0600-0700	71	23%	15%	0%	17%	7%	3%	7%	23%	0%	3%	0%	0%	0%	0%	1%	1%	100%	1.94092692	0.04316498	0.03968006
Sheung Ping Street	44	LD	24	0700-0800	130	21%	15%	0%	18%	8%	3%	8%	23%	1%	3%	0%	0%	0%	0%	1%	1%	100%	1.96284009	0.04384989	0.04033516
Sheung Ping Street	44	LD	24	0800-0900	159	19%	14%	0%	19%	8%	3%	8%	24%	1%	3%	0%	0%	0%	0%	1%	1%	100%	2.01729412	0.0447894	0.04120351
Sheung Ping Street	44	LD	24	0900-1000	147	22%	15%	0%	17%	7%	3%	7%	22%	1%	3%	1%	0%	1%	0%	1%	1%	100%	2.05604254	0.04747611	0.04367784
Sheung Ping Street	44	LD	24	1000-1100	142	24%	16%	0%	15%	6%	3%	7%	20%	1%	3%	1%	0%	1%	0%	2%	1%	100%	2.11876257	0.04822341	0.04436894
Sheung Ping Street	44	LD	24	1100-1200	135	27%	17%	0%	14%	6%	2%	6%	19%	1%	3%	1%	1%	1%	0%	2%	1%	100%	2.01661248	0.04649585	0.04278265
Sheung Ping Street	44	LD	24	1200-1300	154	29%	18%	0%	13%	5%	2%	6%	18%	1%	3%	1%	1%	1%	0%	3%	1%	100%	2.00582193	0.04570826	0.04206846
Sheung Ping Street	44	LD	24	1300-1400	161	31%	19%	0%	12%	5%	2%	5%	17%	1%	2%	1%	1%	1%	0%	3%	1%	100%	1.97389415	0.0451585	0.0415677
Sheung Ping Street	44	LD	24	1400-1500	170	33%	20%	0%	11%	4%	2%	5%	16%	1%	2%	1%	1%	1%	0%	4%	1%	100%	2.01611693	0.04725614	0.04347039
Sheung Ping Street	44	LD	23	1500-1600	193	35%	21%	0%	9%	4%	2%	4%	15%	1%	2%	1%	1%	1%	0%	4%	1%	100%	2.07073032	0.04874775	0.04481421
Sheung Ping Street	44	LD	23	1600-1700	199	36%	22%	0%	9%	4%	2%	4%	15%	1%	2%	1%	1%	1%	1%	4%	1%	100%	2.0175759	0.04821589	0.04432703
Sheung Ping Street	44	LD	23	1700-1800	225	38%	22%	0%	8%	3%	1%	3%	13%	0%	2%	1%	1%	1%	0%	4%	1%	100%	2.0755939	0.04930669	0.0453384
Sheung Ping Street	44	LD	23	1800-1900	203	37%	22%	0%	8%	3%	1%	3%	14%	0%	2%	1%	0%	1%	0%	4%	1%	100%	2.06986834	0.04901364	0.04506288
Sheung Ping Street	44	LD	24	1900-2000	166	36%	21%	0%	9%	4%	1%	4%	14%	1%	2%	1%	1%	1%	0%	4%	1%	100%	2.02581625	0.04728202	0.04349781
Sheung Ping Street	44	LD	24	2000-2100	128	35%	21%	0%	9%	4%	2%	4%	15%	1%	2%	1%	1%	1%	0%	4%	1%	100%	1.97045021	0.04511452	0.04152664
Sheung Ping Street	44	LD	24	2100-2200	111	33%	21%	0%	10%	5%	2%	5%	15%	0%	3%	1%	1%	1%	0%	4%	1%	100%	2.0104358	0.04651324	0.04280247
Sheung Ping Street	44	LD	24	2200-2300	108	32%	20%	0%	10%	5%	2%	5%	16%	0%	3%	1%	1%	1%	0%	4%	1%	100%	2.05655414	0.04751832	0.04372399
Sheung Ping Street	44	LD	25	2300-0000	90	32%	20%	0%	11%	4%	2%	4%	17%	0%	2%	1%	0%	1%	0%	3%	1%	100%	1.95219348	0.04545081	0.04181767
Ka Yip Street	45	LD	24	0000-0100	287	33%	24%	0%	11%	5%	2%	6%	7%	1%	3%	0%	0%	1%	0%	4%	2%	100%	2.01802567	0.04696706	0.04317562

Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																	Composite Emission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
Ka Yip Street	45	LD	25	0100-0200	170	34%	25%	0%	11%	5%	2%	6%	7%	1%	3%	1%	1%	1%	0%	4%	2%	100%	1.9150293	0.04407785	0.04051876
Ka Yip Street	45	LD	25	0200-0300	113	34%	25%	0%	12%	4%	2%	5%	7%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.88185334	0.04402818	0.04047452
Ka Yip Street	45	LD	25	0300-0400	112	33%	26%	0%	11%	4%	2%	5%	7%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.91568786	0.04406622	0.04050739
Ka Yip Street	45	LD	25	0400-0500	113	33%	26%	0%	11%	4%	2%	6%	7%	1%	4%	1%	0%	1%	0%	4%	2%	100%	1.95011075	0.04510068	0.04146007
Ka Yip Street	45	LD	25	0500-0600	114	32%	25%	0%	11%	4%	2%	6%	7%	1%	4%	1%	0%	1%	0%	4%	2%	100%	2.08339022	0.04766226	0.04381638
Ka Yip Street	45	LD	24	0600-0700	335	33%	26%	0%	10%	4%	2%	6%	7%	1%	4%	1%	0%	1%	0%	4%	2%	100%	2.09206523	0.04786422	0.04399693
Ka Yip Street	45	LD	22	0700-0800	614	32%	26%	0%	10%	4%	2%	6%	7%	1%	4%	0%	0%	1%	0%	4%	2%	100%	2.18386602	0.05049741	0.04637409
Ka Yip Street	45	LD	21	0800-0900	777	32%	27%	0%	9%	4%	2%	6%	7%	1%	4%	1%	0%	1%	0%	4%	2%	100%	2.25781288	0.05213725	0.04790076
Ka Yip Street	45	LD	21	0900-1000	672	32%	26%	0%	10%	4%	2%	6%	7%	1%	4%	1%	0%	1%	0%	4%	2%	100%	2.20299495	0.05145236	0.04727159
Ka Yip Street	45	LD	22	1000-1100	619	33%	26%	0%	10%	4%	2%	6%	7%	1%	4%	0%	0%	1%	0%	4%	2%	100%	2.16582756	0.04998118	0.0459009
Ka Yip Street	45	LD	22	1100-1200	565	33%	25%	0%	11%	4%	2%	6%	7%	1%	3%	1%	0%	1%	0%	4%	2%	100%	2.09520276	0.04850955	0.0445483
Ka Yip Street	45	LD	22	1200-1300	627	33%	25%	0%	11%	5%	2%	6%	7%	1%	3%	0%	0%	1%	0%	4%	2%	100%	2.113344	0.04903064	0.04502919
Ka Yip Street	45	LD	22	1300-1400	631	34%	24%	0%	12%	5%	2%	6%	7%	1%	3%	0%	0%	1%	0%	4%	2%	100%	2.04725497	0.04790393	0.04399384
Ka Yip Street	45	LD	22	1400-1500	634	34%	24%	0%	12%	5%	2%	5%	7%	1%	3%	0%	0%	1%	0%	4%	2%	100%	2.03678735	0.04757079	0.04368732
Ka Yip Street	45	LD	21	1500-1600	696	34%	24%	0%	13%	5%	2%	5%	7%	1%	3%	0%	0%	1%	0%	4%	2%	100%	2.07146995	0.04885657	0.04489535
Ka Yip Street	45	LD	21	1600-1700	700	35%	23%	0%	13%	5%	2%	5%	7%	1%	3%	0%	0%	1%	0%	3%	2%	100%	2.02802373	0.04809267	0.04419299
Ka Yip Street	45	LD	21	1700-1800	761	35%	23%	0%	13%	6%	2%	5%	7%	1%	2%	0%	0%	1%	0%	3%	2%	100%	2.0375556	0.04771216	0.04384277
Ka Yip Street	45	LD	21	1800-1900	700	35%	23%	0%	13%	5%	2%	5%	7%	0%	3%	0%	0%	1%	0%	3%	2%	100%	2.03558759	0.04802634	0.04413217
Ka Yip Street	45	LD	22	1900-2000	581	35%	23%	0%	13%	5%	2%	5%	7%	1%	3%	1%	0%	1%	0%	3%	2%	100%	2.00091906	0.04635233	0.04257937
Ka Yip Street	45	LD	23	2000-2100	463	34%	24%	0%	13%	5%	2%	5%	7%	0%	3%	0%	0%	1%	0%	3%	2%	100%	1.97486421	0.04576812	0.042051
Ka Yip Street	45	LD	23	2100-2200	405	34%	24%	0%	12%	5%	2%	5%	7%	0%	3%	0%	0%	0%	0%	3%	2%	100%	1.96972977	0.04583641	0.04210187
Ka Yip Street	45	LD	23	2200-2300	404	34%	24%	0%	12%	5%	2%	5%	7%	0%	3%	0%	0%	0%	0%	4%	2%	100%	2.0092183	0.04654926	0.04275738
Ka Yip Street	45	LD	24	2300-0000	346	34%	24%	0%	12%	5%	2%	5%	7%	1%	3%	1%	0%	1%	0%	4%	2%	100%	1.98911073	0.04605178	0.04233361
Ka Yip Street	46	LD	24	0000-0100	139	37%	19%	0%	10%	4%	3%	8%	7%	1%	5%	1%	0%	1%	0%	3%	2%	100%	1.96564491	0.04864016	0.04469771
Ka Yip Street	46	LD	25	0100-0200	81	37%	20%	0%	10%	4%	2%	9%	7%	1%	5%	0%	0%	0%	0%	2%	2%	100%	1.79631829	0.04356273	0.04001691
Ka Yip Street	46	LD	25	0200-0300	55	36%	20%	0%	9%	4%	4%	7%	7%	2%	5%	0%	0%	0%	0%	4%	2%	100%	1.94549171	0.0457703	0.04208273
Ka Yip Street	46	LD	25	0300-0400	57	35%	21%	0%	9%	4%	4%	7%	9%	2%	5%	0%	0%	0%	0%	4%	2%	100%	1.85274902	0.04490819	0.04129106
Ka Yip Street	46	LD	25	0400-0500	57	35%	21%	0%	9%	4%	4%	7%	9%	2%	5%	0%	0%	0%	0%	4%	2%	100%	1.94813429	0.04490819	0.04129106
Ka Yip Street	46	LD	25	0500-0600	58	34%	22%	0%	9%	3%	3%	7%	9%	2%	5%	0%	0%	0%	0%	3%	2%	100%	1.92733244	0.04413391	0.04057914
Ka Yip Street	46	LD	24	0600-0700	173	34%	23%	0%	8%	3%	3%	8%	9%	1%	6%	1%	0%	1%	0%	3%	2%	100%	2.037383	0.04823935	0.04434759
Ka Yip Street	46	LD	21	0700-0800	318	34%	24%	0%	7%	3%	3%	8%	9%	1%	6%	0%	0%	0%	0%	4%	1%	100%	2.24638523	0.0531072	0.04882895
Ka Yip Street	46	LD	20	0800-0900	408	33%	25%	0%	7%	3%	3%	8%	9%	1%	6%	0%	0%	0%	0%	4%	1%	100%	2.26994464	0.05358842	0.04923838
Ka Yip Street	46	LD	21	0900-1000	345	34%	23%	0%	8%	3%	3%	8%	9%	1%	6%	0%	0%	0%	0%	3%	1%	100%	2.17557711	0.05204463	0.04784069
Ka Yip Street	46	LD	22	1000-1100	314	35%	22%	0%	8%	4%	3%	8%	8%	1%	5%	0%	0%	0%	0%	4%	2%	100%	2.16008258	0.05139219	0.04720835
Ka Yip Street	46	LD	22	1100-1200	283	35%	21%	0%	9%	4%	3%	8%	8%	1%	5%	0%	0%	0%	0%	3%	2%	100%	2.10630588	0.05115395	0.04698066
Ka Yip Street	46	LD	22	1200-1300	305	36%	20%	0%	10%	4%	3%	8%	8%	1%	5%	0%	0%	0%	0%	3%	2%	100%	2.0773889	0.05056633	0.04644912
Ka Yip Street	46	LD	22	1300-1400	303	37%	18%	0%	10%	4%	3%	8%	7%	1%	5%	0%	0%	1%	0%	3%	2%	100%	2.0392457	0.05115368	0.04697164
Ka Yip Street	46	LD	22	1400-1500	296	39%	17%	0%	11%	4%	3%	8%	7%	1%	4%	0%	0%	1%	0%	2%	2%	100%	1.96911305	0.04960693	0.0455473
Ka Yip Street	46	LD	21	1500-1600	322	39%	16%	0%	11%	5%	3%	8%	7%	1%	4%	1%	0%	1%	0%	2%	2%	100%	1.98161195	0.05079839	0.04665515
Ka Yip Street	46	LD	22	1600-1700	318	40%	14%	0%	12%	5%	3%	8%	6%	1%	4%	1%	0%	1%	0%	2%	3%	100%	1.89220459	0.04917172	0.04512252
Ka Yip Street	46	LD	21	1700-1800	340	41%	12%	0%	13%	5%	3%	9%	6%	1%	4%	1%	0%	1%	0%	2%	3%	100%	1.95331113	0.05083058	0.04665861
Ka Yip Street	46	LD	22	1800-1900	315	41%	13%	0%	13%	5%	3%	8%	6%	1%	4%	1%	0%	1%	0%	2%	3%	100%	1.90771165	0.0493473	0.04528841
Ka Yip Street	46	LD	22	1900-2000	265	40%	14%	0%	12%	5%	3%	8%	6%	1%	4%	0%	0%	1%	0%	2%	2%	100%	1.98944669	0.05053069	0.04638617
Ka Yip Street	46	LD	23	2000-2100	213	39%	15%	0%	12%	5%	3%	8%	7%	1%	4%	0%	0%	0%	0%	2%	2%	100%	1.93738613	0.04862078	0.04463742
Ka Yip Street	46	LD	23	2100-2200	188	39%	16%	0%	11%	5%	3%	8%	7%	1%	4%	1%	1%	1%	0%	2%	2%	100%	1.89323955	0.04757342	0.0436851
Ka Yip Street	46	LD	23	2200-2300	191	38%	17%	0%	11%	4%	3%	8%	7%	1%	5%	1%	1%	1%	0%	3%	2%	100%	1.96136298	0.04867667	0.04470198
Ka Yip Street	46	LD	24	2300-0000	164	38%	18%	0%	10%	4%	3%	8%	7%	1%	5%	1%	1%	1%	0%	2%	2%	100%	1.90454856	0.04712542	0.04332399
Ka Yip Street	47	LD	25	0000-0100	65	22%	34%	0%	11%	5%	2%	5%	18%	0%	0%	2%	0%	2%	0%	0%	2%	100%	1.50199461	0.03406098	0.03129958
Ka Yip Street	47	LD	25	0100-0200	36	22%	33%	0%	11%	6%	3%	6%	19%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.44254478	0.02917588	0.02689275
Ka Yip Street	47	LD	25	0200-0300	23	22%	30%	0%	13%	4%	4%	4%	22%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.45778938	0.02907361	0.02679925
Ka Yip Street	47	LD	25	0300-0400	24	21%	29%	0%	13%	4%	4%	8%	21%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.68797511	0.03456888	0.03185594
Ka Yip Street	47	LD	25	0400-0500	23	22%	26%	0%	13%	4%	4%	9%	22%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.72399372	0.03607187	0.03324099
Ka Yip Street	47	LD	25	0500-0600	21	19%	24%	0%	14%	5%	5%	10%	24%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.84556931	0.03878464	0.03573434
Ka Yip Street	47	LD	25	0600-0700	61	20%	23%	0%	13%	5%	3%	8%	23%	0%	0%	2%	2%	2%	0%	0%	0%	100%	1.94150728	0.04413313	0.04065232
Ka Yip Street	47	LD	24	0700-0800	105	20%	20%	0%	12%	6%	4%	10%	24%	0%	0%	2%	1%	2%	0%	0%	0%	100%	2.09962847	0.04946724	0.04554747
Ka Yip Street	47	LD	24	0800-0900	127	20%	17%	0%	13%	6%	4%	10%	24%	0%	0%	2%	2%	2%	0%	0%	0%	100%	2.22462067	0.05295881	0.04875887
Ka Yip Street	47	LD	24	0900-1000	118	20%	22%	0%	13%	5%	3%	9%	23%	0%	0%	2%	1%	2%	0%	0%	0%	100%	2.0088646	0.04698415	0.04326332
Ka Yip Street	47	LD	24	1000-1100	118	21%	25%	0%	12%	5%	3%	8%	21%	0%	0%	2%	1%	2%	0%	0%	1%	100%	1.86967885	0.04339998	0.03992026
Ka Yip Street	47	LD	24	1100-1200	116	22%	28%	0%	12%	5%	3%	7%	20%	0%	0%	1%	1%	1%	0%	0%	1%	100%	1.70159473	0.03777998	0.03474923
Ka Yip Street	47	LD	24	1200-1300	137	22%	31%	0%	12%	4%	2%	6%	19%	0%	0%	1%	1%	1%	0%	0%	1%	100%	1.6526379	0.03661327	0.03368279
Ka Yip Street	47	LD	24	1300-1400	146	22%	34%	0%	11%	5%	2%	5%	18%	0%	0%	1%	1%	1%	0%	0%	1%	100%	1.48574433	0.0319379	0.02934613
Ka Yip Street	47	LD	24	1400-1500	155	23%	36%	0%	11%	5%	1%	5%	17%	0%	0%	1%	1%	1%	0%	0%	1%	100%	1.41670065	0.03001143	0.02757968
Ka Yip Street	47	LD	24	1500-1600	180	23%	38%	0%	11%	4%	1%	4%	16%	0%	0%	1%	1%	1%	0%	0%	1%	100%	1.34045509	0.02774405	0.0255038
Ka Yip Street	47	LD	24	1600-1700	190	23%	40%	0%	11%	4%	1%	3%	15%	0%	0%	1%	1%	1%	0%	0%	2%	100%	1.27556805	0.02617429	0.02403278
Ka Yip Street	47	LD	23	1700-1800	216	23%	42%	0%	10%	4%	1%	3%	14%	0%	0%	0%	0%	0%	0%	0%	1%	100%	1.26331655	0.02516911	0.02308973
Ka Yip Street	47	LD	24	1800-1900	194	23%	41%	0%	10%	4%	1%	3%	15%	0%	0%	1%	1%	1%	0%	0%	2%	100%	1.26902379	0.02571449	0.0236117
Ka Yip Street	47	LD	24	1900-2000	157	23%	39%	0%	10%	4%	1%	3%	15%	0%	0%	1%	1%	1%	0%	0%	1%	100%	1.32204686	0.02690418	0.02472192
Ka Yip Street	47	LD	24	2000-2100	121	22%	39%	0%	11%	4%	2%	3%	16%	0%	0%	1%	0%	1%	0%	0%	2%	100%	1.34416575	0.02813355	0.02583002
Ka Yip Street	47	LD	25	2100-2200	102	23%	37%	0%	11%	5%	1%	4%	17%	0%	0%	1%	0%	1%	0%	0%	1%	100%	1.36287477	0.02895481	0.02663307
Ka Yip Street	47	LD	25	2200-2300	99	22%	36%	0%	11%	4%	2%	4%	17%	0%	0%	1%	0%	1%	0%	0%	1%	100%	1.40401124	0.02982601	0.02743325
Ka Yip Street	47	LD	25	2300-0000	82	22%	35%	0%	11%	5%	1%	5%	17%	0%	0%	1%	0%	1%	0%	0%	1%	100%	1.45623024	0.03213865	0.02954905
Ka Yip Street	48	LD	25	0000-0100	57	12%	0%	0%	9%	4%	18%	47%	0%	2%	9%	0%	0%	0%	0%	0%	0%	100%	4.09548563	0.10286036	0.09470493
Ka Yip Street	48	LD	25	0100-0200	34	12%	0%	0%	9%	3%	18%	47%	0%	3%	9%	0%	0%	0%	0%	0%	0%	100%	4.0689695	0.10238618	0.09427038
Ka Yip Street	48	LD	25	0200-0300	22	14%	0%	0%	9%	5%	18%	45%	0%	0%	9%	0%	0%	0%	0%	0%	0%	100%	4.01220043	0.10095228	0.09294672
Ka Yip Street	48	LD	25	0300-0400	21	10%	0%	0%	10%	5%	19%	48%	0%	0%	10%	0%	0%	0%	0%	0%	0%	100%	4.24928454	0.10503689	0.09670031
Ka Yip Street	48	LD	25	0400-0500	21	10%	0%	0%	10%	5%	19%	48%	0%	0%	10%	0%	0%	0%	0%	0%	0%	100%	4.23957787	0.10503689	0.09670031
Ka Yip Street	48	LD	25	0500-0600	21	10%	0%	0%	10%	5%	19%	48%	0%	0%	10%	0%	0%	0%	0%	0%	0%	100%	4.23957787	0.10503689	0.09670031
Ka Yip Street	48	LD	25	0600-0700	59	12%	2%	0%	8%	3%	17%	47%	0%	2%	8%	0%	0%	0%	0%	0%	0%	100%	4.10756381	0.1021017	0.09400578
Ka Yip Street	48	LD	24	0700-0800	107	11%	2%	0%	7%	3%	18%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.19571793	0.10506682	0.09665238
Ka Yip Street	48	LD	23	0800-0900	132	11%	2%	0%	8%	3%	17%	48%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.35302979	0.10918227	0.10048055
Ka Yip Street	48	LD	24	0900-1000	120	12%	2%	0%	8%	3%	18%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.16452974	0.10491044	0.09651533
Ka Yip Street	48	LD	24	1000-1100	113	12%	1%	0%	8%	4%	18%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.22130701	0.10556033	0.09711042
Ka Yip Street	48	LD	24	1100-1200	109	11%	1%	0%	8%	4%	17%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.18811753	0.10550038	0.09705244
Ka Yip Street	48	LD	23	1200-1300	122	11%	1%	0%	8%	3%	17%	48%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.33518365	0.1090761	0.10037927
Ka Yip Street	48	LD	23	1300-1400	127	11%	1%	0%	9%	3%	17%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.29081185	0.10887839	0.10019892
Ka Yip Street	48	LD	23	1400-1500	132	11%	1%	0%	8%	4%	17%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.27874754	0.108611	0.09995412
Ka Yip Street	48	LD	23	1500-1600	149	11%	0%	0%	9%	3%	17%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.26914083	0.10875462	0.10009169
Ka Yip Street	48	LD	23	1600-1700	154	11%	0%	0%	8%	4%	18%	47%	0%	2%	10%	0%	0%	0%	0%	0%	1%	100%	4.25872169	0.10887558	0.10020404
Ka Yip Street	48	LD	22	1700-1800	172	12%	0%	0%	9%	3%	17%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.41352733	0.11210389	0.10307215
Ka Yip Street	48	LD	23	1800-1900	157	11%	0%	0%	9%	4%	17%	46%	0%	2%	10%	0%	0%	0%	0%	0%	1%	100%	4.25125917	0.10814297	0.09953055
Ka Yip Street	48	LD	23	1900-2000	127	11%	0%	0%	9%	4%	17%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.33218762	0.10941508	0.10069278
Ka Yip Street	48	LD	24	2000-2100	100	11%	0%	0%	9%	4%	17%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.19683751	0.10590446	0.09742035
Ka Yip Street	48	LD	24	2100-2200	86	12%	0%	0%	8%	3%	17%	47%	0%	2%	9%	0%	0%	0%	0%	0%	1%	100%	4.15747889	0.10544566	0.09698988
Ka Yip Street	48	LD	24	2200-2300	84	12%	0%	0%	8%	4%	18%	46%	0%	1%	10%	0%	0%	0%	0%	0%	1%	100%	4.16841746	0.10563136	0.0971576
Ka Yip Street	48	LD	25	2300-0000	69	12%	0%	0%	9%	3%	17%	48%	0%	1%	10%	0%	0%	0%	0%	0%	0%	100%	4.12483312	0.10375084	0.09552368
Ka Yip Street	49	LD	25	0000-0100	60	10%	3%	0%	9%	2%	20%	55%	0%	2%	5%	0%	0%	0%	0%	0%	0%	100%	4.48340109	0.11175216	0.1028834
Ka Yip Street	49	LD	25	0100-0200	34	12%	3%	0%	3%	0%	21%	56%	0%	0%	6%	0%	0%	0%	0%	0%	0%	100%	4.50647914	0.11280512	0.10385288
Ka Yip Street	49	LD	25	0200-0300	23	9%	4%	0%	4%	0%	22%	57%	0%	0%	4%	0%	0%	0%	0%	0%	0%	100%	4.59214359	0.11364447	0.10462064
Ka Yip Street	49	LD	25	0300-0400	22	9%	5%	0%	5%	0%	23%	55%	0%	0%	5%	0%	0%	0%	0%	0%	0%	100%	4.57304546	0.11149377	0.10264158
Ka Yip Street	49	LD	25	0400-0500	22	9%	5%	0%	5%	0%	23%	55%	0%	0%	5%	0%	0%	0%	0%	0%	0%	100%	4.56264546	0.11149377	0.10264158
Ka Yip Street	49	LD	25	0500-0600	21	10%	5%	0%	5%	0%	19%	57%	0%	0%	5%	0%	0%	0%	0%	0%	0%	100%	4.59101423	0.11297823	0.10400927
Ka Yip Street	49	LD	25	0600-0700	64	9%	6%	0%	3%	2%	20%	55%	0%	0%	5%	0%	0%	0%	0%	0%	0%	100%	4.50395861	0.1105962	0.10181488
Ka Yip Street	49	LD	23	0700-0800	121	8%	7%	0%	4%	2%	19%	53%	0%	1%	4%	1%	0%	1%	0%	0%	0%	100%	4.68820039	0.11678353	0.10751525
Ka Yip Street	49	LD	23	0800-0900	150	8%	8%	0%	4%	2%	19%	53%	0%	1%	3%	1%	1%	1%	0%	0%	0%	100%	4.70146696	0.1160234	0.10681453
Ka Yip Street	49	LD	23	0900-1000	131	8%	7%	0%	4%	2%	20%	53%	0%	1%	4%	1%	0%	1%	0%	0%	0%	100%	4.70586772	0.11772262	0.10837944
Ka Yip Street	49	LD	23	1000-1100	122	9%	6%	0%	3%	2%	20%	54%	0%	1%	4%	0%	0%	1%	0%	0%	0%	100%	4.78383786	0.11897796	0.1095357
Ka Yip Street	49	LD	24	1100-1200	115	10%	5%	0%	3%	2%	20%	54%	0%	1%	4%	0%	0%	0%	0%	0%	1%	100%	4.54738322	0.11309943	0.10405135
Ka Yip Street	49	LD	23	1200-1300	129	10%	4%	0%	3%	2%	20%	55%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.74510048	0.11825477	0.10882905
Ka Yip Street	49	LD	23	1300-1400	132	11%	3%	0%	3%	2%	20%	55%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.71977852	0.11890759	0.10943113
Ka Yip Street	49	LD	23	1400-1500	136	11%	2%	0%	3%	1%	21%	55%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.71797512	0.11916189	0.10966699
Ka Yip Street	49	LD	23	1500-1600	152	12%	1%	0%	3%	1%	20%	55%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.69820838	0.11970702	0.11013648
Ka Yip Street	49	LD	23	1600-1700	156	12%	1%	0%	3%	1%	21%	55%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.67738419	0.11966369	0.11009871
Ka Yip Street	49	LD	22	1700-1800	172	13%	0%	0%	2%	1%	20%	56%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.87058345	0.12418199	0.11414234
Ka Yip Street	49	LD	23	1800-1900	156	12%	1%	0%	3%	1%	21%	56%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.7255038	0.12031394	0.11069766
Ka Yip Street	49	LD	23	1900-2000	127	13%	1%	0%	2%	1%	20%	56%	0%	1%	6%	0%	0%	0%	0%	0%	1%	100%	4.76640439	0.12029827	0.11071182
Ka Yip Street	49	LD	24	2000-2100	101	12%	1%	0%	3%	1%	21%	55%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.69622866	0.11656295	0.10723559
Ka Yip Street	49	LD	24	2100-2200	87	11%	2%	0%	2%	1%	21%	55%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.60105878	0.11585466	0.10657517
Ka Yip Street	49	LD	24	2200-2300	87	11%	2%	0%	2%	1%	21%	55%	0%	1%	5%	0%	0%	0%	0%	0%	1%	100%	4.60105878	0.11585466	0.10657517
Ka Yip Street	49	LD	24	2300-0000	73	11%	3%	0%	3%	1%	21%	55%	0%	1%	4%	0%	0%	0%	0%	0%	1%	100%	4.57069581	0.11522252	0.10598078
Fung Yip Street	50	LD	25	0000-0100	15	40%	7%	0%	40%	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.1044795	0.02467492	0.02278128
Fung Yip Street	50	LD	25	0100-0200	9	44%	11%	0%	33%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0.97466826	0.02224861	0.02055346
Fung Yip Street	50	LD	25	0200-0300	7	43%	14%	0%	29%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0.98807772	0.02292431	0.0211697
Fung Yip Street	50	LD	25	0300-0400	7	43%	14%	0%	29%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.00444951	0.02292431	0.0211697
Fung Yip Street	50	LD	25	0400-0500	7	43%	14%	0%	29%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.00154666	0.02292431	0.0211697
Fung Yip Street	50	LD	25	0500-0600	7	43%	14%	0%	29%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.00154666	0.02292431	0.0211697
Fung Yip Street	50	LD	25	0600-0700	19	42%	11%	0%	32%	16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.05987262	0.02453868	0.02265486
Fung Yip Street	50	LD	25	0700-0800	37	41%	11%	0%	30%	14%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.18161355	0.0290634	0.02666597
Fung Yip Street	50	LD	25	0800-0900	47	43%	11%	0%	30%	13%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	2%	100%	1.12620057	0.02746296	0.02522859
Fung Yip Street	50	LD	25	0900-1000	39	41%	10%	0%	31%	13%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.16126952	0.02859265	0.0262419
Fung Yip Street	50	LD	25	1000-1100	37	41%	11%	0%	30%	14%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.18368327	0.0290634	0.02666597
Fung Yip Street	50	LD	25	1100-1200	33	39%	9%	0%	33%	12%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.21267928	0.02967378	0.02720963
Fung Yip Street	50	LD	25	1200-1300	36	39%	8%	0%	33%	14%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.23649514	0.03013228	0.0276442
Fung Yip Street	50	LD	25	1300-1400	35	40%	6%	0%	34%	14%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.29678496	0.0309932	0.02843403
Fung Yip Street	50	LD	25	1400-1500	36	39%	6%	0%	36%	14%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.24998218	0.03081538	0.02827397
Fung Yip Street	50	LD	25	1500-1600	39	38%	5%	0%	36%	15%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.2574052	0.0311508	0.02859323
Fung Yip Street	50	LD	25	1600-1700	38	37%	3%	0%	37%	16%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.36631222	0.03368488	0.03091933
Fung Yip Street	50	LD	25	1700-1800	43	35%	2%	0%	37%	16%	2%	5%	0%	0%	0%	0%	0%	0%	0%	0%	2%	100%	1.50620187	0.03653731	0.03355906
Fung Yip Street	50	LD	25	1800-1900	39	36%	3%	0%	38%	15%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.38237222	0.03345172	0.03070785
Fung Yip Street	50	LD	25	1900-2000	32	38%	3%	0%	38%	16%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	3%	100%	1.33108522	0.03295034	0.03021713
Fung Yip Street	50	LD	25	2000-2100	26	38%	4%	0%	35%	15%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	4%	100%	1.33315534	0.03402018	0.03116192
Fung Yip Street	50	LD	25	2100-2200	23	39%	4%	0%	35%	13%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	4%	100%	1.31988061	0.03386945	0.03099725
Fung Yip Street	50	LD	25	2200-2300	23	39%	4%	0%	35%	13%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	4%	100%	1.31988061	0.03386945	0.03099725
Fung Yip Street	50	LD	25	2300-0000	20	40%	5%	0%	35%	15%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.35954798	0.03258933	0.0300637
Sun Yip Street	51	LD	25	0000-0100	49	16%	29%	0%	10%	4%	2%	6%	22%	0%	2%	2%	2%	2%	0%	0%	2%	100%	1.82812262	0.04315687	0.03963266
Sun Yip Street	51	LD	25	0100-0200	29	17%	28%	0%	10%	3%	3%	7%	24%	0%	0%	3%	0%	3%	0%	0%	0%	100%	1.95754454	0.0478308	0.04405182
Sun Yip Street	51	LD	25	0200-0300	16	19%	31%	0%	13%	6%	0%	6%	25%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.508562	0.03068939	0.02828175
Sun Yip Street	51	LD	25	0300-0400	15	20%	27%	0%	13%	7%	0%	7%	27%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.58077236	0.03273535	0.0301672
Sun Yip Street	51	LD	25	0400-0500	15	27%	20%	0%	13%	7%	0%	7%	27%	0%	0%	0%	0%	0%	0%	0%	0%	100%	1.54678076	0.03374705	0.03110863
Sun Yip Street	51	LD	25	0500-0600	16	25%	19%	0%	13%	6%	0%	6%	25%	0%	0%	0%	0%	6%	0%	0%	0%	100%	2.03056767	0.05440786	0.05011434
Sun Yip Street	51	LD	25	0600-0700	49	22%	14%	0%	10%	4%	4%	8%	24%	0%	2%	2%	2%	4%	0%	0%	2%	100%	2.195164	0.05731048	0.05266704
Sun Yip Street	51	LD	25	0700-0800	84	24%	11%	0%	10%	4%	4%	10%	26%	0%	1%	4%	2%	4%	0%	0%	2%	100%	2.2572103	0.05934777	0.05452504

Traffic Data (Year 2038)

Individual Road Information						Traffic Flow (%)																Composite Emission Factor (g/mile/veh)		
Road Name	Road ID	Road Type	Speed Limit (kph)	Hour	Total Vehicle (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<= 2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium & Heavy Goods Vehicl	07 - Medium & Heavy Goods Vehicl	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6.4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus >15t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	Total	NOx	RSP	FSP
Sun Yip Street	51	LD	24	0800-0900	101	26%	8%	0%	10%	4%	4%	10%	27%	0%	1%	3%	2%	4%	0%	0%	2%	100%	2.35119943	0.06275178	0.05766907
Sun Yip Street	51	LD	25	0900-1000	93	24%	13%	0%	10%	4%	3%	9%	26%	0%	1%	3%	2%	3%	0%	0%	2%	100%	2.13724514	0.05581414	0.05126578
Sun Yip Street	51	LD	25	1000-1100	92	22%	17%	0%	10%	4%	3%	8%	25%	0%	1%	2%	2%	3%	0%	0%	2%	100%	2.08389359	0.05270309	0.04841799
Sun Yip Street	51	LD	25	1100-1200	85	20%	24%	0%	9%	4%	2%	7%	25%	0%	1%	2%	1%	2%	0%	0%	2%	100%	1.88264141	0.04433042	0.04254281
Sun Yip Street	51	LD	25	1200-1300	101	19%	27%	0%	10%	4%	2%	7%	24%	0%	1%	2%	1%	2%	0%	0%	2%	100%	1.8305753	0.04328257	0.03975728
Sun Yip Street	51	LD	24	1300-1400	106	17%	30%	0%	9%	4%	2%	6%	24%	0%	2%	2%	1%	2%	0%	0%	2%	100%	1.77600783	0.04170756	0.03829513
Sun Yip Street	51	LD	24	1400-1500	112	16%	33%	0%	10%	4%	2%	5%	22%	0%	2%	2%	1%	2%	0%	0%	2%	100%	1.72418403	0.03969997	0.03645174
Sun Yip Street	51	LD	24	1500-1600	129	15%	36%	0%	9%	4%	2%	5%	22%	0%	2%	2%	1%	2%	0%	0%	2%	100%	1.64521625	0.03866297	0.03366844
Sun Yip Street	51	LD	24	1600-1700	135	14%	39%	0%	10%	4%	1%	4%	21%	0%	1%	1%	1%	1%	0%	0%	1%	100%	1.60635997	0.03522159	0.03234474
Sun Yip Street	51	LD	24	1700-1800	155	13%	41%	0%	9%	4%	1%	4%	21%	1%	2%	1%	1%	1%	0%	0%	1%	100%	1.57026467	0.03313068	0.0304301
Sun Yip Street	51	LD	24	1800-1900	137	13%	40%	0%	9%	4%	1%	4%	22%	0%	1%	1%	1%	1%	0%	0%	1%	100%	1.57531496	0.03370905	0.03095196
Sun Yip Street	51	LD	24	1900-2000	113	14%	38%	0%	10%	4%	2%	4%	21%	0%	2%	1%	1%	2%	0%	0%	2%	100%	1.65940294	0.03623261	0.03325834
Sun Yip Street	51	LD	25	2000-2100	85	15%	38%	0%	9%	4%	1%	5%	22%	0%	1%	1%	1%	1%	0%	0%	1%	100%	1.57954903	0.03329717	0.03060686
Sun Yip Street	51	LD	25	2100-2200	73	15%	36%	0%	10%	4%	1%	5%	22%	0%	1%	1%	1%	1%	0%	0%	1%	100%	1.66185445	0.03627557	0.03333628
Sun Yip Street	51	LD	25	2200-2300	71	15%	34%	0%	10%	4%	1%	6%	23%	0%	1%	1%	1%	1%	0%	0%	1%	100%	1.68804362	0.03726742	0.03427533
Sun Yip Street	51	LD	25	2300-0000	60	17%	32%	0%	10%	3%	2%	5%	23%	0%	2%	2%	2%	2%	0%	0%	2%	100%	1.68834415	0.03828049	0.03516725
Sun Yip Street	52	LD	24	0000-0100	139	32%	16%	0%	11%	5%	5%	13%	8%	1%	6%	0%	0%	0%	0%	3%	2%	100%	2.30169299	0.05568377	0.05114683
Sun Yip Street	52	LD	25	0100-0200	81	31%	16%	0%	10%	4%	5%	14%	9%	1%	6%	0%	0%	0%	0%	2%	2%	100%	2.21438438	0.05388127	0.04950571
Sun Yip Street	52	LD	25	0200-0300	54	30%	17%	0%	9%	4%	6%	13%	9%	2%	6%	0%	0%	0%	0%	4%	2%	100%	2.40124314	0.0567086	0.05213896
Sun Yip Street	52	LD	25	0300-0400	54	28%	19%	0%	9%	4%	6%	13%	9%	2%	6%	0%	0%	0%	0%	4%	2%	100%	2.44498819	0.05642757	0.05187745
Sun Yip Street	52	LD	25	0400-0500	54	28%	19%	0%	9%	4%	6%	13%	9%	2%	6%	0%	0%	0%	0%	4%	2%	100%	2.439323	0.05642757	0.05187745
Sun Yip Street	52	LD	25	0500-0600	53	26%	19%	0%	9%	4%	6%	13%	9%	2%	6%	0%	0%	0%	0%	4%	2%	100%	2.48245602	0.05720591	0.05258983
Sun Yip Street	52	LD	24	0600-0700	160	26%	21%	0%	8%	4%	5%	14%	10%	1%	6%	0%	0%	0%	0%	4%	2%	100%	2.54121291	0.05891555	0.05415017
Sun Yip Street	52	LD	21	0700-0800	296	24%	21%	0%	8%	3%	5%	14%	10%	1%	6%	0%	0%	0%	0%	4%	2%	100%	2.87543795	0.06812532	0.06260765
Sun Yip Street	52	LD	20	0800-0900	374	23%	22%	0%	8%	3%	5%	14%	10%	1%	7%	0%	0%	0%	0%	4%	1%	100%	2.9612795	0.06987101	0.06420882
Sun Yip Street	52	LD	21	0900-1000	323	25%	20%	0%	8%	3%	5%	14%	10%	1%	7%	0%	0%	0%	0%	4%	2%	100%	2.80075694	0.06705335	0.06163028
Sun Yip Street	52	LD	22	1000-1100	294	27%	19%	0%	9%	4%	5%	14%	9%	1%	6%	0%	0%	0%	0%	3%	2%	100%	2.65715872	0.06349956	0.05832832
Sun Yip Street	52	LD	22	1100-1200	268	28%	18%	0%	9%	4%	5%	13%	9%	1%	6%	0%	0%	0%	0%	3%	2%	100%	2.60881223	0.06364192	0.05826735
Sun Yip Street	52	LD	22	1200-1300	294	30%	17%	0%	10%	4%	5%	13%	9%	1%	6%	0%	0%	0%	0%	3%	2%	100%	2.53450931	0.061769	0.05672159
Sun Yip Street	52	LD	22	1300-1400	294	32%	16%	0%	10%	4%	5%	13%	8%	1%	6%	0%	0%	0%	0%	3%	2%	100%	2.36041816	0.05806313	0.0532957
Sun Yip Street	52	LD	22	1400-1500	294	34%	14%	0%	11%	4%	5%	13%	8%	1%	5%	0%	0%	0%	0%	2%	3%	100%	2.2713562	0.05659981	0.05193332
Sun Yip Street	52	LD	21	1500-1600	324	35%	13%	0%	11%	5%	5%	12%	7%	1%	5%	0%	0%	0%	0%	2%	3%	100%	2.2565023	0.05717809	0.05248407
Sun Yip Street	52	LD	21	1600-1700	323	37%	12%	0%	12%	5%	4%	12%	7%	1%	5%	0%	0%	0%	0%	2%	3%	100%	2.15947443	0.05568417	0.05111108
Sun Yip Street	52	LD	21	1700-1800	350	39%	11%	0%	12%	5%	4%	12%	7%	1%	5%	0%	0%	0%	0%	1%	3%	100%	2.0722801	0.05383977	0.04939566
Sun Yip Street	52	LD	21	1800-1900	323	38%	11%	0%	12%	5%	4%	12%	7%	1%	5%	0%	0%	0%	0%	2%	3%	100%	2.11312315	0.05477614	0.05025865
Sun Yip Street	52	LD	22	1900-2000	270	37%	12%	0%	12%	5%	4%	12%	7%	1%	5%	0%	0%	0%	0%	2%	3%	100%	2.1505999	0.05448542	0.04997895
Sun Yip Street	52	LD	23	2000-2100	214	36%	13%	0%	12%	5%	5%	12%	7%	1%	5%	0%	0%	0%	0%	2%	3%	100%	2.10797606	0.05290542	0.04855603
Sun Yip Street	52	LD	23	2100-2200	187	35%	13%	0%	11%	5%	5%	12%	7%	1%	5%	0%	0%	0%	0%	2%	3%	100%	2.16876431	0.05408814	0.04965121
Sun Yip Street	52	LD	23	2200-2300	187	34%	14%	0%	11%	4%	5%	13%	8%	1%	5%	0%	0%	0%	0%	2%	3%	100%	2.19898767	0.05456352	0.05008824
Sun Yip Street	52	LD	24	2300-0000	161	32%	15%	0%	11%	4%	5%	13%	8%	1%	6%	0%	0%	0%	0%	2%	2%	100%	2.23270659	0.05466254	0.0502149
Road in Chai Wan Depot	CWD	LD	5	0000-0100	2	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0.19647721	0.02317561	0.02317561
Road in Chai Wan Depot	CWD	LD	5	0100-0200	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0	0
Road in Chai Wan Depot	CWD	LD	5	0200-0300	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0	0
Road in Chai Wan Depot	CWD	LD	5	0300-0400	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0	0
Road in Chai Wan Depot	CWD	LD	5	0400-0500	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	0	0
Road in Chai Wan Depot	CWD	LD	5	0500-0600	14	36%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	14%	100%	1.80246882	0.06360319	0.06360319
Road in Chai Wan Depot	CWD	LD	5	0600-0700	33	24%	0%	0%	0%	0%	24%	0%	6%	0%	0%	0%	0%	42%	0%	0%	3%	100%	9.92961219	0.38248388	0.38248388
Road in Chai Wan Depot	CWD	LD	5	0700-0800	59	47%	0%	0%	0%	0%	22%	0%	0%	0%	0%	0%	0%	22%	0%	0%	8%	100%	5.86780921	0.23222328	0.23222328
Road in Chai Wan Depot	CWD	LD	5	0800-0900	32	28%	0%	0%	0%	0%	31%	0%	0%	0%	0%	0%	0%	28%	0%	0%	13%	100%	7.67798876	0.29756355	0.29756355
Road in Chai Wan Depot	CWD	LD	5	0900-1000	27	26%	0%	0%	0%	0%	26%	0%	7%	0%	0%	0%	0%	26%	0%	0%	15%	100%	7.08014551	0.27730972	0.27730972
Road in Chai Wan Depot	CWD	LD	5	1000-1100	31	19%	0%	0%	0%	0%	29%	0%	0%	0%	0%	0%	0%	39%	0%	0%	13%	100%	9.5318893	0.36962151	0.36962151
Road in Chai Wan Depot	CWD	LD	5	1100-1200	34	24%	0%	0%	0%	0%	21%	0%	21%	0%	0%	0%	0%	24%	0%	0%	13%	100%	6.63904749	0.25469112	0.25469112
Road in Chai Wan Depot	CWD	LD	5	1200-1300	35	29%	0%	0%	0%	0%	29%	0%	9%	0%	0%	0%	0%	26%	0%	0%	9%	100%	7.23177324	0.27674988	0.27674988
Road in Chai Wan Depot	CWD	LD	5	1300-1400	36	19%	0%	0%	0%	0%	22%	0%	8%	0%	0%	0%	0%	42%	0%	0%	8%	100%	9.69824691	0.3785622	0.3785622
Road in Chai Wan Depot	CWD	LD	5	1400-1500	37	11%	0%	0%	0%	0%	35%	0%	14%	0%	0%	0%	0%	32%	0%	0%	8%	100%	8.95170896	0.34062682	0.34062682
Road in Chai Wan Depot	CWD	LD	5	1500-1600	40	23%	0%	0%	0%	0%	33%	0%	5%	0%	0%	0%	0%	33%	0%	0%	8%	100%	8.51847496	0.33044476	0.33044476
Road in Chai Wan Depot	CWD	LD	5	1600-1700	45	44%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	27%	0%	0%	9%	100%	6.49129017	0.26183834	0.26183834
Road in Chai Wan Depot	CWD	LD	5	1700-1800	10	20%	0%	0%	0%	0%	30%	0%	10%	0%	0%	0%	0%	40%	0%	0%	0%	100%	9.89247136	0.37636312	0.37636312
Road in Chai Wan Depot	CWD	LD	5	1800-1900	13	46%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	38%	0%	0%	0%	100%	7.77432029	0.30880105	0.30880105
Road in Chai Wan Depot	CWD	LD	5	1900-2000	10	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	100%	7.69606691	0.31092937	0.31092937
Road in Chai Wan Depot	CWD	LD	5	2000-2100	16	25%	0%	0%	0%	0%	19%	0%	31%	0%	0%	0%	0%	25%	0%	0%	0%	100%	6.96800471	0.2584439	0.2584439
Road in Chai Wan Depot	CWD	LD	5	2100-2200	7	86%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	14%	100%	0.83795535	0.03455099	0.03455099
Road in Chai Wan Depot	CWD	LD	5	2200-2300	5	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	20%	100%	4.14869346	0.18297802	0.18297802
Road in Chai Wan Depot	CWD	LD	5	2300-0000	1	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0.19647721	0.02317561	0.02317561

Nos of Trips per VKT for Road Type DD, EX & PD

Year: 2023

	Number of Trips			VKT			Trips per VKT (Overall)
Trips-per-Day by Vehicle/Fuel	Petrol	Diesel	LPG	Petrol	Diesel	LPG	
01 - Private Cars	938268	10727	0	18116508	194069	0	0.051827695
02 - Taxi	49	0	73144	5303	0	7947121	0.00920386
03 - Light Goods Vehicles<=2.5t	98	2180	0	1480	38550	0	0.05690732
04 - Lt Goods Vehicles 2.5-3.5t	6541	205183	0	108270	3728294	0	0.055185838
05 - Light Goods Vehicles>3.5t	0	83480	0	0	2022919	0	0.0412671
06 - Medium & Heavy Goods Vehicl	0	48666	0	0	1043901	0	0.046619363
07 - Medium & Heavy Goods Vehicl	0	127727	0	0	2742324	0	0.046576189
08 - Public Light Buses	0	9495	7893	0	655932	545241	0.01447585
09 - Private Light Bus <=3.5t	781	919	0	20951	31090	0	0.032666551
10 - Private Light Bus >3.5t	13	7910	2358	277	232657	50955	0.036214859
11 - Non-franchised Bus<=6.4t	0	10945	0	0	325127	0	0.033663768
12 - Non-franchised Bus 6.4-15t	0	7593	0	0	224458	0	0.033828155
13 - Non-franchised Bus >15t	0	13613	0	0	400956	0	0.033951356
14 - Franchised Bus (SD)	0	3340	0	0	77969	0	0.042837538
15 - Franchised Bus (DD)	0	59633	0	0	1264347	0	0.047165058
16 - Motorcycles	364555	0	0	998653	0	0	0.365046718
17 - <Placeholder (P1)>	0	0	0	0	0	0	0
18 - <Placeholder (P2)>	0	0	0	0	0	0	0
19 - <Placeholder (P3)>	0	0	0	0	0	0	0
20 - <Placeholder (P4)>	0	0	0	0	0	0	0
21 - <Placeholder (P5)>	0	0	0	0	0	0	0

Nos of Trips per VKT for Road Type LD

Year: 2023

	Number of Trips			VKT			Trips per VKT (Overall)
Trips-per-Day by Vehicle/Fuel	Petrol	Diesel	LPG	Petrol	Diesel	LPG	
01 - Private Cars	938268	10727	0	2355146.04	25228.97	0	0.398674577
02 - Taxi	49	0	73144	689.39	0	1033125.73	0.070798926
03 - Light Goods Vehicles<=2.5t	98	2180	0	192.4	5011.5	0	0.437748612
04 - Lt Goods Vehicles 2.5-3.5t	6541	205183	0	14075.1	484678.22	0	0.424506447
05 - Light Goods Vehicles>3.5t	0	83480	0	0	262979.47	0	0.317439228
06 - Medium & Heavy Goods Vehicl	0	48666	0	0	135707.13	0	0.358610487
07 - Medium & Heavy Goods Vehicl	0	127727	0	0	356502.12	0	0.358278374
08 - Public Light Buses	0	9495	7893	0	85271.16	70881.33	0.111352691
09 - Private Light Bus <=3.5t	781	919	0	2723.63	4041.7	0	0.251281164
10 - Private Light Bus >3.5t	13	7910	2358	36.01	30245.41	6624.15	0.278575836
11 - Non-franchised Bus<=6.4t	0	10945	0	0	42266.51	0	0.258952064
12 - Non-franchised Bus 6.4-15t	0	7593	0	0	29179.54	0	0.260216576
13 - Non-franchised Bus >15t	0	13613	0	0	52124.28	0	0.261164279
14 - Franchised Bus (SD)	0	3340	0	0	10135.97	0	0.329519523
15 - Franchised Bus (DD)	0	59633	0	0	164365.11	0	0.362808141
16 - Motorcycles	364555	0	0	129824.89	0	0	2.808051676
17 - <Placeholder (P1)>	0	0	0	0	0	0	0
18 - <Placeholder (P2)>	0	0	0	0	0	0	0
19 - <Placeholder (P3)>	0	0	0	0	0	0	0
20 - <Placeholder (P4)>	0	0	0	0	0	0	0
21 - <Placeholder (P5)>	0	0	0	0	0	0	0

Nos of Trips for Road Type DD, EX & PD (Year 2038 VKT Data with Year 2023 HK Trip per VKT ratio)

Petrol

Hong Kong SAR Petrol Trips-per-Day by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	0.93494	0.941218	0.969577	0.958652	0.961609	0.949275	0.901683	0.886118	0.902688	0.892335	0.902637	0.906115	0.91841	0.928041	0.929045	0.932961	0.949217	0.97697	0.957155	0.958279	0.957432	0.943811	0.949064	0.943172
02 - Taxi	0.0893	0.090587	0.092032	0.091103	0.08871	0.089145	0.086523	0.084502	0.084248	0.085657	0.086323	0.086938	0.087455	0.087168	0.087412	0.087629	0.087559	0.087441	0.089075	0.088709	0.088673	0.089003	0.088589	0.088994
03 - Light Goods Vehicles<=2.5t	0.001953	0.000766	0.000483	0.000482	0.000476	0.000315	0.001744	0.003093	0.002935	0.002745	0.00253	0.002736	0.002646	0.002758	0.002994	0.003366	0.003287	0.003599	0.002971	0.002289	0.002156	0.002123	0.001972	0.001924
04 - Lt Goods Vehicles 2.5-3.5t	0.367064	0.36588	0.361619	0.364713	0.366509	0.3606	0.336086	0.379038	0.368705	0.373811	0.366163	0.380576	0.373358	0.386556	0.400904	0.400621	0.406322	0.404702	0.395732	0.386099	0.381056	0.381043	0.367353	0.368453
05 - Light Goods Vehicles>3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - Public Light Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09 - Private Light Bus <=3.5t	0.017158	0.015334	0.00914	0.009142	0.009703	0.012102	0.019705	0.021147	0.021015	0.020209	0.019685	0.019168	0.017498	0.017167	0.01591	0.01545	0.01416	0.013641	0.014145	0.015103	0.016122	0.014892	0.01664	0.016303
10 - Private Light Bus >3.5t	0.122831	0.130986	0.128465	0.135352	0.136885	0.140841	0.137015	0.141186	0.142861	0.140275	0.135848	0.126714	0.122151	0.115835	0.110605	0.104883	0.098722	0.092883	0.098482	0.102097	0.10424	0.107796	0.114295	0.115272
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - Non-franchised Bus 6.4-15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 - Franchised Bus (SD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - Franchised Bus (DD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - Motorcycles	0.265094	0.227261	0.216765	0.212531	0.21208	0.211978	0.282079	0.263727	0.294448	0.310491	0.328861	0.351263	0.338796	0.327255	0.331251	0.344981	0.355171	0.353859	0.319719	0.307314	0.318476	0.3053	0.341133	0.313818
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
19 - <Placeholder (P3)>																								
20 - <Placeholder (P4)>																								
21 - <Placeholder (P5)>																								

Diesel

Hong Kong SAR Petrol Trips-per-Day by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	0.997822	1.004523	1.03479	1.02313	1.026285	1.013122	0.962329	0.945717	0.963402	0.952353	0.963347	0.967059	0.980181	0.99046	0.991531	0.99571	1.01306	1.042679	1.021532	1.022731	1.021828	1.00729	1.012897	1.006608
02 - Taxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03 - Light Goods Vehicles<=2.5t	0.001668	0.000654	0.000412	0.000412	0.000406	0.000269	0.001489	0.002642	0.002507	0.002344	0.002161	0.002337	0.00226	0.002355	0.002557	0.002875	0.002807	0.003074	0.002538	0.001955	0.001841	0.001813	0.001684	0.001643
04 - Lt Goods Vehicles 2.5-3.5t	0.334377	0.333299	0.329418	0.332236	0.333872	0.328489	0.306158	0.345286	0.335872	0.340524	0.333556	0.346686	0.340111	0.352133	0.365204	0.364946	0.370139	0.368664	0.360493	0.351718	0.347123	0.347112	0.33464	0.335643
05 - Light Goods Vehicles>3.5t	0.103894	0.101391	0.107551	0.099527	0.099528	0.098251	0.095242	0.109306	0.104956	0.105888	0.103819	0.106343	0.105708	0.109589	0.112138	0.113673	0.114403	0.11469	0.110793	0.109598	0.107913	0.107071	0.103995	0.105983
06 - Medium & Heavy Goods Vehicl	0.054526	0.050694	0.047943	0.048711	0.048812	0.047974	0.07385	0.061728	0.061414	0.05998	0.062118	0.059143	0.05984	0.05666	0.055574	0.054502	0.053811	0.0519	0.053746	0.055383	0.052856	0.057098	0.055913	0.056262
07 - Medium & Heavy Goods Vehicl	0.153736	0.157223	0.152567	0.156418	0.165277	0.172257	0.189586	0.171193	0.168735	0.165671	0.16463	0.15628	0.161466	0.154254	0.151123	0.150723	0.142253	0.138153	0.141281	0.145397	0.144078	0.154185	0.150294	0.151746
08 - Public Light Buses	0.041003	0.043005	0.044141	0.045281	0.044377	0.045586	0.045618	0.046889	0.047102	0.046094	0.0445	0.043956	0.041914	0.041127	0.039682	0.038855	0.038411	0.037501	0.03782	0.038362	0.038794	0.039679	0.040147	0.04058
09 - Private Light Bus <=3.5t	0.013606	0.012159	0.007248	0.007249	0.007694	0.009596	0.015625	0.016769	0.016664	0.016025	0.015609	0.015199	0.013875	0.013613	0.012616	0.012251	0.011228	0.010816	0.011217	0.011976	0.012784	0.011809	0.013195	0.012927
10 - Private Light Bus >3.5t	0.088983	0.09489	0.093064	0.098053	0.099164	0.102029	0.099258	0.102279	0.103493	0.101619	0.098412	0.091795	0.08849	0.083915	0.080126	0.075981	0.071517	0.067287	0.071344	0.073962	0.075515	0.078091	0.082799	0.083507
11 - Non-franchised Bus<=6.4t	0.022316	0.020021	0.0087	0.011522	0.013053	0.012674	0.023817	0.023179	0.024115	0.023209	0.022664	0.021378	0.020083	0.019393	0.018997	0.017774	0.016965	0.016451	0.017117	0.017683	0.017145	0.019106	0.018923	0.019927
12 - Non-franchised Bus 6.4-15t	0.014962	0.006669	0.005086	0.005341	0.005707	0.005729	0.015961	0.016048	0.016235	0.015352	0.014938	0.014866	0.014205	0.013937	0.013111	0.013675	0.012917	0.011519	0.012287	0.01248	0.013323	0.013933	0.014463	0.014657
13 - Non-franchised Bus >15t	0.02518	0.026435	0.015212	0.014987	0.018262	0.019958	0.026597	0.027287	0.027386	0.027568	0.026934	0.024498	0.023973	0.022777	0.021709	0.022391	0.020499	0.018969	0.021554	0.020773	0.02326	0.021966	0.022923	0.022655
14 - Franchised Bus (SD)	0.002219	0.001683	0.000822	0.000822	0.00127	0.001436	0.003082	0.003777	0.004525	0.0044	0.003926	0.00485	0.006983	0.007244	0.007447	0.007277	0.007249	0.00702	0.00748	0.008134	0.007694	0.003742	0.004069	0.002863
15 - Franchised Bus (DD)	0.125227	0.124021	0.137438	0.14012	0.132223	0.128229	0.106938	0.103009	0.096463	0.105547	0.110827	0.114682	0.117395	0.119327	0.121154	0.123592	0.126	0.122834	0.13041	0.129099	0.130219	0.126761	0.126468	0.126434
16 - Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
19 - <Placeholder (P3)>																								
20 - <Placeholder (P4)>																								
21 - <Placeholder (P5)>																								

LPG

Hong Kong SAR Petrol Trips-per-Day by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02 - Taxi	0.08895	0.090232	0.091671	0.090746	0.088363	0.088796	0.086183	0.084171	0.083918	0.085322	0.085984	0.086597	0.087112	0.086826	0.087069	0.087286	0.087216	0.087098	0.088726	0.088361	0.088325	0.088654	0.088242	0.088645
03 - Light Goods Vehicles<=2.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04 - Lt Goods Vehicles 2.5-3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05 - Light Goods Vehicles>3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - Public Light Buses	0.041005	0.043006	0.044143	0.045282	0.044379	0.045588	0.04562	0.046891	0.047103	0.046096	0.044502	0.043957	0.041916	0.041128	0.039684	0.038857	0.038412	0.037503	0.037822	0.038364	0.038796	0.039681	0.040149	0.040581
09 - Private Light Bus <=3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 - Private Light Bus >3.5t	0.121116	0.129157	0.126671	0.133462	0.134974	0.138874	0.135102	0.139215	0.140867	0.138316	0.133951	0.124945	0.120446	0.114218	0.109061	0.103419	0.097343	0.091586	0.097107	0.100671	0.102785	0.106291	0.112699	0.113663
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - Non-franchised Bus 6.4-15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 - Franchised Bus (SD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - Franchised Bus (DD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
19 - <Placeholder (P3)>																								
20 - <Placeholder (P4)>																								
21 - <Placeholder (P5)>																								

Nos of Trips for Road Type LD (Year 2038 VKT Data with Year 2023 HK Trip per VKT ratio)

Petrol

Hong Kong SAR Petrol Trips-per-Day by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	3.226247	3.227387	2.928773	2.851859	2.873616	2.78992	5.375036	5.390096	5.507075	5.395526	5.374071	4.162099	4.161602	4.145439	4.150938	5.229057	5.231512	5.288567	5.270874	5.220133	5.217854	3.243265	3.258462	3.243996
02 - Taxi	1.140423	1.138096	1.135801	1.127754	1.11478	1.107562	0.466677	0.467758	0.462628	0.468649	0.469373	0.60128	0.601479	0.599311	0.600101	0.490047	0.493199	0.491819	0.496039	0.49355	0.492496	1.145425	1.150491	1.14384
03 - Light Goods Vehicles<=2.5t	0.719311	0.715046	1.514923	1.549592	1.570984	1.596312	1.306239	1.293205	1.28356	1.282184	1.28537	1.798591	1.792049	1.790072	1.786253	1.734781	1.705727	1.735332	1.742587	1.744556	1.725809	0.728454	0.755712	0.739189
04 - Lt Goods Vehicles 2.5-3.5t	0.064324	0.080412	0.057628	0.061424	0.064287	0.069018	0.182495	0.182258	0.170988	0.1826	0.188795	0.207551	0.208242	0.210697	0.208134	0.165015	0.165711	0.159769	0.162187	0.165806	0.164048	0.045632	0.04696	0.053624
05 - Light Goods Vehicles>3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - Public Light Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09 - Private Light Bus <=3.5t	0.057501	0.069913	0.058443	0.066999	0.068047	0.083657	0.293629	0.293217	0.291482	0.294425	0.295706	0.125222	0.128783	0.131484	0.129566	0.142481	0.144426	0.139662	0.136102	0.143411	0.146469	0.046383	0.048741	0.052481
10 - Private Light Bus >3.5t	0.041347	0.042683	0	0	0	0	0.389936	0.39239	0.380422	0.389864	0.384251	0.302462	0.304475	0.311199	0.304863	0.171134	0.177565	0.170749	0.168363	0.177495	0.168602	0.036685	0.031604	0.036246
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - Non-franchised Bus 6.4-15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 - Franchised Bus (SD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - Franchised Bus (DD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - Motorcycles	4.008642	3.80768	2.973638	3.356211	3.424616	3.629763	2.632615	2.629707	2.548709	2.628395	2.60942	3.350188	3.325584	3.374188	3.380445	3.524687	3.497457	3.454737	3.446016	3.492835	3.499729	4.135406	3.746395	3.948395
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
19 - <Placeholder (P3)>																								
20 - <Placeholder (P4)>																								
21 - <Placeholder (P5)>																								

Diesel

Hong Kong SAR Petrol Trips-per-Day by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	3.44324	3.444457	3.125758	3.043671	3.066892	2.977566	5.736554	5.752627	5.877474	5.758422	5.735524	4.442036	4.441506	4.424255	4.430124	5.580757	5.583377	5.644269	5.625386	5.571232	5.5688	3.461402	3.477622	3.462183
02 - Taxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03 - Light Goods Vehicles<=2.5t	0.614306	0.610664	1.293774	1.323382	1.341651	1.363281	1.115553	1.104422	1.096185	1.09501	1.097731	1.536031	1.530445	1.528756	1.525495	1.481537	1.456724	1.482007	1.488203	1.489884	1.473874	0.622114	0.645393	0.631282
04 - Lt Goods Vehicles 2.5-3.5t	0.058596	0.073251	0.052496	0.055955	0.058563	0.062872	0.166244	0.166028	0.155762	0.16634	0.171983	0.189069	0.189698	0.191935	0.1896	0.15032	0.150955	0.145542	0.147744	0.151041	0.149439	0.041569	0.042778	0.048849
05 - Light Goods Vehicles>3.5t	0.029751	0.039241	0.54394	0.543018	0.549423	0.552539	0.374347	0.382967	0.376712	0.379396	0.38381	0.481486	0.480078	0.484626	0.479824	0.380866	0.372087	0.369913	0.366935	0.373513	0.372528	0.019755	0.021588	0.024611
06 - Medium & Heavy Goods Vehicl	0.195599	0.183297	0.16511	0.171444	0.174961	0.180726	0.533884	0.535328	0.532593	0.534486	0.542462	0.90113	0.896351	0.896152	0.895253	0.553072	0.566146	0.55635	0.556237	0.560063	0.560886	0.193407	0.178546	0.184066
07 - Medium & Heavy Goods Vehicl	0.137409	0.155744	0.067675	0.076281	0.078044	0.093685	0.0902	0.089124	0.083477	0.087864	0.084424	0.099419	0.098105	0.100815	0.102613	0.110652	0.108124	0.103146	0.099058	0.107366	0.112931	0.152371	0.140711	0.149834
08 - Public Light Buses	0.144307	0.152298	0.163132	0.16534	0.166463	0.169392	0.131928	0.128967	0.128087	0.130807	0.13029	0.098873	0.09893	0.100037	0.100086	0.108491	0.108799	0.105719	0.106046	0.107343	0.107501	0.139045	0.143121	0.143088
09 - Private Light Bus <=3.5t	0.045596	0.055438	0.046342	0.053127	0.053958	0.066336	0.232835	0.232508	0.231132	0.233466	0.234481	0.099296	0.102119	0.104261	0.10274	0.112981	0.114523	0.110746	0.107922	0.113719	0.116143	0.036779	0.038649	0.041615
10 - Private Light Bus >3.5t	0.029953	0.030921	0	0	0	0	0.282481	0.284259	0.275589	0.282429	0.278363	0.219112	0.220571	0.225442	0.220852	0.123975	0.128633	0.123696	0.121967	0.128583	0.122141	0.026576	0.022895	0.026257
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0.029653	0.030265	0.026899	0.028615	0.033787	0.007682	0.009225	0.009485	0.009784	0.031303	0.029231	0.026417	0.025412	0.027707	0.032087	0	0	0
12 - Non-franchised Bus 6.4-15t	0.001384	0.001913	0.012603	0.014483	0.015083	0.018656	0.060274	0.063612	0.057687	0.061123	0.064294	0.02778	0.030642	0.031426	0.032414	0.054178	0.052954	0.04902	0.047387	0.051238	0.054121	0.0009	0.001005	0.001151
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0.012716	0.00933	0.008248	0.008844	0.010762	0.002253	0.002703	0.002785	0.002868	0.007696	0.006861	0.006147	0.005899	0.006471	0.007804	0	0	0
14 - Franchised Bus (SD)	0.0126	0.01722	0	0	0	0	0.00247	0.001793	0.001615	0.001692	0.002079	0.004651	0.005579	0.00573	0.005895	0.002246	0.002003	0.001801	0.001719	0.001889	0.002414	0.008367	0.009451	0.010781
15 - Franchised Bus (DD)	0.798742	0.760147	0.156526	0.155847	0.157459	0.16278	0.521217	0.509243	0.502435	0.515296	0.507803	0.469357	0.469356	0.465088	0.47108	0.581334	0.582158	0.577303	0.583564	0.580184	0.588099	0.789138	0.791492	0.789853
16 - Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
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Hong Kong SAR Petrol Trips-per-Day by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02 - Taxi	1.135953	1.133635	1.131349	1.123334	1.110411	1.103221	0.464848	0.465925	0.460815	0.466812	0.467533	0.598923	0.599121	0.596962	0.597749	0.488127	0.491266	0.489892	0.494095	0.491615	0.490565	1.140935	1.145982	1.139356
03 - Light Goods Vehicles<=2.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04 - Lt Goods Vehicles 2.5-3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05 - Light Goods Vehicles>3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - Public Light Buses	0.144312	0.152304	0.163138	0.165346	0.16647	0.169399	0.131934	0.128973	0.128092	0.130813	0.130295	0.098877	0.098933	0.100041	0.10009	0.108496	0.108804	0.105723	0.10605	0.107347	0.107505	0.13905	0.143127	0.143093
09 - Private Light Bus <=3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 - Private Light Bus >3.5t	0.04077	0.042087	0	0	0	0	0.384491	0.386911	0.37511	0.38442	0.378886	0.298238	0.300224	0.306854	0.300607	0.168745	0.175085	0.168365	0.166012	0.175017	0.166248	0.036172	0.031163	0.03574
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - Non-franchised Bus 6.4-15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 - Franchised Bus (SD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - Franchised Bus (DD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - <Placeholder (P1)>																								
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VKT for Road Type DD, EX & PD (Year 2038 VKT Data with Year 2023 HK VKT Ratio by Fuel Type)

Petrol

Hong Kong SAR Petrol VKT by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	809.7013	482.7734	892.4795	310.949	685.2494	3177.225	807.6631	1416.175	1830.635	1668.017	1547.389	1427.078	1521.64	1539.38	1549.773	1704.056	1789.09	1906.477	1659.577	1371.35	1239.977	1158.401	1092.71	982.1638
02 - Taxi	0.265316	0.160902	0.311241	0.106781	0.295831	1.205281	0.27958	0.49899	0.647176	0.579051	0.52353	0.469102	0.489441	0.481212	0.472657	0.506972	0.511587	0.529325	0.480532	0.402672	0.372017	0.359007	0.347577	0.314635
03 - Light Goods Vehicles<=2.5t	0.110917	0.054349	0.123395	0.032905	0.047742	0.515763	0.123857	0.222797	0.257162	0.245923	0.211236	0.200885	0.218737	0.213293	0.216129	0.267735	0.26767	0.292035	0.230313	0.172869	0.168549	0.153322	0.130142	0.127327
04 - Lt Goods Vehicles 2.5-3.5t	7.193422	4.291783	8.169712	2.761947	7.49541	27.83507	7.048086	12.92427	16.39159	15.24979	14.0534	13.22269	13.77918	14.08629	14.4362	15.83526	16.64258	17.36136	14.98355	12.238	10.96781	10.45647	9.588501	8.734533
05 - Light Goods Vehicles>3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - Public Light Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09 - Private Light Bus <=3.5t	5.124925	3.305235	4.504942	1.803587	7.399538	18.37002	6.489693	11.95279	15.44724	13.26925	11.92864	10.3666	10.46322	9.984143	9.380264	9.955962	9.557402	9.323902	8.744177	7.657194	6.847995	6.316581	6.401124	5.728805
10 - Private Light Bus >3.5t	0.06837	0.042357	0.065355	0.029428	0.100579	0.238079	0.08362	0.15118	0.197742	0.172871	0.151531	0.131724	0.134544	0.127606	0.121352	0.125948	0.121313	0.120747	0.113166	0.097564	0.086889	0.085152	0.086879	0.078995
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - Non-franchised Bus 6.4-15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 - Franchised Bus (SD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - Franchised Bus (DD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - Motorcycles	44.56	26.42	51.45	17.43	39.485	151.54	50.89	84.98	114.24	106.59	99.33	91.46	93.8	91.425	91.265	99.82	103.99	108.375	90.95	73.97	67.94	63.42	61.575	55.485
17 - <Placeholder (P1)>																								
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19 - <Placeholder (P3)>																								
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21 - <Placeholder (P5)>																								

Diesel

Hong Kong SAR Petrol VKT by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	8.673742	5.171601	9.560485	3.330971	7.34058	34.0353	8.651908	15.17045	19.61026	17.86825	16.57605	15.28725	16.30022	16.49026	16.6016	18.25431	19.16522	20.42271	17.77785	14.69027	13.28297	12.40911	11.7054	10.52121
02 - Taxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03 - Light Goods Vehicles<=2.5t	2.889083	1.415651	3.214105	0.857095	1.243558	13.43424	3.226143	5.803253	6.698388	6.405627	5.502114	5.232515	5.697513	5.555707	5.629571	6.973765	6.97208	7.606715	5.999037	4.502781	4.390251	3.993628	3.389858	3.316523
04 - Lt Goods Vehicles 2.5-3.5t	247.7066	147.7882	281.3253	95.10805	258.1056	958.5049	242.7019	445.0492	564.4469	525.1287	483.9311	455.3253	474.4883	485.0637	497.1128	545.2897	573.0899	597.8411	515.9609	421.4175	377.6782	360.07	330.1815	300.775
05 - Light Goods Vehicles>3.5t	106.29	63.35	120.4375	39.7	108.8977	408.5	103.96	190.2655	241.291	224.395	206.2772	193.6186	202.2813	207.261	210.8753	232.7735	243.6628	254.7238	219.4012	180.4739	161.2852	153.1616	140.59	127.8617
06 - Medium & Heavy Goods Vehicl	42.12	24.41	43.734	16.63	23.0237	145.05	51.83465	87.0899	112.07	99.81	91.31435	80.93	86.3658	82.6882	82.2593	86.91475	86.85435	88.49	81.1594	69.0299	60.96	58.77975	55.81	50.5
07 - Medium & Heavy Goods Vehicl	113.76	70.03	117.956	45.58	63.8463	396.44	138.3904	236.2801	303.53	270.61	245.5807	216.85	233.0942	225.3418	220.5507	237.2303	233.8007	239.08	218.4106	185.1301	163.5	158.8453	148.8	135.8
08 - Public Light Buses	31.40484	18.96523	12.35224	12.54883	17.95499	115.8282	33.74751	62.26907	78.00153	67.46226	61.89774	57.01582	62.35644	62.68955	62.0288	68.32506	68.9585	74.49572	68.35236	57.07589	48.56256	44.80009	44.7291	38.1325
09 - Private Light Bus <=3.5t	7.605075	4.904765	6.685058	2.676413	10.98046	27.25998	9.630307	17.73721	22.92276	19.69075	17.70136	15.3834	15.52678	14.81586	13.91974	14.77404	14.1826	13.8361	12.97582	11.36281	10.162	9.373419	9.498876	8.501195
10 - Private Light Bus >3.5t	57.42482	35.57602	54.89246	24.71718	84.47768	199.9666	70.23416	126.9788	166.087	145.197	127.2738	110.6372	113.0057	107.1788	101.9256	105.7856	101.8928	101.4175	95.04968	81.94531	72.9796	71.52083	72.97141	66.34956
11 - Non-franchised Bus<=6.4t	14.74	8.86	14.08	5.13	13.27	43.23	19.3	35.26	47.55	40.11	34.81	29.3	29.59	27.98	26.3	26.67	25.11	25.59	23.17	20.77	17.43	18.25	18.07	16.47
12 - Non-franchised Bus 6.4-15t	10.13	5.53	10.62	3.47	7.13	30.34	13.77	25.14	33.51	28.59	24.07	21	21	20.27	18.33	19.98	19.29	18.32	17.07	14.07	13.02	12.87	13.52	12.28
13 - Non-franchised Bus >15t	17.06	10.29	17	6.11	16.01	50.92	22.34	41.11	54.84	46.31	41.27	34.43	35.26	32.79	30.87	32.49	29.99	28.85	28.6	24.23	22.63	20.87	21.62	19.51
14 - Franchised Bus (SD)	4.7	3	5.74	1.12	4.58	16.12	6.81	12.17	16.45	14.43	12.48	11.25	11.32	10.9	10.73	11.03	10.55	10.38	9.5	9.08	7.84	6.1	6.42	5.83
15 - Franchised Bus (DD)	89.4	55.35	115.4	38.77	99.11	283.05	110.69	197.18	258.55	235.6	208.04	180.98	179.93	171.59	163.42	169.45	165.22	162.7	151.75	129.76	117.7	115.72	112.7	105.39
16 - Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
19 - <Placeholder (P3)>																								
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Hong Kong SAR Petrol VKT by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02 - Taxi	397.6047	241.1291	466.4288	160.0232	443.3342	1806.245	418.9804	747.791	969.8628	867.7709	784.5665	703.0009	733.4806	721.1488	708.3273	759.753	766.6684	793.2507	720.1295	603.4473	557.508	538.011	520.8824	471.5154
03 - Light Goods Vehicles<=2.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04 - Lt Goods Vehicles 2.5-3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05 - Light Goods Vehicles>3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - Public Light Buses	26.10516	15.76477	10.26776	10.43117	14.92501	96.28177	28.05249	51.76093	64.83847	56.07774	51.45226	47.39418	51.83356	52.11045	51.5612	56.79494	57.3215	61.92428	56.81764	47.44411	40.36744	37.23991	37.1809	31.6975
09 - Private Light Bus <=3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 - Private Light Bus >3.5t	12.57681	7.791625	12.02218	5.413393	18.50174	43.79536	15.38222	27.81005	36.37527	31.8001	27.87467	24.23104	24.74976	23.47359	22.32307	23.16846	22.31589	22.21178	20.81715	17.94712	15.98351	15.66402	15.98172	14.53144
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - Non-franchised Bus 6.4-15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 - Franchised Bus (SD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - Franchised Bus (DD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
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VKT for Road Type LD (Year 2038 VKT Data with Year 2023 HK VKT Ratio by Fuel Type)

Petrol

Hong Kong SAR Petrol VKT by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	809.7013	482.7734	892.4795	310.949	685.2494	3177.225	807.6631	1416.175	1830.635	1668.017	1547.389	1427.078	1521.64	1539.38	1549.773	1704.056	1789.09	1906.477	1659.577	1371.35	1239.977	1158.401	1092.71	982.1638
02 - Taxi	0.265316	0.160902	0.311241	0.106781	0.295831	1.205281	0.27958	0.49899	0.647176	0.579051	0.52353	0.469102	0.489441	0.481212	0.472657	0.506972	0.511587	0.529325	0.480532	0.402672	0.372017	0.359007	0.347577	0.314635
03 - Light Goods Vehicles<=2.5t	0.110917	0.054349	0.123395	0.032905	0.047742	0.515763	0.123857	0.222797	0.257162	0.245923	0.211236	0.200885	0.218737	0.213293	0.216129	0.267735	0.26767	0.292035	0.230313	0.172869	0.168549	0.153322	0.130142	0.127327
04 - Lt Goods Vehicles 2.5-3.5t	7.193422	4.291783	8.169712	2.761947	7.49541	27.83507	7.048086	12.92427	16.39159	15.24979	14.0534	13.22269	13.77918	14.08629	14.4362	15.83526	16.64258	17.36136	14.98355	12.238	10.96781	10.45647	9.588501	8.734533
05 - Light Goods Vehicles>3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - Public Light Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09 - Private Light Bus <=3.5t	5.124925	3.305235	4.504942	1.803587	7.399538	18.37002	6.489693	11.95279	15.44724	13.26925	11.92864	10.3666	10.46322	9.984143	9.380264	9.955962	9.557402	9.323902	8.744177	7.657194	6.847995	6.316581	6.401124	5.728805
10 - Private Light Bus >3.5t	0.06837	0.042357	0.065355	0.029428	0.100579	0.238079	0.08362	0.15118	0.197742	0.172871	0.151531	0.131724	0.134544	0.127606	0.121352	0.125948	0.121313	0.120747	0.113166	0.097564	0.086889	0.085152	0.086879	0.078995
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - Non-franchised Bus 6.4-15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 - Franchised Bus (SD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - Franchised Bus (DD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - Motorcycles	44.56	26.42	51.45	17.43	39.485	151.54	50.89	84.98	114.24	106.59	99.33	91.46	93.8	91.425	91.265	99.82	103.99	108.375	90.95	73.97	67.94	63.42	61.575	55.485
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
19 - <Placeholder (P3)>																								
20 - <Placeholder (P4)>																								
21 - <Placeholder (P5)>																								

Diesel

Hong Kong SAR Petrol VKT by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	8.673742	5.171601	9.560485	3.330971	7.34058	34.0353	8.651908	15.17045	19.61026	17.86825	16.57605	15.28725	16.30022	16.49026	16.6016	18.25431	19.16522	20.42271	17.77785	14.69027	13.28297	12.40911	11.7054	10.52121
02 - Taxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03 - Light Goods Vehicles<=2.5t	2.889083	1.415651	3.214105	0.857095	1.243558	13.43424	3.226143	5.803253	6.698388	6.405627	5.502114	5.232515	5.697513	5.555707	5.629571	6.973765	6.97208	7.606715	5.999037	4.502781	4.390251	3.993628	3.389858	3.316523
04 - Lt Goods Vehicles 2.5-3.5t	247.7066	147.7882	281.3253	95.10805	258.1056	958.5049	242.7019	445.0492	564.4469	525.1287	483.9311	455.3253	474.4883	485.0637	497.1128	545.2897	573.0899	597.8411	515.9609	421.4175	377.6782	360.07	330.1815	300.775
05 - Light Goods Vehicles>3.5t	106.29	63.35	120.4375	39.7	108.8977	408.5	103.96	190.2655	241.291	224.395	206.2772	193.6186	202.2813	207.261	210.8753	232.7735	243.6628	254.7238	219.4012	180.4739	161.2852	153.1616	140.59	127.8617
06 - Medium & Heavy Goods Vehicl	42.12	24.41	43.734	16.63	23.0237	145.05	51.83465	87.0899	112.07	99.81	91.31435	80.93	86.3658	82.6882	82.2593	86.91475	86.85435	88.49	81.1594	69.0299	60.96	58.77975	55.81	50.5
07 - Medium & Heavy Goods Vehicl	113.76	70.03	117.956	45.58	63.8463	396.44	138.3904	236.2801	303.53	270.61	245.5807	216.85	233.0942	225.3418	220.5507	237.2303	233.8007	239.08	218.4106	185.1301	163.5	158.8453	148.8	135.8
08 - Public Light Buses	31.40484	18.96523	12.35224	12.54883	17.95499	115.8282	33.74751	62.26907	78.00153	67.46226	61.89774	57.01582	62.35644	62.68955	62.0288	68.32506	68.9585	74.49572	68.35236	57.07589	48.56256	44.80009	44.7291	38.1325
09 - Private Light Bus <=3.5t	7.605075	4.904765	6.685058	2.676413	10.98046	27.25998	9.630307	17.73721	22.92276	19.69075	17.70136	15.3834	15.52678	14.81586	13.91974	14.77404	14.1826	13.8361	12.97582	11.36281	10.162	9.373419	9.498876	8.501195
10 - Private Light Bus >3.5t	57.42482	35.57602	54.89246	24.71718	84.47768	199.9666	70.23416	126.9788	166.087	145.197	127.2738	110.6372	113.0057	107.1788	101.9256	105.7856	101.8928	101.4175	95.04968	81.94531	72.9796	71.52083	72.97141	66.34956
11 - Non-franchised Bus<=6.4t	14.74	8.86	14.08	5.13	13.27	43.23	19.3	35.26	47.55	40.11	34.81	29.3	29.59	27.98	26.3	26.67	25.11	25.59	23.17	20.77	17.43	18.25	18.07	16.47
12 - Non-franchised Bus 6.4-15t	10.13	5.53	10.62	3.47	7.13	30.34	13.77	25.14	33.51	28.59	24.07	21	21	20.27	18.33	19.98	19.29	18.32	17.07	14.07	13.02	12.87	13.52	12.28
13 - Non-franchised Bus >15t	17.06	10.29	17	6.11	16.01	50.92	22.34	41.11	54.84	46.31	41.27	34.43	35.26	32.79	30.87	32.49	29.99	28.85	28.6	24.23	22.63	20.87	21.62	19.51
14 - Franchised Bus (SD)	4.7	3	5.74	1.12	4.58	16.12	6.81	12.17	16.45	14.43	12.48	11.25	11.32	10.9	10.73	11.03	10.55	10.38	9.5	9.08	7.84	6.1	6.42	5.83
15 - Franchised Bus (DD)	89.4	55.35	115.4	38.77	99.11	283.05	110.69	197.18	258.55	235.6	208.04	180.98	179.93	171.59	163.42	169.45	165.22	162.7	151.75	129.76	117.7	115.72	112.7	105.39
16 - Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
19 - <Placeholder (P3)>																								
20 - <Placeholder (P4)>																								
21 - <Placeholder (P5)>																								

LPG

Hong Kong SAR Petrol VKT by Vehicle/Hour	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
01 - Private Cars	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02 - Taxi	397.6047	241.1291	466.4288	160.0232	443.3342	1806.245	418.9804	747.791	969.8628	867.7709	784.5665	703.0009	733.4806	721.1488	708.3273	759.753	766.6684	793.2507	720.1295	603.4473	557.508	538.011	520.8824	471.5154
03 - Light Goods Vehicles<=2.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04 - Lt Goods Vehicles 2.5-3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05 - Light Goods Vehicles>3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - Medium & Heavy Goods Vehicl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - Public Light Buses	26.10516	15.76477	10.26776	10.43117	14.92501	96.28177	28.05249	51.76093	64.83847	56.07774	51.45226	47.39418	51.83356	52.11045	51.5612	56.79494	57.3215	61.92428	56.81764	47.44411	40.36744	37.23991	37.1809	31.6975
09 - Private Light Bus <=3.5t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 - Private Light Bus >3.5t	12.57681	7.791625	12.02218	5.413393	18.50174	43.79536	15.38222	27.81005	36.37527	31.8001	27.87467	24.23104	24.74976	23.47359	22.32307	23.16846	22.31589	22.21178	20.81715	17.94712	15.98351	15.66402	15.98172	14.53144
11 - Non-franchised Bus<=6.4t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - Non-franchised Bus 6.4-15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - Non-franchised Bus >15t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 - Franchised Bus (SD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - Franchised Bus (DD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - <Placeholder (P1)>																								
18 - <Placeholder (P2)>																								
19 - <Placeholder (P3)>																								
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21 - <Placeholder (P5)>																								

Appendix 3.2

Surface Characteristics

CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT
Surface Characteristics

Table 1. Calculation of Annual Average Bowen Ratio for Analysis Area

Land Cover Category[1,2]	Number of 1-km² Grid	Area Fraction (ω_i)	Bowen Ratio[3,4] (x_i)	Average Bowen Ratio[5] $\omega_i \ln(x_i)$	Remark
Urban	16	0.16	1.67	0.082	High-rise buildings in the area.
Grassland	43	0.43	0.73	-0.133	Trees on the hill.
Water	40	0.40	0.10	-0.921	Sea for this area.
Desert Shrubland	1	0.01	4.33	0.015	Area dominanted by shrubland.
TOTAL	100	1.00	-	0.384	

Table 2. Calculation of Annual Average Albedo for Analysis Area

Land Cover Category[1,2]	Number of 1-km² Grid	Area Fraction (ω_i)	Albedo[6,7]	Average Albedo[8]	Remark
Urban	16	0.16	0.16	0.026	High-rise buildings in the area.
Grassland	43	0.43	0.19	0.080	Trees on the hill.
Water	40	0.40	0.12	0.048	Sea for this area.
Desert Shrubland	1	0.01	0.29	0.003	Area dominanted by shrubland.
TOTAL	100	1.00	-	0.157	

Table 3. Calculation of Annual Average Surface Roughness Length for Analysis Area

Sector	Land Cover Category[1,2]	Area (km²)	Area Fraction (ω_i)	Distance (km)[9]	Weighting[10]	Associated Surface Roughness[11] (Sz) (m)	Surface Roughness Length in Sector[12] (m)	Remark
330° - 120°	Urban	0.23	0.17	0.50	0.35	1.000	0.001	High-rise buildings in the area.
	Urban	0.02	0.01	0.36	0.04	1.000		
	Urban	0.02	0.01	0.83	0.01	1.000		
	Water	1.04	0.79	0.57	1.40	0.000		Sea for this area.
120° - 210°	Urban	0.60	0.77	0.60	1.28	1.000	0.888	High-rise buildings in the area.
	Water	0.01	0.05	0.62	0.09	0.000		Sea for this area.
	Water	0.08	0.45	0.26	1.73	0.000		Sea for this area.
	Grassland	0.09	0.12	0.91	0.13	0.053		Sea for this area.
210° - 330°	Urban	0.63	0.60	0.49	1.21	1.000	0.396	High-rise buildings in the area.
	Grassland	0.42	0.40	0.72	0.56	0.053		Sea for this area.

