

**Proposed Concrete Batching Plant in “Industrial” Zone
at Nos.13- 17 Wah Sing Street, Kwai Chung
S16 Planning Application**

(Planning Application No: A/KC/509)

Appendix II

Revised Environmental Assessment



**Section 16 Planning Application for Proposed
Concrete Batching Plant at 13-17 Wah Sing Street,
Kwai Chung
Environmental Assessment Report**

Prepared for:
Wah Sing Manager Company Ltd

24 January 2025

Section 16 Planning Application for Proposed Concrete Batching Plant at 13-17 Wah Sing Street, Kwai Chung Environmental Assessment Report

Prepared for
Wah Sing Manager Company Ltd

For and on behalf of EnviroSolutions & Consulting					
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1 INTRODUCTION

1.1 Project Background

1.1.1 It is planned to demolish the existing building at 13-17 Wah Sing Street, Kwai Chung (“the Site”) and redevelop it into a Concrete Batching Plant (“CBP”).

1.1.2 The Site is zoned Industrial (“I”) under the Approved Kwai Chung Outline Zoning Plan (“OZP”) No. S/KC/32. In accordance with schedule of “I” Zone on the OZP, the use of concrete batching plant falls into Column 2, which may be permitted with or without conditions on application to the Town Planning Board (“TPB”). Therefore, a planning application under Section 16 of the *Town Planning Ordinance* (“TPO”) is required.

1.1.3 In order to support the planning application for the Proposed CBP, EnviroSolutions & Consulting Ltd (“ESC”) has been appointed to prepare this Environmental Assessment (“EA”) Report.

1.2 Site Description

1.2.1 With the site area of approx. 1,780m², The Site is bounded by Wah Sing Street to its south and east. As shown in **Figure 1-1**. It is situated in the industrial areas and surrounded by various industrial buildings.

1.2.2 The Proposed CBP will comprise three to four production line for concrete production. The maximum hourly production rate of the Proposed CBP will be about 480 m³/hour and the operation time will be 24 hours per day.

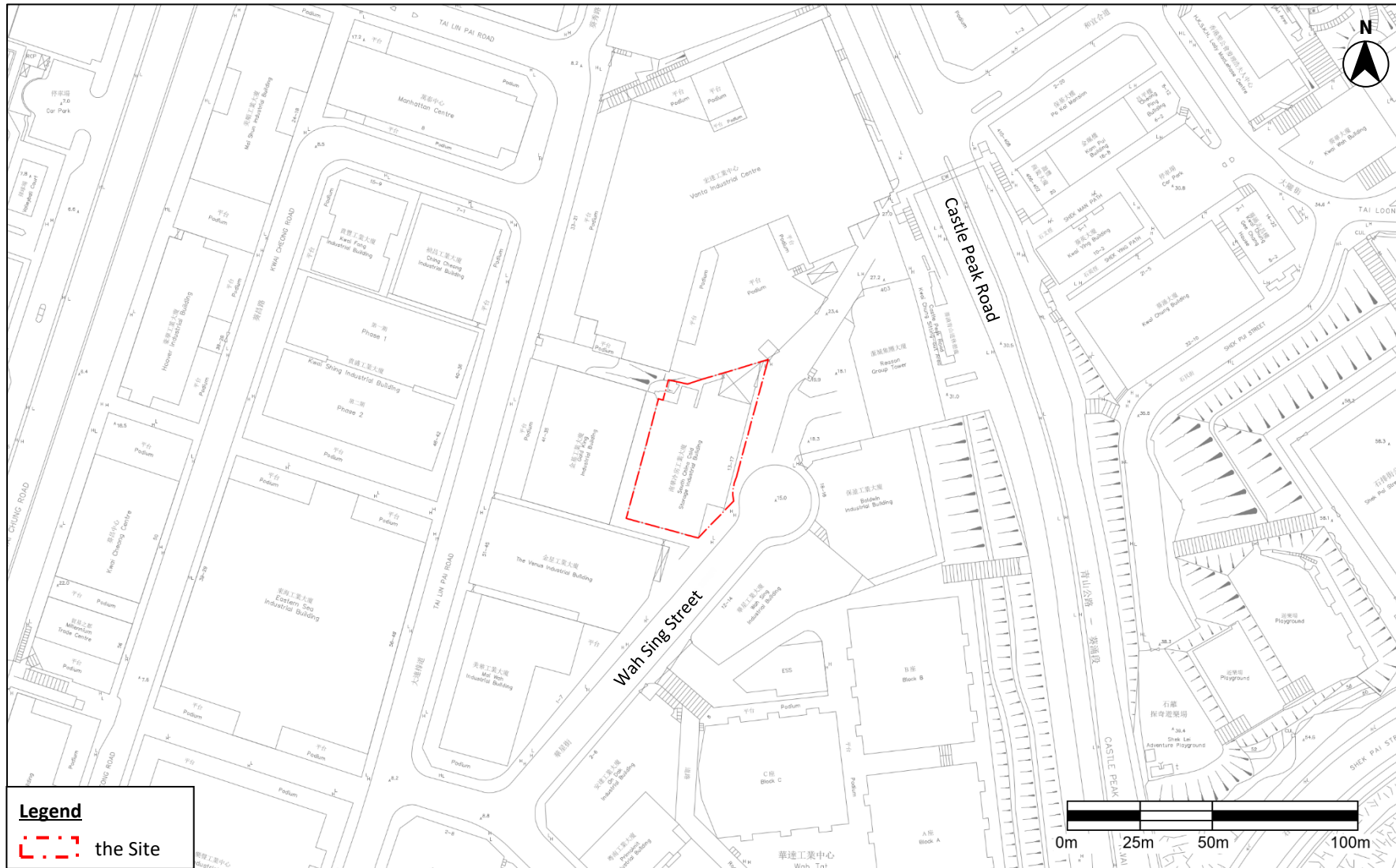
1.2.3 According to Item K.5, Part I, Schedule 2 of the *Environmental Impact Assessment Ordinance* (“EIAO”), “a cement works or concrete batching plant with a total silo capacity of more than 10,000 tonnes in which cement is handled and manufactured” is a Designated Project (“DP”). The total silo capacity of the proposed CBP will not be more than 10,000 tonnes, hence, it is not considered as DP.

1.3 Objectives of the Report

1.3.1 The objectives of this EA Report are to:

- Identify and assess the potential environmental impacts arising from the operation of the Proposed CBP, in terms of air quality, noise, water quality and waste management and land contamination review.
- Recommend appropriate measures to mitigate any impacts if necessary.
- Propose measures for compliance with the Best Practicable Means (“BPMs”) with reference to *A Guidance Note on the Technical, Management and Monitoring Requirements for Specified Processes – Cement Works (Concrete Batch Plant) (BPM 3/2 (16))*.

Figure 1-1 Site Location and its Environs



2 AIR QUALITY

2.1 Introduction

2.1.1 This section provides an assessment of the potential air quality impact arising from the Proposed CBP during construction and operation phases. Mitigation measures are recommended, where necessary, as part of the assessment.

2.2 Environmental Legislation and Standards

Air Quality Objectives

2.2.1 The Proposed CBP will have three to four production lines with total silo capacity exceeding 50 tonnes. Therefore, it is classified as cement works in respect of a Specified Process (“SP”) requiring an application of a SP Licence under Section 14 of APCO.

2.2.2 The Air Quality Objectives (“AQOs”) established under the *Air Pollution Control Ordinance* (“APCO”) (Cap. 311) are given in **Table 2-1**.

Table 2-1 Hong Kong Air Quality Objectives

POLLUTANT	AVERAGING TIME	CONCENTRATION LIMIT <small>[Note 1]</small> ($\mu\text{g}/\text{m}^3$)	NUMBER OF EXCEEDANCES ALLOWED
Sulphur Dioxide (“SO ₂ ”)	10-minute	500	3
	24-hour	50	3
Respirable Suspended Particulates (“RSP” or “PM ₁₀ ”) <small>[Note 2]</small>	24-hour	100	9
	Annual	50	Not applicable
Fine Suspended Particulates (“FSP” or “PM _{2.5} ”) <small>[Note 3]</small>	24-hour	50	35
	Annual	25	Not applicable
Nitrogen Oxide	1-hour	200	18
	Annual	40	Not applicable
Ozone	8-hour	160	9
Carbon Monoxide	1-hour	30,000	0
	8-hour	10,000	0
Lead	Annual	0.5	Not applicable

Notes:

1. All measurements of the concentration of gaseous air pollutants, i.e. SO₂, NO₂, O₃ and CO, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
2. RSP means suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.
3. FSP means suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less.

Air Pollution Control (Construction Dust) Regulation

2.2.3 Enacted under Section 43 of the APCO, the *Air Pollution Control (Construction Dust) Regulation* defines notifiable and regulatory works to ensure effective dust abatement

measures have been properly implemented to reduce dust emissions for a number of construction activities.

- 2.2.4 The Regulation requires that advance notice is given to EPD for any notifiable work^[Ref.#1] and the contractor shall ensure that the notifiable and regulatory works are carried out in accordance with the Schedule of the Regulation, which also includes dust control and suppression measures.

Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation

- 2.2.5 This Regulation takes effect on June 2015 and required Non-road Mobile Machinery (“NRMM”), except those exempted, to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites, container terminals and back up facilities, restricted areas of the airport, designated waste disposal facilities and specified processes.

Air Pollution Control (Fuel Restriction) Regulation

- 2.2.6 The regulation imposes legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes. Gaseous fuel, conventional solid fuel with a sulphur content not exceeding 1% by weight or liquid fuel with a sulphur content not exceeding 0.005% by weight and a viscosity not more than 6 centistokes at 40°C, such as Ultra Low Sulphur Diesel (“ULSD”) are permitted to be used in commercial and industrial processes.

Asbestos Containing Materials (“ACMs”)

- 2.2.7 APCO regulates a series of activities involving ACMs. The owner of premises where ACMs are found or reasonably suspected of shall engage a Registered Asbestos Consultant (“RAC”) to provide an Asbestos Investigation Report (“AIR”) before the building is demolished. In the case that any ACM is found, an Asbestos Management Plan (“AMP”) including an Operation and Maintenance Plan (“O&MP”) for ACM not requiring asbestos removal works; and an Asbestos Abatement Plan (“AAP”) for any asbestos abatement work or work which involves the use or handling of any ACM, shall be prepared, signed by the RAC and then submitted to EPD for approval. The owner shall notice EPD in writing no less than 28 days before date on which any asbestos abatement work is to be commenced in accordance with Section 73 of the APCO.
- 2.2.8 As stipulated in APCO, a Registered Asbestos Contractor shall engage a Registered Asbestos Supervisor stationed continuously at the asbestos abatement area to supervise in removal of ACMs in accordance with the approved AAP. Under Section 74(3) of the APCO, a RAC so appointed shall supervise the asbestos abatement work and notify EPD of any changes of AMP or the asbestos abatement work. After the asbestos abatement work is done, the RAC

¹ Notifiable works include site formation, reclamation, demolition of a building, work carried out in any part of a tunnel that is within 100m of any exit to the open air, construction of the foundation of a building, construction of the superstructure of a building and road construction work.

shall prepare a summary report and submit it to EPD for record and then demolition work can commence.

Guidance Notes on Best Practicable Means (“BPM”) for SPs

- 2.2.9 A number of GNs have been published for SPs which “A Guidance Note on the Technical, Management and Monitoring Requirements for Specified Process – Cement Works (Concrete Batch Plant) BPM 3/2(16)” (“the BPM”) dated February 2016 is relevant to the Proposed CBP. With reference to Annex 1 of the BPM, the emissions from non-fugitive fixed emission points of the Proposed CBP shall not exceed the concentration limited in **Table 2-2**.

Table 2-2 Concentration Limit for Cement works – Concrete Batching Plant

AIR POLLUTANT	CONCENTRATION LIMIT
Particulate matter	10 mg/m ³ (design standard) [a]

Note:

[a]. For the emission points of existing premises with a designed concentration limit of 50 mg/m³, the licence holder shall, upon licence renewal, submit an improvement plan to meet the limit of 10 mg/m³ (design standard). The concentration limit of 10 mg/m³ (design standard) shall be met by 1 January 2018 for all plants.

2.3 Construction Phase Impact Assessment

- 2.3.1 Fugitive dust and gaseous emissions are the major impact that will be generated during construction activities, such as demolition, stockpiling, earth moving, transferring or handling of dusty materials.
- 2.3.2 There is no construction programme at this stage of the project but the duration of construction of the plant is estimated to be about 12 months and assumed to be started at 2025.
- 2.3.3 Based on desktop review, no major concurrent project within the 500m assessment area is anticipated.
- 2.3.4 Potential source of air pollutants such as NO₂, SO₂ and CO could be generated from fuel combustion from the use of Powered Mechanical Equipment (“PME”) during construction works. The *Air Pollution Control (Fuel Restriction) Regulation* was enacted in 1990 to impose legal control on the types of fuel allowed for use and their sulphur contents in commercial and industrial processes which would reduce the sulphur emission impact. To improve air quality and protect public health, EPD has introduced the *Air Pollution control (Non-road Mobile Machinery) (Emission) Regulation* since 1 December 2015, under which only approved or exempted NRMMS are allowed to be used in construction sites. In addition, all construction plants are required to use Ultra-low sulphur diesel (“ULSD”) (diesel fuel containing not more than 0.005% sulphur by weight) as stipulated in *Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No. 19/2005 on Environmental Management on Construction Sites*. Furthermore, given the localised and small scale of the Project, as well as the small number of PMEs involved, adverse air quality impacts due to emissions from the use of PMEs would be unlikely.
- 2.3.5 The works area for demolition of existing building and other construction works is approximately 1,573 m². Given the project area is relatively small and no deep excavation is needed. As discussed in **Section 5.3**, about 7,012 tonnes of inert construction and demolition (C&D) materials and 168 tonnes of non-inert C&D materials will be generated.

Since the works area is limited for construction works, it is anticipated that no more than 20 number of construction plant would be in operation during each construction activity.

2.3.6 There is two dump trucks per day estimated for transportation of inert C&D material from construction material. Dump truck loaded with inert C&D material would be covered entirely before leaving the Project Site to ensure that dusty material would not leak from the dump truck according to the APCO requirement. In case temporary stockpiling of small amount of dusty material is required, the stockpile will be covered by tarpaulin sheets or placed in an area sheltered on the top and the 3 sides. The mitigation measures described in as below would also be implemented during the construction phase to minimise impacts on air quality on nearby ASRs.

2.3.7 The *Air Pollution Control (Construction) Regulation* stipulated several dust control measures. With the implementation of the control measures and relevant good site practices, the potential air quality impact from construction activities associated with this project can be minimized.

Mitigation Measures for Construction Phase

2.3.8 To avoid adverse air quality impact on the air sensitive uses nearby, good site practice and control measures to be implemented during the construction phase are as follows:

- The area where demolition work or any dusty work takes place should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after such work as far as practicable.
- Provide hard paving on open area, regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.
- The working area of any excavation or earth moving operation shall be sprayed with water immediately before, during and immediately after the operation so as to maintain the entire surface wet.
- Frequent watering for particularly dusty areas and areas close to ASRs.
- Any stockpile of dusty materials shall be either covered entirely by impervious sheeting, placed in an area sheltered on the top and three sides, or sprayed with water so as to maintain the entire surface wet.
- Where possible, dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.
- The working area for the uprooting of trees, shrubs, or vegetation or for the removal of boulders, poles, pillars or temporary or permanent structures shall be sprayed with water immediately before, during and immediately after the operation so as to maintain the entire surface wet.
- All demolished items (including trees, shrubs, vegetation, boulders, poles, pillars, structures, debris, rubbish and other items arising from the site clearance) that may dislodge dust particles shall be covered entirely by impervious sheeting or placed in an area sheltered on the top and three sides within a day of demolition.
- Tarpaulin covering of all dusty vehicles loads transported to, from and between site locations.

- Vehicle washing facilities including a high-pressure water jet shall be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point shall be paved with concrete, bituminous materials or hardcore.
- Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit.
- Spray water on the surface of façade grinding work as far as practicable.
- Equip vacuum cleaner on grinder for façade grinding work as far as practicable.
- Main haul road shall be sprayed with water so as to maintain the entire surface wet. Imposition of speed controls for vehicles on site haul roads and confine haulage and delivery vehicles to designated roadways inside the site.
- A portion of any road leading only to a construction site that is within 30m of a discernible or designated vehicle entrance or exit shall be kept clear of dusty materials.
- Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from the ASRs.
- Every stock of more than 20 bags of cement or dry Pulverised Fuel Ash (“PFA”) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and three sides.
- The emission from Non-Road Mobile Machinery (“NRMM”) shall comply with the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, except those exempted.
- All regulated machines to be used in construction site must be approved or exempted with a proper label in a prescribed format issued by EPD.

2.3.9 In addition, the EPD’s *Recommended Pollution Control Clause (“RPCC”) for Construction Contract* in COP should be incorporated in the relevant works contract. The RPCC are generally good engineering practice to minimize inconvenience and environmental nuisance to nearby residents and other sensitive receivers. The general requirements are summarised below:

- The Contractor shall observe and comply with the APCO and its subsidiary regulations, particularly Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Smoke) Regulation.
- The Contractor shall undertake at all times to prevent dust nuisance and smoke as a result of his activities.
- The Contractor shall ensure that there will be adequate water supply / storage for dust suppression.
- The Contractor shall devise, arrange methods of working and carrying out the works in such a manner as to minimise dust impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.
- The Contractor shall provide electric power supply for on-site machinery as far as practicable and diesel generators and machinery shall be avoided to minimize the gaseous and PM emissions.

- The Contractor shall Locate all the dusty activities away from any nearby ASRs as far as practicable.
- The Contractor shall erect higher hoarding at the locations with ASRs in immediate proximity to the project site boundary.
- The Contractor shall avoid using exempted Non-Road Mobile Machinery (NRMMS).

2.3.10 With the implementation of the control measures and relevant good site practices, the potential air quality impact from construction activities associated with this Project can be minimized

2.4 Operation Phase Impact Assessment

Identification of Air Pollution Sources

2.4.1 The proposed CBP will be operated within a fully enclosed building with negative pressure at openings for vehicle access. There is no diesel generator will be used for normal operation.

2.4.2 The works and equipment of the proposed CBP for concrete production will be driven by the mains electricity supply. Therefore, particulate matters, i.e., Respirable Suspended Particulates (“RSP” or “PM10”) and Fine Suspended Particulates (“FSP” or “PM2.5”) will be the major air pollution concerns during the operation of the CBP. Particulate Matters (“PM”) including RSP and FSP are the major pollutants that will be generated during the operating activities of the CBP including transferring and handling of dusty materials, fugitive dust emissions from vehicle movements. The emission of particulate matters will be through Dust Collectors (“DCs”) at rooftop of the full enclosed plant. Vehicular emissions from open road networks within the 500m Study Area is also considered in the assessment. On the other hand, Nitrogen Dioxide (“NO₂”) will be emitted from tailpipe emissions during the vehicle travelling within the CBP and also from open road networks within 500m Study Area. The indicative Emission Points (“EPs”) within the Site as listed in **Table 2-3** and illustrated on **Figure 2-1** will be the major sources of RSP, FSP and NO₂ during the operation of the CBP.

Table 2-3 Summary of Identified Emission Points within CBP during Operation

EMISSION POINTS	DESCRIPTION	POLLUTANT	TYPE	OPERATION HOURS
EP1-EP16	Dust Collectors (DCs) for silos	RSP, FSP	Ducted	07:00 to 19:00
EP17-EP20	DC for mixers and holding hoppers	RSP, FSP	Ducted	07:00 to 19:00
EP21	DC for aggregate transfer and paved roads	RSP, FSP, NO ₂	Ducted	07:00 to 19:00

Note: The operation hours in this table are indicative and the actual operation hours may be changed subject to the detailed design stage in the future.

Emission Control Measures

2.4.3 To further minimise the air quality impact, the following mitigation measures should be provided, implemented and maintained during the operation phase of the CBP:

- Cementitious material storage silos shall be equipped with high level alarms to warn of over-filling.
- Seating of pressure relief valves of all silos shall be checked at least once a week during the process of filling dusty materials into the silos to ensure no dust-laden air leakage from the pressure relief valves.
- A high standard of housekeeping shall be maintained to minimise generation of fugitive emissions. All spillages or deposits of materials shall be cleaned up as soon as possible.
- For loading ready-mixed concrete into the mixer drum of mixer trucks, the loading point shall be fitted with a flexible sleeve/chute which is long enough to enter the mixer drum hatch of the mixer trucks. The flexible sleeve/chute should be made of material capable of withstanding continuous exposure to concrete ingredients such as cement slurries and abrasive aggregates.
- The raw materials such as crushed rock, sand, stone aggregate shall be adequately wetted prior to and during the loading, unloading and handling operations. Effective manual or automatic water spraying system shall be provided and used at all unloading areas, stockpiles and material discharge points.
- All receiving hoppers for unloading materials shall be enclosed on three sides up to 3m above the unloading point.
- Aggregates with a nominal size less than or equal to 5mm should be stored in totally enclosed structure structures such as storage bin bins and should not be handled in open area. Where there is sufficient buffer area surrounding the concrete batching plant, ground stockpiling may be used. The stockpile shall be enclosed at least on top and three sides and with flexible curtain to cover the entrance side.
- Aggregates with a nominal size greater than 5mm should preferably be stored in a totally enclosed structure. If open stockpiling is used, the stockpile shall be enclosed on three sides with the enclosure wall sufficiently higher than the top of the stockpile to prevent wind whipping.
- Closure device shall be provided on mixer trucks for preventing spillage of concrete from the concrete discharge outlet of mixer trucks.
- Dust accumulated in dust collectors shall be properly handled to prevent generating fugitive dust emissions.
- Malfunctioning or breakdown of the process or air pollution control equipment shall be dealt with promptly. Sufficient numbers of spare filter bags shall be kept in stock to allow rapid repair of dust collectors.
- All access road and route roads within the Site shall be paved and adequately wetted.
- Wheel washing facilities should be provided at the Site exit that:
 - (a) All vehicle cleaning activities shall be carried out within the Site boundary. During cleaning, the whole vehicle body shall be located within the Site boundary, and there should be no splashing of wash water to public area outside the Site boundary at all times.

- (b) Effective wheel washing facilities and/or arrangement, such installation of adequate number of pressurised water spray nozzles, should be in place and operated to thoroughly wash down muddy materials from the vehicle body and wheels before vehicles leaving the Site exit. Where necessary, manual hosing by trained labour shall also be supplemented to ensure thorough removal of dust and no muddy water on the vehicle body and wheels.
 - (c) Effective vehicle stopping device should be installed at the cleaning area at the exit of the cleaning area inside the Site boundary to ensure sufficient time for cleaning of the vehicles.
 - (d) A slurry water handling system should be provided and operated effectively to intercept all wash water from the vehicle cleaning process. There should be a peripheral U-channel or suitable alternative to ensure no discharge or spillage of the wash water beyond the Site boundary and to prevent dust deposit accumulation on the public roads.
- There should be no visible run-off of sediment-laden water from the wheel washing facilities to areas outside the Site.
 - Closure device shall be provided on mixer trucks for preventing spillage of concrete from the concrete discharge outlet of mixer trucks.

2.4.4 The mitigation measures proposed above to be actually implemented for the Proposed CBP would be subject to the terms and conditions agreed between EPD and the Applicant in the future, which will be governed under by the SP Licence.

Identification of Air Sensitive Receiver (“ASRs”)

2.4.5 The representative ASRs within 500m study area of the Site have been identified for this assessment. The representative ASRs are shown in **Figure 2-2** and summarised in **Table 2-4**.

Table 2-4 Representative ASRs within Study Area of the Site

ASR ID	DESCRIPTION	USE	APPROX. DISTANCE TO THE SITE, m
ASR1	Hotel Cozi Oasis	Hotel	153
ASR2	Kwai Shing Industrial Building	Commercial	68
ASR3	Vanta Industrial Centre	Commercial	8
ASR4	Vanta Industrial Centre	Commercial	40
ASR5	Kwai Ying Building	Residential	103
ASR6	Gold King Industrial Building	Commercial	6
ASR7	The Venus Industrial Building	Commercial	5
ASR8	Boldwin Industrial Building	Commercial	35
ASR9	Wah Sing Industrial Building	Commercial	23
ASR10	Shek Lei Adventure Playground	Recreational	155
ASR11	Kwai Chung Building	Commercial	145

2.5 Cumulative Air Quality Impact Assessment

Background Air Quality

- 2.5.1 According to “Guidelines on Assessing the ‘TOTAL’ Air Quality Impacts”, PATH pollutant concentrations as from EPD’s Smart Air Modelling Platform (“SAMP”) are used as background concentrations of the assessment.
- 2.5.2 The assessment area of 500m from the Plant covered PATH grids (36,38), (37,38) and (36,39). Year 2025 as downloaded from PATH v3.0 is adopted as the assessment year for predicted cumulative impact comparing against the prevailing AQOs.