Note:
1. The land-use areas are reference to ***Figure 6.3a*** and ***Figure 6.3b***.
2. With reference to *Hong Kong Flora And Vegetation* (http://www.hkflora.com/v2/vegetation/vegetation_def.php), common vegetation types found in Hong Kong include grasslands, scrublands, woodlands, and coastal vegetation at the estuaries and beaches. According to Case Study of Pollutants Concentration Sensitivity to Meteorological Fields and Land Use Parameters over Douala (Cameroon) Using AERMOD Dispersion Model published in 2011, surface roughness length has more effects on concentration patterns than albedo and Bowen ratio. Due to dominance of surface roughness length over the entire concentration, "grassland" with the lowest surface roughness length is adopted for conservative estimation. For consistency of land use categories, "grassland" is adopted for both Albedo and Bowen Ratio.
3. Reference to *User's Guide For the Aermod Meteorological Preprocessor (AERMET)*, published by USEPA, Table 4-2b Daytime Bowen Ratio by Land-use and Season Average Moisture Conditions.
4. An average value of Bowen Ratio is calculated by using default values in *AERMET User's Guide* Table 4-2b, Bowen Ratio in winter, provided in the AERMET User's Guide, is applied to a condition of continuous snow cover and melting snow, thus the Bowen Ratio average in Hong Kong is estimated with Spring, Summer and Autmun conditions only.
5. According to AERMOD Implementation Guide, published by USEPA, determination of Bowen Ratio is based on geometric mean with 10km x 10km analysis area from the Application Site.
Geometric mean equation: $\exp[\Sigma(\omega_i \ln(x_i))]$
where ω_i = the fraction of area, x_i = the average Bowen Ratio for a given land use classification
6. Reference to *User's Guide For the Aermod Meteorological Preprocessor (AERMET)*, published by USEPA, Table 4-1 Albedo of Ground Covers by Land-use and Season.
7. An average value of Albedo is calculated by using default values in AERMET User's Guide Table 4-1, Albedo in winter, provided in the AERMET User's Guide, is applied to a condition of continuous snow cover and melting snow, thus the Albedo average in Hong Kong is estimated with Spring, Summer and Autmun conditions only.
8. According to AERMOD Implementation Guide, published by USEPA, determination of Albedo is based on arithmetric mean with 10km x 10km analysis area from the Application Site.
Arithmetric mean equation: Σ(Albedo$_i$ x Fraction of area$_i$)
9. Distance is the length between Project Site and the centroid of each classification.
10. Weighting is the ratio of area fraction to the distance.
11. Reference to *User's Guide For the Aermod Meteorological Preprocessor (AERMET)*, published by USEPA, Table 4-3 Surface Roughness Length, In Meters, By Land-Use And Season.
12. According to AERMOD Implementation Guide, published by USEPA, determination of Surface Roughness length is based on an inverse-distance weighted geometric mean for a default upwind distance of 1 kilometer relative to the measurement site.
Weighted geometric mean equation: $\exp[\Sigma(\omega_i \ln(x_i)) / \Sigma(\omega_i)]$
where ωi = the fraction of area, xi = the average Surface Roughness for a given land use classification

Appendix 3.3

Calculation of Emission Factors of Vehicles Travelling at Project Site

Table 3-3-1 Summary of Diurnal Traffic Flow

ERR

Hour	Type of Vehicle*								
	Private Car	Motor Cycle	Light Bus/Large Van[3]	Medium Van[1]	Light Truck[1]	Other (Please Specify)	Refuse Collection Vehicle[2]	Street Washing Vehicle[2]	Grab Lorry
1	1	0	0	0	0	1	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	4	2	0	0	0	1	7	0	0
7	8	1	14	5	3	0	0	2	0
8	28	5	13	12	1	0	0	0	0
9	9	4	9	8	2	0	0	0	0
10	6	4	7	5	2	1	0	2	0
11	6	4	12	5	4	0	0	0	0
12	8	4	8	6	1	0	7	0	0
13	10	3	9	8	2	0	0	3	0
14	6	3	15	5	3	1	0	3	0
15	4	3	12	9	4	0	4	1	0
16	8	3	13	11	2	1	2	0	0
17	20	4	12	8	1	0	0	0	0
18	2	0	4	3	0	0	1	0	0
19	6	0	5	0	0	0	2	0	0
20	6	0	4	0	0	0	0	0	0
21	4	0	4	0	3	0	4	1	0
22	5	1	0	0	0	1	0	0	0
23	3	1	1	0	0	0	0	0	0
24	1	0	0	0	0	0	0	0	0

EIA

Hour	Type of Vehicle								
	Private Car	Motor Cycle	Light Bus/Large Van[3]	Medium Van[1]	Light Truck[1]	Other (Please Specify)	Refuse Collection Vehicle[2]	Street Washing Vehicle[2]	Grab Lorry
1	3	0	0	1	0	0	0	0	0
2	0	1	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	2	0	0	0	0	0	0	0
6	0	0	1	0	0	0	7	1	0
7	7	1	10	0	1	0	1	1	0
8	5	6	19	9	4	0	0	0	0
9	4	4	10	6	3	0	0	0	0
10	4	4	6	6	3	0	0	0	0
11	4	4	12	4	0	0	0	0	0
12	4	4	5	6	2	0	8	0	0
13	3	2	6	4	3	0	1	3	0
14	2	3	12	5	1	0	0	3	2
15	4	4	10	9	3	0	5	0	1
16	3	3	13	5	3	0	0	0	0
17	2	6	5	4	3	0	0	0	0
18	0	3	4	0	0	0	0	0	0
19	0	0	2	0	0	0	0	0	0
20	0	0	7	1	1	0	0	0	0
21	2	0	9	1	2	0	3	0	0
22	0	0	0	0	0	0	1	1	0
23	0	1	1	0	0	0	0	0	0
24	2	0	2	0	1	0	0	0	0

Notes:

[1] As confirmed by HKPF, EMSD, FEHD, GLD and GL, medium van and light truck fall into the vehicle class of "Medium & Heavy Goods Vehicle".

[2] As confirmed by HKPF, EMSD, FEHD, GLD and GL, refuse collection vehicle and street washing vehicle fall into the vehicle class of "Public Light Buses".

[3] As confirmed by HKPF, EMSD, FEHD, GLD and GL, light Bus/Large Van fall into the vehicle class of "Non-franchised Bus >15t".

* The vehicle inventory and activities were confirmed by HKPF, EMSD, FEHD, GLD and GL.

Table 3-3-2 Emfac Data for Traveling in Project Site

Scenario: EMFAC Year 2023; Traveling within the Project Site

				Vehicle Breakdown																								
Road ID	Time	Total (Veh/hr)	Travelling Speed (kph)	01 - Private Cars (PC)	03 - Taxi	04 - Light Goods Vehicles<= 2.5t	05 - Lt Goods Vehicles 2.5-3.5t	06 - Light Goods Vehicles> 3.5t	07 - Heavy Goods Vehicles< =15t	08 - Heavy Goods Vehicles >15t	11 - Public Light Buses	12 - Private Light Bus <=3.5t	13 - Private Light Bus >3.5t	14 - Non-franchised Bus<=6.4t	15 - Non-franchised Bus 6.4-15t	16 - Non-franchised Bus >15t	17 - Franchised Bus (SD)	18 - Franchised Bus (DD)	19 - Motorcycles (MC)	NOx E.F. (g/VKT)	PM10 E.F. (g/VKT)	PM2.5 E.F. (g/VKT)	Traveling Distance (m) [1]	NOx E.M (g/hr)	PM10E.M (g/hr)	PM2.5 E.M (g/hr)	NOx E.M (g/s) [2]	PM10 E.M (g/s) [2]	PM2.5 E.M (g/s) [2]
CWD	Hr1	2	5	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.123	0.014	0.014	1000	0.246	0.029	0.029	0.0001	0.000008	0.000008
CWD	Hr2	0	5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.000	0.000	0.000	1000	0.000	0.0000	0.0000	0.0000	0.000000	0.000000
CWD	Hr3	0	5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.000	0.000	0.000	1000	0.000	0.0000	0.0000	0.0000	0.000000	0.000000
CWD	Hr4	0	5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.000	0.000	0.000	1000	0.000	0.0000	0.0000	0.0000	0.000000	0.000000
CWD	Hr5	0	5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.000	0.000	0.000	1000	0.000	0.0000	0.0000	0.0000	0.000000	0.000000
CWD	Hr6	14	5	35.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	1.127	0.040	0.040	1000	15.772	0.5565	0.5565	0.0044	0.000155	0.000155
CWD	Hr7	33	5	24.2%	0.0%	0.0%	0.0%	0.0%	24.2%	0.0%	6.1%	0.0%	0.0%	0.0%	0.0%	42.4%	0.0%	0.0%	3.0%	6.206	0.239	0.239	1000	204.798	7.8887	7.8887	0.0569	0.002191	0.002191
CWD	Hr8	59	5	47.5%	0.0%	0.0%	0.0%	0.0%	22.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.0%	0.0%	0.0%	8.5%	3.667	0.145	0.145	1000	216.375	8.5632	8.5632	0.0601	0.002379	0.002379
CWD	Hr9	32	5	28.1%	0.0%	0.0%	0.0%	0.0%	31.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.1%	0.0%	0.0%	12.5%	4.799	0.186	0.186	1000	153.560	5.9513	5.9513	0.0427	0.001653	0.001653
CWD	Hr10	27	5	25.9%	0.0%	0.0%	0.0%	0.0%	25.9%	0.0%	7.4%	0.0%	0.0%	0.0%	0.0%	25.9%	0.0%	0.0%	14.8%	4.431	0.173	0.173	1000	119.646	4.6796	4.6796	0.0332	0.001300	0.001300
CWD	Hr11	31	5	19.4%	0.0%	0.0%	0.0%	0.0%	29.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.7%	0.0%	0.0%	12.9%	5.957	0.231	0.231	1000	184.680	7.1614	7.1614	0.0513	0.001989	0.001989
CWD	Hr12	34	5	23.5%	0.0%	0.0%	0.0%	0.0%	20.6%	0.0%	20.6%	0.0%	0.0%	0.0%	0.0%	23.5%	0.0%	0.0%	11.8%	4.149	0.159	0.159	1000	141.080	5.4122	5.4122	0.0392	0.001503	0.001503
CWD	Hr13	35	5	28.6%	0.0%	0.0%	0.0%	0.0%	28.6%	0.0%	8.6%	0.0%	0.0%	0.0%	0.0%	25.7%	0.0%	0.0%	8.6%	4.519	0.173	0.173	1000	158.182	6.0539	6.0539	0.0439	0.001682	0.001682
CWD	Hr14	36	5	19.4%	0.0%	0.0%	0.0%	0.0%	22.2%	0.0%	8.3%	0.0%	0.0%	0.0%	0.0%	41.7%	0.0%	0.0%	8.3%	6.061	0.237	0.237	1000	218.211	8.5176	8.5176	0.0606	0.002366	0.002366
CWD	Hr15	37	5	10.8%	0.0%	0.0%	0.0%	0.0%	35.1%	0.0%	13.5%	0.0%	0.0%	0.0%	0.0%	32.4%	0.0%	0.0%	8.1%	5.595	0.213	0.213	1000	207.008	7.8770	7.8770	0.0575	0.002188	0.002188
CWD	Hr16	40	5	22.5%	0.0%	0.0%	0.0%	0.0%	32.5%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	32.5%	0.0%	0.0%	7.5%	5.324	0.207	0.207	1000	212.962	8.2611	8.2611	0.0592	0.002295	0.002295
CWD	Hr17	45	5	44.4%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.7%	0.0%	0.0%	8.9%	4.057	0.164	0.164	1000	182.568	7.3642	7.3642	0.0507	0.002046	0.002046
CWD	Hr18	10	5	20.0%	0.0%	0.0%	0.0%	0.0%	30.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%	6.183	0.235	0.235	1000	61.828	2.3523	2.3523	0.0172	0.000653	0.000653
CWD	Hr19	13	5	46.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.4%	0.0%	0.0%	0.0%	0.0%	38.5%	0.0%	0.0%	0.0%	4.859	0.193	0.193	1000	63.166	2.5090	2.5090	0.0175	0.000697	0.000697
CWD	Hr20	10	5	60.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%	4.810	0.194	0.194	1000	48.100	1.9433	1.9433	0.0134	0.000540	0.000540
CWD	Hr21	16	5	25.0%	0.0%	0.0%	0.0%	0.0%	18.8%	0.0%	31.3%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	4.355	0.162	0.162	1000	69.680	2.5844	2.5844	0.0194	0.000718	0.000718
CWD	Hr22	7	5	85.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	0.224	0.022	0.022	1000	1.566	0.1512	0.1512	0.0004	0.000042	0.000042
CWD	Hr23	5	5	60.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	20.0%	2.593	0.114	0.114	1000	12.965	0.5718	0.5718	0.0036	0.000159	0.000159
CWD	Hr24	1	5	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.123	0.014	0.014	1000	0.123	0.0145	0.0145	0.0000	0.000004	0.000004
																										Max	0.061	0.002379	0.002379

Note:

[1] The longest travelling distance of 1000m was adopted for a conservative approach.

[2] The starting emission was adopted for vehicles traveling within the Project Site

Table 3-3-3 Operation Factor for Each Hour

	NOx	RSP	FSP
Hour	Operation Factor[2]	Operation Factor[2]	Operation Factor[2]
0:00	0.001	0.003	0.003
1:00	0.000	0.000	0.000
2:00	0.000	0.000	0.000
3:00	0.000	0.000	0.000
4:00	0.000	0.000	0.000
5:00	0.072	0.065	0.065
6:00	0.939	0.921	0.921
7:00	0.992	1.000	1.000
8:00	0.704	0.695	0.695
9:00	0.548	0.546	0.546
10:00	0.846	0.836	0.836
11:00	0.647	0.632	0.632
12:00	0.725	0.707	0.707
13:00	1.000	0.995	0.995
14:00	0.949	0.920	0.920
15:00	0.976	0.965	0.965
16:00	0.837	0.860	0.860
17:00	0.283	0.275	0.275
18:00	0.289	0.293	0.293
19:00	0.220	0.227	0.227
20:00	0.319	0.302	0.302
21:00	0.007	0.018	0.018
22:00	0.059	0.067	0.067
23:00	0.001	0.002	0.002

Note:

[1]: The operation factor would be adopted in the AERMOD model to adjust the emission rate i

[2] : The operation factor is based in the equation of :-

$$\frac{Hourly\ Emission\ Factor\ (g/s/m2)}{Maximum\ Houly\ Emission\ Factor\ (g/s/m2)}$$

Table 3-3-4 Emission opening Information

					Initial Lateral Dimension (m)	Initial Vertical Dimension (m)	Max. Emission Rate (g/s)								
ID	X-Coordinate	Y-Coordinate	Elevation (mPD)	Release Height (m)	Sigma Y	Sigma Z	NOx	RSP	FSP	Opening Width (m)	Adjacant Building Height (m)	Opening Area (m2)	Bottom (mPD)	Center (mPD)	Height (m)
T01	842974.0958	814786.278	5	2	4.47	18.60	0.001293	0.000051	0.000051	9.60	40	38.40	5	7	4
T02	843044.7489	814732.9259	5	3	6.19	18.60	0.001792	0.000070	0.000070	13.30	40	53.22	6	8	4
T03	843084.5525	814760.8754	5	2	3.26	18.60	0.000943	0.000037	0.000037	7.00	40	28.00	5	7	4
T04	842977.0174	814795.9851	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T05	842973.9825	814786.4551	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T06	842966.4569	814763.9459	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T07	842972.3223	814739.5075	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T08	842982.1023	814730.9768	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T09	842994.2505	814720.3708	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T10	843002.5452	814713.1459	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T11	843041.4061	814731.3718	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T12	843048.3802	814739.7388	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T13	843055.6949	814748.162	5	11.4	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	14.4	16.4	4
T14	842977.0846	814796.0125	5	18	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	21	23	4
T15	842973.8726	814786.3315	5	18	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	21	23	4
T16	843041.3441	814731.3606	5	18	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	21	23	4
T17	843048.6156	814739.8058	5	18	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	21	23	4
T18	843055.6971	814748.0807	5	18	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	21	23	4
T19	842977.0638	814796.0543	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T20	842973.9935	814786.5367	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T21	842966.4872	814763.955	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T22	842972.3114	814739.4551	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T23	842982.0638	814730.9493	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T24	842994.1949	814720.3574	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T25	843002.4563	814713.1613	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T26	843042.5481	814732.7998	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T27	843049.0884	814740.3645	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T28	843056.193	814748.7628	5	25.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	28.9	30.9	4
T29	842977.1166	814796.0105	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T30	842973.9679	814786.5191	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T31	842966.1583	814763.8061	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T32	842972.3881	814739.3268	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T33	842982.0972	814730.9642	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T34	842994.079	814720.5915	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T35	843002.511	814713.1339	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T36	843042.5042	814732.8549	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T37	843049.0456	814740.4187	5	34.6	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	37.6	39.6	4
T38	842977.0609	814795.7524	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T39	842973.9122	814786.261	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T40	842966.4885	814763.9209	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T41	842972.3254	814739.5477	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T42	842982.1226	814731.0028	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T43	842994.2537	814720.4109	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T44	843002.5483	814713.186	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T45	843041.2013	814731.3373	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T46	843047.7221	814738.9188	5	41	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	44	46	4
T47	842977.1234	814795.9968	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4
T48	842973.9559	814786.5117	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4
T49	842966.493	814763.912	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4
T50	842972.3495	814739.4815	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4
T51	842982.1492	814730.9396	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4
T52	842993.529	814721.0077	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4
T53	843001.8266	814713.7861	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4
T54	843042.482	814732.7411	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4
T55	843049.1076	814740.3372	5	47.9	4.65	18.60	0.001347	0.000053	0.000053	10.00	40	40.00	50.9	52.9	4

Appendix 3.4

Calculation of Emission Factors of Vehicular Idling Activities at Project Site

Table 1
Vehicle Inventory

	Vehicle Type*										Total #
	General Purpose Vehicle						Special Purpose Vehicle				
	Private Car	Motor Cycle	Light Bus/Large Van	Medium Van	Light Truck	Other	Refuse Collection Vehicle	Street Washing Vehicle	Grab Lorry	Other	
Daily In-bound Traffic	71	21	73	42	15	0	13	6	0	0	241
Daily Out-bound Traffic	74	21	69	43	13	6	14	6	0	0	246
Total	145	42	142	85	28	6	27	12	0	0	487
%	29.8%	8.6%	29.2%	17.5%	5.7%	1.2%	5.5%	2.5%	0.0%	0.0%	

Note:
* : The vehicle inventory and activities were confirmed by HKPF, EMSD, FEHD, GLD and GL.
# : Some vehicles may have to stay for repair and maintenance, thus the total number of "Daily In-Bound Traffic" less than "Daily Out-bound Traffic

Pollutant Emission for Idling

Equation for Calculating the Emission for Pollutant
Emission Rate by Heavy Goods Vehicle

The following equation is referenced to the equation 9 of the report of "*Road Tunnels: Vehicle Emissions and Air Demand for Ventilation (Version 2012)*" which is published by the World Road Association (PIARC) (hereinafter refered to as PIARC Report).

$$Q = q_{ex} \times f_h \times f_t \times f_e \times f_m + q_{ne}$$

where:
Q = emission for NOx or particulate matter (g/hr veh)
qex = base emission factor for HGV with diesel engines, depending on averagespeed and road gradient for the base year 2010 (m^2/(h.veh))
qne = emission factor for non-exhaust particulate matter emissions (m^2/h.veh)
fh = altitude factor
ft = influence factors for years differing from the base year
fe = influence factor for technology standards
fm = influence factor for vehicle gross masses

Table 2
Idling NOx Idling Emission

Activity	q_{ex} *[2]*	f_h *[3]*	f_t *[4]*	f_e *[5]*	f_m *[6]*	q_{ne} *[7]*	*Emission Rate (g/hr)*	*Operation Time (s)*	*Corrected NOx Emission Rate (g/hr) per Vehicle*	*Corrected NOx (g/s) Emission Rate per Vehicle*	*Max. No. of Vehicles*	*Corrected NOx (g/s)*
Vehicle Washing at FEHD Depot	163.5	1	0.35	1.6	1	1.04	93	900	23.2	0.00643	1	0.0064306
Vehicle Repair/ Testing at HKPF PVP&EC	163.5	1	0.35	1.6	1	1.04	93	900	23.2	0.00643	5	0.0321528
Vehicle Repair/ Testing at EMSD Depot	163.5	1	0.35	1.6	1	1.04	93	900	23.2	0.00643	14	0.0900278
											20	0.1286111

Note:
[1] Based on the PIARC Report, the technology standard B refers to the countries which have adopted Euro or similar emission standards with a time shift of 10 years.
The description of technology stardand B is similar to the situation in Hong Kong. Therefore, the parameter values for technology standard B is adopted in this assessment.

[2] Base emission factor for NOx, refers to the Tables 19 of PIARC report. The selected factor is refered to 10 km/h and 0 % of gradient.

[3] Altitude factor, refers to Table 12 of PIARC report.

[4] Influence factor, refers to the Table 22 of PIARC report. Due to our operation year is 2023, therefore the factor for year 2020 is selected.

[5] Influence factor for technology standards, refers to Table 23 of PIARC report.
[6] Influence factor for vehicle gross masses, refers to the Table 21 of PIARC report. It is assumed the type of vehicle is 23t (average).
[7] Emission factor for non-exhaust particulate matter emissions, refers to Table 28 of PIARC report. The factor for 10km/h is adopted in this assessment.

Table 3
Idling PM Idling Emission

Activity	q_{ex} *[2]*	f_h *[3]*	f_t *[4]*	f_e *[5]*	f_m *[6]*	q_{ne} *[7]*	*MIRA Correlation Factor (m^2/g) [8]*	*Emission Rate (g/hr)*	*Operation Time (s)*	*Corrected PM Emission Rate (g/hr) per Vehicle*	*Corrected PM (g/s) Emission Rate per Vehicle*	*Max. No. of Vehicles*	*Corrected PM (g/s) [9]*
Vehicle Washing at FEHD Depot	18.2	1	0.33	2.5	1	1.04	4.7	4.23	900	1.059	0.000294	1	########
Vehicle Repair/ Testing at HKPF PVP&EC	18.2	1	0.33	2.5	1	1.04	4.7	4.23	900	1.059	0.000294	5	########
Vehicle Repair/ Testing at EMSD Depot	18.2	1	0.33	2.5	1	1.04	4.7	4.23	900	1.059	0.000294	14	########
												20	########

Note:
[1] Based on the PIARC Report, the technology standard B refers to the countries which have adopted Euro or similar emission standards with a time shift of 10 years.
The description of technology stardand B is similar to the situation in Hong Kong. Therefore, the parameter values for technology standard B is adopted in this assessment.
[2] Base emission factor for PM, refers to the Tables 20 of PIARC report. The selected factor is refered to 10 km/h and 0 % of gradient.
[3] Altitude factor, refers to page 31 of PIARC report, no identifiable the altitude factor for heavy-goods vehicles and altitudes below 2,000m above sea level. Thus, "N/A" would be adopted in the assessment.
[4] Influence factor, refers to the Table 22 of PIARC report. Due to our operation year is 2023, therefore the factor for year 2020 is selected.
[5] Influence factor for technology standards, refers to Table 23 of PIARC report.
[6] Influence factor for vehicle gross masses, refers to the Table 21 of PIARC report. It is assumed the type of vehicle is 23t (average).
[7] Emission factor for non-exhaust particulate matter emissions, refers to Table 28 of PIARC report. The factor for 10km/h is adopted in this assessment.
[8] A conversion factor between particulate emission in g and turbidity is given by the MIRA-correlation factor 1g =4.7m^2 (refers to page 25 of PIARC report).
[9] The emission factors for PM10 and PM2.5 are assumed the same.

Table 4
Operation Factor for Each Hour

	NOx	RSP/ FSP
Hour	Operation Factor	Operation Factor
0:00	0	0
1:00	0	0
2:00	0	0
3:00	0	0
4:00	0	0
5:00	0	0
6:00	0	0
7:00	0	0
8:00	1	1
9:00	1	1
10:00	1	1
11:00	1	1
12:00	1	1
13:00	1	1
14:00	1	1
15:00	1	1
16:00	1	1
17:00	1	1
18:00	0	0
19:00	0	0
20:00	0	0
21:00	0	0
22:00	0	0
23:00	0	0

Remark:
[1] The number of "1" means with operation of idling testing; "0" means without operation of idling testing.
[2] The operation factor would be adopted in the AERMOD model to adjust the emission rate input for the corresponding l
[3] The operation hour (0800 - 1700) for idling testing was confirmed by EMSD and HKPF.

Appendix 3.5

Summary of Information for AERMOD Input

Information for AERMOD

Description	Source ID	X	Y	Source Type	Ground Level (mPD)	Emission Rate(g/s) [3]			Release Height(m)	Sigma Y	Sigma Z
						NOx	RSP	FSP			
Vehicle Travelling Emission [1]	T01	842974.0958	814786.278	VOLUME	5	1.29E-03	5.08E-05	5.08E-05	2	4.47	18.60
Vehicle Travelling Emission [1]	T02	843044.7489	814732.9259	VOLUME	5	1.79E-03	7.03E-05	7.03E-05	3	6.19	18.60
Vehicle Travelling Emission [1]	T03	843064.5525	814760.8754	VOLUME	5	9.43E-04	3.70E-05	3.70E-05	2	3.26	18.60
Vehicle Travelling Emission [1]	T04	842977.0174	814795.9851	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T05	842973.9825	814786.4551	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T06	842966.4569	814763.9459	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T07	842972.3223	814739.5075	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T08	842982.1023	814730.9768	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T09	842994.2505	814720.3708	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T10	843002.5452	814713.1459	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T11	843041.4061	814731.3718	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T12	843048.3802	814739.7368	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T13	843055.6949	814748.162	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	11.4	4.65	18.60
Vehicle Travelling Emission [1]	T14	842977.0846	814796.0125	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	18	4.65	18.60
Vehicle Travelling Emission [1]	T15	842973.8726	814786.3315	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	18	4.65	18.60
Vehicle Travelling Emission [1]	T16	843041.3441	814731.3606	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	18	4.65	18.60
Vehicle Travelling Emission [1]	T17	843048.6156	814739.8058	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	18	4.65	18.60
Vehicle Travelling Emission [1]	T18	843055.6971	814748.0807	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	18	4.65	18.60
Vehicle Travelling Emission [1]	T19	842977.0638	814796.0543	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T20	842973.9935	814786.5367	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T21	842966.4872	814763.955	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T22	842972.3114	814739.4551	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T23	842982.0638	814730.9493	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T24	842994.1949	814720.3574	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T25	843002.4563	814713.1613	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T26	843042.5481	814732.7998	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T27	843049.0884	814740.3645	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T28	843056.193	814748.7628	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	25.9	4.65	18.60
Vehicle Travelling Emission [1]	T29	842977.1166	814796.0105	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T30	842973.9679	814786.5191	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T31	842966.1583	814763.8061	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T32	842972.3881	814739.3268	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T33	842982.0972	814730.9642	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T34	842994.079	814720.5915	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T35	843002.511	814713.1339	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T36	843042.5042	814732.8549	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T37	843049.0456	814740.4187	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	34.6	4.65	18.60
Vehicle Travelling Emission [1]	T38	842977.0609	814795.7524	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T39	842973.9122	814786.261	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T40	842966.4885	814763.9209	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T41	842972.3254	814739.5477	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T42	842982.1226	814731.0028	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T43	842994.2537	814720.4109	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T44	843002.5483	814713.186	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T45	843041.2013	814731.3373	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T46	843047.7221	814738.9188	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	41	4.65	18.60
Vehicle Travelling Emission [1]	T47	842977.1234	814795.9968	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Vehicle Travelling Emission [1]	T48	842973.9559	814786.5117	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Vehicle Travelling Emission [1]	T49	842966.493	814763.912	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Vehicle Travelling Emission [1]	T50	842972.3495	814739.4815	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Vehicle Travelling Emission [1]	T51	842982.1492	814730.9396	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Vehicle Travelling Emission [1]	T52	842993.529	814721.0077	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Vehicle Travelling Emission [1]	T53	843001.8266	814713.7861	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Vehicle Travelling Emission [1]	T54	843042.482	814732.7411	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Vehicle Travelling Emission [1]	T55	843049.1076	814740.3372	VOLUME	5	1.35E-03	5.29E-05	5.29E-05	47.9	4.65	18.60
Idling emission [2]	ID01	842972.0821	814744.8663	VOLUME	5	4.29E-02	1.96E-03	1.96E-03	8	0.93	18.60
Idling emission [2]	ID02	843024.85	814714.2165	VOLUME	5	4.29E-02	1.96E-03	1.96E-03	21.9	0.93	18.60
Idling emission [2]	ID03	843024.85	814714.2165	VOLUME	5	4.29E-02	1.96E-03	1.96E-03	35.3	0.93	18.60

Remark:

[1] The operation factor for vehicle travelling adopted in the AERMOD model to adjust the emission rate input for the corresponding hour refer to Tabel 3-3-3 of Appendix 3.3.

[2] The operation factor for vehicle travelling adopted in the AERMOD model to adjust the emission rate input for the corresponding hour refer to Tabel 3 of Appendix 3.4.

[3] Appendix 3.3 and Appendix 3.4 show the details calculation of emission rate.

Appendix 4.1

Photos of Representative Existing Noise Sensitive Receivers

Photos of Representative Existing NSRs

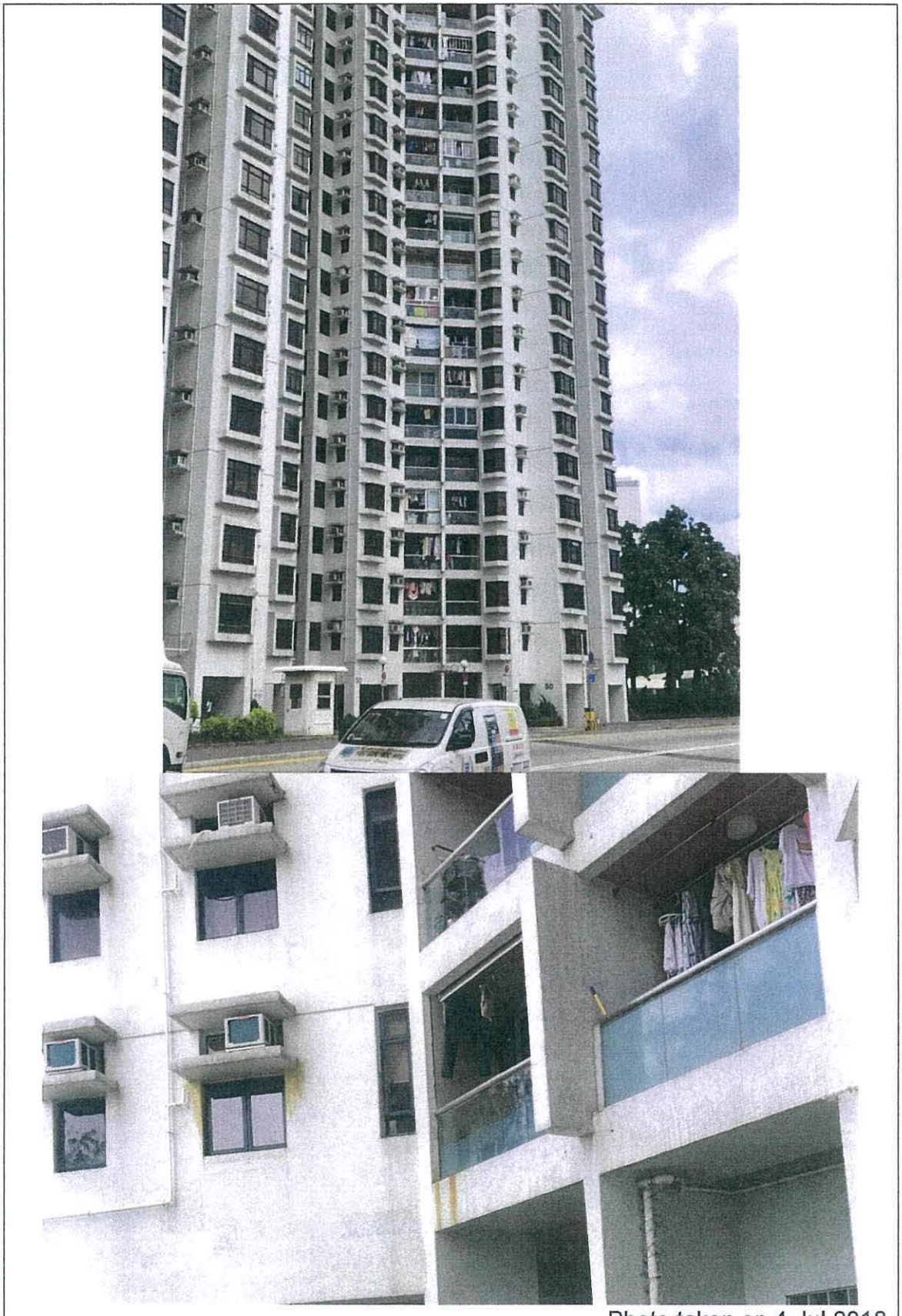

Photo taken on 4-Jul-2018

NSR 1 Heng Fa Chuen Block 50

Photos of Representative Existing NSRs

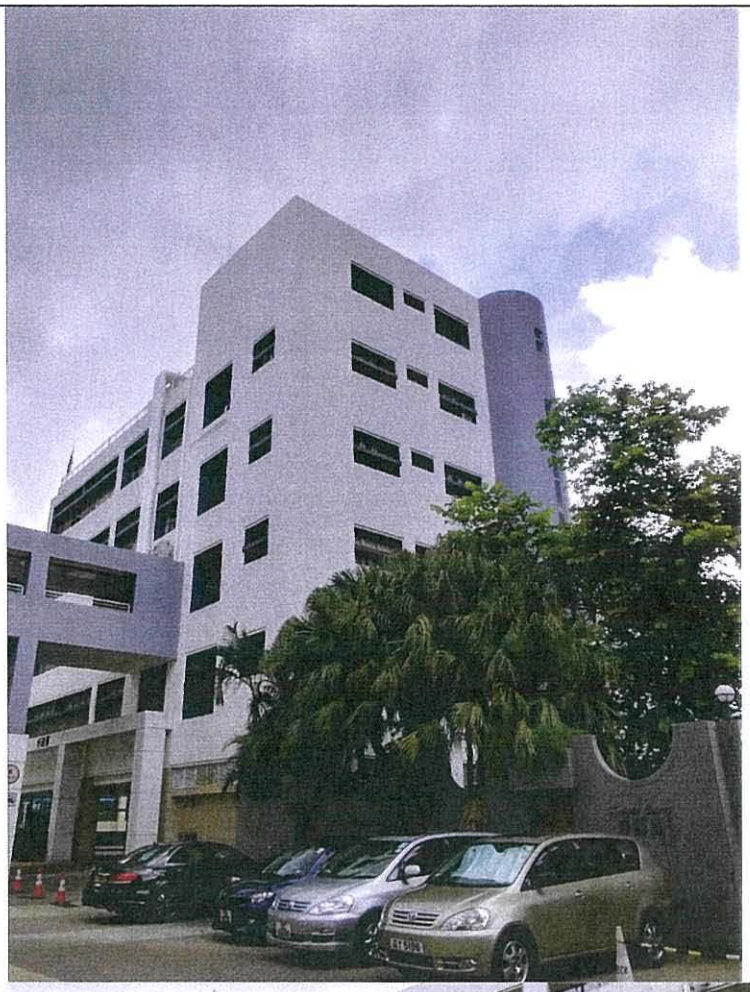

Photo taken on 4-Jul-2018

NSR 2 Hong Kong Institute of Vocational Education (Chai Wan) - Academic Block

Photos of Representative Existing NSRs

Photo taken on 4-Jul-2018

Photos of Representative Existing NSRs

Photo taken on 28-Jun-2018

NSR 4 Tsui Shou House, Tsui Wan Estate

Photo taken on 28-Jun-2018

NSR 5 Endeavourers Chan Cheng Kit Wan Kindergarten

Photo taken on 4-Jul-2018

NSR 6 Tsui Fuk House, Tsui Wan Estate

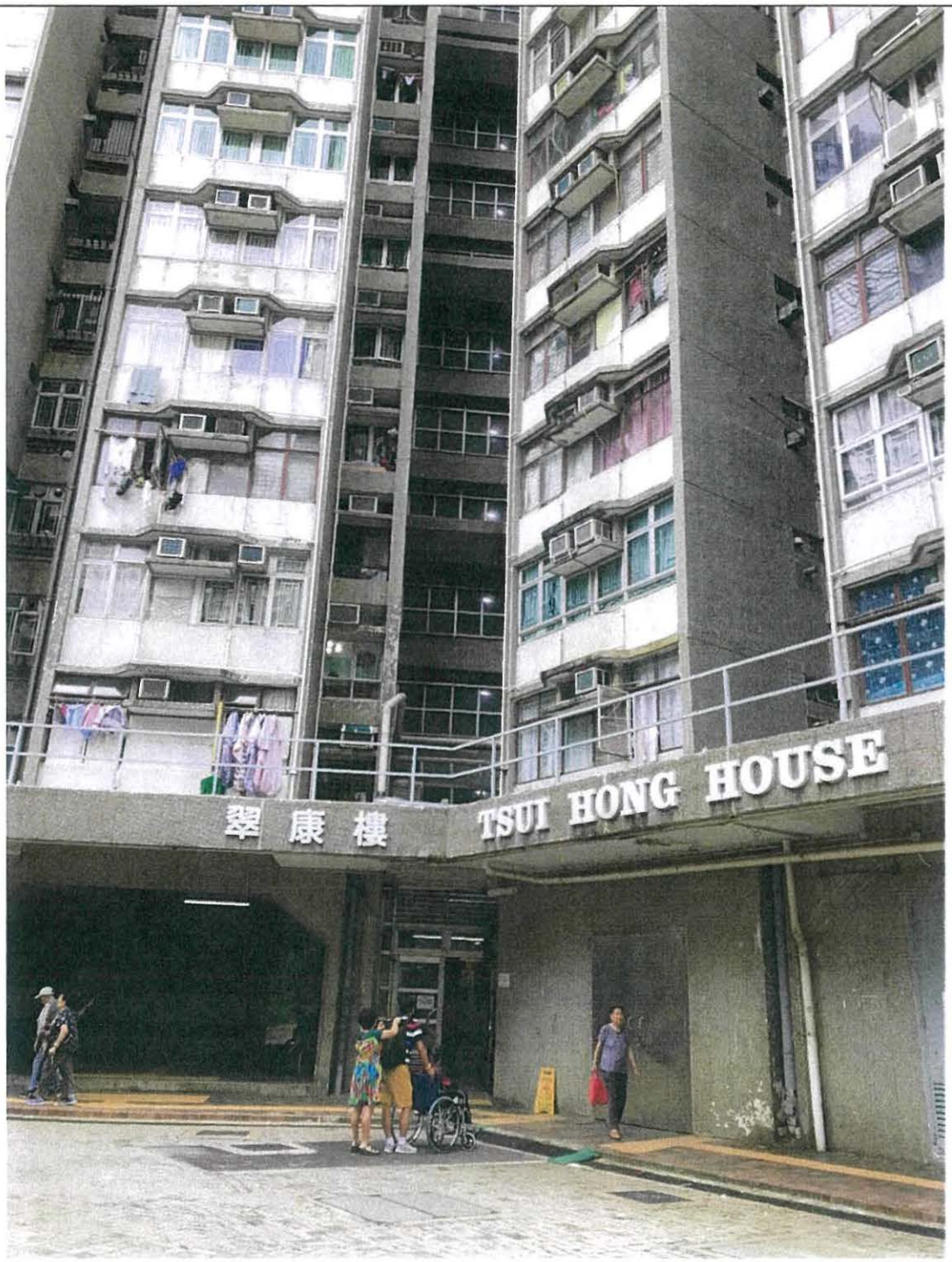

Photo taken on 4-Jul-2018

NSR 7 Tsui Hong House, Tsui Wan Estate

Photos of Representative Existing NSRs

Photo taken on 4-Jul-2018

NSR 8 THEi Campus

Appendix 4.2

Result Summary of Traffic Noise Impact Assessment

Predicted noise levels for "with proposed Project" and "without proposed Project" scenarios during AM and PM peak in Year 2038

				AM Peak Road Traffic Noise in Year 2038, $L_{10(1\ hr)}$, dB(A)			PM Peak Road Traffic Noise in Year 2038, $L_{10(1\ hr)}$, dB(A)		
ID	NAP ID	Floor	mPD	Without proposed Project	With proposed Project	Difference	Without proposed Project	With proposed Project	Difference
1	NAP 101	1F	8.7	70.9	70.9	0	70.3	70.3	0
1	NAP 101	2F	11.7	70.9	70.9	0	70.3	70.4	0.1
1	NAP 101	3F	14.7	70.9	70.9	0	70.3	70.3	0
1	NAP 101	4F	17.7	70.8	70.8	0	70.2	70.2	0
1	NAP 101	5F	20.7	70.7	70.7	0	70.1	70.1	0
1	NAP 101	6F	23.7	70.6	70.6	0	70.0	70.0	0
1	NAP 101	7F	26.7	70.5	70.5	0	69.9	69.9	0
1	NAP 101	8F	29.7	70.4	70.4	0	69.8	69.8	0
1	NAP 101	9F	32.7	70.3	70.3	0	69.7	69.7	0
1	NAP 101	10F	35.7	70.2	70.2	0	69.5	69.6	0.1
1	NAP 101	11F	38.7	70.1	70.1	0	69.4	69.5	0.1
1	NAP 101	12F	41.7	70.0	70.0	0	69.3	69.4	0.1
1	NAP 101	13F	44.7	69.9	69.9	0	69.2	69.3	0.1
1	NAP 101	14F	47.7	69.8	69.8	0	69.1	69.2	0.1
1	NAP 101	15F	50.7	69.7	69.7	0	69.0	69.1	0.1
1	NAP 101	16F	53.7	69.6	69.6	0	68.9	69.0	0.1
1	NAP 101	17F	56.7	69.6	69.6	0	68.9	68.9	0
1	NAP 101	18F	59.7	69.5	69.5	0	68.8	68.8	0
1	NAP 101	19F	62.7	69.4	69.4	0	68.7	68.7	0
1	NAP 101	20F	65.7	69.3	69.4	0.1	68.6	68.7	0.1
1	NAP 101	21F	68.7	69.3	69.3	0	68.5	68.6	0.1
2	NAP 201	1F	6.3	70.9	71.1	0.2	70.5	70.7	0.2
2	NAP 201	2F	9.3	70.9	71.0	0.1	70.5	70.7	0.2
2	NAP 201	3F	12.3	70.9	71.0	0.1	70.5	70.7	0.2
2	NAP 201	4F	15.3	70.9	71.0	0.1	70.5	70.6	0.1
2	NAP 201	5F	18.3	70.8	71.0	0.2	70.4	70.6	0.2
2	NAP 201	6F	21.3	70.8	70.9	0.1	70.4	70.5	0.1
3	NAP 202	1F	7.4	78.2	78.2	0	78.1	78.1	0
3	NAP 202	2F	10.4	78.4	78.4	0	78.2	78.2	0
3	NAP 202	3F	13.4	78.6	78.7	0.1	78.4	78.4	0
3	NAP 202	4F	16.4	78.8	78.8	0	78.4	78.4	0
3	NAP 202	5F	19.4	78.8	78.8	0	78.4	78.4	0
3	NAP 202	6F	22.4	78.7	78.7	0	78.3	78.3	0
4	NAP 301	1F	10.2	70.3	70.3	0	69.8	69.8	0
4	NAP 301	2F	13.2	70.5	70.5	0	69.9	69.9	0
4	NAP 301	3F	16.2	70.8	70.8	0	70.2	70.2	0
4	NAP 301	4F	19.2	71.0	71.0	0	70.3	70.3	0
4	NAP 301	5F	22.2	71.2	71.2	0	70.4	70.5	0.1
4	NAP 301	6F	25.2	71.3	71.3	0	70.6	70.6	0
4	NAP 301	7F	28.2	71.5	71.5	0	70.7	70.7	0
4	NAP 301	8F	31.2	71.7	71.7	0	70.8	70.9	0.1
4	NAP 301	9F	34.2	72.1	72.1	0	71.2	71.2	0
4	NAP 301	10F	37.2	72.5	72.5	0	71.6	71.7	0.1
4	NAP 301	11F	40.2	72.8	72.8	0	72.0	72.0	0
4	NAP 301	12F	43.2	73.0	73.0	0	72.1	72.2	0.1
4	NAP 301	13F	46.2	73.0	73.1	0.1	72.2	72.3	0.1
4	NAP 301	14F	49.2	73.1	73.1	0	72.3	72.3	0
4	NAP 301	15F	52.2	73.1	73.1	0	72.3	72.3	0
4	NAP 301	16F	55.2	73.0	73.1	0.1	72.2	72.3	0.1
4	NAP 301	17F	58.2	73.0	73.0	0	72.2	72.2	0
4	NAP 301	18F	61.2	73.0	73.0	0	72.2	72.2	0
4	NAP 301	19F	64.2	72.9	72.9	0	72.1	72.2	0.1
4	NAP 301	20F	67.2	72.8	72.9	0.1	72.1	72.1	0
4	NAP 301	21F	70.2	72.8	72.8	0	72.0	72.0	0
4	NAP 301	22F	73.2	72.7	72.7	0	71.9	72.0	0.1
4	NAP 301	23F	76.2	72.6	72.7	0.1	71.9	71.9	0
4	NAP 301	24F	79.2	72.6	72.6	0	71.8	71.8	0

Predicted noise levels for "with proposed Project" and "without proposed Project" scenarios during AM and PM peak in Year 2038

				AM Peak Road Traffic Noise in Year 2038, $L_{10(1\ hr)}$, dB(A)			PM Peak Road Traffic Noise in Year 2038, $L_{10(1\ hr)}$, dB(A)		
ID	NAP ID	Floor	mPD	Without proposed Project	With proposed Project	Difference	Without proposed Project	With proposed Project	Difference
5	NAP 401	1F	8.4	78.9	78.9	0	78.0	78.0	0
5	NAP 401	2F	11.4	78.8	78.8	0	77.9	77.9	0
5	NAP 401	3F	14.4	78.7	78.7	0	77.8	77.8	0
5	NAP 401	4F	17.4	78.5	78.5	0	77.6	77.6	0
5	NAP 401	5F	20.4	78.3	78.3	0	77.4	77.4	0
5	NAP 401	6F	23.4	78.1	78.1	0	77.2	77.3	0.1
5	NAP 401	7F	26.4	77.9	77.9	0	77.0	77.0	0
5	NAP 401	8F	29.4	77.7	77.7	0	76.8	76.8	0
5	NAP 401	9F	32.4	77.5	77.5	0	76.6	76.7	0.1
5	NAP 401	10F	35.4	77.3	77.3	0	76.4	76.5	0.1
5	NAP 401	11F	38.4	77.1	77.1	0	76.2	76.3	0.1
5	NAP 401	12F	41.4	76.9	76.9	0	76.1	76.1	0
5	NAP 401	13F	44.4	76.7	76.7	0	75.9	75.9	0
5	NAP 401	14F	47.4	76.6	76.6	0	75.7	75.8	0.1
5	NAP 401	15F	50.4	76.4	76.4	0	75.6	75.6	0
5	NAP 401	16F	53.4	76.2	76.3	0.1	75.4	75.4	0
5	NAP 401	17F	56.4	76.1	76.1	0	75.3	75.3	0
5	NAP 401	18F	59.4	75.9	75.9	0	75.1	75.1	0
5	NAP 401	19F	62.4	75.8	75.8	0	75.0	75.0	0
5	NAP 401	20F	65.4	75.6	75.6	0	74.8	74.8	0
5	NAP 401	21F	68.4	75.5	75.5	0	74.7	74.7	0
5	NAP 401	22F	71.4	75.4	75.4	0	74.6	74.6	0
5	NAP 401	23F	74.4	75.2	75.2	0	74.4	74.4	0
5	NAP 401	24F	77.4	75.1	75.1	0	74.3	74.3	0
5	NAP 401	25F	80.4	75.0	75.0	0	74.2	74.2	0
5	NAP 401	26F	83.4	74.8	74.9	0.1	74.1	74.1	0
5	NAP 401	27F	86.4	74.7	74.8	0.1	73.9	74.0	0.1
5	NAP 401	28F	89.4	74.6	74.6	0	73.8	73.8	0
5	NAP 401	29F	92.4	74.5	74.6	0.1	73.7	73.8	0.1
5	NAP 401	30F	95.4	74.4	74.4	0	73.6	73.7	0.1
6	NAP 501	1F	5.4	79.1	79.1	0	78.2	78.2	0
7	NAP 601	1F	8.9	75.2	75.2	0	74.4	74.4	0
7	NAP 601	2F	11.9	75.2	75.2	0	74.4	74.4	0
7	NAP 601	3F	14.9	75.2	75.2	0	74.3	74.3	0
7	NAP 601	4F	17.9	75.1	75.1	0	74.3	74.3	0
7	NAP 601	5F	20.9	75.1	75.1	0	74.2	74.3	0.1
7	NAP 601	6F	23.9	75.0	75.0	0	74.2	74.2	0
7	NAP 601	7F	26.9	74.9	74.9	0	74.1	74.1	0
7	NAP 601	8F	29.9	74.8	74.8	0	74.0	74.0	0
7	NAP 601	9F	32.9	74.8	74.8	0	74.0	74.0	0
7	NAP 601	10F	35.9	74.7	74.7	0	73.9	73.9	0
7	NAP 601	11F	38.9	74.6	74.6	0	73.8	73.8	0
7	NAP 601	12F	41.9	74.5	74.5	0	73.7	73.7	0
7	NAP 601	13F	44.9	74.4	74.4	0	73.6	73.6	0
7	NAP 601	14F	47.9	74.3	74.3	0	73.5	73.5	0
7	NAP 601	15F	50.9	74.2	74.2	0	73.4	73.4	0
7	NAP 601	16F	53.9	74.1	74.1	0	73.3	73.3	0
7	NAP 601	17F	56.9	74.0	74.0	0	73.2	73.2	0
7	NAP 601	18F	59.9	73.9	73.9	0	73.1	73.1	0
7	NAP 601	19F	62.9	73.8	73.8	0	73.0	73.0	0
7	NAP 601	20F	65.9	73.7	73.7	0	72.9	72.9	0
7	NAP 601	21F	68.9	73.6	73.6	0	72.8	72.8	0
7	NAP 601	22F	71.9	73.5	73.5	0	72.7	72.7	0
7	NAP 601	23F	74.9	73.4	73.4	0	72.6	72.6	0
7	NAP 601	24F	77.9	73.3	73.3	0	72.5	72.5	0
7	NAP 601	25F	80.9	73.2	73.2	0	72.4	72.4	0
7	NAP 601	26F	83.9	73.1	73.1	0	72.3	72.3	0
7	NAP 601	27F	86.9	73.0	73.0	0	72.2	72.2	0
7	NAP 601	28F	89.9	72.9	72.9	0	72.2	72.2	0
7	NAP 601	29F	92.9	72.8	72.8	0	72.1	72.1	0
7	NAP 601	30F	95.9	72.7	72.7	0	72.0	72.0	0

Predicted noise levels for "with proposed Project" and "without proposed Project" scenarios during AM and PM peak in Year 2038

				AM Peak Road Traffic Noise in Year 2038, $L_{10(1\ hr)}$, dB(A)			PM Peak Road Traffic Noise in Year 2038, $L_{10(1\ hr)}$, dB(A)		
ID	NAP ID	Floor	mPD	Without proposed Project	With proposed Project	Difference	Without proposed Project	With proposed Project	Difference
8	NAP 701	1F	8.4	76.8	76.9	0.1	76.1	76.1	0
8	NAP 701	2F	11.4	76.9	77.0	0.1	76.2	76.2	0
8	NAP 701	3F	14.4	76.9	77.0	0.1	76.2	76.2	0
8	NAP 701	4F	17.4	76.9	77.0	0.1	76.2	76.2	0
8	NAP 701	5F	20.4	76.9	77.0	0.1	76.1	76.2	0.1
8	NAP 701	6F	23.4	76.8	76.9	0.1	76.1	76.1	0
8	NAP 701	7F	26.4	76.8	76.8	0	76.0	76.0	0
8	NAP 701	8F	29.4	76.7	76.7	0	75.9	75.9	0
8	NAP 701	9F	32.4	76.6	76.7	0.1	75.8	75.9	0.1
8	NAP 701	10F	35.4	76.5	76.6	0.1	75.7	75.8	0.1
8	NAP 701	11F	38.4	76.4	76.5	0.1	75.7	75.7	0
8	NAP 701	12F	41.4	76.3	76.4	0.1	75.5	75.6	0.1
8	NAP 701	13F	44.4	76.2	76.3	0.1	75.5	75.5	0
8	NAP 701	14F	47.4	76.1	76.2	0.1	75.4	75.4	0
8	NAP 701	15F	50.4	76.0	76.1	0.1	75.3	75.3	0
8	NAP 701	16F	53.4	75.9	76.0	0.1	75.2	75.2	0
8	NAP 701	17F	56.4	75.8	75.9	0.1	75.1	75.1	0
8	NAP 701	18F	59.4	75.7	75.8	0.1	74.9	75.0	0.1
8	NAP 701	19F	62.4	75.6	75.7	0.1	74.8	74.9	0.1
8	NAP 701	20F	65.4	75.5	75.5	0	74.7	74.8	0.1
8	NAP 701	21F	68.4	75.4	75.5	0.1	74.6	74.7	0.1
8	NAP 701	22F	71.4	75.3	75.3	0	74.5	74.6	0.1
8	NAP 701	23F	74.4	75.2	75.2	0	74.4	74.5	0.1
8	NAP 701	24F	77.4	75.0	75.1	0.1	74.3	74.4	0.1
8	NAP 701	25F	80.4	75.0	75.0	0	74.2	74.3	0.1
8	NAP 701	26F	83.4	74.9	74.9	0	74.1	74.2	0.1
8	NAP 701	27F	86.4	74.8	74.8	0	74.0	74.1	0.1
8	NAP 701	28F	89.4	74.7	74.7	0	73.9	74.0	0.1
8	NAP 701	29F	92.4	74.6	74.6	0	73.8	73.9	0.1
8	NAP 701	30F	95.4	74.5	74.6	0.1	73.8	73.8	0
9	NAP 801	5F	26.9	66.5	66.7	0.2	66.3	66.4	0.1
9	NAP 801	6F	30.9	66.5	66.6	0.1	66.2	66.4	0.2
9	NAP 801	7F	34.9	66.4	66.6	0.2	66.1	66.3	0.2
9	NAP 801	8F	38.9	66.5	66.6	0.1	66.2	66.3	0.1
9	NAP 801	9F	42.9	66.5	66.7	0.2	66.2	66.4	0.2
9	NAP 801	10F	46.9	66.5	66.6	0.1	66.2	66.4	0.2
9	NAP 801	11F	50.9	66.5	66.6	0.1	66.2	66.3	0.1
9	NAP 801	12F	54.9	66.5	66.6	0.1	66.2	66.3	0.1
9	NAP 801	13F	58.9	66.4	66.6	0.2	66.1	66.3	0.2
10	NAP 802	5F	26.9	74.9	75.0	0.1	74.1	74.2	0.1
10	NAP 802	6F	30.9	74.9	74.9	0	74.1	74.2	0.1
10	NAP 802	7F	34.9	74.8	74.9	0.1	74.1	74.2	0.1
10	NAP 802	8F	38.9	74.8	74.9	0.1	74.1	74.1	0
10	NAP 802	9F	42.9	74.8	74.9	0.1	74.1	74.1	0
10	NAP 802	10F	46.9	74.8	74.9	0.1	74.0	74.1	0.1
10	NAP 802	11F	50.9	74.8	74.9	0.1	74.0	74.1	0.1
10	NAP 802	12F	54.9	74.7	74.8	0.1	74.0	74.1	0.1
10	NAP 802	13F	58.9	74.7	74.8	0.1	74.0	74.0	0

Appendix 4.3a

Correspondence with Future Users on Noisy Activities

From: Cathy Man <cm@aechk.com>
To: Yuk Yui SZE/ARCHSD/HKSARG@ARCHSD
Cc: Grace Kwok <gk@aechk.com>, Rodney Ip <ri@aechk.com>, Tak Wong <wtk@aechk.com>, Ronan Chan <rc@aechk.com>, Yvonne Kwan <yk@aechk.com>, Chi Lok WONG/ARCHSD/HKSARG@ARCHSD
Date: 07/11/2018 11:03 AM
Subject: FW: Chai Wan Government Complex and Vehicle Depot - Submission of ERR Working Paper (1158/18-0037) - EPD comment (Batch 3)

Dear Vincent,

Comments from EPD on AQIA are received and AEC will study accordingly.

As talked yesterday, as per comments from EPD on the ERR working paper (batch 1), followup actions as detailed below are required.

1. Item d under NIA:

- EPD's comment "Please seek confirmation of the future operator if there will be noisy activities in the new use of HKPF SMD"

- ASD to liaise with HKPF for the confirmation on the future usage of SMD and there will be no noisy activities.
- As refer to TFS, HKPF SMD is served as storage space.
- Refer to '180039 HKPF SMD_CCPS Future Operation.docx"

2. Item e under NIA:

- EPD's comment "Please seek confirmation of the future operators that the information of noise sources and activities to be adopted in NIA for ERR is correct."

- ASD to liaise with user departments (via email or letter or memo) for written confirmation.
- Refer to : "180040 Future Users_Confirmation.docx", "180040_Appendix 1_Extract from RFI dated 23072018.pdf"

3. Item g under NIA:

- EPD's Comment "The assumption of the noise from the bench grinder and drill stand based on equipment catalogues appears not conservative and would likely underestimate the noise impact as noise data from equipment catalogue would likely present the noise from the operation of the equipment only but not the grinding / drilling activities with working objects."

- On-site noise measurement of the operation of bench grinder and drill stand with same model is required.
- ASD to advise the contact person from EMSD for arrangement

4. Item k under NIA:

- EPD's Comment "The ground of making the assumption of full compliance with the construction noise criterion by the WSDCSDHQ project should be given. In general, cumulative CNIA should be conducted based on anticipated construction works at different phases planned / agreed by the proponent of the concurrent project / their construction professional"

- The PER report for WSDCSDHQ has been reviewed and no quantitative assessment for Construction Noise Impact Assessment (CNIA) has been conducted.
- ASD to provide if master program (showing the duration of each construction phase, i.e. foundation, superstructure etc.), construction plant inventory for each construction phase (include quantity, on time % of each plant and mitigation measures) , CNIA if available.
- If not, please confirm if the proposed construction plant list for WSDCSDHQ is appropriate to be assumed in our assessment.
- Refer to "180041 Appendix A - Plant Inventory Assumptions (for WSDCSDHQ).pdf"

5. Item 2 under Land Contamination Assessment

- EPD's comment: "It is mentioned that site appraisal was conducted in July 2018 to validate the previous findings on the potential land contamination issues at the project site. Please attach relevant records, such as correspondence from government departments and site walkover records with photos, to support the conclusion that subsequent soil and groundwater sampling and remediation is considered not necessary."

- Reply from LandsD is still pending regardless repeated email/ telcom/ fax. AEC will issue letter and email again. Grateful if ASD can liaise with LandsD if feasible.
- Refer to "180042 - LandsD(Land Contamination)_reissue.pdf"

Due to tight programme, grateful if the requested info can be available on or before 14 Nov 2018.

Thanks and Regards,

Cathy Man
Senior Consultant

Allied Environmental Consultants Limited
A member of Allied Sustainability and Environmental Consultants Group (Stock Code: 8320)
19/F, Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong

T: (852) 2815 7028 | D: (852) 3915 7148 | F: (852) 2815 5399 | E: cm@aechk.com

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From:	szeyy@archsd.gov.hk
Sent:	Monday, 19 November 2018 2:03 PM
To:	Cathy Man
Cc:	wongcl@archsd.gov.hk; Grace Kwok; Ronan Chan; Rodney Ip; Tak Wong; Yvonne Kwan
Subject:	Re: FW: Chai Wan Government Complex and Vehicle Depot - Submission of ERR Working Paper (1158/18-0037) - EPD comment (Batch 3)
Attachments:	180040 Future Users_Confirmation.docx; 180040 Future Users_Table 1_Extract from ERR Working Paper.pdf; 180039 HKPF SMD_CCPS Future Operation.docx; 180042 - LandsD(Land Contamination)_reissue.pdf; 180041 Appendix A - Plant Inventory Assumptions (for WSDCSDHQ).pdf; 180040 Future Users_Table 1_Extract from ERR Working Paper_FEHD.pdf; 180040 Future Users_Table 1_Extract from ERR Working Paper_mve.pdf
Follow Up Flag:	Follow up
Flag Status:	Completed

Dear Cathy,

Please find our reply for item 1 to 3 as below:

1. It is confirmed that future operation of the HKPF SMD Store will be used for storage purpose only and no noisy activities will be anticipated.

2. Please find user departments' reply as below:

User Department	Comments
FEHD	Comments marked in the attached file.
EMSD	The content is correct. However, some minor touch-up on the items are suggested to tally with the wording used in Table 3.3 of the EIA report – Chemical Mixing --> Chemical Mixing (e.g.: Lubricant Mixing) Chemical refilling --> Chemical Refilling (e.g.: Lubricant refilling)
HKPF PVP&EC	Comments are marked in the attached file.
Government Lab	Information is correct.
GLD	Information is correct.

We would reply for the item 4 ASAP.

For item 5, please advise any further reply from LandsD. If necessary, we can contact LandsD again.

Regards,
Vincent SZE
PM246
Architectural Services Department
Tel: 2867 3815
Fax: 2810 5372

Table 1: Vehicle Repair / Testing Equipment and Activities

HKPF PVP&EC	EMSD Depot	FEHD Depot	GL Specialist Laboratory	GLD Transport Pool
Braking Test (on grade)	Braking test (for vehicles other than motorcycle)	Vehicle washing Water	Vehicle parking	Vehicle parking
Braking Test (on slope)	Braking test (for motorcycle)	~~Vehicle~~ refilling in vehicle (for street washing vehicles)	Chemical testing	Vehicle washing (manual)
Braking test (for vehicles other than motorcycle)	Speedometer test (for motorcycle)	Vehicle parking		
Use of compressed air, e.g. screw driving	Tyre balancing			
Hammering	Tyre changing			
Vehicle Parking	Hammering			
Vehicle lifting	Use of compressed air, e.g. screw driving			
Vehicle examination (in pit)	Vehicle washing			
Vehicle examination (on ground)	Vehicle lifting			
Braking test (for motorcycle)	Engine testing			
	Vehicle parking			
	Chemical mixing			
	Battery charging			
	Chemical refilling			
	Bench Grinder			
	Drill Stand			

Table 1: Vehicle Repair / Testing Equipment and Activities

HKPF PVP&EC	EMSD Depot	FEHD Depot	GL Speci Laborat
Braking Test (on grade) ground	Braking test (for vehicles other than motorcycle)	Vehicle washing	Vehicle park
Braking Test (on slope)	Braking test (for motorcycle)	Vehicle refilling in vehicle	Chemical tes
Braking test (for vehicles other than motorcycle)	Speedometer test (for motorcycle)	Vehicle parking	
Use of compressed air, e.g. screw driving	Tyre balancing		
Hammering	Tyre changing		
Vehicle Parking	Hammering		
Vehicle lifting	Use of compressed air, e.g. screw driving		
Vehicle examination (on pit)	Vehicle washing		
Vehicle examination (on ground)	Vehicle lifting		
Braking test (for motorcycle)	Engine testing		
	Vehicle parking		
	Chemical mixing		
	Battery charging		
	Chemical		

Appendix 4.3b

Correspondence on Fixed Plant Inventory for WSDCSDHQ

From:	szeyy@archsd.gov.hk
Sent:	Tuesday, 27 November 2018 12:19 PM
To:	Cathy Man
Cc:	wongcl@archsd.gov.hk; Grace Kwok; Ronan Chan; Rodney Ip; Tak Wong; Yvonne Kwan
Subject:	Re: FW: Chai Wan Government Complex and Vehicle Depot - Submission of ERR Working Paper (1158/18-0037) - EPD comment (Batch 3)
Attachments:	180040 Future Users_Table 1_Extract from ERR Working Paper_FEHD.pdf; 180040 Future Users_Table 1_Extract from ERR Working Paper_mve.pdf; 180040 Future Users_Confirmation.docx; 180040 Future Users_Table 1_Extract from ERR Working Paper.pdf; 180039 HKPF SMD_CCPS Future Operation.docx; 180042 - LandsD(Land Contamination)_reissue.pdf; 180041 Appendix A - Plant Inventory Assumptions (for WSDCSDHQ).pdf

Dear Cathy,

Regarding item 4, please use the suggested "proposed construction plant list for WSDCSDHQ" as assumption in our assessment.

Regards,
Vincent SZE
PM246
Architectural Services Department
Tel: 2867 3815
Fax: 2810 5372

Project: Chai Wan Government Complex and Vehicle Depot
Date: 5/11/2018

Plant Inventory Assumptions for WSDCSDHQ

Stage	Activities [1]	PME	Remarks	ID	SWL	% on-time [3]	Qty
Pile Foundation	Driven H-Pile	Percussive Piling Machine	CNP required as statutory requirement				
Site Formation	Open Cut and excavation w/ lateral system	Air compressor, air flow >10m^3/min and <=30m^3/min		CNP 002	102	100%	1
		Excavator/loader, wheeled / tracked	QPME [4]	EPD-02383	92	75%	1
		Generator, standard	QPME [4]	EPD-00668	79	100%	1
		Dump Truck, 5.5tonne < Gross Vehicle Weight <=38tonne		Other [2]	105	50%	2
	Ground Compression - Act 1 (Leveling)	Bulldozer		CNP 030	115	100%	2
	Ground Compression - Act 2 (Compressing)	Roller, vibratory	QPME [4]	EPD-00509	95	100%	2
	Sheet piling	Piling, vibrating hammer		CNP 172	115	100%	1
	Pile caps and ground beam construction	Concrete Lorry Mixer		CNP 044	109	75%	1
		Concrete Pump, Stationary / lorry mounted		CNP 047	109	75%	1
		Poker Vibrator, hand-held		Other [2]	102	100%	1
Superstructure	Falsework and formwork, rebar fixing	Air compressor, air flow >10m^3/min and <=30m^3/min		CNP 002	102	100%	1
		Bar bender and cutter (electric)		CNP 021	90	100%	3
		Crane, mobile / barge mounted (diesel)	QPME [4]	EPD-02602	102	75%	1
		Crane, tower (electric)		CNP 049	95	100%	1
		Drill / grinder, hand-held (electric)		Other [2]	89	75%	1
		Generator	QPME [4]	EPD-00668	79	100%	1
		Breaker, hand-held (mass >=20kg and <=35kg)		CNP 025	111	50%	2
		Dump Truck, 5.5tonne < Gross Vehicle Weight <=38tonne		Other [2]	105	50%	1
		Saw, circular, wood		CNP 201	108	75%	2
	Concrete placing	Concrete Lorry Mixer		CNP 044	109	75%	1
		Concrete Pump, Stationary / lorry mounted		CNP 047	109	75%	1
		Poker Vibrator, hand-held		Other [2]	102	100%	1

Remarks:

[0] PME inventory are assumption only and subject to changes and design of Contractor per site situation
[1] Different Activities are not going to take place simultaneously at the same works location
[2] "Other" refer to "Sound Power leels of other commonly used PME"
[3] Maximum percentage of time in operation within any 30 minute of works
[4] "QPME" refer to list of Quality Powered Mechanical Equipment Lavel (valid), as of 29 Oct 2018

Appendix 4.4

Noise Measurement Report

ISSUE NO. : 2
ISSUE DATE : JULY 2019
PROJECT NO. : 1158(A)

PROGRAMME NO. 184GK

CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT

NOISE MEASUREMENT REPORT

COMMERCIAL-IN-CONFIDENCE

Prepared By:

Allied Environmental Consultants Ltd.

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers
[illegible]

Table of Contents

1 INTRODUCTION

Allied Environmental Consultants Limited was commissioned to undertake the Environmental Review (ER) for the Proposed Chai Wan Government Complex and Vehicle Depot at Sheung Tak Street, Chai Wan, which include a noise impact assessment. A noise measurement was conducted to obtain the noise level produced by the drill stand and bench grinder under operation, which are identified as the fixed noise sources from the proposed Project, for the fixed plant noise assessment.

As a conservative approach, estimation of Sound Power Levels (SWL) for the proposed models according to the latest available information obtained from various user departments in July 2018 are also presented. The higher SWL value will be adopted in the fixed noise assessment for impact evaluation.

2 SITE SURVEY AND NOISE MEASUREMENT

2.1 DATE AND TIME

Site survey was conducted on 5th December 2018 (16:30 to 18:00) at the existing Electrical and Mechanical Services Department (EMSD) workshop located at 46 Sheung On Street, Chai Wan to obtain noise data for evaluating the equipment noise levels during non-operation peak hour of the workshop. Photographs of the noise measurements are given in ***Annex A***.

2.2 SURVEY PERSONNEL

The following personnel took part in the measurements.

- Ms. Yvonne Kwan — Assistant Consultant (AEC)
- Mr. Alvin Chow — Technician (AEC)

2.3 WEATHER CONDITIONS

The workshop is covered and the measurements were made only during "dry" weather conditions without presence of rain.

2.4 SITE OBSERVATIONS

The EMSD workshop consists mainly of machines for vehicle repairing, maintenance and dismantling works. The drill stand and bench grinder are fixed and located at the western side of the covered area inside the workshop. As advised by the operators, the operation of the drill stand and bench grinder would be less than 2 times per week with maximum operating duration of 5 minutes and 10 minutes respectively. The equipment would be used for drilling and grinding of mild-steel plate with thickness of no larger than 3mm.

2.5 OPERATION DETAILS

As confirmed by EMSD (***Annex F***), the drill stand and bench grinder located at the EMSD workshop at Chai Wan are the only available equipment in EMSD's workshops/ depots. Corresponding specifications are summarised as below:

Table 2-1 Specifications of Drill Stand & Bench Grinder

	Drill Stand	Bench Grinder
Brand	BOKY	BOSCH
Model	ZJQ4116B	GBG Professional 8
Length (m)	0.4	0.4
Height (m)	0.9	0.3
Height of stand (m)	0.6	0.9
Width (m)	0.3	0.2
Rated Power (W)	375.0	600.0

During site survey, the drilling operation of the drill stand took around 3 minutes and mainly involved 5 steps as illustrated in ***Table 2-2***. Two modes (i.e. ***idling*** and ***operation*** modes) were considered in this report where ***idling mode*** considered noise generated only when machine is ON and ***operation mode*** considered the entire operation, i.e. step 2 to step 4.

Table 2-2 Operation Details of Drill Stand

Step		Description	Machine (ON / OFF)	Approximate Duration (s)
1	Fixing	Metal plate was fixed on the drill stand	OFF	60
2	Preparation	Machine started to operate and the drill was adjusted to position	ON	10
3	Drilling	Began with the contact of drill and the metal plate and finished when a hole was formed	ON	50
4	Finishing	Lifting up the drill from the metal plate	ON	10
5	Dismantling	Machine was turned off and the metal plate was dismantled from the drill stand	OFF	60

During site survey, the operation of bench grinder took around 30 seconds and mainly involved 3 steps as illustrated in ***Table 2-3***. Same approach with the drill stand, both ***idling*** and ***operation*** modes were considered in this report.

Table 2-3 Operation Details of Bench Grinder

Step		Description	Machine (ON / OFF)	Approximate Duration (s)
1	Preparation	Turning on the machine	ON	5

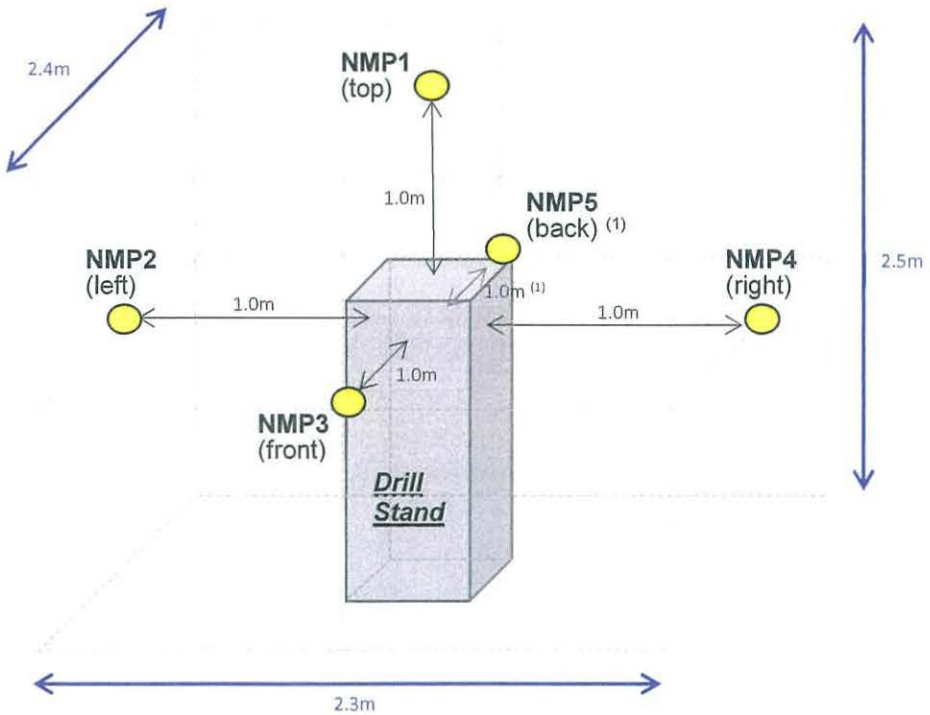
Step		Description	Machine (ON / OFF)	Approximate Duration (s)
2	Grinding	Began with the contact of grinding wheel and the metal plate and finished when the metal plate was shaped	ON	20
3	Finishing	The metal plate was taken further away from the grinder and the machine would be turned off	ON	5

2.6 NOISE MEASUREMENT

As observed during site survey, traffic noise from Wing Tai Road was noticeable at the EMSD workshop occasionally and the background noise was measured by avoiding such traffic noise and other operation noise from vehicle repair/ maintenance prior to equipment measurement.

Noise survey was carried out with reference to ISO3746:2010 with noise data recorded at 1s interval to capture noise data emitting from the ***idling*** and ***operation*** modes as abovementioned. Noise measurement points (NMPs) were located at 1m distance from the equipment whenever possible. The sound level meters set up positions for the drill stand and bench grinder are indicated in ***Plate 1*** and ***Plate 2*** respectively. The average sound pressure level (SPL) recorded amongst the five NMPs were adopted for evaluation of SWL emission.

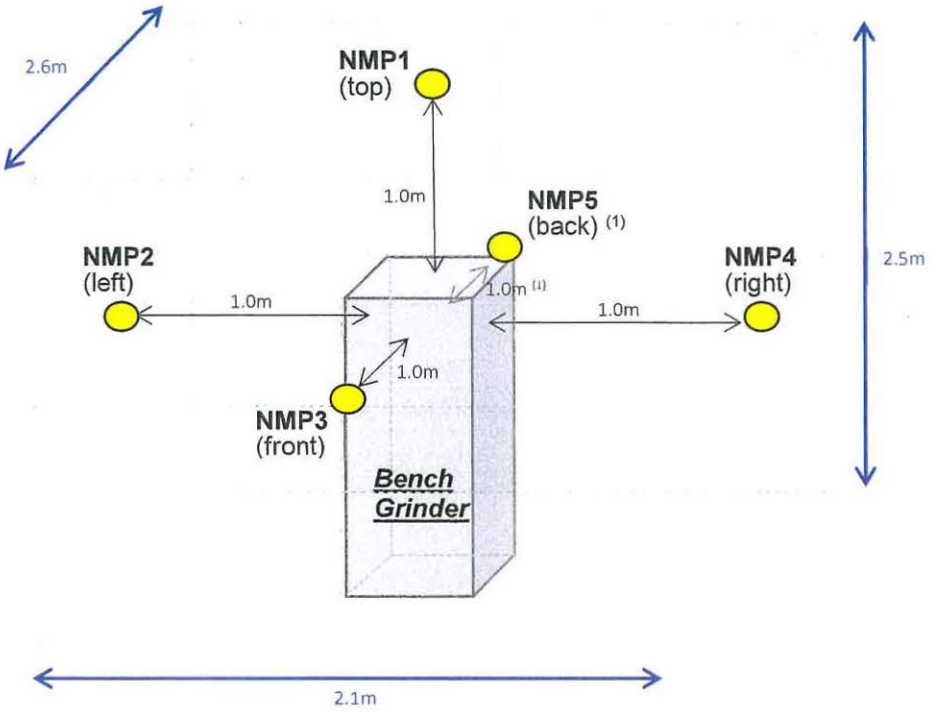
Plate 1 Indicative Location of Noise Measurement Points (NMP) for the Drill Stand



Notes:

(1) Measurement at "back" location was performed at 0.35m for both equipment due to site constraint, the location at "back" was constrained by obstacles. For SWL calculation, the noisiest SPL recorded amongst other measurement locations was adopted as reference SPL for the "back" location.

Plate 2 Indicative Location of NMP for the Bench Grinder



Notes:

(2) Measurement at "back" location was performed at 0.35m for both equipment due to site constraint, the location at "back" was constrained by obstacles. For SWL calculation, the noisiest SPL recorded amongst other measurement locations was adopted as reference SPL for the "back" location.

2.7 INSTRUMENTATION

All noise measurements were conducted using the equipment listed in ***Table 2-4*** below. A copy of the calibration certificates of the sound level meter and calibrator are attached in ***Annex B***.

Table 2-4 List of Instrumentation

Type	Model	Quantity
Sound Level Meter	B&K 2250	1
Sound Level Meter	NTI XL2	1
Sound Level Calibrator	RION NC-73	1

2.8 MEASUREMENT RESULT

A summary table of recorded noise levels for both bench grinder and drill stand together with site observations is shown in ***Annex C***. The measurement results are presented as "overall noise level" in $L_{Aeq(10s)}$ and $L_{Aeq(30s)}$.

No tonal, impulsiveness / intermittency was noticed during operation of the equipment.

3 INFORMATION OF THE PROPOSED EQUIPMENT

3.1 EQUIPMENT SPECIFICATIONS

According to the latest available information obtained from various user departments in July 2018, specifications of the proposed drill stand and bench grinder are summarised as below:

Table 3-1 Specifications of the Proposed Drill Stand & Bench Grinder

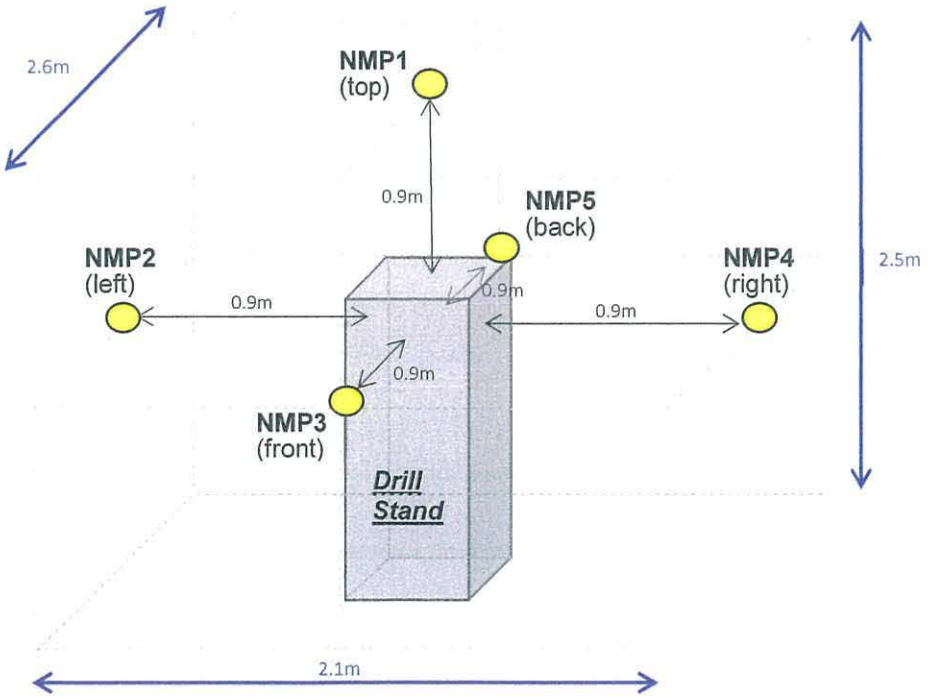
	Drill Stand	Bench Grinder
Brand	JET	metabo
Model	J-2500	BS175
Length (m)	0.8 (31 in)	0.6
Height (m)	1.6 (63 in)	0.5
Width (m)	0.3 (13 in)	0.3
Rated Power (W)	559.3 (3/4hp)	500.0

3.2 CONVERSION OF SWL FOR THE PROPOSED EQUIPMENT

SWL for bench grinder (model BS 175) can be refer to the equipment catalogues as shown in ***Annex D*** According to the latest available information obtained from various user departments in July 2018, which is 89.0 dB(A).

According to the equipment catalogue (***Annex E***), sound rating for model J-2500 drill stand is 82 to 84dB with a measuring distance of 3 feet (0.9m), as shown in ***Plate 3*** below. SPL of 84dB will be used in ***Section 4.2*** as a conservative estimation.

Plate 3 Indicative Location of NMP for the Proposed Drill Stand



4 DETERMINATION OF SOUND POWER LEVEL

SWL emanated from the drill stand will be determined with the SPL as abovementioned, and with reference to ISO3746:2010 (E), *Acoustics – Determination of Sound Power Levels of Noise Sources – Survey Method.*

Step 1: Measurement of Sound Pressure Level
(Details refer to Section 2.8 and Section 3.2)

Step 2: Calculation of sound energy levels
Parallelepiped measurement surface offset from the drill stand, as indicated schematically on ***Plates 1***, ***Plate 2*** and ***Plate 3***, corresponding to the measurement distance, are used to determine the total area of measurement surface. The calculation of SWL is determined by the following equation:

$$SWL = SPL + 10\log(S/S_0)\ dB$$

where: S = Total surface area of parallelepiped measurement surface
S_0 = Reference measurement surface area ($1m^2$)

4.1 SWL FROM NOISE MEASUREMENT

Detailed calculation of SWL for drill stand and bench grinder are tabulated in ***Table 4-1*** and ***Table 4-2*** below.

Table 4-1 Calculation of SWL for Drill Stand

a) Machine Data				
Width	W	0.3		m
Length	L	0.4		m
Height	H	1.5		m
Measurement Distance	r	1.0		m
b) Background Noise Level		60.2		dB(A)
c) Calculation of Sound Power Level				
Mode	-	**Operation**	**Idling**	
Sound Pressure Level ($L_{Aeq(30s)}$)	SPL	68.9	64.8	dB(A)
Background Corrected SPL($L_{Aeq(30s)}$)	SPL	68.3	62.9	dB(A)
Measurement Surface	S	28.7	28.7	m^2
$10\log(S/S_0)$	-	14.6	14.6	dB
Sound Power Level	SWL	**82.8**	**77.5**	dB(A)

Table 4-2 Calculation of SWL for Bench Grinder

a) Machine Data			
Width	W	0.2	m

Length	L	0.4	m
Height	H	1.2	m
Measurement Distance	r	1.0	m
b) Background Noise Level		58.2	dB(A)

c) Calculation of Sound Power Level

Mode	-	**Operation**	**Idling**	
Sound Pressure Level ($L_{Aeq(30s)}$)	SPL	79.8	69.3	dB(A)
Background Corrected SPL($L_{Aeq(30s)}$)	SPL	79.7	69.0	dB(A)
Measurement Surface	S	25.3	25.3	m^2
$10\log(S/S_0)$	-	14.0	14.0	dB
Sound Power Level	SWL	**93.8**	**83.0**	dB(A)

4.2 SWL FROM EQUIPMENT CATALOGUES

Detailed calculation of SWL for the proposed drill stand is tabulated in ***Table 4-3*** below.

Table 4-3 Calculation of SWL for the Proposed Drill Stand

a) Machine Data			
Width	W	0.3	m
Length	L	0.8	m
Height	H	1.6	m
Measurement Distance	r	0.9	m
b) Calculation of Sound Power Level			
Sound Pressure Level ($L_{Aeq(30mins)}$)	SPL	84.0	dB(A)
Measurement Surface	S	29.0	m^2
$10\log(S/S_0)$	-	14.6	dB
Sound Power Level	SWL	**98.6**	dB(A)

5 CONCLUSION

Noise measurements for evaluation of noise emission from drill stand and bench grinder were carried out at EMSD workshop. The calculated SWL of drill stand and bench grinder during operation mode were determined to be 82.8dB(A) and 93.8dB(A) respectively. Besides, estimation of SWL from the proposed equipment catalogues were also presented and the estimated SWL of the proposed drill stand and bench grinder were 98.6dB(A) and 89.0dB(A) respectively.

As a conservative approach, the larger values, i.e. 98.6dB(A) for drill stand and 93.8dB(A) for bench grinder will be adopted for the evaluation of potential fixed plant noise impacts in the ER.

Annex A

Photographs of the Noise Measurement

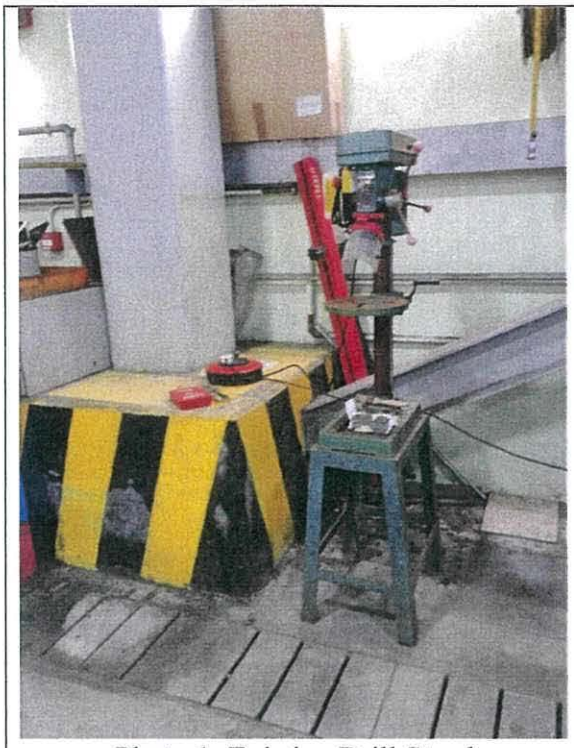


Photo 1: Existing Drill Stand

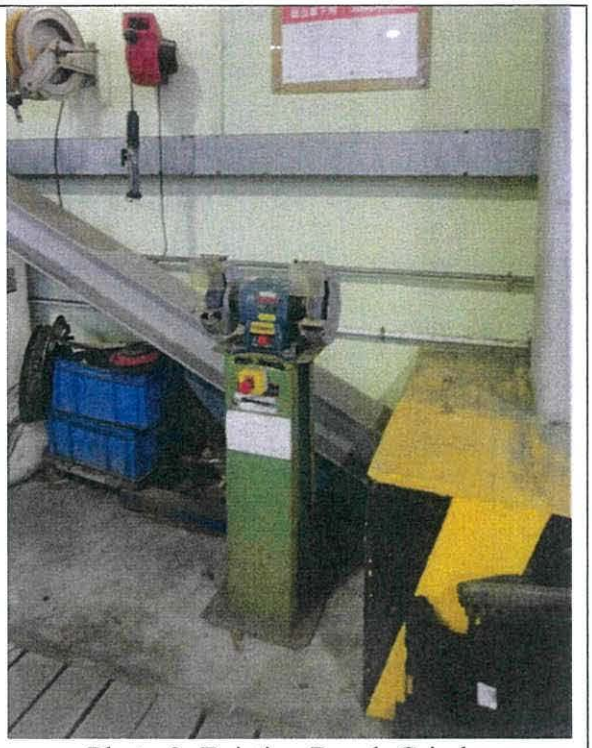


Photo 2: Existing Bench Grinder

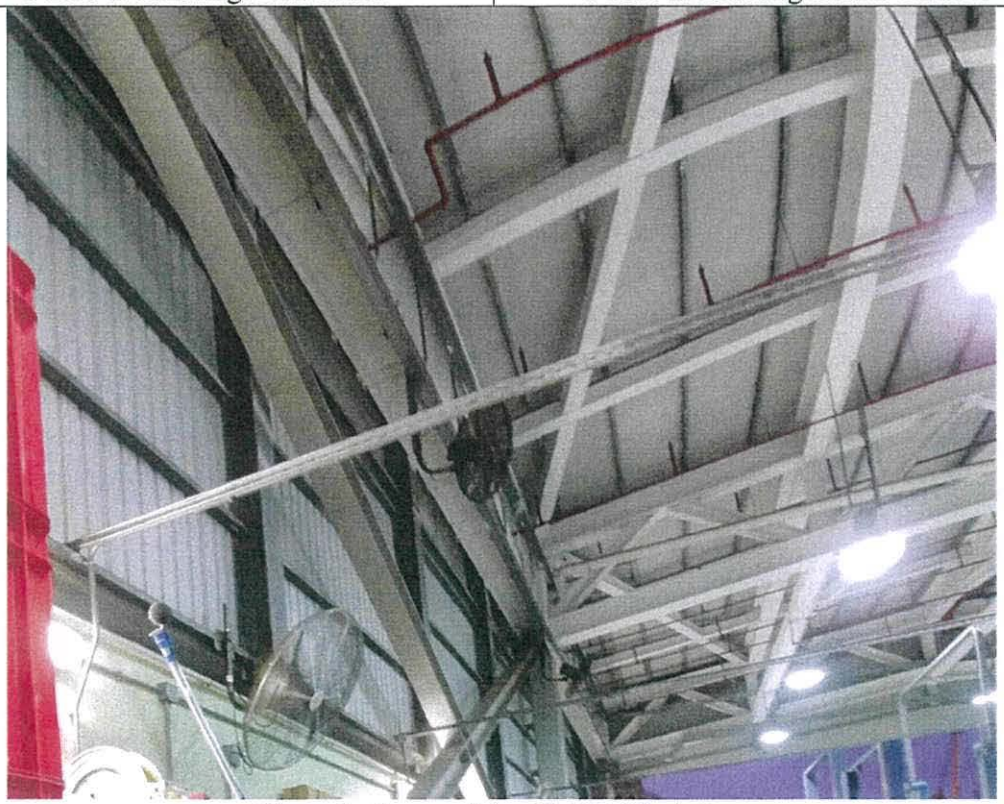


Photo 3: Cover of the EMSD Workshop

Annex B

Equipment Calibration Certificates

Calibration Certificates

Item	Instrument / Accessory	Brand & Model	Serial No.	Calibration Expiry
1	Sound Level Meter	B & K 2250	2630416	10/12/2018
2	Sound Level Meter	NTI XL2	A2A-10571-EO	10/12/2018
4	Acoustical Calibrator	Rion NC-73	10186489	10/12/2018

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12/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong
E-mail: smec@cigismec.com Website: www.cigismec.com
Tel: (852) 2873 6860
Fax: (852) 2555 7533

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CERTIFICATE OF CALIBRATION

Certificate No. 17CA1204 01-01 Page 1 of 2

Item tested

		Microphone	Preamp
Description	Sound Level Meter (Type 1)	Microphone	Preamp
Manufacturer	B & K	B & K	B & K
Type/Model No.	2250	4189	ZC0032
Serial/Equipment No.	2630416	3100149	19675
Adaptors used	-		-

Item submitted by

Customer Name: Allied Environmental Consultants Limited
Address of Customer: 19/F, Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Request No.: -
Date of receipt: 04-Dec-2017

Date of test: 04-Dec-2017

Reference equipment used in the calibration

Description	Model	Serial No.	Expiry Date	Traceable to
Multi function sound calibrator	B&K 4226	2288444	08-Sep-2018	CIGISMEC
Signal generator	DS 360	33873	25-Apr-2018	CEPREI
Signal generator	DS 360	61227	01-Apr-2018	CEPREI

Ambient conditions

Temperature: 21 ± 1 °C
Relative humidity: 50 ± 10 %
Air pressure: 1000 ± 5 hPa

Test specifications

1. The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
2. The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
3. The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory: Feng Jun Qi Date: 11-Dec-2017 Company Chop:

SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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CERTIFICATE OF CALIBRATION

(Continuation Page)

1 Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given at below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.6	
	Lin	Pass	1.6	
Linearity range for Leq	At reference range. Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range. Step 5 dB at 4 kHz	Pass	0.3	
Frequency weightings	A	Pass	0.3	
	C	Pass	0.3	
	Lin	Pass	0.2	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100μs rectangular pulse	Pass	0.2	
R.M.S. accuracy	Crest factor of 3	Pass	0.2	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.2	
	Repeated at frequency of 100 Hz	Pass	0.2	
Time averaging	1 ms burst duty factor 1/100 at 4kHz	Pass	0.2	
	1 ms burst duty factor 1/10 at 4kHz	Pass	0.2	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

2 Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

3. Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement" and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by: Date: 04-Dec-2017

Checked by: Date: 11 Dec 2017

The standards and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

綜合試驗有限公司
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Tel: (852) 2873 6860
Fax: (852) 2555 7533

CERTIFICATE OF CALIBRATION

Certificate No.: 17CA1204 01-03

Item tested

Description:	Sound Level Meter (Type 1)	Microphone	Preamp
Manufacturer:	NTi	NTi Audio	NTi Audio
Type/Model No.:	XL2	MC230	MA220
Serial/Equipment No.:	A2A-10571-EO	8401	5630
Adaptors used:	-	-	

Item submitted by

Customer Name:	Allied Environmental Consultants Limited
Address of Customer:	19/F, Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Request No.:	
Date of receipt:	04-Dec-2017

Date of test: 08-Dec-2017

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	08-Sep-2018	CIGISMEC
Signal generator	DS 360	33873	25-Apr-2018	CEPREI
Signal generator	DS 360	61227	01-Apr-2018	CEPREI

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	50 ± 10 %
Air pressure:	1000 ± 5 hPa

Test specifications

1. The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
2. The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
3. The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responses of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory: Feng Jun Qi Date: 11-Dec-2017 Company Chop: 綜合試驗有限公司 SOILS AND MATERIALS ENGINEERING COMPANY LTD.

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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Fax: (852) 2555 7533

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No: 17CA1204 01 03

1. Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.8	2.1
	Lin	Pass	1.6	2.2
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.2	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Frequency weightings	A	Pass	0.3	
	C	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100μs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	N.A.	N.A.	
	Repeated at frequency of 100 Hz	N.A.	N.A.	
Time averaging	1 ms burst duty factor $1/10^3$ at 4kHz	Pass	0.3	
	1 ms burst duty factor $1/10^4$ at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	N.A.	N.A.	
Overload indicator	SPL	Pass	0.3	
	Leq	Pass	0.4	

2. Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

3. Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

End

Calibrated by: Fung Chi Yip
Date: 08-Dec-2017

Checked by: Lam Tze Wai
Date: 11-Dec-2017

The standards and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

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Tel: (852) 2873 6860
Fax: (852) 2555 7533

CERTIFICATE OF CALIBRATION

Certificate No.: 17CA1204 01-04

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	Rion Co., Ltd.
Type/Model No.:	NC-73
Serial/Equipment No.:	10186489
Adaptors used:	-

Item submitted by

Customer:	Allied Environmental Consultants Limited
Address of Customer:	19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Request No.:	
Date of receipt:	04-Dec-2017

Date of test: 09-Dec-2017

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	11-Apr-2018	SCL
Preamplifier	B&K 2673	2239857	05-May-2018	CEPREI
Measuring amplifier	B&K 2610	2346941	03-May-2018	CEPREI
Signal generator	DS 360	61227	01-Apr-2018	CEPREI
Digital multi-meter	34401A	US36087050	25-Apr-2018	CEPREI
Audio analyzer	8903B	GB41300350	21-Apr-2018	CEPREI
Universal counter	53132A	MY40003662	22-Apr-2018	CEPREI

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	50 ± 10 %
Air pressure:	1005 ± 5 hPa

Test specifications

1. The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942:1997 Annex B and the lab calibration procedure SMTP004-CA-156.
2. The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
3. The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942:1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on **page 2** of this certificate.

Approved Signatory: Feng Jun Qi **Date:** 11-Dec-2017 **Company Chop:**

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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CERTIFICATE OF CALIBRATION

(Continuation Page)

1. Measured Sound Pressure Level

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

(Output level in dB re 20 µPa)

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	Estimated Expanded Uncertainty dB
1000	94.00	94.1?	0.10

2. Sound Pressure Level Stability - Short Term Fluctuations

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be

At 1000 Hz STF = 0.019 dB

Estimated expanded uncertainty 0.005 dB

3. Actual Output Frequency

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was

At 1000 Hz Actual Frequency = 993.5 Hz

Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

4. Total Noise and Distortion

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was

At 1000 Hz TND = 0.7 %

Estimated expanded uncertainty 0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement" and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

End

Calibrated by: Fung Chi Yip
Date 09-Dec-2017

Checked by: Lam Tze Wai
Date: 11-Dec-2017

The standards and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

Annex C

Raw Data of Noise Measurements

Annex C: Raw Data of Noise Measurements

Sound Level Meter	Equipment	Location	Type / Mode	Activity	Start Time	$L_{Aeq(10s)}$	$L_{Aeq(30s)}$	Avg. of all location $L_{Aeq(30s)}$
B&K	S48 Drill Stand	-	Background	No operation	5/12/2018 17:11:16	-	60.2	60.2
B&K		Right	Idling	Machine ON only	5/12/2018 17:15:39	-	64.6	64.6
NTI		Left		Machine ON only	5/12/2018 17:15:34	-	65.3	
B&K		Top		Machine ON only	5/12/2018 17:18:44	-	64.1	
NTI		Front		Machine ON only	5/12/2018 17:18:40	-	64.4	
B&K		Back [1]		Machine ON only	5/12/2018 17:15:39	-	64.6	
B&K		Right	Operation	Preparation	5/12/2018 17:24:36	64.2	67.0	68.9
				Drilling	5/12/2018 17:24:46	67.2		
				Drilling	5/12/2018 17:24:56	68.6		
NTI		Left		Preparation	5/12/2018 17:24:35	64.3	70.1	
				Drilling	5/12/2018 17:24:45	69.4		
				Drilling	5/12/2018 17:24:55	72.8		
B&K		Top		Preparation	5/12/2018 17:27:18	66.3	66.6	
				Drilling	5/12/2018 17:27:28	66.0		
				Drilling	5/12/2018 17:27:38	67.4		
NTI		Front		Preparation	5/12/2018 17:27:18	66.0	69.4	
				Drilling	5/12/2018 17:27:28	68.6		
				Drilling	5/12/2018 17:27:38	71.7		
B&K		Back [1]		Preparation	5/12/2018 17:24:35	64.3	70.1	
				Drilling	5/12/2018 17:24:45	69.4		
				Drilling	5/12/2018 17:24:55	72.8		
B&K	S47 Bench Grinder	-	Background	No operation	5/12/2018 17:44:49	-	58.2	58.2
B&K		Right	Idling	Machine ON only	5/12/2018 17:30:50	-	68.9	69.3
NTI		Left		Machine ON only	5/12/2018 17:30:44	-	70.1	
B&K		Top		Machine ON only	5/12/2018 17:32:53	-	68.2	
NTI		Front		Machine ON only	5/12/2018 17:31:46	-	68.9	
B&K		Back [1]		Machine ON only	5/12/2018 17:30:44	-	70.1	
B&K		Right	Operation	Preparation	5/12/2018 17:34:14	71.1	77.4	79.8
				Grinding	5/12/2018 17:34:24	79.9		
				Finishing	5/12/2018 17:34:34	77.4		
NTI		Left		Preparation	5/12/2018 17:34:15	72.1	80.3	
				Grinding	5/12/2018 17:34:25	83.6		
				Finishing	5/12/2018 17:34:35	79.1		
B&K		Top		Preparation	5/12/2018 17:36:19	79.5	81.2	
				Grinding	5/12/2018 17:36:29	81.8		
				Finishing	5/12/2018 17:36:39	81.9		
NTI		Front		Preparation	5/12/2018 17:35:15	72.9	76.7	
				Grinding	5/12/2018 17:35:25	79.4		
				Finishing	5/12/2018 17:35:35	75.2		
B&K		Back [1]		Preparation	5/12/2018 17:36:19	79.5	81.2	
				Grinding	5/12/2018 17:36:29	81.8		
				Finishing	5/12/2018 17:36:39	81.9		

Remarks:

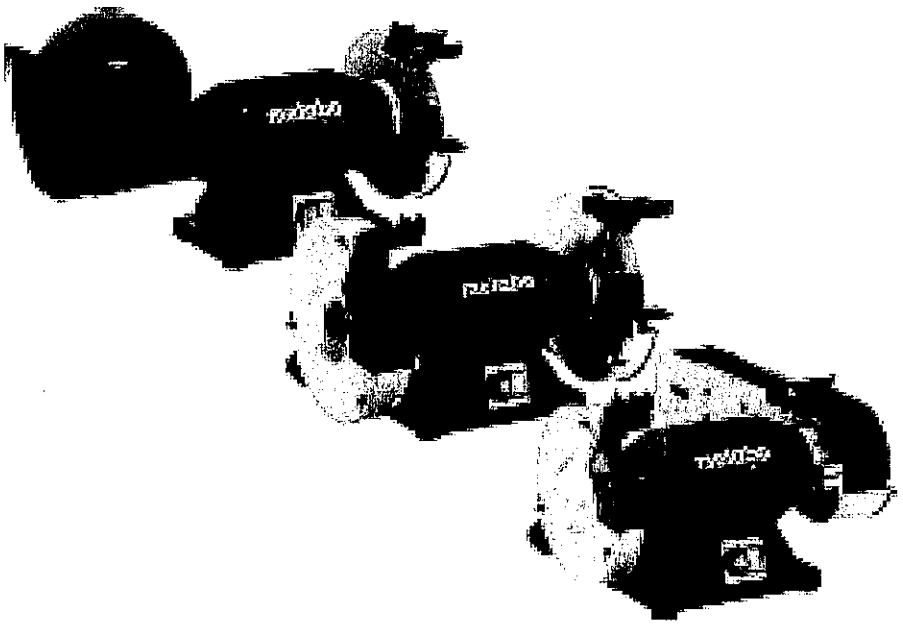
[1] Measurement at "back" location was performed at 0.35m for both equipment due to site constraint, the location at "back" was constrained by obstacles. For SWL calculation, the noisiest SPL recorded amongst other measurement locations was adopted as reference SPL for the "back" location.

Annex D

Equipment Catalogue for the Proposed Bench Grinder

metabo®

BS 175
DS 125
DS 150
DS 175
DS 200
DSD 200
DSD 250
TNS 175



SLO PREVOD ORIGINALNIH NAVODILA ZA UPORABO

170269751_0611_sl

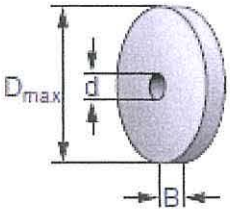
Metabo, prodaja električnih orodij, d.o.o.
Poslovna cona A 22
4208 Šenčur

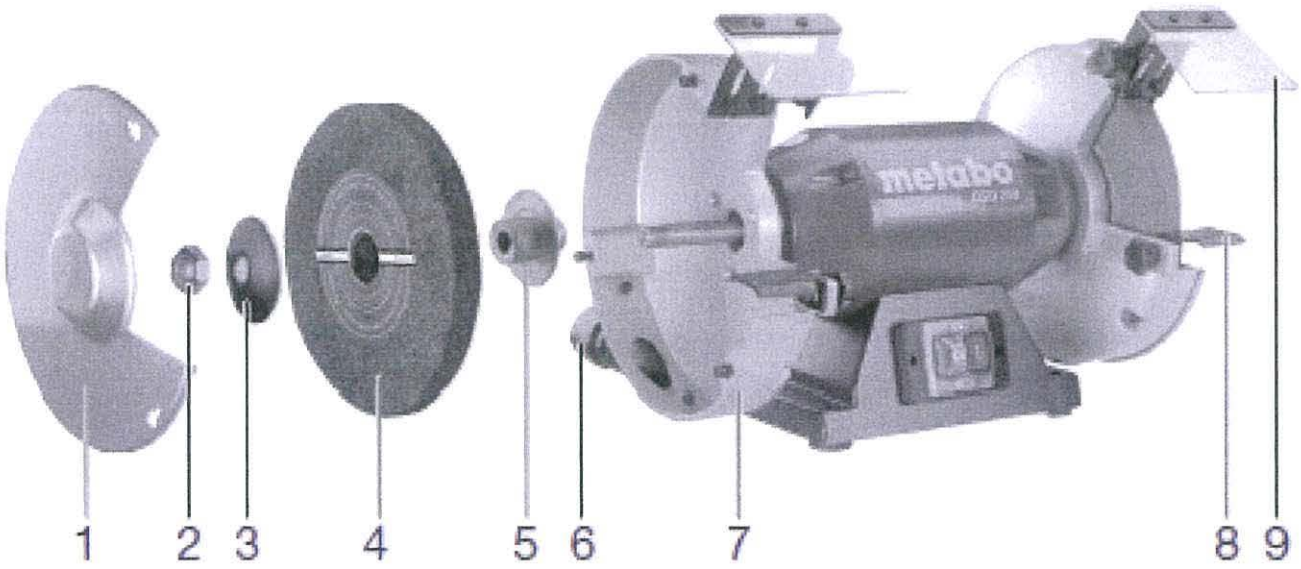
4007430218537

		BS 175	DS 125	DS 150	DS 175	DS 200	DSD 200	DSD 250	TNS 175
D_{max} x B	mm (in)	175x25 ($6\,^{7}/_{8}$ x 1)	125x20 ($4\,^{15}/_{16}$ x $^{25}/_{32}$)	150x20 ($5\,^{29}/_{32}$ x $^{25}/_{32}$)	175x25 ($6\,^{7}/_{8}$ x 1)	200x25 ($7\,^{7}/_{8}$ x 1)	200x25 ($7\,^{7}/_{8}$ x 1)	250x40 ($9\,^{27}/_{32}$ x $1\,^{9}/_{16}$)	175x25 ($6\,^{7}/_{8}$ x 1)
d	mm (in)	32 ($1\,^{1}/_{4}$)	20 ($^{25}/_{32}$)	20 ($^{25}/_{32}$)	32 ($1\,^{1}/_{4}$)	32 ($1\,^{1}/_{4}$)	32 ($1\,^{1}/_{4}$)	51 (2)	32 ($1\,^{1}/_{4}$)
$D_{N,\,max}$ x B	mm (in)	-	-	-	-	-	-	-	200x40 ($7\,^{7}/_{8}$ x $1\,^{9}/_{16}$)
d_N	mm (in)	-	-	-	-	-	-	-	20 ($^{25}/_{32}$)
A	mm (in)	1020x50 ($40\,^{5}/_{32}$ x $1\,^{37}/_{32}$)	-	-	-	-	-	-	-
n_0	min^{-1} (rpm)	2980	2980	2980	2980	2980	2980	1490	2980
P_1	W	500	200	350	500	600	750	900	500
P_2	W	310	130	200	310	370	450	540	310
M_K	Nm	2,3	0,9	1,1	2,3	2,6	3,2	10	2,3
m	kg (lbs)	14,5 (32)	7,5 (16,5)	9,5 (21)	14,5 (32)	16,3 (36)	16,0 (35,5)	33,3 (73,5)	14,9 (32,8)
L_{pA}/K_{pA}	dB(A)	76 / 3	75 / 3	75 / 3	70 / 3	74 / 3	74 / 3	71 / 3	68 / 3
L_{WA}/K_{pA}	dB(A)	89 / 3	88 / 3	88 / 3	83 / 3	87 / 3	87 / 3	87,5 / 3	81 / 3
L_{pAI}/K_{pAI}	dB(A)	-	-	-	-	-	-	74 / 3	-

CE EN 61029, EN 13218
2006/42/EG, 2004/108/EG

ppa. Volker Siegle
Director Innovation, Research and Development
Responsible Person for Documentation

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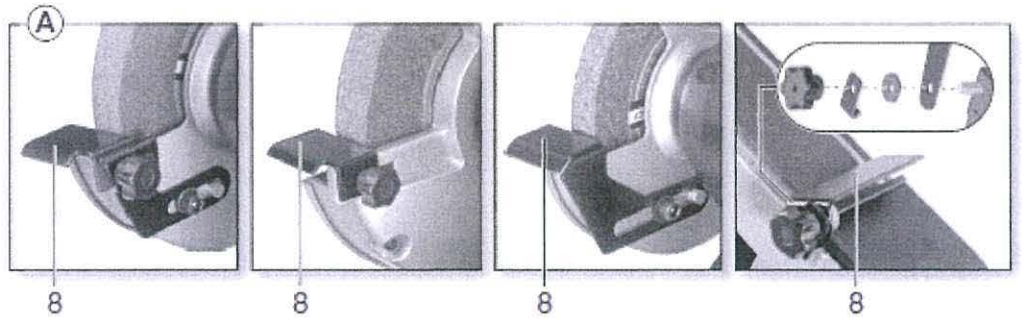
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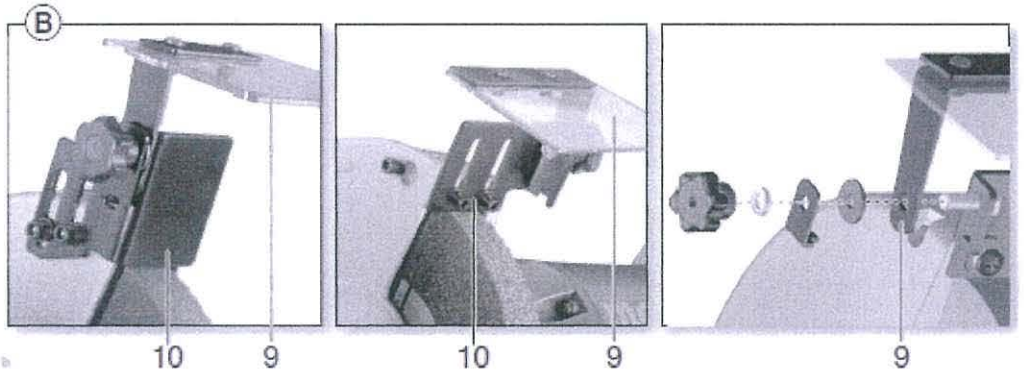
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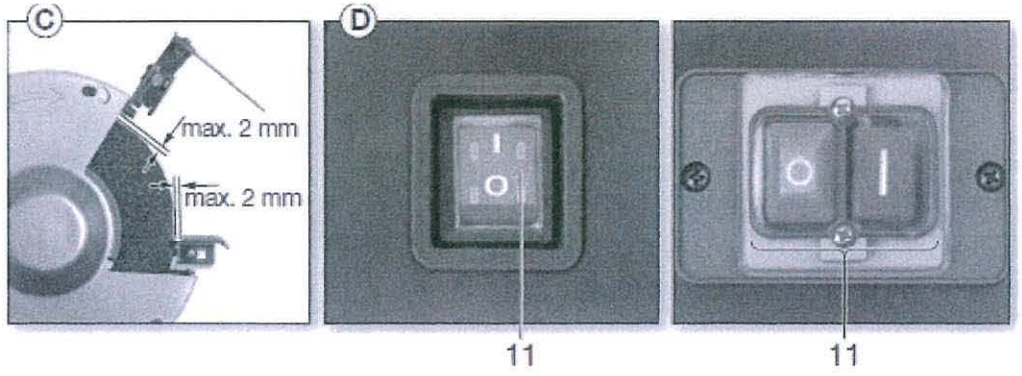
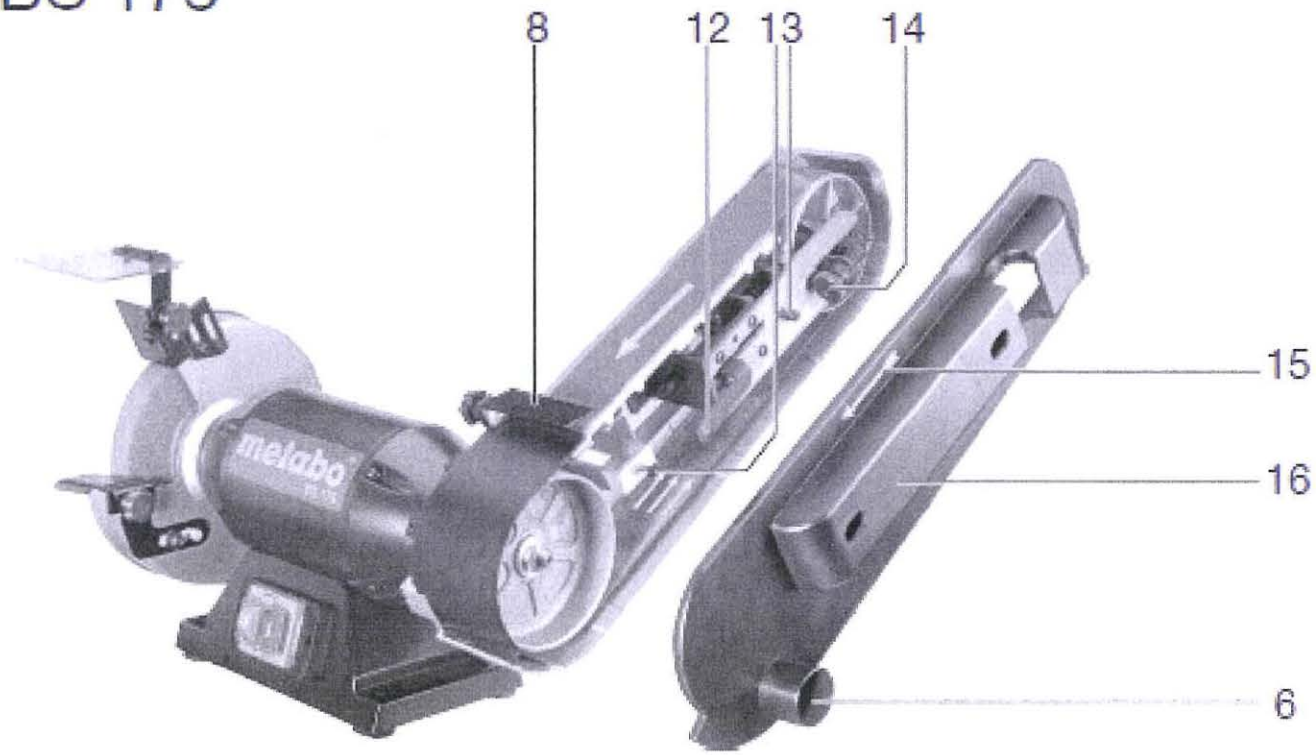
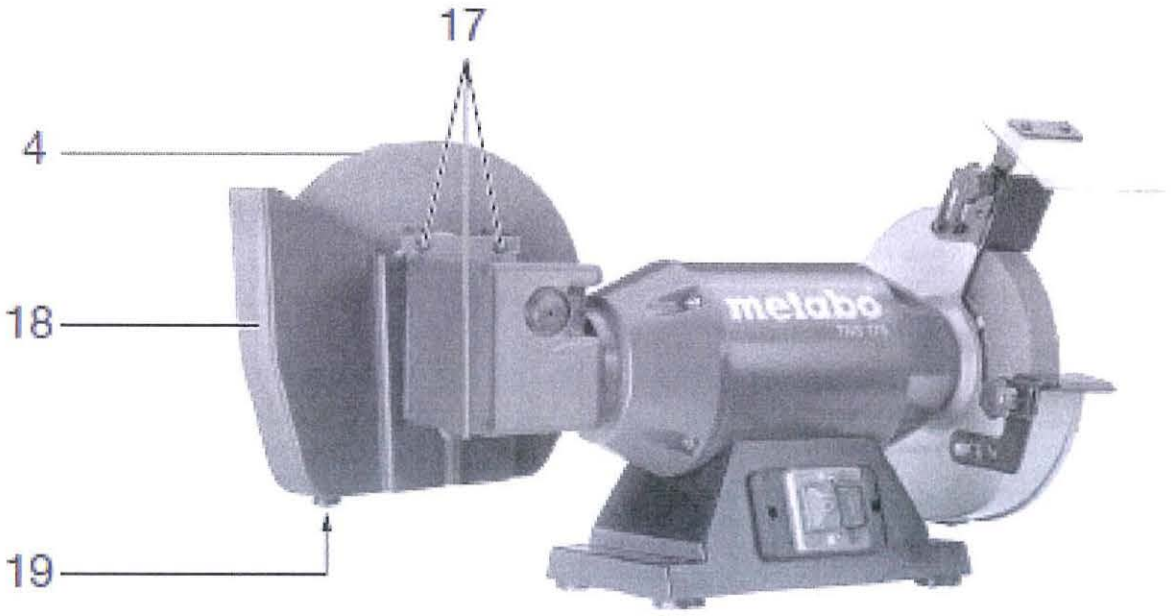

C
max. 2 mm
max. 2 mm
D
11
11

BS 175



TNS 175



Navodila za uporabo

Hvala za vaše zaupanje ob nakupu Metabo stroja. Vsak izdelek iz proizvodnega programa Metabo je pod skrbnim nadzorom v proizvodnji in je na koncu podvržen vsem kontrolam kvalitete po Metabo pravilniku o kvaliteti. Vseeno je življenjska doba stroja odvisna od vas. Zato vas prosimo, da skrbno in v celoti preberite navodilo za uporabo. Samo tako se boste seznanili z vašim novim strojem, skrbeli za njega in ga dolgo uporabljali.

Vsebina

1. Izjava o skladnosti

S svojo polno odgovornostjo izjavljamo, da ta stroj ustreza navedenim standardom in smernicam na strani 2.

2. Uporaba v skladu z določili

Stabilni brusilniki so namenjeni za suho, obrobno brušenje kovin v suhih prostorih občasni, obdelovanec je voden ročno. Tračni stabilni brusilnik (BS 175) je tudi primeren za suho brušenje kovin in lesenih izdelkov.
Suho/mokri brusilnik (TNS 175) je namenjen ostrenje nožev, škarij, dlet in drugih rezilnih orodij ter za brušenje manjših kosov na mokrem brusilnem kolutu.
Brusilniki niso primerni za brušenje aluminija, magnezija ali drugih materialov, ki lahko povzročijo eksplozijo.
Niso primerni za poliranje.
Ne brusite materialov, katerih prah je nevaren zdravju.
Uporabnik v celoti nosi odgovornost za škodo in poškodbe pri nenamenski uporabi.
Pri delu morate upoštevati vsa varnostna navodila!

3. Splošna varnostna navodila

OPOZORILO- Branje navodil za uporabo zmanjša možnost poškodbe in okvar.

Zaradi lastne varnosti in zaščite ter preprečitve poškodbe vašega stroja bodite pozorni na ta znak v teh navodilih.

Neupoštevanje navodil in pravil lahko pripelje do električnega udara, požara ali/in resnih poškodb.
Shranite vse varnostne informacije in navodila za kasnejšo uporabo.
Pred uporabo natančno in v celoti preberite navodila za uporabo in priložena Splošna varnostna navodila.
Vso dokumentacijo in navodila hranite in jih v primeru prodaje stroja priložite novemu uporabniku oz. lastniku!

4. Specifična varnostna navodila

Za vašo osebno varnost upoštevajte vsa varnostna navodila in opozorila, ki se nahajajo v tej knjižici in so označena z tem znakom!

Brusilni kolut mora pasati na stoj. Bodite pozorni na premer in debelino brusilnega koluta. Vpenjalna izvrtina se mora prilegati na os brez zračnosti.
Ne vrtajte v brusilne kolute.
Ne prilagajajte brusilnih kolutov!
Brusilni kolut se mora natančno prilegati na stroj in se vrteti brez dotikanja.
Poškodovani, ekscentrični, ali tresoči brusilni koluti se ne smejo uporabljati.
Pri montaži brusilnega koluta na stroj uporabljajte le priložene matice in prirobnice. Med brusilnim materialom in prirobnico je lahko samo mehak elastičen material (karton, itd)
Zaščitite brusilne kolute pred udarci, poškodbami ali mastjo.
Brusilni diski se morajo skladiščiti skladno z navodili proizvajalca.
Ne dotikajte se vrtečih kolutov.
Vedno uporabljajte pritrjen zaščitni pokrov (1) ali pokrov brusilnega traku (16).
Postavite zaščito (9) v pravilen položaj pred začetkom brušenja.
Uporabljajte brusilni kolut premo, ne s strani!
Ne zmanjšujte vrtilne hitrosti s pritiskanjem na brusilni kolut.
Obdelovalni kos mora biti takih dimenzij, da ga držimo z obema rokama.
Visoka temperatura je posledica dolgotrajnega brušenja.

Vedno si nadenite zaščitna očala, pokrivalo in zaščitne rokavice. Uporabljajte tudi druga zaščitna delovna sredstva (primerna delovna obleka, predpasnik,....) Poskrbite, da iskre, nastale pri brušenju ne poškodujejo predmetov ali oseb v bližini oz. ne povzročijo požar ali eksplozijo.
Nevarna področja morajo biti zaščitena s proti iskrno zaščito, lahko vnetljive snovi pa na varni oddaljenosti.
Prah, ki nastaja med delom lahko resno ogrozi zdravje (različne vrste lesa, kitov, barv, kamna in kovin z vsebnostjo svinca ali težkih kovin) zato uporabljajte sesalce in zaščitne maske za dihala tudi za opazovalce.
Nekatere vrste prahu so klasificirale kot kancerogene snovi, kot so hrastov in bukev prah posebej v kombinaciji z raznimi kemičnimi zaščitnimi laki in premazi. Materiale, ki vsebujejo azbest naj obdelujejo le specialisti!
- Kjerkoli je to omogočeno,uporabljajte odsesovalne sisteme.
- Delovišče naj bo dobro prezračevano.
- Priporočljiva je uporaba zaščitne maske s filtrom razreda P2 Upoštevajte nacionalna priporočila za materiale, ki jih obdelujete.

Materiali, katerih prah je nevaren zdravju, (npr azbest) se ne smejo obdelovati!
Obdelovanec se med brušenjem segreva!
Če obdelovanec zablokira kolut. Takoj izklopite stikalo in izvlecite vtič iz omrežja in odpravite vzrok blokade.
Redno opravljajte čiščenje in vzdrževanje brusilnika.
Posebno bodite pozorni na stanje zaščitnih elementov.
Očistite notranje dele brusilnika ob koluti ali brusilnem traku in preverite, da se nikjer ne dotikata ohišij.

Izvlecite vtič iz omrežja ko se brusilnik ne uporablja ali kakorkoli posegate v brusilnik.
Redno preverjajte stanje vtiča in glavnega kabla in po potrebi naj servis poskrbi za zamenjavo.
Pred uporabo preverite stanje brusilnika zaradi morebitnih poškodb. Posebno pozorni boste na stanje in gibanje zaščitnih delov brusilnika. Vsak poškodovan ali manjkajoči del je potrebno nadomestiti z novim originalnim delom.
Preverite, da se vrteči deli vrtijo brez dotikanja ali drsanja ob ohišje ali drug del brusilnika.

5. Legenda

Glej stran 3 in stran 4
1. Varnostni pokrov
2. Matica
3. Prirobnica
4. Brusilni kolut
5. Notranja prirobnica
6. Priklop za odsesovanje
7. Zaščitni pokrov
8. Podpora obdelovanca
9. Zaščita za oči
10. Usmerjevalec isker
11. Stikalo za vklop/izklop
12. Vzvod (Zamenjava brusilnega traku)*
13. Vijak za pokrov brusilnega traku*
14. Gumb za nastavitev brusilnega traku*
15. Puščica(smer vrtenja traku)*
16. Pokrov brusilnega traku*
17. Vijaki za pritrditev vodne posodice*
18. Vodna posodica*
19. Gumijasti čep *

* odvisno od izvedbe/ni zajeto v dobavi

6. Posebne lastnosti

Bajonetno držalo za zaščitni pokrov zagotavlja hitro in enostavno zamenjavo brusilnega koluta.
Nizka stopnja hrupa, nizek nivo tresljajev, indukcijski motor ne potrebuje vzdrževanja
Gumijasti blažilci tresljajev
BS 175, DS 175, DS 200, DSD 200, DSD 250,
TNS 175: Zaščita z priklopom odsesovanja
TNS 175: Počasno vrtenje fini brusilni kolut za mokro brušenje in ostrenje ter hitro vrteči brusilni kolut.
Posodica za vodo zaščitena proti rjavenju.
BS 175: Dolgi premični tračni brusilnik (do 90°) za obdelavo lesa in kovin.

7. Priprava za delo

7.1. Omrežna napetost

Pred uporabo preverite, če se omrežna napetost in frekvenca ujemata z vrednostmi na tipski ploščici stroja.
Brusilniki so v zaščitnem razredu I, zato morajo biti priklopljeni na ozemljene vtičnice.
DSD 200, DSD 250 (tri-fazne izvedbe):
Preverite smer vrtenja brusilnega koluta (smer vrtenja označuje puščica na pokrovu brusilnika). Izklopite brusilnik. Izvlecite vtič in zasukajte fazi na vtiču (fazni premikač v vtiču) s pomočjo križnega izvijača.

7.2. Postavitev podpore obdelovanca

Vstavite podporo(8) kot je pokazana na sliki A na strani 3.

7.3. Vgradnja usmerjevalca isker in zaščite za oči

Vstavite usmerjevalec isker (10) in zaščite za oči (9) kot je prikazana na sliki B stran 3.

7.4. Varna postavitev brusilnika

Postavite stroj na varen podstavek. Prepričajte se, da je dobro se »sedel« na podlago.
Brusilnik je lahko privit na podlago (vijakov ni v dobavi) skozi luknje v gumijastih blažilcih.
Pri uporabi stojala ali stenskega nosilca je stroj privit (poglavje dodatna oprema)

7.5. Odsesovalni priklop (odvisno od opreme)

Če vaš brusilnik ni opremljen z odsesovalnim priklopom (6) nataknite odsesavanje na odprtino (notranji premer 35 mm)
Pred vklopom se prepričajte, da je priklop nataknjen in odsesavanje deluje.

7.6. Testni zagon

Preverite brusilne kolute pred vsako uporabo.
Testni zagon

Zaženite brusilnik za cca 5 minut brez obremenitev. V bližini stoja ne sme biti nobena oseba.

8. Uporaba

8.1. Nastavitev podpore obdelovanca

Nastavite podporo (8) redno glede na obrabo brusilnega koluta (4). Razdalja med podporo in kolutom naj bo čim manjša, nikoli večja od 2mm (glej sliko C stran 3)
Če je zaradi obrabe nemogoče doseči tako razdaljo zamenjajte brusilni kolut.

8.2. Nastavitev usmerjevalca isker

Nastavite usmerjevalec isker (10) odvisno od obrabe koluta (4). Odvijte vijaka na usmerjevalcu in ga premaknite. Razdalja med usmerjevalcem in kolutom naj bo čim manjša, nikoli večja od 2mm (glej sliko C stran 3).
Če je zaradi obrabe nemogoče doseči tako razdaljo zamenjajte brusilni kolut.

8.3. Vklop/izklop stroja

Pritisnite stikalo (11) (glej skico D stran 3)
I = Vklop
0 = Izklop
DS 125, DS 150: Da se prepreči nenamerni vklop, vedno izklopite brusilnik ko izvlečete vtič iz omrežja, oz. če zmanjka elektrike.
Zaščita pred nenamernem vklopu (ne pri DS125 in DS 150):
ko se vrne električna napetost brusilnik, tudi če je stikalo vklopljeno stroj ne bo deloval. izklopite stikalo in ponovno vklopite.

8.4. Suho brušenje

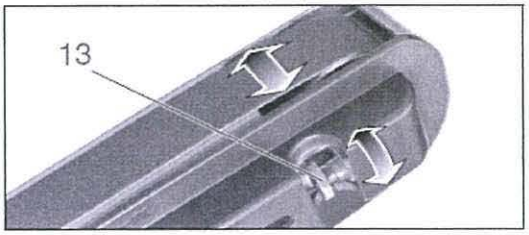
Postavite se pred brusilnik
Primite obdelovanec z obema rokama ga položite na podporo(8) in z občutkom se približajte brusilnemu kolutu.
Za najboljše rezultate premikajte obdelovanec naprej in nazaj po občutku. Tako tudi enakomerno obrabljamo kolut.

8.5. Mokro brušenje (samo TNS 175)

Brusilni kolut za mokro brušenje uporabljajte samo takrat, če je voda v posodici (18). Približno 1/3 koluta mora biti v

vodi. Če je vode več ali manj, rezultati brušenja bodo slabši in obraba koluta bo večja.
postavite se na levo stran brusilnika, pred kolut za mokro brušenje. Primite obdelovanec z obema rokama ga položite čim nižje na brusilni kolut.
Za najboljše rezultate premikajte obdelovanec naprej in nazaj po občutku.

8.6. Nastavitev brusilnega traku (samo pri TNS 175)
Izvlecite vtič iz omrežja. Zavrtite trak na roke in z gumbom (14)nastavite trak tako, da teče po sredini tekača.



9. Vzdrževanje in čiščenje

Čiščenje, nadzor in vzdrževanje brusilnika in zaščitnih pokrovov naj bo redno. Očistite tudi notranjost pokrovov, ob kolutu oz. traku. Kolut ali trak morata teči brez dotikanja ob ohišje.

9.1. Zamenjava koluta

Uporabljajte le originalne Metabo brusilne kolute

Dovoljena hitrost vrtenja navedena na brusilnem kolutu mora biti enaka ali večja od hitrosti vrtenja brusilnika brez obremenitve, navedene na tipski tablici..

Pregled brusilnega koluta

Nataknite brusilni kolut na os brusilnika. Nalahko udarite z kosom trdega lesa. Slišali boste cisto ton, če je brusilni kolut nepoškodovan. Če se sliši žvenketanja ali votel zvok pomeni, da je brusilni kolut poškodovan.

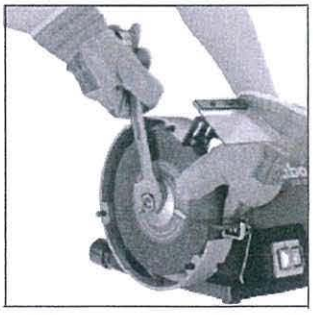
Ne uporabljajte poškodovanih brusilnih kolutov

Testni zagon

Zaženite brusilnik za cca 5 minut brez obremenitev. V bližini brusilnika ne sme biti nobena oseba.
Suhi brusilni kolut

Odvijte vijake na pokrovu(1) zasukajte in odstranite pokrov (1) (bajonetni spoj)

Trdno primite brusilni kolut(4) v položaj kot je prikazano. **Pozor, nevarnost poškodbe!** Nadenite si zaščitne rokavice!



Odstranite matico (2) z viličastim ključem. **Pozor, levi navoj na gredi!**
Odstranite prirobnico (3) in brusilni kolut (4)
Nataknite nov brusilni kolut in ga pritrdite po obratnem vrstnem redu.
Privijte nazaj zaščitni pokrov(1).
Nastavite položaj usmerjevalca isker (10) in podporo obdelovanca (8) kot je opisano v poglavjih 8.2 in 8.1

Zamenjava mokrega brusilnega koluta (samo pri TNS 175)
Izpraznite posodo z vodo(18) dvignite zbiralno posodo nad posodo za vodo in odstranite gumijasti čep(19). Vstavite čep nazaj.
Odvijte 3 vijake (17) in spustite posodo za vodo. Z eno roko trdno primite brusilni kolut(4). Pozor, nevarnost poškodbe! Nadenite si zaščitne rokavice!
Uporabite eno roko da držite brusilni kolut (4). **Nadenite si zaščitne rokavice.**
Odstranite matico z viličastim ključem. Odstranite prirobnico in brusilni kolut (4)
Nataknite nov brusilni kolut in ga pritrdite po obratnem vrstnem redu.
Vrnite posodo za vodo (18). Privijte vijake (17) napolnite posodo za vodo z zadostno količino vode (poglavje 8.5)

9.2. Zamenjava brusilnega traku (samo pri BS 175)
Odstranite pokrov (6): odvijte vijaka (13) in izvlecite pokrov (16) (bajonetni spoj).
Zasukajte vzvod (12) kolikor gre. To bo zmanjšalo napetost brusilnega traku tako da ga lahko izvlečete.
Postavite novi trak na rolerja tako, da je smer puščice na traku enaka kot puščice (15) na pokrovu.
Vrnite vzvod (12) na prvotno mesto in napnite trak.
Postavite pokrov (16) na vijaka (13) in zataknite (bajonetni spoj) Privijte vijaka. Nastavite napetost traku(poglavje 8.6)
Brusilne trakove najdete v poglavju 10 Dodatna oprema.

9.3. Posoda za vodo (samo pri TNS 175)
Redno menjajte vodo v posodi za vodo(18). Podstavite zbiralno posodo pod gumi čep (19) in ga izvlecite.
Demontirajte posodo za vodo, da jo dobro očistite. Za čiščenje notranjosti posode za vodo uporabljajte vodo in ščetko (ne kovinsko)

10. Dodatna oprema

Uporabljate le kvalitetno Metabo dodatno opremo!
Vprašajte Vašega trgovca Metabo orodja za dodatno opremo! Navedite trgovcu točen model, da bo lahko svetoval pravilno dodatno opremo.
Za celotno ponudbo dodatne opreme si poglejte **www.metabo.com** ali katalog Metabo.

A brusilnik koluti
naroč.številka

D= 125 mm:
36 P: 0900025181
60 N: 0900025190
D= 150 mm:
36 P: 6.30632
60 N: 6.30633
D= 175 mm:
36 P: 6.30657
60 N: 6.30656
D= 200 mm:
36 P: 6.30634
60 N: 6.30635
D= 250 mm:
36 P: 6.30636
60 N: 6.30637

Mokri brusilni kolut
D= 200 mm: 0900025653
B Stojalo 6.23866
C Nosilec za stensko montažo 6.23863
D brusilni trakovi

3 x P 40 0900025777
3 x P 60 0900025688
3 x P 80 0900025696
3 x P 100 0900025785
3 x P 120 0900025700
3 x P 180 0900025807
3 x P 240 0900025823
3 x P 400 0900025840

11. Popravila

Popravila na Metabo električnem orodju naj opravljajo le kvalificirani električarji. Če katerikoli Metabo stroj potrebuje servis, ga lahko pošljete na naslove, ki se nahajajo na koncu teh navodil. Prosimo, da priložite opis napake stroja.

12. Zaščita okolja

Metabo embalaža je 100 % reciklažna.
Izrabljen stroj ne zavrzite kjerkoli.
Deli stroja, narejeni iz različnih zlitin in plastike se lahko reciklirajo. Ta navodila so tiskana na beljenem papirju brez uporabe klora.

Samo za članice EU : Ne odlagajte izrabljenih strojev med hišne odpadke
Z upoštevanjem smernice 2002/96/EC za izrabljeno elektronsko in električno opremo in z upoštevanjem nacionalnih zakonskih aktov se izrabljeni električni stroji zbirajo posebej in se jih okolju prijazno reciklira.

13. Tehnični podatki

Legenda znakov v tabeli na strani 2.
Spremembe so mogoče zaradi tehničnega napredka.

D_{max} = Največji dovoljeni premer brusilnega koluta
$D_{N,max}$= Največji dovoljeni premer mokrega brusilnega koluta

d =Premer vpenjalne odprtine brusilnega koluta
d_N = Premer vpenjalne odprtine brusilnega koluta
B = debelina brusilnega koluta
A = Brusilni trak (dolžina x širina)
n_0 = število vrtljajev brez obremenitve
P_1 = vhodna moč motorja
P_2 = izhodna moč motorja
M_N = Navor zaustavitve motorja
m = teža stroja

Tipični A-efektivno opažen nivo zvoka:
L_{pA} = Nivo zvočnega tlaka
L_{WA} = Nivo zvočne moči
L_{pAI} = Emisija zvočnega tlaka
$K_{pA/WA}$ = Nevarno (nivo hrupa)
Tipični prag zvočnega tlaka tega električnega stroja gre lahko preko je 80 dB(A).

Nadenite si ustrezno zaščito sluha!
Vse vrednosti so določene z upoštevanjem standarda EN 60745.

SPLOŠNA VARNOSTNA NAVODILA

OPOZORILO! Preberite splošna varnostna navodila in navodila za uporabo pred uporabo orodja. **Neupoštevanje opozoril in navodil lahko povzroči električni udar ogenj ali/in hude poškodbe.** Shranite ta varnostna navodila. **Izraz** »ročni električni stroji« **se nanaša tudi na baterijski program ročnih strojev.**

1. **Vzdržujte delovišče varno**
   a. **Poskrbite, da bo delovno področje čisto dobro osvetljeno.** Razmetan in temačen prostor kliče po nesreči.
   b. **Ne uporabljajte stroja v bližini vnetljivih tekočin ali plinov zaradi možnosti iskrenja.** Električno orodje povzroča iskrenje, ki lahko zaneti prah ali ogenj.
   c. **Ne dovolite približevanja opazovalcem in otrokom stroju med obratovanjem.** Lahko vas zmotijo pri delu in ogrozijo sebe, vas ali stroj.
2. **Zaščitite se pred električnim udarom**
   a. **Vtikač se mora prilegati omrežni vtičnici. Ne modificirajte jih in ne uporabljajte vmesnih vtičnic za ozemljitve strojev.** Varni vtiči in vtičnice bodo zmanjšali možnost električnega udara.
   b. **Ko delate z električnimi stroji se izogibajte dotikov z ozemljenimi deli kot so vodne pipe, radiatorje, štedilnike, hladilnike.** Obstaja velik riziko električnega udara, če je vaše telo ozemljeno.
   c. **Ne izpostavljajte stroja dežju ali vlagi.** Ne uporabljajte orodja na mokrih ali vlažnih lokacijah saj s tem povečujete nevarnost električnega udara.
   d. **Ne zlorabljajte kabla stroja. Električni kabel ni namenjen vleki, nošnji ali vezanju. Ne vlecite vtikača za kabel iz vtičnice. Ne izpostavljajte el. kabel vročini, olju, ostrim robovom ali premikajočih delov.** Poškodovan kabel lahko povzroči električni udar.
   e. **Ko delate zunaj uporabljajte el. podaljške, ki so namenjeni zunanji uporabi.** Uporaba zunanjih el. podaljškov zmanjša nevarnost el. udara.
   f. **Pri delu v vlažnih prostorih uporabljajte omrežno diferencialno tokovno varovanje (RCD)**
3. **Osebna varnost**
   a. **Zavzemite pravilno držo in ravnotežje med delom. Glejte kaj delate. Uporabljajte zdravo pamet. Ne delajte s strojem ko ste utrujeni ali pod vplivom opojnih substanc.** Trenutek nepazljivosti lahko povzroči poškodbo!
   b. **Uporabljajte zaščitna delovna sredstva (očala** in zaščitno masko, ko delate v prahu, nedrseča obutev, pokrivalo, rokavice).
   c. **Pred priklopom stroja na električno omrežje se prepričajte, da je izklopljeno stikalo za vklop stroja! Ko stroje ne uporabljate, pred servisiranjem ali zamenjavo orodij ali opreme izvlecite vtič iz omrežne vtičnice oz. izvlecite baterijski paket.** Pri nošnji orodja lahko hitro s prstom dotaknete prožilo in povzročite poškodbo.
   d. **Odstranite ključe ali napenjala!. Pred zagonom stroja preverite, da so vsi ključi in pomožna orodja odstranjena iz stroja.** Karkoli od vpenjal lahko ob vključitvi poleti po prostoru in povzroči poškodbo.
   e. **Ne pretiravajte. Bodite pravilno postavljeni in stabilni med delom.** To vam omogoča boljši nadzor nad strojem.
   f. **Bodite oblečeni delu primerno. Ne nosite ohlapnih oblačil ali visečega nakita, lase in viseče dele obleke imejte stran od vrtečih se delov.** Preprečite, da se vam nebi kaj zapletlo v vrteče se dele.
   g. **Če uporabljate odsesovalne sisteme se prepričajte, da so pravilno nameščeni in preklopljeni in vmesniki pašejo na stroj.** Uporaba odsesanih sistemov zmanjša nevarnost poškodb zaradi prahu.
4. **Uporaba stroja in vzdrževanje.**
   a. **Ne preobremenjujte strojev. Delo boste opravili bolje, hitreje in varnejše, če delate z občutkom. Ne uporabljajte malih strojev za dela, ki jih opravljajo težki stroji.** Ne uporabljajte strojev nenamensko! Uporabljajte pravo orodje za delo.
   b. **Ne vklopite stroja če je vklopni gumb ne ostane na položaju vklopljeno/izklopljeno.** Noben stroj ne more biti pod nadzorom, če stikalo za vklop/izklop ne deluje pravilno in ga je potrebno popraviti.
   c. **Ko stroje ne uporabljate, pred servisiranjem ali zamenjavo orodij ali opreme izvlecite vtič iz omrežne vtičnice oz. izvlecite baterijski paket.** Tako zmanjšamo možnost poškodb ob nenamenskem vklopu stroja.
   d. **Hranite stroje in njihova navodila za uporabo izven dosega otrok ali nepooblaščenih oseb.** Stroji so lahko v rokah nepoučenih oseb nevarno orodje!
   e. **Upoštevajte navodila za vzdrževanje in postopke zamenjave orodij. Redno preglejte vse vitalne dele stroja in po potrebi obrabljene in poškodovane dele zamenjajte oz. pošljite stroj v usposobljeno servisno delavnico.** Poskrbite, da bodo mesta, kjer držimo stroj čista, suha in brez olj ali maziv.
   f. **Imejte rezilne površine ostre in čiste za doseganje boljših in varnejših rezultatov.** Pravilno vzdrževana in servisirana oprema olajša delo in omogoča boljšo kontrolo nad strojem.
   g. **Za vašo varnost uporabljajte samo namensko dodatno opremo, ki je opremljena z navodili za uporabo in jo navaja oz. priporoča proizvajalec stroja.** Uporaba stroja izven predpisanega namena in uporaba nenamenske dodatne opreme lahko resno ogrozi osebno varnost
5. **Baterijsko orodje in vzdrževanje**
   a. **Baterije polnite le s polnilcem po navodilih proizvajalca.** Polnjenje z drugimi polnilci lahko povzroči uničenje baterijskega paketa ali celo požar.
   b. **Uporabljajte samo originalne baterijske pakete po Metabo specifikaciji.** Uporaba drugih baterijskih paketov lahko ustvari nevarnost poškodbe.
   c. **Kadar se baterijski paket ne uporablja, ga imejte stran od kovinskih predmetov kot so vijaki, žeblji , sponke, kovanci, podložke,.... . Tako preprečimo možnost kratkega stika.** Spoj obeh polov baterijskega paketa lahko povzroči požar
   d. **Pod določeni mi pogoji lahko pride do izlitja tekočine iz baterijskega paketa. Vse dele telesa, ki pridejo v kontakt s tem izpirajte z vodo in poiščite pomoč zdravnika.** Izlita tekočina iz baterijskega paketa lahko povzroči opekline.
6. **Servis**
   Prepustite servisne posege v vaš stroj le specializiranim servisnim delavnicam, ki bodo uporabili originalne rezervne dele. Tako bo zagotovljeno varno delo z pravilno vzdrževanim strojem.

SLOVENSKO

GARANCIJSKI LIST

za metabo stroje

metabo
work. don't play.
FIRMA IN SEDEŽ
DAJALCA GARANCIJE:
Metabo d.o.o.
Poslovna cona A 22
SI - 4208 ŠENČUR

Oznaka in TIP: _____

Datum izročitve blaga: _____

Firma in sedež prodajalca: _____

Žig in podpis prodajalca: _____

Serijska številka stroja: _____

Dvojnik garancijskega lista se ne izdaja!

1. Metabo d.o.o. jamči za lastnosti in brezhibno delovanje stroja v garancijskem roku, ki začne teči z izročitvijo blaga potrošniku.
2. Za zgoraj navedeni stroj priznavamo 12 mesečni garancijski rok, ki začne teči od dneva izročitve blaga potrošniku. Vse poškodovane dele bomo v tem roku brezplačno zamenjali oz. nadomestili z novimi. Kot garancija se ne prizna obraba potrošnega materiala in pribora kot so krtačke, kabli, maziva, svedri, rezila, obdelovalne plošče, ipd.
3. Garancija velja samo ob posegu, ki ga lahko opravi pooblaščeni serviser za Metabo stroje. Servis je potrebno opraviti na vsakih 70-100 delovnih ur. Če serviser ugotovi, da je bil aparat v garancijskem roku neprimerno vzdrževan, se garancija ne prizna.
4. Iz garancije izključujemo popravila, ki se opravijo zaradi nemarnega ravnanja, vzdrževanja ali neprimerne uporabe.
5. Rok popravila ne sme biti daljši od 45 dni, v nasprotnem primeru vam aparat v celoti zamenjamo z novim.
6. V primeru, da popravilo proizvoda v garancijski dobi traja več kot 3 delovne dni, se vam garancijski rok podaljša za toliko dni, kolikor je bil čas popravila.
7. Garancija ne izključuje pravic potrošnika, ki izhajajo iz odgovornosti prodajalca za napake na blagu.
8. Garancija prične teči z dnem prodaje, kar dokažete s potrjenim garancijskim listom in računom. Pazite, da vam prodajalec izpolni garancijski list s pravilnim datumom prodaje, originalnim žigom, prepisano serijsko številko stroja in podpisom, drugače se vam garancije ne prizna.
9. Oskrbo z vsemi nadomestnimi deli zagotavljamo min. 8 let. Metabo zagotavlja popravilo stroja izven garancijskega roka min. 5 let.
10. Garancija za Metabo stroje velja na celotnem območju Evropske skupnosti.
11. Garancija se ne prizna : **- če je v aparat posegla nepooblaščena oseba,**
    - če so okvare mehanske oz. fizične,
    - če so okvare nastale med transportom po naši izročitvi,
    - če ni potrjen garancijski list in priložen originalen račun,
    - za ves potrošnji material (krtačke, kabli, maziva, redni pregled).

Servis za okvare v garancijskem roku: GMA elektromehanika d.o.o.
Cesta Andreja Bitenca 115
1000 Ljubljana / Tel.: 01 583 83 04

Metabo 3-letna garancija
XXL garancija je na voljo za vse države, ki so navedena na spletni strani www.metabo.si.
Potrdilo o 3-letni garanciji in vsi pogoji so objavljeni na navedeni spletni strani. Obiščite jo in izpolnite potrebne podatke za 3-letno XXL Metabo garancijo.

PROFESSIONAL POWER TOOLS

metabo®

work. don't play.

Metabowerke GmbH,
72622 Nürtingen, Germany
www.metabo.com

Annex E

Equipment Catalogue for the Proposed Drill Stand

This .pdf document is bookmarked

Operating Instructions and Parts Manual
Drill Press
Models: J-2500, J-2530, J-2550

J-2530 *J-2500* *J-2550*

JET
427 New Sanford Road
LaVergne, Tennessee 37086
Ph.: 800-274-6848
www.jettools.com

Part No. M-354400
Revision C3 01/2017

Warranty and Service

JET® warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

Warranty Period
The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

Who is Covered
This warranty covers only the initial purchaser of the product from the date of delivery.

What is Covered
This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

Warranty Limitations
Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

How to Get Technical Support
Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

More Information
JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

How State Law Applies
This warranty gives you specific legal rights, subject to applicable state law.

Limitations on This Warranty
JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

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Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors; Machine Accessories
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

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Table of Contents

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Warnings

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This drill press is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a drill press, do not use until proper training and knowledge have been obtained.
5. Do not use this drill press for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using this drill press. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this drill press, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
8. Wear ear protectors (plugs or muffs) during extended periods of operation.
9. **CALIFORNIA PROPOSITION 65 WARNING:** This product contains chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.
10. This product, when used for welding, cutting, or working with metal, produces fumes, gases, or dusts which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health and Safety Code Section 25249.5 et seq.)
11. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
12. Make certain the switch is in the **OFF** position before connecting the machine to the power supply.
13. Make certain the machine is properly grounded.
14. Make all machine adjustments or maintenance with the machine unplugged from the power source.
15. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
16. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
17. Make sure the drill press is firmly secured to the floor or bench before use.
18. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
19. Provide for adequate space surrounding work area and non-glare, overhead lighting.
20. Keep the floor around the machine clean and free of scrap material, oil and grease.
21. Keep visitors a safe distance from the work area. **Keep children away.**
22. Make your workshop child proof with padlocks, master switches or by removing starter keys.
23. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
24. Maintain a balanced stance at all times so that you do not fall or lean against the spindle or other moving parts. Do not overreach or use excessive force to perform any machine operation.
25. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.

⚠ Warnings

26. Use recommended accessories; improper accessories may be hazardous.
27. Maintain tools with care. Keep drill bits sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
28. Make sure the work piece is securely attached or clamped to the table. Never use your hand to hold the work piece.
29. Turn off the machine before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
30. Do not stand on the machine. Serious injury could occur if the machine tips over.
31. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
32. Remove loose items and unnecessary work pieces from the area before starting the machine.

Familiarize yourself with the following safety notices used in this manual:

⚠CAUTION This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

⚠WARNING This means that if precautions are not heeded, it may result in serious injury or possibly even death.

- - SAVE THESE INSTRUCTIONS - -

Introduction

The JET 15-Inch 16-Speed Drill Presses and 20-Inch 12-Speed Drill Presses, Models J-2500, J-2530 and J-2550, feature rugged cast iron design with ground-steel columns for drilling accuracy in metal, wood, and plastic. The head casting features a ball bearing spindle assembly, supported by four permanently-lubricated, heavy duty ball bearings that are mounted in an enclosed quill for extended life.

Specifications

Model	**J-2500**	**J-2530**	**J-2550**
Stock Number	354400	354401	354402
Model Type	15-Inch Floor	15-Inch Bench	20-Inch Floor
Drilling Capacity			
Cast Iron	Up to 5/8 In.	Up to 5/8 In.	Up to 3/4 In.
Steel	Up to 1/2 In.	Up to 1/2 In.	Up to 5/8 In.
Drill to Center	15 Inches	15 Inches	20 Inches
Motor			
Rating	3/4 hp, 1-Phase	3/4 hp, 1-Phase	1 hp, 1-Phase
RPM	1725	1725	1725
Full Load Amperage	9.0/4.5	9.0/4.5	14/7
Voltage	115/230V (prewired 115V)	115/230V (prewired 115V)	115/230V (prewired 115V)
Column Diameter	2-7/8 In.	2-7/8 In.	3-5/8 In.
Quill			
Diameter	1-7/8 In.	1-7/8 In.	2-1/4 In.
Travel	3-1/8 In.	3-1/8 In.	4-3/4 In.
Table			
Overall	11-1/2 x 11-1/2 In.	11-1/2 x 11-1/2 In.	18-1/2 x 16-1/2 In.
Working Surface	9-1/2 x 9-1/2 In.	9-1/2 x 9-1/2 In.	15-1/2 x 13-1/2
Travel	24 In.	15-1/2 In.	21-1/2 In.
Base			
Size	11 x 19-1/2 In.	10-1/2 x 18 In.	22-3/4 x 17-3/4 In.
Working Surface	7 x 7-1/2	8 x 8	13 x 14-1/2
Chuck Size	5/8-In., Key Chuck	5/8-In., Key Chuck	5/8-In, Key Chuck
Overall Dimensions			
Length	31 In.	31 In.	33-1/2 In.
Width	13 In.	13 In.	18-1/2 In.
Height	63 In.	39-1/2 In.	67 In.
Spindle to Table (Max.)	24 In.	15-1/2 In.	24 In.
Spindle to Column (Max.)	7-1/2 In.	7-1/2 In.	10-1/2 In.
Spindle			
To Base	48	24	43-1/2
Taper	MT-2	MT-2	MT-3
Number of speeds	16	16	12
RPM	200, 290, 350, 430 500, 580, 640, 720 800, 870, 1440, 1630 1820, 2380, 2540, 3630	200, 290, 350, 430 500, 580, 640, 720 800, 870, 1440, 1630 1820, 2380, 2540, 3630	150, 260, 300, 440, 490, 540, 1150, 1550, 1840, 2220, 2950, 4200
Sound Rating	82-84 dB at 3 ft.	82-84 dB at 3 ft.	82-84 dB at 3 ft.
Shipping Weight	168 pounds	163 pounds	304 pounds

Shipping Contents

Unpack the carton and verify that all parts listed below are included.

Main Parts

1 ea	Head Assembly
1 ea	Table
1 set	Column and Table Bracket Assembly
1 ea	Base

Additional Parts

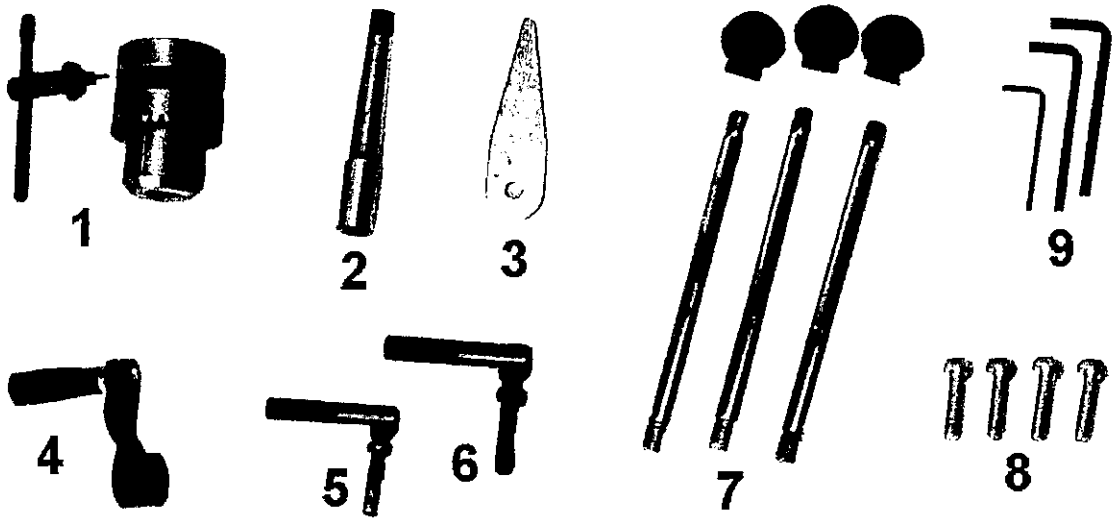
1.	1 set	Chuck and Chuck Key
2.	1 pc	Arbor
3.	1 pc	Drift Key
4.	1 pc	Table Crank Handle
5.	1 pc	Table Lock Handle
6.	1 pc	Column Lock Handle
7.	3 pcs	Downfeed Handles and Knobs
8.	4 pcs	M10 x 40 Hex Cap Screws
9.	1 set	Hex Wrenches (3mm, 5mm, 6mm)

Other Material

1 ea	Owner's Manual
1 ea	Warranty Registration Card

Required Tools

1. 17mm Box Wrench or a 6" – 8" Adjustable Wrench
2. 15/16" wrench



Additional Parts

Assembly

⚠WARNING Read and understand all assembly instructions before attempting assembly! Failure to comply may cause serious injury!

Before Assembly

1. Remove the contents from the shipping container.
2. Compare the contents of the shipping container with the list found above. Report any shortages or damage to your JET distributor.
3. Clean all rust protected surfaces with kerosene or a light solvent. Do not use lacquer thinner, paint thinner, or gasoline. These will damage plastic components and painted surfaces.

Column Assembly

Referring to Figure 1:

1. Place the *base* (A) on a level floor.
2. Place the *column assembly* (B) on the *base* (A) and align the holes in the column support with the holes in the base.
3. **Note:** The column shown in Figure 1 is for the JDP-15MF. While the JDP-15M column is slightly different in appearance, the assembly procedure is the same.
4. Using a 17mm wrench, secure the *column* (B) with four M10 x 40 *hex cap screws* (C) to the base.

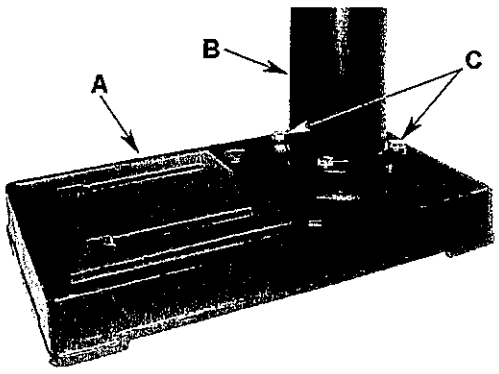


Figure 1

Table Bracket

When shipped, the *rack ring* and *rack* are bundled together with the column in plastic wrap.

Referring to Figures 2 and 3:

1. Remove the wrap and take the *rack ring* (D) and *rack* (B) off the *column* (C).
2. Install the table bracket (A) together with the rack (B) as shown in Figure 2.

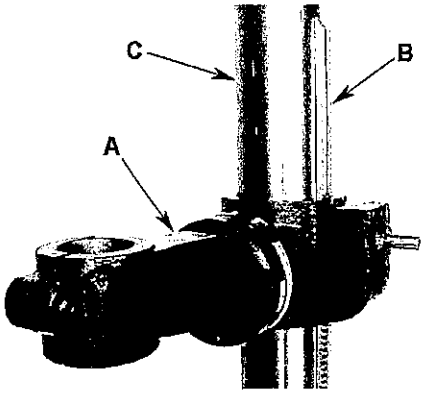


Figure 2

3. Slide the *rack ring* (D) over the *column* (C), placing it so it rests against the *rack* (B) as shown in Figure 3 and tighten firmly.

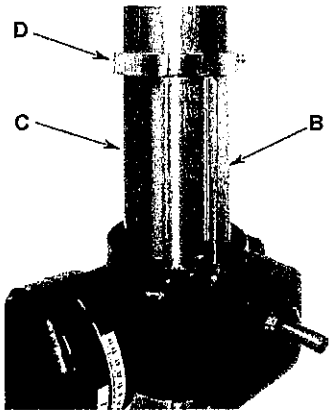


Figure 3

Crank Handle and Table Lock Handle

Referring to Figure 4 (shown already assembled):

1. Loosen the *setscrew* (B) on the *table crank handle* (A).
2. Slide the *handle* (A) onto the table bracket shaft.
3. Turn the handle until the setscrew is opposite the flat section on the shaft, and tighten the setscrew to secure the handle.
4. Install the *table lock handle* (C), but do not tighten.

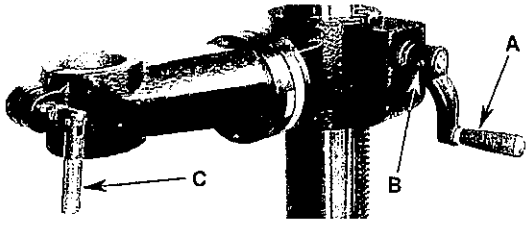


Figure 4

Column Lock Handle

Referring to Figure 5:

Thread the *column lock handle* (D) into the table bracket (E).

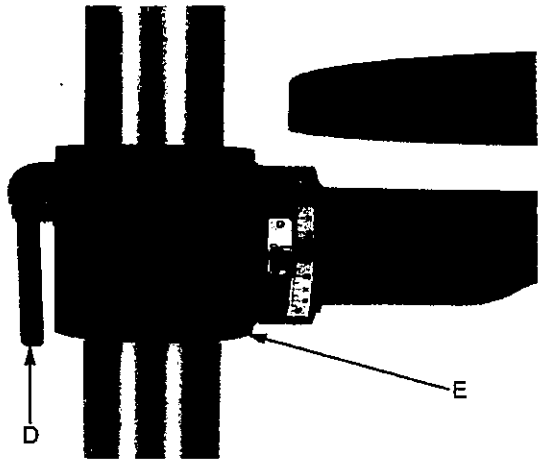


Figure 5

Table Installation

Referring to Figure 6:

1. Place the *table* (A) on the *bracket* (B).
2. Tighten the *table lock handle* (C).

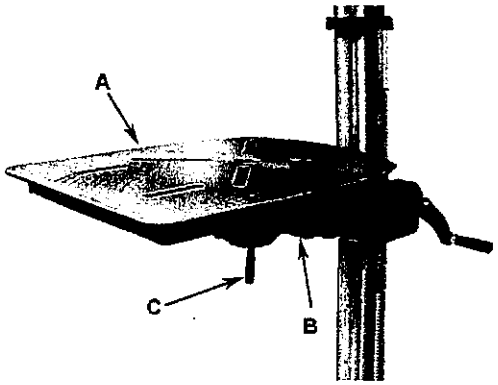


Figure 6

Head Assembly

Referring to Figure 7:

1. With the aid of a second person, carefully lift the *head* onto the column top and slide it down into position

⚠CAUTION The head assembly is heavy! Use care when lifting onto the column!

2. Rotate head assembly until sides of the pulley cover are parallel with the sides of the base.
3. Tighten two *setscrews* (A) with a 5mm hex wrench (provided) until they are snug.

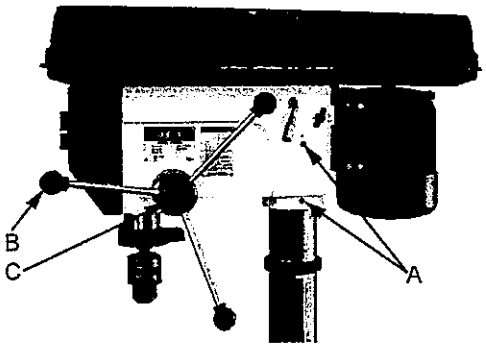


Figure 7

4. Install three *downfeed handles* (B) into the downfeed hub (C).

Chuck and Arbor Installation

Referring to Figure 8:

1. Thoroughly clean *arbor* (A), *chuck* (B) and spindle (C). Any grease or residue in these areas can cause the pieces to separate and create a safety hazard as well as damage to the tool.
2. Twist the *chuck* (B) to retract the chuck jaws if they are exposed.
3. Push chuck (B) by hand onto the arbor (A), and slide assembly firmly up into the spindle (C).
4. Turn the arbor and chuck assembly until the *tang* (B) on the *arbor* (C) engages the slot at the end of the spindle.

Use a single tap from a rubber mallet, or a hammer and a block of wood, against the bottom of the chuck to seat the chuck securely onto the arbor.

⚠CAUTION Do not use a steel hammer directly against the chuck, as this may damage the chuck.

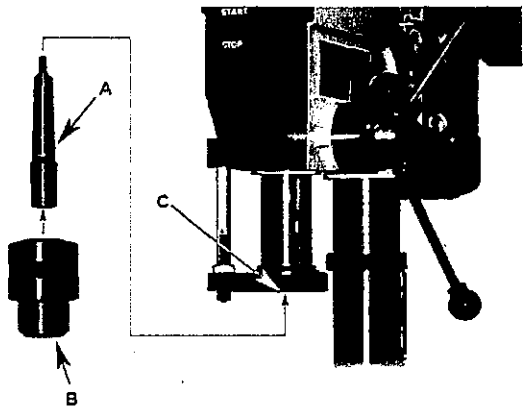


Figure 8

Chuck and Arbor Removal

Referring to Figure 9:

1. Unplug machine from the power source.
2. Raise the table until it is about seven inches below the chuck.
3. Place a piece of scrap wood on the table, and lower *quill* (A) using the downfeed handle.
4. Rotate spindle to align the keyhole in the spindle with the keyhole in the quill.
5. Insert the *drift key* (B) into the aligned slots and tap lightly. The chuck and arbor assembly should fall from the spindle.

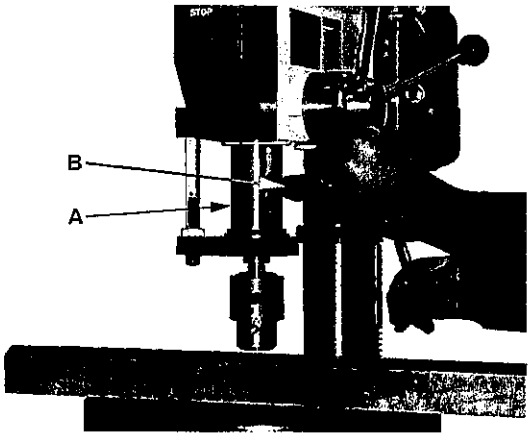


Figure 9

Adjustment

Depth Stop Adjustment

Referring to Figure 10:

To drill multiple holes at the same preset depth, use the depth stop:

1. Use a pencil to mark the depth the bit will drill into the workpiece.
2. With the drill bit in the chuck, lower downfeed handle to advance bit to your *mark* (A).
3. With your other hand, advance the *lock nuts* (B) on the depth stop rod until they are snug to the *seat* (C).
4. The drill bit will now advance to this point.
5. To release, advance the nuts counter-clockwise to the top of the depth stop.

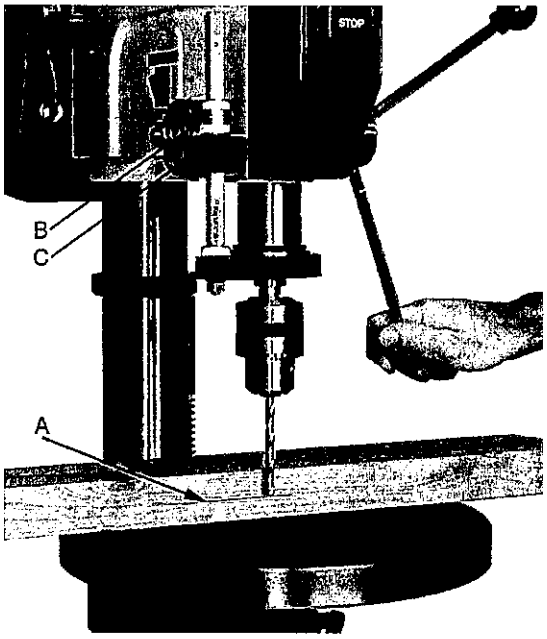


Figure 10

Changing Spindle Speeds

A spindle speed and pulley/belt arrangement chart for all models is found on the inside of the *pulley cover* (D, Fig. 11). Refer to this chart whenever changing speeds.

The charts are also displayed in Figures 12 and 13.

To change spindle speeds:

1. Unplug the machine from the power source.
2. Loosen two *bar knobs* (E, Fig. 11) found on each side of the head assembly.
3. Rotate the *tension adjuster* (F, Fig. 11) clockwise to bring the motor base as close to the head as possible.
4. For desired speed, change the location of belts per pulley/belt arrangement chart.
5. Rotate the *tension adjuster* (F. Fig. 11) counterclockwise to tension the belts.
6. Tighten two *bar knobs* (E, Fig. 11). Belts are properly tensioned when finger and thumb pressure midway between the two pulleys causes approximately ½" deflection.

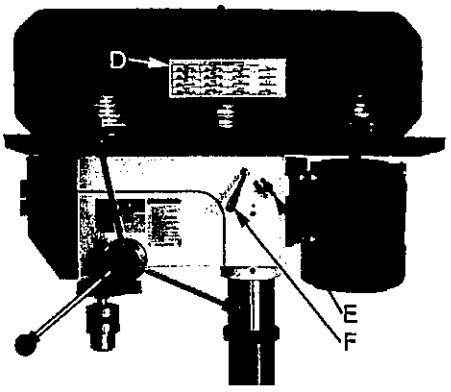


Figure 11

SPINDLE SPEEDS IN R.P.M.

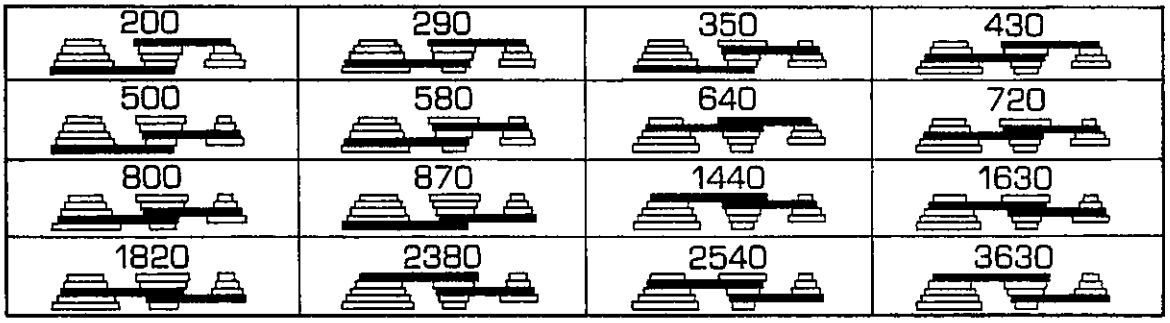


Figure 12 – Spindle Speed Chart for J-2500, J-2530

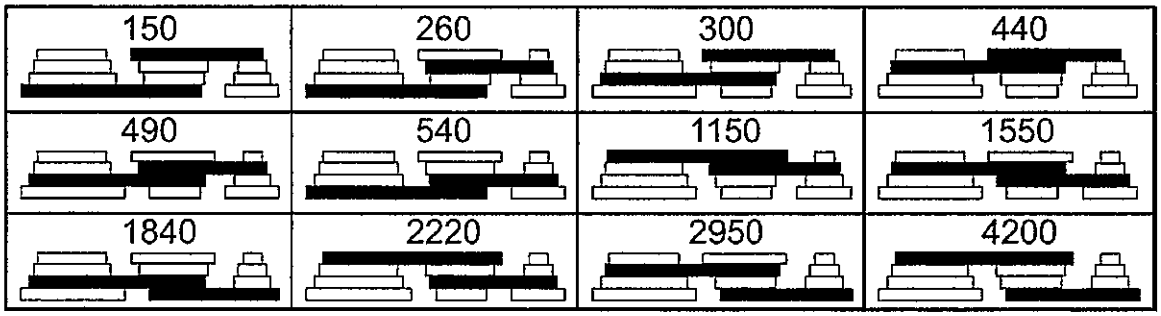


Figure 13 – Spindle Speed Chart for J-2550

Return Spring Adjustment

The return spring is adjusted at the factory and should not need further adjustment. If adjustment is deemed necessary, follow the steps below while referring to Figure 14:

1. Unplug the machine from the power source.
2. Loosen two *hex nuts* (A). Do not remove.
3. Firmly hold the *coil spring cover* (B).
4. Pull out the cover and rotate until the *pin* (C) on the return spring plate engages the next notch in the coil spring cover. Turn the cover clockwise to decrease tension and counter-clockwise to increase tension.
5. Tighten two *hex nuts* (A). Do not over-tighten. Nuts should not contact the housing when tight. The hex nuts should be tightened against each other.