Air Dispersion Model

- 2.5.3 A Gaussian dispersion model AERMOD was used to estimate pollutant concentrations at ASRs. The model was originally developed by the United States Environmental Protection Agency (“USEPA”) and is adopted for evaluating industrial chimney releases (point sources), area and volume sources as well as line sources (i.e. vehicle emission for open roads).
- 2.5.4 AERMET is a meteorological pre-processor developed by USEPA and is used for organising meteorological data into a format suitable for use by AERMOD. Site specific MET data has been downloaded from the Smart Air Modelling Platform (“SAMP”). Details are shown in **Appendix B**.
- 2.5.5 The output from MET data consists of two parts; a file with extension “.sfc” is the surface air data; and a file with extension “.pfl” is the upper air data. Data including wind speed, wind direction and temperature in the surface air data from the output file in “.sfc” format were replaced by the original WRF data.

Vehicular Emissions from Open Roads

- 2.5.6 The predicted 24-hour traffic flow and vehicle compositions at the identified roads within the assessment area was provided by the traffic consultant for the assessment of the potential air quality impact from the open roads. Three years of traffic data was provided as Year 2026 (the proposed commencing year of the CBP), Year 2033 (seven years after the commencing year of the CBP) and Year 2041 (15 years after the commencing year of the CBP).
- 2.5.7 NO₂, RSP and FSP are the key pollutants for vehicular emissions from open roads. Latest EMFAC-HK model as provided in the SAMP with “Zero Emission Vehicle Scenario” has been used to estimate the vehicular emission rates for NO, NO₂, RSP and FSP to include the consideration of Zero Emission Vehicle (“ZEV”) assumptions. The detailed input parameters for the EMFAC-HK model input are summarised in **Appendix C**.
- 2.5.8 A sensitivity test for the provided three years traffic data was conducted to identify the worst assessment year for subsequent AERMOD modelling. The results of the test as shown in **Table 2-5** below show that Year 2026 has the highest NO_x emission which is adopted for the AERMOD modelling for NO and NO₂ as conservative approach. Year 2026 also has the highest RSP and FSP emission and the year is adopted for the AERMOD modelling of RSP and FSP. For the estimation of long-term air quality impact of pollutants (annual average), the daily profile of averaged temperature and relative humidity data in

each hour for each month (i.e., 24 hours data in each month and for 12 months) as derived from the EMFAC-HK model in the SAMP were adopted for the model input. For short-term air quality impact of pollutants (hourly or daily average), the daily profile of minimum temperature and relative humidity data in each hour for each month were adopted.

Table 2-5 Total Vehicular Emissions of Open Roads (Tonnes per Year)

POLLUTANT	YEAR 2026		YEAR 2033		YEAR 2041	
	Monthly Hour Min	Monthly Hour Average	Monthly Hour Min	Monthly Hour Average	Monthly Hour Min	Monthly Hour Average
NO ₂	5.56	5.07	3.48	3.26	2.46	2.31
NO	41.83	37.98	21.51	19.58	10.00	9.03
NO _x	47.40	43.04	24.99	22.83	12.46	11.34
FSP	1.09	1.09	0.60	0.60	0.27	0.27
RSP	1.19	1.19	0.65	0.65	0.29	0.29

Vehicular Emissions from Public Transport Terminus

- 2.5.9 There are three identified bus termini within the 500m study area, Kwai Hing, Shek Lei and Lei Pui Street Bus Terminus. There are also three public light bus (PLB) termini and Taxi Stands at Kwai Hing Bus Terminus, Lei Pui Street Bus Terminus and near to Shek Lei Bus Terminus. For Kwai Hing Bus Terminus, there are other types of vehicles (PV4, PV5 and NFB6) bypass the terminus which would include in the emission assessment.
- 2.5.10 Running, idling and start emissions within the bus termini, PLB termini and taxi stands were assessed with precise approach. Kwai Hing station bus terminus and Shek Lei bus terminus were semi-confined facilities and the rest are open-air facilities. The start emissions calculation was conducted according to the “Technical Note on the Calculation of Start Emissions in Air Quality Impact Assessment”. Start emission factors of vehicle types at various soak times were extracted from EMFAC-HK v4.3. The detailed calculation of start emission is presented in **Appendix D**.

Industrial Emissions

- 2.5.11 The surrounding of the Site is industrial and commercial buildings. No active chimney was identified within the study area. According to the “Guidelines on Assessing the ‘TOTAL’ Air Quality Impacts”, there is no major industrial emission source within 4km is identified
- 2.5.12 The emission rates of the CBP have been summarised in **Appendix A**.

Ozone Limiting Method for Short-term Cumulative NO₂ Assessment

- 2.5.13 Ozone Limiting Method (“OLM”) has been adopted for conversion of NO from vehicle-related source and NO_x from industrial emission sources to NO₂ based on the predicted O₃ level from PATH model as extracted from the SAMP for the short-term cumulative NO₂ assessment.
- 2.5.14 The initial NO₂/NO_x ratio for industrial emission has been assumed as 10% according to “Technical support document (TSD) for NO₂-related AERMOD modifications” as published by USEPA. The predicted initial NO concentrations from open roads and 90% of the

predicted NO_x concentrations from industrial emissions was firstly added together on an hour-to-hour basis and OLM was applied subsequently. The NO₂/NO_x conversion has been calculated based on the equation below:

$$[NO_2]_{predicted} = [NO_2]_{veh} + 0.1 \times [NO_x]_{ind} + \text{Min}\{([NO]_{veh} + 0.9 \times [NO_x]_{ind}) \text{ or } (\frac{46}{48} \times [O_3]_{PATH})\}$$

Where,

[NO₂]predicted = predicted NO₂ concentration

[NO₂]veh = predicted initial NO₂ concentration from vehicular emissions

[NO_x]ind = initial NO_x concentration from industrial sources

[NO]veh = predicted initial NO concentration from vehicular emissions

Min = minimum of the two values in (brackets)

[O₃]PATH = representative O₃ PATH concentration

Jenkin Method for Long-term Cumulative NO₂ Assessment

2.5.15 Jenkin method was adopted for the conversion of cumulative annual average NO_x to NO₂ by using the empirical relationship in observed annual mean of NO_x and NO₂ concentrations with reference to the “*Guidance on Choice of Models and Model Parameters*”. The empirical relationship is derived from the annual mean observed data by relevant EPD’s Air Quality Monitoring Stations (“AQMS”) including North (the closest station), the nearest roadside station (Mong Kok) and derived by the SAMP. The resulting curve was adopted for the cumulative annual average NO_x to NO₂ conversion and the NO_x-to-NO₂ conversion equation using Jenkin method is presented in **Appendix C**.

2.6 Assessment Results

2.6.1 The cumulative air quality impact due to vehicular emissions, the Plant operation and background concentrations were evaluated and compared to the prevailing AQOs as described in **Section 2.2**. The results of maximum concentrations of each ASRs are summarised in **Table 2-6** and **Table 2-7**. Detail results are presented in **Appendix E** and comparison of new parameters of proposed 2025 AQOs are also included for reference.

Table 2-6 Predicted Maximum FSP and RSP Concentrations at Representative ASRs

ASR ID	DESCRIPTION	PATH GRID	HEIGHT		RSP, µg/m ³		FSP, µg/m ³	
			(mPD)	(mAG)	10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE	36 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR1	Hotel Cozi Oasis	(36,38)	33.5	11.5	21.06	53.98	28.33	13.30
ASR2	Kwai Shing Industrial Building	(36,38)	18.5	4.5	21.34	54.59	28.67	13.57

ASR ID	DESCRIPTION	PATH GRID	HEIGHT		RSP, $\mu\text{g}/\text{m}^3$		FSP, $\mu\text{g}/\text{m}^3$	
			(mPD)	(mAG)	10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE	36 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR3	Vanta Industrial Centre	(36,38)	63.5	43.5	22.29	55.29	28.46	13.66
ASR4	Vanta Industrial Centre	(36,38)	30.5/63.5	10.5/43.5	21.23	54.18	28.40	13.31
ASR5	Kwai Ying Building	(36,38)	42.5	5.5	21.00	53.93	28.25	13.26
ASR6	Gold King Industrial Building	(36,38)	63.5	43.5	25.82	60.74	29.57	14.95
ASR7	The Venus Industrial Building	(36,38)	24.5	4.5	21.15	54.09	28.41	13.40
ASR8	Boldwin Industrial Building	(36,38)	27.5	6.5	21.03	53.97	28.34	13.29
ASR9	Wah Sing Industrial Building	(36,38)	24.5	1.5	21.06	53.95	28.34	13.32
ASR10	Shek Lei Adventure Playground	(36,38)	42.5	1.5	21.08	53.95	28.23	13.34
ASR11	Kwai Chung Building	(36,38)	42.5	5.5	20.99	53.91	28.24	13.25
Prevailing AQOs					100	50	50	25

Table 2-7 Predicted Maximum NO₂ Concentrations at Representative ASRs

ASR ID	DESCRIPTION	PATH GRID	HEIGHT		NO ₂ , $\mu\text{g}/\text{m}^3$	
			(mPD)	(mAG)	19 th HIGHEST HOURLY AVERAGE	ANNUAL AVERAGE
ASR1	Hotel Cozi Oasis	(36,38)	33.5	11.5	122.54	27.33
ASR2	Kwai Shing Industrial Building	(36,38)	18.5	4.5	154.03	37.73
ASR3	Vanta Industrial Centre	(36,38)	30.5/69.5	10.5/49.5	143.61	26.78
ASR4	Vanta Industrial Centre	(36,38)	30.5	10.5	127.87	28.33
ASR5	Kwai Ying Building	(36,38)	42.5	5.5	127.07	27.48
ASR6	Gold King Industrial Building	(36,38)	24.5	4.5	133.53	27.70

ASR ID	DESCRIPTION	PATH GRID	HEIGHT		NO ₂ , µg/m ³	
			(mPD)	(mAG)	19 th HIGHEST HOURLY AVERAGE	ANNUAL AVERAGE
ASR7	The Venus Industrial Building	(36,38)	24.5	4.5	137.09	31.78
ASR8	Boldwin Industrial Building	(36,38)	27.5	6.5	127.24	27.34
ASR9	Wah Sing Industrial Building	(36,38)	24.5	1.5	142.41	28.49
ASR10	Shek Lei Adventure Playground	(36,38)	42.5	1.5	135.78	27.33
ASR11	Kwai Chung Building	(36,38)	42.5	5.5	126.91	26.73
Prevailing AQOs					200	40

2.6.2 No exceedance of the pollutant concentrations of prevailing AQOs and proposed 2025 AQOs at representative ASRs is predicted.

2.7 Conclusion

2.7.1 With the implementation of the recommended mitigation measures and good site practice, adverse impact during the construction phase is not anticipated.

2.7.2 For the operation phase, with implementation of mitigation measures mentioned in **paragraph 2.4.3**, the operation of the Proposed CBP will not pose any unacceptable air quality impact.

2.7.3 Overall, no adverse air quality impacts are anticipated during the construction and operation phases of the Proposed CBP.

Figure 2-1 Locations of Emission Points of the Plant

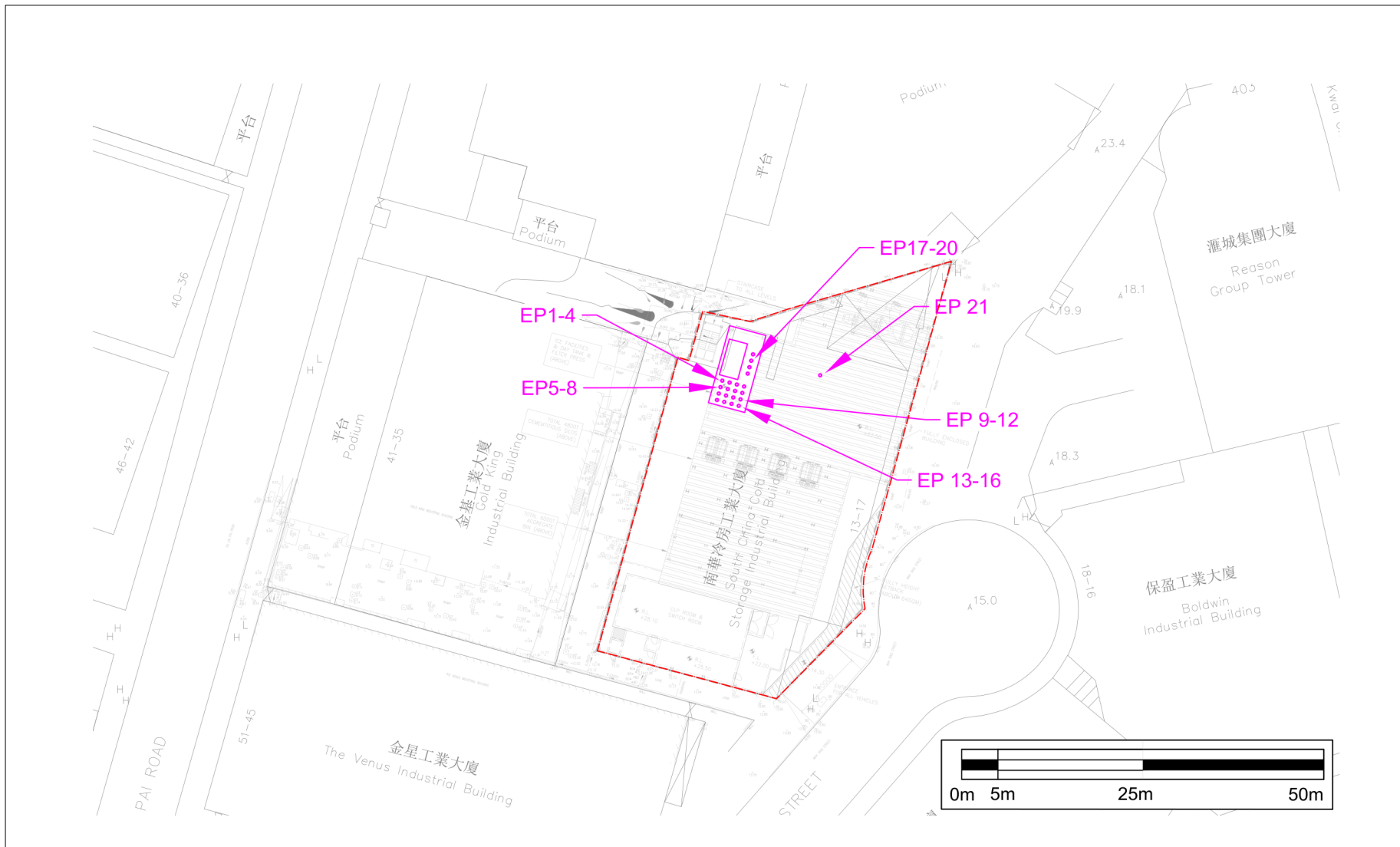
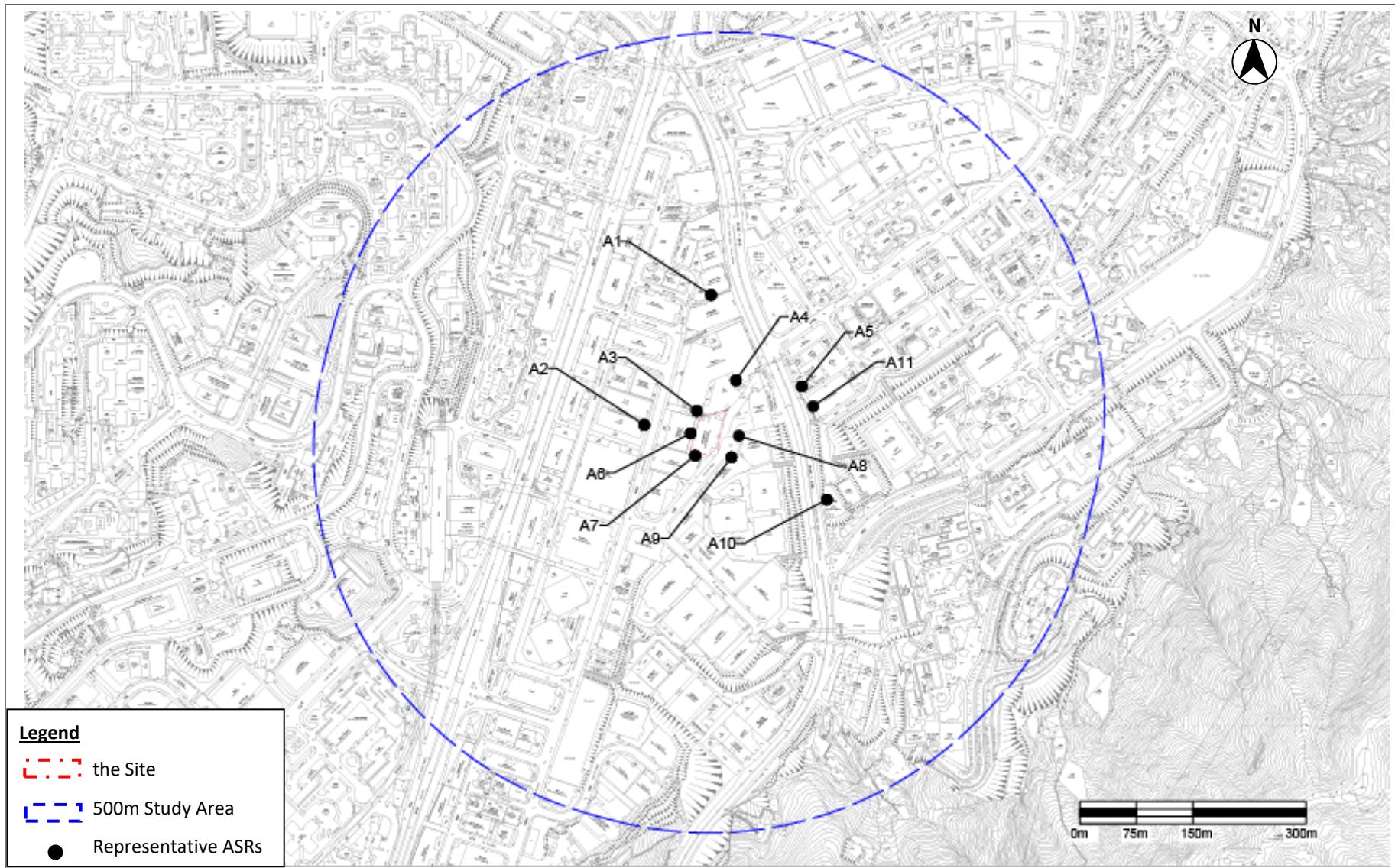


Figure 2-2 Representative ASRs within 500m Study Area of the Site



3 NOISE

3.1 Environmental Legislation and Standards

Noise Control Ordinance (“NCO”, Cap. 400)

3.1.1 The principal legislation controlling environmental noise impact is the *Noise Control Ordinance* (“NCO”). The NCO enables regulations and Technical Memoranda (“TMs”) to be enacted, which introduces detailed control criteria, measurement procedures and other technical matters. The TMs of NCO include:

- TM on Noise from Percussive Piling (“PP-TM”)
- TM on Noise from Construction Work other than Percussive Piling (“GW-TM”)
- TM on Noise from Construction Work in Designated Area (“DA-TM”)
- TM for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (“IND-TM”)

3.1.2 The Site does not fall within a Designated Area (“DA”) in accordance with EPD’s Plan No. EPD/AN/K&NT-01 for Kowloon West, Kwai Chung, Tsuen Wan and Tsing Yi. Therefore, DA-TM is not applicable.

3.1.3 In addition, the following requirements are given under the NCO:

- Hand-held breakers having a mass of above 10kg and any air compressor capable of supplying compressed air at 500kPa or above must be fitted with Noise Emission Label issued under the *Noise Control (Hand Held Percussive Breakers) Regulation* and *Noise Control (Air Compressors) Regulation* of NCO.
- Construction Noise Permit (“CNP”) must be applied by the Contractor from EPD for any percussive piling at any time or any other construction activities conducted within restricted hours (for all days 7pm to 7am the next day and at all times on Public Holidays or Sundays) as defined in NCO.

3.1.4 For noise arising from construction activities (other than percussive piling) during normal working hours (7am to 7pm from Monday to Saturday, not including general holidays), the noise criteria as shown in **Table 3-1** and control measures for construction noise impact during normal working hours can be referred to *Environmental Protection Department Practice Note for Professional Persons - Minimizing Noise from Construction Activities* (“ProPECC PN1/24”).

Table 3-1 Construction Noise Criteria for Non-Restricted Hours

NOISE SENSITIVE RECEIVERS	L _{eq} (30min), dB
All domestic premises Temporary housing accommodation Hostels Convalescences homes Homes for the aged	75 dB(A)
Places of public worship Courts of law Hospitals and medical clinics	70 dB(A) (or 65 dB(A) during examination)

NOISE SENSITIVE RECEIVERS	L_{eq} (30min), dB
Educational institutions (including kindergartens and nurseries)	

- 3.1.5 For fixed plant noise during operation phase, the requirements of IND-TM shall be complied with. Table 2 of IND-TM stipulates the day, evening and night time Acceptable Noise Levels (“ANLs”) for Noise Sensitive Receivers (“NSRs”) according to the corresponding Area Sensitive Rating (“ASR”), which is determined by Influencing Factors (“IFs”) in accordance with the IND-TM. These are summarised in **Table 3-2**.

Table 3-2 Acceptable Noise Levels for Fixed Noise Source

TIME PERIOD	ANL, dB(A)		
	ASR “A”	ASR “B”	ASR “C”
Day (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)			
Night (2300 to 0700 hours)	50	55	60

Hong Kong Planning Standards & Guidelines (“HKPSG”)

- 3.1.6 The noise criteria for planned fixed source shall follow the requirements of Table 4.1 of Chapter 9 of HKPSG:
- 5 dB(A) below the appropriate ANLs shown in Table 2 of IND-TM, and
 - The prevailing background noise levels
- 3.1.7 As recommended in Table 4.1 of Chapter 9 Environment of HKPSG, standards for road traffic noise in terms of $L_{10(1-hr)}$ for the following uses relying on opened windows for ventilation are shown in **Table 3-3**.

Table 3-3 HKPSG Standards for Road Traffic Noise Standards

USES	NOISE STANDARDS $L_{10(1-Hr)}$, dB(A)
All domestic premises including temporary housing accommodation	70
Hotels and hostels	70
Offices	70
Educational institutions including kindergartens, child care centres and all others where unaided voice communication is required	65
Places of public worship and courts of law	55
Hospitals, clinics, convalescences and residential care homes for the elderly, - diagnostic rooms, - wards	55

3.2 Noise Impact from Construction Phase

- 3.2.1 Various construction activities such as demolition and building works will be the key noise sources generated during the construction phase. In particular, the use of Powered Mechanical Equipment (“PME”) and the vehicle movement within the Site are the major

noise sources. The construction and demolition works will be carried out during non-restricted hours, i.e. daytime between 07:00 and 19:00 of any day not being Sunday or general holiday. As such, construction noise will be generated during non-restricted hours only.

- 3.2.2 Given the mitigation measures described in **Paragraph 3.2.3** would be implemented as far as practicable, the noise generated from the construction of the Proposed CBP is not anticipated to pose any unacceptable noise impacts on the NSRs nearby.

Mitigation Measures

- 3.2.3 Construction should be carried out during non-restricted hours as far as practicable. The mitigation measures recommended in ProPECC PN1/24 should be implemented where applicable. In addition, the following measures and on-site practice are recommended in order to minimise the potential construction noise impacts during daytime:

- Quiet PME and construction method should be adopted as far as practicable
- The Contractor should devise and execute working methods to minimise the noise impacts on the surrounding sensitive uses, and provide experienced personnel with suitable training to ensure that those methods are implemented
- Switch off idling equipment
- Regular maintenance of equipment
- Use of muffler/silencer for equipment when necessary
- Noisy equipment and noisy activities should be located as far away from the NSRs as far as practicable
- Use quiet construction method, e.g. use of saw-cut or hydraulic crusher instead of excavator-mounted percussive breaker as far as practicable
- PME should be kept to a minimum and the parallel use of noisy equipment / machineries should be avoided
- Erect noise barriers or noise enclosure for the PME if appropriate
- Implement good house-keeping and provide regular maintenance to the PME
- Spot check resultant noise levels at nearby NSRs

- 3.2.4 If construction work involving the use of PME will be required during restricted hours, a CNP shall be applied for under the NCO. The noise criteria and assessment procedures for obtaining a CNP are specified in GW-TM.

- 3.2.5 In addition, the EPD's RPCC for Construction Contract should be incorporated in the relevant works contract. The RPCC are generally good engineering practice to minimize inconvenience and environmental nuisance to nearby residents and other sensitive receivers. The general requirements as summarised as follows:

- The Contractor shall observe and comply with the NCO and its subsidiary regulation.
- The Contractor shall ensure that all plant and equipment to be used on the Site are properly maintained in good operating condition and noisy construction activities shall be effectively sound-reduced by means of silencers, mufflers, acoustic linings and

shields, acoustic sheds or screen or other means, to avoid disturbance to nearby noise sensitive receivers.

- For carrying out any construction work other than percussive piling during the time period from 0700 to 1900 hours on any day not being a general holiday (including Sundays), the Contractor shall comply with the following requirements.
 - (a) The noise level measured at 1m from most affected external façade of the nearby noise sensitive receivers from the construction works alone during any 30-minute period shall not exceed an equivalent sound level (“ L_{eq} ”) of 75dB(A).
 - (b) The noise level measured at 1m from most affected external façade of the nearby schools from the construction works alone during any 30-minute period shall not exceed L_{eq} of 70dB(A) (65dB(A) during school examination period). The Contractor shall liaise with the schools and/or the Examination Authority to ascertain the exact dates and times of all examination periods during the course of the contract.
 - (c) Should the limits stated in the above be exceeded, the construction shall stop and shall not recommence until appropriate measures acceptable to the Applicant or their representative that are necessary for compliance have been implemented.
 - (d) The Contractor shall adopt, where necessary, the use of Quiet Construction Equipment (“QCE”) and/or shall employ the quietist practicable working methods when carrying out demolition works, and /or road opening works during restricted hours.
- Before commencement of any work, the Applicant or their representative who engaged by the Contractor for construction phase may require the methods of working, plant equipment and sound-reducing measures to be used on the Site to be made available for trial demonstration inspection and approval to ensure that they are suitable for the project.
- The Contractor shall devise, arrange methods of working and carry out the Works in such a manner so as to minimise noise impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.
- Notwithstanding the requirements and limitations set out in the bullet above and subject to compliance with the second and fifth bullet above, the Applicant or their representative may upon application in writing by the Contractor, allow the use of equipment and the carrying out of any construction activities for any duration provided that the Applicant or their representative is satisfied with the application which, in Applicant or their representative’s opinion, is considered to be of absolute necessity and adequate noise insulation has been provided to the schools to be affected, or of emergency nature, and not in contravention with the NCO in any respect.
- The Contractor shall, when necessary, apply for a construction noise permit in accordance with the *Noise Control (General) Regulations* prior to the commencement of the relevant part(s) of the works, display the permit as required and provide a copy to the Applicant or their representative.
- Measures that are to be taken to protect adjacent noise sensitive receivers, if necessary, shall include, but not be limited to, adequate noise barriers. The barriers shall be of substantial construction and designed to reduce transmission of noise. The barriers shall be surmounted with baffle boxes designed to reduce transmission of noise. The location and details of the barriers shall be submitted to the Applicant or their representative for approval before works commence adjacent to schools and other NSRs.

- 3.2.6 With the implementation of the abovementioned mitigation measures, adverse construction noise impact from construction activities is not anticipated.

3.3 Noise Impact from Operation Phase

Identification of Noise Sensitive Receivers

- 3.3.1 The first layer Noise Sensitive Receivers (“NSRs”) within 300m study area of the Site were identified as the representative NSRs for this assessment. All identified NSRs are existing NSRs and no planned NSR has been identified within the assessment area. NSRs located within industrial zone, so it is considered as ASR “C”. The locations of the representative NSRs are shown on **Figure 3-1** and summarised in **Table 3-4**.

Table 3-4 Representative NSRs within 300m Study Area of the Site

NSR ID	DESCRIPTION	USE	SEPARATION DISTANCE TO THE SITE, m	ASR
N01	Po Kai Mansion	Residential	110m	C
N02	Kwai Chung Building	Residential	124m	C
N03	CNEC Ta Tung School	Educational	238m	C
N04	Kwai Chun Court	Residential	223m	C
N05	Hing Lok House	Residential	273m	C

- 3.3.2 The ASR and ANLs adopted in this EA report are used for assessment purpose only, they should not bind the Noise Control Authority’s decision in determining the noise criteria based on the legislation and practices being in force, and contemporary conditions/ situations of adjoining land uses.

Prevailing Background Noise

- 3.3.3 Background noise monitoring at the sensitive façade where is representative to the identified NSRs is the most preferable location. However, it is not allowed to access the private areas of the school/ residential buildings for background noise measurement. As such, background noise monitoring locations near the representative NSRs were adopted. The location of the background noise monitoring locations is shown in **Figure 3-1**.
- 3.3.4 Locations BN1 and BN2 have been selected to conduct the background noise monitoring throughout the entire proposed operation hours during the weekday under free-field condition. BN1 is located at Shek Ying Path to the northwest of N02 and south of N01. The major noise affecting BN1 is the traffic noise from Castle Peak Road – Kwai Chung which is considered to be comparable to that at N01 and N02. BN2 is located at sitting out area of Kwai Hing Estate’s volleyball court to the northeast of N03, east of N04 and southeast of N05. The major noise source of BN2 is the traffic noise from Kwai Chung Road, which has similar environs to that of N03 to N05.
- 3.3.5 A set of minimum $L_{90(1hour)}$ has been adopted as prevailing background noise level. The monitoring data is presented in **Appendix F**.
- 3.3.6 With reference to the Technical Memorandum (“TM”) issued under the Noise Control Ordinance (“NCO”), sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 specifications were used for carrying out the noise monitoring. Immediately prior to and following each

noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements were considered acceptable and valid as the calibration level from before and after the noise measurement agrees to within 1.0dB.

- 3.3.7 Noise measurements were made in accordance with standard acoustical principles and practices in relation to weather conditions. Calibration certificates of the noise monitoring equipment used are provided in **Appendix G**.

Noise Criteria

- 3.3.8 The ASR of all identified NSRs is “C”. The noise criteria for the planned fixed noise source were determined with reference to ANL-5 and the measured background noise level, as shown in **Table 3-5**.

Table 3-5 Noise Criteria of Noise from Fixed Sources of Identified Representative NSRs

NSR NO.	DESCRIPTION	TIME PERIOD	MEASURED BACKGROUND NOISE LEVEL L _{90(1HOUR)} , dB(A)	ANL - 5, dB(A)	NOISE CRITERIA, dB(A)
N01	Po Kai Mansion	Day	66	65	65
N02	Kwai Chung Building	Day	66	65	65
N03	CNEC Ta Tung School	Day	67	65	65
N04	Kwai Chun Court	Day	67	65	65
N05	Hing Lok House	Day	67	65	65

Note: The background noise level was measured at free-field condition. Thus, a façade correction of +3 dB(A) was applied.

3.4 Industrial Noise Impact Assessment

- 3.4.1 The major fixed noise sources are listed below and the proposed noise sources were shown in **Figure 3-2**.

- Concrete Mixer (electric) (4 no./30 mins; % on time: 100.0%)
- Conveyor / Screw Conveyors (4 nos./30 mins; % on time: 100.0%)
- Water / Admixture Pump (1 no./30 mins; % on time: 100.0%)
- Air Compressor (Mixing unit) (4 no./30 mins; % on time: 100.0%)
- Filter Fan (Mixing unit) – Blower (4 no./30 mins; % on time: 100.0%)
- Air Blower (mounted on unloading tank) (4 nos./30 mins; % on time: 100.0%)
- Pump (mounted on unloading tank) (4 nos./30 mins; % on time: 100.0%)
- Filter Fan (Silo) – Blower (16 nos./30 mins; % on time: 100.0%)
- Filter Fan (General) – Blower (1 nos./30 mins; % on time: 100.0%)
- Loader (1 no./30 mins; % on time: 16.7%)
- Concrete Truck (Concrete Collection) (40 nos./30 mins; % on time: 16.7%)

- Aggregate Truck (46 nos./hour)
- Cement/PFA/GGBS/Admixture Tanker (10 nos./hour)

3.4.2 The lists of equipment, utilisation rate and number of items detailed in **Appendix H** have been confirmed by the Applicant and it is considered to be practicable for business-as-usual operation of concrete batching plant. Loader will be used only if emergency case to transport aggregate from storage area to hopper. Vehicle washing facility will be applied on site during operation, however, the operation time of this facility is rather short each time (i.e. approximately 1 minute for each vehicle) and its function is not continuous. Aggregate will be stored in aggregate storage areas, which is served as an emergency use. No action will be taken on the aggregates storage except whenever there are insufficient aggregates provided for concrete production. As a results, insignificant noise will be generated due to the occasionally use of the aggregate storage. In conclusion, noise impacts that may be generated from aggregate storage, vehicle washing and parking is considered insignificant and negligible.

Assessment Methodology

3.4.3 Although the proposed CBP is an industrial use and the noise impact therefore references IND-TM, the characteristics of concrete batching, involving concrete lorry mixer and concrete mixer, are also similar to construction activities. Therefore, the noise impact is proposed to be estimated in accordance with the guidelines given in GW-TM. As such, all items of PME, except truck movement, have been considered at the proposed positions. While due to the long travelling distance of conveyor/ screw conveyor, as a conservative approach, the closest distance between conveyor/ screw conveyor and each NSRs has been adopted and assessed based on the following standard acoustic formula:

$$SPL = SWL - DC + FC$$

where:

SPL – Sound Pressure Level at receiver, dB(A)

SWL – Sound Power Level of PME, dB(A)

DC – Distance Correction, dB(A) ($DC = 20 \times \log_{10}(D) + 8$)

D – Horizontal distance between NSR and notional source, m

FC – Façade Correction of +3 dB(A)

3.4.4 Sound Power Levels (SWLs) of PME are obtained from Table 3 of GW-TM and from Sound Power Levels of Other Commonly Used PME available on EPD's website. Reference is also made to the British Standard 5228 Code of Practice for Noise and Vibration Control on Construction and Open Site – Part 1: Noise amended in February 2014 (BS 5228-1:2009+A1:2014). The "Aggregate Truck" to be adopted during the operation stage is lorry, which will be used to transport raw materials to the Site. Its weight is between 5.5 tonne and 38 tonnes, thus, the sound power level of 105dB(A) with reference to EPD's "Sound power levels of other commonly used PME" was adopted in the calculation.

3.4.5 There will be no tonal noise/ impulsive noise occurring within the CBP and there will be no intermittent noise because of no piling, concrete breaking or similar process. As such, no corrections for tonality, impulsiveness and intermittency are considered to be required.

3.4.6 With regard to the screening effect, a 10 dB(A) reduction was adopted for NSRs without direct line-of-sight to the PME whereas a 5 dB(A) reduction was adopted for NSRs without direct line-of-sight only to the “noisy” part of the PME. The proposed CBP will be fully enclosed with concrete structure, as such a 15 dB(A) noise reduction has been adopted. There will be a vehicular exit/ entrance located at the southeast of the Site and connected to Wah Sing Street. Moreover, the Site is surrounded by various industrial and commercial buildings, which can block direct line of sight between the Site and the surrounding NSRs and provide noise shielding effect for the NSRs in the vicinity. As such, there will be no direct line of sight between all representative NSRs and the entire site.

Assessment Results

3.4.7 The predicted noise impact results are summarised in **Table 3-6** and detailed in **Appendix H**. The assessment results of industrial noise ranged from 45 dB(A) to 49 dB(A).

Table 3-6 Predicted Fixed Noise Impact Level at Identified Representative NSRs During Operation Phase

NSR	DESCRIPTION	NOISE CRITERIA	PREDICTED NOISE LEVEL IN $L_{eq(30min)}$, dB(A)	EXCEEDANCE
		DAY		
N01	Po Kai Mansion	65	49	No
N02	Kwai Chung Building	65	49	No
N03	CNEC Ta Tung School	65	46	No
N04	Kwai Chun Court	65	45	No
N05	Hing Lok House	65	45	No

3.4.8 Results show that all representative NSRs could comply with noise criteria for daytime. The operation of the Proposed CBP will be within a fully enclosed building. Moreover, acoustic enclosure or silencer will be provided for the rooftop Mechanical and Electrical (“M&E”) Equipment, such as cooling tower or chiller plants to minimise the noise impact from these units. As such, adverse industrial noise impact on the surrounding NSRs during the operation phase of the CBP is not anticipated.

3.5 Off-site Traffic Noise Impact Assessment

Assessment Methodology

3.5.1 The operation of CBP would lead to an increase in traffic flow, which will potentially affect the existing NSRs in the vicinity of the Site.

3.5.2 The traffic noise impact assessment will be carried out in two scenarios, “Before” and “After” in order to compare the traffic noise level at the representative NSRs due to the additional traffic flow. Traffic data in Year 2041 has been adopted in the assessment as the worst case scenario.

3.5.3 Given that AM peak hour traffic flow would represent a more severe traffic condition than PM peak hour traffic flow, “Before” scenario has been compared with the “After” scenario under AM peak hour traffic flow to evaluate the traffic noise impact on the existing representative NSRs.

Assessment Results

3.5.4 Contribution of less than 1.0 dB(A) is considered insignificant in accordance with the *Road Traffic Noise Impact Assessment under the Environmental Impact Assessment Ordinance* (“GN 12/2023”). The predicted road traffic noise levels at each existing representative NSR under “Before” and “After” scenarios are summarised in **Table 3-7**.

Table 3-7 Predicted Traffic Noise Impact Level at Identified Representative NSRs During Operation Phase

NSR NO.	DESCRIPTION	PREDICTED NOISE LEVEL IN $L_{10(1hr)}$, dB(A)		PROJECT CONTRIBUTION, dB(A)
		BEFORE	AFTER	
N01	Po Kai Mansion	78.5	78.5	0.0
N02	Kwai Chung Building	77.7	77.7	0.0
N03	CNEC Ta Tung School	82.9	83.0	0.1
N04	Kwai Chun Court	77.0	77.1	0.1
N05	Hing Lok House	76.7	76.8	0.1

3.5.5 Results show that the additional traffic flow generated from the operation of the proposed CBP would not cause significant contribution (i.e. more than 1.0 dB(A)) to the traffic noise level at the representative NSRs. As such, adverse traffic noise impact arising from the operation of the proposed CBP is not anticipated.

3.6 Conclusion

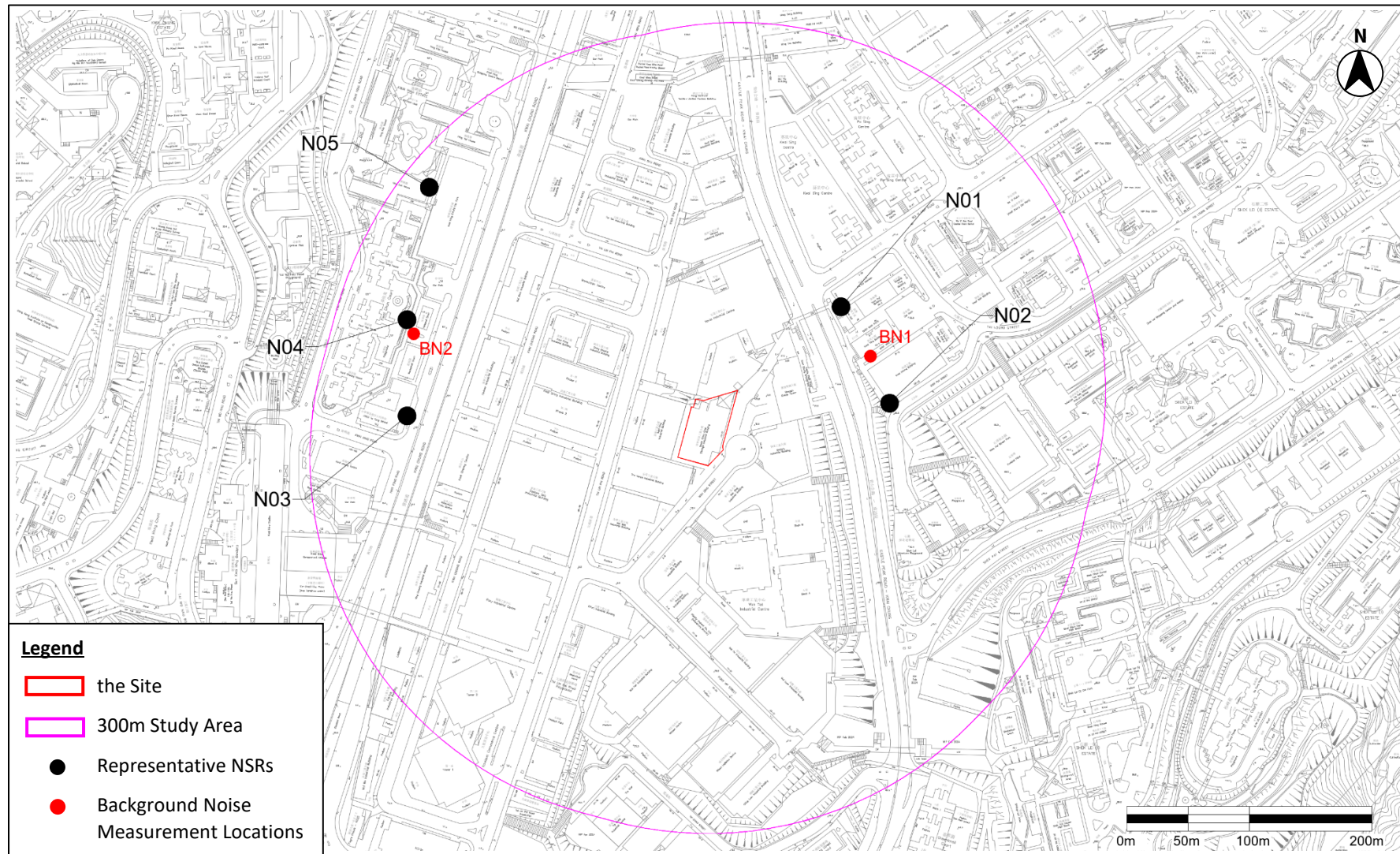
3.6.1 During the construction phase of the Proposed Development, with the implementation of the noise mitigation measures recommended in **Paragraphs 3.2.3 – 3.2.5**, no adverse noise impact is anticipated.

3.6.2 Fixed plant noise is the major potential noise source during the operational phase. Quantitative assessment for the fixed plant noise sources were conducted. The predicted noise level during operation ranges from 45 dB(A) to 49 dB(A), which indicated that all the noise levels at NSRs would comply with the relevant noise criteria.

3.6.3 Traffic noise impact assessment has been carried out to identify the contribution arising from the additional traffic flow generated during the operation phase. Results show that the additional traffic flow would not cause significant contribution to the traffic noise level. No adverse traffic noise impact is anticipated at the existing NSRs.

3.6.4 Overall, with the implementation of the recommended noise mitigation measures, no adverse noise impact is anticipated during the construction or operation phase of the Proposed CBP.

Figure 3-1 Locations of Representative NSRs and Background Noise Measurement



4 WATER QUALITY

4.1 Introduction

- 4.1.1 This section provides an assessment of the potential water quality impact arising from the Proposed CBP during construction and operation phases. Mitigation measures are recommended, where necessary, as part of the assessment

4.2 Environmental Legislation and Standards

Water Pollution Control Ordinance (Cap. 358)

- 4.2.1 The *Technical Memorandum – Standards for Effluent Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters* (“WPCO-TM”) is issued under Section 21 of the *Water Pollution Control Ordinance* (“WPCO”). All discharges into government sewerage systems, marine and inland waters are required to comply with the standards stipulated in the WPCO-TM.

Construction Site Drainage, ProPECC PN2/24

- 4.2.2 With reference to *Professional Persons Environmental Consultative Committee* (“ProPECC”) *Practice Note Construction Site Drainage* (“ProPECC PN2/24”), various guidelines for the handling and disposal of construction site discharges are included. The guidelines include the use of sediment traps, wheel washing facilities for vehicles leaving the Site, adequate maintenance of drainage systems to prevent flooding, overflow, sewage collection and treatment, and comprehensive waste management (collection, handling, transportation, and disposal) procedures.

Drainage Plan subject to Comment by the Environmental Protection Department, ProPECC PN1/23

- 4.2.3 With reference to *ProPECC Practice Note Drainage Plan subject to Comment by the Environmental Protection Department – Building (Standards of Sanitary Fittings, Plumbing, Drainage Works and Latrines) Regulations* (“ProPECC PN1/23”), various guidelines for the pollution control for discharge to storm drains and foul sewers, such as the use of grease trap for wastewater from the restaurant kitchen, the use of silt removal facilities for open surface channel led to stormwater drains, etc., are included. The guidelines also include the requirements for submission of drainage plans.

4.3 Review of Water Quality Impact

Identification of Water Control Zone (“WCZ”) and Water Sensitive Receiver (“WSR”)

- 4.3.1 The Site is situated in Victoria Harbour WCZ. With reference to Annex 14 of the *Technical Memorandum on Environmental Impact Assessment Process* (“EIAO-TM”), several natural/semi-natural watercourses within 500m study area were identified as potential WSRs through desktop study and using topographic map of GeoInfo Map. The identified WSRs are listed in **Table 4-1** and shown in **Figure 4-1**. Potential water quality impacts during construction and operation phase are discussed below.

Table 4-1 Identified Water Sensitive Receivers

WSR ID	DESCRIPTION	TYPE	DISTANCE FROM THE SITE, m
W1	Watercourses to the north CNEC Christian College	Modified watercourse	457
W2	Watercourses to the north Shek Chun House	Modified watercourse	239
W3	Watercourses to the south of Yuet Fung House	Modified watercourse	443
W4	Watercourses to the west of Shek Sau House	Modified watercourse	200
W5	Watercourses to the west of Shek Yat House	Modified watercourse	348
W6	Watercourses to the south of Greenknoll Court	Modified watercourse	242
W7	Watercourses to the east of Wealthy Industrial Building	Modified watercourse	389

Construction Phase

- 4.3.2 Muddy runoff from the Site may be generated during the demolition and construction works, especially during the rainy season.
- 4.3.3 Wash water from vehicles and equipment; silt from any on-site stockpiles of soil, cement and grouting materials; and spillage of fuels, oil and lubricants from construction/reinstatement vehicles and plant may generate water quality impacts. If these pollution sources are not properly controlled, it would lead to increased amounts of suspended solids, grease and oil, pH, Biochemical Oxygen Demand (“BOD”), etc. in the drainage system.
- 4.3.4 There is also the issue of sewage generated by construction workers on-site. As all the WSRs identified within 500m of the study area are located at an elevation higher than that of the Proposed CBP, the effluent discharge from the Proposed CBP would not have any adverse water quality impact on the WSRs. Nevertheless, wastewater from construction of the Proposed CBP will be properly handled before discharge. Therefore, with implementation of the recommended mitigation measures and good practices listed below, adverse water quality impacts from Proposed Development on the WSRs are not anticipated.

Operation Phase

- 4.3.5 Water sprinklers will be installed for dust suppression and the entire site will be paved. Over wetting of the ground and the roads should be avoided by the plant management in order to minimise surface runoff generation. All the surface runoff will be collected by the peripheral drainage system and diverted to sedimentation tank for silt removal prior to on-site reuse.
- 4.3.6 Wheel washing facilities will be also provided at the site entrance. All the vehicles will be cleaned properly before leaving the Site. Wastewater generated from the wheel washing facilities will be also collected and diverted to sedimentation tank for silt removal prior to on-site reuse.