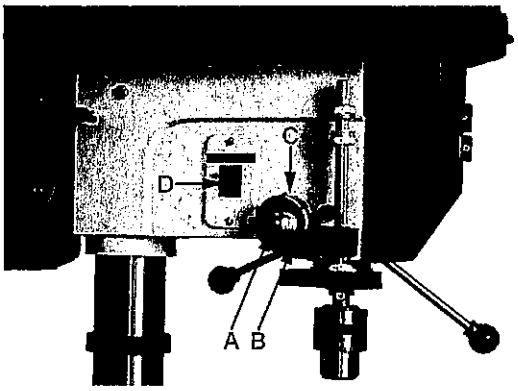


Figure 14

Work Light (J-2500 and J-2530 only)

Install a light bulb, no larger than 60 watts into the socket accessed from beneath the head. The rocker switch controls the *light switch* (D, Fig. 14).

Table Tilt Adjustment

The table tilt adjustments are made on the table bracket under the table.

To tilt the table (refer to Figures 15 and 16):

⚠CAUTION In the following steps do not over loosen. This could result in the table assembly to separate from the column, fall and cause injury.

1. Loosen the *socket head set screw* (A) with a 3mm hex wrench.
2. Using a 15/16" wrench, loosen the *hex cap screw* (B), and tilt the table to the desired angle by aligning the *arrow* (C, Fig. 16) on the rotating part of the bracket to the desired angle (in degrees) displayed on the *scale* (D, Fig 16) at the base of the bracket.
3. Tighten the *hex cap screw* (B).
4. Tighten the *socket head set screw* (A).

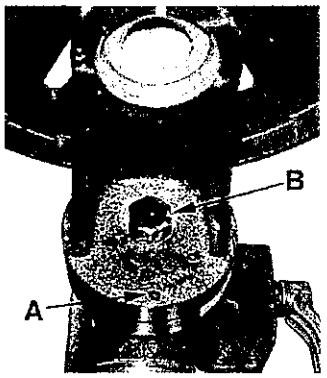


Figure 15

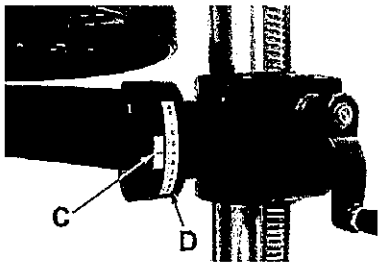


Figure 16

Operation

Installing Drills

Insert the drill into the chuck jaws about 1" (25.4mm) long. When using a small drill do not insert it so far that the jaws touch the flutes of the drill. Make sure that the drill is centered in the chuck before tightening the chuck with the key.

Using the Vise

For the small workpiece that cannot be clamped to the table, use a drill press vise. The vise must be clamped or bolted to the table. Always use a back-up piece of scrap wood to cover the table. This protects both the table and the drill bit.

Basic Operation

Place material to be drilled in such as way as to come into contact with the left side of the column. This prevents the material from spinning.

⚠WARNING **If the work piece is not large enough to come into contact with the column, use a clamp or drill press vise that is securely fastened to the table! Failure to comply may cause serious injury!**

Feed the bit into the material with only enough force to allow the drill bit to work. Feeding too slowly may cause burning of the workpiece. Feeding too quickly may cause the motor to stop and/or the drill bit to break.

Generally speaking, the smaller the drill bit, the greater the RPM required. Wood requires higher speeds than metal. Metal is usually drilled at slower speeds.

In dusty environments, frequently blow out any dust that accumulates inside the motor.

Maintenance

⚠WARNING **Before any intervention on the machine, disconnect it from the electrical supply by pulling out the plug or switching off the main switch! Failure to comply may cause serious injury.**

A coat of automobile-type wax applied to the table and column will help to keep the surfaces clean.

If the power cord is worn, cut, or damaged in any way, have it replaced immediately.

Lubrication

All of the ball bearings are packed with grease at the factory. They require no further lubrication.

Periodically lubricate the gear, rack, table elevation mechanism, the splines (grooves) in the spindle, and the teeth of the quill with a #2 tube grease.

Electrical

Grounding Instructions

⚠CAUTION **This tool must be grounded while in use to protect the operator from electric shock.**

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor, with insulation having an outer surface that is green with or without yellow stripes, is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Use only three wire extension cords that have three-prong grounding plugs and three-pole receptacles that accept the tool's plug.

Repair or replace a damaged or worn cord immediately.

115 Volt Operation

Referring to Figure 17:

As received from the factory, your drill press is ready to run at 115-volt operation. This drill press, when wired for 115 volt, is intended for use on a circuit that has an outlet and a plug that looks like the one illustrated in (A). A temporary adapter, which looks like the adapter shown in (B), may be used to connect this plug to a two-pole receptacle if a properly grounded outlet is not available. The temporary adapter should only be used until a properly grounded outlet can be installed by a qualified electrician. This adapter is not applicable in Canada. The green colored rigid ear, lug, or tab, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box.

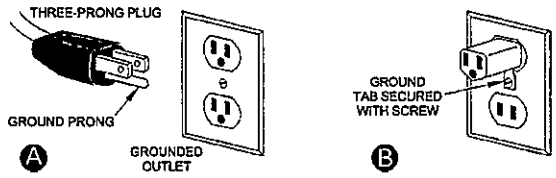


Figure 17

230 Volt Operation

Referring to Figure 18:

If 230V, single-phase operation is desired, the following instructions must be followed:

Disconnect the machine from the power source.

The JET drill press motor has four numbered leads that are factory connected for 115V operation, as shown in (A). For 230V operation reconnect the leads as shown in (B).

The 115V attachment plug (C), supplied with the drill press, must be replaced with a UL/CSA listed plug suitable for 230V operation (D). Contact your local Authorized JET Service Center or qualified electrician for proper procedures to install the plug. The drill press must comply with all local and national codes after the 230-volt plug is installed.

The drill press with a 230-volt plug should only be connected to an outlet having the same configuration as shown in (D). No adapter is available nor should be used with the 230-volt plug.

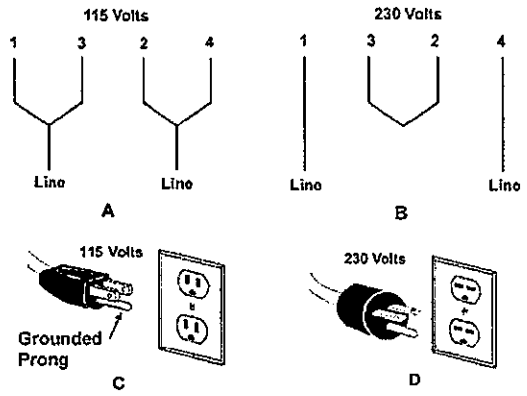


Figure 18

Extension Cords

Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your machine will draw. An undersized cord will cause a drop in the line voltage resulting in power loss and overheating. The table following shows the correct size to use depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. Remember, the smaller the gauge number, the heavier the cord.

Length of Cord	AWG
0 – 25 Feet	16
25 – 50 Feet	14

The drill press with a 230-volt plug should only be connected to an outlet having the same configuration (D, Fig. 18). No adapter is available or should be used with the 230-volt plug.

Important: In all cases (115 or 230 volts), make certain the receptacle in question is properly grounded. If you are not sure, have a registered electrician check the receptacle.

Troubleshooting

Trouble	Probable Cause	Remedy
Drill press will not start.	Drill press unplugged from wall, or motor.	Check all plug connections.
	Fuse blown, or circuit breaker tripped.	Replace fuse, or reset circuit breaker.
	Cord damaged.	Replace cord.
	Starting capacitor bad.	Replace starting capacitor.
Drill press does not come up to speed.	Extension cord too light or too long.	Replace with adequate size and length cord.
	Low current.	Contact a qualified electrician.
Drill Press vibrates excessively.	Stand on uneven surface.	Adjust stand so that it rests evenly on the floor.
	Bad belt(s).	Replace belts.
Noisy Operation.	Incorrect belt tension.	Adjust belt tension. See the *Changing Spindle Speeds* section.
	Dry spindle.	Lubricate spindle. See the *Lubrication* section.
	Loose spindle pulley.	Check tightness of retaining nut on pulley, and tighten if necessary.
	Loose motor pulley.	Tighten setscrews in pulleys.
Workpiece Burns.	Incorrect Speed.	Change to appropriate speed; see the *Changing Spindle Speeds* section.
	Chips not clearing from hole or bit.	Retract drill bit frequently to remove chips.
	Dull drill bit.	Resharpen, or replace drill bit.
	Feeding too slowly.	Increase feed rate.
Drill bit wanders.	Bit sharpened incorrectly.	Resharpen bit correctly.
	Bent drill bit.	Replace drill bit.
	Bit, or chuck not installed properly.	Reinstall the chuck, or bit properly.
Wood splinters on the underside.	No backing board used.	Place a scrap board underneath the workpiece to prevent splintering.
Drill bit binds in workpiece.	Workpiece pinching the bit.	Support or clamp workpiece.
	Excessive feed rate.	Decrease feed rate.
	Chuck jaws not tight.	Tighten chuck jaws.
	Improper belt tension.	Adjust belt tension (*Changing Spindle Speeds*)
Excessive drill bit runout, or wobble.	Bent drill bit.	Replace drill bit.
	Worn spindle bearings.	Replace spindle bearings.
	Bit, or chuck not properly installed.	Reinstall the bit, or chuck properly.
Quill returns too slow, or too fast.	Spring has improper tension.	Adjust spring tension. See the *Return Spring Adjustment* section.
Chuck or arbor does not stay in place.	Dirt, grease, etc on arbor, chuck, or spindle.	Clean all mating surfaces thoroughly with a cleaner degreaser.

Parts

Replacement Parts

To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from JET. Some parts are shown for reference only, and may not be available individually.

Parts List – J-2500, J-2530

Index No.	Part No.	Description	Size	Qty
1A	10600110	Base for J-2530 / JDP-15M		1
1B	10800101	Base for J-2500 / JDP-15MF (not shown)		1
2A	JDP15-1002A	Column Holder for J-2530 / JDP-15M		1
2B	10600204	Column Holder for J-2500 / JDP-15MF		1
3	TS-2279121	Hex Socket Set Screw	M10-12	3
4A	JDP15-1004A	Body Column for J-2530 / JDP-15M		1
4B	JDP15-1004B	Body Column for J-2500 / JDP-15MF		1
	10600404A1	Column Assy for J-2530 / JDP-15M (includes #2A and #4A)		1
	10400401A1	Column Assy for J-2500 / JDP-15MF (includes #2B, #3 and #4B)		1
5	TS-2229403	Hex Head Bolt	M10x40	4
6	10600604	Table Bracket		1
	JDP15-1006	Table Bracket Assy (includes #6 thru #18)		1
7	10600702	Gear		1
8	10600802	Gear Shaft		1
9	10600902	Worm		1
10A	10601009A1	Crank Handle Assy		1
12	JDP15-1012	Table Bracket		1
13	TS-0071011	Hex Head Bolt	5/8-11 x 1-1/2	1
14	TS-2276101	Hex Socket Set Screw	M6-10	1
16	10601601	Tilting Scale		1
17	JDP15-1017	Centering Scale		1
18	JDP15-1018	Drive Screw	Φ 2.3-5	2
19	10601901	Column Lock Handle	M12 x 1.75-35	1
20	10602001	Table Lock Handle	M10 x 1.5	1
21	J-5625221	Table		1
22A	10602204	Rack for J-2530 / JDP-15M		1
22B	10602205	Rack for J-2500 / JDP-15MF		1
23	10602304	Rack Ring	Φ 73.5	1
24	TS-2276081	Hex Socket Set Screw	M6-8	1
25	JDP15-1025G	Head		1
26	TS-2279121	Hex Socket Set Screw	M10-12	2
27	JDP15-1027	Lamp Socket		1
28	TS-1534042	Cr. Re. Pan Head Screw	M6-12	2
29	10602901	Handle Shifter		1
30	10603002	Motor Bar Shifter		1
31	TS-2228161	Hex Head Bolt	M8-16	1
32	10603206	Motor Rod		1
33	10603301	Shifter Bolt	M10-33	2
34	10603416	Motor Base	75 x 125mm	1
35	2502NBC412	Spring Washer	Φ1/2"	1
36	TS-1540081	Hex Nut	M12	2
37	10603704	Hub		1

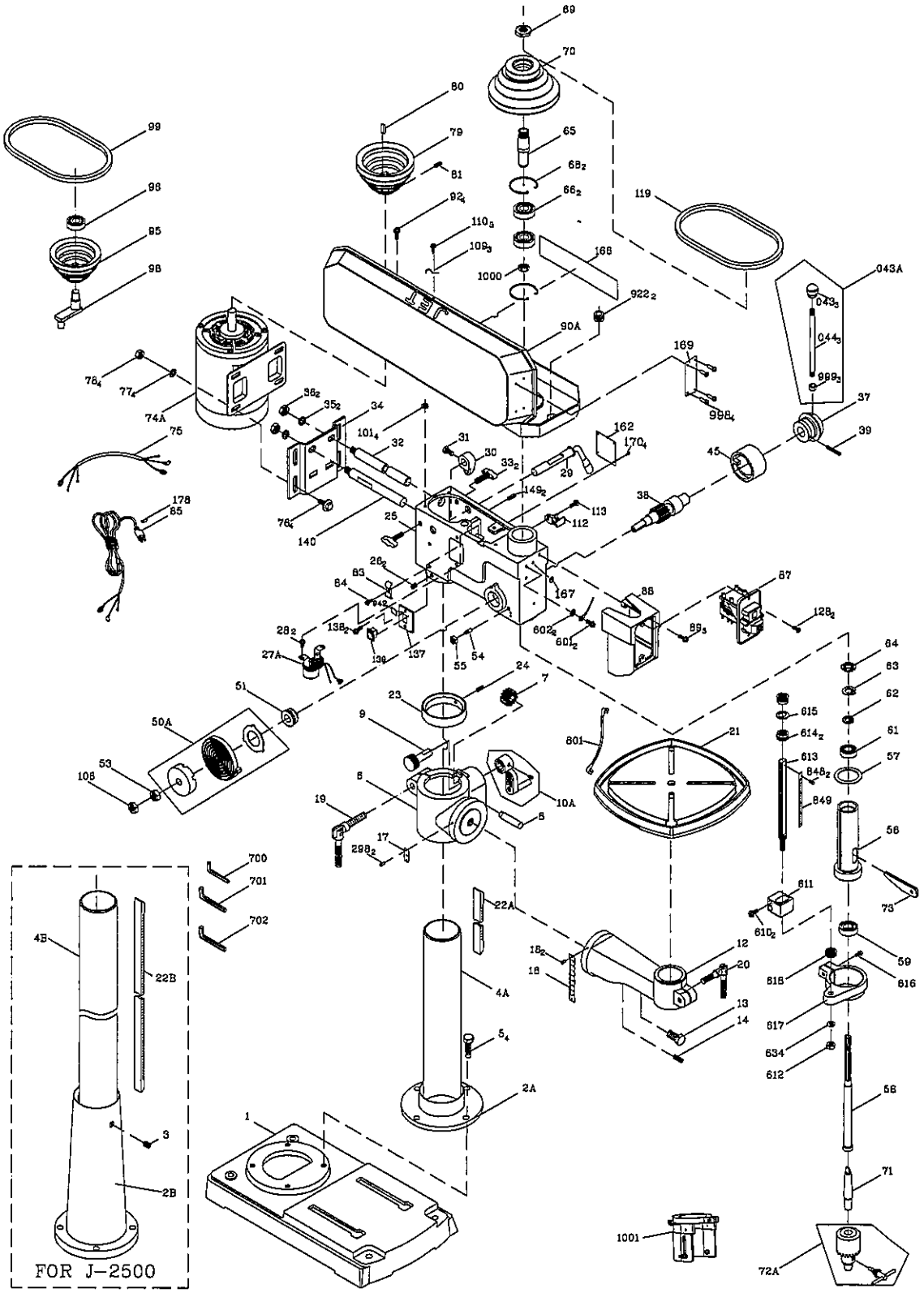
Parts List – J-2500, J-2530

Index No.	Part No.	Description	Size	Qty
38	10603807	Feed Shaft		1
	JDP15-1038	Feed Shaft Assy (includes #37 thru #39)		1
39	JDP12-55	Roll Pin	M5x16	1
43A	J-2500-43A	Handle Bar Assembly		1
45	10604505	Scale Ring		1
50A	JDP15-1050	Spring Cap		1
51	10605115	Shaft Seat		1
53	TS-0561052	Hex Nut	1/2"-20	1
54	10605403	Quill Set Screw	M10-28	1
55	TS-1540071	Hex Nut	M10	1
56	10605608	Quill	MT2	1
	JDP15-1056	Quill and Spindle Assy (includes #56 thru # 64)		1
57	10605702	Rubber Washer		1
58	10605822	Spindle	MT2	1
59	2001ZZ6204	Ball Bearing		1
61	2001ZZ6203	Ball Bearing		1
62	TS-2360161	Washer	M16	1
63	10606301	Nut Lock		1
64	10606401	Spindle Nut		1
65	10606505	Driving Sleeve		1
	JDP15-1065	Driving Sleeve Assy (includes #65 thru #67)		1
66	2001ZZ6204	Ball Bearing		2
67	10606703	Rack ring	Φ 45 T=4	1
68	10606801	Retaining Ring		2
69	10606904	Pulley Set Nut		1
70	JDP15-1070	Spindle Pulley		1
71	21015M2J30	Drilling Arbor	MT2*JT3	1
72A	JDP15-1072	Chuck Assy		1
73	10607303	Wedge Shifter		1
74	JDP15-1074	Motor		1
	JDP15-1074A	Centrifugal Switch (not shown)		1
	JDP15-1074B	Start Capacitor (not shown)	200MFD 125VAC	1
75	JDP15-1075	Motor Wire		1
76	TS-2208201	Hex. Hd. Screw	M8-20	4
77	TS-1550061	Flat Washer	M8	8
78	TS-1540061	Hex Nut	M8	4
79	JDP15-1079	Motor Pulley		1
80	2571MNC307	Parallel Key	5 x 5-20	1
81	TS-1504021	Hex Socket Set Screw	M8-12	1
83	JDP15-1083	Strain Relief		1
84	TS-1534042	Cr. Re. Pan Head Screw	M6-12	1
85	JDP15-1085	Power Cable		1
87	JDP15-1087	Rocker Switch		1
88	JDP15-1088	Switch Box		1
89	TS-1533042	Cr. Re. Pan Head Screw	M5-12	3
90A	JDP15-1090G	Pulley Cover Assy		1
	JDP15-1090A	U Shaped Protecting Rubber (not shown)		1
92	JDP15-1092	Cr. Re. Round Washer Hd. Screw	M6 x 1.0-12	4
95	JDP15-1095	Center Pulley		1
	JDP15-1095A	Center Pulley Assy (includes #95 thru #98)		1
96	JDP15-1096	Ball Bearing		2
98	10609801	Center Pulley Shaft		1
99	VB-A28	V-Belt	A-28	1
101	TS-0680021	Flat Washer	1/4"	4
106	TS-0561052	Hex Nut	½"-20	1
109	JDP15-1109	Clamp-Cord		3

Parts List – J-2500, J-2530

Index No.	Part No.	Description	Size	Qty
110	2668BBDA23	Cr. Re. Pan Head Screw	M5-8	3
112	10611201	Chuck Key Holder		1
113	TS-2286122	Cr. Re. Round Washer Hd. Screw	M6-12	1
119	VB-A26	V-Belt	A-26	1
128	TS-2285162	Cr. Re. Truss Hd. Tapping Screw	M5-16	2
137	JDP15-1137G	Switch Cover		1
138	TS-1533042	Cr. Re. Pan Head Screw	M5-12	2
139	JDP15-1139	Rocker Switch		1
140	10614001	Motor Rod		1
149	2536MBE616	Roll Pin	6-25	2
162	10916202	Warning Label		1
166	JDP15-1166	Speed Diagram		1
169	JET-92	JET Logo Plaque	92x38mm	1
170	2658MZDU36	Drive Screw	Φ 2.3-5	6
601	TS-2245082	Cr. Re. Pan Head Screw	M5-8	4
602	TS-0733031	External Tooth Lock Washer	No 10	2
610	TS-1534692	Cr. Re. Pan Head Screw	M6-35	2
611	10661102	Depth Stop Block		1
612	TS-1540071	Hex Nut	M10	1
613	10661301	Set Bolt		1
	JDP15-1613	Set Bolt Assy (includes #613, 848, 849)		1
614	13005701	Nut	M16	2
615	13005601	Washer	Φ24	1
616	TS-1502081	Hex. Soc. Hd. Cap Blot	M5-35	1
617	JDP15-1617	Set Ring		1
618	10661801	Circular Nut		1
634	2502ABC410	Spring Washer	Φ10	1
700	TS-152704	Wrench Hex		1
701	TS-152706	Wrench Hex		1
702	TS-152707	Wrench Hex		1
801	JDP15-1801	Lead Wire Assembly		1
848	JDP15-1848	Drive Screw	Φ 2.3-5	2
849	JDP15-1849	Scale		1
922	2801ABRF04	Strain Relief	Φ 20	2
999	TS-1540081	Hex Nut	M12x10	3
1000	100633Y8	Plastic Sleeve		1
1001	10810401A1	Chuck Guard Assembly		1

Exploded View – J-2500, J-2530



Parts List – J-2550

Index No.	Part No.	Description	Size	Qty
1	J-5627751	Base		1
2	J-5627761	Collar, Column		1
3	5626231	Set Screw	M10 x 40 mm	1
4	5627771	Column		1
5	5627781	Screw, Hex Head	M12 x 40 mm	4
6	J-5627791	Bracket, Table		1
7	5625071	Gear, Pinion		1
8	5625081	Shaft, Gear		1
9	5625091	Worm		1
10	5627811	Handle, Lowering/Raising		1
11	5626251	Screw, Hex Head	M6 x 12 mm	1
13	5627821	Screw, Hex Head	5/8" x 2"	1
14	5627831	Pin, Location		1
15	5627841	Nut, Hex	1/4" x 20"	1
16	5627851	Scale, Tilting		1
17	5625181	Scale, Angle		1
18	5625191	Set Screw	Ø2.3x 5 mm	3
19	5625211	Handle, Lock	M12 x 180 mm	1
21	J-5627861	Table	18-3/4" x 16-3/4"	1
22	5627871	Rack		1
23	J-5627881	Retainer, Rack		1
24	5627061	Screw Set, Hex Socket	M6 x 10mm	1
25	J-5627891G	Head		1
26	5627021	Screw Set, Hex Socket	M10 x 12mm	2
28	5627911	Screw, Pan Head, Cr.-Re.	M6 x 12mm	2
29	5627121	Lever, Tension Adjustment		1
30	5627131	Cam		1
31	5627141	Screw, Hex Head	M8 x 16 mm	1
32	5627921	Shaft, Motor Base		1
33	5627931	Lock, Motor Bar		2
34	J-5627941	Base, Motor		1
35	5627181	Washer, Spring	Ø1/2"	2
36	5627191	Nut, Hex	M12	2
37	5627211	Hub		1
38	5627951	Shaft, Feed Pinion		1
38A	5627961	Shaft Assembly, Feed Pinion		1
39	5627971	Pin, Roll		1
40	5627241	Pin, Scale Set		1
41	5627981	Wedge, Scale Locking		1
42	5627991	Screw, Depth Lock	M8 x 17 mm	1
43	5629011	Handle		3
43A	J-2550-43A	Bar Assembly, Handle		3
44	5627271	Grip		3
45	5629031	Housing, Spindle Depth		1
46	5629041	Scale		1
47	5625481	Pointer		1
48	5626551	Screw, Drive		3
49	5629051	Coil		1
50	5629061	Housing, Spring		1
50A	5629071	Housing Assembly, Spring		1
51	5629081	Seat, Spring		1
53	5629091	Nut, Hex	1/2"-20	2
54	5627321	Screw, Set, Quill	M10 x 27mm	1
55	5627331	Nut, Hex	M10	1
56	5629111	Quill		1
56A	5629121	Quill Assembly (includes #56 thru 64)		1

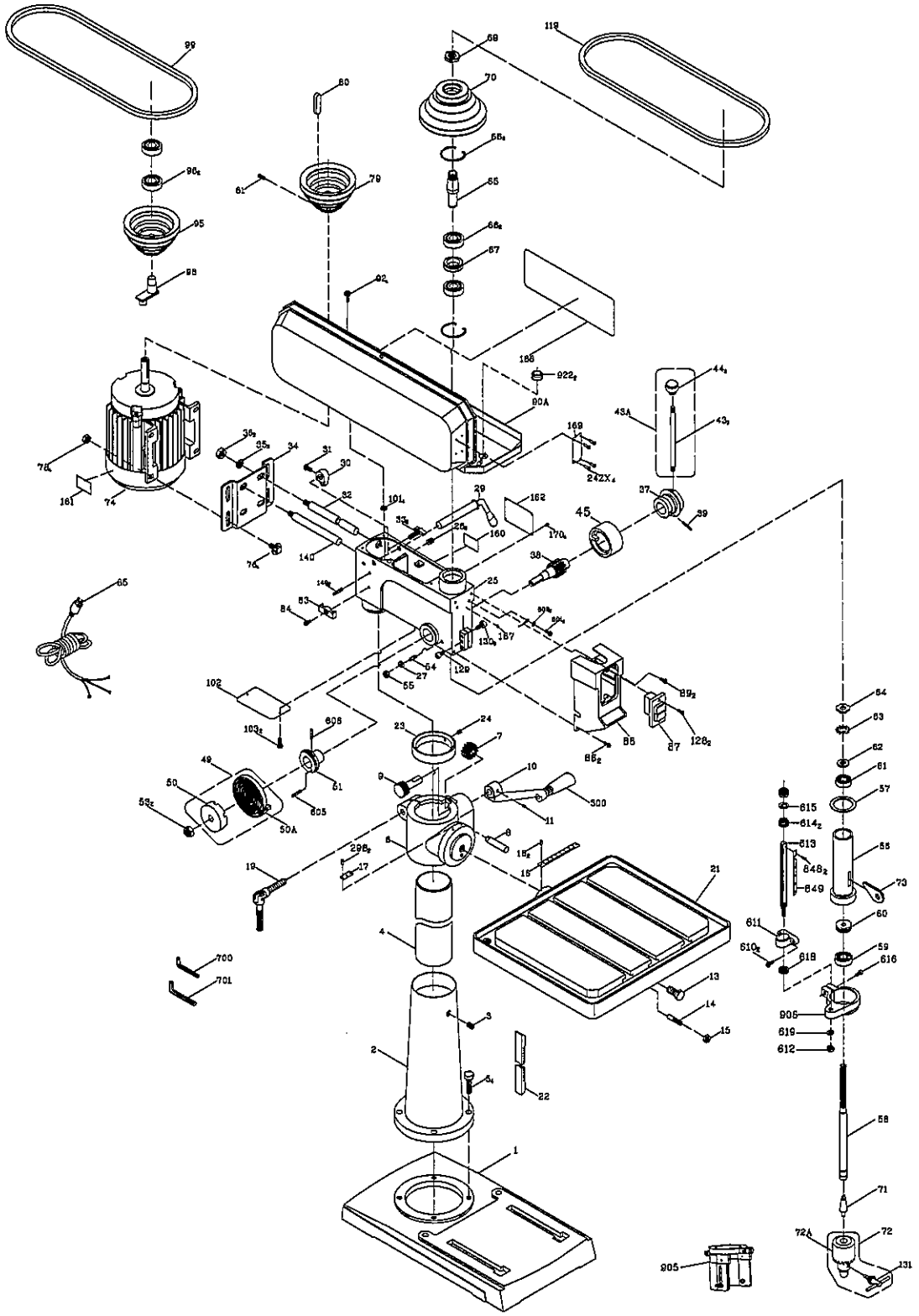
Parts List – J-2550

Index No.	Part No.	Description	Size	Qty
57	5629131	Washer, Rubber		1
58	5629141	Spindle	MT3, Ø34	1
59	5629151	Bearing, Ball	6206ZZ	1
60	5629161	Bearing, Ball, Thrust	2906	
61	5635271	Bearing, Ball	6204Z	1
62	5629171	Washer		1
63	5629181	Lock, Washer		1
64	5629191	Lock, Nut		1
65	5629211	Lock, Driving		1
66	5629221	Bearing, Ball	6206Z	2
67	5629231	Collar		1
68	5629241	Ring, Retaining		2
69	5629251	Nut, Pulley Lock		1
70	5629261	Pulley, Spindle		1
71	5624641	Arbor	MT3 x JT3	1
72	5628931	Chuck	RJ3 - 16L	1
72A	5627401	Chuck and Key		1
73	5624671	Wedge, Taper		1
74	J-5629271	Motor		1
76	5629291	Screw, Hex Head	M8 x 25 mm	4
77	5627511	Washer, Flat	5/16"	4
78	5625821	Nut, Hex	M8	4
79	5629311	Pulley, Motor		1
80	5629321	Key		1
81	5629331	Screw, Set	M8 x 8 mm	1
83	5627551	Clamp		2
84	5626841	Screw, Pan Head	M5 x 8 mm	2
85	5629341	Cord, Power		1
87	JDP15-1087	Push-Button Switch		1
88	5629361	Cover, Switch		1
89	5626871	Screw, Pan Head	M5 x 12 mm	2
90A	5629371G	Pulley Cover Assembly		1
92	5627591	Washer, Round Head Screw	M6 x 12 mm	4
93	5629381	Screw, Truss Head Tapping	M4 x 12 mm	1
94	5627611	Knob		1
95	5629391	Pulley, Center		1
96	5621681	Bearing, Ball	6202Z	2
98	5629411	Shaft, Pulley		1
99	5624701	V-Belt	A-30	1
101	5627641	Washer, Flat	1/4"	4
102	J2550-102	Cover Plate		1
103	5712561	Phillips Pan Head Machine Screw	M5-0.8 x 8	2
119	5637541	V-Belt	A-32	1
128	TS-2285162	Screw, Machine	M5 x 16 mm	2
129	5629421	Screw, Socket Head Cap	M8 x 30 mm	2
130	5629431	Screw, Socket Head Cap	M8 x 25 mm	1
131	5629441	Key, Chuck		1
140	5629451	Shaft, Motor Base		1
149	5629461	Pin, Roll		2
166	11316501	Speed Diagram		1
169	JET-113	JET Logo Plaque	113x47mm	1
601	5629471	Screw, Pan Head	M4 x 12 mm	1
602	5629481	Washer, External Tooth Lock	Ø4	2
605	5629491	Pin, Roll		1
606	5629511	Pin, Roll	Ø2.5 x 10 mm	1

Parts List – J-2550

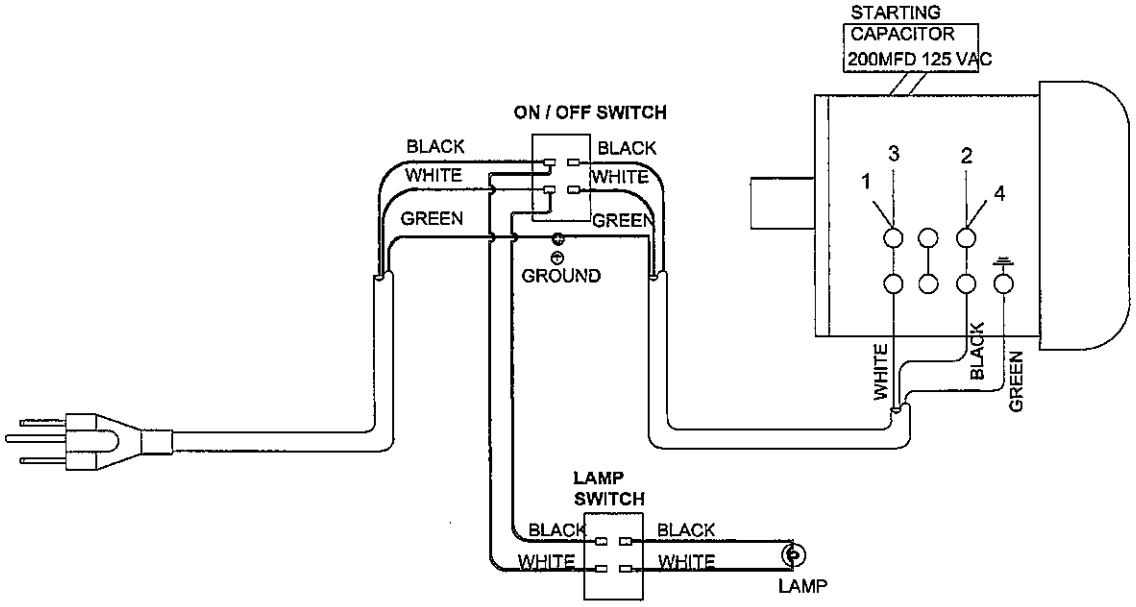
Index No.	Part No.	Description	Size	Qty
610	5513738	Screw		2
611	5513739	Block, Depth Stop		1
612	5513740	Nut		1
613	5513741	Rod, Depth Stop Adjustment	2550 Only	1
614	5513742	Nut, Adjustment Lock		1
615	5513743	Washer		1
616	5513744	Screw, Clamping		1
617	J-5518233	Clamp, Depth Stop support		1
618	5513746	Nut		1
700	5627711	Wrench, Allen	3 mm	1
701	5629521	Wrench, Allen	5 mm	1
903	5627721	Grommet		2
904	J-5629371	Cover Assembly, Pulley		1
905	10810402A1	Chuck Guard Assembly		1
906	11361702	Set Ring		1

Exploded View – J-2550

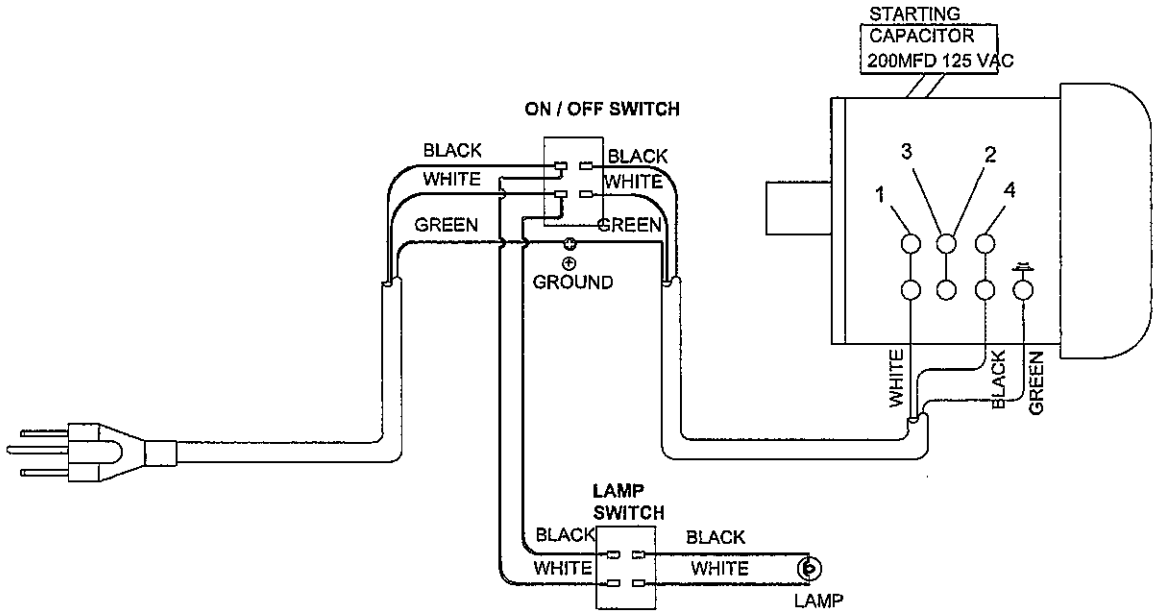


Wiring Diagram

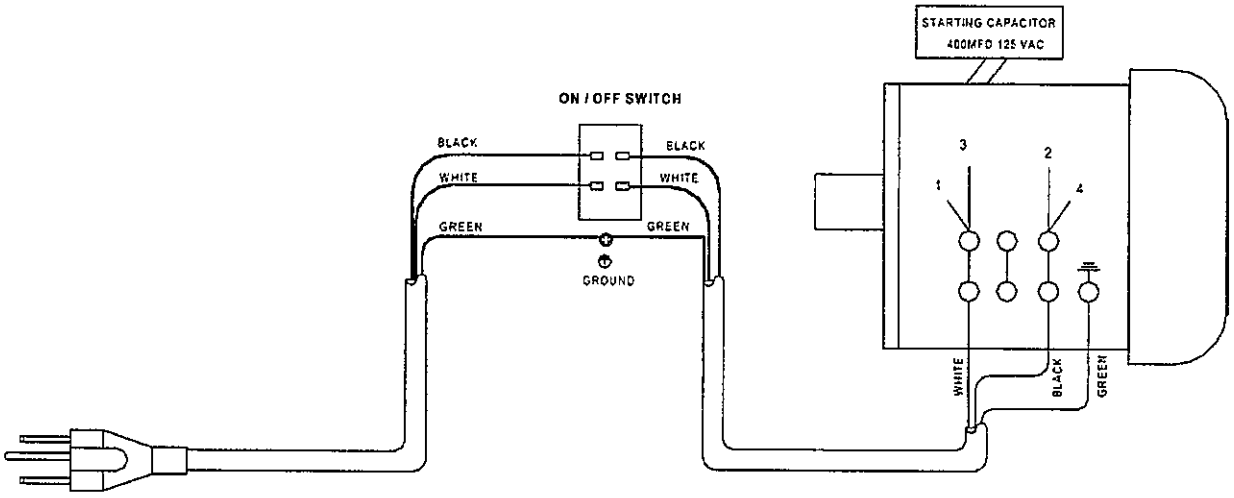
J-2500/J-2530 – 115V



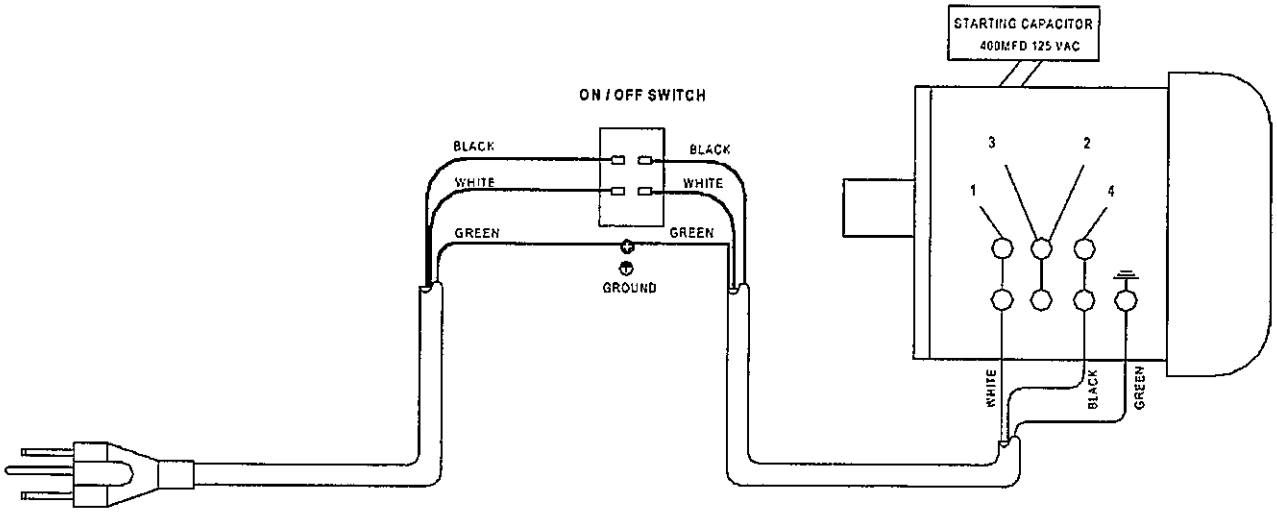
J-2500/J-2530 – 230V



J-2550 – 115V



J-2550 – 230V



JET

427 New Sanford Road
LaVergne, Tennessee 37086
Phone: 800-274-6848
www.jettools.com

Annex F

EMSD's Confirmation Email Record

☐ Urgent ☐ Return receipt ☐ Sign ☐ Encrypt ☐ Mark Subject Restricted

回覆: 184GK - Chai Wan Government Complex and Vehicle Depot - Submission of Environmental Review Report - EMSD query

18/06/2019 13:33

From: SMIVD/HQ/EMSD@EMSD
To: Yuk Yui SZE/ARCHSD/HKSARG@ARCHSD@GCN-NOTES
Cc: Chi Lok WONG/ARCHSD/HKSARG@ARCHSD@GCN-NOTES

Dear Vincent,

Please be confirmed that the drill stand and bench grinder at Chai Wan Workshop which are used for the noise measurement for Noise Impact Assessment are the only available / suitable models in all EMSD vehicle workshops/ depots in Hong Kong at the testing period.

Should further information is required, please feel free to call me direct.

Thank you.

Best regards,

YUNG Yin-hing, Ricky
Ag. SMIVD

Tel.: 3113 0404
Mobile: 9138 9591
Fax: 25768621

Email: rickyyung@emsd.gov.hk

-----Yuk Yui SZE/ARCHSD/HKSARG 撰寫:-----

==========
收件人: SMIVD/HQ/EMSD@EMSD@ARCHSD@GCN-NOTES
寄件人: Yuk Yui SZE/ARCHSD/HKSARG
日期: 2019/06/18 11:13
副本抄送: Chi Lok WONG/ARCHSD/HKSARG@ARCHSD@GCN-NOTES
主旨: 184GK - Chai Wan Government Complex and Vehicle Depot - Submission of Environmental Review Report - EMSD query
==========

Dear Ricky,

Our previous several tele-conversation refers.

Please confirm that the drill stand and bench grinder at Chai Wan Workshop which are used for the noise measurement for Noise Impact Assessment are the only available / suitable models in all EMSD workshops/ depots in Hong Kong at the testing period.

Regards,

Vincent SZE
PM246
Architectural Services Department
Tel: 2867 3815
Fax: 2810 5372

Appendix 4.5

Detailed Calculation of Fixed Plant Noise Impact Assessment

Summary of Fixed Plant

						Daytime and Evening							Night-time						
Noise Type	Source ID	Items	Plant Room ID / Activity ID	Plant Rooms	Maximum Allowable SWL, dB(A)	Quantity / Max concurrent works, nos.	Operation Frequency, nos./ 30 mins	Operation Duration per event	Percentage on-time over 30 mins	Correction for tonality, dB(A)	Correction for impulsiveness, dB(A)	Correction for intermittency, dB(A)	Quantity / Max concurrent works, nos.	Operation Frequency, nos./ 30 mins	Operation Duration per event	Percentage on-time over 30 mins	Correction for tonality, dB(A)	Correction for impulsiveness, dB(A)	Correction for intermittency, dB(A)
MVAC and Other Fixed Noise Sources	S1	Water Pumps	1F_PR 1	Chiller Pump Room	85	2	--	--	100%	5	0	0	1	--	--	100%	5	0	0
	S2	Exhaust Fans	1F_PR 1	Chiller Pump Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S3	General Exhaust Fans	1F_PR 2	Exhaust Fan Room	85	5	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S4	Compressors	1F_PR 3	Compressor Room	85	1	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S5	Exhaust Fans	1F_PR 3	Compressor Room	85	1	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S6	Transformers	1F_PR 4	Transformer Room	85	2	--	--	100%	5	0	0	2	--	--	100%	5	0	0
	S7	Exhaust Fans	1F_PR 4	Transformer Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S8	Transferred Water Pumps	1F_PR 5	Transferred Tank Pump Room	85	2	--	--	100%	5	0	0	2	--	--	100%	5	0	0
	S9	Exhaust Fans	1F_PR 5	Transferred Tank Pump Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S10	Generator (operations during power failure / maintenance)	2F_PR 1	Generator Room	85	2	--	--	100%	0	0	0	2	--	--	100%	0	0	0
	S11	Exhaust Fans	2F_PR 1	Generator Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S12	Compressors	3F_PR 1	Compressor Room	85	1	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S13	Exhaust Fans	3F_PR 1	Compressor Room	85	1	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S14	Water Pumps	3F_PR 2	F.S. Pump Room	85	1	--	--	100%	5	0	0	1	--	--	100%	5	0	0
	S15	Exhaust Fans	3F_PR 2	F.S. Pump Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S16	General Exhaust Fans	3MF_PR 1	Exhaust Fan Room	85	5	--	--	100%	0	0	0	2	--	--	100%	0	0	0
	S17	PAU	3MF_PR 2	PAU Room 1	85	2	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S18	Exhaust Fans	3MF_PR 2	PAU Room 1	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S19	Chiller Plant	4F_PR 1	Chiller Plant Room	85	2	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S20	Exhaust Fans	4F_PR 1	Chiller Plant Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S21	Water Pumps	4F_PR 2	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	85	2	--	--	100%	5	0	0	2	--	--	100%	5	0	0
	S22	Exhaust Fans	4F_PR 2	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S23	Exhaust Fans	5F_PR 1	Battery Charging Room	85	1	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S24	General Exhaust Fans	5F_PR 2	Exhaust Fan Room	85	4	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S25	Welding Exhaust Fans	6F_PR 2	Exhaust Fan Room	85	2	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S26	Exhaust Fans	6F_PR 2	Exhaust Fan Room	85	3	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S27	Exhaust Fans	7F_PR 1	TBE Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S28	PAU	7F_PR 2	PAU Room 2	85	5	--	--	100%	0	0	0	2	--	--	100%	0	0	0
	S29	AHU	8F_PR 1	AHU Room	85	1	--	--	100%	0	0	0	0	--	--	0%	0	0	0
	S30	Lift Machine	RF_PR 1	Lift Machine Room	85	3	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S31	Exhaust Fans	RF_PR 1	Lift Machine Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S32	Water Pumps	RF_PR 2	Portable Flushing and Makeup Water Pump Room	85	3	--	--	100%	5	0	0	3	--	--	100%	5	0	0
	S33	Exhaust Fans	RF_PR 2	Portable Flushing and Makeup Water Pump Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S34	Cooling towers	RF_PR 3	Cooling Tower Plant Room	100	2	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S50	Exhaust Fans	2F_PR 2	Exhaust Fan Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S51	Exhaust Fans	5F_PR 1	Exhaust Fan Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S52	Exhaust Fans	5F_PR 2	Exhaust Fan Room	85	1	--	--	100%	0	0	0	1	--	--	100%	0	0	0
	S53	Exhaust Fans	6F_PR 2	Exhaust Fan Room	85	1	--	--	100%	0	0	0	0	--	--	0%	0	0	0
Vehicle Repair / Testing Activities	S35	Brake Test Strip	1F_Act 1	L1 HKPF	92	1	3	0.5	5%	0	0	0	1	1	0.5	2%	0	0	0
	S36	Hand-held Pneumatic Tools	1F_Act 3	L1 HKPF	100	1	4	0.5	7%	0	0	0	1	1	0.5	2%	0	0	0
	S37	Hammering Activities	1F_Act 4	L1 HKPF	113	3	1	2	7%	0	3	0	1	1	2	7%	0	3	0
	S38	Automatic Vehicle Washing Machine	4F_Act 5	FEHD	88	1	4	2	27%	0	0	0	1	4	2	27%	0	0	0
	S39	Motorcycle Speedometer Calibrator	6F_Act 6	EMSD Dept	112	1	1	1	3%	0	0	0	0	0	1	0%	0	0	0
	S40	Tyre Changer	6F_Act 7	EMSD Dept	98	1	4	2	27%	0	0	0	0	0	2	0%	0	0	0
	S41	Hammering Activities	6F_Act 8	EMSD Dept	113	4	1	2	7%	0	3	0	0	0	2	0%	0	3	0
	S42	Hand-held Pneumatic Tools	6F_Act 9	EMSD Dept	100	4	1	4	13%	0	0	0	0	0	4	0%	0	0	0
	S43	Roller Brake Tester	6F_Act 10	EMSD Dept	99	1	3	0.5	5%	0	0	0	0	0	0.5	0%	0	0	0
	S44	Motorcycle Brake Tester	6F_Act 11	EMSD Dept	99	1	3	2	20%	0	0	0	0	0	2	0%	0	0	0
	S45	Roller Brake Tester	1F_Act 12	L1 HKPF	99	1	3	2	20%	0	0	0	1	1	2	7%	0	0	0
	S47	Bench Grinder	6F_Act 14	EMSD Dept	94	1	1	10	33%	0	0	0	0	0	10	0%	0	0	0
	S48	Drill Stand	6F_Act 15	EMSD Dept	99	1	1	5	17%	0	0	0	0	0	5	0%	0	0	0
	S49	Motorcycle Brake Roller Tester	1F_Act 16	L1 HKPF	99	1	1	30	100%	0	0	0	1	1	30	100%	0	0	0

Remark:

[1] The quantities of vehicle repair / testing facilities and fixed plant had been verified with the future users. The maximum nos. of concurrent operations of vehicle repair/ testing activities would be dictated by the quantities of facilities/ tools equipped in the proposed project.
[2] A correction of -10 dB(A) was adopted if the external louvres and fixed plant were totally screened by barriers or buildings outside the project or building structures of the project. A correction of -5 dB(A) was applied to the fixed noise sources within plant rooms (other than ventilation fans, transformers, generators, PAUs and chillers).
[3] For the correction for tonality of the plant, as information is not available, +6 dB(A) for tonality correction was applied to water pumps and transformers as a conservative assumption in this assessment.
[4] +3 dB(A) for impulsiveness correction was applied to the hammering activities in both daytime and nighttime.
[5] Sound Exposure Level (SEL) for the brake test strip (S35), Bench Grinder (S47) and Drill Stand (S48) are measured on site to obtain the equivalent Sound Pressure Level (Leq(30min)) for the assessment. The measurement result is shown in Appendix 5.9 of the Approved EIA Report and Appendix 4.4 of this ERR respectively.
[6] SWL for the motorcycle speedometer calibrator is adopted from approved EIA report for EMSD Hong Kong Workshop at Sheung On Street, Chai Wan (AEIAR-202/2012).
[7] SWLs for hand-held pneumatic tools, hammering activities, automatic vehicle washing machine, tyre changer, roller brake tester and motorcycled brake tester are adopted from approved EIA report for Reprovisioning of FEHD Sai Yee Street Environmental Hygiene Offices-cum-vehicle Depot at Yen Ming Road, West Kowloon Reclamation Area (AEIAR-216/2013)

[8] The operation duration and frequency of the vehicle repair / testing activities had been obtained from, verified with and confirmed by the future users. The on-time % had been taken into consideration of daily operation needs, time requirements for preparation and setting up of each activity.
[9] Correction Factor for quantity= 10 log (quantity)
[10] Distance correction for SWL= 20 log (distance) + 8
[11] Correction for percentage on-time over 30 mins = 10 log (on-time %)
[12] Detailed design of the plant rooms is not yet available at this stage.
[13] The maximum allowable SWLs for louvres/ equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the SPLs at NSRs =

SPL= Max SWL+DC+FC+BC+OC+TC+IMC+INTC

SPL	Sound Pressure Level (dB(A))
Max SWL	Maximum allowable Sound Power Level (dB(A))
DC	Distance Attenuation (dB(A))
FC	Façade Correction (dB(A))
BC	Barrier Correction (dB(A))
OC	Percentage on-time Correction (dB(A))
TC	Correction for Tonality (dB(A))
IMC	Correction for Impulsiveness (dB(A))
INTC	Correction for Intermittency (dB(A))

The SWL of the equipment shall not exceed the specified Maximum Allowable SWL in order to achieve the noise criteria. Acoustic treatment would be installed as appropriate to achieve the required SWL.

[14] All maximum allowable SWLs are rounded to the nearest whole dB(A).
[15] Hammers will be used by the vehicle examiners at the HKPF PVP&EC to test if the screw is loosen or to assist dismantling parts of the detained vehicles for testing only. No maintenance or repair services for the detained vehicles will be involved.
[16] As the maximum allowable SWLs were adopted, which the SWL of each equipment may be lower in actual case. The predicted noise level represents a conservative estimation.

[Day / Evening Time]

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant &PL, Leq(30mins), dB(A)
NAP 101 1F	Chiller Pump Room	S1	Water Pumps	2	85	100%	331.2	-58.4	-10	-5	-10	3	0	0	0	3.0	0	26.6	46
NAP 101 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	328.3	-58.3	-10	0	-10	3	0	0	0	0	0	19.7	
NAP 101 1F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	389.0	-59.8	-10	-10	-10	3	0	0	0	7.0	0	25.2	
NAP 101 1F	Compressor Room	S4	Compressors	1	85	100%	396.2	-60	-10	-10	-10	3	0	0	0	0	0	18.0	
NAP 101 1F	Compressor Room	S5	Exhaust Fans	1	85	100%	408.8	-60.2	-10	-10	-10	3	0	0	0	0	0	17.8	
NAP 101 1F	Transformer Room	S6	Transformers	2	85	100%	408.8	-60.2	-10	-10	-10	3	0	0	0	3.0	0	26.8	
NAP 101 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	408.8	-60.2	-10	-10	-10	3	0	0	0	0	0	17.8	
NAP 101 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	408.8	-60.2	-10	-10	-10	3	0	0	0	3.0	0	26.8	
NAP 101 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	408.8	-60.2	-10	0	-10	3	0	0	0	0	0	17.8	
NAP 101 1F	Generator Room	S10	Generator (operational during power failure / maintenance)	2	85	100%	412.9	-60.3	-10	-10	-10	3	0	0	0	3.0	0	26.7	
NAP 101 1F	Generator Room	S11	Exhaust Fans	1	85	100%	521.0	-62.3	-10	-10	-10	3	0	0	0	0	0	15.7	
NAP 101 1F	Compressor Room	S12	Compressors	1	85	100%	353.5	-59	-10	-5	-10	3	0	0	0	0	0	19.0	
NAP 101 1F	Compressor Room	S13	Exhaust Fans	1	85	100%	350.0	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	350.0	-58.9	-10	-10	-10	3	9	0	0	0	0	25.1	
NAP 101 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	350.0	-58.9	-10	-10	-10	3	0	0	0	0	0	19.1	
NAP 101 1F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	350.1	-58.9	-10	0	-10	3	0	0	0	7.0	0	29.1	
NAP 101 1F	PAU Room 1	S17	PAU	2	85	100%	413.1	-60.3	-10	-10	-10	3	0	0	0	3.0	0	20.7	
NAP 101 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	413.1	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 1F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	413.3	-60.3	-10	-10	-10	3	0	0	0	3.0	0	20.7	
NAP 101 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	416.9	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 1F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	416.9	-60.4	-10	-5	-10	3	9	0	0	3.0	0	29.6	
NAP 101 1F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	416.9	-60.4	-10	0	-10	3	0	0	0	0	0	17.6	
NAP 101 1F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	351.5	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	419.7	-60.5	-10	-10	-10	3	0	0	0	6.0	0	23.5	
NAP 101 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	419.7	-60.5	-10	-10	-10	3	0	0	0	3.0	0	20.5	
NAP 101 1F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	419.7	-60.5	-10	-10	-10	3	0	0	0	4.8	0	22.3	
NAP 101 1F	TBE Room	S27	Exhaust Fans	1	85	100%	351.2	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1F	PAU Room 2	S28	PAU	5	85	100%	416.5	-60.4	-10	-10	-10	3	0	0	0	7.0	0	24.6	
NAP 101 1F	AHU Room	S29	AHU	1	85	100%	375.9	-59.5	-10	-5	-10	3	0	0	0	0	0	18.5	
NAP 101 1F	Lift Machine Room	S30	Lift Machine	3	85	100%	382.3	-59.6	-10	-5	-10	3	0	0	0	4.8	0	23.2	
NAP 101 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	372.5	-59.4	-10	0	-10	3	0	0	0	0	0	18.6	
NAP 101 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	391.4	-59.9	-10	-10	-10	3	8	0	0	4.8	0	28.8	
NAP 101 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	391.4	-59.9	-10	-10	-10	3	0	0	0	0	0	18.1	
NAP 101 1F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	391.4	-59.9	-10	-5	-10	3	0	0	0	3.0	0	35.1	
NAP 101 1F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	7%	374.8	-59.5	-10	0	-10	3	0	0	0	0	-11.5	21.7	
NAP 101 1F	L1 HKPF	S37	Hammering Activities	3	113	7%	375.3	-59.5	-10	0	-10	3	0	3	0	4.8	-11.5	42.6	
NAP 101 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	404.5	-60.1	-10	0	-10	3	0	0	0	0	-5.7	15.2	
NAP 101 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	379.1	-59.6	-10	0	-10	3	0	0	0	0	-14.8	30.8	
NAP 101 1F	EMSD Dept	S40	Tyre Changer	1	98	27%	382.0	-59.2	-10	0	-10	3	0	0	0	0	-5.7	26.1	
NAP 101 1F	EMSD Dept	S41	Hammering Activities	4	113	7%	390.9	-59.8	-10	0	-10	3	0	3	0	6.0	-11.5	43.5	
NAP 101 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	377.3	-59.5	-10	0	-10	3	0	0	0	6.0	-8.8	30.8	
NAP 101 1F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	389.8	-59.8	-10	0	-10	3	0	0	0	0	-13.0	19.0	
NAP 101 1F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	386.2	-59.3	-10	0	-10	3	0	0	0	0	-7.0	25.7	
NAP 101 1F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	386.2	-59.3	-10	0	-10	3	0	0	0	0	-7.0	25.7	
NAP 101 1F	EMSD Dept	S47	Bench Grinder	1	83.6	33%	402.2	-60.1	-10	0	-10	3	0	0	0	0	-4.8	21.8	
NAP 101 1F	EMSD Dept	S48	Drill Stand	1	99	17%	409.0	-60.2	-10	0	-10	3	0	0	0	0	-7.8	24.0	
NAP 101 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	376.6	-59.6	-10	0	-10	3	0	0	0	0	0.0	32.4	
NAP 101 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	351.5	-58.9	-10	0	-10	3	0	0	0	0	0.0	19.1	
NAP 101 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	417.8	-60.4	-10	-10	-10	3	0	0	0	0	0.0	17.6	
NAP 101 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	351.5	-58.9	-10	0	-10	3	0	0	0	0	0.0	19.1	
NAP 101 1F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	417.8	-60.4	-10	-10	-10	3	0	0	0	0	0.0	17.6	
NAP 101 10F	Chiller Pump Room	S1	Water Pumps	2	85	100%	332.6	-58.4	-10	-5	-10	3	9	0	0	3.0	0	29.6	46
NAP 101 10F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	329.7	-58.4	-10	0	-10	3	0	0	0	0	0	19.6	
NAP 101 10F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	390.1	-59.8	-10	-10	-10	3	0	0	0	7.0	0	25.2	
NAP 101 10F	Compressor Room	S4	Compressors	1	85	100%	397.4	-60.0	-10	-10	-10	3	0	0	0	0	0	18.0	
NAP 101 10F	Compressor Room	S5	Exhaust Fans	1	85	100%	410.0	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 10F	Transformer Room	S6	Transformers	2	85	100%	410.0	-60.3	-10	-10	-10	3	9	0	0	3.0	0	26.7	
NAP 101 10F	Transformer Room	S7	Exhaust Fans	1	85	100%	410.0	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 10F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	410.0	-60.3	-10	-10	-10	3	9	0	0	3.0	0	26.7	
NAP 101 10F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	410.0	-60.3	-10	0	-10	3	0	0	0	0	0	17.7	
NAP 101 10F	Generator Room	S10	Generator (operational during power failure / maintenance)	2	85	100%	413.4	-60.3	-10	-10	-10	3	0	0	0	3.0	0	20.7	
NAP 101 10F	Generator Room	S11	Exhaust Fans	1	85	100%	521.8	-62.4	-10	-10	-10	3	0	0	0	0	0	15.6	
NAP 101 10F	Compressor Room	S12	Compressors	1	85	100%	353.6	-59.0	-10	-5	-10	3	0	0	0	0	0	19.0	
NAP 101 10F	Compressor Room	S13	Exhaust Fans	1	85	100%	350.2	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 10F	F.S. Pump Room	S14	Water Pumps	1	85	100%	350.2	-58.9	-10	-10	-10	3	9	0	0	0	0	25.1	
NAP 101 10F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	350.2	-58.9	-10	-10	-10	3	0	0	0	0	0	19.1	
NAP 101 10F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	350.9	-58.9	-10	0	-10	3	0	0	0	7.0	0	29.1	
NAP 101 10F	PAU Room 1	S17	PAU	2	85	100%	413.0	-60.3	-10	-10	-10	3	0	0	0	3.0	0	20.7	
NAP 101 10F	PAU Room 1	S18	Exhaust Fans	1	85	100%	413.0	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 10F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	412.9	-60.3	-10	-10	-10	3	0	0	0	3.0	0	20.7	
NAP 101 10F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	416.5	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 10F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	416.5	-60.4	-10	-5	-10	3	9	0	0	3.0	0	29.6	
NAP 101 10F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	416.5	-60.4	-10	0	-10	3	0	0	0	0	0	17.6	
NAP 101 10F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	349.9	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 10F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	418.4	-60.4	-10	-10	-10	3	0	0	0	6.0	0	23.6	
NAP 101 10F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	418.4	-60.4	-10	-10	-10	3	0	0	0	3.0	0	20.6	
NAP 101 10F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	418.4	-60.4	-10	-10	-10	3	0	0	0	4.8	0	22.4	
NAP 101 10F	TBE Room	S27	Exhaust Fans	1	85	100%	350.1	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 10F	PAU Room 2	S28	PAU	5	85	100%	416.7	-60.4	-10	-10	-10	3	0	0	0	7.0	0	24.6	
NAP 101 10F	AHU Room	S29	AHU	1	85	100%	372.6	-59.4	-10	-5	-10	3	0	0	0	0	0	18.6	
NAP 101 10F	Lift Machine Room	S30	Lift Machine	3	85	100%	376.5	-59.5	-10	-5	-10	3	0	0	0	4.8	0	23.2	
NAP 101 10F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	369.8	-59.4	-10	0	-10	3	0	0	0	0	0	18.6	
NAP 101 10F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	388.7	-59.8	-10	-10	-10	3	8	0	0	4.8	0	29.0	
NAP 101 10F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	388.7	-59.8	-10	-10	-10	3	0	0	0	0	0	18.2	
NAP 101 10F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	388.7	-59.8	-10	-5	-10	3	0	0	0	3.0	0	36.2	
NAP 101 10F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	378.0	-59.5	-10	0	-10	3	0	0	0	0	-11.5	21.7	
NAP 101 10F	L1 HKPF	S37	Hammering Activities	3	113	7%	374.9	-59.5	-10	0	-10	3	0	3	0	4.8	-11.5	42.5	
NAP 101 10F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	403.1	-60.1	-10	0	-10	3	0	0	0	0	-5.7	15.2	
NAP 101 10F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	377.7	-59.5	-10	0	-10	3	0	0	0	0	-14.8	30.7	
NAP 101 10F	EMSD Dept	S40	Tyre Changer	1	98	27%	380.6	-59.1	-10	0	-10	3	0	0	0	0	-5.7	26.2	
NAP 101 10F	EMSD Dept	S41	Hammering Activities	4	113	7%	389.5	-59.8	-10	0	-10	3	0	3	0	6.0	-11.5	43.5	
NAP 101 10F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	375.9	-59.5	-10	0	-10	3	0	0	0	6.0	-8.8	30.8	
NAP 101 10F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	388.3	-59.8	-10	0	-10	3	0	0	0	0	-13.0	19.7	
NAP 101 10F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	384.8	-59.3	-10	0	-10	3	0	0	0	0	-7.0	25.7	
NAP 101 10F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	384.8	-59.3	-10	0	-10	3	0	0	0	0	-7.0	25.7	
NAP 101 10F	EMSD Dept	S47	Bench Grinder	1	83.6	33%	400.8	-60.1	-10	0	-10	3	0	0	0	0	-4.8	21.9	
NAP 101 10F	EMSD Dept	S48	Drill Stand	1	99	17%	407.7	-60.2	-10	0	-10	3	0	0	0	0	-7.8	24.0	
NAP 101 10F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	377.1	-59.5	-10	0	-10	3	0	0	0	0	0.0	32.5	
NAP 101 10F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	349.9	-58.9	-10	0	-10	3	0	0	0	0	0.0	19.1	
NAP 101 10F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	416.5	-60.4	-10	-10	-10	3	0	0	0	0	0.0	17.6	
NAP 101 10F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	349.9	-58.9	-10	0	-10	3	0	0	0	0	0.0	19.1	
NAP 101 10F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	416.5	-60.4	-10	-10	-10	3	0	0	0	0	0.0	17.6	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Dirtance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 101 21F	Chiller Pump Room	S1	Water Pumps	2	85	100%	337.3	-56.6	-10	-5	-10	3	5	0	0	3.0	0	25.4	48
NAP 101 21F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	334.4	-56.5	-10	0	-10	3	0	0	0	0	0	19.5	
NAP 101 21F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	394.1	-59.9	-10	-10	-10	3	0	0	0	7.0	0	25.1	
NAP 101 21F	Compressor Room	S4	Compressors	1	85	100%	401.3	-60.1	-10	-10	-10	3	0	0	0	0	0	17.9	
NAP 101 21F	Compressor Room	S5	Exhaust Fans	1	85	100%	413.8	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 21F	Transformer Room	S6	Transformers	2	85	100%	413.8	-60.3	-10	-10	-10	3	8	0	0	3.0	0	28.7	
NAP 101 21F	Transformer Room	S7	Exhaust Fans	1	85	100%	413.8	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 21F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	413.8	-60.3	-10	-10	-10	3	8	0	0	3.0	0	28.7	
NAP 101 21F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	413.8	-60.3	-10	0	-10	3	0	0	0	0	0	17.7	
NAP 101 21F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	416.5	-60.4	-10	-10	-19	3	0	0	0	3.0	0	20.6	
NAP 101 21F	Generator Room	S11	Exhaust Fans	1	85	100%	624.7	-62.4	-10	-10	-19	3	0	0	0	0	0	15.6	
NAP 101 21F	Compressor Room	S12	Compressors	1	85	100%	350.6	-59.0	-10	-5	-19	3	0	0	0	0	0	19.0	
NAP 101 21F	Compressor Room	S13	Exhaust Fans	1	85	100%	353.2	-59.0	-10	0	-10	3	0	0	0	0	0	19.0	
NAP 101 21F	F.S. Pump Room	S14	Water Pumps	1	85	100%	353.2	-59.0	-10	-10	-19	3	8	0	0	0	0	25.0	
NAP 101 21F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	353.2	-59.0	-10	-10	-10	3	0	0	0	0	0	19.0	
NAP 101 21F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	352.7	-58.9	-10	0	-19	3	0	0	0	7.0	0	26.1	
NAP 101 21F	PAU Room 1	S17	PAU	2	85	100%	415.3	-60.4	-10	-10	-19	3	0	0	0	3.0	0	20.6	
NAP 101 21F	PAU Room 1	S18	Exhaust Fans	1	85	100%	415.3	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 21F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	414.8	-60.4	-10	-10	-10	3	0	0	0	3.0	0	20.6	
NAP 101 21F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	418.4	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 21F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	418.4	-60.4	-10	-5	-10	3	8	0	0	3.0	0	26.6	
NAP 101 21F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	418.4	-60.4	-10	0	-10	3	0	0	0	0	0	17.6	
NAP 101 21F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	350.7	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 21F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	419.1	-60.4	-10	-10	-10	3	0	0	0	6.0	0	23.6	
NAP 101 21F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	419.1	-60.4	-10	-10	-10	3	0	0	0	3.0	0	20.6	
NAP 101 21F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	419.1	-60.4	-10	-10	-10	3	0	0	0	4.8	0	22.4	
NAP 101 21F	TBE Room	S27	Exhaust Fans	1	85	100%	350.3	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 21F	PAU Room 2	S28	PAU	5	85	100%	416.8	-60.4	-10	-10	-10	3	0	0	0	7.0	0	24.6	
NAP 101 21F	AHU Room	S29	AHU	1	85	100%	372.5	-59.4	-10	-5	-10	3	0	0	0	0	0	18.6	
NAP 101 21F	Lift Machine Room	S30	Lift Machine	3	85	100%	376.7	-59.5	-10	-5	-10	3	0	0	0	4.8	0	23.2	
NAP 101 21F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	356.8	-59.3	-10	0	-10	3	0	0	0	0	0	18.7	
NAP 101 21F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	387.9	-59.8	-10	-10	-10	3	8	0	0	4.8	0	29.0	
NAP 101 21F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	387.9	-59.8	-10	-10	-10	3	0	0	0	0	0	18.2	
NAP 101 21F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	387.9	-59.8	-10	-5	-10	3	0	0	0	3.0	0	36.2	
NAP 101 21F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	380.2	-59.6	-10	0	-10	3	0	0	0	0	-11.8	21.6	
NAP 101 21F	L1 HKPF	S37	Hammering Activities	3	113	7%	377.0	-59.5	-10	0	-10	3	0	3	0	4.8	-11.8	42.5	
NAP 101 21F	FEHD	S38	Automatic Vehicle Washing Machine	1	85	27%	403.9	-60.1	-10	0	-10	3	0	0	0	0	-5.7	15.2	
NAP 101 21F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	376.6	-59.6	-10	0	-10	3	0	0	0	0	-14.8	30.8	
NAP 101 21F	EMSD Dept	S40	Tyre Changer	1	98	27%	361.3	-59.2	-10	0	-10	3	0	0	0	0	-5.7	26.1	
NAP 101 21F	EMSD Dept	S41	Hammering Activities	4	113	7%	390.2	-59.8	-10	0	-10	3	0	3	0	6.0	-11.8	43.5	
NAP 101 21F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	376.6	-59.5	-10	0	-10	3	0	0	0	6.0	-8.8	30.8	
NAP 101 21F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	358.1	-59.5	-10	0	-10	3	0	0	0	0	-13.0	19.7	
NAP 101 21F	EMSD Dept	S44	Motorcycle Brake Tester	1	90	20%	387.1	-59.3	-10	0	-10	3	0	0	0	0	-7.0	25.7	
NAP 101 21F	L1 HKPF	S45	Roller Brake Tester	1	90	20%	387.1	-59.3	-10	0	-10	3	0	0	0	0	-7.0	25.7	
NAP 101 21F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	401.6	-60.1	-10	0	-10	3	0	0	0	0	-4.8	21.9	
NAP 101 21F	EMSD Dept	S48	Drill Stand	1	99	17%	408.4	-60.2	-10	0	-10	3	0	0	0	0	-7.8	24.0	
NAP 101 21F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	377.9	-59.5	-10	0	-10	3	0	0	0	0	0.0	32.5	
NAP 101 21F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	350.7	-58.9	-10	0	-10	3	0	0	0	0	0.0	19.1	
NAP 101 21F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	417.2	-60.4	-10	-10	-10	3	0	0	0	0	0.0	17.6	
NAP 101 21F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	350.7	-58.9	-10	0	-10	3	0	0	0	0	0.0	19.1	
NAP 101 21F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	417.2	-60.4	-10	-10	-10	3	0	0	0	0	0.0	17.6	

(Night-time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to surrounding Buildings, dB(A)	Barrier Correction due to interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 101 1F	Chiller Pump Room	S1	Water Pumps	1	85	100%	331.2	-58.4	-10	-5	-10	3	6	0	0	0	0	25.6	42
NAP 101 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	328.3	-58.3	-10	0	-10	3	0	0	0	0	0	18.7	
NAP 101 1F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	388.0	-59.8	-10	-10	-10	3	0	0	0	0	0	18.2	
NAP 101 1F	Compressor Room	S4	Compressors	0	85	0%	396.2	-60.0	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	Compressor Room	S5	Exhaust Fans	0	85	0%	406.9	-60.2	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	Transformer Room	S6	Transformers	2	85	100%	406.9	-60.2	-10	-10	-10	3	6	0	0	3.0	0	26.8	
NAP 101 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	406.9	-60.2	-10	-10	-10	3	0	0	0	0	0	17.8	
NAP 101 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	406.9	-60.2	-10	-10	-10	3	6	0	0	3.0	0	26.8	
NAP 101 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	406.9	-60.2	-10	0	-10	3	0	0	0	0	0	17.8	
NAP 101 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	412.9	-60.3	-10	-10	-10	3	0	0	0	3.0	0	20.7	
NAP 101 1F	Generator Room	S11	Exhaust Fans	1	85	100%	521.0	-62.3	-10	-10	-10	3	0	0	0	0	0	15.7	
NAP 101 1F	Compressor Room	S12	Compressors	0	85	0%	353.6	-59.0	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	Compressor Room	S13	Exhaust Fans	0	85	0%	350.0	-58.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	350.0	-58.9	-10	-10	-10	3	6	0	0	0	0	25.1	
NAP 101 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	350.0	-58.9	-10	-10	-10	3	0	0	0	0	0	19.1	
NAP 101 1F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	350.1	-58.9	-10	0	-10	3	0	0	0	3.0	0	22.1	
NAP 101 1F	PAU Room 1	S17	PAU	1	85	100%	413.1	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	413.1	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 1F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	413.3	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	416.6	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 1F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	416.9	-60.4	-10	-5	-10	3	6	0	0	3.0	0	26.8	
NAP 101 1F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	416.9	-60.4	-10	0	-10	3	0	0	0	0	0	17.8	
NAP 101 1F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	351.5	-58.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	419.7	-60.5	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	419.7	-60.5	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	419.7	-60.5	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	TBE Room	S27	Exhaust Fans	1	85	100%	351.2	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1F	PAU Room 2	S28	PAU	2	85	100%	414.5	-60.4	-10	-10	-10	3	0	0	0	3	0	20.6	
NAP 101 1F	AHU Room	S29	AHU	0	85	0%	375.0	-59.5	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	Lift Machine Room	S30	Lift Machine	1	85	100%	382.3	-59.6	-10	-5	-10	3	0	0	0	0	0	18.4	
NAP 101 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	372.5	-59.4	-10	0	-10	3	0	0	0	0	0	18.6	
NAP 101 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	391.4	-59.9	-10	-10	-10	3	6	0	0	4.8	0	28.9	
NAP 101 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	391.4	-59.9	-10	-10	-10	3	0	0	0	0	0	18.1	
NAP 101 1F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	391.4	-59.9	-10	-5	-10	3	0	0	0	0	0	33.1	
NAP 101 1F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	2%	374.9	-59.5	-10	0	-10	3	0	0	0	0	-17.0	15.7	
NAP 101 1F	L1 HKPF	S37	Hammering Activities	1	113	7%	375.3	-59.5	-10	0	-10	3	0	3	0	0	-11.5	37.7	
NAP 101 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	404.5	-60.1	-10	0	-10	3	0	0	0	0	-5	15.2	
NAP 101 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	379.1	-59.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	EMSD Dept	S40	Tyre Changer	0	98	0%	382.0	-59.2	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	EMSD Dept	S41	Hammering Activities	0	113	0%	390.9	-59.8	-10	0	-10	3	0	3	0	0	0	0.0	
NAP 101 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	377.3	-59.5	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	369.8	-59.4	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	368.2	-59.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	368.2	-59.3	-10	0	-10	3	0	0	0	0	-11.5	20.9	
NAP 101 1F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	402.2	-60.1	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	EMSD Dept	S48	Drill Stand	0	99	0%	409.0	-60.2	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	378.6	-59.6	-10	0	-10	3	0	0	0	0	0	32.4	
NAP 101 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	351.5	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	417.8	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	351.5	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	417.8	-60.4	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	Chiller Pump Room	S1	Water Pumps	1	85	100%	332.8	-58.4	-10	-5	-10	3	6	0	0	0	0	25.6	42
NAP 101 1DF	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	329.7	-58.4	-10	0	-10	3	0	0	0	0	0	18.6	
NAP 101 1DF	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	390.1	-59.8	-10	-10	-10	3	0	0	0	0	0	18.2	
NAP 101 1DF	Compressor Room	S4	Compressors	0	85	0%	397.4	-60.0	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	Compressor Room	S5	Exhaust Fans	0	85	0%	410.0	-60.3	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	Transformer Room	S6	Transformers	2	85	100%	410.0	-60.3	-10	-10	-10	3	6	0	0	3.0	0	26.7	
NAP 101 1DF	Transformer Room	S7	Exhaust Fans	1	85	100%	410.0	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 1DF	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	410.0	-60.3	-10	-10	-10	3	6	0	0	3.0	0	26.7	
NAP 101 1DF	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	410.0	-60.3	-10	0	-10	3	0	0	0	0	0	17.7	
NAP 101 1DF	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	413.4	-60.3	-10	-10	-10	3	0	0	0	3.0	0	20.7	
NAP 101 1DF	Generator Room	S11	Exhaust Fans	1	85	100%	521.8	-62.4	-10	-10	-10	3	0	0	0	0	0	15.6	
NAP 101 1DF	Compressor Room	S12	Compressors	0	85	0%	353.8	-59.0	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	Compressor Room	S13	Exhaust Fans	0	85	0%	350.2	-58.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	F.S. Pump Room	S14	Water Pumps	1	85	100%	350.2	-58.9	-10	-10	-10	3	6	0	0	0	0	25.1	
NAP 101 1DF	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	350.2	-58.9	-10	-10	-10	3	0	0	0	0	0	19.1	
NAP 101 1DF	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	350.0	-58.9	-10	0	-10	3	0	0	0	3.0	0	22.1	
NAP 101 1DF	PAU Room 1	S17	PAU	1	85	100%	413.0	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 1DF	PAU Room 1	S18	Exhaust Fans	1	85	100%	413.0	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 1DF	Chiller Plant Room	S19	Chiller Plant	1	85	100%	412.9	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 1DF	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	416.5	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 1DF	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	416.8	-60.4	-10	-5	-10	3	6	0	0	3.0	0	26.6	
NAP 101 1DF	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	416.8	-60.4	-10	0	-10	3	0	0	0	0	0	17.6	
NAP 101 1DF	Battery Charging Room	S23	Exhaust Fans	0	85	0%	349.9	-58.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	418.4	-60.4	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	418.4	-60.4	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	418.4	-60.4	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	TBE Room	S27	Exhaust Fans	1	85	100%	350.1	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1DF	PAU Room 2	S28	PAU	2	85	100%	416.7	-60.4	-10	-10	-10	3	0	0	0	3	0	20.6	
NAP 101 1DF	AHU Room	S29	AHU	0	85	0%	372.8	-59.4	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	Lift Machine Room	S30	Lift Machine	1	85	100%	379.5	-59.5	-10	-5	-10	3	0	0	0	0	0	18.4	
NAP 101 1DF	Lift Machine Room	S31	Exhaust Fans	1	85	100%	369.8	-59.4	-10	0	-10	3	0	0	0	0	0	18.6	
NAP 101 1DF	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	388.7	-59.8	-10	-10	-10	3	6	0	0	4.8	0	28.8	
NAP 101 1DF	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	388.7	-59.8	-10	-10	-10	3	0	0	0	0	0	18.2	
NAP 101 1DF	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	388.7	-59.8	-10	-5	-10	3	0	0	0	0	0	33.2	
NAP 101 1DF	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	376.0	-59.5	-10	0	-10	3	0	0	0	0	-17.0	15.7	
NAP 101 1DF	L1 HKPF	S37	Hammering Activities	1	113	7%	374.9	-59.5	-10	0	-10	3	0	3	0	0	-11.5	37.7	
NAP 101 1DF	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	403.1	-60.1	-10	0	-10	3	0	0	0	0	-5	15.2	
NAP 101 1DF	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	377.7	-59.5	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	EMSD Dept	S40	Tyre Changer	0	98	0%	380.4	-59.1	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	EMSD Dept	S41	Hammering Activities	0	113	0%	389.5	-59.8	-10	0	-10	3	0	3	0	0	0	0.0	
NAP 101 1DF	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	375.8	-59.5	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	EMSD Dept	S43	Roller Brake Tester	0	99	0%	366.3	-59.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	366.3	-59.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	L1 HKPF	S45	Roller Brake Tester	1	99	7%	366.3	-59.3	-10	0	-10	3	0	0	0	0	-11.5	20.9	
NAP 101 1DF	EMSD Dept	S47	Bench Grinder	0	93.8	0%	400.8	-60.1	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	EMSD Dept	S48	Drill Stand	0	99	0%	407.7	-60.2	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 1DF	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	377.1	-59.5	-10	0	-10	3	0	0	0	0	0	32.6	
NAP 101 1DF	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	349.8	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1DF	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	416.5	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 1DF	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	349.9	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 1DF	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	416.5	-60.4	-10	-10	-10	3	0	0	0	0	0	0.0	

(Nighttime)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 101 21F	Chiller Pump Room	S1	Water Pumps	1	85	100%	337.9	-56.6	-10	-5	-10	3	5	0	0	0	0	25.4	42
NAP 101 21F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	334.4	-56.5	-10	0	-10	3	0	0	0	0	0	19.5	
NAP 101 21F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	394.1	-59.9	-10	-10	-10	3	0	0	0	0	0	18.1	
NAP 101 21F	Compressor Room	S4	Compressors	0	85	0%	401.3	-60.1	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	Compressor Room	S5	Exhaust Fans	0	85	0%	413.8	-60.3	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	Transformer Room	S6	Transformers	2	85	100%	413.8	-60.3	-10	-10	-10	3	5	0	0	3.0	0	26.7	
NAP 101 21F	Transformer Room	S7	Exhaust Fans	1	85	100%	413.8	-60.3	-10	-10	-10	3	0	0	0	0	0	17.7	
NAP 101 21F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	413.8	-60.3	-10	-10	-10	3	5	0	0	3.0	0	26.7	
NAP 101 21F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	413.8	-60.3	-10	0	-10	3	0	0	0	0	0	17.7	
NAP 101 21F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	410.5	-60.4	-10	-10	-10	3	0	0	0	3.0	0	26.6	
NAP 101 21F	Generator Room	S11	Exhaust Fans	1	85	100%	524.7	-62.4	-10	-10	-10	3	0	0	0	0	0	15.6	
NAP 101 21F	Compressor Room	S12	Compressors	0	85	0%	356.6	-59.0	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	Compressor Room	S13	Exhaust Fans	0	85	0%	353.2	-58.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	F.S. Pump Room	S14	Water Pumps	1	85	100%	353.2	-58.9	-10	-10	-10	3	5	0	0	0	0	25.0	
NAP 101 21F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	353.2	-58.9	-10	-10	-10	3	0	0	0	0	0	18.0	
NAP 101 21F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	352.7	-58.9	-10	0	-10	3	0	0	0	3.0	0	22.1	
NAP 101 21F	PAU Room 1	S17	PAU	1	85	100%	415.3	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 21F	PAU Room 1	S18	Exhaust Fans	1	85	100%	415.3	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 21F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	414.8	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 21F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	416.4	-60.4	-10	-10	-10	3	0	0	0	0	0	17.6	
NAP 101 21F	Water Vehicle Feng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	418.4	-60.4	-10	-5	-10	3	5	0	0	3.0	0	26.6	
NAP 101 21F	Water Vehicle Feng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	418.4	-60.4	-10	0	-10	3	0	0	0	0	0	17.6	
NAP 101 21F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	350.7	-58.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	419.1	-60.4	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	419.1	-60.4	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	419.1	-60.4	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	TBE Room	S27	Exhaust Fans	1	85	100%	350.3	-58.9	-10	0	-10	3	0	0	0	0	0	19.1	
NAP 101 21F	PAU Room 2	S28	PAU	2	85	100%	416.8	-60.4	-10	-10	-10	3	0	0	0	3	0	29.6	
NAP 101 21F	AHU Room	S29	AHU	0	85	0%	372.3	-59.4	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	Lift Machine Room	S30	Lift Machine	1	85	100%	376.7	-59.5	-10	-5	-10	3	0	0	0	0	0	18.4	
NAP 101 21F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	386.8	-59.7	-10	0	-10	3	0	0	0	0	0	18.7	
NAP 101 21F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	387.9	-59.8	-10	-10	-10	3	5	0	0	4.8	0	29.0	
NAP 101 21F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	387.9	-59.8	-10	-10	-10	3	0	0	0	0	0	18.2	
NAP 101 21F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	387.9	-59.8	-10	-5	-10	3	0	0	0	0	0	33.2	
NAP 101 21F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	380.2	-59.6	-10	0	-10	3	0	0	0	0	-17.8	15.6	
NAP 101 21F	L1 HKPF	S37	Hammering Activities	1	113	7%	377.0	-59.5	-10	0	-10	3	0	3	0	0	-11.5	37.7	
NAP 101 21F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	403.9	-60.1	-10	0	-10	3	0	0	0	0	-6	15.2	
NAP 101 21F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	378.5	-59.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	EMSD Dept	S40	Tyre Changer	0	88	0%	381.9	-59.2	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	EMSD Dept	S41	Hammering Activities	0	113	0%	390.2	-59.8	-10	0	-10	3	0	3	0	0	0	0.0	
NAP 101 21F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	376.8	-59.5	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	359.1	-59.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	367.1	-59.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 101 21F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	367.1	-59.3	-10	0	-10	3	0	0	0	0	-11.8	20.9	
NAP 101 21F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	401.6	-60.1	-10	0	-10	3	0	0	0	0	0.0	0.0	
NAP 101 21F	EMSD Dept	S48	Drill Stand	0	99	0%	408.4	-60.2	-10	0	-10	3	0	0	0	0	0.0	0.0	
NAP 101 21F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	377.9	-59.5	-10	0	-10	3	0	0	0	0	0.0	32.5	
NAP 101 21F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	350.7	-58.9	-10	0	-10	3	0	0	0	0	0.0	19.1	
NAP 101 21F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	417.2	-60.4	-10	-10	-10	3	0	0	0	0	0.0	17.6	
NAP 101 21F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	350.7	-58.9	-10	0	-10	3	0	0	0	0	0.0	19.1	
NAP 101 21F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	417.2	-60.4	-10	-10	-10	3	0	0	0	0	0.0	0.0	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Facade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	ResuRant SPL, Leq(30mins), dB(A)
NAP 201 1F	Chiller Pump Room	S1	Water Pumps	2	85	100%	159.8	-52.1	0	-5	-5	3	0	0	0	3.0	0	39.9	63
NAP 201 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	160.7	-51.6	0	0	0	3	0	0	0	0	0	36.4	
NAP 201 1F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	165.9	-52.4	0	0	0	3	0	0	0	7.0	0	42.6	
NAP 201 1F	Compressor Room	S4	Compressors	1	85	100%	188.8	-53.5	0	-5	-5	3	0	0	0	0	0	29.5	
NAP 201 1F	Compressor Room	S5	Exhaust Fans	1	85	100%	192.9	-53.7	0	0	0	3	0	0	0	0	0	34.3	
NAP 201 1F	Transformer Room	S6	Transformers	2	85	100%	192.9	-53.7	0	-10	-10	3	0	0	0	3.0	0	33.3	
NAP 201 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	192.9	-53.7	0	-10	-10	3	0	0	0	0	0	24.3	
NAP 201 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	192.9	-53.7	0	-5	-5	3	0	0	0	3.0	0	38.3	
NAP 201 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	192.9	-53.7	0	0	0	3	0	0	0	0	0	34.3	
NAP 201 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	207.2	-54.3	0	-10	-10	3	0	0	0	3.0	0	26.7	
NAP 201 1F	Generator Room	S11	Exhaust Fans	1	85	100%	253.8	-56.1	0	-10	-10	3	0	0	0	0	0	21.9	
NAP 201 1F	Compressor Room	S12	Compressors	1	85	100%	200.0	-54.0	0	-5	-5	3	0	0	0	0	0	29.0	
NAP 201 1F	Compressor Room	S13	Exhaust Fans	1	85	100%	201.4	-54.1	0	0	0	3	0	0	0	0	0	33.9	
NAP 201 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	201.4	-54.1	0	-10	-10	3	6	0	0	0	0	29.9	
NAP 201 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	201.4	-54.1	0	-10	-10	3	0	0	0	0	0	23.9	
NAP 201 1F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	201.7	-54.1	0	0	0	3	0	0	0	7.0	0	40.9	
NAP 201 1F	PAU Room 1	S17	PAU	2	85	100%	207.8	-54.4	0	-10	-10	3	0	0	0	3.0	0	26.6	
NAP 201 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	207.8	-54.4	0	-10	-10	3	0	0	0	0	0	23.6	
NAP 201 1F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	206.2	-54.4	0	-10	-10	3	0	0	0	3.0	0	26.6	
NAP 201 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	213.1	-54.6	0	-10	-10	3	0	0	0	0	0	23.4	
NAP 201 1F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	213.1	-54.6	0	-5	-5	3	6	0	0	3.0	0	37.4	
NAP 201 1F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	213.1	-54.6	0	0	0	3	0	0	0	0	0	33.4	
NAP 201 1F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	204.3	-54.2	0	0	0	3	0	0	0	0	0	33.8	
NAP 201 1F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	210.5	-54.5	0	-10	-10	3	0	0	0	6.0	0	29.5	
NAP 201 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	210.5	-54.5	0	-10	-10	3	0	0	0	3.0	0	26.5	
NAP 201 1F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	210.5	-54.5	0	-10	-10	3	0	0	0	4.8	0	28.3	
NAP 201 1F	T&E Room	S27	Exhaust Fans	1	85	100%	205.6	-54.3	0	0	0	3	0	0	0	0	0	33.7	
NAP 201 1F	PAU Room 2	S28	PAU	5	85	100%	218.4	-54.7	0	-10	-10	3	0	0	0	7.0	0	30.3	
NAP 201 1F	AHU Room	S29	AHU	1	85	100%	225.4	-55.1	0	-5	-5	3	0	0	0	0	0	27.9	
NAP 201 1F	Lift Machine Room	S30	Lift Machine	3	85	100%	227.5	-55.1	0	-5	-5	3	0	0	0	4.8	0	32.7	
NAP 201 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	226.0	-55.2	0	0	0	3	0	0	0	0	0	32.8	
NAP 201 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	183.4	-53.3	0	-5	-5	3	0	0	0	4.8	0	40.5	
NAP 201 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	183.4	-53.3	0	0	0	3	0	0	0	0	0	34.7	
NAP 201 1F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	183.4	-53.3	0	-5	-5	3	0	0	0	3.0	0	47.7	
NAP 201 1F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	204.5	-54.2	0	0	0	3	0	0	0	0	-11.8	37.0	
NAP 201 1F	L1 HKPF	S37	Hammering Activities	3	113	7%	205.4	-54.3	0	0	0	3	0	0	3	4.8	-11.6	57.7	
NAP 201 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	201.0	-54.1	0	0	0	3	0	0	0	0	-6	31.2	
NAP 201 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	180.0	-52.1	0	0	0	3	0	0	0	0	-14.8	48.1	
NAP 201 1F	EMSD Dept	S40	Tyre Changer	1	98	27%	183.9	-52.3	0	0	0	3	0	0	0	0	-5.7	43.1	
NAP 201 1F	EMSD Dept	S41	Hammering Activities	4	113	7%	175.2	-52.9	0	0	0	3	0	3	0	8.0	-11.9	60.4	
NAP 201 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	215.8	-54.7	0	0	0	3	0	0	0	6.0	-8.8	45.6	
NAP 201 1F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	215.0	-54.6	0	0	0	3	0	0	0	0	-13.0	34.4	
NAP 201 1F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	183.8	-52.3	0	0	0	3	0	0	0	0	-7.0	42.7	
NAP 201 1F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	183.8	-52.3	0	0	0	3	0	0	0	0	-7.0	42.7	
NAP 201 1F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	191.8	-53.7	0	0	0	3	0	0	0	0	-4.8	36.3	
NAP 201 1F	EMSD Dept	S48	Drill Stand	1	99	17%	200.8	-54.0	0	0	0	3	0	0	0	0	-7.8	40.2	
NAP 201 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	175.5	-52.9	0	0	0	3	0	0	0	0	0.0	49.1	
NAP 201 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	204.3	-54.2	0	0	0	3	0	0	0	0	0.0	33.8	
NAP 201 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	215.1	-54.7	0	-10	-10	3	0	0	0	0	0.0	23.3	
NAP 201 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	204.3	-54.2	0	0	0	3	0	0	0	0	0.0	33.8	
NAP 201 1F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	215.1	-54.7	0	-10	-10	3	0	0	0	0	0.0	23.3	
NAP 201 3F	Chiller Pump Room	S1	Water Pumps	2	85	100%	160.0	-52.1	0	-5	-5	3	6	0	0	3.0	0	39.9	63
NAP 201 3F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	160.8	-51.6	0	0	0	3	0	0	0	0	0	36.4	
NAP 201 3F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	166.1	-52.4	0	0	0	3	0	0	0	7.0	0	42.6	
NAP 201 3F	Compressor Room	S4	Compressors	1	85	100%	188.9	-53.5	0	-5	-5	3	0	0	0	0	0	29.5	
NAP 201 3F	Compressor Room	S5	Exhaust Fans	1	85	100%	193.0	-53.7	0	0	0	3	0	0	0	0	0	34.3	
NAP 201 3F	Transformer Room	S6	Transformers	2	85	100%	193.0	-53.7	0	-10	-10	3	6	0	0	3.0	0	33.3	
NAP 201 3F	Transformer Room	S7	Exhaust Fans	1	85	100%	193.0	-53.7	0	-10	-10	3	0	0	0	0	0	24.3	
NAP 201 3F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	193.0	-53.7	0	-5	-5	3	6	0	0	3.0	0	38.3	
NAP 201 3F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	193.0	-53.7	0	0	0	3	0	0	0	0	0	34.3	
NAP 201 3F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	207.1	-54.3	0	-10	-10	3	0	0	0	3.0	0	26.7	
NAP 201 3F	Generator Room	S11	Exhaust Fans	1	85	100%	253.7	-56.1	0	-10	-10	3	0	0	0	0	0	21.9	
NAP 201 3F	Compressor Room	S12	Compressors	1	85	100%	199.7	-54.0	0	-5	-5	3	0	0	0	0	0	29.0	
NAP 201 3F	Compressor Room	S13	Exhaust Fans	1	85	100%	201.1	-54.1	0	0	0	3	0	0	0	0	0	33.9	
NAP 201 3F	F.S. Pump Room	S14	Water Pumps	1	85	100%	201.1	-54.1	0	-10	-10	3	6	0	0	0	0	29.9	
NAP 201 3F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	201.1	-54.1	0	-10	-10	3	0	0	0	0	0	23.9	
NAP 201 3F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	201.3	-54.1	0	0	0	3	0	0	0	7.0	0	40.9	
NAP 201 3F	PAU Room 1	S17	PAU	2	85	100%	207.4	-54.3	0	-10	-10	3	0	0	0	3.0	0	26.7	
NAP 201 3F	PAU Room 1	S18	Exhaust Fans	1	85	100%	207.4	-54.3	0	-10	-10	3	0	0	0	0	0	23.7	
NAP 201 3F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	207.7	-54.3	0	-10	-10	3	0	0	0	3.0	0	26.7	
NAP 201 3F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	212.6	-54.6	0	-10	-10	3	0	0	0	0	0	23.4	
NAP 201 3F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	212.6	-54.6	0	-5	-5	3	6	0	0	3.0	0	37.4	
NAP 201 3F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	212.6	-54.6	0	0	0	3	0	0	0	0	0	33.4	
NAP 201 3F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	203.3	-54.2	0	0	0	3	0	0	0	0	0	33.8	
NAP 201 3F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	209.5	-54.4	0	-10	-10	3	0	0	0	6.0	0	29.6	
NAP 201 3F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	209.5	-54.4	0	-10	-10	3	0	0	0	3.0	0	26.6	
NAP 201 3F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	209.5	-54.4	0	-10	-10	3	0	0	0	4.8	0	28.4	
NAP 201 3F	T&E Room	S27	Exhaust Fans	1	85	100%	204.4	-54.2	0	0	0	3	0	0	0	0	0	33.8	
NAP 201 3F	PAU Room 2	S28	PAU	5	85	100%	215.3	-54.7	0	-10	-10	3	0	0	0	7.0	0	30.3	
NAP 201 3F	AHU Room	S29	AHU	1	85	100%	224.2	-55.0	0	-5	-5	3	0	0	0	0	0	28.0	
NAP 201 3F	Lift Machine Room	S30	Lift Machine	3	85	100%	226.1	-55.1	0	-5	-5	3	0	0	0	4.8	0	32.7	
NAP 201 3F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	226.6	-55.1	0	0	0	3	0	0	0	0	0	32.9	
NAP 201 3F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	181.7	-53.2	0	-5	-5	3	6	0	0	4.8	0	40.6	
NAP 201 3F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	181.7	-53.2	0	0	0	3	0	0	0	0	0	34.8	
NAP 201 3F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	181.7	-53.2	0	-5	-5	3	0	0	0	3.0	0	47.8	
NAP 201 3F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	204.4	-54.2	0	0	0	3	0	0	0	0	-11.8	37.0	
NAP 201 3F	L1 HKPF	S37	Hammering Activities	3	113	7%	204.9	-54.2	0	0	0	3	0	0	3	4.8	-11.6	57.8	
NAP 201 3F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	200.0	-54.0	0	0	0	3	0	0	0	0	-6	31.3	
NAP 201 3F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	156.7	-52.0	0	0	0	3	0	0	0	0	-14.8	48.2	
NAP 201 3F	EMSD Dept	S40	Tyre Changer	1	98	27%	161.7	-52.2	0	0	0	3	0	0	0	0	-5.7	43.1	
NAP 201 3F	EMSD Dept	S41	Hammering Activities	4	113	7%	174.0	-52.8	0	0	0	3	0	3	0	8.0	-11.9	60.5	
NAP 201 3F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	214.9	-54.6	0	0	0	3	0	0	0	6.0	-8.8	45.7	
NAP 201 3F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	214.9	-54.6	0	0	0	3	0	0	0	0	-13.0	34.4	
NAP 201 3F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	182.6	-52.2	0	0	0	3	0	0	0	0	-7.0	42.8	
NAP 201 3F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	182.6	-52.2	0	0	0	3	0	0	0	0	-7.0	42.8	
NAP 201 3F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	190.7	-53.6	0	0	0	3	0	0	0	0	-4.8	36.4	
NAP 201 3F	EMSD Dept	S48	Drill Stand	1	99	17%	199.8	-54.0	0	0	0	3	0	0	0	0	-7.8	40.2	
NAP 201 3F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	174.3	-52.8	0	0	0	3	0	0	0	0	0.0	49.2	
NAP 201 3F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	203.3	-54.2	0	0	0	3	0	0	0	0	0.0	33.8	
NAP 201 3F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	214.2	-54.6	0	-10	-10	3	0	0	0	0	0.0	23.4	
NAP 201 3F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	203.3	-54.2	0	0	0	3	0	0	0	0	0.0	33.8	
NAP 201 3F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	214.2	-54.6	0	-10	-10	3	0	0	0	0	0.0	23.4	

[Day / Evening Time]

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 201 6F	Chiller Pump Room	S1	Water Pumps	2	85	100%	160.8	-52.1	0	-5	-5	3	5	0	0	3.0	0	30.9	33
NAP 201 6F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	151.5	-51.6	0	0	0	3	0	0	0	0	0	36.4	
NAP 201 6F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	186.7	-52.4	0	0	0	3	0	0	0	7.0	0	42.6	
NAP 201 6F	Compressor Room	S4	Compressors	1	85	100%	188.5	-53.5	0	-5	-5	3	0	0	0	0	0	29.4	
NAP 201 6F	Compressor Room	S5	Exhaust Fans	1	85	100%	193.8	-53.7	0	0	0	3	0	0	0	0	0	34.3	
NAP 201 6F	Transformer Room	S6	Transformers	2	85	100%	193.8	-53.7	0	-10	-10	3	5	0	0	3.0	0	33.3	
NAP 201 6F	Transformer Room	S7	Exhaust Fans	1	85	100%	193.8	-53.7	0	-10	-10	3	0	0	0	0	0	24.3	
NAP 201 6F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	193.8	-53.7	0	-5	-5	3	5	0	0	3.0	0	33.3	
NAP 201 6F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	193.8	-53.7	0	0	0	3	0	0	0	0	0	34.3	
NAP 201 6F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	207.3	-54.3	0	-10	-10	3	0	0	0	3.0	0	26.7	
NAP 201 6F	Generator Room	S11	Exhaust Fans	1	85	100%	254.1	-56.1	0	-10	-10	3	0	0	0	0	0	21.9	
NAP 201 6F	Compressor Room	S12	Compressors	1	85	100%	199.5	-54.0	0	-5	-5	3	0	0	0	0	0	29.0	
NAP 201 6F	Compressor Room	S13	Exhaust Fans	1	85	100%	201.0	-54.1	0	0	0	3	0	0	0	0	0	33.9	
NAP 201 6F	F.S. Pump Room	S14	Water Pumps	1	85	100%	201.0	-54.1	0	-10	-10	3	5	0	0	0	0	29.9	
NAP 201 6F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	201.0	-54.1	0	-10	-10	3	0	0	0	0	0	23.9	
NAP 201 6F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	201.0	-54.1	0	0	0	3	0	0	0	7.0	0	40.9	
NAP 201 6F	PAU Room1	S17	PAU	2	85	100%	207.1	-54.3	0	-10	-10	3	0	0	0	3.0	0	26.7	
NAP 201 6F	PAU Room1	S18	Exhaust Fans	1	85	100%	207.3	-54.3	0	-10	-10	3	0	0	0	0	0	23.7	
NAP 201 6F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	207.2	-54.3	0	-10	-10	3	0	0	0	3.0	0	26.7	
NAP 201 6F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	212.1	-54.5	0	-10	-10	3	0	0	0	0	0	23.5	
NAP 201 6F	Water Vehicle Feng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	212.1	-54.5	0	-5	-5	3	5	0	0	3.0	0	37.5	
NAP 201 6F	Water Vehicle Feng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	212.1	-54.5	0	0	0	3	0	0	0	0	0	33.5	
NAP 201 6F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	202.1	-54.1	0	0	0	3	0	0	0	0	0	33.9	
NAP 201 6F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	208.4	-54.4	0	-10	-10	3	0	0	0	6.0	0	29.6	
NAP 201 6F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	208.4	-54.4	0	-10	-10	3	0	0	0	3.0	0	26.6	
NAP 201 6F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	208.4	-54.4	0	-10	-10	3	0	0	0	4.8	0	28.4	
NAP 201 6F	TDE Room	S27	Exhaust Fans	1	85	100%	202.0	-54.1	0	0	0	3	0	0	0	0	0	33.9	
NAP 201 6F	PAU Room 2	S28	PAU	5	85	100%	213.9	-54.6	0	-10	-10	3	0	0	0	7.0	0	30.4	
NAP 201 6F	AHU Room	S29	AHU	1	85	100%	222.8	-55.0	0	-5	-5	3	0	0	0	0	0	26.0	
NAP 201 6F	Lift Machine Room	S30	Lift Machine	3	85	100%	224.3	-55.0	0	-5	-5	3	0	0	0	4.8	0	32.8	
NAP 201 6F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	224.9	-55.0	0	0	0	3	0	0	0	0	0	33.0	
NAP 201 6F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	179.5	-53.1	0	-5	-5	3	5	0	0	4.8	0	40.7	
NAP 201 6F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	179.5	-53.1	0	0	0	3	0	0	0	0	0	34.9	
NAP 201 6F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	179.5	-53.1	0	-5	-5	3	0	5	0	3.0	0	47.9	
NAP 201 6F	L1 HKPF	S36	Handheld Pneumatic Tools	1	100	7%	204.9	-54.2	0	0	0	3	0	0	0	0	+11.5	57.0	
NAP 201 6F	L1 HKPF	S37	Hammering Activities	3	113	7%	204.4	-54.2	0	0	0	3	0	3	0	4.8	+11.5	57.8	
NAP 201 6F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	198.9	-54.0	0	0	0	3	0	0	0	0	-6	31.3	
NAP 201 6F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	157.2	-51.9	0	0	0	3	0	0	0	0	-14.9	46.3	
NAP 201 6F	EMSD Dept	S40	Tyre Changer	1	88	27%	160.3	-52.1	0	0	0	3	0	0	0	0	-5.7	43.2	
NAP 201 6F	EMSD Dept	S41	Hammering Activities	4	113	7%	172.8	-52.7	0	0	0	3	0	3	0	6.0	+11.5	60.6	
NAP 201 6F	EMSD Dept	S42	Handheld Pneumatic Tools	4	100	13%	213.8	-54.6	0	0	0	3	0	0	0	6.0	-8.8	45.7	
NAP 201 6F	EMSD Dept	S43	Roller Brake Tester	1	89	5%	212.9	-54.6	0	0	0	3	0	0	0	0	-13.0	34.4	
NAP 201 6F	EMSD Dept	S44	Motorcycle Brake Tester	1	89	20%	161.2	-52.1	0	0	0	3	0	0	0	0	-7.0	42.9	
NAP 201 6F	L1 HKPF	S45	Roller Brake Tester	1	89	20%	161.2	-52.1	0	0	0	3	0	0	0	0	-7.0	42.9	
NAP 201 6F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	189.5	-53.6	0	0	0	3	0	0	0	0	-4.8	38.4	
NAP 201 6F	EMSD Dept	S48	Drill Stand	1	89	17%	198.4	-54.0	0	0	0	3	0	0	0	0	-7.8	40.2	
NAP 201 6F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	172.8	-52.8	0	0	0	3	0	0	0	0	0.0	49.2	
NAP 201 6F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	202.1	-54.1	0	0	0	3	0	0	0	0	0.0	33.9	
NAP 201 6F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	213.1	-54.6	0	-10	-10	3	0	0	0	0	0.0	23.4	
NAP 201 6F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	202.1	-54.1	0	0	0	3	0	0	0	0	0.0	33.9	
NAP 201 6F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	213.1	-54.6	0	-10	-10	3	0	0	0	0	0.0	23.4	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 202 1F	Chiller Pump Room	S1	Water Pumps	2	85	100%	268.2	-56.6	-10	-5	-10	3	0	0	0	3.0	0	30.4	50
NAP 202 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	259.1	-56.3	-10	0	-10	3	0	0	0	0	0	21.7	
NAP 202 1F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	265.8	-56.5	-10	0	-10	3	0	0	0	7.0	0	28.5	
NAP 202 1F	Compressor Room	S4	Compressors	1	85	100%	269.4	-57.2	-10	-5	-10	3	0	0	0	0	0	20.8	
NAP 202 1F	Compressor Room	S5	Exhaust Fans	1	85	100%	291.0	-57.3	-10	0	-10	3	0	0	0	0	0	20.7	
NAP 202 1F	Transformer Room	S6	Transformers	2	85	100%	291.0	-57.3	-10	-10	-10	3	0	0	0	3.0	0	29.7	
NAP 202 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	291.0	-57.3	-10	-10	-10	3	0	0	0	0	0	20.7	
NAP 202 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	291.0	-57.3	-10	-5	-10	3	0	0	0	3.0	0	29.7	
NAP 202 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	291.0	-57.3	-10	0	-10	3	0	0	0	0	0	20.7	
NAP 202 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	306.0	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 1F	Generator Room	S11	Exhaust Fans	1	85	100%	396.1	-60.0	-10	-10	-10	3	0	0	0	0	0	18.0	
NAP 202 1F	Compressor Room	S12	Compressors	1	85	100%	307.3	-57.8	-10	-5	-10	3	0	0	0	0	0	20.2	
NAP 202 1F	Compressor Room	S13	Exhaust Fans	1	85	100%	306.0	-57.8	-10	0	-10	3	0	0	0	0	0	20.2	
NAP 202 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	306.0	-57.8	-10	-10	-10	3	0	0	0	0	0	26.2	
NAP 202 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	306.0	-57.8	-10	-10	-10	3	0	0	0	0	0	20.2	
NAP 202 1F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	306.0	-57.8	-10	0	-10	3	0	0	0	7.0	0	27.2	
NAP 202 1F	PAU Room 1	S17	PAU	2	85	100%	306.4	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	306.4	-57.7	-10	-10	-10	3	0	0	0	0	0	20.3	
NAP 202 1F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	305.7	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	311.4	-57.9	-10	-10	-10	3	0	0	0	0	0	20.1	
NAP 202 1F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	311.4	-57.9	-10	-5	-10	3	0	0	0	3.0	0	29.1	
NAP 202 1F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	311.4	-57.9	-10	0	-10	3	0	0	0	0	0	20.1	
NAP 202 1F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	310.9	-57.9	-10	0	-10	3	0	0	0	0	0	20.1	
NAP 202 1F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	307.0	-57.7	-10	-10	-10	3	0	0	0	6.0	0	26.3	
NAP 202 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	307.0	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 1F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	307.0	-57.7	-10	-10	-10	3	0	0	0	4.8	0	25.1	
NAP 202 1F	TBE Room	S27	Exhaust Fans	1	85	100%	311.8	-57.9	-10	0	-10	3	0	0	0	0	0	20.1	
NAP 202 1F	PAU Room 2	S28	PAU	5	85	100%	313.7	-57.9	-10	-10	-10	3	0	0	0	7.0	0	27.1	
NAP 202 1F	AHU Room	S29	AHU	1	85	100%	330.1	-58.4	-10	-5	-10	3	0	0	0	0	0	19.6	
NAP 202 1F	Lift Machine Room	S30	Lift Machine	3	85	100%	331.0	-58.4	-10	-5	-10	3	0	0	0	4.8	0	24.4	
NAP 202 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	332.6	-58.4	-10	0	-10	3	0	0	0	0	0	19.6	
NAP 202 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	281.5	-57.0	-10	-5	-10	3	0	0	0	4.8	0	31.8	
NAP 202 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	281.5	-57.0	-10	0	-10	3	0	0	0	0	0	21.8	
NAP 202 1F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	281.5	-57.0	-10	-5	-10	3	0	0	0	3.0	0	38.8	
NAP 202 1F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	7%	309.6	-57.9	-10	0	-10	3	0	0	0	0	-11.6	23.4	
NAP 202 1F	L1 HKPF	S37	Hammering Activities	3	113	7%	310.3	-57.8	-10	0	-10	3	0	0	0	4.8	-11.6	44.2	
NAP 202 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	299.9	-57.5	-10	0	-10	3	0	0	0	0	-5.7	17.8	
NAP 202 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	260.0	-56.3	-10	0	-10	3	0	0	0	0	-14.8	33.9	
NAP 202 1F	EMSD Dept	S40	Tyre Changer	1	98	27%	266.4	-56.5	-10	0	-10	3	0	0	0	0	-5.7	28.8	
NAP 202 1F	EMSD Dept	S41	Hammering Activities	4	113	7%	274.1	-56.8	-10	0	-10	3	0	3	0	6.0	-11.8	46.5	
NAP 202 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	320.4	-58.1	-10	0	-10	3	0	0	0	6.0	-8.8	32.2	
NAP 202 1F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	320.4	-58.1	-10	0	-10	3	0	0	0	0	-13.0	30.9	
NAP 202 1F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	266.4	-56.5	-10	0	-10	3	0	0	0	0	-7.0	28.5	
NAP 202 1F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	266.4	-56.5	-10	0	-10	3	0	0	0	0	-7.0	28.5	
NAP 202 1F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	290.1	-57.3	-10	0	-10	3	0	0	0	0	-4.8	24.7	
NAP 202 1F	EMSD Dept	S48	Drill Stand	1	99	17%	298.4	-57.5	-10	0	-10	3	0	0	0	0	-7.8	26.7	
NAP 202 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	277.0	-56.8	-10	0	-10	3	0	0	0	0	0.0	35.2	
NAP 202 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	310.9	-57.9	-10	0	-10	3	0	0	0	0	0.0	20.1	
NAP 202 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	312.6	-57.9	-10	-10	-10	3	0	0	0	0	0.0	20.1	
NAP 202 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	310.9	-57.8	-10	0	-10	3	0	0	0	0	0.0	20.1	
NAP 202 1F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	312.6	-57.9	-10	-10	-10	3	0	0	0	0	0.0	20.1	
NAP 202 2F	Chiller Pump Room	S1	Water Pumps	2	85	100%	268	-56.6	-10	-5	-10	3	0	0	0	3.0	0	30.4	50
NAP 202 2F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	259	-56.3	-10	0	-10	3	0	0	0	0	0	21.7	
NAP 202 2F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	266	-56.5	-10	0	-10	3	0	0	0	7.0	0	28.5	
NAP 202 2F	Compressor Room	S4	Compressors	1	85	100%	290	-57.2	-10	-5	-10	3	0	0	0	0	0	20.8	
NAP 202 2F	Compressor Room	S5	Exhaust Fans	1	85	100%	291	-57.3	-10	0	-10	3	0	0	0	0	0	20.7	
NAP 202 2F	Transformer Room	S6	Transformers	2	85	100%	291	-57.3	-10	-10	-10	3	0	0	0	3.0	0	29.7	
NAP 202 2F	Transformer Room	S7	Exhaust Fans	1	85	100%	291	-57.3	-10	-10	-10	3	0	0	0	0	0	20.7	
NAP 202 2F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	291	-57.3	-10	-5	-10	3	0	0	0	3.0	0	29.7	
NAP 202 2F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	291	-57.3	-10	0	-10	3	0	0	0	0	0	20.7	
NAP 202 2F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 2F	Generator Room	S11	Exhaust Fans	1	85	100%	396	-60.0	-10	-10	-10	3	0	0	0	0	0	18.0	
NAP 202 2F	Compressor Room	S12	Compressors	1	85	100%	307	-57.7	-10	-5	-10	3	0	0	0	0	0	20.3	
NAP 202 2F	Compressor Room	S13	Exhaust Fans	1	85	100%	309	-57.8	-10	0	-10	3	0	0	0	0	0	20.2	
NAP 202 2F	F.S. Pump Room	S14	Water Pumps	1	85	100%	309	-57.8	-10	-10	-10	3	0	0	0	0	0	26.2	
NAP 202 2F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	309	-57.8	-10	-10	-10	3	0	0	0	0	0	20.2	
NAP 202 2F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	309	-57.8	-10	0	-10	3	0	0	0	7.0	0	27.2	
NAP 202 2F	PAU Room 1	S17	PAU	2	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 2F	PAU Room 1	S18	Exhaust Fans	1	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	0	0	20.3	
NAP 202 2F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 2F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	311	-57.9	-10	-10	-10	3	0	0	0	0	0	20.1	
NAP 202 2F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	311	-57.9	-10	-5	-10	3	0	0	0	3.0	0	29.1	
NAP 202 2F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	311	-57.9	-10	0	-10	3	0	0	0	0	0	20.1	
NAP 202 2F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	310	-57.8	-10	0	-10	3	0	0	0	0	0	20.2	
NAP 202 2F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	6.0	0	26.3	
NAP 202 2F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 2F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	4.8	0	25.1	
NAP 202 2F	TBE Room	S27	Exhaust Fans	1	85	100%	311	-57.9	-10	0	-10	3	0	0	0	0	0	20.1	
NAP 202 2F	PAU Room 2	S28	PAU	5	85	100%	313	-57.9	-10	-10	-10	3	0	0	0	7.0	0	27.1	
NAP 202 2F	AHU Room	S29	AHU	1	85	100%	329	-58.3	-10	-5	-10	3	0	0	0	0	0	19.7	
NAP 202 2F	Lift Machine Room	S30	Lift Machine	3	85	100%	330	-58.4	-10	-5	-10	3	0	0	0	4.8	0	24.4	
NAP 202 2F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	332	-58.4	-10	0	-10	3	0	0	0	0	0	19.6	
NAP 202 2F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	280	-57.0	-10	-5	-10	3	0	0	0	4.8	0	31.8	
NAP 202 2F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	280	-57.0	-10	0	-10	3	0	0	0	0	0	21.8	
NAP 202 2F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	280	-57.0	-10	-5	-10	3	0	0	0	3.0	0	38.8	
NAP 202 2F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	310	-57.8	-10	0	-10	3	0	0	0	0	-11.6	23.4	
NAP 202 2F	L1 HKPF	S37	Hammering Activities	3	113	7%	310	-57.8	-10	0	-10	3	0	3	0	4.8	-11.6	44.2	
NAP 202 2F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	299	-57.5	-10	0	-10	3	0	0	0	0	-5.7	17.8	
NAP 202 2F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	259	-56.3	-10	0	-10	3	0	0	0	0	-14.8	33.9	
NAP 202 2F	EMSD Dept	S40	Tyre Changer	1	98	27%	266	-56.5	-10	0	-10	3	0	0	0	0	-5.7	28.8	
NAP 202 2F	EMSD Dept	S41	Hammering Activities	4	113	7%	273	-56.7	-10	0	-10	3	0	3	0	6.0	-11.8	46.6	
NAP 202 2F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	320	-58.1	-10	0	-10	3	0	0	0	6.0	-8.8	32.2	
NAP 202 2F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	320	-58.1	-10	0	-10	3	0	0	0	0	-13.0	30.9	
NAP 202 2F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	266	-56.5	-10	0	-10	3	0	0	0	0	-7.0	28.5	
NAP 202 2F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	266	-56.5	-10	0	-10	3	0	0	0	0.0	-7.0	28.5	
NAP 202 2F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	289	-57.2	-10	0	-10	3	0	0	0	0	-4.8	24.8	
NAP 202 2F	EMSD Dept	S48	Drill Stand	1	99	17%	295	-57.5	-10	0	-10	3	0	0	0	0	-7.8	26.7	
NAP 202 2F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	276	-56.8	-10	0	-10	3	0	0	0	0.0	0.0	35.2	
NAP 202 2F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	310	-57.8	-10	0	-10	3	0	0	0	0	0.0	20.2	
NAP 202 2F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	312	-57.9	-10	-10	-10	3	0	0	0	0	0.0	20.1	
NAP 202 2F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	310	-57.8	-10	0	-10	3	0	0	0	0	0.0	20.2	
NAP 202 2F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	312	-57.9	-10	-10	-10	3	0	0	0	0.0	0.0	20.1	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Residual SPL, Leq30mins, dB(A)
NAP 202 6F	Chiller Pump Room	S1	Water Pumps	2	85	100%	259	-56.6	-10	-5	-10	3	5	0	0	3.0	0	30.4	50
NAP 202 6F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	250	-56.3	-10	0	-10	3	0	0	0	0	0	21.7	
NAP 202 6F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	286	-56.9	-10	0	-10	3	0	0	0	7.0	0	28.6	
NAP 202 6F	Compressor Room	S4	Compressors	1	85	100%	290	-57.2	-10	-5	-10	3	0	0	0	0	0	20.8	
NAP 202 6F	Compressor Room	S5	Exhaust Fans	1	85	100%	292	-57.3	-10	0	-10	3	0	0	0	0	0	20.7	
NAP 202 6F	Transformer Room	S6	Transformers	2	85	100%	292	-57.3	-10	-10	-10	3	8	0	0	3.0	0	29.7	
NAP 202 6F	Transformer Room	S7	Exhaust Fans	1	85	100%	292	-57.3	-10	-10	-10	3	0	0	0	0	0	20.7	
NAP 202 6F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	292	-57.3	-10	-5	-10	3	8	0	0	3.0	0	29.7	
NAP 202 6F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	292	-57.3	-10	0	-10	3	0	0	0	0	0	20.7	
NAP 202 6F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 6F	Generator Room	S11	Exhaust Fans	1	85	100%	289	-50.0	-10	-10	-10	3	0	0	0	0	0	16.0	
NAP 202 6F	Compressor Room	S12	Compressors	1	85	100%	307	-57.7	-10	-5	-10	3	0	0	0	0	0	20.3	
NAP 202 6F	Compressor Room	S13	Exhaust Fans	1	85	100%	309	-57.8	-10	0	-10	3	0	0	0	0	0	20.2	
NAP 202 6F	F.S. Pump Room	S14	Water Pumps	1	85	100%	309	-57.8	-10	-10	-10	3	8	0	0	0	0	26.2	
NAP 202 6F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	309	-57.8	-10	-10	-10	3	0	0	0	0	0	20.2	
NAP 202 6F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	309	-57.8	-10	0	-10	3	0	0	0	7.0	0	27.2	
NAP 202 6F	PAU Room 1	S17	PAU	2	85	100%	308	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 6F	PAU Room 1	S18	Exhaust Fans	1	85	100%	308	-57.7	-10	-10	-10	3	0	0	0	0	0	20.3	
NAP 202 6F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 6F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	311	-57.8	-10	-10	-10	3	0	0	0	0	0	20.2	
NAP 202 6F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	311	-57.8	-10	-5	-10	3	8	0	0	3.0	0	28.2	
NAP 202 6F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	311	-57.8	-10	0	-10	3	0	0	0	0	0	20.2	
NAP 202 6F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	310	-57.8	-10	0	-10	3	0	0	0	0	0	20.2	
NAP 202 6F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	300	-57.7	-10	-10	-10	3	0	0	0	6.0	0	26.3	
NAP 202 6F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	3.0	0	23.3	
NAP 202 6F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	306	-57.7	-10	-10	-10	3	0	0	0	4.8	0	25.1	
NAP 202 6F	TDE Room	S27	Exhaust Fans	1	85	100%	310	-57.8	-10	0	-10	3	0	0	0	0	0	20.2	
NAP 202 6F	PAU Room 2	S28	PAU	5	85	100%	312	-57.9	-10	-10	-10	3	0	0	0	7.0	0	27.1	
NAP 202 6F	AHU Room	S29	AHU	1	85	100%	328	-58.3	-10	-5	-10	3	0	0	0	0	0	18.7	
NAP 202 6F	Lift Machine Room	S30	Lift Machine	3	85	100%	329	-58.3	-10	-5	-10	3	0	0	0	4.8	0	24.5	
NAP 202 6F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	330	-58.4	-10	0	-10	3	0	0	0	0	0	19.6	
NAP 202 6F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	279	-56.9	-10	-5	-10	3	6	0	0	4.8	0	31.9	
NAP 202 6F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	279	-56.9	-10	0	-10	3	0	0	0	0	0	21.1	
NAP 202 6F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	279	-56.9	-10	-5	-10	3	6	0	0	3.0	0	39.1	
NAP 202 6F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	310	-57.8	-10	0	-10	3	0	0	0	0	-11.8	23.4	
NAP 202 6F	L1 HKPF	S37	Hammering Activities	3	113	7%	310	-57.8	-10	0	-10	3	0	3	0	4.8	-11.8	44.2	
NAP 202 6F	FCHD	S38	Automatic Vehicle Washing Machine	1	68	27%	299	-57.5	-10	0	-10	3	0	0	0	0	-5.7	17.8	
NAP 202 6F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	258	-56.2	-10	0	-10	3	0	0	0	0	-14.8	34.0	
NAP 202 6F	EMSD Dept	S40	Tyre Changer	1	98	27%	265	-56.5	-10	0	-10	3	0	0	0	0	-5.7	28.8	
NAP 202 6F	EMSD Dept	S41	Hammering Activities	4	113	7%	273	-56.7	-10	0	-10	3	0	3	0	6.0	-11.8	46.6	
NAP 202 6F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	319	-58.1	-10	0	-10	3	0	0	0	6.0	-8.8	32.2	
NAP 202 6F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	319	-58.1	-10	0	-10	3	0	0	0	0.0	-13.0	20.9	
NAP 202 6F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	265	-56.5	-10	0	-10	3	0	0	0	0.0	-7.0	28.5	
NAP 202 6F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	265	-56.5	-10	0	-10	3	0	0	0	0.0	-7.0	28.5	
NAP 202 6F	EMSD Dept	S47	Bench Grinder	1	93.6	33%	289	-57.2	-10	0	-10	3	0	0	0	0.0	-4.8	24.8	
NAP 202 6F	EMSD Dept	S48	Drill Stand	1	99	17%	297	-57.5	-10	0	-10	3	0	0	0	0.0	-7.8	26.7	
NAP 202 6F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	278	-56.8	-10	0	-10	3	0	0	0	0.0	0.0	35.2	
NAP 202 6F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	310	-57.8	-10	0	-10	3	0	0	0	0.0	0.0	20.2	
NAP 202 6F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	311	-57.9	-10	-10	-10	3	0	0	0	0.0	0.0	20.1	
NAP 202 6F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	310	-57.8	-10	0	-10	3	0	0	0	0.0	0.0	20.2	
NAP 202 6F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	311	-57.9	-10	-10	-10	3	0	0	0	0.0	0.0	20.1	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant &PL, Leq(30mins), dB(A)
NAP 301 1F	Chiller Pump Room	S1	Water Pumps	2	85	100%	228.3	-55.2	+10	-5	-10	3	0	0	0	3.0	0	31.8	51
NAP 301 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	219.8	-54.8	+10	0	-10	3	0	0	0	0	0	33.2	
NAP 301 1F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	258.2	-56.2	+10	0	-10	3	0	0	0	7.0	0	28.8	
NAP 301 1F	Compressor Room	S4	Compressors	1	85	100%	278.0	-56.9	+10	-5	-10	3	0	0	0	0	0	21.1	
NAP 301 1F	Compressor Room	S5	Exhaust Fans	1	85	100%	285.7	-57.1	+10	+10	-10	3	0	0	0	0	0	20.9	
NAP 301 1F	Transformer Room	S6	Transformers	2	85	100%	285.7	-57.1	+10	+10	-10	3	6	0	0	3.0	0	29.9	
NAP 301 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	285.7	-57.1	+10	+10	-10	3	0	0	0	0	0	20.9	
NAP 301 1F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	285.7	-57.1	+10	+5	-10	3	6	0	0	3.0	0	29.9	
NAP 301 1F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	285.7	-57.1	+10	0	-10	3	0	0	0	0	0	20.9	
NAP 301 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	297.9	-57.5	+10	+10	-10	3	0	0	0	3.0	0	23.5	
NAP 301 1F	Generator Room	S11	Exhaust Fans	1	85	100%	307.2	-58.3	+10	+10	-10	3	0	0	0	0	0	18.7	
NAP 301 1F	Compressor Room	S12	Compressors	1	85	100%	269.0	-56.6	+10	+5	-10	3	0	0	0	0	0	21.4	
NAP 301 1F	Compressor Room	S13	Exhaust Fans	1	85	100%	269.0	-56.6	+10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	268.6	-56.6	+10	+10	-10	3	6	0	0	0	0	27.4	
NAP 301 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	268.6	-56.6	+10	+10	-10	3	0	0	0	0	0	21.4	
NAP 301 1F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	268.8	-56.6	+10	0	-10	3	0	0	0	7.0	0	28.4	
NAP 301 1F	PAU Room 1	S17	PAU	2	85	100%	298.1	-57.5	+10	+10	-10	3	0	0	0	3.0	0	23.5	
NAP 301 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	298.1	-57.5	+10	+10	-10	3	0	0	0	0	0	20.5	
NAP 301 1F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	298.3	-57.5	+10	+10	-10	3	0	0	0	3.0	0	23.5	
NAP 301 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	303.2	-57.6	+10	+10	-10	3	0	0	0	0	0	20.4	
NAP 301 1F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	303.2	-57.6	+10	+5	-10	3	6	0	0	3.0	0	29.4	
NAP 301 1F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	303.2	-57.6	+10	0	-10	3	0	0	0	0	0	20.4	
NAP 301 1F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	270.4	-56.8	+10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 1F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	301.6	-57.6	+10	+10	-10	3	0	0	0	6.0	0	26.4	
NAP 301 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	301.6	-57.6	+10	+10	-10	3	0	0	0	3.0	0	23.4	
NAP 301 1F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	301.8	-57.6	+10	+10	-10	3	0	0	0	4.8	0	25.2	
NAP 301 1F	TBE Room	S27	Exhaust Fans	1	85	100%	271.3	-56.7	+10	0	-10	3	0	0	0	0	0	21.3	
NAP 301 1F	PAU Room 2	S28	PAU	5	85	100%	305.3	-57.7	+10	+10	-10	3	0	0	0	7.0	0	27.3	
NAP 301 1F	AHU Room	S29	AHU	1	85	100%	296.5	-57.4	+10	+5	-10	3	0	0	0	0	0	20.6	
NAP 301 1F	Lift Machine Room	S30	Lift Machine	3	85	100%	296.5	-57.5	+10	+5	-10	3	0	0	0	4.8	0	26.3	
NAP 301 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	296.5	-57.4	+10	0	-10	3	0	0	0	0	0	20.6	
NAP 301 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	269.4	-56.6	+10	+5	-10	3	6	0	0	4.8	0	32.2	
NAP 301 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	269.4	-56.6	+10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 1F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	269.4	-56.6	+10	-5	-10	3	0	0	0	3.0	0	30.4	
NAP 301 1F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	281.3	-57.0	+10	0	-10	3	0	0	0	0	-11.8	24.2	
NAP 301 1F	L1 HKPF	S37	Hammering Activities	3	113	7%	281.8	-57.0	+10	0	-10	3	0	3	0	4.8	-11.8	45.0	
NAP 301 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	289.0	-57.2	+10	0	-10	3	0	0	0	0	-5.7	18.1	
NAP 301 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	248.3	-55.9	+10	0	-10	3	0	0	0	0	-14.8	34.3	
NAP 301 1F	EMSD Dept	S40	Tyre Changer	1	96	27%	243.2	-55.7	+10	0	-10	3	0	0	0	0	-5.7	29.6	
NAP 301 1F	EMSD Dept	S41	Hammering Activities	4	113	7%	264.4	-56.4	+10	0	-10	3	0	3	0	6.0	-11.8	46.9	
NAP 301 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	289.8	-57.2	+10	0	-10	3	0	0	0	6.0	-8.8	33.1	
NAP 301 1F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	296.2	-57.1	+10	0	-10	3	0	0	0	0	-13.0	21.9	
NAP 301 1F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	246.4	-55.8	+10	0	-10	3	0	0	0	0	-7.0	29.2	
NAP 301 1F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	246.4	-55.8	+10	0	-10	3	0	0	0	0	-7.0	29.2	
NAP 301 1F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	281.2	-57.0	+10	0	-10	3	0	0	0	0	-4.8	25.0	
NAP 301 1F	EMSD Dept	S48	Drill Stand	1	90	17%	290.4	-57.3	+10	0	-10	3	0	0	0	0	-7.8	26.9	
NAP 301 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	259.7	-56.3	+10	0	-10	3	0	0	0	0	0.0	35.7	
NAP 301 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	270.4	-56.8	+10	0	-10	3	0	0	0	0	0.0	21.4	
NAP 301 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	304.5	-57.7	+10	+10	-10	3	0	0	0	0	0.0	30.3	
NAP 301 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	270.4	-56.8	+10	0	-10	3	0	0	0	0	0.0	21.4	
NAP 301 1F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	304.5	-57.7	+10	+10	-10	3	0	0	0	0	0.0	30.3	
NAP 301 12F	Chiller Pump Room	S1	Water Pumps	2	85	100%	231.4	-55.3	+10	+5	-10	3	6	0	0	3.0	0	31.7	51
NAP 301 12F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	223.0	-55.0	+10	0	-10	3	0	0	0	0	0	23.0	
NAP 301 12F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	261.0	-56.3	+10	0	-10	3	0	0	0	7.0	0	28.7	
NAP 301 12F	Compressor Room	S4	Compressors	1	85	100%	280.6	-57.0	+10	-5	-10	3	0	0	0	0	0	21.0	
NAP 301 12F	Compressor Room	S5	Exhaust Fans	1	85	100%	288.2	-57.2	+10	+10	-10	3	0	0	0	0	0	20.8	
NAP 301 12F	Transformer Room	S6	Transformers	2	85	100%	288.2	-57.2	+10	+10	-10	3	6	0	0	3.0	0	29.8	
NAP 301 12F	Transformer Room	S7	Exhaust Fans	1	85	100%	288.2	-57.2	+10	+10	-10	3	0	0	0	0	0	20.8	
NAP 301 12F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	288.2	-57.2	+10	+5	-10	3	6	0	0	3.0	0	29.8	
NAP 301 12F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	288.2	-57.2	+10	0	-10	3	0	0	0	0	0	20.8	
NAP 301 12F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	299.2	-57.5	+10	+10	-10	3	0	0	0	3.0	0	23.5	
NAP 301 12F	Generator Room	S11	Exhaust Fans	1	85	100%	309.0	-58.3	+10	+10	-10	3	0	0	0	0	0	18.7	
NAP 301 12F	Compressor Room	S12	Compressors	1	85	100%	269.8	-56.6	+10	+5	-10	3	0	0	0	0	0	21.4	
NAP 301 12F	Compressor Room	S13	Exhaust Fans	1	85	100%	269.4	-56.6	+10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 12F	F.S. Pump Room	S14	Water Pumps	1	85	100%	269.4	-56.6	+10	+10	-10	3	6	0	0	0	0	27.4	
NAP 301 12F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	269.4	-56.6	+10	+10	-10	3	0	0	0	0	0	21.4	
NAP 301 12F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	269.6	-56.6	+10	0	-10	3	0	0	0	7.0	0	28.4	
NAP 301 12F	PAU Room 1	S17	PAU	2	85	100%	298.4	-57.5	+10	+10	-10	3	0	0	0	3.0	0	23.5	
NAP 301 12F	PAU Room 1	S18	Exhaust Fans	1	85	100%	298.4	-57.5	+10	+10	-10	3	0	0	0	0	0	20.5	
NAP 301 12F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	298.1	-57.5	+10	+10	-10	3	0	0	0	3.0	0	23.5	
NAP 301 12F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	303.1	-57.6	+10	+10	-10	3	0	0	0	0	0	20.4	
NAP 301 12F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	303.1	-57.6	+10	+5	-10	3	6	0	0	3.0	0	29.4	
NAP 301 12F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	303.1	-57.6	+10	0	-10	3	0	0	0	0	0	20.4	
NAP 301 12F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	268.4	-56.6	+10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 12F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	299.6	-57.5	+10	+10	-10	3	0	0	0	6.0	0	26.5	
NAP 301 12F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	299.6	-57.5	+10	+10	-10	3	0	0	0	3.0	0	23.5	
NAP 301 12F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	299.8	-57.5	+10	+10	-10	3	0	0	0	4.8	0	25.3	
NAP 301 12F	TBE Room	S27	Exhaust Fans	1	85	100%	268.5	-56.6	+10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 12F	PAU Room 2	S28	PAU	5	85	100%	302.8	-57.6	+10	+10	-10	3	0	0	0	7.0	0	27.4	
NAP 301 12F	AHU Room	S29	AHU	1	85	100%	293.3	-57.3	+10	+5	-10	3	0	0	0	0	0	20.7	
NAP 301 12F	Lift Machine Room	S30	Lift Machine	3	85	100%	295.7	-57.4	+10	+5	-10	3	0	0	0	4.8	0	25.4	
NAP 301 12F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	292.2	-57.3	+10	0	-10	3	0	0	0	0	0	20.7	
NAP 301 12F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	265.1	-56.5	+10	+5	-10	3	6	0	0	4.8	0	32.3	
NAP 301 12F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	265.1	-56.5	+10	0	-10	3	0	0	0	0	0	21.5	
NAP 301 12F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	265.1	-56.5	+10	-5	-10	3	0	0	0	3.0	0	30.5	
NAP 301 12F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	283.8	-57.1	+10	0	-10	3	0	0	0	0	-11.8	24.1	
NAP 301 12F	L1 HKPF	S37	Hammering Activities	3	113	7%	281.8	-57.0	+10	0	-10	3	0	3	0	4.8	-11.8	45.0	
NAP 301 12F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	287.2	-57.2	+10	0	-10	3	0	0	0	0	-5.7	18.1	
NAP 301 12F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	246.1	-55.8	+10	0	-10	3	0	0	0	0	-14.8	34.4	
NAP 301 12F	EMSD Dept	S40	Tyre Changer	1	96	27%	241.0	-55.6	+10	0	-10	3	0	0	0	0	-5.7	29.7	
NAP 301 12F	EMSD Dept	S41	Hammering Activities	4	113	7%	262.3	-56.4	+10	0	-10	3	0	3	0	6.0	-11.8	46.9	
NAP 301 12F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	288.0	-57.2	+10	0	-10	3	0	0	0	6.0	-8.8	33.1	
NAP 301 12F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	284.3	-57.1	+10	0	-10	3	0	0	0	0	-13.0	21.9	
NAP 301 12F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	244.2	-55.8	+10	0	-10	3	0	0	0	0	-7.0	29.2	
NAP 301 12F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	244.2	-55.8	+10	0	-10	3	0	0	0	0	-7.0	29.2	
NAP 301 12F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	279.3	-56.9	+10	0	-10	3	0	0	0	0	-4.8	25.1	
NAP 301 12F	EMSD Dept	S48	Drill Stand	1	90	17%	288.5	-57.2	+10	0	-10	3	0	0	0	0	-7.8	27.0	
NAP 301 12F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	257.8	-56.2	+10	0	-10	3	0	0	0	0	0.0	35.8	
NAP 301 12F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	268.4	-56.6	+10	0	-10	3	0	0	0	0	0.0	21.4	
NAP 301 12F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	302.7	-57.5	+10	+10	-10	3	0	0	0	0	0.0	30.4	
NAP 301 12F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	268.4	-56.6	+10	0	-10	3	0	0	0	0	0.0	21.4	
NAP 301 12F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	302.7	-57.6	+10	+10	-10	3	0	0	0	0	0.0	30.4	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 301 24F	Chiller Pump Room	S1	Water Pumps	2	85	100%	240.0	-55.6	+10	-5	+10	3	0	0	0	3.0	0	31.4	51
NAP 301 24F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	231.9	-55.3	+10	0	+10	3	0	0	0	0	0	22.7	
NAP 301 24F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	269.6	-56.6	+10	0	+10	3	0	0	0	7.0	0	28.4	
NAP 301 24F	Compressor Room	S4	Compressors	1	85	100%	287.7	-57.2	+10	-5	+10	3	0	0	0	0	0	20.8	
NAP 301 24F	Compressor Room	S5	Exhaust Fans	1	85	100%	295.2	-57.4	+10	+10	+10	3	0	0	0	0	0	20.6	
NAP 301 24F	Transformer Room	S6	Transformers	2	85	100%	295.2	-57.4	+10	+10	+10	3	5	0	0	3.0	0	29.6	
NAP 301 24F	Transformer Room	S7	Exhaust Fans	1	85	100%	295.2	-57.4	+10	+10	+10	3	0	0	0	0	0	20.6	
NAP 301 24F	Transferred Tank Pump Room	S9	Transferred Water Pumps	2	85	100%	295.2	-57.4	+10	+5	+10	3	5	0	0	3.0	0	29.6	
NAP 301 24F	Transferred Tank Pump Room	S8	Exhaust Fans	1	85	100%	295.2	-57.4	+10	0	+10	3	0	0	0	0	0	20.6	
NAP 301 24F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	304.9	-57.7	+10	+10	+10	3	0	0	0	3.0	0	23.3	
NAP 301 24F	Generator Room	S11	Exhaust Fans	1	85	100%	374.2	-59.5	+10	+10	+10	3	0	0	0	0	0	18.5	
NAP 301 24F	Compressor Room	S12	Compressors	1	85	100%	275.3	-56.8	+10	-5	+10	3	0	0	0	0	0	21.2	
NAP 301 24F	Compressor Room	S13	Exhaust Fans	1	85	100%	274.9	-56.8	+10	0	+10	3	0	0	0	0	0	21.2	
NAP 301 24F	F.S. Pump Room	S14	Water Pumps	1	85	100%	274.9	-56.8	+10	+10	+10	3	5	0	0	0	0	27.2	
NAP 301 24F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	274.9	-56.8	+10	+10	+10	3	0	0	0	0	0	21.2	
NAP 301 24F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	274.0	-56.8	+10	0	+10	3	0	0	0	7.0	0	28.2	
NAP 301 24F	PAU Room 1	S17	PAU	2	85	100%	302.8	-57.6	+10	+10	+10	3	0	0	0	3.0	0	23.4	
NAP 301 24F	PAU Room 1	S18	Exhaust Fans	1	85	100%	302.8	-57.6	+10	+10	+10	3	0	0	0	0	0	20.4	
NAP 301 24F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	302.1	-57.6	+10	+10	+10	3	0	0	0	3.0	0	23.4	
NAP 301 24F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	307.0	-57.7	+10	+10	+10	3	0	0	0	0	0	20.3	
NAP 301 24F	Water Vehicle Fêng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	307.0	-57.7	+10	+5	+10	3	5	0	0	3.0	0	29.3	
NAP 301 24F	Water Vehicle Fêng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	307.0	-57.7	+10	0	+10	3	0	0	0	0	0	20.3	
NAP 301 24F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	270.8	-56.7	+10	0	+10	3	0	0	0	0	0	21.3	
NAP 301 24F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	302.0	-57.5	+10	+10	+10	3	0	0	0	6.0	0	26.4	
NAP 301 24F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	302.0	-57.5	+10	+10	+10	3	0	0	0	3.0	0	23.4	
NAP 301 24F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	302.0	-57.5	+10	+10	+10	3	0	0	0	4.8	0	25.2	
NAP 301 24F	TBE Room	S27	Exhaust Fans	1	85	100%	270.0	-56.8	+10	0	+10	3	0	0	0	0	0	21.4	
NAP 301 24F	PAU Room 2	S28	PAU	5	85	100%	304.1	-57.7	+10	+10	+10	3	0	0	0	7.0	0	27.3	
NAP 301 24F	AHU Room	S29	AHU	1	85	100%	293.1	-57.3	+10	-5	+10	3	0	0	0	0	0	20.7	
NAP 301 24F	Lift Machine Room	S30	Lift Machine	3	85	100%	295.8	-57.4	+10	-5	+10	3	0	0	0	4.8	0	25.4	
NAP 301 24F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	292.1	-57.3	+10	0	+10	3	0	0	0	0	0	20.7	
NAP 301 24F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	265.1	-56.5	+10	-5	+10	3	5	0	0	4.8	0	32.3	
NAP 301 24F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	265.1	-56.5	+10	0	+10	3	0	0	0	0	0	21.5	
NAP 301 24F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	265.1	-56.5	+10	-5	+10	3	0	0	0	3.0	0	39.5	
NAP 301 24F	L1 HKPF	S39	Hand-held Pneumatic Tools	1	100	7%	290.8	-57.3	+10	0	+10	3	0	0	0	0	-11.8	23.9	
NAP 301 24F	L1 HKPF	S37	Hammering Activities	3	113	7%	285.9	-57.1	+10	0	+10	3	0	3	0	4.8	-11.8	44.8	
NAP 301 24F	FEHD	S38	Automatic Vehicle Washing Machine	1	89	27%	299.4	-57.2	+10	0	+10	3	0	0	0	0	-5.7	16.1	
NAP 301 24F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	248.7	-55.9	+10	0	+10	3	0	0	0	0	-14.8	34.3	
NAP 301 24F	EMSD Dept	S40	Tyre Changer	1	98	27%	243.7	-55.7	+10	0	+10	3	0	0	0	0	-5.7	29.6	
NAP 301 24F	EMSD Dept	S41	Hammering Activities	4	113	7%	254.8	-56.1	+10	0	+10	3	0	3	0	6.0	-11.8	48.0	
NAP 301 24F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	15%	290.2	-57.3	+10	0	+10	3	0	0	0	6.0	-8.8	33.0	
NAP 301 24F	EMSD Dept	S43	Roller Brake Tester	1	89	5%	286.5	-57.1	+10	0	+10	3	5	0	0	0	-13.0	21.9	
NAP 301 24F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	249.9	-55.9	+10	0	+10	3	0	0	0	0	-7.0	29.1	
NAP 301 24F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	240.9	-55.6	+10	0	+10	3	0	0	0	0	-7.0	29.1	
NAP 301 24F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	281.8	-57.0	+10	0	+10	3	0	0	0	0	-4.8	25.0	
NAP 301 24F	EMSD Dept	S48	Drill Stand	1	99	17%	290.8	-57.3	+10	0	+10	3	0	0	0	0	-7.8	26.9	
NAP 301 24F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	260.2	-56.3	+10	0	+10	3	0	0	0	0	0.0	35.7	
NAP 301 24F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	270.8	-56.7	+10	0	+10	3	0	0	0	0	0.0	21.3	
NAP 301 24F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	304.9	-57.7	+10	+10	+10	3	0	0	0	0	0.0	20.3	
NAP 301 24F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	270.8	-56.7	+10	0	+10	3	0	0	0	0	0.0	21.3	
NAP 301 24F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	304.9	-57.7	+10	+10	+10	3	0	0	0	0	0.0	20.3	

(Night-time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Duration, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 301 1F	Chiller Pump Room	S1	Water Pumps	1	85	100%	228.3	-55.2	-10	-5	-10	3	5	0	0	0	0	28.8	44
NAP 301 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	219.8	-54.8	-10	0	-10	3	0	0	0	0	0	23.2	
NAP 301 1F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	258.2	-58.2	-10	0	-10	3	0	0	0	0	0	21.8	
NAP 301 1F	Compressor Room	S4	Compressors	0	85	0%	278.0	-56.8	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	Compressor Room	S5	Exhaust Fans	0	85	0%	265.7	-57.1	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	Transformer Room	S6	Transformers	2	85	100%	265.7	-57.1	-10	-10	-10	3	5	0	0	3.0	0	29.8	
NAP 301 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	265.7	-57.1	-10	-10	-10	3	0	0	0	0	0	20.9	
NAP 301 1F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	265.7	-57.1	-10	-5	-10	3	5	0	0	3.0	0	29.9	
NAP 301 1F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	265.7	-57.1	-10	0	-10	3	0	0	0	0	0	20.9	
NAP 301 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	297.8	-57.5	-10	-10	-10	3	0	0	0	3.0	0	23.5	
NAP 301 1F	Generator Room	S11	Exhaust Fans	1	85	100%	307.2	-59.3	-10	-10	-10	3	0	0	0	0	0	18.7	
NAP 301 1F	Compressor Room	S12	Compressors	0	85	0%	269.0	-56.6	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	Compressor Room	S13	Exhaust Fans	0	85	0%	268.6	-56.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	268.6	-56.6	-10	-10	-10	3	5	0	0	0	0	27.4	
NAP 301 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	268.6	-56.6	-10	-10	-10	3	0	0	0	0	0	21.4	
NAP 301 1F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	268.6	-56.6	-10	0	-10	3	0	0	0	3.0	0	24.4	
NAP 301 1F	PAU Room 1	S17	PAU	1	85	100%	295.1	-57.5	-10	-10	-10	3	0	0	0	0	0	20.5	
NAP 301 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	295.1	-57.5	-10	-10	-10	3	0	0	0	0	0	20.5	
NAP 301 1F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	295.3	-57.5	-10	-10	-10	3	0	0	0	0	0	20.5	
NAP 301 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	303.2	-57.6	-10	-10	-10	3	0	0	0	0	0	20.4	
NAP 301 1F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	303.2	-57.6	-10	-5	-10	3	5	0	0	3.0	0	29.4	
NAP 301 1F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	303.2	-57.6	-10	0	-10	3	0	0	0	0	0	20.4	
NAP 301 1F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	270.4	-56.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	301.8	-57.6	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	Exhaust Fan Room	S25	Waiting Exhaust Fans	0	85	0%	301.8	-57.6	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	301.8	-57.6	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	TBE Room	S27	Exhaust Fans	1	85	100%	271.3	-56.7	-10	0	-10	3	0	0	0	0	0	21.3	
NAP 301 1F	PAU Room 2	S28	PAU	2	85	100%	305.3	-57.7	-10	-10	-10	3	0	0	0	3	0	23.3	
NAP 301 1F	AHU Room	S29	AHU	0	85	0%	295.5	-57.4	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	Lift Machine Room	S30	Lift Machine	1	85	100%	295.5	-57.5	-10	-5	-10	3	0	0	0	0	0	20.5	
NAP 301 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	295.1	-57.4	-10	0	-10	3	0	0	0	0	0	20.6	
NAP 301 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	269.4	-56.6	-10	-5	-10	3	5	0	0	4.8	0	32.2	
NAP 301 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	269.4	-56.6	-10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 1F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	269.4	-56.6	-10	-5	-10	3	0	0	0	0	0	36.4	
NAP 301 1F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	2%	281.3	-57.0	-10	0	-10	3	0	0	0	0	-17.6	18.2	
NAP 301 1F	L1 HKPF	S37	Hammering Activities	1	113	7%	281.8	-57.0	-10	0	-10	3	0	3	0	0	-11.8	40.2	
NAP 301 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	85	27%	299.0	-57.2	-10	0	-10	3	0	0	0	0	-6	18.1	
NAP 301 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	248.3	-55.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	EMSD Dept	S40	Tyre Changer	0	98	0%	243.2	-55.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	EMSD Dept	S41	Hammering Activities	0	113	0%	264.4	-56.4	-10	0	-10	3	0	3	0	0	0	0.0	
NAP 301 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	269.8	-57.2	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	286.2	-57.1	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	248.4	-55.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 1F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	248.4	-55.9	-10	0	-10	3	0	0	0	0	-11.8	24.4	
NAP 301 1F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	281.2	-57.0	-10	0	-10	3	0	0	0	0	0.0	0.0	
NAP 301 1F	EMSD Dept	S48	Drill Stand	0	99	0%	290.4	-57.3	-10	0	-10	3	0	0	0	0	0.0	0.0	
NAP 301 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	259.7	-56.3	-10	0	-10	3	0	0	0	0	0.0	35.7	
NAP 301 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	270.4	-56.8	-10	0	-10	3	0	0	0	0	0.0	21.4	
NAP 301 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	304.5	-57.7	-10	-10	-10	3	0	0	0	0	0.0	20.3	
NAP 301 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	270.4	-56.8	-10	0	-10	3	0	0	0	0	0.0	21.4	
NAP 301 1F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	304.5	-57.7	-10	-10	-10	3	0	0	0	0	0.0	0.0	
NAP 301 12F	Chiller Pump Room	S1	Water Pumps	1	85	100%	231.4	-55.3	-10	0	-10	3	5	0	0	0	0	28.7	44
NAP 301 12F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	223.0	-55.0	-10	0	-10	3	0	0	0	0	0	23.0	
NAP 301 12F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	261.0	-56.3	-10	0	-10	3	0	0	0	0	0	21.7	
NAP 301 12F	Compressor Room	S4	Compressors	0	85	0%	280.9	-57.0	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	Compressor Room	S5	Exhaust Fans	0	85	0%	268.2	-57.2	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	Transformer Room	S6	Transformers	2	85	100%	268.2	-57.2	-10	0	-10	3	5	0	0	3.0	0	29.8	
NAP 301 12F	Transformer Room	S7	Exhaust Fans	1	85	100%	268.2	-57.2	-10	0	-10	3	0	0	0	0	0	20.8	
NAP 301 12F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	268.2	-57.2	-10	0	-10	3	5	0	0	3.0	0	29.8	
NAP 301 12F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	268.2	-57.2	-10	0	-10	3	0	0	0	0	0	20.8	
NAP 301 12F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	299.2	-57.5	-10	0	-10	3	0	0	0	3.0	0	23.5	
NAP 301 12F	Generator Room	S11	Exhaust Fans	1	85	100%	309.0	-59.3	-10	0	-10	3	0	0	0	0	0	18.7	
NAP 301 12F	Compressor Room	S12	Compressors	0	85	0%	269.8	-56.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	Compressor Room	S13	Exhaust Fans	0	85	0%	269.4	-56.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	F.S. Pump Room	S14	Water Pumps	1	85	100%	269.4	-56.6	-10	0	-10	3	5	0	0	0	0	27.4	
NAP 301 12F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	269.4	-56.6	-10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 12F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	269.1	-56.6	-10	0	-10	3	0	0	0	3.0	0	24.4	
NAP 301 12F	PAU Room 1	S17	PAU	1	85	100%	298.4	-57.5	-10	0	-10	3	0	0	0	0	0	20.5	
NAP 301 12F	PAU Room 1	S18	Exhaust Fans	1	85	100%	298.4	-57.5	-10	0	-10	3	0	0	0	0	0	20.5	
NAP 301 12F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	298.1	-57.5	-10	0	-10	3	0	0	0	0	0	20.5	
NAP 301 12F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	303.1	-57.6	-10	0	-10	3	0	0	0	0	0	20.4	
NAP 301 12F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	303.1	-57.6	-10	0	-10	3	5	0	0	3.0	0	29.4	
NAP 301 12F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	303.1	-57.6	-10	0	-10	3	0	0	0	0	0	20.4	
NAP 301 12F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	268.4	-56.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	299.8	-57.5	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	Exhaust Fan Room	S25	Waiting Exhaust Fans	0	85	0%	299.8	-57.5	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	299.8	-57.5	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	TBE Room	S27	Exhaust Fans	1	85	100%	256.5	-56.6	-10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 12F	PAU Room 2	S28	PAU	2	85	100%	302.8	-57.6	-10	0	-10	3	0	0	0	3	0	23.4	
NAP 301 12F	AHU Room	S29	AHU	0	85	0%	292.9	-57.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	Lift Machine Room	S30	Lift Machine	1	85	100%	293.7	-57.4	-10	0	-10	3	0	0	0	0	0	20.6	
NAP 301 12F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	292.2	-57.3	-10	0	-10	3	0	0	0	0	0	20.7	
NAP 301 12F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	265.1	-56.5	-10	0	-10	3	5	0	0	4.8	0	32.3	
NAP 301 12F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	265.1	-56.5	-10	0	-10	3	0	0	0	0	0	21.5	
NAP 301 12F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	265.1	-56.5	-10	0	-10	3	0	0	0	0	0	36.5	
NAP 301 12F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	283.8	-57.1	-10	0	-10	3	0	0	0	0	-17.6	18.1	
NAP 301 12F	L1 HKPF	S37	Hammering Activities	1	113	7%	281.8	-57.0	-10	0	-10	3	0	3	0	0	-11.8	40.2	
NAP 301 12F	FEHD	S38	Automatic Vehicle Washing Machine	1	85	27%	287.2	-57.2	-10	0	-10	3	0	0	0	0	-6	18.1	
NAP 301 12F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	246.1	-55.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	EMSD Dept	S40	Tyre Changer	0	98	0%	241.0	-55.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	EMSD Dept	S41	Hammering Activities	0	113	0%	262.3	-56.4	-10	0	-10	3	0	3	0	0	0	0.0	
NAP 301 12F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	268.0	-57.2	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	284.3	-57.1	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	244.2	-55.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 12F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	244.2	-55.8	-10	0	-10	3	0	0	0	0	-11.8	24.4	
NAP 301 12F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	279.3	-56.9	-10	0	-10	3	0	0	0	0	0.0	0.0	
NAP 301 12F	EMSD Dept	S48	Drill Stand	0	99	0%	288.5	-57.2	-10	0	-10	3	0	0	0	0	0.0	0.0	
NAP 301 12F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	257.6	-56.2	-10	0	-10	3	0	0	0	0	0.0	35.8	
NAP 301 12F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	268.4	-56.6	-10	0	-10	3	0	0	0	0	0.0	21.4	
NAP 301 12F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	302.7	-57.6	-10	0	-10	3	0	0	0	0	0.0	20.4	
NAP 301 12F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	268.4	-56.6	-10	0	-10	3	0	0	0	0	0.0	21.4	
NAP 301 12F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	302.7	-57.6	-10	0	-10	3	0	0	0	0	0.0	0.0	

(Night-time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Building s, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 301 24F	Chiller Pump Room	S1	Water Pumps	1	85	100%	240.0	-55.6	-10	0	-10	3	0	0	0	0	0	28.4	44
NAP 301 24F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	231.9	-55.3	-10	0	-10	3	0	0	0	0	0	22.7	
NAP 301 24F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	264.6	-56.4	-10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 24F	Compressor Room	S4	Compressors	0	85	0%	297.7	-57.2	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	Compressor Room	S5	Exhaust Fans	0	85	0%	296.2	-57.4	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	Transformer Room	S6	Transformers	2	85	100%	295.2	-57.4	-10	0	-10	3	6	0	0	3.0	0	29.6	
NAP 301 24F	Transformer Room	S7	Exhaust Fans	1	85	100%	295.2	-57.4	-10	0	-10	3	0	0	0	0	0	20.6	
NAP 301 24F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	295.2	-57.4	-10	0	-10	3	6	0	0	3.0	0	29.6	
NAP 301 24F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	295.2	-57.4	-10	0	-10	3	0	0	0	0	0	20.6	
NAP 301 24F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	304.9	-57.7	-10	0	-10	3	0	0	0	3.0	0	23.3	
NAP 301 24F	Generator Room	S11	Exhaust Fans	1	85	100%	274.2	-56.5	-10	0	-10	3	0	0	0	0	0	16.5	
NAP 301 24F	Compressor Room	S12	Compressors	0	85	0%	275.5	-56.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	Compressor Room	S13	Exhaust Fans	0	85	0%	274.9	-56.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	F.S. Pump Room	S14	Water Pumps	1	85	100%	274.9	-56.8	-10	0	-10	3	6	0	0	0	0	27.2	
NAP 301 24F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	274.9	-56.8	-10	0	-10	3	0	0	0	0	0	21.2	
NAP 301 24F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	274.0	-56.8	-10	0	-10	3	0	0	0	3.0	0	24.2	
NAP 301 24F	PAU Room 1	S17	PAU	1	85	100%	302.8	-57.6	-10	0	-10	3	0	0	0	0	0	20.4	
NAP 301 24F	PAU Room 1	S18	Exhaust Fans	1	85	100%	302.8	-57.6	-10	0	-10	3	0	0	0	0	0	20.4	
NAP 301 24F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	302.1	-57.6	-10	0	-10	3	0	0	0	0	0	20.4	
NAP 301 24F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	307.0	-57.7	-10	0	-10	3	0	0	0	0	0	20.3	
NAP 301 24F	Water Vehicle Feng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	307.0	-57.7	-10	0	-10	3	6	0	0	3.0	0	29.3	
NAP 301 24F	Water Vehicle Feng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	307.0	-57.7	-10	0	-10	3	0	0	0	0	0	20.3	
NAP 301 24F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	270.8	-56.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	302.0	-57.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	302.0	-57.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	302.0	-57.6	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	TBE Room	S27	Exhaust Fans	1	85	100%	270.0	-56.6	-10	0	-10	3	0	0	0	0	0	21.4	
NAP 301 24F	PAU Room 2	S28	PAU	2	85	100%	304.1	-57.7	-10	0	-10	3	0	0	0	3	0	23.3	
NAP 301 24F	AHU Room	S29	AHU	0	85	0%	293.1	-57.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	Lift Machine Room	S30	Lift Machine	1	85	100%	295.6	-57.4	-10	0	-10	3	0	0	0	0	0	26.6	
NAP 301 24F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	292.1	-57.3	-10	0	-10	3	0	0	0	0	0	20.7	
NAP 301 24F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	285.1	-56.5	-10	0	-10	3	6	0	0	4.8	0	32.3	
NAP 301 24F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	285.1	-56.5	-10	0	-10	3	0	0	0	0	0	21.5	
NAP 301 24F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	285.1	-56.5	-10	0	-10	3	0	0	0	0	0	36.5	
NAP 301 24F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	3%	290.8	-57.3	-10	0	-10	3	0	0	0	0	-17.8	17.9	
NAP 301 24F	L1 HKPF	S37	Hammering Activities	1	113	7%	285.9	-57.1	-10	0	-10	3	0	3	0	0	-11.8	40.1	
NAP 301 24F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	289.4	-57.2	-10	0	-10	3	0	0	0	0	-6	18.1	
NAP 301 24F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	248.7	-55.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	EMSD Dept	S40	Tyre Changer	0	98	0%	243.7	-55.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	EMSD Dept	S41	Hammering Activities	0	113	0%	284.8	-56.5	-10	0	-10	3	0	3	0	0	0	0.0	
NAP 301 24F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	290.2	-57.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	285.6	-57.1	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	246.9	-55.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 301 24F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	246.9	-55.8	-10	0	-10	3	0	0	0	0	-11.6	24.3	
NAP 301 24F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	281.6	-57.0	-10	0	-10	3	0	0	0	0	0.0	0.0	
NAP 301 24F	EMSD Dept	S48	Drill Stand	0	99	0%	290.8	-57.3	-10	0	-10	3	0	0	0	0	0.0	0.0	
NAP 301 24F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	89	100%	290.2	-56.3	-10	0	-10	3	0	0	0	0	0.0	35.7	
NAP 301 24F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	270.8	-56.7	-10	0	-10	3	0	0	0	0	0.0	21.3	
NAP 301 24F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	304.9	-57.7	-10	0	-10	3	0	0	0	0	0.0	20.3	
NAP 301 24F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	270.8	-56.7	-10	0	-10	3	0	0	0	0	0.0	21.3	
NAP 301 24F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	304.9	-57.7	-10	0	-10	3	0	0	0	0	0.0	0.0	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 401 1F	Chiller Pump Room	S1	Water Pumps	2	85	100%	415.2	-60.4	0	-5	-5	3	5	0	0	3.0	0	31.6	57
NAP 401 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	413.9	-60.3	0	0	0	3	0	0	0	0	0	27.7	
NAP 401 1F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	356.5	-59.0	0	0	0	3	0	0	0	7.0	0	36.0	
NAP 401 1F	Compressor Room	S4	Compressors	1	85	100%	361.6	-59.2	0	-5	-5	3	0	0	0	0	0	23.8	
NAP 401 1F	Compressor Room	S5	Exhaust Fans	1	85	100%	349.4	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 1F	Transformer Room	S6	Transformers	2	85	100%	349.4	-58.9	0	-5	-5	3	5	0	0	3.0	0	33.1	
NAP 401 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	349.4	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	349.4	-58.9	0	-5	-5	3	5	0	0	3.0	0	33.1	
NAP 401 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	349.4	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	354.9	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 401 1F	Generator Room	S11	Exhaust Fans	1	85	100%	536.1	-62.6	0	0	0	3	0	0	0	0	0	25.4	
NAP 401 1F	Compressor Room	S12	Compressors	1	85	100%	416.8	-60.4	0	-10	-10	3	0	0	0	0	0	17.6	
NAP 401 1F	Compressor Room	S13	Exhaust Fans	1	85	100%	421.0	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	421.0	-60.5	0	-5	-5	3	8	0	0	0	0	28.5	
NAP 401 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	421.0	-60.5	0	0	0	3	0	0	0	0	0	27.5	
NAP 401 1F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	421.1	-60.5	0	-10	-10	3	0	0	0	7.0	0	24.5	
NAP 401 1F	PAU Room 1	S17	PAU	2	85	100%	355.2	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 401 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	355.2	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 1F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	355.4	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 401 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	354.9	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 1F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	354.9	-59.0	0	-10	-10	3	5	0	0	3.0	0	26.0	
NAP 401 1F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	354.9	-59.0	0	-10	-10	3	0	0	0	0	0	19.0	
NAP 401 1F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	422.3	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 1F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	349.0	-58.9	0	0	0	3	0	0	0	6.0	0	35.1	
NAP 401 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	349.0	-58.9	0	0	0	3	0	0	0	3.0	0	32.1	
NAP 401 1F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	349.0	-58.9	0	0	0	3	0	0	0	4.8	0	33.9	
NAP 401 1F	TBE Room	S27	Exhaust Fans	1	85	100%	422.9	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 1F	PAU Room 2	S28	PAU	5	85	100%	356.7	-59.0	0	0	0	3	0	0	0	7.0	0	36.0	
NAP 401 1F	AHU Room	S29	AHU	1	85	100%	414.5	-60.4	0	-10	-10	3	0	0	0	0	0	17.6	
NAP 401 1F	Lift Machine Room	S30	Lift Machine	3	85	100%	408.9	-60.2	0	-10	-10	3	0	0	0	4.8	0	22.6	
NAP 401 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	419.8	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	368.7	-59.3	0	-5	-5	3	5	0	0	4.8	0	34.5	
NAP 401 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	368.7	-59.3	0	0	0	3	0	0	0	0	0	28.7	
NAP 401 1F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	369.7	-59.3	0	-10	-10	3	0	0	0	3.0	0	36.7	
NAP 401 1F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	397.0	-60.0	0	0	0	3	0	0	0	0	-11.5	31.2	
NAP 401 1F	L1 HKPF	S37	Hammering Activities	3	113	7%	397.4	-60.0	0	0	0	3	0	3	0	4.8	-11.5	52.0	
NAP 401 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	85	27%	361.4	-59.2	0	0	0	3	0	0	0	0	-5.7	26.1	
NAP 401 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	366.0	-59.3	0	0	0	3	0	0	0	0	-14.8	40.9	
NAP 401 1F	EMSD Dept	S40	Tyre Changer	1	98	27%	385.3	-59.7	0	0	0	3	0	0	0	0	-5.7	35.6	
NAP 401 1F	EMSD Dept	S41	Hammering Activities	4	113	7%	360.8	-59.1	0	0	0	3	0	3	0	6.0	-11.5	54.2	
NAP 401 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	403.7	-60.1	0	0	0	3	0	0	0	6.0	-8.8	40.2	
NAP 401 1F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	411.2	-60.3	0	0	0	3	0	0	0	0	-13.0	29.7	
NAP 401 1F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	380.4	-59.6	0	0	0	3	0	0	0	0	-7.0	35.4	
NAP 401 1F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	380.4	-59.6	0	0	0	3	0	0	0	0	-7.0	35.4	
NAP 401 1F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	357.7	-59.1	0	0	0	3	0	0	0	0	-4.8	32.9	
NAP 401 1F	EMSD Dept	S48	Drill Stand	1	99	17%	355.8	-59.0	0	0	0	3	0	0	0	0	-7.8	35.2	
NAP 401 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	374.9	-59.5	0	0	0	3	0	0	0	0	0.0	42.5	
NAP 401 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	422.3	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	356.0	-59.0	0	0	0	3	0	0	0	0	0.0	29.0	
NAP 401 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	422.3	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 1F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	356.0	-59.0	0	0	0	3	0	0	0	0	0.0	29.0	
NAP 401 15F	Chiller Pump Room	S1	Water Pumps	2	85	100%	417.7	-60.4	0	-5	-5	3	5	0	0	3.0	0	31.9	57
NAP 401 15F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	416.3	-60.4	0	0	0	3	0	0	0	0	0	27.6	
NAP 401 15F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	359.4	-59.1	0	0	0	3	0	0	0	7.0	0	35.8	
NAP 401 15F	Compressor Room	S4	Compressors	1	85	100%	364.7	-59.2	0	-5	-5	3	0	0	0	0	0	23.8	
NAP 401 15F	Compressor Room	S5	Exhaust Fans	1	85	100%	352.3	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 15F	Transformer Room	S6	Transformers	2	85	100%	352.3	-58.9	0	-5	-5	3	5	0	0	3.0	0	33.1	
NAP 401 15F	Transformer Room	S7	Exhaust Fans	1	85	100%	352.3	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 15F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	352.3	-58.9	0	-5	-5	3	5	0	0	3.0	0	33.1	
NAP 401 15F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	352.3	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 15F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	356.8	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 401 15F	Generator Room	S11	Exhaust Fans	1	85	100%	537.9	-62.6	0	0	0	3	0	0	0	0	0	25.4	
NAP 401 15F	Compressor Room	S12	Compressors	1	85	100%	417.5	-60.4	0	-10	-10	3	0	0	0	0	0	17.6	
NAP 401 15F	Compressor Room	S13	Exhaust Fans	1	85	100%	422.0	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 15F	F.S. Pump Room	S14	Water Pumps	1	85	100%	422.0	-60.5	0	-5	-5	3	8	0	0	0	0	28.5	
NAP 401 15F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	422.0	-60.5	0	0	0	3	0	0	0	0	0	27.5	
NAP 401 15F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	421.7	-60.5	0	-10	-10	3	0	0	0	7.0	0	24.5	
NAP 401 15F	PAU Room 1	S17	PAU	2	85	100%	355.9	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 401 15F	PAU Room 1	S18	Exhaust Fans	1	85	100%	355.9	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 15F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	355.8	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 401 15F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	355.0	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 15F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	355.0	-59.0	0	-10	-10	3	5	0	0	3.0	0	26.0	
NAP 401 15F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	355.0	-59.0	0	-10	-10	3	0	0	0	0	0	19.0	
NAP 401 15F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	420.9	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 15F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	348.3	-58.8	0	0	0	3	0	0	0	6.0	0	35.2	
NAP 401 15F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	348.3	-58.8	0	0	0	3	0	0	0	3.0	0	32.2	
NAP 401 15F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	348.3	-58.8	0	0	0	3	0	0	0	4.8	0	34.0	
NAP 401 15F	TBE Room	S27	Exhaust Fans	1	85	100%	420.9	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 15F	PAU Room 2	S28	PAU	5	85	100%	354.3	-59.0	0	0	0	3	0	0	0	7.0	0	36.0	
NAP 401 15F	AHU Room	S29	AHU	1	85	100%	412.0	-60.3	0	-10	-10	3	0	0	0	0	0	17.7	
NAP 401 15F	Lift Machine Room	S30	Lift Machine	3	85	100%	405.8	-60.2	0	-10	-10	3	0	0	0	4.8	0	22.6	
NAP 401 15F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	416.8	-60.4	0	-10	-10	3	0	0	0	0	0	17.6	
NAP 401 15F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	363.0	-59.2	0	-5	-5	3	5	0	0	4.8	0	34.6	
NAP 401 15F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	363.0	-59.2	0	0	0	3	0	0	0	0	0	28.8	
NAP 401 15F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	363.0	-59.2	0	-10	-10	3	0	0	0	3.0	0	36.8	
NAP 401 15F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	399.5	-60.0	0	0	0	3	0	0	0	0	-11.5	31.2	
NAP 401 15F	L1 HKPF	S37	Hammering Activities	3	113	7%	397.8	-60.0	0	0	0	3	0	3	0	4.8	-11.5	52.0	
NAP 401 15F	FEHD	S38	Automatic Vehicle Washing Machine	1	85	27%	358.9	-59.1	0	0	0	3	0	0	0	0	-5.7	26.2	
NAP 401 15F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	364.4	-59.2	0	0	0	3	0	0	0	0	-14.8	41.0	
NAP 401 15F	EMSD Dept	S40	Tyre Changer	1	98	27%	384.8	-59.7	0	0	0	3	0	0	0	0	-5.7	35.6	
NAP 401 15F	EMSD Dept	S41	Hammering Activities	4	113	7%	359.0	-59.1	0	0	0	3	0	3	0	6.0	-11.5	54.2	
NAP 401 15F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	402.3	-60.1	0	0	0	3	0	0	0	6.0	-8.8	40.2	
NAP 401 15F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	409.8	-60.3	0	0	0	3	0	0	0	0	-13.0	29.7	
NAP 401 15F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	378.9	-59.6	0	0	0	3	0	0	0	0	-7.0	35.4	
NAP 401 15F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	378.9	-59.6	0	0	0	3	0	0	0	0	-7.0	35.4	
NAP 401 15F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	356.1	-59.0	0	0	0	3	0	0	0	0	-4.8	33.0	
NAP 401 15F	EMSD Dept	S48	Drill Stand	1	99	17%	354.0	-58.9	0	0	0	3	0	0	0	0	-7.8	35.2	
NAP 401 15F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	373.3	-59.4	0	0	0	3	0	0	0	0	0.0	42.6	
NAP 401 15F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	420.9	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 15F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	354.4	-59.0	0	0	0	3	0	0	0	0	0.0	29.0	
NAP 401 15F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	420.9	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 15F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	354.4	-59.0	0	0	0	3	0	0	0	0	0.0	29.0	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage Ontime Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 401 30F	Chiller Pump Room	S1	Water Pumps	2	85	100%	424.9	-60.6	0	-5	-5	3	0	0	0	3.0	0	31.4	57
NAP 401 30F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	423.6	-60.5	0	0	0	3	0	0	0	0	0	27.5	
NAP 401 30F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	387.8	-59.3	0	0	0	3	0	0	0	7.0	0	35.7	
NAP 401 30F	Compressor Room	S4	Compressors	1	85	100%	372.9	-59.4	0	-5	-5	3	0	0	0	0	0	23.6	
NAP 401 30F	Compressor Room	S5	Exhaust Fans	1	85	100%	360.9	-59.1	0	0	0	3	0	0	0	0	0	26.9	
NAP 401 30F	Transformer Room	S6	Transformers	2	85	100%	360.6	-59.1	0	-5	-5	3	0	0	0	3.0	0	32.9	
NAP 401 30F	Transformer Room	S7	Exhaust Fans	1	85	100%	360.9	-59.1	0	0	0	3	0	0	0	0	0	26.9	
NAP 401 30F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	360.9	-59.1	0	-5	-5	3	0	0	0	3.0	0	32.9	
NAP 401 30F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	360.9	-59.1	0	0	0	3	0	0	0	0	0	26.9	
NAP 401 30F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	364.2	-59.2	0	-5	-5	3	0	0	0	3.0	0	28.8	
NAP 401 30F	Generator Room	S11	Exhaust Fans	1	85	100%	643.4	-62.7	0	0	0	3	0	0	0	0	0	25.3	
NAP 401 30F	Compressor Room	S12	Compressors	1	85	100%	423.2	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 30F	Compressor Room	S13	Exhaust Fans	1	85	100%	427.8	-60.6	0	-10	-10	3	0	0	0	0	0	17.4	
NAP 401 30F	F.S. Pump Room	S14	Water Pumps	1	85	100%	427.8	-60.6	0	-5	-5	3	6	0	0	0	0	28.4	
NAP 401 30F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	427.8	-60.6	0	0	0	3	0	0	0	0	0	27.4	
NAP 401 30F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	424.2	-60.6	0	-10	-10	3	0	0	0	7.0	0	24.4	
NAP 401 30F	PAU Room1	S17	PAU	2	85	100%	362.0	-59.2	0	-5	-5	3	0	0	0	3.0	0	26.8	
NAP 401 30F	PAU Room1	S18	Exhaust Fans	1	85	100%	362.0	-59.2	0	0	0	3	0	0	0	0	0	23.8	
NAP 401 30F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	361.2	-59.2	0	-5	-5	3	0	0	0	3.0	0	26.8	
NAP 401 30F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	360.7	-59.1	0	0	0	3	0	0	0	0	0	26.9	
NAP 401 30F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	360.7	-59.1	0	-10	-10	3	6	0	0	3.0	0	27.9	
NAP 401 30F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	360.7	-59.1	0	-10	-10	3	0	0	0	0	0	18.9	
NAP 401 30F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	424.1	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 30F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	352.1	-58.9	0	0	0	3	0	0	0	6.0	0	35.1	
NAP 401 30F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	352.1	-58.9	0	0	0	3	0	0	0	3.0	0	32.1	
NAP 401 30F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	352.1	-58.9	0	0	0	3	0	0	0	4.8	0	33.9	
NAP 401 30F	TBE Room	S27	Exhaust Fans	1	85	100%	423.3	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 30F	PAU Room 2	S28	PAU	5	85	100%	357.2	-59.1	0	0	0	3	0	0	0	7.0	0	35.9	
NAP 401 30F	AHU Room	S29	AHU	1	85	100%	413.9	-60.3	0	-10	-10	3	0	0	0	0	0	17.7	
NAP 401 30F	Lift Machine Room	S30	Lift Machine	3	85	100%	406.8	-60.2	0	-10	-10	3	0	0	0	4.8	0	22.6	
NAP 401 30F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	417.8	-60.4	0	-10	-10	3	0	0	0	0	0	17.6	
NAP 401 30F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	364.4	-59.2	0	-5	-5	3	6	0	0	4.8	0	34.6	
NAP 401 30F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	364.4	-59.2	0	0	0	3	0	0	0	0	0	29.8	
NAP 401 30F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	364.4	-59.2	0	-10	-10	3	0	0	0	3.0	0	36.8	
NAP 401 30F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	407.1	-60.2	0	0	0	3	0	0	0	0	-11.8	31.0	
NAP 401 30F	L1 HKPF	S37	Hammering Activities	3	113	7%	402.7	-60.1	0	0	0	3	0	3	0	4.8	-11.8	51.8	
NAP 401 30F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	363.6	-59.2	0	0	0	3	0	0	0	0	-5.7	28.1	
NAP 401 30F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	366.1	-59.3	0	0	0	3	0	0	0	0	-16.8	40.9	
NAP 401 30F	EMSD Dept	S40	Tyre Changer	1	99	27%	366.3	-59.3	0	0	0	3	0	0	0	0	-5.7	35.5	
NAP 401 30F	EMSD Dept	S41	Hammering Activities	4	113	7%	362.7	-59.2	0	0	0	3	0	3	0	6.0	-11.8	54.1	
NAP 401 30F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	405.6	-60.2	0	0	0	3	0	0	0	6.0	-8.8	40.1	
NAP 401 30F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	413.0	-60.3	0	0	0	3	0	0	0	0	-13.0	28.7	
NAP 401 30F	EMSD Dept	S44	Motorcycle Brake Tester	1	89	20%	382.5	-59.7	0	0	0	3	0	0	0	0	-7.0	35.3	
NAP 401 30F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	382.5	-59.7	0	0	0	3	0	0	0	0	-7.0	35.3	
NAP 401 30F	EMSD Dept	S47	Bench Grinder	1	93.6	33%	359.6	-59.1	0	0	0	3	0	0	0	0	-4.8	32.9	
NAP 401 30F	EMSD Dept	S48	Drill Stand	1	89	17%	357.8	-59.1	0	0	0	3	0	0	0	0	-7.8	35.1	
NAP 401 30F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	376.9	-59.5	0	0	0	3	0	0	0	0	0.0	42.6	
NAP 401 30F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	424.1	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 30F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	356.2	-59.1	0	0	0	3	0	0	0	0	0.0	28.9	
NAP 401 30F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	424.1	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 30F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	356.2	-59.1	0	0	0	3	0	0	0	0	0.0	28.9	