4.3.7 Wastewater generated from the surface runoff due to the use of water sprinkler and wheel washing facilities will be first diverted to a sump pit for collection. After that, the wastewater will be diverted to a sedimentation tank for sedimentation and the slurry generated will be dewatered to produce cement cake. The cement cake arising from the treatment process is inert materials and will be reused in the Public Fill Reception Facilities. The design of the sedimentation tank, including the capacity, treatment methodology, etc., will be provided to EPD for approval during detailed design stage in accordance with *ProPECC PN1/23*.

4.3.8 Sewage from toilet will be generated by the on-site staff and truck drivers at the sanitary facilities, which will be another major source of wastewater generation arising from the Proposed CBP. This kind of wastewater will be discharge into the public sewerage system underneath Wah Sing Street. A separate Sewerage Impact Assessment (“SIA”) has been conducted to confirm the feasibility of proposed sewage connection. It concludes that the existing public sewerage system has sufficient capacity for the Proposed CBP. Therefore, no adverse water quality impact during operation phase of the Proposed CBP is anticipated.

4.4 Mitigation Measures

Construction Phase

4.4.1 During construction phase, adequate capacity and number of portable toilets with adequate frequency for offsite disposal to be supplied, maintained and emptied by a licensed collector should be provided for construction workers.

4.4.2 The construction contractor shall follow good site practice and be responsible for providing, implementing and maintaining the mitigation measures as specified in *ProPECC PN 2/24* for construction site drainage. The key requirements are as follows:

- Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Temporary construction drainage or earth bunds or sand bag barriers should be provided on site to properly direct storm water to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary to intercept storm run-off from outside the Site so that it will not wash across the Site. Catchpits and perimeter channels should be construction in advance of site formation works and earthworks.
- Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.
- Construction works should be programmed to minimise soil excavation works in rainy reasons (generally from April to September). If soil excavation works could not be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporarily exposed slope surfaces should be covered (e.g. by tarpaulin), and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.

- Earthworks final surfaces should be well compacted and the subsequent permanent works or surface protection works should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided when necessary.
- Measures should be taken to minimise the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches should be discharged into storm drains via silt removal facilities.
- Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.
- Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.
- All vehicles and plant should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm water drains. The section of construction road between the wheel washing bay and the public road should be paved to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.

4.4.3 In addition, the EPD's RPCC for Construction Contract should be incorporated in the relevant works contract. The RPCC are generally good engineering practice to minimise inconvenience and environmental nuisance to nearby residents and other sensitive receivers. The general requirements are summarised below:

- The Contractor shall observe and comply with WPCO and its subsidiary regulation.
- The Contractor shall carry out the Works in such a manner as to minimise adverse impacts on the water quality during execution of the works. In particular the Contractor shall arrange his method of working to minimise the effects on the water quality within and outside the Site, on the transport routes and at the loading, dredging and dumping areas.
- The Contractor shall follow the practices, and be responsible for the design, construction, operation and maintenance of all the mitigation measures as specified in the ProPECC PN 2/24 "Construction Site Drainage" issued by the Director of Environmental Protection. The design of the mitigation measures shall be submitted by the Contractor to the Engineer for approval.
- The Contractor shall not discharge directly or indirectly or cause or permit or suffer to be discharged into any public sewer, stormwater drain, channel, stream-course or sea any trade effluent or foul or contaminated water or cooling or hot water without the prior written consent of the Engineer in consultation with the Director of Environmental Protection and Director of Water Supplies, who may as a condition of granting his consent require to the Contractor to provide, operate and maintain at the Contractor's own expense to the satisfaction of the Engineer suitable works for the

treatment and disposal of such trade effluent or foul or contaminated or cooling or hot water. The design of such treatment works shall be submitted to the Engineer for approval not less than one month before commencement of the relevant works.

- If any office, site canteen or site toilet facilities is/are erected, foul water effluent shall be directed to a foul sewer or to a sewage treatment and disposal facilities either directly or indirectly by means of pumping or other means approved by the Engineer.

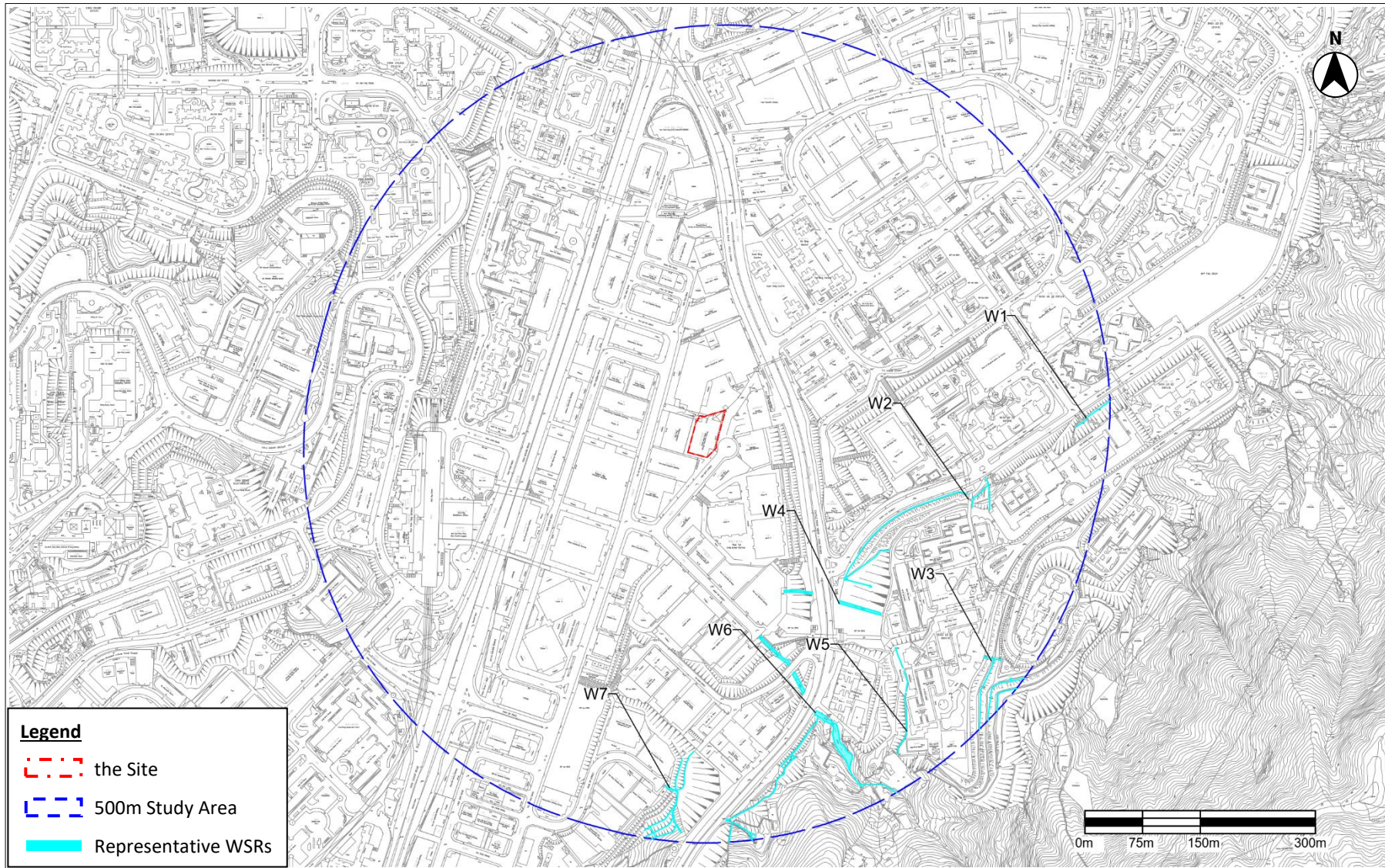
Operation Phase

- 4.4.4 Wastewater generated from sprinklers and wheel washing facilities will be collected and diverted to the sedimentation tank for silt removal. The wastewater will be firstly diverted and collected in a sump pit for further treatment by sedimentation and dewatering. The slurry/cement cake arising from the wastewater treatment process is inert material and so it will be disposed of at Public Fill Reception Facilities for further reuse. The treated effluent will be reused onsite.
- 4.4.5 Sewage from toilet will be discharge into the public sewerage system underneath Wah Sing Street. Considering the small amount of sewage generated from the toilets of the Site, the existing public sewerage system shall have sufficient capacity for the Proposed CBP. Therefore, no adverse water quality impact during operation phase of the Proposed CBP is anticipated.

4.5 Conclusion

- 4.5.1 During construction phase, water quality impacts can be properly controlled with the implementation of good site practice, as stated in **paragraphs 4.4.1 to 4.4.3**. Adequate capacity and number of portable toilets will be provided for construction workers on-site. With the provision, implementation and maintenance of the recommended measures, no adverse water quality impacts from the Site during construction phase is anticipated.
- 4.5.2 The contractor shall apply for a Discharge Licence from EPD under the WPCO. All site discharged shall be treated in accordance with the terms and conditions of the Discharge Licence.
- 4.5.3 During operation phase, no adverse water quality impact is anticipated from wastewater/sewage from employees. The wastewater arising from the Proposed CBP will be discharged into the public sewerage system. Besides, The wastewater generated from water sprinklers and wheel washing facilities will be collected and diverted to sedimentation tank for silt removal. The treated effluent will be reused onsite.
- 4.5.4 Overall, no adverse water quality impacts are anticipated during the construction or operation phase of the Proposed CBP.

Figure 4-1 Representative ASRs within 500m Study Area of the Site



5 WASTE MANAGEMENT

5.1 Introduction

5.1.1 This section provides an assessment of the potential impact related to waste management arising from the Proposed CBP during construction and operation phases. Mitigation measures are recommended, where necessary, as part of the assessment.

5.2 Environmental Legislation and Standards

Waste Management

5.2.1 The key environmental legislation and standards applicable to waste management in Hong Kong are as follows:

- Waste Disposal Ordinance (Cap. 354) (“WDO”)
- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)
- Waste Disposal (Charges for Disposal of Chemical Waste) Regulation (Cap. 354J)
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)
- Land (Miscellaneous Provisions) Ordinance (Cap. 28)
- Public Health and Municipal Services Ordinance (Cap.132BK) – Public Cleansing and Prevention of Nuisances Regulation
- Environmental, Transport and Works Bureau (“ETWB”) Technical Circular (Works) No. 19/2005, Environmental Management on Construction Sites
- ETWB Technical Circular (Works) No. 22/2003A, Additional Measures to improve Site Cleanliness and Control Mosquito Breeding on Construction Sites
- Development Bureau (“DevB”) Technical Circular (Works) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials
- Civil Engineering and Development Department (“CEDD”) Technical Circulars (CEDD TC No. 11/2019), Management of Construction and Demolition Materials
- Building Department Practice Note for Authorised Persons, Registered Structural Engineers and Registered Geotechnical Engineers Waste Minimisation – Construction and Demolition Waste (“ADV-19”)
- Building Department Practice Note for Authorised Persons, Registered Structural Engineers and Registered Geotechnical Engineers Waste Minimisation – Provision of Fitments and Fittings in New Buildings (“APP-114”)
- Building Department Practice Note for Registered Contractors (“PNRC 17”), Control of Environmental Nuisance from Construction Sites
- CEDD Project Administration Handbook for Civil Engineering Works (“PAH”)
- EPD Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes
- EPD Recommended Pollution Control Clauses (“RPCC”) for Construction Contracts

5.3 Potential Waste Management Impacts

Construction Phase

5.3.1 The key potential waste sources during the construction phase are:

- Inert Construction and Demolition (“C&D”) materials (e.g. waste concrete, surplus soil, waste asphalt etc.)
- Non-inert C&D Materials (e.g. wood and plastics)
- Chemical wastes (including asbestos) such as waste battery and waste lubricating oil from vehicles/plant maintenance
- General refuse generated by site workers

Inert C&D Materials

5.3.2 Inert C&D materials are those which do not decompose, such as debris, rubble, earth and concrete, and which are suitable for land reclamation and site formation.

5.3.3 There are two major phases during construction stage, one is demolition of the existing building, and the other is construction of a new building for the Proposed CBP. Each major phase will include sub-Phases. The tentative sequence will include demolition of the existing building, site clearance, and construction of the new building. The major source on inert C&D materials during construction will be demolition of the existing building, minor removal of the existing pavement due to demolition and construction of the Proposed CBP. No re-profiling of the Site will be required for the Proposed CBP.

5.3.4 In demolition stage, since there is absence of any local estimation method based on Gross Floor Area (“GFA”), the quantity of demolition waste was calculated based on the estimated GFA according to the USEPA’s *Characterization of Building-Related Construction and Demolition Debris in the United States* ^[Ref.#3]. The typical demolition generation rate of 561kg/m² was adopted in the estimation.

5.3.5 Due to lack of the information of existing building, the GFA of 4-storey existing building is assumed to be 6,300m², (i.e. existing building footprint x no. of storey=1,575 m² x 4). It is estimated that 3,534 tonnes of inert C&D materials will be generated from the demolition of existing building, as shown in calculation below:

$$\begin{aligned} \text{Demolition Waste} &= \text{demolition generation rate} \times \text{GFA} \\ &= 561\text{kg/m}^2 \times 6,300 \text{ m}^2 \\ &= 3,534,300 \text{ kg} \\ &= 3,534 \text{ tonnes} \end{aligned}$$

5.3.6 In the superstructure stage, in accordance with Section 3.2 of A Guide for Managing and Minimizing Building and Demolition Waste published by the Hong Kong Polytechnic University in May 2001 (“the Guide”), it provides a “waste index” for building waste

³ The approximate generation rate of 561kg/m² for residential use was converted from the average generation rate of 115lb/ft² in Table 5 from *Characterization of Building-Related Construction and Demolition Debris*, Franklin Associates, USEPA, 1998.

generation in Hong Kong based on the Gross Floor Area (“GFA”) of three different building types as follows:

- Private Housing Projects 0.250m³/m² GFA
- Government Housing Projects 0.174m³/m² GFA
- Commercial Office Projects 0.200m³/m² GFA

5.3.7 For estimating of building waste generated from the Proposed CBP, the “waste index” for Commercial Office are adopted. However, as noted above, in addition to inert C&D materials, this “waste index” also include non-inert C&D materials, such as timber formwork, packaging waste and other wastes, and the Guide does not identify what proportion of building waste is inert C&D materials and what proportion is non-inert C&D materials.

5.3.8 With reference to Plate 2.12 of EPD’s *Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2022*, in 2022 92% of construction wastes was either reused on-site or sent to the public fill reception facilities, implying that such construction wastes should be inert C&D materials. The proportion of inert C&D materials in the “waste index” can therefore be estimated by applying the Hong Kong-wide proportion of inert C&D materials in construction waste, i.e. 92%, to the “waste index” as follows:

$$\begin{aligned} \text{Waste Index}_{\text{Inert C\&D materials (Commercial Office Projects)}} &= 0.92 \times 0.200\text{m}^3/\text{m}^2 \text{ GFA} \\ &= 0.184\text{m}^3/\text{m}^2 \text{ GFA} \end{aligned}$$

5.3.9 The GFA of the 6-storey Proposed CBP is 10,500m². the proportion of inert C&D materials of building waste from the Proposed Development can therefore be estimated as follows:

$$\begin{aligned} \text{Building Waste} &= \text{Waste Index}_{\text{Inert C\&D materials (Commercial Office Projects)}} \times \text{GFA} \\ &= 0.184 \times 10,500 \\ &= 1,932\text{m}^3 \end{aligned}$$

5.3.10 Assuming the density of inert C&D materials is 1.8 tonnes/m³, approx. 3,478 tonnes of building wastes would be generated by the Proposed Development.

5.3.11 **Table 5-1** summarises the total estimated inert C&D materials generated during construction stage.

Table 5-1 Total Estimated Inert C&D Materials Generated During Construction

INERT C&D MATERIAL TYPE	ESTIMATED INERT C&D MATERIAL GENERATION (TONNES)
Demolition of Existing Building	3,534
Building Waste	3,478
Total	7,012

5.3.12 Assuming the construction period to be two years with six working days a week and four weeks a month, the daily inert C&D material generation rate will be approx. 12.2 tonnes/day (i.e. 7,012 tonnes/ (6 x 4 x 24) days).

- 5.3.13 Inert C&D materials should be reused on-site as far as practicable and efforts should be made to optimise cut and fill requirements during the detailed design. Good site practice and mitigation measures should be implemented, as recommended in **Section 5.4**. The remaining materials should be sent to public fill reception facilities, Fill Bank at Tuen Mun Area 38 and Fill Bank at Tseung Kwan O Area 137.
- 5.3.14 The majority of inert C&D materials generated from construction will be building waste. Since deep excavation and backfilling works is not needed for the Proposed Development, not much of the inert C&D materials will be re-used on site. Hence, the 12.2 tonnes/day inert C&D material will be delivered to public fill reception facilities. The reuse of inert C&D materials in public filling reception facilities would be agreed with relevant authorities before delivery.
- 5.3.15 With the implementation of the recommended good site practice and mitigation measures, no adverse waste impact from the handling, transportation or disposal of inert C&D materials during construction of the Proposed CBP is anticipated.

Non-Inert C&D Materials

- 5.3.16 Non-inert C&D materials (or C&D waste) are those which can decompose such as bamboo, timber, vegetation, packaging waste and other organic material, and which are therefore unsuitable for land reclamation.
- 5.3.17 The major source of non-inert C&D material during construction will be the non-inert C&D material component of building waste including timber formwork, packaging waste generated during the construction stage.
- 5.3.18 The building waste in the “waste index” provided in the Guide also includes non-inert C&D materials. Since Plate 2.12 of Waste Statistics for 2022 shows that in 2022, 8% of C&D waste was disposed of at landfills. The proportion of non-inert C&D materials (or C&D waste) in the “waste index” can be estimated by applying the Hong Kong-wide proportion of non-inert C&D materials (or C&D waste) in construction waste, i.e. 8%, to the “waste index” as follows:

$$\begin{aligned}\text{Waste Index}_{\text{Non-Inert C\&D materials (Commercial Office Projects)}} &= 0.08 \times 0.200\text{m}^3/\text{m}^2 \text{ GFA} \\ &= 0.016\text{m}^3/\text{m}^2 \text{ GFA}\end{aligned}$$

- 5.3.19 Given the total GFA of the Proposed Development is approx. 10,500m², the non-inert C&D materials (or C&D waste) components in building waste can therefore be estimated as follows:

$$\begin{aligned}\text{Building Waste} &= \text{Waste Index}_{\text{Non-Inert C\&D materials (Commercial Office Projects)}} \times \text{GFA} \\ &= 0.016 \times 10,500 \\ &= 168\text{m}^3\end{aligned}$$

- 5.3.20 Assuming the density of non-inert C&D materials is 1.0 tonnes/m³, approx. 168 tonnes of building waste would be generated by the Proposed Development. Assuming the construction period to be two year with six working days a week and four weeks a month, the daily non-inert C&D material generation rate will be approx. 0.3 tonnes/day (i.e. 168 tonnes/ (6 x 4 x 24) days).

- 5.3.21 Non-inert C&D materials generated during construction should be sorted on-site. Recyclable materials, such as metal, paper product, timber and plastic, should be collected by local recyclers for recycling. All non-inert C&D materials should be recycled as far as possible and landfill disposal should be adopted as the last resort. The nearest disposal facility is North East New Territories Landfill (“NENT”) Landfill. Disposal of C&D wastes of landfills would be agreed with relevant authorities.
- 5.3.22 It is expected that no more than 10% of the generated non-inert building waste can be recycled or reused. This means that the expected amount of non-inert C&D waste to be reused or recycled on-site is around 7 tonnes at most.
- 5.3.23 If 10% of non-inert C&D materials can be reused/recycled on-site, the surplus non-inert C&D materials mainly comprising building waste will be approx. 151 tonnes in total. Assuming the construction period to be two year with six working days a week and four weeks a month, the total daily non-inert C&D materials for disposal of at NENT Landfill would be approx. 0.3 tonnes/day (i.e. 64 tonnes/ (6 x 4 x 24) days).
- 5.3.24 Considering the above estimation, with the implementation of the recommended good site practice and mitigation measures, no adverse waste impact from the handling, transportation or disposal of non-inert C&D materials (or C&D waste) during construction of the Proposed CBP is anticipated.

General Refuse

- 5.3.25 General refuse from workers is similar to domestic waste and includes packaging and organic material.
- 5.3.26 The number of workers will depend on the contractor and the construction methods employed. According to the Applicant’s experience, the number of construction workers for the Proposed Development should be no more than 20 per day.
- 5.3.27 According to Plate 2.7 of Waste Statistics for 2022, the per capita domestic waste disposal rate in 2022 was 0.93 kg/person/day, although the per worker generation rate of general refuse will likely be less than this. For a conservative approach, the per capita domestic waste disposal rate in 2022 has been adopted for general refuse generation by construction workers. Since every worker is expected to generate general refuse, the total general refuse generated by construction workers is estimated as follows:

$$\begin{aligned}\text{General Refuse/Day} &= \text{No. of workers/day} \times \text{per capita generation rate} \\ &= 20 \text{ workers} \times 0.93 \text{ kg/workers/day} \\ &= 18.6 \text{ kg/day}\end{aligned}$$

$$\begin{aligned}\text{Total General Refuse} &= \text{General Refuse/Day} \times \text{Construction Duration} \\ &= 18.6 \text{ kg/day} \times 6 \text{ days/week} \times 4 \text{ weeks/month} \times 24 \text{ months} \\ &= 10,714 \text{ kg or 11 tonnes}\end{aligned}$$

- 5.3.28 General refuse generated during construction should be sorted on-site. Recyclable materials, such as metal, paper product and plastics should be collected by local recyclers

for recycling. All general refuse should be recycled as far as possible and landfill disposal should only be adopted as the last resort.

- 5.3.29 According to Plate 3.2 of Waste Statistics for 2022, in 2022 the recovery rate of domestic waste is approx. 20%. It is therefore assumed that 20% of general refuse, i.e., approx. 2,143kg of general refuse, would be reused and recycled by the recyclers. The surplus general refuse of 8,571 kg or 14.9kg/day (i.e. 18.6kg x 80%) in average would be sent to landfills.
- 5.3.30 Given the above, no adverse waste impact from the handling, transportation or disposal of general refuse from workforce during construction of the Proposed CBP is anticipated.

Chemical Waste

- 5.3.31 The existing building at No.13-17, Wah Sing Street, was built in 1960s. ACM will likely present in this building. Under APCO, for demolition of buildings with potential to contain ACMs, asbestos investigation shall be conducted by a Registered Asbestos Consultant (“RAC”). In the case that ACMs are identified, an Asbestos Investigation Report (“AIR”) and an Asbestos Management Plan (“AMP”) comprising an Operation and Maintenance Plan (“O&MP”) and an Asbestos Abatement Plan (“AAP”) shall be submitted to EPD for approval. A Registered Asbestos Contractor (“RACont”) shall be engaged to carry out asbestos abatement work according to the approved AIR and AAP before demolition. The owner of the premises must notify the Labour Department and the EPD at least 28 days before the commencement of the asbestos abatement works in accordance with the regulatory requirement.
- 5.3.32 Once asbestos abatement work has been completed according to the approved AAP, the RAC shall conduct a visual inspection to check for any additional ACMs. If additional ACMs are discovered, demolition shall be suspended and the RAC shall be informed of the situation immediately, the RAC shall submit the modified AAP to the EPD after investigation for further asbestos abatement work by the RAC. An air sampling test shall be conducted by a Registered Asbestos Laboratory (“RAL”) at the working area when all ACMs has been removed, in order to make sure that there is no asbestos fibre left suspended in the air.
- 5.3.33 The asbestos waste labelling, handling and packaging depends on the type of ACMs. The EPD’s Code of Practice on the Handling, Transportation and Disposal of Asbestos Waste shall be followed for handling, collection and transportation and disposal of asbestos. The quantity of the asbestos to be generated depends on the investigation and asbestos abatement plan carried out by RAC.
- 5.3.34 In general, the following precautionary measures stipulated in EPD’s *Code of Practice on Asbestos Control - Safe Handling of Low Risk Asbestos Containing Material and Code of Practice on Asbestos Control - Asbestos Work Using Full Containment or Mini Containment Method* should be taken during the removal of ACMs:
- Adoption of protection, such as a full containment, mini containment, or segregation of work area.
 - Provision of decontamination facilities for cleaning of workers, equipment and bagged waste before leaving the work area.