(Night-time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Sound Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 401 1F	Chiller Pump Room	S1	Water Pumps	1	85	100%	415.2	-60.4	0	-5	-5	3	0	0	0	0	0	28.6	50
NAP 401 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	413.9	-60.3	0	0	0	3	0	0	0	0	0	27.7	
NAP 401 1F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	356.5	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 1F	Compressor Room	S4	Compressors	0	85	0%	351.8	-59.2	0	-5	-5	3	0	0	0	0	0	0.0	
NAP 401 1F	Compressor Room	S5	Exhaust Fans	0	85	0%	349.4	-58.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	Transformer Room	S6	Transformers	2	85	100%	349.4	-58.9	0	-5	-5	3	0	0	0	3.0	0	33.1	
NAP 401 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	349.4	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	349.4	-58.9	0	-5	-5	3	0	0	0	3.0	0	33.1	
NAP 401 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	349.4	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	354.9	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 401 1F	Generator Room	S11	Exhaust Fans	1	85	100%	536.1	-62.6	0	0	0	3	0	0	0	0	0	25.4	
NAP 401 1F	Compressor Room	S12	Compressors	0	85	0%	418.6	-60.4	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 1F	Compressor Room	S13	Exhaust Fans	0	85	0%	421.0	-60.5	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	421.0	-60.5	0	-5	-5	3	6	0	0	0	0	28.5	
NAP 401 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	421.0	-60.5	0	0	0	3	0	0	0	0	0	27.5	
NAP 401 1F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	421.1	-60.5	0	-10	-10	3	0	0	0	3.0	0	30.5	
NAP 401 1F	PAU Room 1	S17	PAU	1	85	100%	355.2	-58.0	0	-5	-5	3	0	0	0	0	0	24.0	
NAP 401 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	355.2	-58.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 1F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	355.4	-58.0	0	-5	-5	3	0	0	0	0	0	24.0	
NAP 401 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	354.9	-58.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 1F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	354.9	-58.0	0	-10	-10	3	6	0	0	3.0	0	28.0	
NAP 401 1F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	354.9	-58.0	0	-10	-10	3	0	0	0	0	0	19.0	
NAP 401 1F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	422.3	-60.5	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 1F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	349.9	-58.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	349.9	-58.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	349.9	-58.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	TBE Room	S27	Exhaust Fans	1	85	100%	422.9	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 1F	PAU Room 2	S28	PAU	3	85	100%	356.7	-59.0	0	0	0	3	0	0	0	3	0	32.0	
NAP 401 1F	AHU Room	S29	AHU	0	85	0%	414.6	-60.4	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 1F	Lift Machine Room	S30	Lift Machine	1	85	100%	406.9	-60.2	0	-10	-10	3	0	0	0	0	0	17.8	
NAP 401 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	419.8	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	366.7	-59.3	0	-5	-5	3	6	0	0	4.8	0	34.5	
NAP 401 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	366.7	-59.3	0	0	0	3	0	0	0	0	0	26.7	
NAP 401 1F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	366.7	-59.3	0	-10	-10	3	0	0	0	0	0	33.7	
NAP 401 1F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	397.0	-60.0	0	0	0	3	0	0	0	0	-17.0	25.2	
NAP 401 1F	L1 HKPF	S37	Hammering Activities	1	113	7%	397.4	-60.0	0	0	0	3	0	3	0	0	-11.8	47.2	
NAP 401 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	361.4	-59.2	0	0	0	3	0	0	0	0	-6	26.1	
NAP 401 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	366.0	-59.3	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	EMSD Dept	S40	Tyre Changer	0	98	0%	368.3	-59.7	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	EMSD Dept	S41	Hammering Activities	0	113	0%	360.6	-59.1	0	0	0	3	0	3	0	0	0	0.0	
NAP 401 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	403.7	-60.1	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	411.2	-60.3	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	380.4	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 1F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	380.4	-59.6	0	0	0	3	0	0	0	0	-11.6	30.6	
NAP 401 1F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	357.7	-59.1	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 401 1F	EMSD Dept	S48	Drill Stand	0	99	0%	355.6	-59.0	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 401 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	374.9	-59.5	0	0	0	3	0	0	0	0	0.0	42.5	
NAP 401 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	422.3	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	356.0	-59.0	0	0	0	3	0	0	0	0	0.0	29.0	
NAP 401 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	422.3	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 1F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	356.0	-59.0	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 401 15F	Chiller Pump Room	S1	Water Pumps	1	85	100%	417.7	-60.4	0	-5	-5	3	6	0	0	0	0	28.6	50
NAP 401 15F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	416.3	-60.4	0	0	0	3	0	0	0	0	0	27.6	
NAP 401 15F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	359.4	-59.1	0	0	0	3	0	0	0	0	0	28.9	
NAP 401 15F	Compressor Room	S4	Compressors	0	85	0%	354.7	-59.2	0	-5	-5	3	0	0	0	0	0	0.0	
NAP 401 15F	Compressor Room	S5	Exhaust Fans	0	85	0%	352.3	-58.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	Transformer Room	S6	Transformers	2	85	100%	352.3	-58.9	0	-5	-5	3	6	0	0	3.0	0	33.1	
NAP 401 15F	Transformer Room	S7	Exhaust Fans	1	85	100%	352.3	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 15F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	352.3	-58.9	0	-5	-5	3	6	0	0	3.0	0	33.1	
NAP 401 15F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	352.3	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 401 15F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	356.8	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 401 15F	Generator Room	S11	Exhaust Fans	1	85	100%	537.9	-62.6	0	0	0	3	0	0	0	0	0	25.4	
NAP 401 15F	Compressor Room	S12	Compressors	0	85	0%	417.5	-60.4	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 15F	Compressor Room	S13	Exhaust Fans	0	85	0%	422.0	-60.5	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 15F	F.S. Pump Room	S14	Water Pumps	1	85	100%	422.0	-60.5	0	-5	-5	3	6	0	0	0	0	28.5	
NAP 401 15F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	422.0	-60.5	0	0	0	3	0	0	0	0	0	27.5	
NAP 401 15F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	421.7	-60.5	0	-10	-10	3	0	0	0	3.0	0	30.5	
NAP 401 15F	PAU Room 1	S17	PAU	1	85	100%	355.9	-59.0	0	-5	-5	3	0	0	0	0	0	24.0	
NAP 401 15F	PAU Room 1	S18	Exhaust Fans	1	85	100%	355.9	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 15F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	355.8	-59.0	0	-5	-5	3	0	0	0	0	0	24.0	
NAP 401 15F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	355.0	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 15F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	355.0	-59.0	0	-10	-10	3	6	0	0	3.0	0	28.0	
NAP 401 15F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	355.0	-59.0	0	-10	-10	3	0	0	0	0	0	19.0	
NAP 401 15F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	420.9	-60.5	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 15F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	348.3	-58.8	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	348.3	-58.8	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	348.3	-58.8	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	TBE Room	S27	Exhaust Fans	1	85	100%	420.9	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 15F	PAU Room 2	S28	PAU	2	85	100%	354.3	-59.0	0	0	0	3	0	0	0	3	0	32.0	
NAP 401 15F	AHU Room	S29	AHU	0	85	0%	412.0	-60.3	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 15F	Lift Machine Room	S30	Lift Machine	1	85	100%	405.6	-60.2	0	-10	-10	3	0	0	0	0	0	17.8	
NAP 401 15F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	418.6	-60.4	0	-10	-10	3	0	0	0	0	0	17.6	
NAP 401 15F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	363.0	-59.2	0	-5	-5	3	6	0	0	4.8	0	34.6	
NAP 401 15F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	363.0	-59.2	0	0	0	3	0	0	0	0	0	26.8	
NAP 401 15F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	363.0	-59.2	0	-10	-10	3	0	0	0	0	0	33.8	
NAP 401 15F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	399.5	-60.0	0	0	0	3	0	0	0	0	-17.0	25.2	
NAP 401 15F	L1 HKPF	S37	Hammering Activities	1	113	7%	397.5	-60.0	0	0	0	3	0	3	0	0	-11.8	47.2	
NAP 401 15F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	359.9	-59.1	0	0	0	3	0	0	0	0	-6	26.2	
NAP 401 15F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	364.4	-59.2	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	EMSD Dept	S40	Tyre Changer	0	98	0%	364.8	-59.7	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	EMSD Dept	S41	Hammering Activities	0	113	0%	359.0	-59.1	0	0	0	3	0	3	0	0	0	0.0	
NAP 401 15F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	402.3	-60.1	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	409.8	-60.3	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	378.9	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	378.9	-59.6	0	0	0	3	0	0	0	0	-12	30.6	
NAP 401 15F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	356.1	-59.0	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	EMSD Dept	S48	Drill Stand	0	99	0%	354.0	-59.0	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 15F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	373.3	-59.4	0	0	0	3	0	0	0	0	0	42.6	
NAP 401 15F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	420.9	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 15F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	354.4	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 401 15F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	420.9	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 15F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	354.4	-59.0	0	0	0	3	0	0	0	0	0	0.0	

(Nighttime)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max. concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 401 30F	Chiller Pump Room	S1	Water Pumps	1	85	100%	424.9	-60.6	0	-5	-5	3	6	0	0	0	0	28.4	50
NAP 401 30F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	423.6	-60.5	0	0	0	3	0	0	0	0	0	27.5	
NAP 401 30F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	387.8	-58.9	0	0	0	3	0	0	0	0	0	28.7	
NAP 401 30F	Compressor Room	S4	Compressors	0	85	0%	372.9	-59.4	0	-5	-5	3	0	0	0	0	0	0.0	
NAP 401 30F	Compressor Room	S5	Exhaust Fans	0	85	0%	360.9	-58.1	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	Transformer Room	S6	Transformers	2	85	100%	360.9	-58.1	0	-5	-5	3	6	0	0	3.0	0	32.9	
NAP 401 30F	Transformer Room	S7	Exhaust Fans	1	85	100%	360.9	-58.1	0	0	0	3	0	0	0	0	0	28.9	
NAP 401 30F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	360.9	-58.1	0	-5	-5	3	6	0	0	3.0	0	32.9	
NAP 401 30F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	360.9	-58.1	0	0	0	3	0	0	0	0	0	28.9	
NAP 401 30F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	384.2	-59.2	0	-5	-5	3	0	0	0	3.0	0	26.8	
NAP 401 30F	Generator Room	S11	Exhaust Fans	1	85	100%	543.4	-62.7	0	0	0	3	0	0	0	0	0	25.3	
NAP 401 30F	Compressor Room	S12	Compressors	0	85	0%	423.2	-60.5	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 30F	Compressor Room	S13	Exhaust Fans	0	85	0%	427.6	-60.6	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 30F	F.S. Pump Room	S14	Water Pumps	1	85	100%	427.6	-60.6	0	-5	-5	3	8	0	0	0	0	28.4	
NAP 401 30F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	427.6	-60.6	0	0	0	3	0	0	0	0	0	27.4	
NAP 401 30F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	424.2	-60.6	0	-10	-10	3	0	0	0	3.0	0	20.4	
NAP 401 30F	PAU Room 1	S17	PAU	1	85	100%	362.0	-58.2	0	-5	-5	3	0	0	0	0	0	23.8	
NAP 401 30F	PAU Room 1	S18	Exhaust Fans	1	85	100%	362.0	-58.2	0	0	0	3	0	0	0	0	0	28.8	
NAP 401 30F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	361.2	-58.2	0	-5	-5	3	0	0	0	0	0	23.8	
NAP 401 30F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	360.7	-58.1	0	0	0	3	0	0	0	0	0	28.9	
NAP 401 30F	Water Vehicle Fêng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	360.7	-58.1	0	-10	-10	3	8	0	0	3.0	0	27.9	
NAP 401 30F	Water Vehicle Fêng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	360.7	-58.1	0	-10	-10	3	0	0	0	0	0	18.8	
NAP 401 30F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	424.1	-60.5	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 30F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	352.1	-58.0	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	352.1	-58.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	352.1	-58.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	TBE Room	S27	Exhaust Fans	1	85	100%	423.3	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 401 30F	PAU Room 2	S28	PAU	2	85	100%	357.2	-58.1	0	0	0	3	0	0	0	3	0	31.9	
NAP 401 30F	AHU Room	S29	AHU	0	85	0%	413.9	-60.3	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 401 30F	Lift Machine Room	S30	Lift Machine	1	85	100%	406.8	-60.2	0	-10	-10	3	0	0	0	0	0	17.8	
NAP 401 30F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	417.8	-60.4	0	-10	-10	3	0	0	0	0	0	17.6	
NAP 401 30F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	364.4	-58.2	0	-5	-5	3	6	0	0	4.8	0	34.6	
NAP 401 30F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	364.4	-58.2	0	0	0	3	0	0	0	0	0	28.8	
NAP 401 30F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	364.4	-58.2	0	-10	-10	3	0	0	0	0	0	33.8	
NAP 401 30F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	2%	407.1	-60.2	0	0	0	3	0	0	0	0	-17.6	25.0	
NAP 401 30F	L1 HKPF	S37	Hammering Activities	1	113	7%	402.7	-60.1	0	0	0	3	0	3	0	0	-11.8	47.1	
NAP 401 30F	FCHD	S38	Automatic Vehicle Washing Machine	1	88	27%	353.6	-58.2	0	0	0	3	0	0	0	0	-6	26.1	
NAP 401 30F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	388.1	-59.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	EMSD Dept	S40	Tyre Changer	0	96	0%	388.3	-59.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	EMSD Dept	S41	Hammering Activities	0	113	0%	362.7	-59.2	0	0	0	3	0	3	0	0	0	0.0	
NAP 401 30F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	405.5	-60.2	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	413.0	-60.3	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	362.5	-59.7	0	0	0	3	0	0	0	0	0	0.0	
NAP 401 30F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	362.5	-59.7	0	0	0	3	0	0	0	0	-11.8	30.5	
NAP 401 30F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	359.8	-59.1	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 401 30F	EMSD Dept	S48	Drill Stand	0	99	0%	357.8	-59.1	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 401 50F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	378.9	-59.5	0	0	0	3	0	0	0	0	0.0	42.5	
NAP 401 30F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	424.1	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 30F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	358.2	-59.1	0	0	0	3	0	0	0	0	0.0	28.8	
NAP 401 30F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	424.1	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 401 30F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	358.2	-59.1	0	0	0	3	0	0	0	0	0.0	0.0	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 501 GF	Chiller Pump Room	S1	Water Pumps	2	85	100%	417.1	-60.4	0	-5	-5	3	0	0	0	3.0	0	31.6	57
NAP 501 GF	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	416.2	-60.4	0	0	0	3	0	0	0	0	0	27.6	
NAP 501 GF	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	357.9	-59.1	0	0	0	3	0	0	0	7.0	0	35.9	
NAP 501 GF	Compressor Room	S4	Compressors	1	85	100%	342.1	-59.2	0	-5	-5	3	0	0	0	0	0	23.8	
NAP 501 GF	Compressor Room	S5	Exhaust Fans	1	85	100%	349.4	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 501 GF	Transformer Room	S6	Transformers	2	85	100%	349.4	-58.9	0	-5	-5	3	0	0	0	3.0	0	33.1	
NAP 501 GF	Transformer Room	S7	Exhaust Fans	1	85	100%	349.4	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 501 GF	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	349.4	-58.9	0	-5	-5	3	0	0	0	3.0	0	33.1	
NAP 501 GF	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	349.4	-58.9	0	0	0	3	0	0	0	0	0	29.1	
NAP 501 GF	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	354.3	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 501 GF	Generator Room	S11	Exhaust Fans	1	85	100%	397.1	-62.6	0	0	0	3	0	0	0	0	0	25.4	
NAP 501 GF	Compressor Room	S12	Compressors	1	85	100%	416.8	-60.4	0	-10	-10	3	0	0	0	0	0	17.6	
NAP 501 GF	Compressor Room	S13	Exhaust Fans	1	85	100%	421.3	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 501 GF	F.S. Pump Room	S14	Water Pumps	1	85	100%	421.3	-60.5	0	-5	-5	3	0	0	0	0	0	25.5	
NAP 501 GF	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	421.3	-60.5	0	0	0	3	0	0	0	0	0	27.5	
NAP 501 GF	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	421.4	-60.5	0	-10	-10	3	0	0	0	7.0	0	24.5	
NAP 501 GF	PAU Room 1	S17	PAU	2	85	100%	354.7	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 501 GF	PAU Room 1	S18	Exhaust Fans	1	85	100%	354.7	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 501 GF	Chiller Plant Room	S19	Chiller Plant	2	85	100%	354.9	-59.0	0	-5	-5	3	0	0	0	3.0	0	27.0	
NAP 501 GF	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	354.1	-59.0	0	0	0	3	0	0	0	0	0	29.0	
NAP 501 GF	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	354.1	-59.0	0	-10	-10	3	0	0	0	3.0	0	26.0	
NAP 501 GF	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	354.1	-59.0	0	-10	-10	3	0	0	0	0	0	19.0	
NAP 501 GF	Battery Charging Room	S23	Exhaust Fans	1	85	100%	422.7	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 501 GF	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	349.5	-58.9	0	0	0	3	0	0	0	6.0	0	35.1	
NAP 501 GF	Exhaust Fan Room	S25	Walking Exhaust Fans	2	85	100%	349.5	-58.9	0	0	0	3	0	0	0	3.0	0	32.1	
NAP 501 GF	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	349.5	-58.9	0	0	0	3	0	0	0	4.8	0	33.9	
NAP 501 GF	TBE Room	S27	Exhaust Fans	1	85	100%	423.4	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 501 GF	PAU Room 2	S28	PAU	5	85	100%	358.2	-59.0	0	0	0	3	0	0	0	7.0	0	36.0	
NAP 501 GF	AHU Room	S29	AHU	1	85	100%	414.1	-60.3	0	-10	-10	3	0	0	0	0	0	17.7	
NAP 501 GF	Lift Machine Room	S30	Lift Machine	3	85	100%	408.3	-60.2	0	-10	-10	3	0	0	0	4.8	0	22.6	
NAP 501 GF	Lift Machine Room	S31	Exhaust Fans	1	85	100%	419.4	-60.5	0	-10	-10	3	0	0	0	0	0	17.5	
NAP 501 GF	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	356.1	-59.0	0	-5	-5	3	0	0	0	4.8	0	34.5	
NAP 501 GF	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	356.1	-59.0	0	0	0	3	0	0	0	0	0	29.7	
NAP 501 GF	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	358.1	-59.0	0	-10	-10	3	0	0	0	3.0	0	36.7	
NAP 501 GF	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	3%	395.7	-60.0	0	0	0	3	0	0	0	0	-11.8	31.2	
NAP 501 GF	L1 HKPF	S37	Hammering Activities	3	113	7%	397.3	-60.0	0	0	0	3	0	3	0	4.8	-11.8	52.0	
NAP 501 GF	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	361.6	-59.2	0	0	0	3	0	0	0	0	-5.7	26.1	
NAP 501 GF	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	366.1	-59.3	0	0	0	3	0	0	0	0	-14.8	40.9	
NAP 501 GF	EMSD Dept	S40	Tyre Changer	1	96	27%	388.3	-59.8	0	0	0	3	0	0	0	0	-5.7	35.5	
NAP 501 GF	EMSD Dept	S41	Hammering Activities	4	113	7%	362.0	-59.2	0	0	0	3	0	3	0	6.0	-11.8	54.1	
NAP 501 GF	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	403.4	-60.1	0	0	0	3	0	0	0	6.0	-8.8	40.2	
NAP 501 GF	EMSD Dept	S43	Roller Brake Tester	1	99	5%	410.9	-60.3	0	0	0	3	0	0	0	0	-13.0	28.7	
NAP 501 GF	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	382.4	-59.7	0	0	0	3	0	0	0	0	-7.0	35.3	
NAP 501 GF	L1 HKPF	S45	Roller Brake Tester	1	99	20%	382.4	-59.7	0	0	0	3	0	0	0	0	-7.0	35.3	
NAP 501 GF	EMSD Dept	S47	Bench Grinder	1	93.8	33%	358.3	-59.1	0	0	0	3	0	0	0	0	-4.8	32.9	
NAP 501 GF	EMSD Dept	S48	Drill Stand	1	99	17%	355.8	-59.0	0	0	0	3	0	0	0	0	-7.8	35.2	
NAP 501 GF	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	378.2	-59.5	0	0	0	3	0	0	0	0	0.0	42.5	
NAP 501 GF	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	422.7	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 501 GF	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	355.4	-59.0	0	0	0	3	0	0	0	0	0.0	29.0	
NAP 501 GF	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	422.7	-60.5	0	-10	-10	3	0	0	0	0	0.0	17.5	
NAP 501 GF	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	355.4	-59.0	0	0	0	3	0	0	0	0	0.0	29.0	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 601 1F	Chiller Pump Room	S1	Water Pumps	2	85	100%	454.1	-61.1	0	-5	-5	3	6	0	0	3.0	0	30.9	56
NAP 601 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	454.1	-61.1	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 1F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	394.1	-59.9	0	0	0	3	0	0	0	7.0	0	35.1	
NAP 601 1F	Compressor Room	S4	Compressors	1	85	100%	395.4	-59.9	0	-5	-5	3	0	0	0	0	0	23.1	
NAP 601 1F	Compressor Room	S5	Exhaust Fans	1	85	100%	382.4	-58.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 1F	Transformer Room	S6	Transformers	2	85	100%	382.4	-58.7	0	-5	-5	3	6	0	0	3.0	0	32.3	
NAP 601 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	382.4	-58.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	382.4	-58.7	0	-5	-5	3	6	0	0	3.0	0	32.3	
NAP 601 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	382.4	-58.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	385.3	-58.7	0	-5	-5	3	0	0	0	3.0	0	26.3	
NAP 601 1F	Generator Room	S11	Exhaust Fans	1	85	100%	385.3	-58.7	0	0	0	3	0	0	0	0	0	24.7	
NAP 601 1F	Compressor Room	S12	Compressors	1	85	100%	449.2	-61.0	0	-10	-10	3	0	0	0	0	0	17.0	
NAP 601 1F	Compressor Room	S13	Exhaust Fans	1	85	100%	453.8	-61.1	0	-10	-10	3	0	0	0	0	0	16.9	
NAP 601 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	453.8	-61.1	0	-5	-5	3	6	0	0	0	0	27.9	
NAP 601 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	453.8	-61.1	0	0	0	3	0	0	0	0	0	26.9	
NAP 601 1F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	453.7	-61.1	0	-10	-10	3	0	0	0	7.0	0	23.9	
NAP 601 1F	PAU Room 1	S17	PAU	2	85	100%	385.5	-58.7	0	-5	-5	3	0	0	0	3.0	0	26.3	
NAP 601 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	385.5	-58.7	0	0	0	3	0	0	0	0	0	26.3	
NAP 601 1F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	385.7	-58.7	0	-5	-5	3	0	0	0	3.0	0	26.3	
NAP 601 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	384.3	-58.7	0	0	0	3	0	0	0	0	0	26.3	
NAP 601 1F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	384.3	-58.7	0	-10	-10	3	6	0	0	3.0	0	27.3	
NAP 601 1F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	384.3	-58.7	0	-10	-10	3	0	0	0	0	0	16.3	
NAP 601 1F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	454.8	-61.2	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 1F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	380.1	-58.6	0	0	0	3	0	0	0	6.0	0	34.4	
NAP 601 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	380.1	-58.6	0	0	0	3	0	0	0	3.0	0	31.4	
NAP 601 1F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	380.1	-58.6	0	0	0	3	0	0	0	4.8	0	33.2	
NAP 601 1F	TBE Room	S27	Exhaust Fans	1	85	100%	455.5	-61.2	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 1F	PAU Room 2	S28	PAU	5	85	100%	388.0	-58.7	0	0	0	3	0	0	0	7.0	0	35.3	
NAP 601 1F	AHU Room	S29	AHU	1	85	100%	443.5	-60.9	0	-10	-10	3	0	0	0	0	0	17.1	
NAP 601 1F	Lift Machine Room	S30	Lift Machine	3	85	100%	437.3	-60.8	0	-10	-10	3	0	0	0	4.8	0	22.0	
NAP 601 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	445.6	-61.0	0	-10	-10	3	0	0	0	0	0	17.0	
NAP 601 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	402.3	-60.1	0	-5	-5	3	6	0	0	4.8	0	33.7	
NAP 601 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	402.3	-60.1	0	0	0	3	0	0	0	0	0	27.9	
NAP 601 1F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	402.5	-60.1	0	-10	-10	3	0	0	0	3.0	0	35.9	
NAP 601 1F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	7%	428.2	-60.6	0	0	0	3	0	0	0	0	-11.6	30.6	
NAP 601 1F	L1 HKPF	S37	Hammering Activities	3	113	7%	428.7	-60.6	0	0	0	3	0	3	0	4.8	-11.6	51.4	
NAP 601 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	393.3	-59.9	0	0	0	3	0	0	0	0	-5.7	25.4	
NAP 601 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	404.9	-60.1	0	0	0	3	0	0	0	0	-14.8	40.1	
NAP 601 1F	EMSD Dept	S40	Tyre Changer	1	96	27%	424.6	-60.6	0	0	0	3	0	0	0	0	-5.7	34.7	
NAP 601 1F	EMSD Dept	S41	Hammering Activities	4	113	7%	397.1	-60.0	0	0	0	3	0	3	0	6.0	-11.8	53.5	
NAP 601 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	433.8	-60.7	0	0	0	3	0	0	0	6.0	-8.8	39.8	
NAP 601 1F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	441.4	-60.9	0	0	0	3	0	0	0	0	-13.0	28.1	
NAP 601 1F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	418.8	-60.4	0	0	0	3	0	0	0	0	-7.0	34.6	
NAP 601 1F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	418.8	-60.4	0	0	0	3	0	0	0	0	-7.0	34.6	
NAP 601 1F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	391.2	-59.8	0	0	0	3	0	0	0	0	-4.8	32.2	
NAP 601 1F	EMSD Dept	S48	Drill Stand	1	88	17%	387.5	-59.8	0	0	0	3	0	0	0	0	-7.8	34.4	
NAP 601 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	411.1	-60.3	0	0	0	3	0	0	0	0	0.0	41.7	
NAP 601 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	454.8	-61.2	0	-10	-10	3	0	0	0	0	0.0	16.8	
NAP 601 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	385.3	-59.7	0	0	0	3	0	0	0	0	0.0	28.3	
NAP 601 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	454.8	-61.2	0	-10	-10	3	0	0	0	0	0.0	16.8	
NAP 601 1F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	385.3	-59.7	0	0	0	3	0	0	0	0	0.0	28.3	
NAP 601 15F	Chiller Pump Room	S1	Water Pumps	2	85	100%	456.4	-61.2	0	-5	-5	3	6	0	0	3.0	0	30.8	56
NAP 601 15F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	456.4	-61.2	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 15F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	396.6	-60.0	0	0	0	3	0	0	0	7.0	0	35.0	
NAP 601 15F	Compressor Room	S4	Compressors	1	85	100%	398.1	-60.0	0	-5	-5	3	0	0	0	0	0	23.0	
NAP 601 15F	Compressor Room	S5	Exhaust Fans	1	85	100%	385.1	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 15F	Transformer Room	S6	Transformers	2	85	100%	385.1	-59.7	0	-5	-5	3	6	0	0	3.0	0	32.3	
NAP 601 15F	Transformer Room	S7	Exhaust Fans	1	85	100%	385.1	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 15F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	385.1	-59.7	0	-5	-5	3	6	0	0	3.0	0	32.3	
NAP 601 15F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	385.1	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 15F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	387.1	-59.8	0	-5	-5	3	0	0	0	3.0	0	26.2	
NAP 601 15F	Generator Room	S11	Exhaust Fans	1	85	100%	387.1	-59.4	0	0	0	3	0	0	0	0	0	24.6	
NAP 601 15F	Compressor Room	S12	Compressors	1	85	100%	450.1	-61.1	0	-10	-10	3	0	0	0	0	0	16.9	
NAP 601 15F	Compressor Room	S13	Exhaust Fans	1	85	100%	454.5	-61.2	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 15F	F.S. Pump Room	S14	Water Pumps	1	85	100%	454.5	-61.2	0	-5	-5	3	6	0	0	0	0	27.8	
NAP 601 15F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	454.5	-61.2	0	0	0	3	0	0	0	0	0	26.8	
NAP 601 15F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	454.5	-61.1	0	-10	-10	3	0	0	0	7.0	0	23.9	
NAP 601 15F	PAU Room 1	S17	PAU	2	85	100%	386.2	-59.7	0	-5	-5	3	0	0	0	3.0	0	26.3	
NAP 601 15F	PAU Room 1	S18	Exhaust Fans	1	85	100%	386.2	-59.7	0	0	0	3	0	0	0	0	0	26.3	
NAP 601 15F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	385.9	-59.7	0	-5	-5	3	0	0	0	3.0	0	26.3	
NAP 601 15F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	384.5	-59.7	0	0	0	3	0	0	0	0	0	26.3	
NAP 601 15F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	384.5	-59.7	0	-10	-10	3	6	0	0	3.0	0	27.3	
NAP 601 15F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	384.5	-59.7	0	-10	-10	3	0	0	0	0	0	16.3	
NAP 601 15F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	453.5	-61.1	0	-10	-10	3	0	0	0	0	0	16.9	
NAP 601 15F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	378.7	-59.6	0	0	0	3	0	0	0	6.0	0	34.4	
NAP 601 15F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	378.7	-59.6	0	0	0	3	0	0	0	3.0	0	31.4	
NAP 601 15F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	378.7	-59.6	0	0	0	3	0	0	0	4.8	0	33.2	
NAP 601 15F	TBE Room	S27	Exhaust Fans	1	85	100%	453.6	-61.1	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 15F	PAU Room 2	S28	PAU	5	85	100%	383.8	-59.7	0	0	0	3	0	0	0	7.0	0	35.3	
NAP 601 15F	AHU Room	S29	AHU	1	85	100%	441.1	-60.8	0	-10	-10	3	0	0	0	0	0	17.1	
NAP 601 15F	Lift Machine Room	S30	Lift Machine	3	85	100%	434.3	-60.8	0	-10	-10	3	0	0	0	4.8	0	22.0	
NAP 601 15F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	445.6	-61.0	0	-10	-10	3	0	0	0	0	0	17.0	
NAP 601 15F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	398.9	-60.0	0	-5	-5	3	6	0	0	4.8	0	33.8	
NAP 601 15F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	398.9	-60.0	0	0	0	3	0	0	0	0	0	28.0	
NAP 601 15F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	399.8	-60.0	0	-10	-10	3	0	0	0	3.0	0	36.0	
NAP 601 15F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	430.7	-60.7	0	0	0	3	0	0	0	0	-11.6	30.5	
NAP 601 15F	L1 HKPF	S37	Hammering Activities	3	113	7%	428.8	-60.6	0	0	0	3	0	3	0	4.8	-11.6	51.4	
NAP 601 15F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	391.9	-59.9	0	0	0	3	0	0	0	0	-5.7	25.4	
NAP 601 15F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	403.5	-60.1	0	0	0	3	0	0	0	0	-14.8	40.1	
NAP 601 15F	EMSD Dept	S40	Tyre Changer	1	96	27%	423.3	-60.5	0	0	0	3	0	0	0	0	-5.7	34.8	
NAP 601 15F	EMSD Dept	S41	Hammering Activities	4	113	7%	395.7	-59.9	0	0	0	3	0	3	0	6.0	-11.8	53.4	
NAP 601 15F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	432.3	-60.7	0	0	0	3	0	0	0	6.0	-8.8	39.8	
NAP 601 15F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	440.2	-60.9	0	0	0	3	0	0	0	0	-13.0	28.1	
NAP 601 15F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	417.3	-60.4	0	0	0	3	0	0	0	0	-7.0	34.6	
NAP 601 15F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	417.3	-60.4	0	0	0	3	0	0	0	0	-7.0	34.6	
NAP 601 15F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	389.8	-59.8	0	0	0	3	0	0	0	0	-4.8	32.2	
NAP 601 15F	EMSD Dept	S48	Drill Stand	1	88	17%	386.2	-59.7	0	0	0	3	0	0	0	0	-7.8	34.5	
NAP 601 15F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	409.8	-60.3	0	0	0	3	0	0	0	0	0.0	41.7	
NAP 601 15F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	453.5	-61.1	0	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 601 15F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	383.9	-59.7	0	0	0	3	0	0	0	0	0.0	28.3	
NAP 601 15F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	453.5	-61.1	0	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 601 15F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	383.9	-59.7	0	0	0	3	0	0	0	0	0.0	28.3	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Assessment SPL, Leq(30mins), dB(A)
NAP 601 30F	Chiller Pump Room	S1	Water Pumps	2	85	100%	463.1	-61.3	0	-5	-5	3	5	0	0	3.0	0	30.7	56
NAP 601 30F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	463.1	-61.3	0	-10	-10	3	0	0	0	0	0	18.7	
NAP 601 30F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	464.5	-60.1	0	0	0	3	0	0	0	7.0	0	34.9	
NAP 601 30F	Compressor Room	S4	Compressors	1	85	100%	465.7	-60.2	0	-5	-5	3	0	0	0	0	0	22.8	
NAP 601 30F	Compressor Room	S5	Exhaust Fans	1	85	100%	393.0	-59.9	0	0	0	3	0	0	0	0	0	28.1	
NAP 601 30F	Transformer Room	S6	Transformers	2	85	100%	393.0	-59.9	0	-5	-5	3	5	0	0	3.0	0	32.1	
NAP 601 30F	Transformer Room	S7	Exhaust Fans	1	85	100%	393.0	-59.9	0	0	0	3	0	0	0	0	0	28.1	
NAP 601 30F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	393.0	-59.9	0	-5	-5	3	5	0	0	3.0	0	32.1	
NAP 601 30F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	393.0	-59.9	0	0	0	3	0	0	0	0	0	28.1	
NAP 601 30F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	394.0	-59.9	0	-5	-5	3	0	0	0	3.0	0	28.1	
NAP 601 30F	Generator Room	S11	Exhaust Fans	1	85	100%	502.1	-63.4	0	0	0	3	0	0	0	0	0	24.6	
NAP 601 30F	Compressor Room	S12	Compressors	1	85	100%	455.4	-61.2	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 30F	Compressor Room	S13	Exhaust Fans	1	85	100%	459.8	-61.3	0	-10	-10	3	0	0	0	0	0	16.7	
NAP 601 30F	F.S. Pump Room	S14	Water Pumps	1	85	100%	459.8	-61.3	0	-5	-5	3	8	0	0	0	0	27.7	
NAP 601 30F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	459.8	-61.3	0	0	0	3	0	0	0	0	0	26.7	
NAP 601 30F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	458.7	-61.2	0	-10	-10	3	0	0	0	7.0	0	23.8	
NAP 601 30F	PAU Room 1	S17	PAU	2	85	100%	509.0	-59.8	0	-5	-5	3	0	0	0	3.0	0	26.2	
NAP 601 30F	PAU Room 1	S18	Exhaust Fans	1	85	100%	509.0	-59.8	0	0	0	3	0	0	0	0	0	26.2	
NAP 601 30F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	391.2	-59.8	0	-5	-5	3	0	0	0	3.0	0	26.2	
NAP 601 30F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	389.8	-59.8	0	0	0	3	0	0	0	0	0	26.2	
NAP 601 30F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	389.8	-59.8	0	-10	-10	3	8	0	0	3.0	0	27.2	
NAP 601 30F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	389.8	-59.8	0	-10	-10	3	0	0	0	0	0	18.2	
NAP 601 30F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	456.5	-61.2	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 30F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	382.3	-59.6	0	0	0	3	0	0	0	6.0	0	34.4	
NAP 601 30F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	382.3	-59.6	0	0	0	3	0	0	0	3.0	0	31.4	
NAP 601 30F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	382.3	-59.6	0	0	0	3	0	0	0	4.8	0	33.2	
NAP 601 30F	TBE Room	S27	Exhaust Fans	1	85	100%	455.8	-61.2	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 30F	PAU Room 2	S28	PAU	5	85	100%	386.5	-59.7	0	0	0	3	0	0	0	7.0	0	35.3	
NAP 601 30F	AHU Room	S29	AHU	1	85	100%	442.9	-60.9	0	-10	-10	3	0	0	0	0	0	17.1	
NAP 601 30F	Lift Machine Room	S30	Lift Machine	3	85	100%	435.5	-60.8	0	-10	-10	3	0	0	0	4.8	0	22.0	
NAP 601 30F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	446.8	-61.0	0	-10	-10	3	0	0	0	0	0	17.0	
NAP 601 30F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	400.3	-60.0	0	-5	-5	3	5	0	0	4.8	0	33.8	
NAP 601 30F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	400.3	-60.0	0	0	0	3	0	0	0	0	0	28.0	
NAP 601 30F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	400.3	-60.0	0	-10	-10	3	0	0	0	3.0	0	35.0	
NAP 601 30F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	437.8	-60.9	0	0	0	3	0	0	0	0	-11.5	30.4	
NAP 601 30F	L1 HKPF	S37	Hammering Activities	3	113	7%	433.8	-60.7	0	0	0	3	0	3	0	4.8	-11.5	51.3	
NAP 601 30F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	396.4	-59.9	0	0	0	3	0	0	0	0	-5.7	25.4	
NAP 601 30F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	406.9	-60.2	0	0	0	3	0	0	0	0	-14.8	40.0	
NAP 601 30F	EMSD Dept	S40	Tyre Changer	1	88	27%	426.6	-60.6	0	0	0	3	0	0	0	0	-5.7	34.7	
NAP 601 30F	EMSD Dept	S41	Hammering Activities	4	113	7%	399.1	-60.0	0	0	0	3	0	3	0	6.0	-11.5	53.3	
NAP 601 30F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	435.8	-60.8	0	0	0	3	0	0	0	6.0	-8.8	39.5	
NAP 601 30F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	443.3	-60.9	0	0	0	3	0	0	0	0	-13.0	36.1	
NAP 601 30F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	420.5	-60.5	0	0	0	3	0	0	0	0	-7.0	34.5	
NAP 601 30F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	420.5	-60.5	0	0	0	3	0	0	0	0	-7.0	34.5	
NAP 601 30F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	393.3	-59.9	0	0	0	3	0	0	0	0	-4.8	32.1	
NAP 601 30F	EMSD Dept	S48	Drill Stand	1	99	17%	389.7	-59.8	0	0	0	3	0	0	0	0	-7.8	34.4	
NAP 601 30F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	413.1	-60.3	0	0	0	3	0	0	0	0	0.0	41.7	
NAP 601 30F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	456.5	-61.2	0	-10	-10	3	0	0	0	0	0.0	16.8	
NAP 601 30F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	387.4	-59.8	0	0	0	3	0	0	0	0	0.0	26.2	
NAP 601 30F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	456.5	-61.2	0	-10	-10	3	0	0	0	0	0.0	16.8	
NAP 601 30F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	387.4	-59.8	0	0	0	3	0	0	0	0	0.0	26.2	

(Nighttime)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Result on 1 hr, Leq(30mins), dB(A)
NAP 601 1F	Chiller Pump Room	S1	Water Pumps	1	85	100%	454.1	-61.1	0	-5	-5	3	6	0	0	0	0	27.9	49
NAP 601 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	454.1	-61.1	0	-10	-10	3	0	0	0	0	0	18.9	
NAP 601 1F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	394.1	-59.9	0	0	0	3	0	0	0	0	0	28.1	
NAP 601 1F	Compressor Room	S4	Compressors	0	85	0%	395.4	-59.9	0	-5	-5	3	0	0	0	0	0	0.0	
NAP 601 1F	Compressor Room	S5	Exhaust Fans	0	85	0%	342.4	-59.7	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	Transformer Room	S6	Transformers	2	85	100%	342.4	-59.7	0	-5	-5	3	6	0	0	3.0	0	32.3	
NAP 601 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	342.4	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	342.4	-59.7	0	-5	-5	3	6	0	0	3.0	0	32.3	
NAP 601 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	342.4	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	385.3	-59.7	0	-5	-5	3	0	0	0	3.0	0	26.3	
NAP 601 1F	Generator Room	S11	Exhaust Fans	1	85	100%	385.3	-63.3	0	0	0	3	0	0	0	0	0	24.7	
NAP 601 1F	Compressor Room	S12	Compressors	0	85	0%	449.2	-61.9	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 1F	Compressor Room	S13	Exhaust Fans	0	85	0%	453.6	-61.1	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	453.6	-61.1	0	-5	-5	3	6	0	0	0	0	27.9	
NAP 601 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	453.6	-61.1	0	0	0	3	0	0	0	0	0	26.9	
NAP 601 1F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	453.7	-61.1	0	-10	-10	3	0	0	0	3.0	0	19.9	
NAP 601 1F	PAU Room 1	S17	PAU	1	85	100%	385.5	-59.7	0	-5	-5	3	0	0	0	0	0	23.3	
NAP 601 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	385.5	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 1F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	385.7	-59.7	0	-5	-5	3	0	0	0	0	0	23.3	
NAP 601 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	384.3	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 1F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	384.3	-59.7	0	-10	-10	3	6	0	0	3.0	0	27.3	
NAP 601 1F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	384.3	-59.7	0	-10	-10	3	0	0	0	0	0	18.3	
NAP 601 1F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	454.8	-61.2	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 1F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	380.1	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	380.1	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	380.1	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	TBE Room	S27	Exhaust Fans	1	85	100%	455.9	-61.2	0	-10	-10	3	0	0	0	0	0	18.8	
NAP 601 1F	PAU Room 2	S28	PAU	2	85	100%	388.0	-59.7	0	0	0	3	0	0	0	3	0	31.3	
NAP 601 1F	AHU Room	S29	AHU	0	85	0%	443.5	-60.9	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 1F	Lift Machine Room	S30	Lift Machine	1	85	100%	437.3	-60.8	0	-10	-10	3	0	0	0	0	0	17.2	
NAP 601 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	448.6	-61.0	0	-10	-10	3	0	0	0	0	0	17.0	
NAP 601 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	402.3	-60.1	0	-5	-5	3	6	0	0	4.8	0	33.7	
NAP 601 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	402.3	-60.1	0	0	0	3	0	0	0	0	0	27.8	
NAP 601 1F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	402.3	-60.1	0	-10	-10	3	0	0	0	0	0	32.8	
NAP 601 1F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	428.2	-60.6	0	0	0	3	0	0	0	0	-17.8	24.8	
NAP 601 1F	L1 HKPF	S37	Hammering Activities	1	113	7%	428.7	-60.6	0	0	0	3	0	3	0	0	-11.8	46.6	
NAP 601 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	393.3	-59.9	0	0	0	3	0	0	0	0	-6	25.4	
NAP 601 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	404.9	-60.1	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	EMSD Dept	S40	Tyre Changer	0	98	0%	424.6	-60.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	EMSD Dept	S41	Hammering Activities	0	113	0%	397.1	-60.0	0	0	0	3	0	3	0	0	0	0.0	
NAP 601 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	430.8	-60.7	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	441.4	-60.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	418.6	-60.4	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 1F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	418.6	-60.4	0	0	0	3	0	0	0	0	-11.8	29.8	
NAP 601 1F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	391.2	-59.8	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 601 1F	EMSD Dept	S48	Drill Stand	0	99	0%	387.6	-59.8	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 601 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	411.1	-60.3	0	0	0	3	0	0	0	0	0.0	41.7	
NAP 601 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	454.5	-61.2	0	-10	-10	3	0	0	0	0	0.0	18.8	
NAP 601 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	385.3	-59.7	0	0	0	3	0	0	0	0	0.0	28.3	
NAP 601 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	454.6	-61.2	0	-10	-10	3	0	0	0	0	0.0	18.8	
NAP 601 1F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	385.3	-59.7	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 601 15F	Chiller Pump Room	S1	Water Pumps	1	85	100%	456.4	-61.2	0	-5	-5	3	6	0	0	0	0	27.8	49
NAP 601 15F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	456.4	-61.2	0	-10	-10	3	0	0	0	0	0	18.8	
NAP 601 15F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	396.6	-60.0	0	0	0	3	0	0	0	0	0	28.0	
NAP 601 15F	Compressor Room	S4	Compressors	0	85	0%	398.1	-60.0	0	-5	-5	3	0	0	0	0	0	0.0	
NAP 601 15F	Compressor Room	S5	Exhaust Fans	0	85	0%	385.1	-59.7	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	Transformer Room	S9	Transformers	2	85	100%	385.1	-59.7	0	-5	-5	3	6	0	0	3.0	0	32.3	
NAP 601 15F	Transformer Room	S7	Exhaust Fans	1	85	100%	385.1	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 15F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	385.1	-59.7	0	-5	-5	3	6	0	0	3.0	0	32.3	
NAP 601 15F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	385.1	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 15F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	387.1	-59.8	0	-5	-5	3	0	0	0	3.0	0	26.2	
NAP 601 15F	Generator Room	S11	Exhaust Fans	1	85	100%	387.1	-63.4	0	0	0	3	0	0	0	0	0	24.6	
NAP 601 15F	Compressor Room	S12	Compressors	0	85	0%	450.1	-61.1	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 15F	Compressor Room	S13	Exhaust Fans	0	85	0%	454.5	-61.2	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 15F	F.S. Pump Room	S14	Water Pumps	1	85	100%	454.5	-61.2	0	-5	-5	3	6	0	0	0	0	27.8	
NAP 601 15F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	454.5	-61.2	0	0	0	3	0	0	0	0	0	26.8	
NAP 601 15F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	454.3	-61.1	0	-10	-10	3	0	0	0	3.0	0	19.9	
NAP 601 15F	PAU Room 1	S17	PAU	1	85	100%	386.2	-59.7	0	-5	-5	3	0	0	0	0	0	23.3	
NAP 601 15F	PAU Room 1	S18	Exhaust Fans	1	85	100%	386.2	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 15F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	385.9	-59.7	0	-5	-5	3	0	0	0	0	0	23.3	
NAP 601 15F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	384.5	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 15F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	384.5	-59.7	0	-10	-10	3	6	0	0	3.0	0	27.3	
NAP 601 15F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	384.5	-59.7	0	-10	-10	3	0	0	0	0	0	18.3	
NAP 601 15F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	453.5	-61.1	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 15F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	378.7	-59.5	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	378.7	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	378.7	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	TBE Room	S27	Exhaust Fans	1	85	100%	453.5	-61.1	0	-10	-10	3	0	0	0	0	0	18.9	
NAP 601 15F	PAU Room 2	S28	PAU	2	85	100%	383.8	-59.7	0	0	0	3	0	0	0	3	0	31.3	
NAP 601 15F	AHU Room	S29	AHU	0	85	0%	441.1	-60.9	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 15F	Lift Machine Room	S30	Lift Machine	1	85	100%	434.3	-60.8	0	-10	-10	3	0	0	0	0	0	17.2	
NAP 601 15F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	445.8	-61.0	0	-10	-10	3	0	0	0	0	0	17.0	
NAP 601 15F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	398.9	-60.0	0	-5	-5	3	6	0	0	4.8	0	33.8	
NAP 601 15F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	398.9	-60.0	0	0	0	3	0	0	0	0	0	28.0	
NAP 601 15F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	398.9	-60.0	0	-10	-10	3	0	0	0	0	0	33.0	
NAP 601 15F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	430.7	-60.7	0	0	0	3	0	0	0	0	-17.8	24.5	
NAP 601 15F	L1 HKPF	S37	Hammering Activities	1	113	7%	428.8	-60.6	0	0	0	3	0	3	0	0	-11.8	46.6	
NAP 601 15F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	391.9	-59.9	0	0	0	3	0	0	0	0	-6	25.4	
NAP 601 15F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	403.6	-60.1	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	EMSD Dept	S40	Tyre Changer	0	98	0%	423.3	-60.5	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	EMSD Dept	S41	Hammering Activities	0	113	0%	395.7	-59.9	0	0	0	3	0	3	0	0	0	0.0	
NAP 601 15F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	433.3	-60.7	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	440.2	-60.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	417.3	-60.4	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	417.3	-60.4	0	0	0	3	0	0	0	0	+12	29.9	
NAP 601 15F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	389.6	-59.8	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	EMSD Dept	S48	Drill Stand	0	99	0%	386.2	-59.7	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 15F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	409.8	-60.3	0	0	0	3	0	0	0	0	0	41.7	
NAP 601 15F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	453.5	-61.1	0	-10	-10	3	0	0	0	0	0	18.9	
NAP 601 15F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	383.8	-59.7	0	0	0	3	0	0	0	0	0	28.3	
NAP 601 15F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	453.5	-61.1	0	-10	-10	3	0	0	0	0	0	18.9	
NAP 601 15F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	383.8	-59.7	0	0	0	3	0	0	0	0	0	0.0	

[Night-time]

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 601 30F	Chiller Pump Room	S1	Water Pumps	1	85	100%	463.1	-61.3	0	-5	-5	3	6	0	0	0	0	27.7	49
NAP 601 30F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	463.1	-61.3	0	-10	-10	3	0	0	0	0	0	16.7	
NAP 601 30F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	494.5	-60.1	0	0	0	3	0	0	0	0	0	27.9	
NAP 601 30F	Compressor Room	S4	Compressors	0	85	0%	405.7	-60.2	0	-5	-5	3	0	0	0	0	0	0.0	
NAP 601 30F	Compressor Room	S5	Exhaust Fans	0	85	0%	393.0	-59.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	Transformer Room	S6	Transformers	2	85	100%	393.0	-59.9	0	-5	-5	3	6	0	0	3.0	0	32.1	
NAP 601 30F	Transformer Room	S7	Exhaust Fans	1	85	100%	393.0	-59.9	0	0	0	3	0	0	0	0	0	28.1	
NAP 601 30F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	393.0	-59.9	0	-5	-5	3	6	0	0	3.0	0	32.1	
NAP 601 30F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	393.0	-59.9	0	0	0	3	0	0	0	0	0	28.1	
NAP 601 30F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	394.0	-59.9	0	-5	-5	3	0	0	0	3.0	0	28.1	
NAP 601 30F	Generator Room	S11	Exhaust Fans	1	85	100%	592.1	-63.4	0	0	0	3	0	0	0	0	0	24.6	
NAP 601 30F	Compressor Room	S12	Compressors	0	85	0%	455.4	-61.2	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 30F	Compressor Room	S13	Exhaust Fans	0	85	0%	459.6	-61.2	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 30F	F.S. Pump Room	S14	Water Pumps	1	85	100%	459.8	-61.3	0	-5	-5	3	6	0	0	0	0	27.7	
NAP 601 30F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	459.8	-61.3	0	0	0	3	0	0	0	0	0	26.7	
NAP 601 30F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	459.7	-61.2	0	-10	-10	3	0	0	0	3.0	0	19.8	
NAP 601 30F	PAU Room 1	S17	PAU	1	85	100%	389.0	-59.8	0	-5	-5	3	0	0	0	0	0	23.2	
NAP 601 30F	PAU Room 1	S18	Exhaust Fans	1	85	100%	389.0	-59.8	0	0	0	3	0	0	0	0	0	28.2	
NAP 601 30F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	391.2	-59.8	0	-5	-5	3	0	0	0	0	0	23.2	
NAP 601 30F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	389.8	-59.8	0	0	0	3	0	0	0	0	0	28.2	
NAP 601 30F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	389.8	-59.8	0	-10	-10	3	6	0	0	3.0	0	27.2	
NAP 601 30F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	389.8	-59.8	0	-10	-10	3	0	0	0	0	0	18.2	
NAP 601 30F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	456.5	-61.2	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 30F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	382.3	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	382.3	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	382.3	-59.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	TBE Room	S27	Exhaust Fans	1	85	100%	455.8	-61.2	0	-10	-10	3	0	0	0	0	0	16.8	
NAP 601 30F	PAU Room 2	S28	PAU	2	85	100%	385.6	-59.7	0	0	0	3	0	0	0	3	0	31.3	
NAP 601 30F	AHU Room	S29	AHU	0	85	0%	442.9	-60.9	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 601 30F	Lift Machine Room	S30	Lift Machine	1	85	100%	435.5	-60.8	0	-10	-10	3	0	0	0	0	0	17.2	
NAP 601 30F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	446.8	-61.0	0	-10	-10	3	0	0	0	0	0	17.0	
NAP 601 30F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	400.3	-60.0	0	-5	-5	3	6	0	0	4.8	0	33.8	
NAP 601 30F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	400.3	-60.0	0	0	0	3	0	0	0	0	0	28.0	
NAP 601 30F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	400.3	-60.0	0	-10	-10	3	0	0	0	0	0	33.0	
NAP 601 30F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	437.8	-60.8	0	0	0	3	0	0	0	0	-17.0	24.4	
NAP 601 30F	L1 HKPF	S37	Hammering Activities	1	113	7%	433.6	-60.7	0	0	0	3	0	3	0	0	-11.5	46.5	
NAP 601 30F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	395.4	-59.9	0	0	0	3	0	0	0	0	-6	25.4	
NAP 601 30F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	406.9	-60.2	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	EMSD Dept	S40	Tyre Changer	0	98	0%	428.8	-60.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	EMSD Dept	S41	Hammering Activities	0	113	0%	399.1	-60.0	0	0	0	3	0	3	0	0	0	0.0	
NAP 601 30F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	435.8	-60.8	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	443.3	-60.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	420.5	-60.5	0	0	0	3	0	0	0	0	0	0.0	
NAP 601 30F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	420.5	-60.5	0	0	0	3	0	0	0	0	-11.8	29.7	
NAP 601 30F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	393.3	-59.9	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 601 30F	EMSD Dept	S48	Drill Stand	0	99	0%	389.7	-59.8	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 601 30F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	413.1	-60.3	0	0	0	3	0	0	0	0	0.0	41.7	
NAP 601 30F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	456.5	-61.2	0	-10	-10	3	0	0	0	0	0.0	16.8	
NAP 601 30F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	387.4	-59.8	0	0	0	3	0	0	0	0	0.0	28.2	
NAP 601 30F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	456.5	-61.2	0	-10	-10	3	0	0	0	0	0.0	16.8	
NAP 601 30F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	387.4	-59.8	0	0	0	3	0	0	0	0	0.0	0.0	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 701 1F	Chiller Pump Room	S1	Water Pumps	2	85	100%	437.4	-60.8	-10	-5	-10	3	6	0	0	3.0	0	26.2	47
NAP 701 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	434.3	-60.8	-10	0	-10	3	0	0	0	0	0	17.2	
NAP 701 1F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	382.6	-59.7	-10	0	-10	3	0	0	0	7.0	0	25.3	
NAP 701 1F	Compressor Room	S4	Compressors	1	85	100%	392.8	-59.9	-10	-5	-10	3	0	0	0	0	0	18.1	
NAP 701 1F	Compressor Room	S5	Exhaust Fans	1	85	100%	381.6	-59.6	-10	0	-10	3	0	0	0	0	0	18.4	
NAP 701 1F	Transformer Room	S6	Transformers	2	85	100%	381.6	-59.6	-10	-5	-10	3	6	0	0	3.0	0	27.4	
NAP 701 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	381.6	-59.6	-10	0	-10	3	0	0	0	0	0	18.4	
NAP 701 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	381.6	-59.6	-10	-5	-10	3	6	0	0	3.0	0	27.4	
NAP 701 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	381.6	-59.6	-10	0	-10	3	0	0	0	0	0	18.4	
NAP 701 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	390.0	-59.8	-10	-5	-10	3	0	0	0	3.0	0	21.2	
NAP 701 1F	Generator Room	S11	Exhaust Fans	1	85	100%	576.1	-63.2	-10	0	-10	3	0	0	0	0	0	14.8	
NAP 701 1F	Compressor Room	S12	Compressors	1	85	100%	446.7	-61.0	-10	-10	-10	3	0	0	0	0	0	17.0	
NAP 701 1F	Compressor Room	S13	Exhaust Fans	1	85	100%	451.0	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	451.0	-61.1	-10	-5	-10	3	6	0	0	0	0	22.9	
NAP 701 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	451.0	-61.1	-10	0	-10	3	0	0	0	0	0	16.9	
NAP 701 1F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	451.2	-61.1	-10	-10	-10	3	0	0	0	7.0	0	23.9	
NAP 701 1F	PAU Room 1	S17	PAU	2	85	100%	390.3	-59.8	-10	-5	-10	3	0	0	0	3.0	0	21.2	
NAP 701 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	390.3	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 1F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	390.6	-59.8	-10	-5	-10	3	0	0	0	3.0	0	21.2	
NAP 701 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	391.0	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 1F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	391.0	-59.8	-10	-10	-10	3	6	0	0	3.0	0	27.2	
NAP 701 1F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	391.0	-59.8	-10	-10	-10	3	0	0	0	0	0	18.2	
NAP 701 1F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	452.2	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 1F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	385.1	-59.7	-10	0	-10	3	0	0	0	6.0	0	24.3	
NAP 701 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	385.1	-59.7	-10	0	-10	3	0	0	0	3.0	0	21.3	
NAP 701 1F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	385.1	-59.7	-10	0	-10	3	0	0	0	4.8	0	23.1	
NAP 701 1F	TBE Room	S27	Exhaust Fans	1	85	100%	452.9	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 1F	PAU Room 2	S28	PAU	5	85	100%	392.7	-59.9	-10	0	-10	3	0	0	0	7.0	0	25.1	
NAP 701 1F	AHU Room	S29	AHU	1	85	100%	446.9	-61.0	-10	-10	-10	3	0	0	0	0	0	17.0	
NAP 701 1F	Lift Machine Room	S30	Lift Machine	3	85	100%	443.7	-60.9	-10	-10	-10	3	0	0	0	4.8	0	21.9	
NAP 701 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	453.9	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	394.4	-59.9	-10	-5	-10	3	6	0	0	4.8	0	26.9	
NAP 701 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	394.4	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 1F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	394.4	-59.9	-10	-10	-10	3	0	0	0	3.0	0	36.1	
NAP 701 1F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	7%	429.8	-60.7	-10	0	-10	3	0	0	0	0	-11.8	20.5	
NAP 701 1F	L1 HKPF	S37	Hammering Activities	3	113	7%	429.9	-60.7	-10	0	-10	3	0	3	0	4.8	-11.8	41.3	
NAP 701 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	394.3	-59.9	-10	0	-10	3	0	0	0	0	-5.7	15.4	
NAP 701 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	389.5	-59.8	-10	0	-10	3	0	0	0	0	-14.8	30.4	
NAP 701 1F	EMSD Dept	S40	Tyre Changer	1	88	27%	410.0	-60.3	-10	0	-10	3	0	0	0	0	-5.7	25.0	
NAP 701 1F	EMSD Dept	S41	Hammering Activities	4	113	7%	387.9	-59.8	-10	0	-10	3	0	3	0	6.0	-11.8	43.5	
NAP 701 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	437.4	-60.8	-10	0	-10	3	0	0	0	6.0	-8.8	29.5	
NAP 701 1F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	444.1	-60.9	-10	0	-10	3	0	0	0	0	-13.0	18.1	
NAP 701 1F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	404.5	-60.1	-10	0	-10	3	0	0	0	0	-7.0	24.9	
NAP 701 1F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	404.5	-60.1	-10	0	-10	3	0	0	0	0	-7.0	24.9	
NAP 701 1F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	399.8	-59.8	-10	0	-10	3	0	0	0	0	-4.8	22.2	
NAP 701 1F	EMSD Dept	S48	Drill Stand	1	99	17%	388.0	-59.6	-10	0	-10	3	0	0	0	0	-7.8	24.4	
NAP 701 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	401.7	-60.1	-10	0	-10	3	0	0	0	0	0.0	31.9	
NAP 701 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	452.2	-61.1	-10	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 701 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0.0	18.1	
NAP 701 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	452.2	-61.1	-10	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 701 1F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0.0	18.1	
NAP 701 15F	Chiller Pump Room	S1	Water Pumps	2	85	100%	439.8	-60.9	-10	-5	-10	3	6	0	0	3.0	0	28.1	47
NAP 701 15F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	436.8	-60.8	-10	0	-10	3	0	0	0	0	0	17.2	
NAP 701 15F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	385.2	-59.7	-10	0	-10	3	0	0	0	7.0	0	25.3	
NAP 701 15F	Compressor Room	S4	Compressors	1	85	100%	395.4	-59.9	-10	-5	-10	3	0	0	0	0	0	18.1	
NAP 701 15F	Compressor Room	S5	Exhaust Fans	1	85	100%	384.3	-59.7	-10	0	-10	3	0	0	0	0	0	18.3	
NAP 701 15F	Transformer Room	S6	Transformers	2	85	100%	384.3	-59.7	-10	-5	-10	3	6	0	0	3.0	0	27.3	
NAP 701 15F	Transformer Room	S7	Exhaust Fans	1	85	100%	384.3	-59.7	-10	0	-10	3	0	0	0	0	0	18.3	
NAP 701 15F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	384.3	-59.7	-10	-5	-10	3	6	0	0	3.0	0	27.3	
NAP 701 15F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	384.3	-59.7	-10	0	-10	3	0	0	0	0	0	18.3	
NAP 701 15F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	391.8	-59.8	-10	-5	-10	3	0	0	0	3.0	0	21.1	
NAP 701 15F	Generator Room	S11	Exhaust Fans	1	85	100%	577.8	-63.2	-10	0	-10	3	0	0	0	0	0	14.8	
NAP 701 15F	Compressor Room	S12	Compressors	1	85	100%	447.6	-61.0	-10	-10	-10	3	0	0	0	0	0	17.0	
NAP 701 15F	Compressor Room	S13	Exhaust Fans	1	85	100%	451.9	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 15F	F.S. Pump Room	S14	Water Pumps	1	85	100%	451.9	-61.1	-10	-5	-10	3	6	0	0	0	0	22.9	
NAP 701 15F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	451.9	-61.1	-10	0	-10	3	0	0	0	0	0	16.9	
NAP 701 15F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	451.7	-61.1	-10	-10	-10	3	0	0	0	7.0	0	23.9	
NAP 701 15F	PAU Room 1	S17	PAU	2	85	100%	390.8	-59.8	-10	-5	-10	3	0	0	0	3.0	0	21.2	
NAP 701 15F	PAU Room 1	S18	Exhaust Fans	1	85	100%	390.8	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 15F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	390.7	-59.8	-10	-5	-10	3	0	0	0	3.0	0	21.2	
NAP 701 15F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	391.2	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 15F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	391.2	-59.8	-10	-10	-10	3	6	0	0	3.0	0	27.2	
NAP 701 15F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	391.2	-59.8	-10	-10	-10	3	0	0	0	0	0	18.2	
NAP 701 15F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	451.0	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 15F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	383.6	-59.7	-10	0	-10	3	0	0	0	6.0	0	24.3	
NAP 701 15F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	383.6	-59.7	-10	0	-10	3	0	0	0	3.0	0	21.3	
NAP 701 15F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	383.6	-59.7	-10	0	-10	3	0	0	0	4.8	0	23.1	
NAP 701 15F	TBE Room	S27	Exhaust Fans	1	85	100%	450.9	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 15F	PAU Room 2	S28	PAU	5	85	100%	390.5	-59.8	-10	0	-10	3	0	0	0	7.0	0	25.2	
NAP 701 15F	AHU Room	S29	AHU	1	85	100%	446.5	-61.0	-10	-10	-10	3	0	0	0	0	0	17.0	
NAP 701 15F	Lift Machine Room	S30	Lift Machine	3	85	100%	440.7	-60.9	-10	-10	-10	3	0	0	0	4.8	0	21.9	
NAP 701 15F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	450.9	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 15F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	391.0	-59.8	-10	-5	-10	3	6	0	0	4.8	0	29.0	
NAP 701 15F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	391.0	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 15F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	391.0	-59.8	-10	-10	-10	3	0	0	0	3.0	0	36.2	
NAP 701 15F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	451.6	-60.7	-10	0	-10	3	0	0	0	0	-11.8	20.5	
NAP 701 15F	L1 HKPF	S37	Hammering Activities	3	113	7%	430.0	-60.7	-10	0	-10	3	0	3	0	4.8	-11.8	41.3	
NAP 701 15F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	392.8	-59.9	-10	0	-10	3	0	0	0	0	-5.7	15.4	
NAP 701 15F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	388.1	-59.8	-10	0	-10	3	0	0	0	0	-14.8	30.4	
NAP 701 15F	EMSD Dept	S40	Tyre Changer	1	88	27%	408.6	-60.2	-10	0	-10	3	0	0	0	0	-5.7	25.1	
NAP 701 15F	EMSD Dept	S41	Hammering Activities	4	113	7%	386.3	-59.7	-10	0	-10	3	0	3	0	6.0	-11.8	43.6	
NAP 701 15F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	436.1	-60.8	-10	0	-10	3	0	0	0	6.0	-8.8	29.5	
NAP 701 15F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	442.8	-60.9	-10	0	-10	3	0	0	0	0	-13.0	18.1	
NAP 701 15F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	403.1	-60.1	-10	0	-10	3	0	0	0	0	-7.0	24.9	
NAP 701 15F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	403.1	-60.1	-10	0	-10	3	0	0	0	0	-7.0	24.9	
NAP 701 15F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	387.1	-59.8	-10	0	-10	3	0	0	0	0	-4.8	22.2	
NAP 701 15F	EMSD Dept	S48	Drill Stand	1	99	17%	387.1	-59.8	-10	0	-10	3	0	0	0	0	-7.8	24.4	
NAP 701 15F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	400.3	-60.0	-10	0	-10	3	0	0	0	0	0.0	32.0	
NAP 701 15F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	451.0	-61.1	-10	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 701 15F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	390.8	-59.8	-10	0	-10	3	0	0	0	0	0.0	18.2	
NAP 701 15F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	451.0	-61.1	-10	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 701 15F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	390.8	-59.8	-10	0	-10	3	0	0	0	0	0.0	18.2	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Facade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant 6PL, Leq(30mins), dB(A)
NAP 701 30F	Chiller Pump Room	S1	Water Pumps	2	85	100%	446.7	-61.0	-10	-5	-10	3	0	0	0	3.0	0	26.0	55
NAP 701 30F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	443.8	-60.9	-10	0	-10	3	0	0	0	0	0	17.1	
NAP 701 30F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	393.1	-59.9	-10	0	-10	3	0	0	0	7.0	0	25.1	
NAP 701 30F	Compressor Room	S4	Compressors	1	85	100%	403.1	-60.1	-10	-5	-10	3	0	0	0	0	0	17.9	
NAP 701 30F	Compressor Room	S5	Exhaust Fans	1	85	100%	392.1	-59.8	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Transformer Room	S6	Transformers	2	85	100%	392.1	-59.9	-10	-5	-10	3	6	0	0	3.0	0	27.1	
NAP 701 30F	Transformer Room	S7	Exhaust Fans	1	85	100%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	392.1	-59.9	-10	-5	-10	3	6	0	0	3.0	0	27.1	
NAP 701 30F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	398.5	-60.0	-10	-5	-10	3	0	0	0	3.0	0	21.0	
NAP 701 30F	Generator Room	S11	Exhaust Fans	1	85	100%	543.8	-63.3	-10	0	-10	3	0	0	0	0	0	14.7	
NAP 701 30F	Compressor Room	S12	Compressors	1	85	100%	452.8	-61.1	-10	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 30F	Compressor Room	S13	Exhaust Fans	1	85	100%	457.2	-61.2	-10	-10	-10	3	0	0	0	0	0	16.8	
NAP 701 30F	F.S. Pump Room	S14	Water Pumps	1	85	100%	457.2	-61.2	-10	-5	-10	3	6	0	0	0	0	22.8	
NAP 701 30F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	457.2	-61.2	-10	0	-10	3	0	0	0	0	0	18.8	
NAP 701 30F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	454.1	-61.1	-10	-10	-10	3	0	0	0	7.0	0	23.9	
NAP 701 30F	PAU Room 1	S17	PAU	2	85	100%	393.7	-59.9	-10	-5	-10	3	0	0	0	3.0	0	21.1	
NAP 701 30F	PAU Room 1	S18	Exhaust Fans	1	85	100%	393.7	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	395.8	-59.9	-10	-5	-10	3	0	0	0	3.0	0	21.1	
NAP 701 30F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	396.9	-60.0	-10	0	-10	3	0	0	0	0	0	18.0	
NAP 701 30F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	396.9	-60.0	-10	-10	-10	3	6	0	0	3.0	0	27.0	
NAP 701 30F	Water Vehicle Fling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	396.9	-60.0	-10	-10	-10	3	0	0	0	0	0	18.0	
NAP 701 30F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	453.8	-61.1	0	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 30F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	387.1	-59.8	0	0	0	3	0	0	0	6.0	0	34.2	
NAP 701 30F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	387.1	-59.8	0	0	0	3	0	0	0	3.0	0	31.2	
NAP 701 30F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	387.1	-59.8	0	0	0	3	0	0	0	4.8	0	33.0	
NAP 701 30F	TBE Room	S27	Exhaust Fans	1	85	100%	453.2	-61.1	0	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 30F	PAU Room 2	S28	PAU	5	85	100%	393.2	-59.8	0	0	0	3	0	0	0	7.0	0	35.1	
NAP 701 30F	AHU Room	S29	AHU	1	85	100%	443.3	-61.0	0	-10	-10	3	0	0	0	0	0	17.0	
NAP 701 30F	Lift Machine Room	S30	Lift Machine	3	85	100%	441.9	-60.8	0	-10	-10	3	0	0	0	4.8	0	21.9	
NAP 701 30F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	452.1	-61.1	0	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 30F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	392.5	-59.9	0	-5	-5	3	6	0	0	4.8	0	33.9	
NAP 701 30F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	392.5	-59.9	0	0	0	3	0	0	0	0	0	26.1	
NAP 701 30F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	392.3	-59.9	0	-10	-10	3	0	0	0	3.0	0	36.1	
NAP 701 30F	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	7%	435.5	-60.8	-10	0	-10	3	0	0	0	0	-11.8	20.4	
NAP 701 30F	L1 HKPF	S37	Hammering Activities	3	113	7%	434.7	-60.8	-10	0	-10	3	0	3	0	4.8	-11.8	41.2	
NAP 701 30F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	396.2	-60.0	-10	0	-10	3	0	0	0	0	-5.7	15.3	
NAP 701 30F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	391.6	-59.9	0	0	0	3	0	0	0	0	-14.8	40.3	
NAP 701 30F	EMSD Dept	S40	Tyre Changer	1	96	27%	411.9	-60.3	0	0	0	3	0	0	0	0	-5.7	35.0	
NAP 701 30F	EMSD Dept	S41	Hammering Activities	4	113	7%	349.7	-59.5	0	0	0	3	0	3	0	6.0	-11.8	53.5	
NAP 701 30F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	439.2	-60.9	0	0	0	3	0	0	0	6.0	-8.8	39.4	
NAP 701 30F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	445.9	-61.0	0	0	0	3	0	0	0	0	-13.0	28.0	
NAP 701 30F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	436.5	-60.2	0	0	0	3	0	0	0	0	-7.0	34.8	
NAP 701 30F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	436.5	-60.2	-10	0	-10	3	0	0	0	0	-7.0	24.8	
NAP 701 30F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	390.6	-59.8	0	0	0	3	0	0	0	0	-4.6	32.2	
NAP 701 30F	EMSD Dept	S48	Drill Stand	1	99	17%	390.5	-59.8	0	0	0	3	0	0	0	0	-7.8	34.4	
NAP 701 30F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	403.6	-60.1	-10	0	-10	3	0	0	0	0	0.0	31.9	
NAP 701 30F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	453.9	-61.1	-10	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 701 30F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	394.0	-59.9	0	0	0	3	0	0	0	0	0.0	26.1	
NAP 701 30F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	453.9	-61.1	0	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 701 30F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	394.0	-59.9	0	0	0	3	0	0	0	0	0.0	26.1	

(Nighttime)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant distance, ft	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Negotiated SPL, Leq(30mins), dB(A)
NAP 701 1F	Chiller Pump Room	S1	Water Pumps	1	85	100%	437.4	-59.8	-10	-5	-15	3	6	0	0	0	0	23.2	41
NAP 701 1F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	434.8	-59.8	-10	0	-10	3	0	0	0	0	0	17.2	
NAP 701 1F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	382.8	-59.7	-10	0	-10	3	0	0	0	0	0	16.5	
NAP 701 1F	Compressor Room	S4	Compressors	0	85	0%	382.8	-59.9	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	Compressor Room	S5	Exhaust Fans	0	85	0%	381.8	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	Transformer Room	S6	Transformers	2	85	100%	381.8	-59.8	-10	-5	-10	3	6	0	0	3.0	0	27.4	
NAP 701 1F	Transformer Room	S7	Exhaust Fans	1	85	100%	381.8	-59.8	-10	0	-10	3	0	0	0	0	0	16.4	
NAP 701 1F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	381.8	-59.8	-10	-5	-15	3	6	0	0	3.0	0	27.4	
NAP 701 1F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	381.8	-59.8	-10	0	-10	3	0	0	0	0	0	16.4	
NAP 701 1F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	390.0	-59.8	-10	-5	-15	3	0	0	0	3.0	0	21.2	
NAP 701 1F	Generator Room	S11	Exhaust Fans	1	85	100%	576.1	-63.2	-10	0	-10	3	0	0	0	0	0	14.8	
NAP 701 1F	Compressor Room	S12	Compressors	0	85	0%	446.7	-61.0	-10	-10	-15	3	0	0	0	0	0	0.0	
NAP 701 1F	Compressor Room	S13	Exhaust Fans	0	85	0%	451.0	-61.1	-10	-10	-15	3	0	0	0	0	0	0.0	
NAP 701 1F	F.S. Pump Room	S14	Water Pumps	1	85	100%	451.0	-61.1	-10	-5	-15	3	6	0	0	0	0	22.9	
NAP 701 1F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	451.0	-61.1	-10	0	-10	3	0	0	0	0	0	16.9	
NAP 701 1F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	451.2	-61.1	-10	-10	-15	3	0	0	0	3.0	0	19.9	
NAP 701 1F	PAU Room 1	S17	PAU	1	85	100%	390.9	-59.8	-10	-5	-15	3	0	0	0	0	0	18.2	
NAP 701 1F	PAU Room 1	S18	Exhaust Fans	1	85	100%	390.9	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 1F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	390.5	-59.8	-10	-5	-15	3	0	0	0	0	0	18.2	
NAP 701 1F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	391.0	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 1F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	391.0	-59.8	-10	-10	-15	3	6	0	0	3.0	0	27.2	
NAP 701 1F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	391.0	-59.8	-10	-10	-15	3	0	0	0	0	0	18.2	
NAP 701 1F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	452.2	-61.1	-10	-10	-15	3	0	0	0	0	0	0.0	
NAP 701 1F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	385.1	-59.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	385.1	-59.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	385.1	-59.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	TBE Room	S27	Exhaust Fans	1	85	100%	452.8	-61.1	-10	-10	-15	3	0	0	0	0	0	18.8	
NAP 701 1F	PAU Room 2	S28	PAU	2	85	100%	392.7	-59.9	-10	0	-10	3	0	0	0	3	0	21.1	
NAP 701 1F	AHU Room	S29	AHU	0	85	0%	448.9	-61.0	-10	-10	-15	3	0	0	0	0	0	0.0	
NAP 701 1F	Lift Machine Room	S30	Lift Machine	1	85	100%	443.7	-60.9	-10	-10	-15	3	0	0	0	0	0	17.1	
NAP 701 1F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	453.9	-61.1	-10	-10	-15	3	0	0	0	0	0	16.8	
NAP 701 1F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	394.4	-59.9	-10	-5	-15	3	6	9	0	4.8	0	29.8	
NAP 701 1F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	394.4	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 1F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	394.4	-59.9	-10	-10	-15	3	0	0	0	0	0	33.1	
NAP 701 1F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	429.5	-60.7	-10	0	-10	3	0	0	0	0	0	-17.0	14.5
NAP 701 1F	L1 HKPF	S37	Hammering Activities	1	113	7%	429.9	-60.7	-10	0	-10	3	0	3	0	0	0	-11.6	36.5
NAP 701 1F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	394.3	-59.9	-10	0	-10	3	0	0	0	0	0	-6	15.4
NAP 701 1F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	389.6	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	EMSD Dept	S40	Tyre Changer	0	88	0%	410.0	-60.3	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	EMSD Dept	S41	Hammering Activities	0	113	0%	387.8	-59.8	-10	0	-10	3	0	3	0	0	0	0.0	
NAP 701 1F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	437.4	-60.8	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	444.1	-60.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	404.5	-60.1	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 1F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	404.5	-60.1	-10	0	-10	3	0	0	0	0	0	-11.6	20.1
NAP 701 1F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	388.8	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 1F	EMSD Dept	S48	Drill Stand	0	89	0%	388.6	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 1F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	401.7	-60.1	-10	0	-10	3	0	0	0	0	0	0.0	31.9
NAP 701 1F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	452.2	-61.1	-10	-10	-15	3	0	0	0	0	0	0.0	16.9
NAP 701 1F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0	0.0	16.1
NAP 701 1F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	452.2	-61.1	-10	-10	-15	3	0	0	0	0	0	0.0	16.9
NAP 701 1F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 15F	Chiller Pump Room	S1	Water Pumps	1	85	100%	439.8	-60.9	-10	-5	-15	3	6	0	0	0	0	23.1	41
NAP 701 15F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	436.8	-60.8	-10	0	-10	3	0	0	0	0	0	17.2	
NAP 701 15F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	385.3	-59.7	-10	0	-10	3	0	0	0	0	0	16.5	
NAP 701 15F	Compressor Room	S4	Compressors	0	85	0%	385.4	-59.9	-10	-5	-15	3	0	0	0	0	0	0.0	
NAP 701 15F	Compressor Room	S5	Exhaust Fans	0	85	0%	384.3	-59.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 15F	Transformer Room	S6	Transformers	2	85	100%	384.3	-59.7	-10	-5	-15	3	6	0	0	3.0	0	27.3	
NAP 701 15F	Transformer Room	S7	Exhaust Fans	1	85	100%	384.3	-59.7	-10	0	-10	3	0	0	0	0	0	16.3	
NAP 701 15F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	384.3	-59.7	-10	-5	-15	3	6	0	0	3.0	0	27.3	
NAP 701 15F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	384.3	-59.7	-10	0	-10	3	0	0	0	0	0	16.3	
NAP 701 15F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	391.8	-59.9	-10	-5	-15	3	0	0	0	3.0	0	21.1	
NAP 701 15F	Generator Room	S11	Exhaust Fans	1	85	100%	577.8	-63.2	-10	0	-10	3	0	0	0	0	0	14.8	
NAP 701 15F	Compressor Room	S12	Compressors	0	85	0%	447.6	-61.0	-10	-10	-15	3	0	0	0	0	0	0.0	
NAP 701 15F	Compressor Room	S13	Exhaust Fans	0	85	0%	451.9	-61.1	-10	-10	-15	3	0	0	0	0	0	0.0	
NAP 701 15F	F.S. Pump Room	S14	Water Pumps	1	85	100%	451.9	-61.1	-10	-5	-15	3	6	0	0	0	0	22.9	
NAP 701 15F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	451.9	-61.1	-10	0	-10	3	0	0	0	0	0	16.9	
NAP 701 15F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	451.7	-61.1	-10	-10	-15	3	0	0	0	3.0	0	19.9	
NAP 701 15F	PAU Room 1	S17	PAU	1	85	100%	390.9	-59.8	-10	-5	-15	3	0	0	0	0	0	18.2	
NAP 701 15F	PAU Room 1	S18	Exhaust Fans	1	85	100%	390.9	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 15F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	390.7	-59.8	-10	-5	-15	3	0	0	0	0	0	18.2	
NAP 701 15F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	391.2	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 15F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	391.2	-59.8	-10	-10	-15	3	6	0	0	3.0	0	27.2	
NAP 701 15F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	391.2	-59.8	-10	-10	-15	3	0	0	0	0	0	18.2	
NAP 701 15F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	451.0	-61.1	-10	-10	-15	3	0	0	0	0	0	0.0	
NAP 701 15F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	383.8	-59.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 15F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	383.8	-59.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 15F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	383.8	-59.7	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 15F	TBE Room	S27	Exhaust Fans	1	85	100%	450.9	-61.1	-10	-10	-15	3	0	0	0	0	0	18.9	
NAP 701 15F	PAU Room 2	S28	PAU	2	85	100%	390.5	-59.8	-10	0	-10	3	0	0	0	3	0	21.2	
NAP 701 15F	AHU Room	S29	AHU	0	85	0%	446.5	-61.0	-10	-10	-15	3	0	0	0	0	0	0.0	
NAP 701 15F	Lift Machine Room	S30	Lift Machine	1	85	100%	440.7	-60.9	-10	-10	-15	3	0	0	0	0	0	17.1	
NAP 701 15F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	450.9	-61.1	-10	-10	-15	3	0	0	0	0	0	16.9	
NAP 701 15F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	391.0	-59.8	-10	-5	-15	3	6	0	0	4.8	0	29.0	
NAP 701 15F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	391.0	-59.8	-10	0	-10	3	0	0	0	0	0	18.2	
NAP 701 15F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	391.0	-59.8	-10	-10	-15	3	0	0	0	0	0	33.2	
NAP 701 15F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	431.8	-60.7	-10	0	-10	3	0	0	0	0	0	-17.0	14.5
NAP 701 15F	L1 HKPF	S37	Hammering Activities	1	113	7%	430.0	-60.7	-10	0	-10	3	0	3	0	0	0	-11.6	36.5
NAP 701 15F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	392.8	-59.9	-10	0	-10	3	0	0	0	0	0	-6	15.4
NAP 701 15F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	388.1	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 15F	EMSD Dept	S40	Tyre Changer	0	88	0%	408.6	-60.2	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 15F	EMSD Dept	S41	Hammering Activities	0	113	0%	386.3	-59.7	-10	0	-10	3	0	3	0	0	0	0.0	0.0
NAP 701 15F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	436.1	-60.8	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 15F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	442.8	-60.9	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 15F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	403.1	-60.1	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 15F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	403.1	-60.1	-10	0	-10	3	0	0	0	0	0	-11.6	20.1
NAP 701 15F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	387.1	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 15F	EMSD Dept	S48	Drill Stand	0	89	0%	387.1	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	0.0
NAP 701 15F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	400.3	-60.0	-10	0	-10	3	0	0	0	0	0	0.0	32.0
NAP 701 15F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	451.0	-61.1	-10	-10	-15	3	0	0	0	0	0	0.0	16.9
NAP 701 15F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	390.8	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	16.2
NAP 701 15F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	451.0	-61.1	-10	-10	-15	3	0	0	0	0	0	0.0	16.9
NAP 701 15F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	390.8	-59.8	-10	0	-10	3	0	0	0	0	0	0.0	0.0