- Use of engineering control techniques such as negative pressure equipment with High Efficiency Particulate Air (“HEPA”) filters to ensure air flow between work area and the outside environment is free from any fibre release.
- Watering of ACMs before and during disturbance, minimising the breakage and dropping of ACMs, and packing of debris and waste immediately after it is produced.
- Provision of HEPA-filtered vacuum cleaner and wet wiping for cleaning the work area.
- Provision of sealants for coating any surfaces previously in contact with or contaminated by asbestos.
- Proper bagging, safe storage and disposal of asbestos and ACMs.
- Pre-treatment of all effluent from work area before discharge.
- Air monitoring strategy to check for any remaining asbestos present in the work area after the asbestos work.

5.3.35 Other than asbestos, no hazardous materials or hazardous wastes are expected to be generated during the construction phase. Only less than 1 tonne of chemical waste, waste batteries, lubricating oil and waste paints may be generated throughout the entire construction phase given the small scale of the works.

5.3.36 The Contractor shall register as a Chemical Waste Producer under the WDO. All chemical waste shall be stores at a properly designed chemical waste storage area located within the construction site in accordance with EPD’s *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*. A licensed collector shall be employed to handle and dispose of all chemical wastes, e.g. at the Chemical Waste Treatment Centre (“CWTC”) at Tsing Yi, or other facility approved by EPD.

5.3.37 Given the above, no adverse waste impact from the handling, transportation or disposal of chemical waste during the construction of the Proposed CBP is anticipated.

Table 5-2 Estimated Amount of Different Types of Wastes to be Generated During Construction Phase

WASTE TYPE	ESTIMATED QUANTITY (TONNES)	KEY SOURCES OF WASTE GENERATION	TREATMENT
INERT C&D MATERIAL			
Demolition waste	3,534	Demolition	1. On-site reuse/recycle
Building Waste	3,478	Superstructure Construction	2. Off-site reuse/recycle 3. Delivery to public fill reception facilities
NON-INERT C&D MATERIAL			
Building Waste	168	Superstructure Construction	1. On-site sorting for reuse/recycle 2. Disposal of at landfill
ASBESTOS WASTE			
Asbestos Waste	Depends on the findings of the AIR	Asbestos abatement work	1. Supervision of asbestos waste handling, packaging and disposal by RAC 2. Disposal by licensed asbestos waste collector

WASTE TYPE	ESTIMATED QUANTITY (TONNES)	KEY SOURCES OF WASTE GENERATION	TREATMENT
OTHERS			
General Refuse	11	Construction staff	1. On-site sorting for reuse/recycle 2. Disposal of at landfill
Chemical Waste	<1	Waste batteries, lubricating oil and waste paints, etc.	All to be collected by the licensed chemical waste collector and treated in the CWTC.

Operation Phase

- 5.3.38 During the operation phase, the major type of waste generated will be cementitious cake. As advised by the Applicant, about 20m³ cementitious cake would be generated from daily operation of the Proposed CBP. Besides, municipal solid waste (“MSW”) from onsite staff and truck drivers as well as chemical waste from the maintenance of the plant equipment will be generated during operation phase.
- 5.3.39 According to Plate 2.7 of Waste Statistic for 2022, the most recent per MSW disposal rate is 1.51kg/person/day. The estimated total staff of the Proposed Development would be around 12. With six working days per week, the annual MSW generation during the operation phase is expected to be around 5.2 tonnes (i.e. 1.51 kg x 12 x (6 x 4 x 12) days).
- 5.3.40 Plate 3.2 of Waste Statistics for 2022 shows that in 2022, the recovery rate of MSW is 32%. It is therefore estimated that 32% of MSW (i.e. 1.7 tonnes/year) could be reused and recycled by the recyclers. The surplus MSW of 3.5 tonnes/year would be disposed of at the North West New Territories Transfer Station.
- 5.3.41 Since MSW will be collected on a regular basis by waste collectors and will be disposed of at a landfill managed by EPD, no adverse waste impacts from handling, transportation or disposal are anticipated. Nevertheless, to minimize MSW generation mitigation measures proposed in **Section 5.4** should be implemented.
- 5.3.42 Only less than 1 tonne of chemical wastes will be expected to be generated from daily operation of the Proposed CBP. A licensed collector shall be employed to handle and dispose of the chemical wastes, if any.
- 5.3.43 Cementitious cake, the major type of waste, will be also generated from the sedimentation tank for recycling the wastewater from runoff and wheel washing facilities after the dewatering process. The cementitious cake will be therefore reused at Public Fill Reception Facilities.
- 5.3.44 With the implementation of the mitigation measures, there should be no adverse waste impact from the handling, transportation or disposal of domestic waste during the operation of the Proposed CBP.

5.4 Mitigation Measures

Construction Phase

- 5.4.1 Waste management shall be controlled through contractual requirements as well as through statutory requirements.

- 5.4.2 A Waste Management Plan (“WMP”) should be developed by the contractor and submitted to the Project Engineer/Architect for approval in accordance with ADV-19 before the commencement of any construction works. The objectives of the WMP will be to identify any potential environmental impacts from the generation of waste at the Site; to recommend appropriate waste handling, collection, sorting, disposal and recycling measures in accordance with requirements of the current regulations; and to categorise and permit segregation of C&D materials where practicable (i.e. inert material/non-inert material) for disposal considerations i.e. public fill reception facilities/landfill.
- 5.4.3 Good housekeeping practices shall be adopted with reference to the WMP such as waste segregation prior to disposal. Besides the provision of stockpiling and segregating areas at site, effective collection of site wastes is required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating odour nuisance pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.
- 5.4.4 A trip-ticket system should be established in accordance with DevB TC(W) No. 6/2010 and the *Waste Disposal (Charges for Disposal of Construction Waste) Regulation* to monitor the disposal of public fill and solid wastes at public filling facilities and landfills, and to control fly-tipping. A trip-ticket system should be included as one of the contractual requirements for the contractor to strictly implement.
- 5.4.5 Whenever there are excess recyclable construction materials, including bricks, plastics and metals, reuse and recycling should be carried out as far as practicable to minimise the amount of waste disposal. Other inert materials such as concrete, asphalt, etc. should be delivered to public fill. Non-inert and non-recyclable wastes should be disposed at designated landfill site.
- 5.4.6 General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the construction contractor to remove general refuse from the Site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of “wind-blown” materials.
- 5.4.7 Food waste generated during construction and operation would be separate from other waste and recycled as far as practicable, in order to minimize unpleasant odour and potential environmental hygiene issues.
- 5.4.8 For chemical waste, the Contractor should follow the ‘trip-ticket’ system of which the arrangement of production, collection and disposal in accordance with the *Waste Disposal (Chemical Waste) (General) Regulation*.
- 5.4.9 In addition, the EPD’s RPCC for Construction Contract should be incorporated in the relevant works contract. The RPCC are generally good engineering practice to minimise inconvenience and environmental nuisance to nearby residents and other sensitive receivers. The general requirements are as follows:
- The Contractor shall observe and comply with the WDO and its subsidiary.
 - The Contractor shall submit to the Engineer for approval a waste management plan with appropriate mitigation measures including allocation of an area for waste segregation and shall ensure that the day-to-day site operations comply with the approved waste management plan.

- The Contractor shall minimise the generation of waste from his work. Avoidance and minimisation of waste generation can be achieved through changing or improving design and practices, careful planning and good site management.
- The Contractor shall ensure that different types of wastes are segregated on-site and stored in different containers, skips or stockpiles to facilitate reuse / recycling of waste and, as the last resort, disposal at different outlets as appropriate.
- The reuse and recycling of waste shall be practised as far as possible. The recycled materials shall include paper / cardboard, timber and metal etc.
- The Contractor shall ensure that C&D materials are sorted into public fill (inert portion) and non-inert C&D materials (non-inert portion). The public fill which comprises soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused such as earth filling, reclamation, site formation works, etc. as far as practicable, and delivered to public fill reception facility as the last resort. The non-inert C&D materials which comprises metal, timber, paper, glass, etc. shall be reused and recycled as far as practicable, and, as the last resort, disposal of at landfills.
- The Contractor shall record the amount of waste generated, recycled and disposed of (including the disposal sites).
- The Contractor shall use a trip ticket system for the delivery of C&D materials to any designated public filling facility and/or landfill.
- Training shall be provided for workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.
- The Contractor shall not permit sewage and untreated effluent containing sand, cement, silt or any other suspended or dissolved material to flow from the Site onto any adjoining land, or allow any solid waste including refuse which is not part of the final product from waste processing plants to be deposited anywhere within the Site and the adjoining land. He shall arrange removal of such matter from the Site in a proper manner to the satisfaction of the Engineer in consultation with the EPD.
- The Contractor shall observe and comply with the Waste Disposal (Chemical Waste) (General) Regulation.
- The Contractor shall apply for registration as chemical waste producer under the *Waste Disposal (Chemical Waste) (General) Regulation* when chemical waste is produced. All chemical waste shall be properly stored, labelled, packaged and collected in accordance with the Regulation.
- All dump trucks engaged on-site for delivery of inert and non-inert C&D material from the site to the designated disposal locations, including PFRFs, landfills etc., should be equipped with GPS or equivalent system for tracking and monitoring of their travel routings and parking locations by the Contractor to prohibit illegal dumping and landfilling of materials.

Operation Phase

- 5.4.10 The operator shall encourage reuse and recycling of MSW in line with government policy. The waste management hierarchy shall be adopted by the building management to manage MSW in a suitable manner. The waste management hierarchy is a concept which shows the desirability of various waste management methods and comprises the following in order of preference:

- Avoidance
- Minimisation
- Recycling/reuse

- 5.4.11 MSW such as general refuse, food waste, food packaging, paper, can, plastic bottles, etc., which shall be collected and stored in appropriate waste receptacles with a secure lid to minimize the potential adverse impact due to wind blowing away garbage and to improve hygiene. Recyclable and non-recyclable waste shall be regularly collected by waste collectors and taken off-site for recycling or disposal, respectively.
- 5.4.12 For the cementitious cake, the Contractor should temporarily store the cementitious cake onsite in a waste hopper with impervious sheeting covering before transferred to Public Fill Reception Facilities for reuse.
- 5.4.13 For chemical waste, the Contractor should follow the 'trip-ticket' system of which the arrangement of production, collection and disposal in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

5.5 Conclusion

- 5.5.1 With the development of WMP and to implement the good site practices recommended therein, the waste generation during construction phase can be greatly reduced. Provided that good site practices as recommended in **Section 5.4** will be followed, there should be no adverse impacts related to the management, handling and transportation of waste during the construction phase.
- 5.5.2 During the operation phase, the major type of waste generated will be cementitious cake and MSW. Since MSW will be collected on a regular basis by waste collectors and will be disposed at a landfill managed by EPD, no adverse waste impacts from handling, transportation, or disposal are anticipated during operation.
- 5.5.3 With the implementation of the recommended mitigation measures, adverse waste management impact during the construction and operation phases of the Proposed CBP is not anticipated.

6 LAND CONTAMINATION

6.1 Environmental Legislation and Standards

6.1.1 The following legislation, standards and guidelines were taken reference to for conducting the land contamination assessment:

- EPD Guidance Note for Contaminated Land Assessment and Remediation.
- EPD Practice Guide for Investigation and Remediation of Contaminated Land.
- Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management.

6.2 Assessment Methodology

6.2.1 Land contamination assessment would be conducted according to EPD’s Practice Guide. Typically, before a complete land contamination assessment, a site appraisal would be conducted to determine whether there is any potential for land contamination in the Site.

6.2.2 In the case that potential land contamination issues are identified, a complete land contamination assessment with the following steps should be undertaken:

1. Design a site investigation (“SI”) strategy and prepare a Contamination Assessment Plan (“CAP”) for EPD’s approval
2. Upon EPD’s approval of the CAP, conduct SI according to the approved CAP
3. Upon completion of SI, interpret the results and prepare a Contamination Assessment Report (“CAR”) for EPD’s approval
4. Plan and design remediation strategy and prepare a Remediation Assessment Plan (“RAP”) for EPD’s approval
5. Carry out remediation works according to the approved RAP
6. Prepare a Remediation Report (“RR”) for EPD’s endorsement

6.3 Site Appraisal

Review of Historical Use

6.3.1 Aerial photographs records provided in **Appendix I** show that the Site was an agriculture land in the 1960s, in which the historical agricultural activities unlikely caused land contamination. In Year 1976, it was observed that a building was constructed on the Site. The building remains unchanged on the site until Year 2022. The historical land uses of the Project Site based on the aerial photographic records is summarised in **Table 6-1**.

Table 6-1 Historical Land Uses of the Project Site

PHOTO ID	HISTORICAL LAND USES
1963_1963-6355	Agriculture land
1976_16829	A industrial building was present.
1986_A05724	No major change on the land use
1997_A46265	No major change on the land use

PHOTO ID	HISTORICAL LAND USES
1999_CN22648	No major change was observed
2008_CS15794	No major change was observed
2018_E033900C	No major change was observed
2022_E170956C	No major change was observed

6.3.2 Based on the preliminary review on the historical aerial photographs and documents on the website, no land contamination potential was observed. Nevertheless, as the existing building was served as the industrial premise for the past decades, a site walkover and site appraisal will be required to further evaluate the land contamination potential of the historical use. In the case that any land contamination is suspected during site visit, step 1 to step 6 of **paragraph 6.2.2** will be followed. At the time of site appraisal, the building was fenced off and inaccessible. As such, site walkover inside the existing building was not feasible. The site walkover and site appraisal are under arrangement and details will be provided in due course.

6.4 Conclusion

6.4.1 No suspected land contaminated activities were found based on the historical aerial photographs. However, given the existing building is served as the industrial premise for the past decades, a site walkover and site appraisal will be required to further evaluate the land contamination potential of the historical use. The findings of the site walkover and site appraisal will be submitted to EPD for agreement once available. In case any land contamination potential is suspected, step 1 to step 6 of **paragraph 6.2.2** will be followed.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1.1 This EA has indicated that the Proposed CBP will not generate any unacceptable environmental impacts during construction and operation phases, provided that all the recommended mitigation measures and good site practice are strictly implemented.

7.1.2 Specific conclusions for air quality, noise, water quality and waste management are as follows:

Air Quality

7.1.3 With the implementation of the recommended mitigation measures and good site practice, adverse impacts during construction phases are not anticipated.

7.1.4 No adverse air quality impact on the Proposed CBP is anticipated with the implementation of the proposed mitigation measures and meet the SIL during operation phase.

7.1.5 Overall, no adverse air quality impact is anticipated during the construction or operation phases of the Proposed CBP.

Noise

7.1.6 Overall, with the implementation of the recommended noise mitigation measures, no adverse impact during the construction or operation phase of the Proposed CBP is anticipated.

Water Quality

7.1.7 During construction phase, water quality impact will be properly controlled with the implementation of good site practice. Portable toilets, when necessary will be provided for construction workers on-site. Provided these measures are implemented, adverse water quality impact is not anticipated during the construction phase.

7.1.8 The Contractor shall apply for a Discharge Licence under the WPCO and the effluent discharged from the construction site shall comply with the terms and conditions of the Discharge Licence.

7.1.9 During operation phase, no adverse water quality impact is anticipated from wastewater/sewage from employees. The wastewater arising from the Proposed CBP will be discharged into the public sewerage system. Besides, The wastewater generated from water sprinklers and wheel washing facilities will be collected and diverted to sedimentation tank for silt removal. The treated effluent will be reused onsite.

7.1.10 Overall, no adverse water quality impacts are anticipated during the construction or operation phase of the Proposed CBP.

Waste Management

7.1.11 With the development of WMP and to implement the good site practices recommended therein, the waste generation during construction phase can be greatly reduced. Provided that good site practices will be followed, there should be no adverse impacts related to the management, handling and transportation of waste during the construction phase.

- 7.1.12 During the operation phase, the major type of waste generated will be cementitious cake and municipal solid waste. Since municipal solid waste will be collected on a regular basis by waste collectors and will be disposed at a landfill managed by EPD, no adverse waste impacts from handling, transportation, or disposal are anticipated during operation.
- 7.1.13 With the implementation of the recommended mitigation measures, adverse waste management impact during the construction and operation phases of the Proposed CBP is not anticipated.

Land Contamination

- 7.1.14 No suspected land contaminated activities were found based on the historical aerial photographs. However, given the existing building is served as the industrial premise for the past decades, a site walkover and site appraisal will be required to further evaluate the land contamination potential of the historical use.

Appendix A Emission Calculation and Summary of Emission Rates

Summary of emission rates and parameters for emission sources during daytime operation

Emission Points	Descriptions	Coordinates		Elevation (mPD)	Type of Source	Ducted / Fugitive?	Stack/Emission Height (mAG)	Stack/Emission Height (mPD)	Exit Temperature (K)	Exit Temperature (K) (For model input)	Flow Rate (m ³ /hour)	Exit Velocity (m/s)	Outlet Dimension (m)					RSP Emission Rate (g/s for point source or g/m/s for area source)	FSP Emission Rate (g/s for point source or g/m/s for area source)	NO Emission Rate (g/s for point source or g/m/s for area source)	NO2 Emission Rate (g/s for point source or g/m/s for area source)	Operation Period	
		X	Y										Length of X-axis	Length of Y-axis	Input Angle	Length	Width						Calculated Diameter
EP1	Dust Collector (DC-1) for Cementitious Material Silo	831913.1	825003.3	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP2	Dust Collector (DC-2) for Cementitious Material Silo	831914.1	825003.1	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP3	Dust Collector (DC-3) for Cementitious Material Silo	831915.1	825002.8	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP4	Dust Collector (DC-4) for Cementitious Material Silo	831916.1	825002.5	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP5	Dust Collector (DC-5) for Cementitious Material Silo	831912.8	825002.4	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP6	Dust Collector (DC-6) for Cementitious Material Silo	831913.8	825002.2	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP7	Dust Collector (DC-7) for Cementitious Material Silo	831914.8	825001.9	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP8	Dust Collector (DC-8) for Cementitious Material Silo	831915.8	825001.6	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP9	Dust Collector (DC-9) for Cementitious Material Silo	831912.6	825001.5	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP10	Dust Collector (DC-10) for Cementitious Material Silo	831913.6	825001.3	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP11	Dust Collector (DC-11) for Cementitious Material Silo	831914.6	825001.0	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP12	Dust Collector (DC-12) for Cementitious Material Silo	831915.6	825000.7	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP13	Dust Collector (DC-13) for Cementitious Material Silo	831912.3	825000.6	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP14	Dust Collector (DC-14) for Cementitious Material Silo	831913.4	825000.4	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP15	Dust Collector (DC-15) for Cementitious Material Silo	831914.4	825000.1	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP16	Dust Collector (DC-16) for Cementitious Material Silo	831915.4	824999.8	15	Point	D	44.8	59.8	Ambient	0	3,000	25.42	-	-	-	0.25	0.15	0.22	8.13E-04	2.94E-04	--	--	0700-1900
EP17	Dust Collector (DC-17) for Mixer and Holding Hopper	831917.3	825007.0	15	Point	D	44.8	59.8	Ambient	0	1,500	12.71	-	-	-	0.25	0.15	0.22	2.83E-03	1.05E-03	--	--	0700-1900
EP18	Dust Collector (DC-18) for Mixer and Holding Hopper	831917.1	825006.1	15	Point	D	44.8	59.8	Ambient	0	1,500	12.71	-	-	-	0.25	0.15	0.22	2.83E-03	1.05E-03	--	--	0700-1900
EP19	Dust Collector (DC-19) for Mixer and Holding Hopper	831916.8	825005.2	15	Point	D	44.8	59.8	Ambient	0	1,500	12.71	-	-	-	0.25	0.15	0.22	2.83E-03	1.05E-03	--	--	0700-1900
EP20	Dust Collector (DC-20) for Mixer and Holding Hopper	831916.6	825004.3	15	Point	D	44.8	59.8	Ambient	0	1,500	12.71	-	-	-	0.25	0.15	0.22	2.83E-03	1.05E-03	--	--	0700-1900
EP21	Dust Collector (DC-21) for Aggregate Transfer and Paved Road	831926.6	825004.1	15	Point	D	52.7	67.7	Ambient	0	4,500	3.75	-	-	-	0.491	0.562	0.59	4.30E-06	1.15E-06	9.95E-02	1.66E-02	0700-1900

Calculation of Dust Emissions from Dust Collectors

Method: USEPA AP-42 Table 11.12-1 of Section 11.12 version 6/06

EP1 to EP16 Emission from Dust Collectors (DC 1 to DC 16) for Cementitious Materials Silos

Maximum Cementitious Material Loading Rate per Silo	=	45	tonnes/hour	(Note 1)
Capacity of Dust Collector (Flow rate)	=	3,000	m ³ /hour	(Note 2)
	=	0.833	m ³ /s	
Control Efficiency (η%)	=	99.99	%	(Note 2)
Uncontrolled TSP Emission Factor of Cementitious Materials	=	1.57	kg/Mg	(Note 3)
Uncontrolled RSP Emission Factor of Cementitious Materials	=	0.65	kg/Mg	(Note 4)
Uncontrolled FSP Emission Factor of Cementitious Materials	=	0.2355	kg/Mg	(Note 5)
Unmitigated TSP Emission Rate of Each Dust Collector of Cementitious Materials per Silo	=	70.65	kg/hour	
Unmitigated RSP Emission Rate of Each Dust Collector of Cementitious Materials per Silo	=	29.25	kg/hour	
Unmitigated FSP Emission Rate of Each Dust Collector of Cementitious Materials per Silo	=	10.5975	kg/hour	
Mitigated TSP Emission of Dust Collector	=	0.007065	kg/hour	
	=	7.065	g/hour	
	=	0.0020	g/s	
	=	2.36	mg/m ³	
Mitigated RSP Emission of Dust Collector	=	0.002925	kg/hour	
	=	2.925	g/hour	
	=	0.0008	g/s	
	=	0.98	mg/m ³	
Mitigated FSP Emission of Dust Collector	=	0.00105975	kg/hour	
	=	1.05975	g/hour	
	=	0.0003	g/s	
	=	0.35	mg/m ³	

EP17 to EP20 Emissions from Dust Collectors (DC17 to DC20) for Cement/GGBS/PFA Holding Hoppers

Maximum Cement/GGBS/PFA Consumption Rate	=	50	tonne/hour	(Note 6)
Uncontrolled TSP Emission Factor of Cement/PFA/GGBS Loading	=	1.57	kg/Mg	(Notes 7, 3)
Uncontrolled RSP Emission Factor of Cement/PFA/GGBS Loading	=	0.65	kg/Mg	(Notes 7, 4)
Uncontrolled FSP Emission Factor of Cement/PFA/GGBS Loading	=	0.2355	kg/Mg	(Notes 7, 5)
Unmitigated TSP Emission Rate of Each Cement/GGBS/PFA Holding Hoppers	=	78.5	kg/hour	
	=	0.022	kg/s	
Unmitigated RSP Emission Rate of Each Cement/GGBS/PFA Holding Hoppers	=	32.5	kg/hour	
	=	0.009	kg/s	
Unmitigated FSP Emission Rate of Each Cement/GGBS/PFA Holding Hoppers	=	11.775	kg/hour	
	=	0.003	kg/s	

EP17 to EP20 Emissions from Dust Collector (DC 17 to DC20) for 5m³ Concrete Mixer

Total Concrete Production Rate	=	100	m ³ /hour/leg	
Density	=	2.4	tonne/m ³	
Total Concrete Production Rate	=	240	tonne/hour/leg	
Maximum Cementitious Material Consumption Rate (r1)	=	55	tonne/hour/leg	(Note 8)
	=	0.015	tonne/s/leg	
Maximum Aggregate/Sand Consumption Rate (r2)	=	200	tonne/hour/leg	(Note 8)
	=	0.056	tonne/s/leg	
Uncontrolled TSP Emission Factor of Mixer Loading for Cementitious Material (EF _{TSP1})	=	0.286	kg/Mg	(Note 9)
Uncontrolled TSP Emission Factor of Mixer(Weigh Hopper) Loading for Aggregate/Sand (EF _{TSP2})	=	0.0026	kg/Mg	(Note 9)
Unmitigated Total TSP Emission Rate of (ER _{TSP})	=	0.0045	kg/s/mixer	r ₁ × EF _{TSP1} + r ₂ × EF _{TSP2}
Uncontrolled RSP Emission Factor of Mixer Loading for Cementitious Material (EF _{RSP1})	=	0.078	kg/Mg	(Note 9)
Uncontrolled RSP Emission Factor of Mixer(Weigh Hopper) Loading for Aggregate/Sand (EF _{RSP2})	=	0.0013	kg/Mg	(Note 9)
Unmitigated Total RSP Emission Rate of (ER _{RSP})	=	0.0013	kg/s/mixer	r ₁ × EF _{RSP1} + r ₂ × EF _{RSP2}
Uncontrolled FSP Emission Factor of Mixer Loading for Cementitious Material (EF _{FSP1})	=	0.0429	kg/Mg	(Note 5)
Uncontrolled FSP Emission Factor of Mixer(Weigh Hopper) Loading for Aggregate/Sand (EF _{FSP2})	=	0.0004	kg/Mg	(Note 5)
Unmitigated Total FSP Emission Rate of (ER _{FSP})	=	0.0007	kg/s/mixer	r ₁ × EF _{FSP1} + r ₂ × EF _{FSP2}

Mitigated Measures for Mixer and Cement/GGBS/PFA Holding Hoppers: Dust collector DC 17 to DC20

No. of legs	=	4		
Capacity of Dust Collector (Flow rate)	=	1500	m ³ /hour	(Note 2) V15
	=	0.4167	m ³ /s	
Control Efficiency (η%)	=	99.99	%	(Note 2)
Mitigated TSP Emission Rate of Dust Collector	=	6.99E-06	kg/s	ER = ER _{TSP} * (1-η%)
	=	0.007	g/s	
	=	16.8	mg/m ³	
Mitigated RSP Emission Rate of Dust Collector	=	2.83E-06	kg/s	ER = ER _{RSP} * (1-η%)
	=	2.83E-03	g/s	
	=	6.8	mg/m ³	
Mitigated FSP Emission Rate of Dust Collector	=	1.05E-06	kg/s	ER = ER _{FSP} * (1-η%)
	=	1.05E-03	g/s	
	=	2.5	mg/m ³	

Note:

- The maximum cementitious material (cement, PFA, GGBS and silica fume) loading rate is provided by the Applicant.
- Capacity of Dust Collector is provided by the Applicant as shown Appendix A.
- For TSP (or Total PM), cement unloading rate of 0.36kg/Mg and cement supplement unloading rate of 1.57kg/Mg are mentioned in USEPA AP-42 Table 11.12-1 of Section 11.12 version 6/06. The higher value of 1.57kg/Mg is considered for the worst-case scenario.
- For RSP (or PM₁₀), cement unloading rate of 0.24kg/Mg and cement supplement unloading rate of 0.65kg/Mg are mentioned in USEPA AP-42 Table 11.12-1 of Section 11.12 version 6/06. The higher value of 0.65kg/Mg is considered for the worst-case scenario.
- FSP emission concentration is assumed to be 15% of TSP in accordance with Page B.2-13, Appendix B2 of AP-42.
- The maximum cement, PFA and GGBS consumption rate is provided by the Applicant.
- Cementitious material is loaded from the relevant silo to pressurised tank and then the relevant holding hopper. Because the cementitious material is conveyed via pneumatic pipe to holding tank, the emission factor of unloading to elevated silo (pneumatic) should be adopted for the worst-case scenario.
- Material consumption rates are different for different concrete products. Therefore, the maximum aggregate and cementitious consumption rates have been adopted for the worst-case scenario.
- The emission factors are referred to USEPA AP-42 Table 11.12-1 of Section 11.12 version 6/06.

Concrete Batching Plant at Kwai Chung
 Calculation of Emissions from Aggregate Transfer
 Method: USEPA AP-42 Table 11.12-1 of Section 11.12 version 6/06

Emissions from unloading of aggregates to aggregate receiving hoppers (EP17)			
No. of aggregate receiving hoppers	=	3	
Maximum aggregate loading rate	=	100,000 kg/hr	
		100 tonnes/hour (i.e. Mg/hour)	(Note 1)
Uncontrolled TSP Emission Factor (Aggregate)	=	0.0035 kg/Mg	
Uncontrolled RSP Emission Factor (Aggregate)	=	0.0017 kg/Mg	
Unmitigated Total TSP Emission Rate from EP5	=	0.3500 kg/hr	
Unmitigated Total RSP Emission Rate from EP5	=	0.1700 kg/hr	
Unmitigated Total FSP Emission Rate from EP5	=	0.0525 kg/hr	(Note 2)

Mitigation Measures : With three side enclosure + water spraying

Receiving Area	=	94	m ²	(Note 1)
Control Efficiency	=	95	%	(Note 3)
Mitigated TSP Emission Rate	=	0.0175 kg/hr/hopper		
	=	0.004861 g/s/hopper		
	=	0.014583 g/s		
Mitigated RSP Emission Rate	=	0.0085 kg/hr/hopper		
	=	0.002361 g/s/hopper		
	=	0.007083 g/s		
Mitigated FSP Emission Rate	=	0.00263 kg/hr/hopper		
	=	7.29E-04 g/s/hopper		
	=	0.002188 g/s		

Total Calculation of Emissions from Paved Roads (incl tailpipe emission)

RSP Emission Factor (controlled) of paved road	=	3.60E-02	g/s
FSP Emission Factor (controlled) of paved road	=	9.33E-03	g/s

Mitigated Measures: Dust collector DC 18

Capacity of Dust Collector (Flow rate)	=	4500	m ³ /hour	(Note 4) V15
	=	1.2500	m ³ /s	
Control Efficiency (η%)	=	99.99	%	(Note 4)
Mitigated TSP Emission Rate of Dust Collector	=	5.99E-06	g/s	
Mitigated RSP Emission Rate of Dust Collector	=	4.30E-06	g/s	
	=	0.0	mg/m ³	
Mitigated FSP Emission Rate of Dust Collector	=	1.15E-06	g/s	

Note

1. Information as provided by the Applicant.
2. FSP emission concentration is assumed to be 15% of TSP in accordance with Page B.2-13, Appendix B2 of AP-42 .
3. Reference to the Approved EIA report "Road Works at West Kowloon" in 2009, 95% of dust removal efficiency was adopted for unloading aggregate to receiving hopper with enclosure on three sides and a top cover and equipped with water spraying system.
4. Capacity of Dust Collector is provided by the Applicant as shown Appendix A.

SP Licence Application for Concrete Batching Plant at Kwai Chung
 Calculation of Emissions from Paved Roads

Method: USEPA AP-42, Section 13.2.1.3, version 1/2011

Particulate Emission Factor (g/VKT), E = $k (sL)^{0.91} (W)^{1.02}$
 where
 k = particle size multiplier
 sL = road surface silt loading
 W = average weight of the vehicles traveling the road

From Concrete Trucks

Mitigation measures: water spraying and wheel washing

Average Loaded Weight of Truck = 30 tons
 Average Unladen Weight of Trucks = 15 tons
 Average Weight of Truck = 22.5 tons
 k = 3.23 g/VKT (for TSP) (Note 1)
 = 0.62 g/VKT (for RSP)
 = 0.15 g/VKT (for FSP)
 sL = road surface silt loading = 12 g/m² (Note 2)

EP24_1

Control Efficiency = 91.1 % (Note 3)
 Trucks Travelling Frequency = 40 veh/hr (Note 4)
 Road Length = 10.0 m
 Area of paved road travelled = 30.0 m²
 RSP Emission Factor (uncontrolled) of paved road = 142.4534 g/VKT
 RSP Emission Factor (controlled) of paved road = 12.7066 g/VKT
 = 1.27E-02 g/veh/m
 = 5.08E-01 g/m/hr
 = 1.41E-04 g/m/s
 = 1.41E-03 g/s
 FSP Emission Factor (uncontrolled) of paved road = 34.4645 g/VKT
 FSP Emission Factor (controlled) of paved road = 3.0742 g/VKT
 = 3.07E-03 g/veh/m
 = 1.23E-01 g/m/hr
 = 3.42E-05 g/m/s
 = 3.42E-04 g/s

EP24_2

Control Efficiency = 91.1 % (Note 3)
 Trucks Travelling Frequency = 40 veh/hr (Note 4)
 Road Length = 22.6 m
 Area of paved road travelled = 67.8 m²
 RSP Emission Factor (uncontrolled) of paved road = 142.4534 g/VKT
 RSP Emission Factor (controlled) of paved road = 12.7066 g/VKT
 = 1.27E-02 g/veh/m
 = 5.08E-01 g/m/hr
 = 1.41E-04 g/m/s
 = 3.19E-03 g/s
 FSP Emission Factor (uncontrolled) of paved road = 34.4645 g/VKT
 FSP Emission Factor (controlled) of paved road = 3.0742 g/VKT
 = 3.07E-03 g/veh/m
 = 1.23E-01 g/m/hr
 = 3.42E-05 g/m/s
 = 7.72E-04 g/s

EP24_3

Control Efficiency = 91.1 % (Note 3)
 Trucks Travelling Frequency = 40 veh/hr (Note 4)
 Road Length = 33.2 m
 Area of paved road travelled = 99.6 m²

RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT
RSP Emission Factor (controlled) of paved road	=	12.7066	g/VKT
	=	1.27E-02	g/veh/m
	=	5.08E-01	g/m/hr
	=	1.41E-04	g/m/s
	=	4.69E-03	g/s

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	3.0742	g/VKT
	=	3.07E-03	g/veh/m
	=	1.23E-01	g/m/hr
	=	3.42E-05	g/m/s
	=	1.13E-03	g/s

EP24_4

Control Efficiency	=	91.1	%	(Note 3)
Trucks Travelling Frequency	=	40	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	

RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT
RSP Emission Factor (controlled) of paved road	=	12.7066	g/VKT
	=	1.27E-02	g/veh/m
	=	5.08E-01	g/m/hr
	=	1.41E-04	g/m/s
	=	6.64E-04	g/s

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	3.0742	g/VKT
	=	3.07E-03	g/veh/m
	=	1.23E-01	g/m/hr
	=	3.42E-05	g/m/s
	=	1.61E-04	g/s

EP24_5

Control Efficiency	=	99.1	%	(Note 3)
Trucks Travelling Frequency	=	10	veh/hr	(Note 4)
Road Length	=	28.3	m	
Area of paved road travelled	=	84.9	m ²	

RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT
RSP Emission Factor (controlled) of paved road	=	1.3236	g/VKT
	=	1.32E-03	g/veh/m
	=	1.32E-02	g/m/hr
	=	3.68E-06	g/m/s
	=	1.04E-04	g/s

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	0.3202	g/VKT
	=	3.20E-04	g/veh/m
	=	3.20E-03	g/m/hr
	=	8.90E-07	g/m/s
	=	2.52E-05	g/s

EP24_6

Control Efficiency	=	99.1	%	(Note 3)
Trucks Travelling Frequency	=	10	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	

RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT
RSP Emission Factor (controlled) of paved road	=	1.3236	g/VKT
	=	1.32E-03	g/veh/m
	=	1.32E-02	g/m/hr

	=	3.68E-06	g/m/s	
	=	1.73E-05	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.3202	g/VKT	
	=	3.20E-04	g/veh/m	
	=	3.20E-03	g/m/hr	
	=	8.90E-07	g/m/s	
	=	4.18E-06	g/s	

EP24_7

Control Efficiency	=	92.0	%	(Note 3)
Trucks Travelling Frequency	=	30	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	11.3830	g/VKT	
	=	1.14E-02	g/veh/m	
	=	3.41E-01	g/m/hr	
	=	9.49E-05	g/m/s	
	=	4.46E-04	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	2.7539	g/VKT	
	=	2.75E-03	g/veh/m	
	=	8.26E-02	g/m/hr	
	=	2.29E-05	g/m/s	
	=	1.08E-04	g/s	

EP24_8

Control Efficiency	=	99.1	%	(Note 3)
Trucks Travelling Frequency	=	10	veh/hr	(Note 4)
Road Length	=	28.3	m	
Area of paved road travelled	=	84.9	m ²	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	1.3236	g/VKT	
	=	1.32E-03	g/veh/m	
	=	1.32E-02	g/m/hr	
	=	3.68E-06	g/m/s	
	=	1.04E-04	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.3202	g/VKT	
	=	3.20E-04	g/veh/m	
	=	3.20E-03	g/m/hr	
	=	8.90E-07	g/m/s	
	=	2.52E-05	g/s	

EP24_9

Control Efficiency	=	98.1	%	(Note 3)
Trucks Travelling Frequency	=	20	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	2.6472	g/VKT	
	=	2.65E-03	g/veh/m	
	=	5.29E-02	g/m/hr	
	=	1.47E-05	g/m/s	
	=	6.91E-05	g/s	

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	0.6405	g/VKT
	=	6.40E-04	g/veh/m
	=	1.28E-02	g/m/hr
	=	3.56E-06	g/m/s
	=	1.67E-05	g/s

EP24_10

Control Efficiency	=	96.7	%	(Note 3)
Trucks Travelling Frequency	=	20	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	

RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT
RSP Emission Factor (controlled) of paved road	=	4.7650	g/VKT
	=	4.76E-03	g/veh/m
	=	9.53E-02	g/m/hr
	=	2.65E-05	g/m/s
	=	1.24E-04	g/s

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	1.1528	g/VKT
	=	1.15E-03	g/veh/m
	=	2.31E-02	g/m/hr
	=	6.40E-06	g/m/s
	=	3.01E-05	g/s

EP24_11

Control Efficiency	=	99.1	%	(Note 3)
Trucks Travelling Frequency	=	10	veh/hr	(Note 4)
Road Length	=	28.3	m	
Area of paved road travelled	=	84.9	m ²	

RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT
RSP Emission Factor (controlled) of paved road	=	1.3236	g/VKT
	=	1.32E-03	g/veh/m
	=	1.32E-02	g/m/hr
	=	3.68E-06	g/m/s
	=	1.04E-04	g/s

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	0.3202	g/VKT
	=	3.20E-04	g/veh/m
	=	3.20E-03	g/m/hr
	=	8.90E-07	g/m/s
	=	2.52E-05	g/s

EP24_12

Control Efficiency	=	97.2	%	(Note 3)
Trucks Travelling Frequency	=	30	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	

RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT
RSP Emission Factor (controlled) of paved road	=	3.9708	g/VKT
	=	3.97E-03	g/veh/m
	=	1.19E-01	g/m/hr
	=	3.31E-05	g/m/s
	=	1.56E-04	g/s

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	0.9607	g/VKT
	=	9.61E-04	g/veh/m
	=	2.88E-02	g/m/hr

= 8.01E-06 g/m/s
= 3.76E-05 g/s

EP24_13

Control Efficiency	=	97.6	%	(Note 3)
Trucks Travelling Frequency	=	10	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	3.4414	g/VKT	
	=	3.44E-03	g/veh/m	
	=	3.44E-02	g/m/hr	
	=	9.56E-06	g/m/s	
	=	4.49E-05	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.8326	g/VKT	
	=	8.33E-04	g/veh/m	
	=	8.33E-03	g/m/hr	
	=	2.31E-06	g/m/s	
	=	1.09E-05	g/s	

EP24_14

Control Efficiency	=	99.1	%	(Note 3)
Trucks Travelling Frequency	=	10	veh/hr	(Note 4)
Road Length	=	28.3	m	
Area of paved road travelled	=	84.9	m ²	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	1.3236	g/VKT	
	=	1.32E-03	g/veh/m	
	=	1.32E-02	g/m/hr	
	=	3.68E-06	g/m/s	
	=	1.04E-04	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.3202	g/VKT	
	=	3.20E-04	g/veh/m	
	=	3.20E-03	g/m/hr	
	=	8.90E-07	g/m/s	
	=	2.52E-05	g/s	

EP24_15

Control Efficiency	=	96.3	%	(Note 3)
Trucks Travelling Frequency	=	40	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	5.2944	g/VKT	
	=	5.29E-03	g/veh/m	
	=	2.12E-01	g/m/hr	
	=	5.88E-05	g/m/s	
	=	2.76E-04	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	1.2809	g/VKT	
	=	1.28E-03	g/veh/m	
	=	5.12E-02	g/m/hr	
	=	1.42E-05	g/m/s	
	=	6.69E-05	g/s	

EP24_16

Control Efficiency	=	98.5	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	2.1178	g/VKT	
	=	2.12E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (controlled) of paved road	=	0.5124	g/VKT	
	=	5.12E-04	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_17

Control Efficiency	=	96.3	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	16.8	m	
Area of paved road travelled	=	50.4	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	5.2944	g/VKT	
	=	5.29E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (controlled) of paved road	=	1.2809	g/VKT	
	=	1.28E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_18

Control Efficiency	=	96.3	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	9.2	m	
Area of paved road travelled	=	27.6	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	5.2944	g/VKT	
	=	5.29E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (controlled) of paved road	=	1.2809	g/VKT	
	=	1.28E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_19

Control Efficiency	=	94.8	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	28.3	m	

Area of paved road travelled	=	84.9	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	7.4122	g/VKT	
	=	7.41E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (controlled) of paved road	=	1.7933	g/VKT	
	=	1.79E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_20

Control Efficiency	=	91.1	%	(Note 3)
Trucks Travelling Frequency	=	40	veh/hr	(Note 4)
Road Length	=	11.4	m	
Area of paved road travelled	=	34.2	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	12.7066	g/VKT	
	=	1.27E-02	g/veh/m	
	=	5.08E-01	g/m/hr	
	=	1.41E-04	g/m/s	
	=	1.61E-03	g/s	
FSP Emission Factor (controlled) of paved road	=	3.0742	g/VKT	
	=	3.07E-03	g/veh/m	
	=	1.23E-01	g/m/hr	
	=	3.42E-05	g/m/s	
	=	3.89E-04	g/s	

From Raw Material Delivery Truck

Mitigation measures: water spraying and wheel washing

Average Loaded Weight of Truck	=	30	tons	
Average Unladen Weight of Trucks	=	15	tons	
Average Weight of Truck	=	22.5	tons	
k	=	3.23	g/VKT (for TSP)	(Note 1)
	=	0.62	g/VKT (for RSP)	
	=	0.15	g/VKT (for FSP)	
sL = road surface silt loading	=	12	g/m ²	(Note 2)

EP24_1

Control Efficiency	=	91.1	%	(Note 3)
Trucks Travelling Frequency	=	56	veh/hr	(Note 4)
Road Length	=	10.0	m	
Area of paved road travelled	=	30.0	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	12.7066	g/VKT	
	=	1.27E-02	g/veh/m	
	=	7.12E-01	g/m/hr	
	=	1.98E-04	g/m/s	
	=	1.98E-03	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	3.0742	g/VKT	
	=	3.07E-03	g/veh/m	
	=	1.72E-01	g/m/hr	

	=	4.78E-05	g/m/s	
	=	4.78E-04	g/s	
EP24_2				
Control Efficiency	=	91.1	%	(Note 3)
Trucks Travelling Frequency	=	56	veh/hr	(Note 4)
Road Length	=	22.6	m	
Area of paved road travelled	=	67.8	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	12.7066	g/VKT	
	=	1.27E-02	g/veh/m	
	=	7.12E-01	g/m/hr	
	=	1.98E-04	g/m/s	
	=	4.47E-03	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	3.0742	g/VKT	
	=	3.07E-03	g/veh/m	
	=	1.72E-01	g/m/hr	
	=	4.78E-05	g/m/s	
	=	1.08E-03	g/s	

EP24_3				
Control Efficiency	=	91.1	%	(Note 3)
Trucks Travelling Frequency	=	56	veh/hr	(Note 4)
Road Length	=	33.2	m	
Area of paved road travelled	=	99.6	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	12.7066	g/VKT	
	=	1.27E-02	g/veh/m	
	=	7.12E-01	g/m/hr	
	=	1.98E-04	g/m/s	
	=	6.56E-03	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	3.0742	g/VKT	
	=	3.07E-03	g/veh/m	
	=	1.72E-01	g/m/hr	
	=	4.78E-05	g/m/s	
	=	1.59E-03	g/s	

EP24_4				
Control Efficiency	=	91.1	%	(Note 3)
Trucks Travelling Frequency	=	56	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	12.7066	g/VKT	
	=	1.27E-02	g/veh/m	
	=	7.12E-01	g/m/hr	
	=	1.98E-04	g/m/s	
	=	9.29E-04	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	3.0742	g/VKT	

= 3.07E-03 g/veh/m
 = 1.72E-01 g/m/hr
 = 4.78E-05 g/m/s
 = 2.25E-04 g/s

EP24_5

Control Efficiency = 99.1 % (Note 3)
 Trucks Travelling Frequency = 0 veh/hr (Note 4)
 Road Length = 28.3 m
 Area of paved road travelled = 84.9 m²

TSP Emission Factor of paved road = 742.136 g/VKT
 = 0.742136 g/veh/m
 RSP Emission Factor (uncontrolled) of paved road = 142.4534 g/VKT
 RSP Emission Factor (controlled) of paved road = 1.3236 g/VKT
 = 1.32E-03 g/veh/m
 = 0.00E+00 g/m/hr
 = 0.00E+00 g/m/s
 = 0.00E+00 g/s

FSP Emission Factor (uncontrolled) of paved road = 34.4645 g/VKT
 FSP Emission Factor (controlled) of paved road = 0.3202 g/VKT
 = 3.20E-04 g/veh/m
 = 0.00E+00 g/m/hr
 = 0.00E+00 g/m/s
 = 0.00E+00 g/s

EP24_6

Control Efficiency = 99.1 % (Note 3)
 Trucks Travelling Frequency = 0 veh/hr (Note 4)
 Road Length = 4.7 m
 Area of paved road travelled = 14.1 m²

TSP Emission Factor of paved road = 742.136 g/VKT
 = 0.742136 g/veh/m
 RSP Emission Factor (uncontrolled) of paved road = 142.4534 g/VKT
 RSP Emission Factor (controlled) of paved road = 1.3236 g/VKT
 = 1.32E-03 g/veh/m
 = 0.00E+00 g/m/hr
 = 0.00E+00 g/m/s
 = 0.00E+00 g/s

FSP Emission Factor (uncontrolled) of paved road = 34.4645 g/VKT
 FSP Emission Factor (controlled) of paved road = 0.3202 g/VKT
 = 3.20E-04 g/veh/m
 = 0.00E+00 g/m/hr
 = 0.00E+00 g/m/s
 = 0.00E+00 g/s

EP24_7

Control Efficiency = 92.0 % (Note 3)
 Trucks Travelling Frequency = 56 veh/hr (Note 4)
 Road Length = 4.7 m
 Area of paved road travelled = 14.1 m²

TSP Emission Factor of paved road = 742.136 g/VKT
 = 0.742136 g/veh/m
 RSP Emission Factor (uncontrolled) of paved road = 142.4534 g/VKT
 RSP Emission Factor (controlled) of paved road = 11.3830 g/VKT
 = 1.14E-02 g/veh/m
 = 6.37E-01 g/m/hr
 = 1.77E-04 g/m/s
 = 8.32E-04 g/s

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	2.7539	g/VKT
	=	2.75E-03	g/veh/m
	=	1.54E-01	g/m/hr
	=	4.28E-05	g/m/s
	=	2.01E-04	g/s

EP24_8

Control Efficiency	=	99.1	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	28.3	m	
Area of paved road travelled	=	84.9	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	1.3236	g/VKT	
	=	1.32E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.3202	g/VKT	
	=	3.20E-04	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_9

Control Efficiency	=	98.1	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	2.6472	g/VKT	
	=	2.65E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.6405	g/VKT	
	=	6.40E-04	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_10

Control Efficiency	=	96.7	%	(Note 3)
Trucks Travelling Frequency	=	16	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	4.7650	g/VKT	
	=	4.76E-03	g/veh/m	
	=	7.62E-02	g/m/hr	
	=	2.12E-05	g/m/s	
	=	9.95E-05	g/s	

FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	1.1528	g/VKT
	=	1.15E-03	g/veh/m
	=	1.84E-02	g/m/hr
	=	5.12E-06	g/m/s
	=	2.41E-05	g/s

EP24_11

Control Efficiency	=	99.1	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	28.3	m	
Area of paved road travelled	=	84.9	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	1.3236	g/VKT	
	=	1.32E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.3202	g/VKT	
	=	3.20E-04	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_12

Control Efficiency	=	97.2	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	3.9708	g/VKT	
	=	3.97E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.9607	g/VKT	
	=	9.61E-04	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_13

Control Efficiency	=	97.6	%	(Note 3)
Trucks Travelling Frequency	=	16	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	3.4414	g/VKT	
	=	3.44E-03	g/veh/m	
	=	5.51E-02	g/m/hr	