[Night-time]

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittancy, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 701 30F	Chiller Pump Room	S1	Water Pumps	1	85	100%	446.7	-61.0	-10	-5	-10	3	6	0	0	0	0	23.0	42
NAP 701 30F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	443.8	-60.9	-10	0	-10	3	0	0	0	0	0	17.1	
NAP 701 30F	Exhaust Fan Room	S3	General Exhaust Fans	1	85	100%	393.1	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Compressor Room	S4	Compressors	0	85	0%	403.1	-60.1	-10	-5	-10	3	0	0	0	0	0	0.0	
NAP 701 30F	Compressor Room	S5	Exhaust Fans	0	85	0%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0	0.0	
NAP 701 30F	Transformer Room	S6	Transformers	2	85	100%	392.1	-59.9	-10	-5	-10	3	6	0	0	3.0	0	27.1	
NAP 701 30F	Transformer Room	S7	Exhaust Fans	1	85	100%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	392.1	-59.9	-10	-5	-10	3	6	0	0	3.0	0	27.1	
NAP 701 30F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	392.1	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	398.5	-60.0	-10	-5	-10	3	6	0	0	3.0	0	21.0	
NAP 701 30F	Generator Room	S11	Exhaust Fans	1	85	100%	582.9	-63.3	-10	0	-10	3	0	0	0	0	0	14.7	
NAP 701 30F	Compressor Room	S12	Compressors	0	85	0%	452.8	-61.1	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 701 30F	Compressor Room	S13	Exhaust Fans	0	85	0%	457.2	-61.2	-10	-10	-10	3	0	0	0	0	0	0.0	
NAP 701 30F	F.S. Pump Room	S14	Water Pumps	1	85	100%	457.2	-61.2	-10	-5	-10	3	0	0	0	0	0	22.8	
NAP 701 30F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	457.2	-61.2	-10	0	-10	3	0	0	0	0	0	18.8	
NAP 701 30F	Exhaust Fan Room	S16	General Exhaust Fans	2	85	100%	454.1	-61.1	-10	-10	-10	3	6	0	0	3.0	0	19.9	
NAP 701 30F	PAU Room 1	S17	PAU	1	85	100%	393.7	-59.9	-10	-5	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	PAU Room 1	S18	Exhaust Fans	1	85	100%	393.7	-59.9	-10	0	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Chiller Plant Room	S19	Chiller Plant	1	85	100%	395.9	-59.9	-10	-5	-10	3	0	0	0	0	0	18.1	
NAP 701 30F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	396.3	-60.0	-10	0	-10	3	0	0	0	0	0	18.0	
NAP 701 30F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	396.3	-60.0	-10	-10	-10	3	6	0	0	3.0	0	27.0	
NAP 701 30F	Water Vehicle Filing and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	396.3	-60.0	-10	-10	-10	3	0	0	0	0	0	18.0	
NAP 701 30F	Battery Charging Room	S23	Exhaust Fans	0	85	0%	453.9	-61.1	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 701 30F	Exhaust Fan Room	S24	General Exhaust Fans	0	85	0%	587.1	-63.6	0	0	0	3	0	0	0	0	0	0.0	
NAP 701 30F	Exhaust Fan Room	S25	Welding Exhaust Fans	0	85	0%	387.1	-59.8	0	0	0	3	0	0	0	0	0	0.0	
NAP 701 30F	Exhaust Fan Room	S26	Exhaust Fans	0	85	0%	387.1	-59.8	0	0	0	3	0	0	0	0	0	0.0	
NAP 701 30F	TBE Room	S27	Exhaust Fans	1	85	100%	453.2	-61.1	0	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 30F	PAU Room 2	S28	PAU	2	85	100%	393.2	-59.9	0	0	0	3	0	0	0	3	0	31.1	
NAP 701 30F	AHU Room	S29	AHU	0	85	0%	448.3	-61.0	0	-10	-10	3	0	0	0	0	0	0.0	
NAP 701 30F	Lift Machine Room	S30	Lift Machine	1	85	100%	441.8	-60.9	0	-10	-10	3	0	0	0	0	0	17.1	
NAP 701 30F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	452.1	-61.1	0	-10	-10	3	0	0	0	0	0	16.9	
NAP 701 30F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	392.3	-59.9	0	-5	-5	3	6	0	0	4.8	0	53.9	
NAP 701 30F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	392.3	-59.9	0	0	0	3	0	0	0	0	0	28.1	
NAP 701 30F	Cooling Tower Plant Room	S34	Cooling towers	1	100	100%	392.3	-59.9	0	-10	-10	3	0	0	0	0	0	33.1	
NAP 701 30F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	2%	438.8	-60.8	-10	0	-10	3	0	0	0	0	-17.8	14.4	
NAP 701 30F	L1 HKPF	S37	Hammering Activities	1	113	7%	434.7	-60.8	-10	0	-10	3	0	3	0	0	-11.8	36.4	
NAP 701 30F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	396.2	-60.0	-10	0	-10	3	0	0	0	0	-6	15.3	
NAP 701 30F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	0	112	0%	391.8	-59.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 701 30F	EMSD Dept	S40	Tyre Changer	0	98	0%	411.9	-60.3	0	0	0	3	0	0	0	0	0	0.0	
NAP 701 30F	EMSD Dept	S41	Hammering Activities	0	113	0%	389.7	-59.8	0	0	0	3	0	3	0	0	0	0.0	
NAP 701 30F	EMSD Dept	S42	Hand-held Pneumatic Tools	0	100	0%	434.2	-60.9	0	0	0	3	0	0	0	0	0	0.0	
NAP 701 30F	EMSD Dept	S43	Roller Brake Tester	0	99	0%	445.9	-61.0	0	0	0	3	0	0	0	0	0	0.0	
NAP 701 30F	EMSD Dept	S44	Motorcycle Brake Tester	0	99	0%	405.5	-60.2	0	0	0	3	0	0	0	0	0	0.0	
NAP 701 30F	L1 HKPF	S45	Roller Brake Tester	1	99	7%	406.5	-60.2	-10	0	-10	3	0	0	0	0	-11.8	20.0	
NAP 701 30F	EMSD Dept	S47	Bench Grinder	0	93.8	0%	390.8	-59.8	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 701 30F	EMSD Dept	S48	Drill Stand	0	99	0%	390.5	-59.8	0	0	0	3	0	0	0	0	0.0	0.0	
NAP 701 30F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	403.8	-60.1	-10	0	-10	3	0	0	0	0	0.0	31.9	
NAP 701 30F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	453.9	-61.1	-10	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 701 30F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	394.0	-59.9	0	0	0	3	0	0	0	0	0.0	28.1	
NAP 701 30F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	453.9	-61.1	0	-10	-10	3	0	0	0	0	0.0	16.9	
NAP 701 30F	Exhaust Fan Room	S53	Exhaust Fans	0	85	0%	394.0	-59.9	0	0	0	3	0	0	0	0	0.0	0.0	

[Day / Evening Time]

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30mins), dB(A)
NAP 801 SF	Chiller Pump Room	S1	Water Pumps	2	85	100%	264.4	-56.4	0	-5	-5	3	5	0	0	3.0	0	35.6	61
NAP 801 SF	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	261.1	-56.3	0	0	0	3	0	0	0	0	0	31.7	
NAP 801 SF	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	211.0	-54.5	0	0	0	3	0	0	0	7.0	0	40.5	
NAP 801 SF	Compressor Room	S4	Compressors	1	85	100%	223.1	-55.0	0	-5	-5	3	0	0	0	0	0	26.0	
NAP 801 SF	Compressor Room	S5	Exhaust Fans	1	85	100%	212.9	-54.6	0	0	0	3	0	0	0	0	0	33.4	
NAP 801 SF	Transformer Room	S6	Transformers	2	85	100%	212.9	-54.6	0	-5	-5	3	5	0	0	3.0	0	37.4	
NAP 801 SF	Transformer Room	S7	Exhaust Fans	1	85	100%	212.9	-54.6	0	0	0	3	0	0	0	0	0	33.4	
NAP 801 SF	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	212.9	-54.6	0	-5	-5	3	5	0	0	3.0	0	37.4	
NAP 801 SF	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	212.9	-54.6	0	0	0	3	0	0	0	0	0	33.4	
NAP 801 SF	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	222.3	-54.9	0	-5	-5	3	0	0	0	3.0	0	31.1	
NAP 801 SF	Generator Room	S11	Exhaust Fans	1	85	100%	335.0	-58.5	0	0	0	3	0	0	0	0	0	29.5	
NAP 801 SF	Compressor Room	S12	Compressors	1	85	100%	274.7	-56.8	0	-10	-10	3	0	0	0	0	0	21.2	
NAP 801 SF	Compressor Room	S13	Exhaust Fans	1	85	100%	279.0	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 801 SF	F.S. Pump Room	S14	Water Pumps	1	85	100%	279.0	-56.9	0	-5	-5	3	8	0	0	0	0	32.1	
NAP 801 SF	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	279.0	-56.9	0	0	0	3	0	0	0	0	0	31.1	
NAP 801 SF	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	279.6	-56.9	0	-10	-10	3	0	0	0	7.0	0	26.1	
NAP 801 SF	PAU Room 1	S17	PAU	2	85	100%	221.8	-54.9	0	-5	-5	3	0	0	0	3.0	0	31.1	
NAP 801 SF	PAU Room 1	S18	Exhaust Fans	1	85	100%	221.8	-54.9	0	0	0	3	0	0	0	0	0	33.1	
NAP 801 SF	Chiller Plant Room	S19	Chiller Plant	2	85	100%	221.8	-54.9	0	-5	-5	3	0	0	0	3.0	0	31.1	
NAP 801 SF	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	223.2	-55.0	0	0	0	3	0	0	0	0	0	33.0	
NAP 801 SF	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	223.2	-55.0	0	-10	-10	3	8	0	0	3.0	0	32.0	
NAP 801 SF	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	223.2	-55.0	0	-10	-10	3	0	0	0	0	0	23.0	
NAP 801 SF	Battery Charging Room	S23	Exhaust Fans	1	85	100%	279.4	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 801 SF	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	216.5	-54.7	0	0	0	3	0	0	0	6.0	0	38.3	
NAP 801 SF	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	216.5	-54.7	0	0	0	3	0	0	0	3.0	0	36.3	
NAP 801 SF	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	216.5	-54.7	0	0	0	3	0	0	0	4.8	0	36.1	
NAP 801 SF	TBE Room	S27	Exhaust Fans	1	85	100%	279.8	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 801 SF	PAU Room 2	S28	PAU	5	85	100%	224.4	-55.0	0	0	0	3	0	0	0	7.0	0	40.0	
NAP 801 SF	AHU Room	S29	AHU	1	85	100%	278.2	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 801 SF	Lift Machine Room	S30	Lift Machine	3	85	100%	273.6	-56.7	0	-10	-10	3	0	0	0	4.8	0	26.1	
NAP 801 SF	Lift Machine Room	S31	Exhaust Fans	1	85	100%	283.1	-57.0	0	-10	-10	3	0	0	0	0	0	21.0	
NAP 801 SF	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	221.4	-54.9	0	-5	-5	3	8	0	0	4.8	0	34.8	
NAP 801 SF	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	221.4	-54.9	0	0	0	3	0	0	0	0	0	33.1	
NAP 801 SF	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	221.4	-54.9	0	-10	-10	3	0	0	0	3.0	0	41.1	
NAP 801 SF	L1 HKPF	S35	Hand-held Pneumatic Tools	1	100	7%	259.6	-56.3	0	0	0	3	0	0	0	0	-11.5	34.9	
NAP 801 SF	L1 HKPF	S37	Hammering Activities	3	113	7%	259.6	-56.3	0	0	0	3	0	3	0	4.8	-11.5	55.7	
NAP 801 SF	FEHD	S38	Automatic Vehicle Washing Machine	1	85	27%	223.7	-55.0	0	0	0	3	0	0	0	0	-5.7	30.3	
NAP 801 SF	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	215.2	-54.7	0	0	0	3	0	0	0	0	-14.8	45.5	
NAP 801 SF	EMSD Dept	S40	Tyre Changer	1	98	27%	235.9	-55.4	0	0	0	3	0	0	0	0	-5.7	39.9	
NAP 801 SF	EMSD Dept	S41	Hammering Activities	4	113	7%	214.5	-54.6	0	0	0	3	0	3	0	6.0	-11.5	56.7	
NAP 801 SF	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	266.5	-56.5	0	0	0	3	0	0	0	6.0	-8.8	43.8	
NAP 801 SF	EMSD Dept	S43	Roller Brake Tester	1	99	5%	272.8	-56.7	0	0	0	3	0	0	0	0	-13.0	32.3	
NAP 801 SF	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	230.2	-55.2	0	0	0	3	0	0	0	0	-7.0	39.8	
NAP 801 SF	L1 HKPF	S45	Roller Brake Tester	1	99	20%	230.2	-55.2	0	0	0	3	0	0	0	0	-7.0	39.8	
NAP 801 SF	EMSD Dept	S47	Bench Grinder	1	93.8	33%	217.1	-54.7	0	0	0	3	0	0	0	0	-4.8	37.3	
NAP 801 SF	EMSD Dept	S48	Drill Stand	1	99	17%	216.2	-54.8	0	0	0	3	0	0	0	0	-7.8	39.4	
NAP 801 SF	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	220.1	-55.2	0	0	0	3	0	0	0	0	0.0	46.8	
NAP 801 SF	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	279.4	-56.9	0	-10	-10	3	0	0	0	0	0.0	21.1	
NAP 801 SF	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	223.8	-55.0	0	0	0	3	0	0	0	0	0.0	33.0	
NAP 801 SF	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	279.4	-56.9	0	-10	-10	3	0	0	0	0	0.0	21.1	
NAP 801 SF	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	223.8	-55.0	0	0	0	3	0	0	0	0	0.0	33.0	
NAP 801PF	Chiller Pump Room	S1	Water Pumps	2	85	100%	266.3	-56.5	0	-5	-5	3	8	0	0	3.0	0	35.5	61
NAP 801PF	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	263.1	-56.4	0	0	0	3	0	0	0	0	0	31.6	
NAP 801PF	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	213.4	-54.6	0	0	0	3	0	0	0	7.0	0	40.4	
NAP 801PF	Compressor Room	S4	Compressors	1	85	100%	225.4	-55.1	0	-5	-5	3	0	0	0	0	0	27.9	
NAP 801PF	Compressor Room	S5	Exhaust Fans	1	85	100%	215.3	-54.7	0	0	0	3	0	0	0	0	0	33.3	
NAP 801PF	Transformer Room	S6	Transformers	2	85	100%	215.3	-54.7	0	-5	-5	3	8	0	0	3.0	0	37.3	
NAP 801PF	Transformer Room	S7	Exhaust Fans	1	85	100%	215.3	-54.7	0	0	0	3	0	0	0	0	0	33.3	
NAP 801PF	Transferred Tank Pump Room	S8	Transferred Water Pumps	3	85	100%	215.3	-54.7	0	-5	-5	3	0	0	0	3.0	0	37.3	
NAP 801PF	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	215.3	-54.7	0	0	0	3	0	0	0	0	0	33.3	
NAP 8019F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	224.8	-55.0	0	-5	-5	3	0	0	0	3.0	0	31.0	
NAP 8019F	Generator Room	S11	Exhaust Fans	1	85	100%	336.5	-58.5	0	0	0	3	0	0	0	0	0	29.5	
NAP 8019F	Compressor Room	S12	Compressors	1	85	100%	275.6	-56.8	0	-10	-10	3	0	0	0	0	0	21.2	
NAP 8019F	Compressor Room	S13	Exhaust Fans	1	85	100%	279.6	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 8019F	F.S. Pump Room	S14	Water Pumps	1	85	100%	279.6	-56.9	0	-5	-5	3	8	0	0	0	0	32.1	
NAP 8019F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	279.9	-56.9	0	0	0	3	0	0	0	0	0	31.1	
NAP 8019F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	279.6	-56.9	0	-10	-10	3	0	0	0	7.0	0	26.1	
NAP 8019F	PAU Room 1	S17	PAU	2	85	100%	222.8	-55.0	0	-5	-5	3	0	0	0	3.0	0	31.0	
NAP 8019F	PAU Room 1	S18	Exhaust Fans	1	85	100%	222.8	-55.0	0	0	0	3	0	0	0	0	0	33.0	
NAP 8019F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	222.5	-54.9	0	-5	-5	3	0	0	0	3.0	0	31.1	
NAP 8019F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	223.8	-55.0	0	0	0	3	0	0	0	0	0	33.0	
NAP 8019F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	223.8	-55.0	0	-10	-10	3	8	0	0	3.0	0	32.0	
NAP 8019F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	223.8	-55.0	0	-10	-10	3	0	0	0	0	0	23.0	
NAP 8019F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	279.9	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 8019F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	215.8	-54.7	0	0	0	3	0	0	0	6.0	0	38.3	
NAP 8019F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	215.8	-54.7	0	0	0	3	0	0	0	3.0	0	36.3	
NAP 8019F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	215.8	-54.7	0	0	0	3	0	0	0	4.8	0	36.1	
NAP 8019F	TBE Room	S27	Exhaust Fans	1	85	100%	279.9	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 8019F	PAU Room 2	S28	PAU	5	85	100%	223.3	-55.0	0	0	0	3	0	0	0	7.0	0	40.0	
NAP 8019F	AHU Room	S29	AHU	1	85	100%	277.0	-56.9	0	-10	-10	3	0	0	0	0	0	21.2	
NAP 8019F	Lift Machine Room	S30	Lift Machine	3	85	100%	271.9	-56.7	0	-10	-10	3	0	0	0	4.8	0	26.1	
NAP 8019F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	281.5	-57.0	0	-10	-10	3	0	0	0	0	0	21.0	
NAP 8019F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	219.4	-54.8	0	-5	-5	3	8	0	0	4.8	0	34.8	
NAP 8019F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	219.4	-54.8	0	0	0	3	0	0	0	0	0	33.2	
NAP 8019F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	219.4	-54.8	0	-10	-10	3	0	0	0	3.0	0	41.2	
NAP 8019F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	261.7	-56.4	0	0	0	3	0	0	0	0	-11.5	34.6	
NAP 8019F	L1 HKPF	S37	Hammering Activities	3	113	7%	259.3	-56.3	0	0	0	3	0	3	0	4.8	-11.5	55.7	
NAP 8019F	FEHD	S38	Automatic Vehicle Washing Machine	1	85	27%	223.1	-55.0	0	0	0	3	0	0	0	0	-5.7	30.3	
NAP 8019F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	214.6	-54.6	0	0	0	3	0	0	0	0	-14.8	45.6	
NAP 8019F	EMSD Dept	S40	Tyre Changer	1	98	27%	235.0	-55.4	0	0	0	3	0	0	0	0	-5.7	39.9	
NAP 8019F	EMSD Dept	S41	Hammering Activities	4	113	7%	213.8	-54.6	0	0	0	3	0	3	0	6.0	-11.5	56.7	
NAP 8019F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	266.1	-56.5	0	0	0	3	0	0	0	6.0	-8.8	43.8	
NAP 8019F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	272.3	-56.7	0	0	0	3	0	0	0	0	-13.0	32.3	
NAP 8019F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	229.6	-55.2	0	0	0	3	0	0	0	0	-7.0	39.8	
NAP 8019F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	229.6	-55.2	0	0	0	3	0	0	0	0	-7.0	39.8	
NAP 8019F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	216.4	-54.7	0	0	0	3	0	0	0	0	-4.8	37.3	
NAP 8019F	EMSD Dept	S48	Drill Stand	1	99	17%	217.8	-54.8	0	0	0	3	0	0	0	0	-7.8	39.4	
NAP 8019F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	227.8	-55.1	0	0	0	3	0	0	0	0	0.0	46.9	
NAP 8019F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	278.9	-56.9	0	-10	-10	3	0	0	0	0	0.0	21.1	
NAP 8019F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	223.2	-55.0	0	0	0	3	0	0	0	0	0.0	33.0	
NAP 8019F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	278.9	-56.9	0	-10	-10	3	0	0	0	0	0.0	21.1	
NAP 8019F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	229.2	-55.0	0	0	0	3	0	0	0	0	0.0	33.0	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30min), dB(A)
NAP 80113F	Chiller Pump Room	S1	Water Pumps	2	85	100%	269.2	-56.6	0	-5	-5	3	5	0	0	3.0	0	35.4	61
NAP 80113F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	266.0	-56.5	0	0	0	3	0	0	0	0	0	31.5	
NAP 80113F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	217.0	-54.7	0	0	0	3	0	0	0	7.0	0	40.3	
NAP 80113F	Compressor Room	S4	Compressors	1	85	100%	226.6	-55.1	0	-5	-5	3	0	0	0	0	0	27.9	
NAP 80113F	Compressor Room	S5	Exhaust Fans	1	85	100%	218.8	-54.8	0	0	0	3	0	0	0	0	0	33.2	
NAP 80113F	Transformer Room	S6	Transformers	2	85	100%	218.8	-54.8	0	-5	-5	3	5	0	0	3.0	0	37.2	
NAP 80113F	Transformer Room	S7	Exhaust Fans	1	85	100%	218.8	-54.8	0	0	0	3	0	0	0	0	0	33.2	
NAP 80113F	Transfered Tank Pump Room	S8	Transfered Water Pumps	2	85	100%	218.8	-54.8	0	-5	-5	3	5	0	0	3.0	0	37.2	
NAP 80113F	Transfered Tank Pump Room	S9	Exhaust Fans	1	85	100%	218.8	-54.8	0	0	0	3	0	0	0	0	0	33.2	
NAP 80113F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	220.8	-55.1	0	-5	-5	3	0	0	0	3.0	0	30.9	
NAP 80113F	Generator Room	S11	Exhaust Fans	1	85	100%	338.7	-58.8	0	0	0	3	0	0	0	0	0	29.4	
NAP 80113F	Compressor Room	S12	Compressors	1	85	100%	377.5	-59.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 80113F	Compressor Room	S13	Exhaust Fans	1	85	100%	381.8	-57.0	0	-10	-10	3	0	0	0	0	0	21.0	
NAP 80113F	F.S. Pump Room	S14	Water Pumps	1	85	100%	381.8	-57.0	0	-5	-5	3	5	0	0	0	0	32.0	
NAP 80113F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	381.8	-57.0	0	0	0	3	0	0	0	0	0	31.0	
NAP 80113F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	381.2	-57.0	0	-10	-10	3	0	0	0	7.0	0	26.0	
NAP 80113F	PAU Room 1	S17	PAU	2	85	100%	224.9	-55.0	0	-5	-5	3	0	0	0	3.0	0	31.0	
NAP 80113F	PAU Room 1	S18	Exhaust Fans	1	85	100%	224.9	-55.0	0	0	0	3	0	0	0	0	0	33.0	
NAP 80113F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	224.3	-55.0	0	-5	-5	3	0	0	0	3.0	0	31.0	
NAP 80113F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	225.5	-55.1	0	0	0	3	0	0	0	0	0	32.9	
NAP 80113F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	225.5	-55.1	0	-10	-10	3	5	0	0	3.0	0	31.9	
NAP 80113F	Water Vehicle Fang and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	225.5	-55.1	0	-10	-10	3	0	0	0	0	0	22.9	
NAP 80113F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	279.4	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 80113F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	216.5	-54.7	0	0	0	3	0	0	0	6.0	0	39.3	
NAP 80113F	Exhaust Fan Room	S25	Walking Exhaust Fans	2	85	100%	216.5	-54.7	0	0	0	3	0	0	0	3.0	0	36.3	
NAP 80113F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	216.5	-54.7	0	0	0	3	0	0	0	4.8	0	38.1	
NAP 80113F	TBE Room	S27	Exhaust Fans	1	85	100%	279.1	-56.9	0	-10	-10	3	0	0	0	0	0	21.1	
NAP 80113F	PAU Room 2	S28	PAU	6	85	100%	223.5	-55.0	0	0	0	3	0	0	0	7.0	0	40.0	
NAP 80113F	AHU Room	S29	AHU	1	85	100%	276.8	-56.8	0	-10	-10	3	0	0	0	0	0	21.2	
NAP 80113F	Lift Machine Room	S30	Lift Machine	3	85	100%	271.3	-56.7	0	-10	-10	3	0	0	0	4.8	0	26.1	
NAP 80113F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	280.9	-57.0	0	-10	-10	3	0	0	0	0	0	21.0	
NAP 80113F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	218.7	-54.8	0	-5	-5	3	5	0	0	4.8	0	39.0	
NAP 80113F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	218.7	-54.8	0	0	0	3	0	0	0	0	0	33.2	
NAP 80113F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	218.7	-54.8	0	-10	-10	3	0	0	0	3.0	0	41.2	
NAP 80113F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	264.7	-56.5	0	0	0	3	0	0	0	0	-11.8	34.7	
NAP 80113F	L1 HKPF	S37	Hammering Activities	3	113	7%	269.8	-56.3	0	0	0	3	0	3	0	4.8	-11.8	52.7	
NAP 80113F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	223.8	-55.0	0	0	0	3	0	0	0	0	-5.7	30.3	
NAP 80113F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	215.3	-54.7	0	0	0	3	0	0	0	0	-14.8	45.5	
NAP 80113F	EMSD Dept	S40	Tyre Changer	1	98	27%	235.8	-55.4	0	0	0	3	0	0	0	0	-5.7	39.9	
NAP 80113F	EMSD Dept	S41	Hammering Activities	4	113	7%	214.5	-54.6	0	0	0	3	0	3	0	6.0	-11.8	58.7	
NAP 80113F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	266.6	-56.5	0	0	0	3	0	0	0	6.0	-8.9	43.6	
NAP 80113F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	372.8	-56.7	0	0	0	3	0	0	0	0	-13.0	32.3	
NAP 80113F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	230.3	-55.2	0	0	0	3	0	0	0	0	-7.0	39.8	
NAP 80113F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	230.3	-55.2	0	0	0	3	0	0	0	0	-7.0	39.8	
NAP 80113F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	217.1	-54.7	0	0	0	3	0	0	0	0	-4.8	37.3	
NAP 80113F	EMSD Dept	S48	Drill Stand	1	99	17%	219.3	-54.8	0	0	0	3	0	0	0	0	-7.8	30.4	
NAP 80113F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	226.2	-55.2	0	0	0	3	0	0	0	0	0.0	46.8	
NAP 80113F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	279.4	-56.9	0	-10	-10	3	0	0	0	0	0.0	21.1	
NAP 80113F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	223.9	-55.0	0	0	0	3	0	0	0	0	0.0	33.0	
NAP 80113F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	279.4	-56.9	0	-10	-10	3	0	0	0	0	0.0	21.1	
NAP 80113F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	223.9	-55.0	0	0	0	3	0	0	0	0	0.0	33.0	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant S.P.L. Leq(30mins), dB(A)
NAP 802 5F	Chiller Pump Room	S1	Water Pumps	2	85	100%	318.6	-58.1	-10	-5	-10	3	5	0	0	3.0	0	28.9	50
NAP 802 5F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	315.5	-58.0	-10	0	-10	3	0	0	0	0	0	20.0	
NAP 802 5F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	264.4	-56.4	-10	0	-10	3	0	0	0	7.0	0	28.6	
NAP 802 5F	Compressor Room	S4	Compressors	1	85	100%	275.5	-56.8	-10	-5	-10	3	0	0	0	0	0	21.2	
NAP 802 5F	Compressor Room	S5	Exhaust Fans	1	85	100%	264.7	-56.5	-10	0	-10	3	0	0	0	0	0	21.5	
NAP 802 5F	Transformer Room	S6	Transformers	2	85	100%	264.7	-56.5	-10	-5	-10	3	5	0	0	3.0	0	30.5	
NAP 802 5F	Transformer Room	S7	Exhaust Fans	1	85	100%	264.7	-56.5	-10	0	-10	3	0	0	0	0	0	21.5	
NAP 802 5F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	264.7	-56.5	-10	-5	-10	3	5	0	0	3.0	0	30.5	
NAP 802 5F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	264.7	-56.5	-10	0	-10	3	0	0	0	0	0	21.5	
NAP 802 5F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	273.4	-56.7	-10	-5	-10	3	0	0	0	3.0	0	24.3	
NAP 802 5F	Generator Room	S11	Exhaust Fans	1	85	100%	409.5	-60.2	-10	0	-10	3	0	0	0	0	0	17.8	
NAP 802 5F	Compressor Room	S12	Compressors	1	85	100%	327.9	-58.3	-10	-10	-10	3	0	0	0	0	0	19.7	
NAP 802 5F	Compressor Room	S13	Exhaust Fans	1	85	100%	332.2	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 802 5F	F.S. Pump Room	S14	Water Pumps	1	85	100%	332.2	-58.4	-10	-5	-10	3	5	0	0	0	0	25.6	
NAP 802 5F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	332.2	-58.4	-10	0	-10	3	0	0	0	0	0	19.6	
NAP 802 5F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	332.1	-58.4	-10	-10	-10	3	0	0	0	7.0	0	26.6	
NAP 802 5F	PAU Room 1	S17	PAU	2	85	100%	273.1	-56.7	-10	-5	-10	3	0	0	0	3.0	0	24.3	
NAP 802 5F	PAU Room 1	S18	Exhaust Fans	1	85	100%	273.1	-56.7	-10	0	-10	3	0	0	0	0	0	21.3	
NAP 802 5F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	273.1	-56.7	-10	-5	-10	3	0	0	0	3.0	0	24.3	
NAP 802 5F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	274.0	-56.8	-10	0	-10	3	0	0	0	0	0	21.2	
NAP 802 5F	Water Vehicle Fâng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	274.0	-56.8	-10	-10	-10	3	5	0	0	3.0	0	30.2	
NAP 802 5F	Water Vehicle Fâng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	274.0	-56.8	-10	-10	-10	3	0	0	0	0	0	21.2	
NAP 802 5F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	332.5	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 802 5F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	267.3	-56.5	-10	0	-10	3	0	0	0	6.0	0	27.5	
NAP 802 5F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	267.3	-56.5	-10	0	-10	3	0	0	0	3.0	0	24.5	
NAP 802 5F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	267.3	-56.5	-10	0	-10	3	0	0	0	4.8	0	26.3	
NAP 802 5F	T&E Room	S27	Exhaust Fans	1	85	100%	332.9	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 802 5F	PAU Room 2	S28	PAU	5	85	100%	275.0	-56.8	-10	0	-10	3	0	0	0	7.0	0	28.2	
NAP 802 5F	AHU Room	S29	AHU	1	85	100%	339.0	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 802 5F	Lift Machine Room	S30	Lift Machine	3	85	100%	325.0	-58.2	-10	-10	-10	3	0	0	0	4.8	0	24.6	
NAP 802 5F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	334.9	-58.5	-10	-10	-10	3	0	0	0	0	0	19.5	
NAP 802 5F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	274.2	-56.8	-10	-5	-10	3	5	0	0	4.8	0	32.0	
NAP 802 5F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	274.2	-56.8	-10	0	-10	3	0	0	0	0	0	21.2	
NAP 802 5F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	274.2	-56.8	-10	-10	-10	3	0	0	0	3.0	0	39.2	
NAP 802 5F	L1 HKPF	S35	Handheld Pneumatic Tools	1	100	7%	312.1	-57.9	-10	0	-10	3	0	0	0	0	-11.6	23.3	
NAP 802 5F	L1 HKPF	S37	Hammering Activities	3	113	7%	311.3	-57.9	-10	0	-10	3	0	3	0	4.8	-11.6	44.1	
NAP 802 5F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	275.0	-56.8	-10	0	-10	3	0	0	0	0	-5.7	18.5	
NAP 802 5F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	269.1	-56.6	-10	0	-10	3	0	0	0	0	-14.8	33.8	
NAP 802 5F	EMSD Dept	S40	Tyre Changer	1	98	27%	269.6	-57.2	-10	0	-10	3	0	0	0	0	-5.7	28.1	
NAP 802 5F	EMSD Dept	S41	Hammering Activities	4	113	7%	267.7	-56.6	-10	0	-10	3	0	3	0	6.0	-11.6	48.7	
NAP 802 5F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	316.7	-58.1	-10	0	-10	3	0	0	0	6.0	-8.8	32.2	
NAP 802 5F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	325.1	-58.2	-10	0	-10	3	0	0	0	0	-13.0	20.8	
NAP 802 5F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	284.1	-57.1	-10	0	-10	3	0	0	0	0	-7.0	27.9	
NAP 802 5F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	284.1	-57.1	-10	0	-10	3	0	0	0	0	-7.0	27.9	
NAP 802 5F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	269.4	-56.6	-10	0	-10	3	0	0	0	0	-4.8	25.4	
NAP 802 5F	EMSD Dept	S48	Drill Stand	1	99	17%	269.9	-56.6	-10	0	-10	3	0	0	0	0	-7.8	27.8	
NAP 802 5F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	281.6	-57.0	-10	0	-10	3	0	0	0	0	0.0	35.0	
NAP 802 5F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	332.5	-58.4	-10	-10	-10	3	0	0	0	0	0.0	19.6	
NAP 802 5F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	274.5	-56.8	-10	0	-10	3	0	0	0	0	0.0	21.2	
NAP 802 5F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	332.5	-58.4	-10	-10	-10	3	0	0	0	0	0.0	19.6	
NAP 802 5F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	274.5	-56.8	-10	0	-10	3	0	0	0	0	0.0	21.2	
NAP 8029F	Chiller Pump Room	S1	Water Pumps	2	85	100%	320.2	-58.1	-10	-5	-10	3	5	0	0	3.0	0	28.9	50
NAP 8029F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	317.1	-58.0	-10	0	-10	3	0	0	0	0	0	20.0	
NAP 8029F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	266.3	-56.5	-10	0	-10	3	0	0	0	7.0	0	28.5	
NAP 8029F	Compressor Room	S4	Compressors	1	85	100%	277.3	-56.9	-10	-5	-10	3	0	0	0	0	0	21.1	
NAP 8029F	Compressor Room	S5	Exhaust Fans	1	85	100%	268.6	-56.6	-10	0	-10	3	0	0	0	0	0	21.5	
NAP 8029F	Transformer Room	S6	Transformers	2	85	100%	268.6	-56.6	-10	-5	-10	3	5	0	0	3.0	0	30.5	
NAP 8029F	Transformer Room	S7	Exhaust Fans	1	85	100%	268.6	-56.6	-10	0	-10	3	0	0	0	0	0	21.5	
NAP 8029F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	268.6	-56.6	-10	-5	-10	3	5	0	0	3.0	0	30.5	
NAP 8029F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	268.6	-56.6	-10	0	-10	3	0	0	0	0	0	21.5	
NAP 8029F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	274.7	-56.8	-10	-5	-10	3	0	0	0	3.0	0	24.2	
NAP 8029F	Generator Room	S11	Exhaust Fans	1	85	100%	410.7	-60.3	-10	0	-10	3	0	0	0	0	0	17.7	
NAP 8029F	Compressor Room	S12	Compressors	1	85	100%	328.8	-58.3	-10	-10	-10	3	0	0	0	0	0	19.7	
NAP 8029F	Compressor Room	S13	Exhaust Fans	1	85	100%	333.0	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 8029F	F.S. Pump Room	S14	Water Pumps	1	85	100%	333.0	-58.4	-10	-5	-10	3	5	0	0	0	0	25.6	
NAP 8029F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	333.0	-58.4	-10	0	-10	3	0	0	0	0	0	19.6	
NAP 8029F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	332.7	-58.4	-10	-10	-10	3	0	0	0	7.0	0	26.6	
NAP 8029F	PAU Room 1	S17	PAU	2	85	100%	273.8	-56.7	-10	-5	-10	3	0	0	0	3.0	0	24.3	
NAP 8029F	PAU Room 1	S18	Exhaust Fans	1	85	100%	273.8	-56.7	-10	0	-10	3	0	0	0	0	0	21.3	
NAP 8029F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	273.5	-56.7	-10	-5	-10	3	0	0	0	3.0	0	24.3	
NAP 8029F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	274.4	-56.8	-10	0	-10	3	0	0	0	0	0	21.2	
NAP 8029F	Water Vehicle Fâng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	274.4	-56.8	-10	-10	-10	3	5	0	0	3.0	0	30.2	
NAP 8029F	Water Vehicle Fâng and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	274.4	-56.8	-10	-10	-10	3	0	0	0	0	0	21.2	
NAP 8029F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	332.1	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 8029F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	266.8	-56.5	-10	0	-10	3	0	0	0	6.0	0	27.5	
NAP 8029F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	266.8	-56.5	-10	0	-10	3	0	0	0	3.0	0	24.5	
NAP 8029F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	266.8	-56.5	-10	0	-10	3	0	0	0	4.8	0	26.3	
NAP 8029F	T&E Room	S27	Exhaust Fans	1	85	100%	332.2	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 8029F	PAU Room 2	S28	PAU	5	85	100%	274.1	-56.8	-10	0	-10	3	0	0	0	7.0	0	28.2	
NAP 8029F	AHU Room	S29	AHU	1	85	100%	329.0	-58.3	-10	-10	-10	3	0	0	0	0	0	19.7	
NAP 8029F	Lift Machine Room	S30	Lift Machine	3	85	100%	323.6	-58.2	-10	-10	-10	3	0	0	0	4.8	0	24.6	
NAP 8029F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	333.6	-58.5	-10	-10	-10	3	0	0	0	0	0	19.5	
NAP 8029F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	272.5	-56.7	-10	-5	-10	3	5	0	0	4.8	0	32.1	
NAP 8029F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	272.5	-56.7	-10	0	-10	3	0	0	0	0	0	21.3	
NAP 8029F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	272.5	-56.7	-10	-10	-10	3	0	0	0	3.0	0	39.3	
NAP 8029F	L1 HKPF	S36	Handheld Pneumatic Tools	1	100	7%	313.7	-57.9	-10	0	-10	3	0	0	0	0	-11.6	23.3	
NAP 8029F	L1 HKPF	S37	Hammering Activities	3	113	7%	311.7	-57.9	-10	0	-10	3	0	3	0	4.8	-11.6	44.1	
NAP 8029F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	275.1	-56.8	-10	0	-10	3	0	0	0	0	-5.7	18.5	
NAP 8029F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	268.7	-56.6	-10	0	-10	3	0	0	0	0	-14.8	33.8	
NAP 8029F	EMSD Dept	S40	Tyre Changer	1	98	27%	269.1	-57.2	-10	0	-10	3	0	0	0	0	-5.7	28.1	
NAP 8029F	EMSD Dept	S41	Hammering Activities	4	113	7%	267.2	-56.5	-10	0	-10	3	0	3	0	6.0	-11.6	48.8	
NAP 8029F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	316.2	-58.1	-10	0	-10	3	0	0	0	6.0	-8.8	32.2	
NAP 8029F	EMSD Dept	S43	Roller Brake Tester	1	99	5%	324.7	-58.2	-10	0	-10	3	0	0	0	0	-13.0	20.8	
NAP 8029F	EMSD Dept	S44	Motorcycle Brake Tester	1	99	20%	283.6	-57.1	-10	0	-10	3	0	0	0	0	-7.0	27.9	
NAP 8029F	L1 HKPF	S45	Roller Brake Tester	1	99	20%	283.6	-57.1	-10	0	-10	3	0	0	0	0	-7.0	27.9	
NAP 8029F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	268.9	-56.6	-10	0	-10	3	0	0	0	0	-4.8	25.4	
NAP 8029F	EMSD Dept	S48	Drill Stand	1	99	17%	269.4	-56.6	-10	0	-10	3	0	0	0	0	-7.8	27.8	
NAP 8029F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	281.1	-57.0	-10	0	-10	3	0	0	0	0	0.0	35.0	
NAP 8029F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	332.1	-58.4	-10	-10	-10	3	0	0	0	0	0.0	19.6	
NAP 8029F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	274.0	-56.8	-10	0	-10	3	0	0	0	0	0.0	21.2	
NAP 8029F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	332.1	-58.4	-10	-10	-10	3	0	0	0	0	0.0	19.6	
NAP 8029F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	274.0	-56.8	-10	0	-10	3	0	0	0	0	0.0	21.2	

(Day / Evening Time)

NAP ID	Room	Source ID	Identified Noise Sources	Quantity / Max concurrent works, nos.	Maximum Allowable SWL, dB(A)	Percentage on-time over 30 mins	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Percentage On-time Correction, dB(A)	Predicted Noise Level, dB(A)	Resultant SPL, Leq(30min), dB(A)
NAP 80213F	Chiller Pump Room	S1	Water Pumps	2	85	100%	322.6	-58.2	-10	-5	-10	3	5	0	0	3.0	0	26.8	60
NAP 80213F	Chiller Pump Room	S2	Exhaust Fans	1	85	100%	319.5	-58.1	-10	0	-10	3	0	0	0	0	0	19.9	
NAP 80213F	Exhaust Fan Room	S3	General Exhaust Fans	5	85	100%	269.2	-56.6	-10	0	-10	3	0	0	0	7.0	0	28.4	
NAP 80213F	Compressor Room	S4	Compressors	1	85	100%	280.1	-56.9	-10	-5	-10	3	0	0	0	0	0	21.1	
NAP 80213F	Compressor Room	S5	Exhaust Fans	1	85	100%	269.5	-56.6	-10	0	-10	3	0	0	0	0	0	21.4	
NAP 80213F	Transformer Room	S6	Transformers	2	85	100%	269.6	-56.6	-10	-5	-10	3	5	0	0	3.0	0	30.4	
NAP 80213F	Transformer Room	S7	Exhaust Fans	1	85	100%	269.5	-56.6	-10	0	-10	3	0	0	0	0	0	21.4	
NAP 80213F	Transferred Tank Pump Room	S8	Transferred Water Pumps	2	85	100%	269.5	-56.6	-10	-5	-10	3	5	0	0	3.0	0	30.4	
NAP 80213F	Transferred Tank Pump Room	S9	Exhaust Fans	1	85	100%	269.5	-56.6	-10	0	-10	3	0	0	0	0	0	21.4	
NAP 80213F	Generator Room	S10	Generator (operations during power failure / maintenance)	2	85	100%	277.1	-56.8	-10	-5	-10	3	0	0	0	3.0	0	24.1	
NAP 80213F	Generator Room	S11	Exhaust Fans	1	85	100%	412.5	-60.3	-10	0	-10	3	0	0	0	0	0	17.7	
NAP 80213F	Compressor Room	S12	Compressors	1	85	100%	339.2	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 80213F	Compressor Room	S13	Exhaust Fans	1	85	100%	334.6	-58.5	-10	-10	-10	3	0	0	0	0	0	19.5	
NAP 80213F	F.S. Pump Room	S14	Water Pumps	1	85	100%	334.6	-58.5	-10	-5	-10	3	5	0	0	0	0	25.5	
NAP 80213F	F.S. Pump Room	S15	Exhaust Fans	1	85	100%	334.6	-58.5	-10	0	-10	3	0	0	0	0	0	19.5	
NAP 80213F	Exhaust Fan Room	S16	General Exhaust Fans	5	85	100%	334.1	-58.5	-10	-10	-10	3	0	0	0	7.0	0	26.5	
NAP 80213F	PAU Room 1	S17	PAU	2	85	100%	275.5	-56.8	-10	-5	-10	3	0	0	0	3.0	0	24.2	
NAP 80213F	PAU Room 1	S18	Exhaust Fans	1	85	100%	275.5	-56.8	-10	0	-10	3	0	0	0	0	0	21.2	
NAP 80213F	Chiller Plant Room	S19	Chiller Plant	2	85	100%	275.0	-56.8	-10	-5	-10	3	0	0	0	3.0	0	24.2	
NAP 80213F	Chiller Plant Room	S20	Exhaust Fans	1	85	100%	275.8	-56.8	-10	0	-10	3	0	0	0	0	0	21.2	
NAP 80213F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S21	Water Pumps	2	85	100%	275.9	-56.8	-10	-10	-10	3	5	0	0	3.0	0	30.2	
NAP 80213F	Water Vehicle Filling and Automatic Vehicle Washing System Water Tank and Water Pump Room	S22	Exhaust Fans	1	85	100%	275.9	-56.8	-10	-10	-10	3	0	0	0	0	0	21.2	
NAP 80213F	Battery Charging Room	S23	Exhaust Fans	1	85	100%	332.6	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 80213F	Exhaust Fan Room	S24	General Exhaust Fans	4	85	100%	267.3	-56.5	-10	0	-10	3	0	0	0	8.0	0	27.5	
NAP 80213F	Exhaust Fan Room	S25	Welding Exhaust Fans	2	85	100%	267.3	-56.5	-10	0	-10	3	0	0	0	3.0	0	24.5	
NAP 80213F	Exhaust Fan Room	S26	Exhaust Fans	3	85	100%	267.3	-56.5	-10	0	-10	3	0	0	0	4.8	0	25.9	
NAP 80213F	TBE Room	S27	Exhaust Fans	1	85	100%	332.3	-58.4	-10	-10	-10	3	0	0	0	0	0	19.6	
NAP 80213F	PAU Room 2	S28	PAU	5	85	100%	274.2	-56.8	-10	0	-10	3	0	0	0	7.0	0	28.2	
NAP 80213F	AHU Room	S29	AHU	1	85	100%	328.9	-58.3	-10	-10	-10	3	0	0	0	0	0	19.7	
NAP 80213F	Lift Machine Room	S30	Lift Machine	3	85	100%	323.2	-58.2	-10	-10	-10	3	0	0	0	4.8	0	24.6	
NAP 80213F	Lift Machine Room	S31	Exhaust Fans	1	85	100%	333.1	-58.5	-10	-10	-10	3	0	0	0	0	0	19.5	
NAP 80213F	Portable Flushing and Makeup Water Pump Room	S32	Water Pumps	3	85	100%	272.0	-56.7	-10	-5	-10	3	5	0	0	4.8	0	32.1	
NAP 80213F	Portable Flushing and Makeup Water Pump Room	S33	Exhaust Fans	1	85	100%	272.0	-56.7	-10	0	-10	3	0	0	0	0	0	21.3	
NAP 80213F	Cooling Tower Plant Room	S34	Cooling towers	2	100	100%	272.0	-56.7	-10	-10	-10	3	0	0	0	3.0	0	39.3	
NAP 80213F	L1 HKPF	S36	Hand-held Pneumatic Tools	1	100	7%	316.2	-58.0	-10	0	-10	3	0	0	0	0	-11.8	23.2	
NAP 80213F	L1 HKPF	S37	Hammering Activities	3	113	7%	313.0	-57.9	-10	0	-10	3	0	3	0	4.8	-11.8	44.1	
NAP 80213F	FEHD	S38	Automatic Vehicle Washing Machine	1	88	27%	275.6	-56.8	-10	0	-10	3	0	0	0	0	-5.7	18.5	
NAP 80213F	EMSD Dept	S39	Motorcycle Speedometer Calibrator	1	112	3%	269.2	-56.6	-10	0	-10	3	0	0	0	0	-14.8	33.6	
NAP 80213F	EMSD Dept	S40	Tyre Changer	1	98	27%	269.6	-57.2	-10	0	-10	3	0	0	0	0	-5.7	28.1	
NAP 80213F	EMSD Dept	S41	Hammering Activities	4	113	7%	267.8	-56.6	-10	0	-10	3	0	3	0	6.0	-11.8	46.7	
NAP 80213F	EMSD Dept	S42	Hand-held Pneumatic Tools	4	100	13%	314.7	-58.1	-10	0	-10	3	0	0	0	6.0	-8.9	32.2	
NAP 80213F	EMSD Dept	S43	Roller Brake Tester	1	89	5%	325.2	-58.2	-10	0	-10	3	0	0	0	0	-13.0	20.8	
NAP 80213F	EMSD Dept	S44	Motorcycle Brake Tester	1	98	20%	284.2	-57.1	-10	0	-10	3	0	0	0	0	-7.0	27.9	
NAP 80213F	L1 HKPF	S45	Roller Brake Tester	1	98	20%	284.2	-57.1	-10	0	-10	3	0	0	0	0	-7.0	27.9	
NAP 80213F	EMSD Dept	S47	Bench Grinder	1	93.8	33%	269.4	-56.6	-10	0	-10	3	0	0	0	0	-4.8	25.4	
NAP 80213F	EMSD Dept	S48	Drill Stand	1	99	17%	270.0	-56.6	-10	0	-10	3	0	0	0	0	-7.8	27.6	
NAP 80213F	L1 HKPF	S49	Motorcycle Brake Roller Tester	1	99	100%	281.6	-57.0	-10	0	-10	3	0	0	0	0	0.0	35.0	
NAP 80213F	Exhaust Fan Room	S50	Exhaust Fans	1	85	100%	332.6	-58.4	-10	-10	-10	3	0	0	0	0	0.0	19.6	
NAP 80213F	Exhaust Fan Room	S51	Exhaust Fans	1	85	100%	274.5	-56.8	-10	0	-10	3	0	0	0	0	0.0	21.2	
NAP 80213F	Exhaust Fan Room	S52	Exhaust Fans	1	85	100%	332.6	-58.4	-10	-10	-10	3	0	0	0	0	0.0	19.6	
NAP 80213F	Exhaust Fan Room	S53	Exhaust Fans	1	85	100%	274.5	-56.8	-10	0	-10	3	0	0	0	0	0.0	21.2	

				Day/ Evening Time											
NAP ID	Room	Source ID	Identified Noise Sources	Max no. of events in 30 mins, nos.	$L_{eq(30min)}$, dB(A)	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Predicted Noise Level, dB(A)
NAP 101 1F	L1 HKPF	S35	Brake Test Strip	1	62	350.3	-16.7	-10	0	-10	3	0	0	0	0	38.3
NAP 101 10F	L1 HKPF	S35	Brake Test Strip	1	62	351.6	-16.7	-10	0	-10	3	0	0	0	0	38.3
NAP 101 21F	L1 HKPF	S35	Brake Test Strip	1	62	356.0	-16.8	-10	0	-10	3	0	0	0	0	38.2
NAP 201 1F	L1 HKPF	S35	Brake Test Strip	1	62	172.4	-13.8	0	0	0	3	0	0	0	0	51.4
NAP 201 3F	L1 HKPF	S35	Brake Test Strip	1	62	172.5	-13.8	0	0	0	3	0	0	0	0	51.4
NAP 201 6F	L1 HKPF	S35	Brake Test Strip	1	62	173.2	-13.8	0	0	0	3	0	0	0	0	51.4
NAP 202 1F	L1 HKPF	S35	Brake Test Strip	1	62	278.3	-15.7	-10	0	-10	3	0	0	0	0	39.3
NAP 202 3F	L1 HKPF	S35	Brake Test Strip	1	62	279.4	-15.7	-10	0	-10	3	0	0	0	0	39.3
NAP 202 6F	L1 HKPF	S35	Brake Test Strip	1	62	279.8	-15.7	-10	0	-10	3	0	0	0	0	39.3
NAP 301 1F	L1 HKPF	S35	Brake Test Strip	1	62	246.9	-15.2	-10	0	-10	3	0	0	0	0	39.8
NAP 301 12F	L1 HKPF	S35	Brake Test Strip	1	62	249.8	-15.2	-10	0	-10	3	0	0	0	0	39.8
NAP 301 24F	L1 HKPF	S35	Brake Test Strip	1	62	257.7	-15.4	-10	0	-10	3	0	0	0	0	39.6
NAP 401 1F	L1 HKPF	S35	Brake Test Strip	1	62	402.5	-17.3	0	0	0	3	0	0	0	0	47.7
NAP 401 15F	L1 HKPF	S35	Brake Test Strip	1	62	405.0	-17.3	0	0	0	3	0	0	0	0	47.7
NAP 401 30F	L1 HKPF	S35	Brake Test Strip	1	62	412.5	-17.4	0	0	0	3	0	0	0	0	47.6
NAP 501 GF	L1 HKPF	S35	Brake Test Strip	1	62	403.7	-17.3	0	0	0	3	0	0	0	0	47.7
NAP 601 1F	L1 HKPF	S35	Brake Test Strip	1	62	439.1	-17.7	0	0	0	3	0	0	0	0	47.3
NAP 601 15F	L1 HKPF	S35	Brake Test Strip	1	62	441.5	-17.7	0	0	0	3	0	0	0	0	47.3
NAP 601 30F	L1 HKPF	S35	Brake Test Strip	1	62	448.4	-17.8	0	0	0	3	0	0	0	0	47.2
NAP 701 1F	L1 HKPF	S35	Brake Test Strip	1	62	428.2	-17.6	-10	0	-10	3	0	0	0	0	37.4
NAP 701 15F	L1 HKPF	S35	Brake Test Strip	1	62	430.5	-17.6	-10	0	-10	3	0	0	0	0	37.4
NAP 701 30F	L1 HKPF	S35	Brake Test Strip	1	62	437.6	-17.7	0	0	0	3	0	0	0	0	47.3
NAP 801 6F	L1 HKPF	S35	Brake Test Strip	1	62	255.8	-15.3	0	0	0	3	0	0	0	0	49.7
NAP 8019F	L1 HKPF	S35	Brake Test Strip	1	62	257.8	-15.4	0	0	0	3	0	0	0	0	49.6
NAP 80113F	L1 HKPF	S35	Brake Test Strip	1	62	260.8	-15.4	0	0	0	3	0	0	0	0	49.6
NAP 802 5F	L1 HKPF	S35	Brake Test Strip	1	62	308.6	-16.2	-10	0	-10	3	0	0	0	0	38.8
NAP 8029F	L1 HKPF	S35	Brake Test Strip	1	62	311.2	-16.2	-10	0	-10	3	0	0	0	0	38.8
NAP 80213F	L1 HKPF	S35	Brake Test Strip	1	62	313.7	-16.2	-10	0	-10	3	0	0	0	0	38.8

Remark

[1] The building design shall ensure that NSR 1 will not have direct line-of-sight to the brake test strip at Level 1. A correction of -10 dB(A) was adopted.

				Night Time													
NAP ID	Room	Source ID	Identified Noise Sources	Max no. of events in 30 mins, nos.	$L_{eq(30min)}$, dB(A)	Slant Distance, m	Distance Attenuation, dB(A)	Barrier Correction due to Surrounding Buildings, dB(A)	Barrier Correction due to Interior Structure, dB(A)	Overall Barrier Correction, dB(A)	Façade Correction, dB(A)	Correction for Tonality, dB(A)	Correction for Impulsiveness, dB(A)	Correction for Intermittency, dB(A)	Correction for Quantity, dB(A)	Predicted Noise Level, dB(A)
NAP 101 1F	L1 HKPF	S35	Brake Test Strip	1	62	350.3	-16.7	-10	0	-10	3	0	0	0	0	38.3
NAP 101 10F	L1 HKPF	S35	Brake Test Strip	1	62	351.6	-16.7	-10	0	-10	3	0	0	0	0	38.3
NAP 101 21F	L1 HKPF	S35	Brake Test Strip	1	62	355.0	-16.8	-10	0	-10	3	0	0	0	0	38.2
NAP 201 1F	L1 HKPF	S35	Brake Test Strip	No night time operation												
NAP 201 3F	L1 HKPF	S35	Brake Test Strip													
NAP 201 5F	L1 HKPF	S35	Brake Test Strip													
NAP 202 1F	L1 HKPF	S35	Brake Test Strip	No night time operation												
NAP 202 3F	L1 HKPF	S35	Brake Test Strip													
NAP 202 6F	L1 HKPF	S35	Brake Test Strip													
NAP 301 1F	L1 HKPF	S35	Brake Test Strip	1	62	246.9	-15.2	-10	0	-10	3	0	0	0	0	39.8
NAP 301 12F	L1 HKPF	S35	Brake Test Strip	1	62	249.6	-15.2	-10	0	-10	3	0	0	0	0	39.8
NAP 301 24F	L1 HKPF	S35	Brake Test Strip	1	62	257.7	-15.4	-10	0	-10	3	0	0	0	0	39.6
NAP 401 1F	L1 HKPF	S35	Brake Test Strip	1	62	402.5	-17.3	0	0	0	3	0	0	0	0	47.7
NAP 401 15F	L1 HKPF	S35	Brake Test Strip	1	62	405.0	-17.3	0	0	0	3	0	0	0	0	47.7
NAP 401 30F	L1 HKPF	S35	Brake Test Strip	1	62	412.5	-17.4	0	0	0	3	0	0	0	0	47.6
NAP 501 GF	L1 HKPF	S35	Brake Test Strip	No night time operation												
NAP 601 1F	L1 HKPF	S35	Brake Test Strip	1	62	439.1	-17.7	0	0	0	3	0	0	0	0	47.3
NAP 601 15F	L1 HKPF	S35	Brake Test Strip	1	62	441.5	-17.7	0	0	0	3	0	0	0	0	47.3
NAP 601 30F	L1 HKPF	S35	Brake Test Strip	1	62	448.4	-17.8	0	0	0	3	0	0	0	0	47.2
NAP 701 1F	L1 HKPF	S35	Brake Test Strip	1	62	428.2	-17.6	-10	0	-10	3	0	0	0	0	37.4
NAP 701 15F	L1 HKPF	S35	Brake Test Strip	1	62	430.5	-17.6	-10	0	-10	3	0	0	0	0	37.4
NAP 701 30F	L1 HKPF	S35	Brake Test Strip	1	62	437.6	-17.7	0	0	0	3	0	0	0	0	47.3
NAP 801 5F	L1 HKPF	S35	Brake Test Strip	No night time operation												
NAP 8019F	L1 HKPF	S35	Brake Test Strip													
NAP 80113F	L1 HKPF	S35	Brake Test Strip													
NAP 802 5F	L1 HKPF	S35	Brake Test Strip	No night time operation												
NAP 8029F	L1 HKPF	S35	Brake Test Strip													
NAP 80213F	L1 HKPF	S35	Brake Test Strip													

Remark:

[1] The building design shall ensure that NSR 1 will not have direct line-of-sight to the brake test strip at Level 1. A correction of -10 dB(A) was adopted.

NAP ID	Level	Daytime and Eveningtime				Nighttime			
		Predicted Fixed Noise	Predicted Event Noise (S35)	Cumulative Noise Level (dB(A))	Criteria (dB(A))	Predicted Fixed Noise	Predicted Event Noise (S35)	Cumulative Noise Level (dB(A))	Criteria (dB(A))
NAP 101	1/F	48	38	48	57	42	38	44	50
	10/F	48	38	48		42	38	44	
	21/F	48	38	48		42	38	44	
NAP 201	1/F	63	51	63	64	No operation in night-time			
	3/F	63	51	63					
	6/F	63	51	63					
NAP 202	1/F	50	39	50	64	No operation in night-time			
	3/F	50	39	50					
	6/F	50	39	50					
NAP 301	1/F	51	40	51	58	44	40	45	55
	12/F	51	40	51		44	40	45	
	24/F	51	40	51		44	40	45	
NAP 401	1/F	57	48	57	65	50	48	52	55
	15/F	57	48	57		50	48	52	
	30/F	57	48	57		50	48	52	
NAP 501	G/F	57	48	57	65	No operation in night-time			
NAP 601	1/F	56	47	57	65	49	47	51	55
	15/F	56	47	57		49	47	51	
	30/F	56	47	57		49	47	51	
NAP 701	1/F	47	37	47	65	41	37	43	55
	15/F	47	37	47		41	37	43	
	30/F	55	47	56		42	47	48	
NAP 801	5/F	61	50	61	65	No operation in night-time			
	9/F	61	50	61					
	13/F	61	50	61					
NAP 802	5/F	50	39	50	65	No operation in night-time			
	9/F	50	39	50					
	13/F	50	39	50					

Remark:
According to the result above, which has not taken into account noise in the 10-second preparation time period, the highest fixed source noise level at the worst affected NSR (i.e. NSR 1) at nighttime would be 49dB(A). Assuming noise from the preparation was similar to that of the test itself, a sensitivity has been conducted and the results revealed that the highest fixed source noise level would still not exceed the 50dB(A) criterion.

Appendix 4.6a

Detailed Calculation of Construction Noise Impact Assessment (Unmitigated Scenario)

Construction Plant Inventory for the Proposed Project (Unmitigated Scenario)

PME		TM or Other Reference	SWL, dB(A)	No. of PME	% on Time	On-Time % Correction, dB(A)	Total SWL, dB(A)		Highest SWL of Each Construction Activity, dB(A)
Activity 1 - Site Formation, Excavation and Filling									
Excavation and Filling	Air compressor, air flow > 10 m^3/min and <= 30 m^3/min	CNP 002	102	1	100%	0.0	102	114	119
	Excavator / loader, wheeled / tracked	CNP 081	112	1	75%	-1.2	111		
	Generator, Standard	CNP 101	108	1	100%	0.0	108		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	2	50%	-3.0	105		
Breaking excavated hard/ oversize materials	Breaker, hand-held, mass >= 20 kg and <= 35 kg	CNP 025	111	1	50%	-3.0	108	115	
	Excavator / loader, wheeled / tracked	CNP 081	112	2	75%	-1.2	114		
Ground Compression	Bulldozer	CNP 030	115	2	100%	0.0	118	119	
	Roller, vibratory	CNP 186	108	2	100%	0.0	111		
Activity 2 - Foundation									
General Foundation Construction	Air compressor, air flow > 30 m^3/min	CNP 003	104	1	75%	-1.2	103	118	119
	Bar bender and cutter (electric)	CNP 021	90	3	75%	-1.2	94		
	Generator	CNP 101	108	2	100%	0.0	111		
	Drill / grinder, hand-held (electric)	CNP 065	98	2	50%	-3.0	98		
	Saw, circular, wood	CNP 201	108	2	75%	-1.2	110		
	Water pump, submersible (electric)	CNP 283	85	3	75%	-1.2	89		
	Excavator / loader, wheeled / tracked	CNP 081	112	1	75%	-1.2	111		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	1	50%	-3.0	102		
	Lorry	CNP 141	112	1	50%	-3.0	109		
	Crane, mobile / barge mounted (diesel)	CNP 048	112	1	75%	-1.2	111		
Piling Works	Generator	CNP 101	108	1	100%	0.0	108	116	
	Piling, vibrating hammer	CNP 172	115	1	100%	0.0	115		
Concreting Works	Concrete lorry mixer	CNP 044	109	1	75%	-1.2	108	119	
	Concrete pump, stationary / lorry mounted	CNP 047	109	1	75%	-1.2	108		
	Generator	CNP 101	108	1	100%	0.0	108		
	Poker, vibratory, hand-held	CNP 170	113	3	100%	0.0	118		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	1	50%	-3.0	102		
	Lorry, gross vehicle weight > 38 tonne	Other [1]	112	1	50%	-3.0	109		
Activity 3 - Main Building Construction									
General construction works	Air compressor, air flow > 10 m^3/min and <= 30 m^3/min	CNP 002	102	1	75%	-1.2	101	117	119
	Bar bender and cutter (electric)	CNP 021	90	3	100%	0.0	95		
	Crane, mobile / barge mounted (diesel)	CNP 048	112	1	75%	-1.2	111		
	Crane, tower (electric)	CNP 049	95	1	100%	0.0	95		
	Drill / grinder, hand-held (electric)	CNP 065	98	1	75%	-1.2	97		
	Generator	CNP 101	108	1	100%	0.0	108		
	Breaker, hand-held, mass >= 20 kg and <= 35 kg	CNP 025	111	2	50%	-3.0	111		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	1	50%	-3.0	102		
	Saw, circular, wood	CNP 201	108	3	70%	-1.5	111		
Concreting works	Concrete lorry mixer	CNP 044	109	1	75%	-1.2	108	119	
	Concrete pump, stationary / lorry mounted	CNP 047	109	1	75%	-1.2	108		
	Generator	CNP 101	108	1	100%	0.0	108		
	Poker, vibratory, hand-held	CNP 170	113	3	100%	0.0	118		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	1	50%	-3.0	102		
	Lorry, gross vehicle weight > 38 tonne	Other [1]	112	1	50%	-3.0	109		
Finishing	Drill, percussive, hand-held (electric)	CNP 064	103	3	50%	-3.0	105	118	
	Jig-saw, hand-held wood (electric)	Other [1]	99	1	50%	-3.0	96		
	Concrete corer	CNP 042	117	2	50%	-3.0	117		
	Lorry, with crane / grab, 5.5 tonne < gross vehicle weight < 38 tonne	Other [1]	105	2	50%	-3.0	105		

Note
[1] Reference to "Sound Power Levels of other commonly used PME"

Construction Plant Inventory for Concurrent Project - WSDCSDHQ Development

PME		TM or Other Reference	SWL, dB(A)	No. of PME	% on Time	On-Time % Correction, dB(A)	Noise Barrier Correction, dB(A)	Total SWL, dB(A)		Highest SWL of Each Construction Activity, dB(A)
Activity 1 - Site Formation, Excavation and Filling										
Excavation and Filling	Air compressor, air flow > 10 m^3/min and <= 30 m^3/min	CNP 002	102	1	100%	0	0	102	107	118
	Excavator / loader, wheeled / tracked	EPD-02383 [2]	92	1	75%	-1.2	0	91		
	Generator, Standard	EPD-00668 [2]	79	1	100%	0	0	79		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	2	50%	-3.0	0	105		
Ground Compression (Leveling)	Bulldozer	CNP 030	116	2	100%	0	0	118	118	
Ground Compression (Compressing)	Roller, vibratory	EPD-00509 [2]	95	2	100%	0	0	98	98	
Sheet Piling	Piling, vibrating hammer	CNP 172	115	2	100%	0	0	118	118	
Pile caps & ground beam construction	Concrete lorry mixer	CNP 044	109	1	75%	-1.2	0	108	111	
	Concrete pump, stationary / lorry mounted	CNP 047	109	1	75%	-1.2	0	108		
	Poker, vibratory, hand-held	Other [1]	102	1	100%	0.0	0	102		
Activity 2 - Superstructure										
Falsework and formwork, rebar fixing	Air compressor, air flow > 10 m^3/min and <= 30 m^3/min	CNP 002	102	1	75%	-1.2	0	101	114	114
	Bar bender and cutter (electric)	CNP 021	90	3	100%	0.0	0	95		
	Crane, mobile / barge mounted (diesel)	EPD-02602 [2]	102	1	75%	-1.2	0	101		
	Crane, tower (electric)	CNP 049	95	1	100%	0.0	0	95		
	Drill / grinder, hand-held (electric)	Other [1]	89	1	75%	-1.2	0	88		
	Generator	EPD-00668 [2]	79	1	100%	0	0	79		
	Breaker, hand-held, mass >= 20 kg and <= 35 kg	CNP 025	111	2	50%	-3.0	0	111		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	1	50%	-3.0	0	102		
	Saw, circular, wood	CNP 201	108	2	70%	-1.5	0	109		
Concreting works	Concrete lorry mixer	CNP 044	109	1	75%	-1.2	0	108	111	
	Concrete pump, stationary / lorry mounted	CNP 047	109	1	75%	-1.2	0	108		
	Poker, vibratory, hand-held	Other [1]	102	1	100%	0.0	0	102		

Note :
[1] Reference to "Sound Power Levels of other commonly used PME"
[2] Reference to list of Quality Powered Mechanical Equipment Label (valid), as of 30th Oct 2015

Calculation of Construction Noise Level due to the proposed Project (Unmitigated Scenario)

NAP	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Point) (B), m	Horz. Dist. (=A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	Barrier Corr., dB(A) [1]	CNL, dB(A)
NAP 101	Site Formation, Excavation and Filling	119	300	36	336	-59	3	0	63
NAP 201	Site Formation, Excavation and Filling	119	145	19	164	-52	3	0	70
NAP 202	Site Formation, Excavation and Filling	119	248	19	267	-57	3	-10	55
NAP 301	Site Formation, Excavation and Filling	119	160	19	179	-53	3	-10	59
NAP 401	Site Formation, Excavation and Filling	119	345	17	362	-59	3	0	63
NAP 501	Site Formation, Excavation and Filling	119	340	19	359	-59	3	0	63
NAP 601	Site Formation, Excavation and Filling	119	375	17	392	-60	3	0	62
NAP 701	Site Formation, Excavation and Filling	119	380	17	397	-60	3	0	62
NAP 801	Site Formation, Excavation and Filling	119	200	17	217	-55	3	0	67
NAP 802	Site Formation, Excavation and Filling	119	260	17	277	-57	3	-10	55
NAP 101	Foundation	119	300	36	336	-59	3	0	63
NAP 201	Foundation	119	145	19	164	-52	3	0	70
NAP 202	Foundation	119	248	19	267	-57	3	-10	55
NAP 301	Foundation	119	160	19	179	-53	3	-10	59
NAP 401	Foundation	119	345	17	362	-59	3	0	63
NAP 501	Foundation	119	340	19	359	-59	3	0	63
NAP 601	Foundation	119	375	17	392	-60	3	0	62
NAP 701	Foundation	119	380	17	397	-60	3	0	62
NAP 801	Foundation	119	200	17	217	-55	3	0	67
NAP 802	Foundation	119	260	17	277	-57	3	-10	55
NAP 101	Main Building Construction	119	300	36	336	-59	3	0	63
NAP 201	Main Building Construction	119	145	19	164	-52	3	0	70
NAP 202	Main Building Construction	119	248	19	267	-57	3	-10	55
NAP 301	Main Building Construction	119	160	19	179	-53	3	-10	59
NAP 401	Main Building Construction	119	345	17	362	-59	3	0	63
NAP 501	Main Building Construction	119	340	19	359	-59	3	0	63
NAP 601	Main Building Construction	119	375	17	392	-60	3	0	62
NAP 701	Main Building Construction	119	380	17	397	-60	3	0	62
NAP 801	Main Building Construction	119	200	17	217	-55	3	0	67
NAP 802	Main Building Construction	119	260	17	277	-57	3	-10	55

[1] Attenuation of -10 dB(A) is applied to the NSR(s) that does not have a direct line of sight of the Project site.

Calculation of Construction Noise Level due to Concurrent Project - WSDCSDHQ Development

NAP	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Point) (B), m	Horz. Dist. (=A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	Barrier Corr., dB(A) [1]	CNL, dB(A)
NAP 101	Site Formation, Excavation and Filling	118	117	30	147	-51	3	0	70
NAP 201	Site Formation, Excavation and Filling	118	157	23	180	-53	3	0	68
NAP 202	Site Formation, Excavation and Filling	118	247	28	275	-57	3	0	64
NAP 301	Site Formation, Excavation and Filling	118	136	25	161	-52	3	0	69
NAP 401	Site Formation, Excavation and Filling	118	505	28	533	-63	3	0	58
NAP 501	Site Formation, Excavation and Filling	118	508	28	536	-63	3	0	58
NAP 601	Site Formation, Excavation and Filling	118	546	30	576	-63	3	0	58
NAP 701	Site Formation, Excavation and Filling	118	519	27	546	-63	3	0	58
NAP 801	Site Formation, Excavation and Filling	118	345	27	372	-59	3	0	62
NAP 802	Site Formation, Excavation and Filling	118	404	27	431	-61	3	0	60
NAP 101	Superstructure	114	117	30	147	-51	3	0	66
NAP 201	Superstructure	114	157	23	180	-53	3	0	64
NAP 202	Superstructure	114	247	28	275	-57	3	0	60
NAP 301	Superstructure	114	136	25	161	-52	3	0	65
NAP 401	Superstructure	114	505	28	533	-63	3	0	54
NAP 501	Superstructure	114	508	28	536	-63	3	0	54
NAP 601	Superstructure	114	546	30	576	-63	3	0	54
NAP 701	Superstructure	114	519	27	546	-63	3	0	54
NAP 801	Superstructure	114	345	27	372	-59	3	0	58
NAP 802	Superstructure	114	404	27	431	-61	3	0	56

[1] Attenuation of -10 dB(A) is applied to the NSR(s) that does not have a direct line of sight of the Project site.

Predicted Monthly Construction Noise Levels due to the Proposed Project (Unmitigated Scenario)

Project	Activities/ Month/Year	2020												2021												2022											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Chai Wan Vehicle Depot	Site formation, Excavation and Filling	■	■	■	■	■	■																														
	Foundation						■	■	■	■	■	■	■	■	■	■	■																				
	Main Building Construction																■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
WSDCSDHQ	Site formation, Excavation and Filling										■	■	■	■	■	■	■	■	■	■	■	■	■	■														
	Superstructure																								■	■	■	■	■	■	■	■	■	■	■	■	■	■

Construction Programme with Predicted Noise Level	NSR																																				Max	Min
The Project (CNL)	NAP 101	Heng Fa Chuen Block 50	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63		63	63
	NAP 201	HK IVE (Chai Wan) - Academic Block	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70		70	70
	NAP 202	HK IVE (Chai Wan) - Academic Block	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55		55	55
	NAP 301	Knight Court Flat C & D	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59		59	59
	NAP 401	Tsui Shou House, Tsui Wan Estate	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63		63	63
	NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63		63	63
	NAP 601	Tsui Fuk House, Tsui Wan Estate	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62		62	62
	NAP 701	Tsui Hong House, Tsui Wan Estate	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62		62	62
	NAP 801	Proposed THEi New Campus in Chai Wan	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67		67	67
	NAP 802	Proposed THEi New Campus in Chai Wan	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55		55	55
WSDCSDHQ (CNL)	NAP 101	Heng Fa Chuen Block 50										70	70	70	70	70	70	70	70	70	70	70	70	66	66	66	66	66	66	66	66	66	66	66	66	66	70	66
	NAP 201	HK IVE (Chai Wan) - Academic Block										68	68	68	68	68	68	68	68	68	68	68	68	64	64	64	64	64	64	64	64	64	64	64	64	64	68	64
	NAP 202	HK IVE (Chai Wan) - Academic Block										64	64	64	64	64	64	64	64	64	64	64	64	60	60	60	60	60	60	60	60	60	60	60	60	60	64	60
	NAP 301	Knight Court Flat C & D										69	69	69	69	69	69	69	69	69	69	69	69	65	65	65	65	65	65	65	65	65	65	65	65	65	69	65
	NAP 401	Tsui Shou House, Tsui Wan Estate										58	58	58	58	58	58	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten										58	58	58	58	58	58	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 601	Tsui Fuk House, Tsui Wan Estate										58	58	58	58	58	58	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 701	Tsui Hong House, Tsui Wan Estate										58	58	58	58	58	58	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 801	Proposed THEi New Campus in Chai Wan (N/A)										62	62	62	62	62	62	62	62	62	62	62	62	58	58	58	58	58	58	58	58	58	58	58	58	58	62	58
	NAP 802	Proposed THEi New Campus in Chai Wan (N/A)										60	60	60	60	60	60	60	60	60	60	60	60	56	56	56	56	56	56	56	56	56	56	56	56	56	60	56
Overall (CNL)	NAP 101	Heng Fa Chuen Block 50	63	63	63	63	63	63	63	63	63	71	71	71	71	71	71	71	71	71	71	71	71	68	68	68	68	68	68	68	68	68	68	68	68	68	71	63
	NAP 201	HK IVE (Chai Wan) - Academic Block	70	70	70	70	70	70	70	70	70	72	72	72	72	72	72	72	72	72	72	72	72	71	71	71	71	71	71	71	71	71	71	71	71	71	72	64
	NAP 202	HK IVE (Chai Wan) - Academic Block	55	55	55	55	55	55	55	55	55	65	65	65	65	65	65	65	65	65	65	65	65	61	61	61	61	61	61	61	61	61	61	61	61	61	65	55
	NAP 301	Knight Court Flat C & D	59	59	59	59	59	59	59	59	59	69	69	69	69	69	69	69	69	69	69	69	69	66	66	66	66	66	66	66	66	66	66	66	66	66	69	59
	NAP 401	Tsui Shou House, Tsui Wan Estate	63	63	63	63	63	63	63	63	63	65	65	65	65	65	65	65	65	65	65	65	65	64	64	64	64	64	64	64	64	64	64	64	64	64	65	54
	NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	63	63	63	63	63	63	63	63	63	65	65	65	65	65	65	65	65	65	65	65	65	64	64	64	64	64	64	64	64	64	64	64	64	64	65	54
	NAP 601	Tsui Fuk House, Tsui Wan Estate	62	62	62	62	62	62	62	62	62	64	64	64	64	64	64	64	64	64	64	64	64	63	63	63	63	63	63	63	63	63	63	63	63	63	64	54
	NAP 701	Tsui Hong House, Tsui Wan Estate	62	62	62	62	62	62	62	62	62	64	64	64	64	64	64	64	64	64	64	64	64	63	63	63	63	63	63	63	63	63	63	63	63	63	64	54
	NAP 801	Proposed THEi New Campus in Chai Wan	67	67	67	67	67	67	67	67	67	69	69	69	69	69	69	69	69	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	69	58
	NAP 802	Proposed THEi New Campus in Chai Wan	55	55	55	55	55	55	55	55	55	61	61	61	61	61	61	61	61	61	61	61	61	59	59	59	59	59	59	59	59	59	59	59	59	56	61	55
CNL Standard	NAP 101	Heng Fa Chuen Block 50	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 201	HK IVE (Chai Wan) - Academic Block	65	70	70	70	65	70	65	70	70	70	70	70	65	70	70	70	65	70	65	70	70	70	70	70	65	70	70	70	65	70	65	70	70	70		
	NAP 202	HK IVE (Chai Wan) - Academic Block	65	70	70	70	65	70	65	70	70	70	70	70	65	70	70	70	65	70	65	70	70	70	70	70	65	70	70	70	65	70	65	70	70	70		
	NAP 301	Knight Court Flat C & D	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 401	Tsui Shou House, Tsui Wan Estate	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70		
	NAP 601	Tsui Fuk House, Tsui Wan Estate	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 701	Tsui Hong House, Tsui Wan Estate	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 801	Proposed THEi New Campus in Chai Wan	70	70	70	70	65	70	65	65	70	70	70	65	70	70	70	70	65	70	65	65	70	70	70	65	70	70	70	70	65	70	65	65	70	70		
	NAP 802	Proposed THEi New Campus in Chai Wan	70	70	70	70	65	70	65	65	70	70	70	65	70	70	70	70	65	70	65	65	70	70	70	65	70	70	70	70	65	70	65	65	70	70		

Note: Noise Level(s) exceeding the construction noise criteria

Appendix 4.6b

Detailed Calculation of Construction Noise Impact Assessment (Mitigated Scenario)

Construction Plant Inventory for the Proposed Project (Mitigated Scenario)

PME		TM or Other Reference	SWL, dB(A)	No. of PME	% on Time	On-Time % Correction, dB(A)	Noise Barrier Correction, dB(A)	Total SWL, dB(A)		Highest SWL of Each Construction Activity, dB(A)
Activity 1 - Site Formation, Excavation and Filling										
Excavation and Filling	Air compressor, air flow > 10 m^3/min and <= 30 m^3/min	CNP 002	102	1	100%	0.0	0	102	107	118
	Excavator / loader, wheeled / tracked	EPD-02383 [2]	92	1	75%	-1.2	0	91		
	Generator, Standard	EPD-06915 [2]	84	1	100%	0.0	-5	79		
	Dump truck, 5.5 tonne < gross vehicle weight =< 36 tonne	Other [1]	105	2	50%	-3.0	0	105		
Breaking excavated hard/ oversize materials	Breaker, hand-held, mass >= 20 kg and <= 35 kg	CNP 025	111	1	50%	-3.0	-5	103	103	
	Excavator / loader, wheeled / tracked	EPD-02383 [2]	92	2	75%	-1.2	0	84		
Ground Compression	Bulldozer	CNP 030	115	2	100%	0.0	0	118	118	
	Roller, vibratory	EPD-06897 [2]	84	2	100%	0.0	0	97		
Activity 2 - Foundation										
General Foundation Construction	Air compressor, air flow > 30 m^3/min	CNP 003	104	1	75%	-1.2	0	103	112	114
	Bar bender and cutter (electric)	CNP 021	90	3	75%	-1.2	0	94		
	Generator	EPD-06915 [2]	84	2	100%	0.0	-5	82		
	Drill / grinder, hand-held (electric)	Other [1]	89	2	50%	-3.0	0	89		
	Saw, circular, wood	CNP 201	108	2	75%	-1.2	-5	105		
	Water pump, submersible (electric)	CNP 283	85	3	75%	-1.2	0	89		
	Excavator / loader, wheeled / tracked	EPD-02383 [2]	92	1	75%	-1.2	0	91		
	Dump truck, 5.5 tonne < gross vehicle weight =< 36 tonne	Other [1]	105	1	50%	-3.0	0	102		
	Lorry	CNP 141	112	1	50%	-3.0	0	109		
	Crane, mobile / barge mounted (diesel)	EPD-02602 [2]	102	1	75%	-1.2	0	101		
Piling Works	Generator	EPD-06915 [2]	84	1	100%	0.0	-5	79	110	
	Piling, vibrating hammer	CNP 172	115	1	100%	0.0	-5	110		
Concreting Works	Concrete lorry mixer	CNP 044	108	1	75%	-1.2	0	106	114	
	Concrete pump, stationary / lorry mounted	CNP 047	109	1	75%	-1.2	0	108		
	Generator	EPD-06915 [2]	84	1	100%	0.0	-5	79		
	Poker, vibratory, hand-held	Other [1]	102	1	100%	0.0	0	102		
	Dump truck, 5.5 tonne < gross vehicle weight =< 36 tonne	Other [1]	105	1	50%	-3.0	0	102		
	Lorry, gross vehicle weight > 36 tonne	Other [1]	112	1	50%	-3.0	0	109		
Activity 3 - Main Building Construction										
General construction works	Air compressor, air flow > 10 m^3/min and <= 30 m^3/min	CNP 002	102	1	75%	-1.2	0	101	113	114
	Bar bender and cutter (electric)	CNP 021	90	3	100%	0.0	0	95		
	Crane, mobile / barge mounted (diesel)	EPD-02602 [2]	102	1	75%	-1.2	0	101		
	Crane, tower (electric)	CNP 049	95	1	100%	0.0	0	95		
	Drill / grinder, hand-held (electric)	Other [1]	89	1	75%	-1.2	0	88		
	Generator	EPD-06915 [2]	84	1	100%	0.0	-5	79		
	Breaker, hand-held, mass >= 20 kg and <= 35 kg	CNP 025	111	2	50%	-3.0	-5	106		
	Dump truck, 5.5 tonne < gross vehicle weight =< 36 tonne	Other [1]	105	1	50%	-3.0	0	102		
	Saw, circular, wood	CNP 201	108	3	70%	-1.5	0	111		
Concreting works	Concrete lorry mixer	CNP 044	109	1	75%	-1.2	0	108	114	
	Concrete pump, stationary / lorry mounted	CNP 047	109	1	75%	-1.2	0	108		
	Generator	EPD-06915 [2]	84	1	100%	0.0	-5	79		
	Poker, vibratory, hand-held	Other [1]	102	1	100%	0.0	0	102		
	Dump truck, 5.5 tonne < gross vehicle weight =< 36 tonne	Other [1]	105	1	50%	-3.0	0	102		
	Lorry, gross vehicle weight > 36 tonne	Other [1]	112	1	50%	-3.0	0	109		
Finishing	Drill, percussive, hand-held (electric)	CNP 064	103	3	50%	-3.0	0	105	114	
	Jig-saw, hand-held wood (electric)	Other [1]	99	1	50%	-3.0	0	96		
	Concrete corer	CNP 042	117	2	50%	-3.0	-5	112		
	Lorry, with crane / grab, 5.5 tonne < gross vehicle weight < 36 tonne	Other [1]	105	2	50%	-3.0	0	105		

Note :
[1] Reference to "Sound Power Levels of other commonly used PME"
[2] Reference to list of Quality Powered Mechanical Equipment Label (valid), as of 16th August 2018

Construction Plant Inventory for Concurrent Project - WSDCSDHQ Development

PME		TM or Other Reference	SWL, dB(A)	No. of PME	% on Time	On-Time % Correction, dB(A)	Noise Barrier Correction, dB(A)	Total SWL, dB(A)		Highest SWL of Each Construction Activity, dB(A)
Activity 1 - Site Formation, Excavation and Filling										
Excavation and Filling	Air compressor, air flow > 10 m^3/min and <= 30 m^3/min	CNP 002	102	1	100%	0	0	102	107	118
	Excavator / loader, wheeled / tracked	EPD-02383 [2]	92	1	75%	-1.2	0	91		
	Generator, Standard	EPD-06915 [2]	84	1	100%	0	0	84		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	2	50%	-3.0	0	105		
Ground Compression (Levelling)	Bulldozer	CNP 030	115	2	100%	0	0	118	118	
Ground Compression (Compressing)	Roller, vibratory	EPD-06997 [2]	94	2	100%	0	0	97	97	
Sheet Piling	Piling, vibrating hammer	CNP 172	115	2	100%	0	0	118	118	
Pile caps & ground beam construction	Concrete lorry mixer	CNP 044	109	1	75%	-1.2	0	108	111	
	Concrete pump, stationary / lorry mounted	CNP 047	109	1	75%	-1.2	0	108		
	Poker, vibratory, hand-held	Other [1]	102	1	100%	0.0	0	102		
Activity 2 - Superstructure										
Falsework and formwork, rebar fixing	Air compressor, air flow > 10 m^3/min and <= 30 m^3/min	CNP 002	102	1	75%	-1.2	0	101	114	114
	Bar bender and cutter (electric)	CNP 021	90	3	100%	0.0	0	95		
	Crane, mobile / barge mounted (diesel)	EPD-02602 [2]	102	1	75%	-1.2	0	101		
	Crane, tower (electric)	CNP 049	95	1	100%	0.0	0	95		
	Drill / grinder, hand-held (electric)	Other [1]	89	1	75%	-1.2	0	88		
	Generator	EPD-06915 [2]	84	1	100%	0	0	84		
	Breaker, hand-held, mass >= 20 kg and <= 35 kg	CNP 025	111	2	50%	-3.0	0	111		
	Dump truck, 5.5 tonne < gross vehicle weight =< 38 tonne	Other [1]	105	1	50%	-3.0	0	102		
	Saw, circular, wood	CNP 201	108	2	70%	-1.5	0	109		
Concreting works	Concrete lorry mixer	CNP 044	109	1	75%	-1.2	0	108	111	
	Concrete pump, stationary / lorry mounted	CNP 047	109	1	75%	-1.2	0	108		
	Poker, vibratory, hand-held	Other [1]	102	1	100%	0.0	0	102		

Note :
[1] Reference to "Sound Power Levels of other commonly used PME"
[2] Reference to list of Quality Powered Mechanical Equipment Label (valid), as of 16th August 2019

Calculation of Construction Noise Level due to the Proposed Project (Mitigated Scenario)

NAP	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Point) (B), m	Horz. Dist. (=A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	Barrier Corr., dB(A) [1]	CNL, dB(A)
NAP 101	Site Formation, Excavation and Filling	118	300	36	336	-59	3	0	62
NAP 201	Site Formation, Excavation and Filling	118	145	19	164	-52	3	0	69
NAP 202	Site Formation, Excavation and Filling	118	248	19	267	-57	3	-10	54
NAP 301	Site Formation, Excavation and Filling	118	160	19	179	-53	3	-10	58
NAP 401	Site Formation, Excavation and Filling	118	345	17	362	-59	3	0	62
NAP 501	Site Formation, Excavation and Filling	118	340	19	359	-59	3	0	62
NAP 601	Site Formation, Excavation and Filling	118	375	17	392	-60	3	0	61
NAP 701	Site Formation, Excavation and Filling	118	380	17	397	-60	3	0	61
NAP 801	Site Formation, Excavation and Filling	118	200	17	217	-55	3	0	66
NAP 802	Site Formation, Excavation and Filling	118	260	17	277	-57	3	-10	54
NAP 101	Foundation	114	300	36	336	-59	3	0	58
NAP 201	Foundation	114	145	19	164	-52	3	0	65
NAP 202	Foundation	114	248	19	267	-57	3	-10	50
NAP 301	Foundation	114	160	19	179	-53	3	-10	54
NAP 401	Foundation	114	345	17	362	-59	3	0	58
NAP 501	Foundation	114	340	19	359	-59	3	0	58
NAP 601	Foundation	114	375	17	392	-60	3	0	57
NAP 701	Foundation	114	380	17	397	-60	3	0	57
NAP 801	Foundation	114	200	17	217	-55	3	0	62
NAP 802	Foundation	114	260	17	277	-57	3	-10	50
NAP 101	Main Building Construction	114	300	36	336	-59	3	0	58
NAP 201	Main Building Construction	114	145	19	164	-52	3	0	65
NAP 202	Main Building Construction	114	248	19	267	-57	3	-10	50
NAP 301	Main Building Construction	114	160	19	179	-53	3	-10	54
NAP 401	Main Building Construction	114	345	17	362	-59	3	0	58
NAP 501	Main Building Construction	114	340	19	359	-59	3	0	58
NAP 601	Main Building Construction	114	375	17	392	-60	3	0	57
NAP 701	Main Building Construction	114	380	17	397	-60	3	0	57
NAP 801	Main Building Construction	114	200	17	217	-55	3	0	62
NAP 802	Main Building Construction	114	260	17	277	-57	3	-10	50

[1] Attenuation of -10 dB(A) is applied to the NSR(s) that does not have a direct line of sight of the Project site.