	=	1.53E-05	g/m/s
	=	7.19E-05	g/s
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT
FSP Emission Factor (controlled) of paved road	=	0.8326	g/VKT
	=	8.33E-04	g/veh/m
	=	1.33E-02	g/m/hr
	=	3.70E-06	g/m/s
	=	1.74E-05	g/s

EP24_14

Control Efficiency	=	99.1	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	28.3	m	
Area of paved road travelled	=	84.9	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	1.3236	g/VKT	
	=	1.32E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	0.3202	g/VKT	
	=	3.20E-04	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_15

Control Efficiency	=	96.3	%	(Note 3)
Trucks Travelling Frequency	=	0	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	5.2944	g/VKT	
	=	5.29E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	1.2809	g/VKT	
	=	1.28E-03	g/veh/m	
	=	0.00E+00	g/m/hr	
	=	0.00E+00	g/m/s	
	=	0.00E+00	g/s	

EP24_16

Control Efficiency	=	98.5	%	(Note 3)
Trucks Travelling Frequency	=	16	veh/hr	(Note 4)
Road Length	=	4.7	m	
Area of paved road travelled	=	14.1	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	2.1178	g/VKT	

= 2.12E-03 g/veh/m
 = 3.39E-02 g/m/hr
 = 9.41E-06 g/m/s
 = 4.42E-05 g/s

FSP Emission Factor (uncontrolled) of paved road = 34.4645 g/VKT
 FSP Emission Factor (controlled) of paved road = 0.5124 g/VKT
 = 5.12E-04 g/veh/m
 = 8.20E-03 g/m/hr
 = 2.28E-06 g/m/s
 = 1.07E-05 g/s

EP24_17

Control Efficiency = 96.3 % (Note 3)
 Trucks Travelling Frequency = 40 veh/hr (Note 4)
 Road Length = 16.8 m
 Area of paved road travelled = 50.4 m²

TSP Emission Factor of paved road = 742.136 g/VKT
 = 0.742136 g/veh/m
 RSP Emission Factor (uncontrolled) of paved road = 142.4534 g/VKT
 RSP Emission Factor (controlled) of paved road = 5.2944 g/VKT
 = 5.29E-03 g/veh/m
 = 2.12E-01 g/m/hr
 = 5.88E-05 g/m/s
 = 9.88E-04 g/s

FSP Emission Factor (uncontrolled) of paved road = 34.4645 g/VKT
 FSP Emission Factor (controlled) of paved road = 1.2809 g/VKT
 = 1.28E-03 g/veh/m
 = 5.12E-02 g/m/hr
 = 1.42E-05 g/m/s
 = 2.39E-04 g/s

EP24_18

Control Efficiency = 96.3 % (Note 3)
 Trucks Travelling Frequency = 40 veh/hr (Note 4)
 Road Length = 9.2 m
 Area of paved road travelled = 27.6 m²

TSP Emission Factor of paved road = 742.136 g/VKT

	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	5.2944	g/VKT	
	=	5.29E-03	g/veh/m	
	=	2.12E-01	g/m/hr	
	=	5.88E-05	g/m/s	
	=	5.41E-04	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	1.2809	g/VKT	
	=	1.28E-03	g/veh/m	
	=	5.12E-02	g/m/hr	
	=	1.42E-05	g/m/s	
	=	1.31E-04	g/s	

EP24_19

Control Efficiency	=	94.8	%	(Note 3)
Trucks Travelling Frequency	=	56	veh/hr	(Note 4)
Road Length	=	28.3	m	
Area of paved road travelled	=	84.9	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	7.4122	g/VKT	
	=	7.41E-03	g/veh/m	
	=	4.15E-01	g/m/hr	
	=	1.15E-04	g/m/s	
	=	3.26E-03	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	1.7933	g/VKT	
	=	1.79E-03	g/veh/m	
	=	1.00E-01	g/m/hr	
	=	2.79E-05	g/m/s	
	=	7.89E-04	g/s	

EP24_20

Control Efficiency	=	91.1	%	(Note 3)
Trucks Travelling Frequency	=	56	veh/hr	(Note 4)
Road Length	=	11.4	m	
Area of paved road travelled	=	34.2	m ²	
TSP Emission Factor of paved road	=	742.136	g/VKT	
	=	0.742136	g/veh/m	
RSP Emission Factor (uncontrolled) of paved road	=	142.4534	g/VKT	
RSP Emission Factor (controlled) of paved road	=	12.7066	g/VKT	
	=	1.27E-02	g/veh/m	
	=	7.12E-01	g/m/hr	
	=	1.98E-04	g/m/s	
	=	2.25E-03	g/s	
FSP Emission Factor (uncontrolled) of paved road	=	34.4645	g/VKT	
FSP Emission Factor (controlled) of paved road	=	3.0742	g/VKT	
	=	3.07E-03	g/veh/m	
	=	1.72E-01	g/m/hr	
	=	4.78E-05	g/m/s	
	=	5.45E-04	g/s	

Note:

1. Particle size multiplier is referred to Table 13.2-1-1, Section 13.2.1 of USEPA AP42 (ver 1/11) for RSP (PM10) and FSP (PM2.5).
2. Road surfacing silt loading is referred to Table 13.2.1-3 of USEPA AP42 (ver 1/11) for concrete batching.
3. Percentage of dust mitigation efficiency is calculated with reference to Cowherd et al., "Control of Open Fugitive Dust Sources, EPA-450/3-88-008,
4. The vehicle numbers within the site is advised by the applicant.

Calculation of Dust Suppression Efficiency for Paved Road
Method: USEPA, Control of Open Fugitive Dust Sources

Percentage of Dust Suppression by Watering is derived from the equation:
 $C = 100 - (0.8pd / i)$

Where:

- C = average control efficiency, percent
- P = potential average hourly daytime evaporation rate, mm/h
- d = average hourly daytime traffic rate
- i = application intensity, L/m²
- t = time between applications, h (t =1 for apply water per hour)

- P = 0.0049 x evaporation for annual condition (Note 1)
- Evaporation for annual condition = 1204.1 mm (Note 2)
- = 47.40542 inch (Note 3)
- P = 0.2323 mm/h
- i = 2 L/m²
- t = 1 h (t=1 for apply watering every hour)

Road Segments	average hourly daytime traffic rate (d)	Average control efficiency (%)
EP24_1	96	91.1
EP24_2	96	91.1
EP24_3	96	91.1
EP24_4	96	91.1
EP24_5	10	99.1
EP24_6	10	99.1
EP24_7	86	92.0
EP24_8	10	99.1
EP24_9	20	98.1
EP24_10	36	96.7
EP24_11	10	99.1
EP24_12	30	97.2
EP24_13	26	97.6
EP24_14	10	99.1
EP24_15	40	96.3
EP24_16	16	98.5
EP24_17	40	96.3
EP24_18	40	96.3
EP24_19	56	94.8
EP24_20	96	91.1

Remark: The contents are for reference only, please revise if more than one combination of temperature and relative humidity adopted.

Year: 2026 Temp: 10 RH: 18

Start Emission Factor (g/trip) - NOx

Time (min)	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 Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	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 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t
5	0.07390	0.99580	0.00920	0.00130	0.04600	0.07750	0.20070	0.66190	0.03260	0.23770	0.03880	0.08390	0.27790	0.36570	0.79300	0.09240	0.21940	0.13070
10	0.07560	1.01220	0.01090	0.00140	0.08290	0.13960	0.36120	1.00640	0.03970	0.36690	0.06980	0.15110	0.50030	0.65820	1.42740	0.10440	0.39490	0.23520
20	0.07870	1.04440	0.01400	0.00170	0.11050	0.18610	0.48160	1.58640	0.05240	0.56800	0.09310	0.20140	0.66700	0.87760	1.90320	0.12600	0.52650	0.31360
30	0.08160	1.07560	0.01650	0.00190	0.15650	0.26360	0.68230	2.07490	0.06280	0.74830	0.13190	0.28540	0.94500	1.24330	2.69620	0.14430	0.74590	0.44420
40	0.08430	1.10570	0.01850	0.00200	0.19340	0.32570	0.84280	2.45330	0.07090	0.88840	0.16290	0.35250	1.16730	1.53580	3.33060	0.15930	0.92140	0.54880
50	0.08670	1.13470	0.02010	0.00210	0.25780	0.43420	1.12380	2.74660	0.07680	1.01420	0.21720	0.47000	1.55640	2.04770	4.44080	0.17090	1.22850	0.73170
60	0.08900	1.16280	0.02110	0.00220	0.37750	0.63580	1.64550	2.97340	0.08040	1.14470	0.31800	0.68830	2.27910	2.99850	6.50270	0.17920	1.79880	1.07140
120	0.09870	1.29420	0.02200	0.00240	0.46960	0.79090	2.04680	3.09760	0.08320	1.22900	0.39560	0.85610	2.83500	3.72980	8.08870	0.18310	2.23760	1.33270
180	0.10660	1.39920	0.02220	0.00250	0.69050	1.16310	3.01000	3.23740	0.08980	1.37960	0.58180	1.25900	4.16900	5.48500	11.89510	0.18030	3.29060	1.95980
240	0.10570	1.38770	0.02180	0.00250	0.90230	1.51980	3.93310	3.36550	0.08930	1.52200	0.76020	1.64510	5.44760	7.16700	15.54300	0.17560	4.29970	2.56090
300	0.10430	1.36830	0.02130	0.00250	1.01280	1.70590	4.41470	3.41950	0.08840	1.59210	0.85330	1.84660	6.11460	8.04460	17.44620	0.16970	4.82620	2.87440
360	0.10220	1.34100	0.02070	0.00250	1.19690	2.01610	5.21740	3.51810	0.08730	1.71170	1.00840	2.18230	7.22630	9.50730	20.61820	0.16260	5.70370	3.39710
420	0.09960	1.30570	0.02000	0.00240	1.31660	2.21770	5.73920	3.56750	0.08590	1.78470	1.10920	2.40050	7.94900	10.45800	22.68000	0.15440	6.27400	3.73680
480	0.09640	1.26250	0.01910	0.00230	1.38110	2.32630	6.02010	3.57410	0.08420	1.81750	1.16350	2.51810	8.33810	10.97000	23.79020	0.14490	6.58110	3.91970
540	0.09250	1.21140	0.01820	0.00230	1.41790	2.38830	6.18060	3.55650	0.08230	1.82930	1.19460	2.58520	8.56040	11.26250	24.42470	0.13430	6.75660	4.02420
600	0.08810	1.15240	0.01710	0.00220	1.45480	2.45030	6.34120	3.53360	0.08000	1.83930	1.22560	2.65230	8.78280	11.55500	25.05910	0.12250	6.93210	4.12870
660	0.08310	1.08540	0.01600	0.00210	1.47320	2.48130	6.42140	3.49270	0.07750	1.83480	1.24110	2.68590	8.89400	11.70130	25.37630	0.10960	7.01990	4.18100
720	0.07750	1.01050	0.01470	0.00200	1.47320	2.48130	6.42140	3.43400	0.07480	1.81560	1.24110	2.68590	8.89400	11.70130	25.37630	0.09540	7.01990	4.18100
Maximum	0.10660	1.39920	0.02220	0.00250	1.47320	2.48130	6.42140	3.57410	0.08980	1.83930	1.24110	2.68590	8.89400	11.70130	25.37630	0.18310	7.01990	4.18100
Max * VKT	0.03922	0.09081	0.00906	0.00102	0.41047	0.80398	2.07836	0.41350	0.01928	0.46482	0.28341	0.62409	2.07211	4.86520	8.69794	0.46960	2.26871	0.97594

Running Exhaust Emission Factor (g/km-vehicle) - NOx

Speed (km/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 Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	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 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t
10	0.0449	0.9615	2.1764	2.0716	2.4766	3.9845	6.665	1.5474	1.4825	1.5993	3.1253	4.422	9.9693	9.7158	12.9182	0.3749	8.122	5.6114
15	0.0393	0.7484	1.7512	1.6572	2.0237	3.2203	4.7591	1.2914	1.1767	1.2531	2.4003	3.5625	7.1914	7.1819	9.0843	0.3497	5.8829	3.8136
20	0.0353	0.6264	1.473	1.3817	1.7383	2.7479	3.6899	1.126	0.9634	1.0524	1.9904	3.0259	5.6409	5.7873	7.1087	0.3283	4.6358	2.7848
21	0.0346	0.6079	1.4276	1.3363	1.6925	2.6728	3.5341	1.099	0.9275	1.0215	1.9282	2.9401	5.4136	5.5799	6.8232	0.3244	4.4526	2.639
22	0.034	0.5908	1.3847	1.2934	1.6495	2.6025	3.3918	1.0735	0.8933	0.9928	1.8707	2.8598	5.2055	5.3893	6.5623	0.3207	4.2847	2.5068
23	0.0334	0.575	1.3442	1.2527	1.609	2.5365	3.2612	1.0494	0.8608	0.9661	1.8173	2.7841	5.0143	5.2136	6.3228	0.3171	4.1303	2.3865
24	0.0328	0.5603	1.3058	1.214	1.5708	2.4743	3.1408	1.0265	0.8296	0.9411	1.7676	2.7128	4.8378	5.051	6.1022	0.3136	3.9877	2.2765
25	0.0322	0.5466	1.2693	1.1771	1.5346	2.4156	3.0297	1.0047	0.7998	0.9176	1.7213	2.6453	4.6745	4.9002	5.8981	0.3103	3.8557	2.1757
26	0.0317	0.5339	1.2345	1.1419	1.5003	2.36	2.9266	0.9841	0.7712	0.8956	1.6779	2.5814	4.5229	4.7598	5.7087	0.307	3.7331	2.083
27	0.0312	0.522	1.2013	1.1082	1.4677	2.3072	2.8307	0.9643	0.7438	0.8749	1.6372	2.5206	4.3817	4.6288	5.5323	0.3039	3.6188	1.9975
28	0.0307	0.5109	1.1695	1.076	1.4366	2.257	2.7414	0.9455	0.7173	0.8553	1.5989	2.4628	4.2499	4.5063	5.3678	0.3008	3.5121	1.9185
29	0.0302	0.5005	1.139	1.045	1.4069	2.2093	2.6579	0.9276	0.6919	0.8368	1.5628	2.4077	4.1266	4.3915	5.2138	0.2979	3.4122	1.8451
30	0.0297	0.4907	1.1098	1.0153	1.3786	2.1637	2.5797	0.9104	0.6673	0.8193	1.5287	2.355	4.0109	4.2836	5.0693	0.2951	3.3184	1.777
31	0.0292	0.4812	1.0468	0.9461	1.3321	2.0941	2.5062	0.894	0.6006	0.8027	1.4964	2.267	3.9021	4.1821	4.9335	0.2923	3.2303	1.7135
32	0.0288	0.4721	1.0216	0.9207	1.3071	2.0538	2.4372	0.8783	0.5799	0.7869	1.4658	2.2207	3.7997	4.0864	4.8055	0.2897	3.1472	1.6543
33	0.0284	0.4634	0.9979	0.8968	1.2834	2.0156	2.3721	0.8633	0.5607	0.7719	1.4367	2.1769	3.7031	3.9961	4.6847	0.2872	3.0688	1.599
34	0.0279	0.4551	0.9756	0.8744	1.261	1.9793	2.3107	0.8489	0.5426	0.7576	1.4091	2.1354	3.6118	3.9106	4.5705	0.2847	2.9947	1.5471
35	0.0275	0.4472	0.9546	0.8533	1.2397	1.9449	2.2526	0.8351	0.5258	0.7439	1.3827	2.0961	3.5253	3.8296	4.4623	0.2824	2.9245	1.4985
36	0.0271	0.4396	0.9348	0.8334	1.2194	1.9121	2.1975	0.8219	0.51	0.7309	1.3576	2.0588	3.4433	3.7528	4.3597	0.2801	2.8579	1.4528
37	0.0267	0.4324	0.916	0.8147	1.2001	1.8809	2.1454	0.8093	0.4952	0.7184	1.3336	2.0232	3.3655	3.6798	4.2622	0.2779	2.7946	1.4098
38	0.0264	0.4255	0.8982	0.7969	1.1816	1.8511	2.0958	0.7971	0.4812	0.7065	1.3106	1.9893	3.2915	3.6104	4.1694	0.2758	2.7345	1.3693
39	0.026	0.4189	0.8814	0.7801	1.164	1.8226	2.0486	0.7856	0.468	0.6951	1.2887	1.957	3.221	3.5443	4.0811	0.2738	2.6772	1.3311
40	0.0257	0.4126	0.8653	0.7642	1.1471	1.7953	2.0038	0.7745	0.4556	0.6841	1.2676	1.9261	3.1538	3.4813	3.9967	0.2719	2.6225	1.295
41	0.0253	0.4065	0.8501	0.749	1.131	1.7692	1.961	0.7639	0.4438	0.6737	1.2474	1.8966	3.0897	3.4212	3.9162	0.27	2.5704	1.2609

Remark: The contents are for reference only, please revise if more than one combination of temperature and relative humidity are adopted.

Year: 2026 Temp: 10 RH: 18

Start Emission Factor (g/trip) - NO

Time (min)	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 Goods Vehicles<=1.5t	07 - Medium Goods Vehicles1.5-2.4t	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 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t
5	0.07020	0.96870	0.00870	0.00120	0.03310	0.05430	0.17460	0.64950	0.03100	0.22750	0.02790	0.05740	0.24900	0.35160	0.74870	0.08780	0.19720	0.09300
10	0.07180	0.98470	0.01040	0.00130	0.05970	0.09790	0.31420	0.98510	0.03770	0.34900	0.05030	0.10340	0.44820	0.63280	1.34760	0.09920	0.35490	0.16730
20	0.07480	1.01600	0.01330	0.00160	0.07960	0.13050	0.41900	1.55660	0.04980	0.54370	0.06700	0.13780	0.59750	0.84370	1.79680	0.11970	0.47320	0.22310
30	0.07750	1.04640	0.01570	0.00180	0.11270	0.18480	0.59360	2.03370	0.05970	0.71420	0.09500	0.19530	0.84660	1.19530	2.54550	0.13710	0.67030	0.31600
40	0.08010	1.07560	0.01760	0.00190	0.13930	0.22830	0.73320	2.40300	0.06740	0.84650	0.11730	0.24120	1.04570	1.47650	3.14440	0.15130	0.82810	0.39050
50	0.08240	1.10390	0.01910	0.00200	0.18560	0.30440	0.97760	2.68260	0.07300	0.95930	0.15640	0.32160	1.39430	1.96860	4.19260	0.16240	1.10400	0.52060
60	0.08450	1.13120	0.02000	0.00210	0.27180	0.44570	1.43150	2.88580	0.07640	1.06620	0.22890	0.47100	2.04170	2.88270	6.13920	0.17020	1.61650	0.76230
120	0.09380	1.25900	0.02090	0.00230	0.33810	0.55440	1.78060	2.99220	0.07900	1.13240	0.28480	0.58580	2.53970	3.58580	7.63660	0.17390	2.01090	0.94820
180	0.10130	1.36120	0.02110	0.00240	0.49710	0.81540	2.61850	3.09000	0.08530	1.23990	0.41890	0.86150	3.73480	5.27320	11.23020	0.17130	2.95720	1.39430
240	0.10040	1.35000	0.02070	0.00240	0.64970	1.06540	3.42150	3.17800	0.08480	1.34110	0.54730	1.12570	4.88020	6.89020	14.67420	0.16680	3.86410	1.82200
300	0.09910	1.33110	0.02020	0.00240	0.72920	1.19590	3.84050	3.21110	0.08400	1.38970	0.61440	1.26360	5.47780	7.73390	16.47110	0.16120	4.33720	2.04500
360	0.09710	1.30460	0.01970	0.00240	0.86180	1.41340	4.53880	3.27490	0.08290	1.47340	0.72600	1.49330	6.47370	9.14020	19.46580	0.15450	5.12580	2.41690
420	0.09460	1.27020	0.01900	0.00230	0.94790	1.55470	4.99270	3.30170	0.08160	1.52320	0.79860	1.64270	7.12110	10.05410	21.41230	0.14670	5.63830	2.65860
480	0.09160	1.22820	0.01810	0.00220	0.99440	1.63080	5.23710	3.29630	0.08000	1.54350	0.83770	1.72320	7.46970	10.54640	22.46050	0.13770	5.91430	2.78870
540	0.08790	1.17850	0.01730	0.00220	1.02090	1.67430	5.37670	3.27190	0.07820	1.54820	0.86010	1.76910	7.66880	10.82760	23.05950	0.12760	6.07200	2.86310
600	0.08370	1.12110	0.01620	0.00210	1.04750	1.71770	5.51640	3.24230	0.07600	1.55110	0.88240	1.81500	7.86810	11.10880	23.65840	0.11640	6.22980	2.93740
660	0.07890	1.05590	0.01520	0.00200	1.06070	1.73950	5.58620	3.19820	0.07360	1.54310	0.89360	1.83800	7.96770	11.24940	23.95790	0.10410	6.30870	2.97460
720	0.07360	0.98300	0.01400	0.00190	1.06070	1.73950	5.58620	3.13990	0.07110	1.52400	0.89360	1.83800	7.96770	11.24940	23.95790	0.09060	6.30870	2.97460
Maximum	0.10130	1.36120	0.02110	0.00240	1.06070	1.73950	5.58620	3.30170	0.08530	1.55110	0.89360	1.83800	7.96770	11.24940	23.95790	0.17390	6.30870	2.97460
Max * VKT	0.03727	0.08834	0.00861	0.00098	0.29554	0.56363	1.80804	0.38199	0.01832	0.39199	0.20405	0.42708	1.85630	4.67731	8.21177	0.44601	2.03886	0.69434

Running Exhaust Emission Factor (g/km-vehicle) - NO

Speed (km/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 Goods Vehicles<=1.5t	07 - Medium Goods Vehicles1.5-2.4t	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 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t
10	0.04250	0.93560	1.98720	1.90210	1.78310	2.77080	5.37340	1.31060	1.19690	1.19900	2.25020	2.97250	8.64430	9.39180	12.26860	0.35620	6.73330	4.28670
15	0.03720	0.72830	1.59850	1.52100	1.45710	2.24010	3.86270	1.10900	0.95130	0.94550	1.72820	2.39440	6.27720	6.94920	8.66660	0.33220	4.90040	2.94550
20	0.03340	0.60960	1.34400	1.26720	1.25160	1.91250	3.01790	0.97440	0.77990	0.79730	1.43310	2.03360	4.96050	5.60570	6.79580	0.31190	3.88220	2.18120
21	0.03280	0.59160	1.30250	1.22540	1.21860	1.86040	2.89430	0.95210	0.75100	0.77430	1.38830	1.97590	4.76670	5.40580	6.52420	0.30820	3.73210	2.07240
22	0.03220	0.57500	1.26320	1.18580	1.18760	1.81170	2.78130	0.93100	0.72350	0.75300	1.34690	1.92200	4.58900	5.22200	6.27570	0.30470	3.59450	1.97360
23	0.03160	0.55960	1.22610	1.14830	1.15850	1.76600	2.67750	0.91090	0.69740	0.73310	1.30850	1.87110	4.42560	5.05250	6.04750	0.30120	3.46780	1.88360
24	0.03110	0.54530	1.19100	1.11260	1.13100	1.72290	2.58170	0.89170	0.67230	0.71450	1.27270	1.82310	4.27450	4.89570	5.83710	0.29790	3.35080	1.80130
25	0.03050	0.53200	1.15760	1.07860	1.10490	1.68230	2.49320	0.87340	0.64830	0.69690	1.23930	1.77780	4.13470	4.75020	5.64240	0.29480	3.24230	1.72570
26	0.03000	0.51960	1.12570	1.04610	1.08020	1.64380	2.41100	0.85610	0.62530	0.68050	1.20810	1.73480	4.00470	4.61470	5.46170	0.29160	3.14150	1.65620
27	0.02950	0.50800	1.09530	1.01500	1.05670	1.60720	2.33440	0.83940	0.60330	0.66500	1.17880	1.69400	3.88350	4.48830	5.29320	0.28870	3.04740	1.59200
28	0.02910	0.49720	1.06620	0.98530	1.03440	1.57240	2.26310	0.82350	0.58200	0.65030	1.15120	1.65510	3.77020	4.37010	5.13610	0.28580	2.95960	1.53270
29	0.02860	0.48710	1.03820	0.95670	1.01300	1.53940	2.19630	0.80830	0.56160	0.63640	1.12520	1.61810	3.66420	4.25930	4.98900	0.28300	2.87730	1.47750
30	0.02810	0.47760	1.01150	0.92930	0.99260	1.50790	2.13380	0.79370	0.54180	0.62330	1.10070	1.58270	3.56460	4.15510	4.85090	0.28030	2.80000	1.42620
31	0.02770	0.46830	0.95350	0.86500	0.95910	1.46030	2.07490	0.77980	0.48830	0.61080	1.07740	1.52360	3.47090	4.05710	4.72110	0.27770	2.72730	1.37840
32	0.02730	0.45950	0.93040	0.84160	0.94110	1.43240	2.01960	0.76640	0.47170	0.59890	1.05540	1.49250	3.38260	3.96470	4.59870	0.27520	2.65870	1.33380
33	0.02690	0.45100	0.90870	0.81960	0.92400	1.40590	1.96740	0.75360	0.45620	0.58770	1.03440	1.46310	3.29930	3.87750	4.48320	0.27280	2.59400	1.29210
34	0.02640	0.44290	0.88830	0.79890	0.90790	1.38080	1.91810	0.74130	0.44160	0.57690	1.01460	1.43520	3.22040	3.79490	4.37400	0.27050	2.53280	1.25300
35	0.02600	0.43520	0.86910	0.77950	0.89260	1.35690	1.87140	0.72950	0.42810	0.56660	0.99550	1.40870	3.14570	3.71670	4.27050	0.26830	2.47470	1.21630
36	0.02570	0.42780	0.85100	0.76110	0.87800	1.33420	1.82710	0.71820	0.41540	0.55680	0.97750	1.38370	3.07480	3.64250	4.17240	0.26610	2.41960	1.18180
37	0.02530	0.42080	0.83380	0.74390	0.86410	1.31260	1.78520	0.70740	0.40350	0.54740	0.96020	1.35980	3.00740	3.57200	4.07910	0.26400	2.36730	1.14930
38	0.02500	0.41410	0.81750	0.72750	0.85070	1.29190	1.74520	0.69700	0.39220	0.53840	0.94360	1.33700	2.94340	3.50490	3.99030	0.26200	2.31750	1.11870
39	0.02460	0.40770	0.80220	0.71200	0.83810	1.27210	1.70720	0.68710	0.38160	0.52980	0.92790	1.31530	2.88220	3.44110	3.90580	0.26010	2.27000	1.08990
40	0.02430	0.40160	0.78740	0.69740	0.82590	1.25320	1.67110	0.67760	0.37160	0.52150	0.91270	1.29450	2.82400	3.38020	3.82500	0.25830	2.22470	1.06260
41	0.02400	0.39560	0.77350	0.68340	0.81430	1.23510	1.63660	0.66860	0.36210	0.51370	0.89810	1.27470	2.76830	3.32210	3.74800	0.25650	2.18150	1.03680

Remark: The contents are for reference only, please revise if more than one combination of temperature and relative humidity are adopted.