Calculation of Construction Noise Level due to Concurrent Project - WSDCSDHQ Development

NAP	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Point) (B), m	Horz. Dist. (=A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	Barrier Corr., dB(A) [1]	CNL, dB(A)
NAP 101	Site Formation, Excavation and Filling	118	117	30	147	-51	3	0	70
NAP 201	Site Formation, Excavation and Filling	118	157	23	180	-53	3	0	68
NAP 202	Site Formation, Excavation and Filling	118	247	28	275	-57	3	0	64
NAP 301	Site Formation, Excavation and Filling	118	136	25	161	-52	3	0	69
NAP 401	Site Formation, Excavation and Filling	118	505	28	533	-63	3	0	58
NAP 501	Site Formation, Excavation and Filling	118	508	28	536	-63	3	0	58
NAP 601	Site Formation, Excavation and Filling	118	546	30	576	-63	3	0	58
NAP 701	Site Formation, Excavation and Filling	118	519	27	546	-63	3	0	58
NAP 801	Site Formation, Excavation and Filling	118	345	27	372	-59	3	0	62
NAP 802	Site Formation, Excavation and Filling	118	404	27	431	-61	3	0	60
NAP 101	Superstructure	114	117	30	147	-51	3	0	66
NAP 201	Superstructure	114	157	23	180	-53	3	0	64
NAP 202	Superstructure	114	247	28	275	-57	3	0	60
NAP 301	Superstructure	114	136	25	161	-52	3	0	65
NAP 401	Superstructure	114	505	28	533	-63	3	0	54
NAP 501	Superstructure	114	508	28	536	-63	3	0	54
NAP 601	Superstructure	114	546	30	576	-63	3	0	54
NAP 701	Superstructure	114	519	27	546	-63	3	0	54
NAP 801	Superstructure	114	345	27	372	-59	3	0	58
NAP 802	Superstructure	114	404	27	431	-61	3	0	56

[1] Attenuation of -10 dB(A) is applied to the NSR(s) that does not have a direct line of sight of the Project site.

Predicted Monthly Construction Noise Levels due to the Proposed Project (Mitigated Scenario)

Project	Activities/ Month/Year	2020												2021												2022											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Chai Wan Vehicle Depot	Site formation, Excavation and Filling																																				
	Foundation																																				
	Main Building Construction																																				
WSDCSDHQ	Site formation, Excavation and Filling																																				
	Superstructure																																				

Construction Programme with Predicted Noise Level	NSR																																					Max	Min
The Project (CNL)	NAP 101	Heng Fa Chuen Block 50	62	62	62	62	62	62	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	62	58
	NAP 201	HK IVE (Chai Wan) - Academic Block	69	69	69	69	69	69	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	69	65
	NAP 202	HK IVE (Chai Wan) - Academic Block	54	54	54	54	54	54	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	54	50
	NAP 301	Knight Court Flat C & D	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 401	Tsui Shou House, Tsui Wan Estate	62	62	62	62	62	62	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	62	58
	NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	62	62	62	62	62	62	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	62	58
	NAP 601	Tsui Fuk House, Tsui Wan Estate	61	61	61	61	61	61	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	61	57
	NAP 701	Tsui Hong House, Tsui Wan Estate	61	61	61	61	61	61	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	61	57
	NAP 801	Proposed THEi New Campus in Chai Wan	66	66	66	66	66	66	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	66	62
	NAP 802	Proposed THEi New Campus in Chai Wan	54	54	54	54	54	54	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	54	50
WSDCSDHQ (CNL)	NAP 101	Heng Fa Chuen Block 50										70	70	70	70	70	70	70	70	70	70	70	70	70	66	66	66	66	66	66	66	66	66	66	66	66	70	66
	NAP 201	HK IVE (Chai Wan) - Academic Block										68	68	68	68	68	68	68	68	68	68	68	64	64	64	64	64	64	64	64	64	64	64	54	64	68	64
	NAP 202	HK IVE (Chai Wan) - Academic Block										64	64	64	64	64	64	64	64	64	64	64	60	60	60	60	60	60	60	60	60	60	60	60	60	64	60
	NAP 301	Knight Court Flat C & D										69	69	69	69	69	69	69	69	69	69	69	65	65	65	65	65	65	65	65	65	65	65	65	65	69	65
	NAP 401	Tsui Shou House, Tsui Wan Estate										58	58	58	58	58	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten										58	58	58	58	58	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 601	Tsui Fuk House, Tsui Wan Estate										58	58	58	58	58	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 701	Tsui Hong House, Tsui Wan Estate										58	58	58	58	58	58	58	58	58	58	58	54	54	54	54	54	54	54	54	54	54	54	54	54	58	54
	NAP 801	Proposed THEi New Campus in Chai Wan (N/A)										62	62	62	62	62	62	62	62	62	62	62	58	58	58	58	58	58	58	58	58	58	58	58	58	62	58
	NAP 802	Proposed THEi New Campus in Chai Wan (N/A)										60	60	60	60	60	60	60	60	60	60	60	56	56	56	56	56	56	56	56	56	56	56	56	56	60	56
Overall (CNL)	NAP 101	Heng Fa Chuen Block 50	62	62	62	62	62	62	58	58	58	58	70	70	70	70	70	70	70	70	70	70	70	70	67	67	67	67	67	67	67	67	67	67	67	66	70	58
	NAP 201	HK IVE (Chai Wan) - Academic Block	69	69	69	69	69	69	65	65	65	65	70	70	70	70	70	70	70	70	70	70	70	70	67	67	67	67	67	67	67	67	67	67	67	64	70	64
	NAP 202	HK IVE (Chai Wan) - Academic Block	54	54	54	54	54	54	50	50	50	50	64	64	64	64	64	64	64	64	64	64	64	64	61	61	61	61	61	61	61	61	61	61	61	60	64	50
	NAP 301	Knight Court Flat C & D	58	58	58	58	58	58	54	54	54	54	69	69	69	69	69	69	69	69	69	69	69	69	65	65	65	65	65	65	65	65	65	65	65	65	69	54
	NAP 401	Tsui Shou House, Tsui Wan Estate	62	62	62	62	62	62	58	58	58	58	61	61	61	61	61	61	61	61	61	61	61	61	59	59	59	59	59	59	59	59	59	59	59	54	62	54
	NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	62	62	62	62	62	62	58	58	58	58	61	61	61	61	61	61	61	61	61	61	61	61	59	59	59	59	59	59	59	59	59	59	59	54	62	54
	NAP 601	Tsui Fuk House, Tsui Wan Estate	61	61	61	61	61	61	57	57	57	57	60	60	60	60	60	60	60	60	60	60	60	60	59	59	59	59	59	59	59	59	59	59	59	54	61	54
	NAP 701	Tsui Hong House, Tsui Wan Estate	61	61	61	61	61	61	57	57	57	57	60	60	60	60	60	60	60	60	60	60	60	60	59	59	59	59	59	59	59	59	59	59	59	54	61	54
	NAP 801	Proposed THEi New Campus in Chai Wan	66	66	66	66	66	66	62	62	62	62	65	65	65	65	65	65	65	65	65	65	65	65	63	63	63	63	63	63	63	63	63	63	63	58	66	58
	NAP 802	Proposed THEi New Campus in Chai Wan	54	54	54	54	54	54	50	50	50	50	60	60	60	60	60	60	60	60	60	60	60	60	57	57	57	57	57	57	57	57	57	57	57	56	60	50
CNL Standard	NAP 101	Heng Fa Chuen Block 50	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 201	HK IVE (Chai Wan) - Academic Block	65	70	70	70	65	70	65	70	70	70	70	70	65	70	70	70	65	70	65	70	70	70	70	70	70	65	70	70	70	65	70	65	70	70	70	70
	NAP 202	HK IVE (Chai Wan) - Academic Block	65	70	70	70	65	70	65	70	70	70	70	70	65	70	70	70	65	70	65	70	70	70	70	70	70	65	70	70	70	65	70	65	70	70	70	70
	NAP 301	Knight Court Flat C & D	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 401	Tsui Shou House, Tsui Wan Estate	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 501	Endeavourers Chan Cheng Kit Wan Kindergarten	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70		
	NAP 601	Tsui Fuk House, Tsui Wan Estate	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 701	Tsui Hong House, Tsui Wan Estate	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
	NAP 801	Proposed THEi New Campus in Chai Wan	70	70	70	70	65	70	65	65	70	70	70	65	70	70	70	70	65	70	65	65	70	70	70	65	70	70	70	70	65	70	65	65	70	70	70	65
	NAP 802	Proposed THEi New Campus in Chai Wan	70	70	70	70	65	70	65	65	70	70	70	65	70	70	70	70	65	70	65	65	70	70	70	65	70	70	70	70	65	70	65	65	70	70	70	65

Note: [redacted] Noise Level(s) exceeding the construction noise criteria

Appendix 4.7a

Traffic Forecast Data of Year 2038

Year 2018 Traffic Forecast

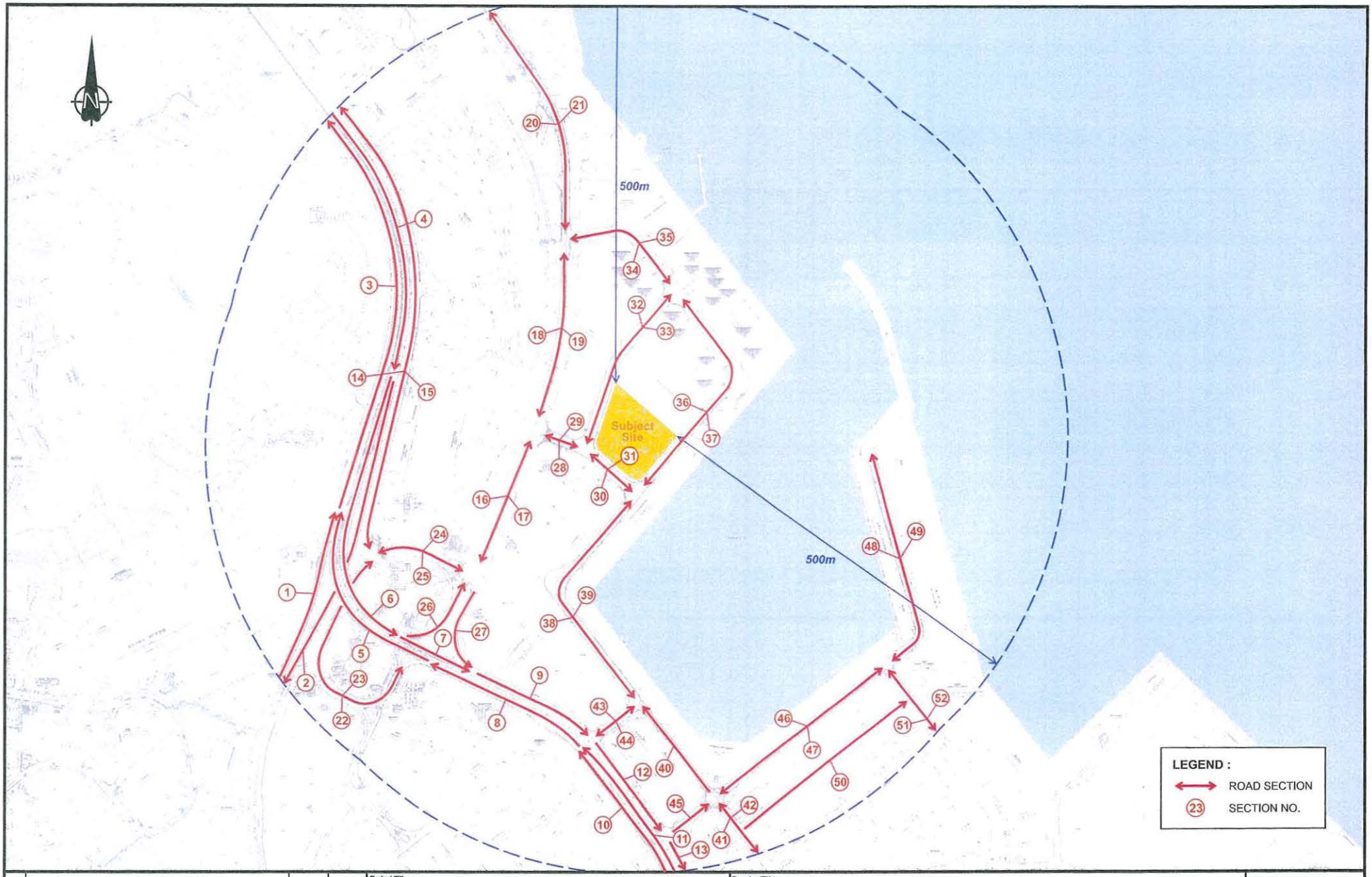
Road ID	AM Peak of Proposed Project Generated Traffic (0800-0900 hrs)				PM Peak of Proposed Project Generated Traffic (1500-1600 hrs)			
	With Project		Without Project		With Project		Without Project	
	Veh/hr	HV%	Veh/hr	HV%	Veh/hr	HV%	Veh/hr	HV%
1	483	48.0%	483	48.0%	473	43.0%	473	43.0%
2	558	39.0%	558	39.0%	486	48.0%	486	48.0%
3	1980	40.0%	1966	40.0%	1720	45.0%	1699	44.0%
4	1821	45.0%	1792	44.0%	1604	42.0%	1589	42.0%
5	1335	44.0%	1306	43.0%	1110	42.0%	1095	42.0%
6	1424	40.0%	1410	40.0%	1212	43.0%	1191	43.0%
7	997	40.0%	997	40.0%	847	46.0%	847	46.0%
8	1475	44.0%	1475	44.0%	1231	43.0%	1231	43.0%
9	1117	41.0%	1117	41.0%	967	47.0%	967	47.0%
10	275	33.0%	275	33.0%	286	39.0%	286	39.0%
11	1200	47.0%	1200	47.0%	948	44.0%	948	44.0%
12	1225	44.0%	1225	44.0%	1161	46.0%	1161	46.0%
13	372	36.0%	372	36.0%	400	38.0%	400	38.0%
14	165	25.0%	165	25.0%	101	26.0%	101	26.0%
15	59	34.0%	59	34.0%	53	45.0%	53	45.0%
16	491	52.0%	477	52.0%	438	49.0%	417	47.0%
17	229	58.0%	200	55.0%	236	53.0%	221	52.0%
18	368	52.0%	368	52.0%	323	48.0%	323	48.0%
19	143	52.0%	143	52.0%	125	58.0%	125	58.0%
20	412	42.0%	412	42.0%	371	38.0%	371	38.0%
21	153	56.0%	153	56.0%	129	57.0%	129	57.0%
22	255	56.0%	255	56.0%	260	53.0%	260	53.0%
23	109	61.0%	80	54.0%	143	55.0%	128	52.0%
24	202	64.0%	202	64.0%	202	56.0%	202	56.0%
25	261	44.0%	232	39.0%	269	41.0%	254	39.0%
26	427	41.0%	413	41.0%	365	38.0%	344	36.0%
27	118	55.0%	118	55.0%	117	57.0%	117	57.0%
28	87	64.0%	58	55.0%	113	48.0%	98	44.0%
29	123	50.0%	109	49.0%	121	52.0%	100	46.0%
30	66	71.0%	37	62.0%	81	47.0%	66	41.0%
31	43	63.0%	29	66.0%	73	67.0%	52	62.0%
32	55	69.0%	55	69.0%	41	46.0%	41	46.0%
33	21	90.0%	21	90.0%	33	88.0%	33	88.0%
34	171	51.0%	171	51.0%	133	38.0%	133	38.0%
35	130	82.0%	130	82.0%	86	72.0%	86	72.0%
36	117	61.0%	103	61.0%	126	61.0%	105	57.0%
37	92	86.0%	63	87.0%	85	66.0%	70	64.0%
38	145	57.0%	145	57.0%	141	61.0%	141	61.0%
39	98	82.0%	98	82.0%	88	65.0%	88	65.0%
40	160	51.0%	160	51.0%	248	46.0%	248	46.0%
41	139	61.0%	139	61.0%	167	60.0%	167	60.0%
42	472	46.0%	472	46.0%	515	42.0%	515	42.0%
43	71	61.0%	71	61.0%	45	69.0%	45	69.0%
44	183	66.0%	183	66.0%	245	49.0%	245	49.0%
45	854	47.0%	854	47.0%	762	51.0%	762	51.0%
46	402	62.0%	402	62.0%	346	62.0%	346	62.0%
47	74	82.0%	74	82.0%	137	36.0%	137	36.0%
48	197	79.0%	197	79.0%	155	90.0%	155	90.0%
49	96	71.0%	96	71.0%	70	76.0%	70	76.0%
50	23	61.0%	23	61.0%	35	31.0%	35	31.0%
51	102	80.0%	102	80.0%	155	44.0%	155	44.0%
52	344	56.0%	344	56.0%	297	51.0%	297	51.0%

Note: HV% denotes percentage of heavy vehicles of a particular road section.

Year 2038 Traffic Forecast

Road ID	AM Peak of Proposed Project Generated Traffic (0800-0900 hrs)				PM Peak of Proposed Project Generated Traffic (1500-1600 hrs)			
	With Project		Without Project		With Project		Without Project	
	Veh/hr	HV%	Veh/hr	HV%	Veh/hr	HV%	Veh/hr	HV%
1	580	62.2%	580	62.2%	500	35.8%	500	35.8%
2	550	39.8%	550	39.8%	570	45.5%	570	45.5%
3	1710	46.5%	1680	46.3%	1430	32.0%	1400	32.1%
4	2140	34.4%	2120	34.5%	1960	36.4%	1940	36.0%
5	1140	38.5%	1100	38.0%	940	30.2%	910	30.2%
6	1600	32.6%	1570	32.6%	1390	32.6%	1370	32.0%
7	980	32.9%	980	32.9%	910	33.2%	910	33.2%
8	1340	38.8%	1340	38.8%	1160	32.5%	1160	32.5%
9	1160	36.0%	1160	36.0%	1070	36.0%	1070	36.0%
10	300	30.8%	300	30.8%	250	23.2%	250	23.2%
11	1050	41.2%	1050	41.2%	920	34.9%	920	34.9%
12	1220	38.1%	1220	38.1%	1240	36.2%	1240	36.2%
13	450	36.6%	450	36.6%	490	29.8%	490	29.8%
14	170	14.0%	170	14.0%	100	28.3%	100	28.3%
15	90	34.8%	90	34.8%	110	40.2%	110	40.2%
16	690	36.9%	670	37.3%	600	39.4%	580	38.2%
17	310	47.1%	280	46.0%	310	50.2%	290	52.3%
18	350	45.6%	350	45.6%	340	35.5%	340	35.5%
19	230	38.4%	230	38.4%	200	47.2%	200	47.2%
20	550	32.0%	550	32.0%	510	28.7%	510	28.7%
21	190	47.8%	190	47.8%	170	53.7%	170	53.7%
22	330	40.4%	330	40.4%	330	39.6%	330	39.6%
23	160	34.4%	130	28.5%	170	42.3%	150	45.1%
24	270	53.8%	270	53.8%	270	46.8%	270	46.8%
25	290	27.6%	260	23.8%	320	35.9%	290	36.7%
26	620	31.9%	590	32.0%	480	31.2%	460	29.5%
27	190	53.0%	190	53.0%	160	52.9%	160	52.9%
28	110	58.7%	80	60.0%	150	45.3%	130	49.2%
29	400	29.2%	380	29.3%	300	33.2%	280	30.4%
30	90	56.5%	70	56.7%	140	51.1%	130	53.6%
31	60	54.3%	50	62.5%	100	63.8%	90	62.7%
32	360	29.7%	350	29.8%	240	33.4%	230	31.7%
33	50	67.7%	50	74.2%	60	58.5%	50	67.4%
34	530	24.9%	530	24.9%	390	23.7%	390	23.7%
35	100	79.0%	100	79.0%	70	55.9%	70	55.9%
36	130	52.7%	110	55.5%	120	57.4%	110	55.9%
37	90	70.8%	70	74.6%	130	51.6%	120	54.4%
38	150	58.3%	150	58.3%	130	56.0%	130	56.0%
39	80	76.7%	80	76.7%	110	51.4%	110	51.4%
40	180	53.1%	180	53.1%	220	45.0%	220	45.0%
41	150	56.4%	150	56.4%	170	65.1%	170	65.1%
42	450	45.7%	450	45.7%	580	39.9%	580	39.9%
43	110	61.3%	110	61.3%	50	44.9%	50	44.9%
44	160	66.7%	160	66.7%	230	39.1%	230	39.1%
45	780	39.4%	780	39.4%	770	40.7%	770	40.7%
46	410	40.9%	410	40.9%	340	43.8%	340	43.8%
47	130	63.0%	130	63.0%	220	33.8%	220	33.8%
48	140	86.4%	140	86.4%	180	87.8%	180	87.8%
49	150	84.0%	150	84.0%	180	86.0%	180	86.0%
50	50	44.7%	50	44.7%	50	60.5%	50	60.5%
51	110	64.4%	110	64.4%	160	45.2%	160	45.2%
52	380	53.7%	380	53.7%	350	47.4%	350	47.4%

Note: HV% denotes percentage of heavy vehicles of a particular road section.



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title: CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT - VARIATION EIA & TIA

Drawing Title: **INDEX PLAN**

Designed	Checked	Scale	Date	Drawing No.	Rev.
LAU	GPH	NTS	JUL 2018	6.1	-

SYSTRA MVA

CHK50370610/TIA/F2.CDR/CKM/16JUL18

Appendix 4.7b

Transport Department Endorsement Letter

[HARGW]

By Fax
2527 8490

運輸署
Transport Department

本署檔案 Our Ref. : (HB0S2) in TD HR146/192/SHE-7(L)
來函檔號 Your Ref. : CHK50370610/GPH/L1900442/sys
電 話 Tel. : 2829 5524
圖文傳真 Fax : 2824 0399
電 郵 Email :

CHK 50370610
00329222
18/4/19
YKP 18/4/19
PML
18/4/19

17 April 2019

MVA HONG KONG LIMITED
22nd Floor, Genesis,
33-35 Wong Chuk Hang Road,
Hong Kong
(Attn: Ms. Kris POON)

Dear Madam,

Chai Wan Government Complex and Vehicle Depot
Traffic Forecast for Environmental Assessment Study
Response to Comments

I refer to your letter dated 15 March 2019 regarding the captioned submission and have no comment on the traffic forecast from traffic engineering viewpoint.

Yours faithfully,

(KWAN Wing-yip)
for Commissioner for Transport

市區(香港)分區辦事處
Urban Regional Office (Hong Kong)
香港灣仔告士打道七號入境事務大樓三十七樓
37th floor Immigration Tower 7 Gloucester Road Wan Chai Hong Kong
網址 Web Site: http://www.td.gov.hk

Appendix 4.7c

Estimation of Ingress/ Egress Traffic at Proposed Chai Wan Depot

Estimation of Ingress Traffic at Proposed Chai Wan Depot (including Special Purpose Vehicles)

Time Slot	Vehicle Type										
	General Purpose Vehicle						Special Purpose Vehicle				
	Private Car	Motor Cycle	Light Bus/Large Van	Medium Van	Light Truck	Other (Please Specify)	Refuse Collection Vehicle	Street Washing Vehicle	Grab Lorry	Other (Please Specify)	Total
0600-0700	1	2	0	0	0	0	0	0	0	0	3
0700-0800	1	1	0	1	0	0	0	0	0	0	3
0800-0900	15	3	5	2	0	0	0	0	0	0	25
0900-1000	6	2	2	2	0	0	0	0	0	0	12
1000-1100	3	2	2	3	2	0	0	1	0	0	13
1100-1200	3	2	8	3	2	0	0	0	0	0	18
1200-1300	4	2	6	3	1	0	7	0	0	0	23
1300-1400	6	2	5	5	1	0	0	3	0	0	22
1400-1500	3	2	5	2	2	0	0	1	0	0	15
1500-1600	2	1	6	7	2	0	0	0	0	0	18
1600-1700	5	1	11	7	1	0	1	0	0	0	26
1700-1800	4	1	8	5	1	0	0	0	0	0	19
1800-1900	1	0	2	2	0	0	1	0	0	0	6
1900-2000	4	0	4	0	0	0	0	0	0	0	8
2000-2100	4	0	4	0	0	0	0	0	0	0	8
2100-2200	2	0	4	0	3	0	4	1	0	0	14
2200-2300	3	0	0	0	0	0	0	0	0	0	3
2300-2400	2	0	1	0	0	0	0	0	0	0	3
2400-0100	1	0	0	0	0	0	0	0	0	0	1
0100-0200	1	0	0	0	0	0	0	0	0	0	1
0200-0300	0	0	0	0	0	0	0	0	0	0	0
0300-0400	0	0	0	0	0	0	0	0	0	0	0
0400-0500	0	0	0	0	0	0	0	0	0	0	0
0500-0600	0	0	0	0	0	0	0	0	0	0	0
	71	21	73	42	15	0	13	6	0	Total	241

Estimation of Egress Traffic at Proposed Chai Wan Depot (including Special Purpose Vehicles)

Time Slot	Vehicle Type										
	General Purpose Vehicle						Special Purpose Vehicle				
	Private Car	Motor Cycle	Light Bus/Large Van	Medium Van	Light Truck	Other (Please Specify)	Refuse Collection Vehicle	Street Washing Vehicle	Grab Lorry	Other (Please Specify)	Total
0600-0700	3	0	0	0	0	1	7	0	0	0	11
0700-0800	7	0	14	4	3	0	0	2	0	0	30
0800-0900	13	2	8	10	1	0	0	0	0	0	34
0900-1000	3	2	7	6	2	0	0	0	0	0	20
1000-1100	3	2	5	2	0	1	0	1	0	0	14
1100-1200	3	2	4	2	2	0	0	0	0	0	13
1200-1300	4	2	2	3	0	0	0	0	0	0	11
1300-1400	4	1	4	3	1	0	0	0	0	0	13
1400-1500	3	1	10	3	1	1	0	2	0	0	21
1500-1600	2	2	6	2	2	0	4	1	0	0	19
1600-1700	3	2	2	4	1	1	1	0	0	0	14
1700-1800	16	3	4	3	0	0	0	0	0	0	26
1800-1900	1	0	2	1	0	0	0	0	0	0	4
1900-2000	2	0	1	0	0	0	2	0	0	0	5
2000-2100	2	0	0	0	0	0	0	0	0	0	2
2100-2200	2	0	0	0	0	0	0	0	0	0	2
2200-2300	2	1	0	0	0	1	0	0	0	0	4
2300-2400	1	1	0	0	0	0	0	0	0	0	2
2400-0100	0	0	0	0	0	0	0	0	0	0	0
0100-0200	0	0	0	0	0	1	0	0	0	0	1
0200-0300	0	0	0	0	0	0	0	0	0	0	0
0300-0400	0	0	0	0	0	0	0	0	0	0	0
0400-0500	0	0	0	0	0	0	0	0	0	0	0
0500-0600	0	0	0	0	0	0	0	0	0	0	0
	74	21	69	43	13	6	14	6	0	Total	246

Appendix 4.8

Correspondence with Highways Department on Road Surfacing Material

Dear Yvonne,

Please be clarified that the road surfacing highlighted in yellow is polymer modified friction course (PMFC).

Regards,
CHAN Man-ho, Michael
Assistant District Engineer/North East
Urban (HK)/HyD
Tel: 2231 5623

From: Yvonne Kwan <yk@aechk.com>
To: "adene.u@hyd.gov.hk" <adene.u@hyd.gov.hk>
Cc: Cathy Man <cm@aechk.com>, Ronan Chan <rc@aechk.com>, Rodney Ip <ri@aechk.com>, Tak Wong <wtk@aechk.com>
Date: 06/05/2019 11:21
Subject: FW: 184GK Chai Wan Government Complex and Vehicle Depot at Sheung Tak Street: Request for Information - Noise Mitigation Measures for Roads in Chai Wan [ref no: 1158/18-002]

Dear Michael,

As per our tele-conversation, in order to facilitate our traffic noise assessment, grateful if you can confirm if the FC as highlighted in the attached drawing is PMFC. The previous enquiry letter is also attached for easy reference.

If you have any further queries, please do not hesitate to contact us.
Thank you!

Best Regards,
Yvonne Kwan
Assistant Consultant

cid:image001.png@01D3D7E8.79F7E4F0
Allied Environmental Consultants Limited
A member of Allied Sustainability and Environmental Consultants Group (Stock Code: 8320)
19/F, Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
T: (852) 2815 7028 | D: (852) 3915 7162 | F: (852) 2815 5399 | E: yk@aechk.com
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cid:image003.png@01D3D7E8.79F7E4F0
IMG_256

-----Original Message-----
From: dene.u@hyd.gov.hk <dene.u@hyd.gov.hk>

Sent: Monday, May 28, 2018 9:32 AM
To: Yvonne Kwan <yk@aechk.com>
Cc: 'Cathy Man' <cm@aechk.com>; rc@aechk.com; ri@aechk.com; wtk@aechk.com
Subject: RE: 184GK Chai Wan Government Complex and Vehicle Depot at Sheung Tak Street: Request for Information - Noise Mitigation Measures for Roads in Chai Wan [ref no: 1158/18-002]

Dear Yvonne,

It was noted that a delivery failure occurred. I hereby resend the content as below for your perusal please.

Regards
Paul Lee
District Engineer/North East
Urban (HK)/HyD
Tel: 2231 5623

From: Paul CY LEE/HYD/HKSARG
To: "Yvonne Kwan" <yk@aechk.com>
Cc: "'Cathy Man'" <cm@aechk.com>, dene.u@hyd.gov.hk, rc@aechk.com, ri@aechk.com, wtk@aechk.com
Date: 25/05/2018 18:07
Subject: RE: 184GK Chai Wan Government Complex and Vehicle Depot at Sheung Tak Street: Request for Information - Noise Mitigation Measures for Roads in Chai Wan [ref no: 1158/18-002]

Dear Yvonne,

Please find the attached scan copy of the markup drawing for your perusal.
(See attached file: Scan- IEC.pdf)

Regards
Paul Lee
District Engineer/North East
Urban (HK)/HyD
Tel: 2231 5623

From: "Yvonne Kwan" <yk@aechk.com>
To: <dene.u@hyd.gov.hk>
Cc: "'Cathy Man'" <cm@aechk.com>, <wtk@aechk.com>, <ri@aechk.com>, <rc@aechk.com>
Date: 25/05/2018 15:10

Subject: RE: 184GK Chai Wan Government Complex and Vehicle Depot at
Sheung Tak Street: Request for Information - Noise Mitigation Measures for Roads in Chai Wan [ref no: 1158/18-002]

Dear Mr. Lee,

Thanks for your reply dated 24 May 2018 regarding the captioned (ref: (HST9U)HyD UHK/12-1/5/5(DNE)).

However, the markup indicating the extent and configuration of the low noise surfacing cannot be shown in the attached B&W drawing.

Grateful if you can resend the colour-scanned drawing OR confirm the LNRS extent shown in the attached (App5.4), which was provided by HyD in April 2013, is still valid.

It is much appreciated if your reply can be available by 1 June 2018.

If you have any further queries, please do not hesitate to contact us.
Thank you!

Best Regards,
Yvonne Kwan
Assistant Consultant

cid:image001.png@01D3D7E8.79F7E4F0
Allied Environmental Consultants Limited
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Follow us on cid:image002.png@01D3D7E8.79F7E4F0 http://www.asecg.com
cid:image003.png@01D3D7E8.79F7E4F0
IMG_256

From: Yvonne Kwan <yk@aechk.com>
Sent: Monday, May 7, 2018 2:10 PM
To: 'dene.u@hyd.gov.hk' <dene.u@hyd.gov.hk>
Cc: 'Cathy Man' <cm@aechk.com>; 'wongcl@archsd.gov.hk' <wongcl@archsd.gov.hk>; 'szeyy@archsd.gov.hk' <szeyy@archsd.gov.hk>; 'wtk@aechk.com' <wtk@aechk.com>; 'ri@aechk.com' <ri@aechk.com>; 'rc@aechk.com' <rc@aechk.com>
Subject: 184GK Chai Wan Government Complex and Vehicle Depot at Sheung Tak Street: Request for Information - Noise Mitigation Measures for Roads in Chai Wan [ref no: 1158/18-002]

Dear Mr. LEE Chun Yeung, Paul (Dist Engr/North East),

We are commissioned by the Architectural Services Department (ArchSD) to conduct an Environmental Review Report (ERR) for a development project at the captioned location (as shown in the enclosed location plan), in
accordance with the approved Environmental Impact Assessment Report (EIA/230/2015) on 5 Oct 2015. Please find the attached cover letter requesting information regarding noise mitigation measures for roads in Chai Wan.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available by 18 May 2018.

We thank you in anticipation for your kind assistance. Should you have any queries, please feel free to contact me.

Best Regards,
Yvonne Kwan
Assistant Consultant

cid:image001.png@01D3D7E8.79F7E4F0
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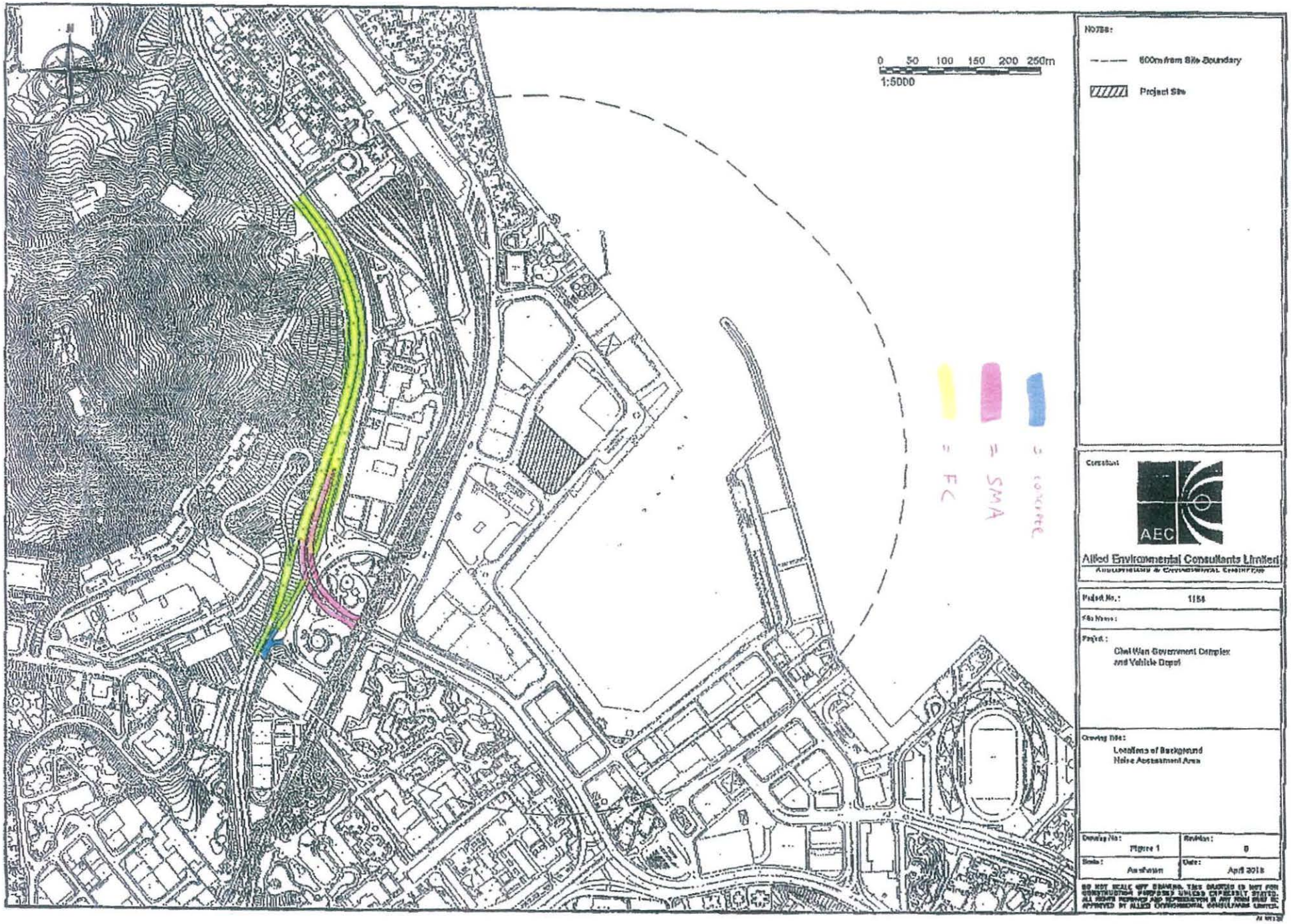
cid:image003.png@01D3D7E8.79F7E4F0
IMG_256

[attachment "App 5.4_Location Plan showing Area of IEC with Low Noise Road Surface.pdf" deleted by Paul CY LEE/HYD/HKSARG] [attachment "(HST9U)HyD UHK12-155(DNE).pdf" deleted by Paul CY LEE/HYD/HKSARG] (See attached file: Scan- IEC.pdf)(See attached file: 180002 - Letter to HyD (Noise Mitigation Measures).pdf)



NOTES:

600m from Site Boundary

Project Site

Consultant

Allied Environmental Consultants Limited

Project No.: 1158

File Name:

Project:
Chai Wan Government Complex and Vehicle Depot

Drawing Title:
Locations of Background Noise Assessment Area

Drawing No.: Figure 1

Revision: 0

Scale: As shown

Date: April 2018

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Tel.: (852) 2815 7028 Fax: (852) 2815 5399 Email: info@aechk.com

沛然環境評估工程顧問有限公司

Our Ref: 1158/18-0002

7 May 2018

By Fax and Email

Highways Department
Urban Region
District and Maintenance Section (Hong Kong Office)
7th Floor, North Point Government Offices,
333 Java Road, Hong Kong

Mr. LEE Chun Yeung, Paul (Dist Eng/North East).

CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT AT SHEUNG TAK STREET, CHAI WAN (PROGRAMME NO. 184GK)
REQUEST FOR INFORMATION – NOISE MITIGATION MEASURES FOR ROADS IN CHAI WAN

We are commissioned by the Architectural Services Department (ArchSD) to conduct an Environmental Review Report (ERR) for a development project at the captioned location (as shown in the enclosed location plan), in accordance with the approved Environmental Impact Assessment Report (EIA/230/2015) on 5 Oct 2015.

In order to facilitate the environmental assessments, it would be grateful if you could advise the extent and configuration of any low noise surfacing (e.g. Friction Course (FC), PSMA, PMMA, PMSMA6 etc.) and/or noise mitigated measures (i.e. noise barrier etc.) which have been applied / planned, within 500m from the boundary of the Subject Site, especially to the following streets as listed below (refer to the enclosed location plan).

1. Island Eastern Corridor
2. Chong Fu Road
3. Sheung Tat Street
4. Sheung On Street
5. Sheung Mau Street
6. Shing Tai Road
7. Wing Tai Road
8. Shun Tai Road
9. Ka Yip Street
10. Fung Yip Street
11. Sun Yip Street

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available by 18 May 2018.

We thank you in anticipation for your kind assistance. Should you have any queries, please feel free to contact our Ms. Yvonne Kwan (yk@aechk.com) or the undersigned at 2815-7028.

Yours sincerely,

Cathy Man
Senior Consultant
Allied Environmental Consultants Limited
(cm@aechk.com)
CM/yk

Encl.

cc. ArchSD (Attn: Mr. Chi Lok WONG/SPM231 & Mr. Vincent SZE/PM246) – by email (w/e)

NOTES :

---- 500m from Site Boundary

Project Site

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Locations of Background Noise Assessment Area
Drawing No :	Figure 1
Revision :	0
Scale :	As shown
Date :	April 2018

A3 420 x 297

Appendix 5.1

Hydraulic Assessment

Estimation of Sewage Generation (from the Proposed Project)

Sewage Source	Approx. Number	Unit Flow Factor (m^3/d/ person)	Estimated Consumption (m^3/wash)	Average Dry Weather Flow (m^3/d)	References
HKPF's Population	40	0.18	/	7.20	- Population: estimated by user - Unit Flow Factor: 0.08 for employee and 0.1 for transportation trade activities according to Table T-2 of GESF
FEHD's Population	127	0.18	/	22.86	- Population: estimated by user - Unit Flow Factor: 0.08 for employee and 0.1 for transportation trade activities according to Table T-2 of GESF
EMSD's Population	33	0.18	/	5.94	- Population: estimated by user - Unit Flow Factor: 0.08 for employee and 0.1 for transportation trade activities according to Table T-2 of GESF
GL's Population	60	0.18	/	10.80	- Population: estimated by user - Unit Flow Factor: 0.08 for employee and 0.1 for storage trade activities according to Table T-2 of GESF
GLD's Population	60	0.18	/	10.80	- Population: estimated by user - Unit Flow Factor: 0.08 for employee and 0.1 for transportation trade activities according to Table T-2 of GESF
Daily vehicle washing from EMSD's workshop (Manual Wash)	2	/	0.12	0.24	- No. of vehicles to be washed: estimated by user - Estimated consumption: estimated by user
Daily vehicle washing from GLD's depot (Manual Wash)	24	/	0.48	11.52	- No. of vehicles to be washed: estimated by user - Estimated consumption: estimated by user
Daily vehicle washing from FEHD's depot (Automated Vehicle Washing Machine)	33	/	1.00	33.00	- No. of vehicles to be washed: estimated by user - Estimated consumption: estimated by user
Daily vehicle washing from FEHD's depot (Manual Wash)	17	/	8.00	136.00	- No. of vehicles to be washed: estimated by user - Estimated consumption: estimated by user
			Total Average Dry Weather Flow (ADWF) (m^3/d)	238.36	
			Peaking Factor	8	Table T-5 of GESF
			Catchment Inflow Factor (P_{CIF})	1.1	Table T-4 of GESF
			Peak Wet Weather Flow (PWWF) (m^3/d)	2097.57	
			Peak Wet Weather Flow (PWWF) (m^3/s)	0.0243	

Estimation of Sewage Generation (from Surrounding Developments)

Sewage Source	Sewer Manhole Number	Population	Unit Flow Factor (m^3/d/ person)	Peaking Factor	Catchment Inflow Factor (P_{CIF})	Peak Wet Weather Flow (PWWF) (m^3/s)	References
Government Logistics Centre	FMH7034178	180	0.18	8	1.1	0.0033	- Population: estimated by user - Unit Flow Factor: 0.08 for employee and 0.1 for transport, storage and communication activities according to Table T-2 of GESF
New World First Bus Depot	FMH7034178	700	0.18	8	1.1	0.0128	- Population: estimated by user - Unit Flow Factor: 0.08 for employee and 0.1 for transportation trade activities according to Table T-2 of GESF
Citybus Chai Wan Depot	FMH7034208	385	0.18	8	1.1	0.0071	- Population: estimated by user - Unit Flow Factor: 0.08 for employee and 0.1 for transportation trade activities according to Table T-2 of GESF
WSDCSDHQ	FMH7034198	assumed at 100% capacity					

Estimation of Sewerage Hydraulic

Upstream Manhole	Downstream Manhole	Pipe Size (mm)	Length (m) [1]	Upstream invert level (mPD) [1]	Downstream invert level (mPD) [1]	Gradient (1:x)	Slope, *S* (m/m)	Colebrook-White roughness coefficient (mm) [2]	Velocity, *V* (m/s) [3]	Pipe Capacity, *Q* (m^3/s) [4]	Contribution by the proposed Project (%)	Total Flow from Proposed Project and Surrounding Developments (m^3/s)	Total Capacity Taken (%)	Sufficient Capacity?
FMH7034177	FMH7034178	225	8	3.23	3.15	100.0	0.0100	6.0	0.8983	0.0357	68.0%	0.0243	68.0%	Yes
FMH7034178	FMH7034180	400	53	2.64	2.58	883.3	0.0011	6.0	0.4491	0.0564	43.0%	0.0404	71.6%	Yes
FMH7034180	FMH7034216	400	24	2.58	2.44	171.9	0.0058	6.0	1.0204	0.1282	18.9%	0.0404	31.5%	Yes
FMH7034216	FMH7034205	400	31	2.44	2.26	171.9	0.0058	6.0	1.0204	0.1282	18.9%	0.0404	31.5%	Yes
FMH7034205	FMH7034206	400	11	2.26	2.22	275.0	0.0036	6.0	0.8063	0.1013	24.0%	0.0404	39.9%	Yes
FMH7034206	FMH7034208	600	56	2.22	1.63	94.9	0.0105	6.0	1.8068	0.5109	4.8%	0.0404	7.9%	Yes
FMH7034208	FMH7034210	600	62	1.63	1.43	310.0	0.0032	6.0	0.9990	0.2825	8.6%	0.0475	16.8%	Yes
FMH7034210	FMH7034212	600	52	1.41	1.38	1733.3	0.0006	6.0	0.4215	0.1192	20.4%	0.0475	39.8%	Yes
FMH7034212	FMH7034213	600	49	1.37	1.12	196.0	0.0051	6.0	1.2568	0.3554	6.8%	0.0475	13.4%	Yes
FMH7034213	FMH7034200	600	80	1.10	1.07	2325.0	0.0004	6.0	0.3637	0.1028	23.6%	0.0475	46.2%	Yes
FMH7034200	FMH7034199	600	13	1.07	1.06	2325.0	0.0004	6.0	0.3637	0.1028	23.6%	0.0475	46.2%	Yes
FMH7034199	FMH7034198	600	23	1.04	1.00	575.0	0.0017	6.0	0.7331	0.2073	11.7%	0.0475	22.9%	Yes
FMH7034197	FMH7034198	1200	62	1.51	1.40	563.6	0.0018	6.0	1.1709	1.3242	0.0%	1.3242	100.0% [5]	Yes
FMH7034198	FSH7001100	2100	9	0.85	0.81	225.0	0.0044	6.0	2.6614	9.2181	0.3%	1.3717	14.9%	Yes

Note:

1) Information from DSD's Drainage Layout Plan.

2) Reference to Table 5 of DSD's Sewerage Manual Part 1.

3) Velocity is calculated using Colebrook-White Equation:

$$V = -2(2gDS)^{0.5}\log\left(\frac{k}{3.7D}+\frac{2.5\nu}{D(2gDS)^{0.5}}\right)$$

k = Colebrook-White roughness coefficient, in metres
V = velocity, in metres per second
D = circular cross-section pipe, inside diameter, in metres
S = slope, in metres per metre
ν = kinematic viscosity of water, in square metres per second.

4) Pipe capacity is calculated from: $Q = V \times A$

5) The discharge is assumed to be at full capacity as a worst-case scenario, which included the consideration of WSDCSDHQ.

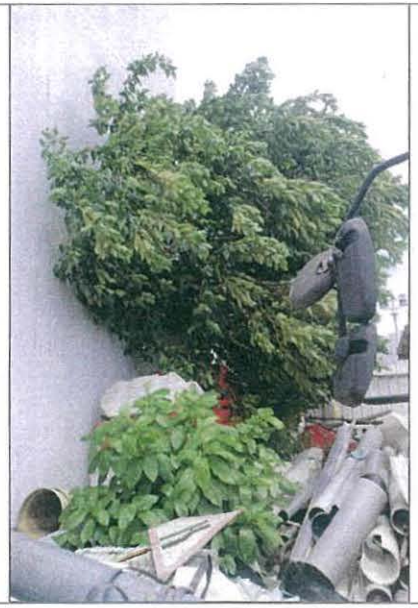
Appendix 6.1

Tree Assessment Schedule

Tree No.	Scientific Name	Chinese Common Name	Species Origin	Overall Height (m)	Trunk Diameter (m)	Crown Spread (m)	Form (Good/ Fair/ Poor)	Health (Good/ Fair/ Poor)	Amenity Value (High/ Med/ Low)	Survival Rate after Transplanting (High/Med/Low)	Recommended Treatment	Justification for Treatment	Remarks
T01	Broussonetia papyrifera	構樹	Native	6.5	0.18	4.0	Poor	Poor	Low	Low	Fell	1, 2, 3, 5	Restricted crown by adjacent building structure; construction equipments stacking around trunk
T02	Bombax ceiba	木棉	Exotic	5.6	0.10	7.6	Fair	Poor	Med	Med	Fell	1, 2, 4, 5	Construction equipment stacking around trunk
T03	Bombax ceiba	木棉	Exotic	7.2	0.16	3.8	Fair	Poor	Med	Med	Fell	1, 2, 4, 5	Construction equipment stacking around trunk
T04	Carica papaya	木瓜	Exotic	7.0	0.20	3.3	Poor	Fair	Low	Med	Fell	1, 2, 4, 5	Common fruit trees; leaning; restricted crown by adjacent building structure
T05	Carica papaya	木瓜	Exotic	6.1	0.15	2.7	Poor	Fair	Low	Med	Fell	1, 2, 4, 5	Common fruit trees; leaning; restricted crown by adjacent building structure
T06	Spathodea campanulata	火焰木	Exotic	4.5	0.15	4.9	Poor	Poor	Low	Low	Fell	1, 2, 3, 4, 5	Leaning; canopy protruding into the Project site
T07	Callistemon viminalis	串錢柳	Exotic	4.7	0.13	3.4	Poor	Poor	Low	Med	Retain & Prune		Leaning; canopy protruding into the Project site; potential danger to passerby
T08	Spathodea campanulata	火焰木	Exotic	5.2	0.15	2.0	Poor	Fair	Low	Med	Retain & Prune		Leaning; canopy protruding into the Project site
T09	Spathodea campanulata	火焰木	Exotic	5.3	0.22	5.5	Poor	Fair	Low	Med	Retain & Prune		Leaning; canopy protruding into the Project site; potential danger to passerby
T10	Spathodea campanulata	火焰木	Exotic	5.0	0.18	4.0	Poor	Fair	Low	Med	Retain & Prune		Leaning; canopy protruding into the Project site
T11	Spathodea campanulata	火焰木	Exotic	3.3	0.11	2.4	Fair	Fair	Low	Med	Retain		Low-branching
T12	Spathodea campanulata	火焰木	Exotic	4.0	0.13	3.0	Fair	Fair	Med	Med	Retain		Trunk and canopy protruding into the Project site
T13	Bombax ceiba	木棉	Exotic	9.1	0.34	7.6	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T14	Bombax ceiba	木棉	Exotic	9.3	0.49	8.9	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T15	Bombax ceiba	木棉	Exotic	11.1	0.43	7.8	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T16	Bombax ceiba	木棉	Exotic	12.3	0.54	7.1	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T17	Bombax ceiba	木棉	Exotic	12.1	0.32	6.0	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T18	Bombax ceiba	木棉	Exotic	11.0	0.42	8.7	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T19	Bombax ceiba	木棉	Exotic	10.5	0.43	11.6	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T20	Bombax ceiba	木棉	Exotic	11.5	0.46	10.1	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T21	Bombax ceiba	木棉	Exotic	12.1	0.51	10.2	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T22	Bombax ceiba	木棉	Exotic	11.1	0.34	7.2	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T23	Bombax ceiba	木棉	Exotic	10.0	0.31	4.9	Fair	Fair	Med	Med	Fell	1, 4, 5	Trunk and canopy protruding into the Project site
T24	Bombax ceiba	木棉	Exotic	10.4	0.41	8.9	Fair	Fair	Med	Med	Fell	1, 4, 5	Trunk and canopy protruding into the Project site
T25	Melaleuca quinquenervia	白千層	Exotic	8.4	0.24	3.2	Poor	Fair	Med	Low	Fell	1, 2, 3, 4, 5	Canopy protruding into the Project site
T26	Bombax ceiba	木棉	Exotic	9.9	0.37	8.3	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T27	Bombax ceiba	木棉	Exotic	11.6	0.38	8.6	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T28	Bombax ceiba	木棉	Exotic	10.3	0.35	10.4	Good	Good	Med	Low	Retain & Prune		Trunk and canopy protruding into the Project site
T29	Melaleuca quinquenervia	白千層	Exotic	10.4	0.22	3.2	Fair	Fair	Med	Low	Retain & Prune		
T30	Melaleuca quinquenervia	白千層	Exotic	10.7	0.27	4.7	Fair	Fair	Med	Low	Retain		
T31	Melaleuca quinquenervia	白千層	Exotic	8.2	0.23	3.7	Fair	Fair	Med	Low	Retain		

Justification Note:

1) Direct conflict with the proposed development
2) Poor health or form that does not support transplanting
3) Species of low survival rate after transplanting
4) Impractical for transplanting due to restriction of the formation size of rootball
5) Species of low landscape or ecological value that can be compensated easily



T01

T02

T03

T04

T05

T06

NOTES :

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Tree Assessment Schedule
Drawing No :	Appendix 6.1
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297

T07

T08

T09

T10

T11

T12

NOTES :

Consultant

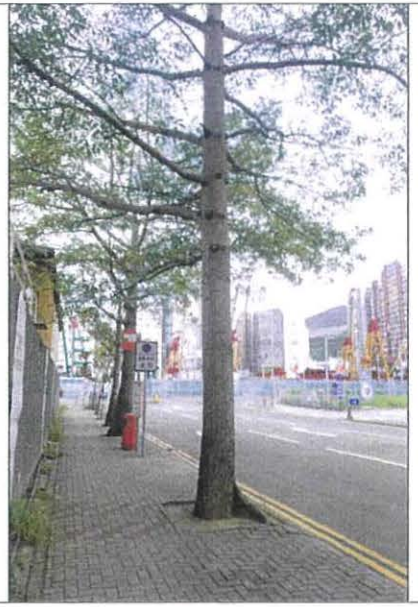
Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Tree Assessment Schedule
Drawing No : Appendix 6.1	Revision : 0
Scale : NTS	Date : December 2018

A3 420 x 297

T13

T14



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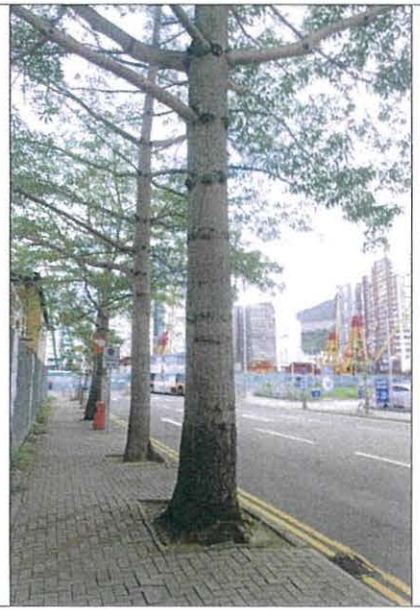
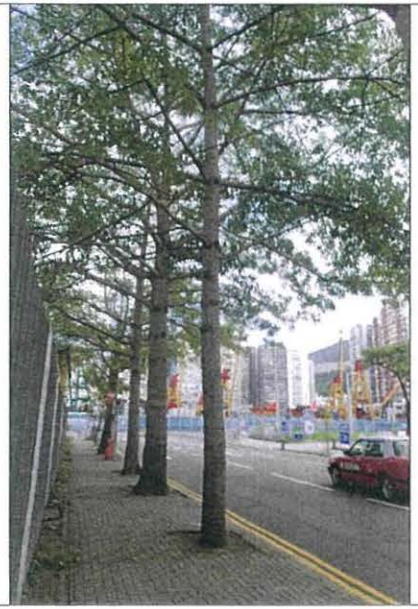
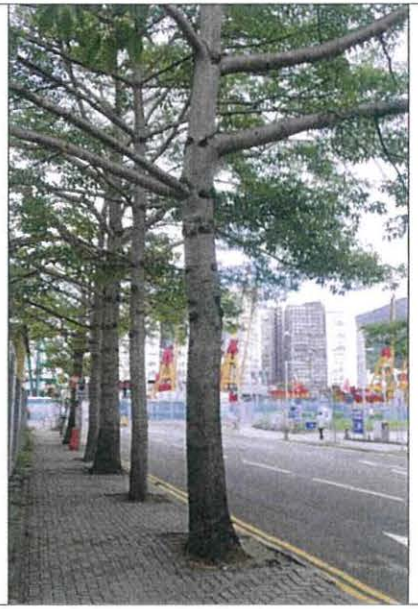


T16



T17



T18

NOTES :

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Tree Assessment Schedule
Drawing No : Appendix 6.1	Revision : 0
Scale : NTS	Date : December 2018

A3 420 x 297

T19

T20

T21

T22

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T24

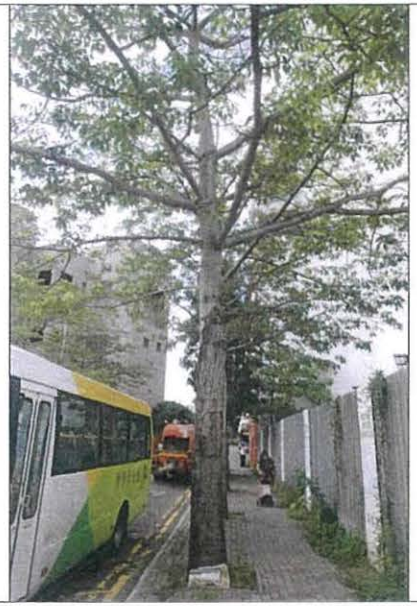
NOTES :

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Tree Assessment Schedule
Drawing No :	Appendix 6.1
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297

		
T25	T26	T27
		
T28	T29	T30

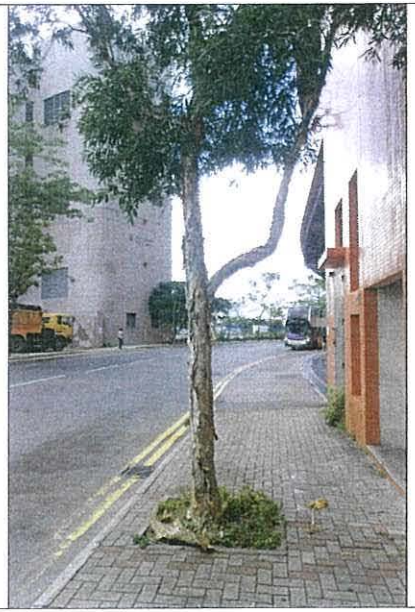
NOTES :

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIRONMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Tree Assessment Schedule
Drawing No :	Appendix 6.1
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297



T31

NOTES :

Consultant

Allied Environmental Consultants Limited
ACOUSTICIANS & ENVIROMENTAL ENGINEERS

Project No. :	1158(A)
File Name :	
Project :	Chai Wan Government Complex and Vehicle Depot
Drawing Title :	Tree Assessment Schedule
Drawing No :	Appendix 6.1
Revision :	0
Scale :	NTS
Date :	December 2018

A3 420 x 297

Appendix 8.1

Site Appraisal Checklist

Annex C1
Site Walkover Checklist

GENERAL SITE DETAILS

SITE OWNER/CLIENT Drainage Services Department (DSD)

PROPERTY ADDRESS Sheung Tak Street, Chai Wan, Hong Kong

PERSON CONDUCTING THE QUESTIONNAIRE

NAME Ryan Cheng

POSITION Consultant, Allied Environmental Consultants Limited

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Mr. Chau Chung Ming

POSITION Welcome Construction Co., Ltd. (Term Contractor of DSD)

TELEPHONE 9610 2026

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled. **Obtain a flow schematic if possible.**

Number of employees: Full-time: _____

Part-time: _____

Temporary/Seasonal: _____

Maximum no. of people on site at any time: Max. 80

Typical hours of operation: 24-hr

Number of shifts: 2

Days per week: 7

Weeks per year: 52

Scheduled plant shut-down: Not applicable

Detail the main sources of energy at the site:

Gas	Yes/(No)
Electricity	(Yes)/No
Coal	Yes/(No)
Oil	Yes/(No)
Other	Yes/(No)

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: Approx. 7,000m^2

What area of the site is covered by buildings (%): 10% (Temporary building only)

Please list all current and previous owners/occupiers if possible. Housing Department, Kai Hing Trading Company, Highway Department, Drainage Services Department / Welcome Construction Co., Ltd

Is a site plan available? If yes, please attach. (Yes)/No

Are there any other parties on site as tenants or sub-tenants? Yes/(No)

If yes, identify those parties: Not applicable

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: New World First Bus Chong Fu Road Permanent Depot (Industrial)

South: Chai Wan Public Cargo Working Area (Industrial), Citybus Chai Wan Depot (Industrial), Esso Petrol cum LPG Filling Station, THEi Campus

East: Chai Wan Public Cargo Working Area (Industrial)

West: Hong Kong Institute of Vocational Education (Chai Wan) (Institutional), Knight Court (Residential)

Annex C1
Site Walkover Checklist

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

Flat terrain with scattered vegetation and no water body.

State the size and location of the nearest residential communities.

Knight Court (approx. 150m to the northwest of the Project site).

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

The nearest sensitive habitat nearby is Heng Fa Chuen Playground, which is approximately 200m to the northeast of the Project site.

Questionnaire with Existing/Previous Site Owner or Occupier

		Yes/No	Notes
1.	What are the main activities/operations at the above address?		Vehicle parking and material storage (refer to **Attachment 1** for photo record)
2.	How long have you been occupying the site?		11-12 years
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	No	
4.	Prior to your occupancy, who occupied the site?		Fee-paying carpark
5.	What were the main activities/operations during their occupancy?		Vehicle parking
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	No	No change since being occupied by DSD term contractor
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	No	
8.	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	
9.	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	No	
10.	Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	No	
	• Where do you store these chemicals?		N/A
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	
13.	Has the facility produced a separate hazardous substance inventory?	Yes	Storage of 2 to 3 drums of diesel / gasoline were recorded in the past
14.	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	No	

		Yes/No	Notes
15.	How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	See Note	Construction material such as aggregate, drainage pipes, manhole covers, milled asphalt, etc. are received by vehicles and stored in sealed containers (liquid) & covered by impervious sheeting (solid)
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No	
	• How many underground storage tanks do you have on site?		N/A
	• What are the tanks constructed of?		N/A
	• What are the contents of these tanks?		N/A
	• Are the pipelines above or below ground?		N/A
	• If the pipelines are below ground, has any leak and integrity testing been performed?		N/A
	• Have there been any spills associated with these tanks?		N/A
17.	Are there any disused underground storage tanks?	No	
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	Yes	Every 6 months
19.	How are the wastes disposed of?	See Note	C&D waste to sorting facility / landfill
20.	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No	
21.	Have any spills occurred on site? (If yes, please provide details.)	No	
	• When did the spill occur?		N/A
	• What were the substances spilled?		N/A
	• What was the quantity of material spilled?		N/A
	• Did you notify the relevant departments of the spill?		N/A
	• What were the actions taken to clean up the spill?		N/A
	• What were the areas affected?		N/A
22.	Do you have any records of major renovation of your site or re-arrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No	
24.	Are there any known contaminations on site? (If yes, please provide details.)	No	
25.	Has the site ever been remediated? (If yes, please provide details.)	No	

Annex C1
Site Walkover Checklist

Observations

		Yes/No	Notes
1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?		N/A
2.	What are the conditions of the bund walls and floors?		N/A
3.	Are any surface water drains located near to drum storage and unloading areas?		N/A
4.	Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	Yes	General Refuse
5.	Is there a storage site for the wastes?	Yes	Only for a max. of 24 hrs
6.	Is there an on-site landfill?	No	
7.	Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	
9.	Are there any potential off-site sources of contamination?	No	
10.	Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	
11.	Are there any sumps, effluent pits, interceptors or lagoons on site?	No	
12.	Any noticeable odours during site walkover?	No	
13.	Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	See Note	No storage of diesel and oils except a few sealed containers with lubricant were identified within the site boundary. Drip trays were provided to the seal containers.

Annex C2

Potential Information Sources for Site Appraisal

1. Aerial photographs from the Lands Department of Hong Kong
2. Public Records Office – For obtaining old maps and photos
3. Local Libraries – Public libraries and/or Universities Libraries
4. Antiquities and Monuments Office – For obtaining old maps and historical information
5. Topographic Maps from the Survey and Mapping Office – Lands Department
6. Land title searches from the Land Registry
7. Site plans obtained from site contacts
8. Building layout drawings from current and previous site owners
9. Previous assessments completed by site owners
10. Consultation with authorities for obtaining information such as underground utilities, sensitive areas, previous site investigation, zoning and spill records:
    a. Planning Department
    b. Agriculture, Fisheries and Conservation Department
    c. Lands Department
    d. Buildings Department
    e. Environmental Protection Department
    f. Fire Services Department
    g. Drainage Services Department
    h. Civil Engineering and Development Department
    i. Geotechnical Engineering Office, Civil Engineering and Development Department

Annex D

Health, Safety and Environmental Controls during Site Appraisal, Site Investigation and Remediation

	Site Appraisal	Site Investigation	Remediation
Health and Safety (H&S)			
Identify potential health and safety risks and determine control measures	✓	✓	✓
Potential Risks			
• Exposure to hazardous materials on site	✓	✓	✓
• Exposure to contaminated soil & groundwater		✓	✓
• Exposure to volatile / toxic vapours	✓	✓	✓
• Exposure to sample preservative chemicals		✓	✓
• Exposure to chemicals used in remediation			✓
• Possible presence of underground services and utilities		✓	✓
• Machines / equipment on site	✓	✓	✓
• Machines / equipment used in site investigation and remediation		✓	✓
• Manual handling and repetitive motions		✓	✓
• Confined space		✓	✓
• Moving vehicles	✓	✓	✓
• Falling and flying objects	✓	✓	✓
• Dust	✓	✓	✓
• Noise	✓	✓	✓
• Slip and trip	✓	✓	✓
• Fall from height	✓	✓	✓
• Fire and explosion	✓	✓	✓
• Poisonous plants and animals	✓	✓	✓
• Heat stress	✓	✓	✓
H&S Control Measures			
• Prepare site H&S plan		✓	✓
• Appoint site safety personnel		✓	✓
• Works designed and supervised by competent persons		✓	✓
• Personal protective equipment (PPE), for example:			
◦ Safety shoes	✓	✓	✓
◦ Helmet	✓	✓	✓
◦ Respiratory protection	✓	✓	✓
◦ Breathing apparatus			✓
◦ Hearing protection	✓	✓	✓
◦ Goggles	✓	✓	✓
◦ Face mask		✓	✓

	Site Appraisal	Site Investigation	Remediation
• Gloves		✓	✓
• Coverall		✓	✓
• Barricade the site		✓	✓
• Communicate with other working on site		✓	✓
• Check for explosive/flammable gases		✓	✓
• Confined space entry procedure		✓	✓
• Subsurface utility survey		✓	✓
• Compressed gas procedure		✓	✓
• Chemical handling procedure		✓	✓
• Provide decontamination facilities		✓	✓
• Use mechanical tools to reduce manual handling		✓	✓
Environment			
• Identify potential environmental impacts and determine control measures		✓	✓
Potential Environmental Impacts			
• Handling and storage of potentially contaminated soil and groundwater		✓	✓
• Disposal of contaminated wastes arising from the on-site activities		✓	✓
• Discharge of potentially contaminated wastewater		✓	✓
Environmental Control Measures			
• Segregate potentially contaminated soil and groundwater		✓	✓
• Stockpile of potentially contaminated materials should be contained and covered		✓	✓
• Collect potentially contaminated water recovered for appropriate treatment and disposal		✓	✓
• Segregate contaminated waste for disposal in accordance with the requirements of the Waste Disposal Ordinance		✓	✓
• Discharge to the storm water drainage, sewer or surface water shall comply with the requirements of the Water Pollution Control Ordinance		✓	✓
• Comply with noise and vibration limits		✓	✓
• Comply with Air Pollution Control Ordinance		✓	✓

Notes: This table is provided as a guide for identification of potential health, safety and environmental risks and control measures associated with site appraisal, site investigation and remediation activities. Potential risks and control measures listed here are those typically found and implemented in Hong Kong. Risks should be reviewed for each individual site and site-specific control measures should be identified and implemented accordingly. Reference should be made to relevant legislation and guidelines relating to the protection of H&S of personnel such as the *Factories and Industrial Undertakings Ordinance* and the *Occupational Safety and Health Ordinance* and their associated regulations and relevant environmental legislations.

Appendix 8.2

Site Photos of Current Land Use Activities

Appendix 8.2 Site Photos of Current Land Use Activities (15 July 2019) (Rev.1)

Photo 1: Building Entrance (Taken at Site Entrance facing Sheung On Street)

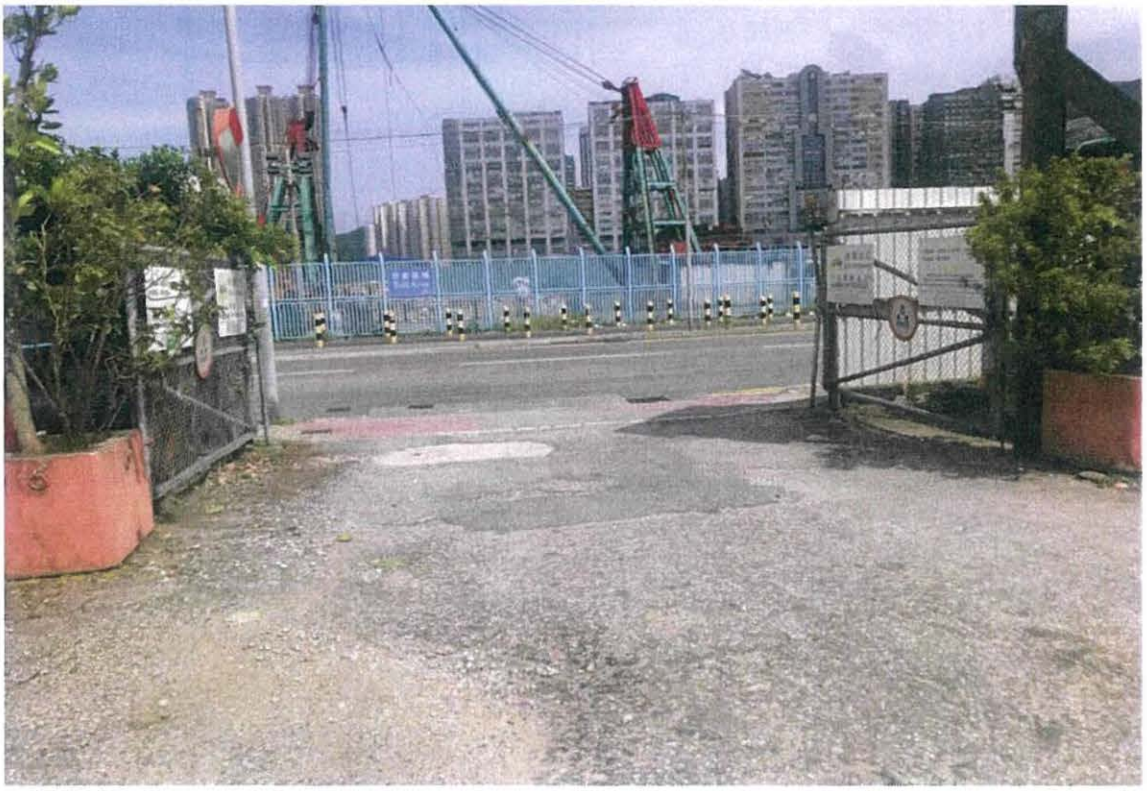


Photo 2: Overview of the Project Site (Taken at Site Entrance)

Appendix 8.2 Site Photos of Current Land Use Activities (15 July 2019) (Rev.1)

Photo 3: Northeast Boundary of the Project Site facing New world First Bus Services Ltd.

Photo 4: Stockpiling Areas within the Project Site

Appendix 8.2 Site Photos of Current Land Use Activities (15 July 2019) (Rev.1)

Photo 5: Designated Storage Area of Fence Barriers and Traffic Cones

Photo 6: Designated Storage Area of Drainage Pipes

Appendix 8.2 Site Photos of Current Land Use Activities (15 July 2019) (Rev.1)

Photo 7: Designated Storage Area of Cable Drums

Photo 8: Storage of Sealed Containers of Lubricant

Appendix 8.3

Correspondence with Local Authorities on Record Request

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Tel.: (852) 2815 7028 Fax: (852) 2815 5399 Email: info@aechk.com

沛然環境評估工程顧問有限公司

Our Ref: 1158/18-0019

30 July 2018

By Fax (2960 1760) and Email

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
Eastern
2/F, Chinachem Exchange Square,
1 Hoi Wan Street, Quarry Bay,
Hong Kong

Attn: Miss CHEUNG Wai Ping, Clara

Dear Madam,

CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT AT SHEUNG TAK STREET, CHAI WAN (PROGRAMME NO. 184GK)
REQUEST FOR INFORMATION – RECORDS OF REGISTERED CHEMICAL WASTE PRODUCERS AND HISTORICAL RECORDS OF CHEMICAL SPILLAGE / LEAKAGE

We are commissioned by the Architectural Services Department (ArchSD) to conduct an Environmental Review Report (ERR) for a development project at the captioned location (as shown in the enclosed location plan), in accordance with the approved Environmental Impact Assessment Report (EIA/230/2015) on 5 Oct 2015, which included a land contamination assessment.

We understand that the Project site is currently used by Drainage Services Department (DSD) as works and staging area. In order to facilitate our land contamination assessment for the EIA study, we would be grateful if the following information concerning the Project site (from 2014 to 2018) can be provided:

(i) Current and past registration of registered chemical waste producer; and
(ii) Historical records of chemical spillage / leakage.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available by 10 August 2018.

We thank you in anticipation for your kind assistance. Should you have any queries, please feel free to contact our Ms. Yvonne Kwan (yk@aechk.com) or the undersigned at 2815-7028.

Yours sincerely,

Ronan Chan
Senior Consultant
Allied Environmental Consultants Limited
(rc@aechk.com)
RC/yk
Encl.
cc. ArchSD (Attn: Mr. Chi Lok WONG/SPM231 & Mr. Vincent SZE/PM246) – by email (w/e)

本署檔案 OUR REF:
來函檔案 1158/18-0019 YOUR REF:
電 話 2516 1818 TEL NO:
圖文傳真 2960 1761 FAX NO:
網 址 HOMEPAGE: http://www.epd.gov.hk/

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
2/F., Chinachem Exchange Square
1 Hoi Wan Street
Quarry Bay, Hong Kong

環境保護署
環保法規管理科
區域辦事處(南)
香港鰂魚涌
海灣街一號
華懋交易廣場二樓

9 August 2018

(By Post & Fax: 2815 5399)

To: Allied Environmental Consultants Limited
19/F., Kwan Chart Tower,
6 Tonnochy Road, Wanchai,
Hong Kong
Attn: Ronan Chan

Dear Mr. Chan,

Re: Chai Wan Government Complex & Vehicle Depot at Sheung Tak Street, Chai Wan (Programme No. 184GK)
Request for Information- Records of Registered Chemical Waste Producers & Historical Records of Chemical Spillage/leakage

I refer to your letter referenced above dated 30 July 2018, requesting the following information with respect to study area in your attached figure:

(1) Current and past registration of registered chemical waste producer; and
(2) Historical records of chemical spillage/leakage.

You are advised to visit our territory-wide register of chemical waste producers, maintained at the Territory Control Office (in Wan Chai). Please contact our Environmental Protection Inspector, Andy MA (Tel: 2835 1357) to make an appointment for the access to the register.

We do not have any records of chemical leakage or spillage at the above site from 2014 to 2018. You are reminded that this information is not exhaustive and you are advised to check with other concerned parties/authorities responsible for handling chemical leakage/spillage incidents. You may also consider taking samples for your study of land contamination, if necessary.

Yours sincerely,

(Dr. Olive H.K. LEE)
for Director of Environmental Protection

cc. ArchSD (Attn.: Mr. C.L. WONG & Mr. Vincent SZE) Fax: 2810 5372

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Tel: (852) 2815 7028 Fax: (852) 2815 5399 Email: info@aechk.com

沛然環境評估工程顧問有限公司

Our Ref: 1158/18-0018

30 July 2018

By Fax (2413 0873) and Email

Fire Services Department
Licensing & Certification Command
Dangerous Goods Division
4th Floor, FSD Kwai Chung Office Building,
86 Hing Shing Road, Kwai Chung, New Territories.

Attn: Mr. LI Wai Cheong

Dear Sir,

CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT AT SHEUNG TAK STREET, CHAI WAN (PROGRAMME NO. 184GK)
REQUEST FOR INFORMATION – REGISTRATION OF DANGEROUS GOODS RECORDS AND HISTORICAL RECORDS OF DANGEROUS GOODS SPILLAGE / LEAKAGE

We are commissioned by the Architectural Services Department (ArchSD) to conduct an Environmental Review Report (ERR) for a development project at the captioned location (as shown in the enclosed location plan), in accordance with the approved Environmental Impact Assessment Report (EIA/230/2015) on 5 Oct 2015, which included a land contamination assessment.

We understand that the Project site is currently used by Drainage Services Department (DSD) as works and staging area. In order to facilitate our land contamination assessment for the EIA study, we would be grateful if the following information concerning the Project site (from 2014 to 2018) can be provided:

(i) Current and past registration of dangerous goods records; and
(ii) Historical records of dangerous goods spillage / leakage.

Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available by 10 August 2018.

We thank you in anticipation for your kind assistance. Should you have any queries, please feel free to contact our Ms. Yvonne Kwan (yk@aechk.com) or the undersigned at 2815-7028.

Yours sincerely,

Ronan Chan
Senior Consultant
Allied Environmental Consultants Limited
(rc@aechk.com)
RC/yk

Encl.
cc. ArchSD (Attn: Mr. Chi Lok WONG/SPM231 & Mr. Vincent SZE/PM246) – by email (w/e)

消防處
香港九龍尖沙咀東部康莊道1號
消防總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS
BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (172) in FSD GR 6-5/4 R Pt. 19
來函檔號 YOUR REF. : 1158/18-0018
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2739 5879
電 話 TEL NO. : 2733 7741

9 August 2018

Allied Environmental Consultants Limited
19/F.,
Kwan Chart Tower,
6 Tonnochy Road,
Wan Chai, Hong Kong.
(Attn: Ms. Ronan CHAN, Senior Consultant)

By fax (2815 5399) only

Dear Ms. CHAN,

Chai Wan Government Complex and Vehicle Depot
at Sheung Tak Street, Chai Wan
(Programme No. 184GK)
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 30.7.2018 regarding the captioned subject.

Your submission only consists of map or layout drawing that we may not be able to provide accurate information from the database. Please provide more information such as building names, house numbers and street names, etc. of the subject location.

Please also submit the appointment letter from your client for record.

Should you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(KONG Wai-chung)
for Director of Fire Services

Ref. number and date should be quoted in reference to this letter
凡提及本信時請引述編號及日期

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Tel.: (852) 2815 7028 Fax: (852) 2815 5399 Email: info@aechk.com

沛然環境評估工程顧問有限公司

Your Ref: (172) in FSD GR 6-5/4 R, Pt. 19
Our Ref: 1158/18-0025

10 August 2018

By Hand and Email

Fire Services Department
Fire Services Headquarters Command
Management Group (MG)
9th Floor, Fire Services Headquarters Building,
1 Hong Chong Road, Tsim Sha Tsui East, Kowloon.

Attn: Mr. KONG Wai Chung

Dear Sir,

CHAI WAN GOVERNMENT COMPLEX AND VEHICLE DEPOT AT SHEUNG TAK STREET, CHAI WAN (PROGRAMME NO. 184GK)
REQUEST FOR INFORMATION – REGISTRATION OF DANGEROUS GOODS RECORDS AND INCIDENT RECORDS (SUPPLEMENTARY INFORMATION)

With reference to your letter no. *(172) in FSD GR 6-5/4 R, Pt. 19* dated 9 August 2018, please find the supplementary information on the Project location as below to facilitate the information request process.

(i)	Lot No.:	TGLA No GLA-THK 1700
(ii)	Building Name:	N/A
(iii)	House Number:	N/A
(iv)	Street Number:	Junction of Sheung Tat Street, Sheung On Street and Sheung Mau Street

Appointment letter from Architectural Services Department (ArchSD) is also attached for your record. Due to tight programme of the captioned project, it is highly appreciated if your reply on the above request could be available by 17 August 2018.

We thank you in anticipation for your kind assistance. Should you have any queries, please feel free to contact our Ms. Yvonne Kwan (yk@aechk.com) or the undersigned at 2815-7028.

Yours sincerely,

Ronan Chan
Senior Consultant
Allied Environmental Consultants Limited
(rc@aechk.com)
RC/yk

Encl.
cc. ArchSD (Attn: Mr. Chi Lok WONG/SPM231 & Mr. Vincent SZE/PM246) – by email (w/e)

消 防 處
香港九龍尖沙咀東部廣華道 1 號
消防總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (15) in FSD GR 6-5/4 R Pt. 20
來函檔號 YOUR REF. : 1158/18-0018
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2739 5879
電 話 TEL NO. : 2733 7741

24 August 2018

Allied Environmental Consultants Limited
19/F.,
Kwan Chart Tower,
6 Tonnochy Road,
Wan Chai, Hong Kong.
(Attn: Ms. Ronan CHAN, Senior Consultant)

Dear Ms. CHAN,

Chai Wan Government Complex and Vehicle Depot at Sheung Tak Street, Chai Wan

Request for Information of Dangerous Goods & Incident Records

I refer to your email of 13.8.2018 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(KONG Wai-chung)
for Director of Fire Services

Please quote our reference in your reply

By Fax Only

MEMO

From District Lands Officer, Hong Kong East	To CE/HK&I, DSD
Ref. (232) In DLO/HE 483/EHGS/87	(Attn. : Mr. W.T. AU)
Tel. No. 2835 1664	Your Ref. 00434Z in DSD HK 9/DC201704/14
Fax No. 2834 4324	Dated 13.7.2017
Email eshkecw@landsd.gov.hk	Fax No : 2827 6657
Date 6 November 2017	Total Pages 1

Temporary Government Land Allocation No. GLA-THK 1700 & Extension hereto to Director of Drainage Services for Works Area at Junction of Sheung Mau Street and Sheung On Street, Chai Wan, Hong Kong

I refer to your memo dated 13.7.2017.

2. Please be advised that the term of the allocation has been extended to 31.3.2008 and thereafter quarterly, as such, your application to extend the allocation to 31.3.2022 is not required. However, as C of P has advised this office that the site is required for the planned permanent development of Chai Wan Government Complex and Vehicle Depot by July 2019, subject to funding approval by LegCo in May 2019, there is no guarantee that the site would be available for use by your department beyond July 2019.

3. To facilitate the GI works related to the Chai Wan Government Complex and Vehicles Depot, the following clause shall be deemed to be included in the Engineering Condition of your TGLA with immediate effect:-

> The District Lands Officer and his duly authorized officers, contractors, his or their workmen and any other persons authorized by him or them (hereinafter collectively referred to as "the authorized persons") with or without tools, equipment, machinery or motor vehicles shall upon reasonable prior notice being given to the allocate have the right of unrestricted ingress, egress and regress to, from and through the site free of costs for the purposes of carrying out site investigation works or site inspection which the District Lands Officer may require or authorize. Save in respect of restoring and making good the site to the same condition prior to the carrying out of site investigation works or site inspection, the District Lands Officer and the authorized persons, shall have no liability in respect of any loss, damage, nuisance or disturbance whatsoever caused to or suffered by the allocatee arising out of or incidental to the exercise by the District Lands Officer or the authorized persons of the right of unrestricted ingress, egress and regress and in the carrying out of the site investigation works or site inspection conferred under this condition and no claim shall be made against the District Lands Officer or the authorized persons by the District Lands Officer in respect of any such loss, damage, nuisance or disturbance.

4. Should you have any queries, please feel free to contact the undersigned.

(Kason CHEUNG)
for District Lands Officer, Hong Kong East

c.c.

C of P (Att.: IP Ying-choi) - fax.2200 4374
DPO/HK, PlanD
AC for T/U,TD
CHE/HK, HyD
PM/HKI&I, CEDD
CGE/I, GEO,CEDD
CE/HK, WSD
DO(E)
D of FS
DFEH
DC Eastern, C of P
SLS/HK

TOTAL P.001