Year: 2026 Temp: 10 RH: 18

Start Emission Factor (g/trip) - RSP

Time (min)	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 Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	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 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t
5	0.00040	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00370	0.00000	0.00000
10	0.00080	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00360	0.00000	0.00000
20	0.00150	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00070	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00350	0.00000	0.00000
30	0.00230	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00110	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00350	0.00000	0.00000
40	0.00290	0.00000	0.00030	0.00010	0.00000	0.00000	0.00000	0.00000	0.00140	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00350	0.00000	0.00000
50	0.00360	0.00000	0.00030	0.00010	0.00000	0.00000	0.00000	0.00000	0.00170	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00360	0.00000	0.00000
60	0.00420	0.00000	0.00030	0.00010	0.00000	0.00000	0.00000	0.00000	0.00190	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00380	0.00000	0.00000
120	0.00700	0.00000	0.00050	0.00010	0.00000	0.00000	0.00000	0.00000	0.00300	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00630	0.00000	0.00000
180	0.00780	0.00000	0.00060	0.00020	0.00000	0.00000	0.00000	0.00000	0.00330	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00760	0.00000	0.00000
240	0.00860	0.00000	0.00060	0.00020	0.00000	0.00000	0.00000	0.00000	0.00350	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00890	0.00000	0.00000
300	0.00930	0.00000	0.00070	0.00020	0.00000	0.00000	0.00000	0.00000	0.00380	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01000	0.00000	0.00000
360	0.00980	0.00000	0.00080	0.00020	0.00000	0.00000	0.00000	0.00000	0.00390	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01090	0.00000	0.00000
420	0.01030	0.00000	0.00080	0.00020	0.00000	0.00000	0.00000	0.00000	0.00410	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01180	0.00000	0.00000
480	0.01070	0.00000	0.00090	0.00020	0.00000	0.00000	0.00000	0.00000	0.00430	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01250	0.00000	0.00000
540	0.01090	0.00000	0.00090	0.00020	0.00000	0.00000	0.00000	0.00000	0.00440	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01310	0.00000	0.00000
600	0.01110	0.00000	0.00090	0.00020	0.00000	0.00000	0.00000	0.00000	0.00450	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01360	0.00000	0.00000
660	0.01120	0.00000	0.00100	0.00020	0.00000	0.00000	0.00000	0.00000	0.00450	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01390	0.00000	0.00000
720	0.01120	0.00000	0.00100	0.00020	0.00000	0.00000	0.00000	0.00000	0.00460	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01410	0.00000	0.00000
Maximum	0.01120	0.00000	0.00100	0.00020	0.00000	0.00000	0.00000	0.00000	0.00460	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01410	0.00000	0.00000
Max * VKT	0.00412	0.00000	0.00041	0.00008	0.00000	0.00000	0.00000	0.00000	0.00099	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.03616	0.00000	0.00000

Running Exhaust Emission Factor (g/km-vehicle) - RSP

Speed (km/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 Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	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 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t
10	0.00970	0.00000	0.02780	0.02450	0.06590	0.11890	0.22810	0.04330	0.01830	0.06140	0.10170	0.07490	0.36100	0.28400	0.38340	0.01340	0.27810	0.11410
15	0.00770	0.00000	0.02390	0.02110	0.05470	0.08180	0.17690	0.03520	0.01520	0.04990	0.08290	0.06160	0.28000	0.23120	0.31210	0.01070	0.21560	0.08880
20	0.00600	0.00000	0.02070	0.01820	0.04790	0.06410	0.14760	0.02930	0.01260	0.04150	0.06870	0.05360	0.23360	0.19980	0.26970	0.00850	0.17990	0.07400
21	0.00580	0.00000	0.02010	0.01780	0.04690	0.06160	0.14310	0.02830	0.01210	0.04010	0.06630	0.05230	0.22650	0.19490	0.26310	0.00820	0.17440	0.07170
22	0.00550	0.00000	0.01960	0.01730	0.04590	0.05940	0.13890	0.02740	0.01170	0.03880	0.06400	0.05120	0.21990	0.19040	0.25700	0.00780	0.16940	0.06960
23	0.00530	0.00000	0.01900	0.01680	0.04500	0.05730	0.13510	0.02650	0.01130	0.03750	0.06190	0.05010	0.21380	0.18620	0.25120	0.00750	0.16470	0.06770
24	0.00500	0.00000	0.01850	0.01640	0.04420	0.05550	0.13150	0.02570	0.01090	0.03640	0.05990	0.04910	0.20820	0.18220	0.24590	0.00720	0.16030	0.06580
25	0.00480	0.00000	0.01810	0.01600	0.04340	0.05380	0.12820	0.02490	0.01060	0.03520	0.05790	0.04810	0.20290	0.17850	0.24080	0.00690	0.15630	0.06410
26	0.00460	0.00000	0.01760	0.01550	0.04260	0.05220	0.12500	0.02420	0.01020	0.03420	0.05610	0.04720	0.19790	0.17490	0.23610	0.00670	0.15250	0.06250
27	0.00440	0.00000	0.01720	0.01520	0.04190	0.05070	0.12210	0.02350	0.00990	0.03320	0.05440	0.04630	0.19320	0.17160	0.23160	0.00640	0.14890	0.06110
28	0.00420	0.00000	0.01670	0.01480	0.04130	0.04940	0.11930	0.02280	0.00960	0.03230	0.05280	0.04550	0.18880	0.16850	0.22740	0.00620	0.14550	0.05970
29	0.00410	0.00000	0.01630	0.01440	0.04070	0.04810	0.11670	0.02220	0.00930	0.03140	0.05130	0.04470	0.18470	0.16550	0.22330	0.00600	0.14230	0.05830
30	0.00390	0.00000	0.01590	0.01410	0.04010	0.04700	0.11430	0.02160	0.00900	0.03050	0.04990	0.04400	0.18080	0.16270	0.21950	0.00570	0.13930	0.05710
31	0.00380	0.00000	0.01550	0.01370	0.03960	0.04590	0.11190	0.02110	0.00880	0.02980	0.04850	0.04330	0.17710	0.16000	0.21590	0.00550	0.13650	0.05590
32	0.00360	0.00000	0.01520	0.01340	0.03910	0.04490	0.10970	0.02060	0.00850	0.02900	0.04730	0.04260	0.17360	0.15750	0.21250	0.00540	0.13380	0.05480
33	0.00350	0.00000	0.01480	0.01310	0.03860	0.04390	0.10760	0.02010	0.00830	0.02830	0.04610	0.04200	0.17030	0.15500	0.20920	0.00520	0.13120	0.05380
34	0.00340	0.00000	0.01450	0.01280	0.03820	0.04310	0.10560	0.01960	0.00810	0.02770	0.04500	0.04130	0.16710	0.15270	0.20600	0.00500	0.12880	0.05280
35	0.00330	0.00000	0.01420	0.01250	0.03780	0.04220	0.10370	0.01920	0.00780	0.02710	0.04390	0.04070	0.16410	0.15050	0.20300	0.00480	0.12640	0.05180
36	0.00310	0.00000	0.01390	0.01220	0.03740	0.04140	0.10190	0.01880	0.00760	0.02650	0.04300	0.04020	0.16120	0.14830	0.20010	0.00470	0.12420	0.05090
37	0.00300	0.00000	0.01350	0.01200	0.03700	0.04070	0.10010	0.01850	0.00740	0.02600	0.04210	0.03960	0.15850	0.14630	0.19740	0.00460	0.12210	0.05010
38	0.00290	0.00000	0.01330	0.01170	0.03660	0.04000	0.09850	0.01810	0.00720	0.02550	0.04120	0.03910	0.15580	0.14430	0.19470	0.00440	0.12010	0.04920
39	0.00290	0.00000	0.01300	0.01150	0.03630	0.03930	0.09690	0.01780	0.00710	0.02510	0.04050	0.03860	0.15330	0.14240	0.19220	0.00430	0.11810	0.04840
40	0.00280	0.00000	0.01270	0.01120	0.03600	0.03870	0.09540	0.01750	0.00690	0.02460	0.03980	0.03810	0.15090	0.14060	0.18970	0.00420	0.11630	0.04770
41	0.00270	0.00000	0.01250	0.01100	0.03570	0.03810	0.09390	0.01720	0.00670	0.02420	0.03910	0.03760	0.14860	0.13890	0.18740	0.00410	0.11450	0.04700

Remark: The contents are for reference only, please revise if more than one combination of temperature and relative humidity are adopted.

Year: 2026 Temp: 10 RH: 18

Start Emission Factor (g/trip) - FSP

Time (min)	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 Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	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 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t
5	0.00040	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00280	0.00000	0.00000
10	0.00070	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00030	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00280	0.00000	0.00000
20	0.00140	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00070	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00290	0.00000	0.00000
30	0.00210	0.00000	0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00100	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00290	0.00000	0.00000
40	0.00270	0.00000	0.00020	0.00010	0.00000	0.00000	0.00000	0.00000	0.00130	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00300	0.00000	0.00000
50	0.00330	0.00000	0.00020	0.00010	0.00000	0.00000	0.00000	0.00000	0.00150	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00320	0.00000	0.00000
60	0.00390	0.00000	0.00030	0.00010	0.00000	0.00000	0.00000	0.00000	0.00180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00340	0.00000	0.00000
120	0.00650	0.00000	0.00040	0.00010	0.00000	0.00000	0.00000	0.00000	0.00280	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00550	0.00000	0.00000
180	0.00730	0.00000	0.00050	0.00010	0.00000	0.00000	0.00000	0.00000	0.00300	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00650	0.00000	0.00000
240	0.00800	0.00000	0.00050	0.00020	0.00000	0.00000	0.00000	0.00000	0.00330	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00750	0.00000	0.00000
300	0.00860	0.00000	0.00060	0.00020	0.00000	0.00000	0.00000	0.00000	0.00350	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00830	0.00000	0.00000
360	0.00910	0.00000	0.00070	0.00020	0.00000	0.00000	0.00000	0.00000	0.00370	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00910	0.00000	0.00000
420	0.00950	0.00000	0.00070	0.00020	0.00000	0.00000	0.00000	0.00000	0.00380	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00970	0.00000	0.00000
480	0.00990	0.00000	0.00070	0.00020	0.00000	0.00000	0.00000	0.00000	0.00400	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01030	0.00000	0.00000
540	0.01010	0.00000	0.00080	0.00020	0.00000	0.00000	0.00000	0.00000	0.00410	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01080	0.00000	0.00000
600	0.01030	0.00000	0.00080	0.00020	0.00000	0.00000	0.00000	0.00000	0.00410	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01120	0.00000	0.00000
660	0.01040	0.00000	0.00080	0.00020	0.00000	0.00000	0.00000	0.00000	0.00420	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01140	0.00000	0.00000
720	0.01040	0.00000	0.00080	0.00020	0.00000	0.00000	0.00000	0.00000	0.00420	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01160	0.00000	0.00000
Maximum	0.01040	0.00000	0.00080	0.00020	0.00000	0.00000	0.00000	0.00000	0.00420	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01160	0.00000	0.00000
Max * VKT	0.00383	0.00000	0.00033	0.00008	0.00000	0.00000	0.00000	0.00000	0.00090	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02975	0.00000	0.00000

Running Exhaust Emission Factor (g/km-vehicle) - FSP

Speed (km/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 Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	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 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t
10	0.00900	0.00000	0.02550	0.02250	0.06070	0.10940	0.20980	0.03980	0.01690	0.05650	0.09360	0.06890	0.33210	0.26120	0.35270	0.01120	0.25580	0.10500
15	0.00720	0.00000	0.02190	0.01940	0.05030	0.07530	0.16270	0.03240	0.01400	0.04590	0.07620	0.05670	0.25760	0.21270	0.28710	0.00890	0.19830	0.08170
20	0.00560	0.00000	0.01900	0.01680	0.04410	0.05900	0.13580	0.02700	0.01160	0.03820	0.06320	0.04930	0.21490	0.18380	0.24810	0.00710	0.16550	0.06810
21	0.00530	0.00000	0.01850	0.01630	0.04310	0.05670	0.13160	0.02610	0.01120	0.03690	0.06100	0.04820	0.20840	0.17930	0.24210	0.00680	0.16050	0.06600
22	0.00510	0.00000	0.01800	0.01590	0.04220	0.05460	0.12780	0.02520	0.01080	0.03570	0.05890	0.04710	0.20230	0.17520	0.23640	0.00650	0.15580	0.06400
23	0.00490	0.00000	0.01750	0.01550	0.04140	0.05270	0.12430	0.02440	0.01050	0.03450	0.05690	0.04610	0.19670	0.17130	0.23110	0.00620	0.15150	0.06220
24	0.00470	0.00000	0.01700	0.01510	0.04060	0.05100	0.12100	0.02360	0.01010	0.03350	0.05510	0.04510	0.19150	0.16760	0.22620	0.00600	0.14750	0.06060
25	0.00450	0.00000	0.01660	0.01470	0.03990	0.04950	0.11790	0.02290	0.00980	0.03240	0.05330	0.04420	0.18660	0.16420	0.22160	0.00580	0.14380	0.05900
26	0.00430	0.00000	0.01620	0.01430	0.03920	0.04800	0.11500	0.02220	0.00950	0.03150	0.05160	0.04340	0.18210	0.16090	0.21720	0.00550	0.14030	0.05750
27	0.00410	0.00000	0.01580	0.01390	0.03860	0.04670	0.11230	0.02160	0.00920	0.03050	0.05010	0.04260	0.17780	0.15790	0.21310	0.00530	0.13700	0.05620
28	0.00390	0.00000	0.01540	0.01360	0.03800	0.04540	0.10980	0.02100	0.00890	0.02970	0.04860	0.04190	0.17370	0.15500	0.20920	0.00510	0.13390	0.05490
29	0.00380	0.00000	0.01500	0.01330	0.03740	0.04430	0.10740	0.02040	0.00860	0.02890	0.04720	0.04110	0.16990	0.15230	0.20550	0.00490	0.13090	0.05370
30	0.00360	0.00000	0.01460	0.01290	0.03690	0.04320	0.10510	0.01990	0.00830	0.02810	0.04590	0.04050	0.16630	0.14970	0.20200	0.00480	0.12820	0.05250
31	0.00350	0.00000	0.01430	0.01260	0.03640	0.04220	0.10300	0.01940	0.00810	0.02740	0.04460	0.03980	0.16290	0.14720	0.19860	0.00460	0.12560	0.05150
32	0.00340	0.00000	0.01390	0.01230	0.03600	0.04130	0.10090	0.01890	0.00790	0.02670	0.04350	0.03920	0.15970	0.14490	0.19550	0.00440	0.12310	0.05040
33	0.00320	0.00000	0.01360	0.01210	0.03550	0.04040	0.09900	0.01850	0.00760	0.02610	0.04240	0.03860	0.15670	0.14260	0.19240	0.00430	0.12070	0.04950
34	0.00310	0.00000	0.01330	0.01180	0.03510	0.03960	0.09720	0.01810	0.00740	0.02550	0.04140	0.03800	0.15370	0.14050	0.18950	0.00410	0.11850	0.04850
35	0.00300	0.00000	0.01300	0.01150	0.03470	0.03880	0.09540	0.01770	0.00720	0.02490	0.04040	0.03750	0.15100	0.13840	0.18680	0.00400	0.11630	0.04770
36	0.00290	0.00000	0.01270	0.01130	0.03440	0.03810	0.09370	0.01730	0.00700	0.02440	0.03950	0.03700	0.14830	0.13650	0.18410	0.00390	0.11430	0.04680
37	0.00280	0.00000	0.01240	0.01100	0.03400	0.03740	0.09210	0.01700	0.00690	0.02390	0.03870	0.03650	0.14580	0.13460	0.18160	0.00380	0.11230	0.04600
38	0.00270	0.00000	0.01220	0.01080	0.03370	0.03680	0.09060	0.01670	0.00670	0.02350	0.03790	0.03600	0.14340	0.13280	0.17910	0.00370	0.11050	0.04530
39	0.00260	0.00000	0.01190	0.01060	0.03340	0.03620	0.08910	0.01640	0.00650	0.02310	0.03720	0.03550	0.14110	0.13100	0.17680	0.00350	0.10870	0.04460
40	0.00260	0.00000	0.01170	0.01030	0.03310	0.03560	0.08770	0.01610	0.00640	0.02270	0.03660	0.03510	0.13880	0.12940	0.17450	0.00340	0.10700	0.04390
41	0.00250	0.00000	0.01140	0.01010	0.03290	0.03500	0.08640	0.01590	0.00620	0.02230	0.03600	0.03460	0.13670	0.12780	0.17240	0.00340	0.10530	0.04320

Environmental Assessment for Concrete Batching Plant at Kwai Chung
Traffic Density of the Ping Che CBP

Traffic Density of the CBP

Segment ID	Coordinates		Road Length	Hourly maximum traffic density (Veh)						Total
	X	Y		Concrete Truck	Raw Material Delivery Truck					
EP24_1			10	40	56					96
EP24_2			22.6	40	56					96
EP24_3			33.2	40	56					96
EP24_4			4.7	40	56					96
EP24_5			28.3	10	0					10
EP24_6			4.7	10	0					10
EP24_7			4.7	30	56					86
EP24_8			28.3	10	0					10
EP24_9			4.7	20	0					20
EP24_10			4.7	20	16					36
EP24_11			28.3	10	0					10
EP24_12			4.7	30	0					30
EP24_13			4.7	10	16					26
EP24_14			28.3	10	0					10
EP24_15			4.7	40	0					40
EP24_16			4.7	0	16					16
EP24_17			16.8	0	40					40
EP24_18			9.2	0	40					40
EP24_19			28.3	0	56					56
EP24_20			11.4	40	56					96

RSP Emission Factors from Tailpipe Emission

Segment ID	Coordinates		Road Length	RSP Emission Factor (g/s)						Total	
	X	Y		Emission Factor, g/km-veh	Start Emission, g/trip						
EP24_1			10	2.28E-01	0.00E+00					6.08E-05	
EP24_2			22.6	2.28E-01	0.00E+00					1.37E-04	
EP24_3			33.2	2.28E-01	0.00E+00					2.02E-04	
EP24_4			4.7	2.28E-01	0.00E+00					2.86E-05	
EP24_5			28.3	2.28E-01	0.00E+00					1.79E-05	
EP24_6			4.7	2.28E-01	0.00E+00					2.98E-06	
EP24_7			4.7	2.28E-01	0.00E+00					2.56E-05	
EP24_8			28.3	2.28E-01	0.00E+00					1.79E-05	
EP24_9			4.7	2.28E-01	0.00E+00					5.96E-06	
EP24_10			4.7	2.28E-01	0.00E+00					1.07E-05	
EP24_11			28.3	2.28E-01	0.00E+00					1.79E-05	
EP24_12			4.7	2.28E-01	0.00E+00					8.93E-06	
EP24_13			4.7	2.28E-01	0.00E+00					7.74E-06	
EP24_14			28.3	2.28E-01	0.00E+00					1.79E-05	
EP24_15			4.7	2.28E-01	0.00E+00					1.19E-05	
EP24_16			4.7	2.28E-01	0.00E+00					4.76E-06	
EP24_17			16.8	2.28E-01	0.00E+00					4.26E-05	
EP24_18			9.2	2.28E-01	0.00E+00					2.33E-05	
EP24_19			28.3	2.28E-01	0.00E+00					1.00E-04	
EP24_20			11.4	2.28E-01	0.00E+00					6.93E-05	
Note: All Vehicles are as HGV 15t-24t at speed 10kph and start emission for 10min (approx duration from switch off engine to start-up)										Total via EP21	8.15E-04

FSP Emission Factors of the Paved Road

Segment ID	Coordinates		Road Length	FSP Emission Factor (g/s)						Loader	Total
	X	Y		Emission Factor, g/km-veh	Start Emission, g/trip						
EP24_1			10	2.10E-01	0.00E+00					5.59E-05	
EP24_2			22.6	2.10E-01	0.00E+00					1.26E-04	
EP24_3			33.2	2.10E-01	0.00E+00					1.86E-04	
EP24_4			4.7	2.10E-01	0.00E+00					2.63E-05	
EP24_5			28.3	2.10E-01	0.00E+00					1.65E-05	
EP24_6			4.7	2.10E-01	0.00E+00					2.74E-06	
EP24_7			4.7	2.10E-01	0.00E+00					2.36E-05	
EP24_8			28.3	2.10E-01	0.00E+00					1.65E-05	
EP24_9			4.7	2.10E-01	0.00E+00					5.48E-06	
EP24_10			4.7	2.10E-01	0.00E+00					9.86E-06	
EP24_11			28.3	2.10E-01	0.00E+00					1.65E-05	
EP24_12			4.7	2.10E-01	0.00E+00					8.22E-06	
EP24_13			4.7	2.10E-01	0.00E+00					7.12E-06	
EP24_14			28.3	2.10E-01	0.00E+00					1.65E-05	
EP24_15			4.7	2.10E-01	0.00E+00					1.10E-05	
EP24_16			4.7	2.10E-01	0.00E+00					4.38E-06	
EP24_17			16.8	2.10E-01	0.00E+00					3.92E-05	
EP24_18			9.2	2.10E-01	0.00E+00					2.14E-05	
EP24_19			28.3	2.10E-01	0.00E+00					9.24E-05	
EP24_20			11.4	2.10E-01	0.00E+00					6.38E-05	
Note: All Vehicles are as HGV 15t-24t at speed 10kph and start emission for 10min (approx duration from switch off engine to start-up)										Total via EP21	7.49E-04

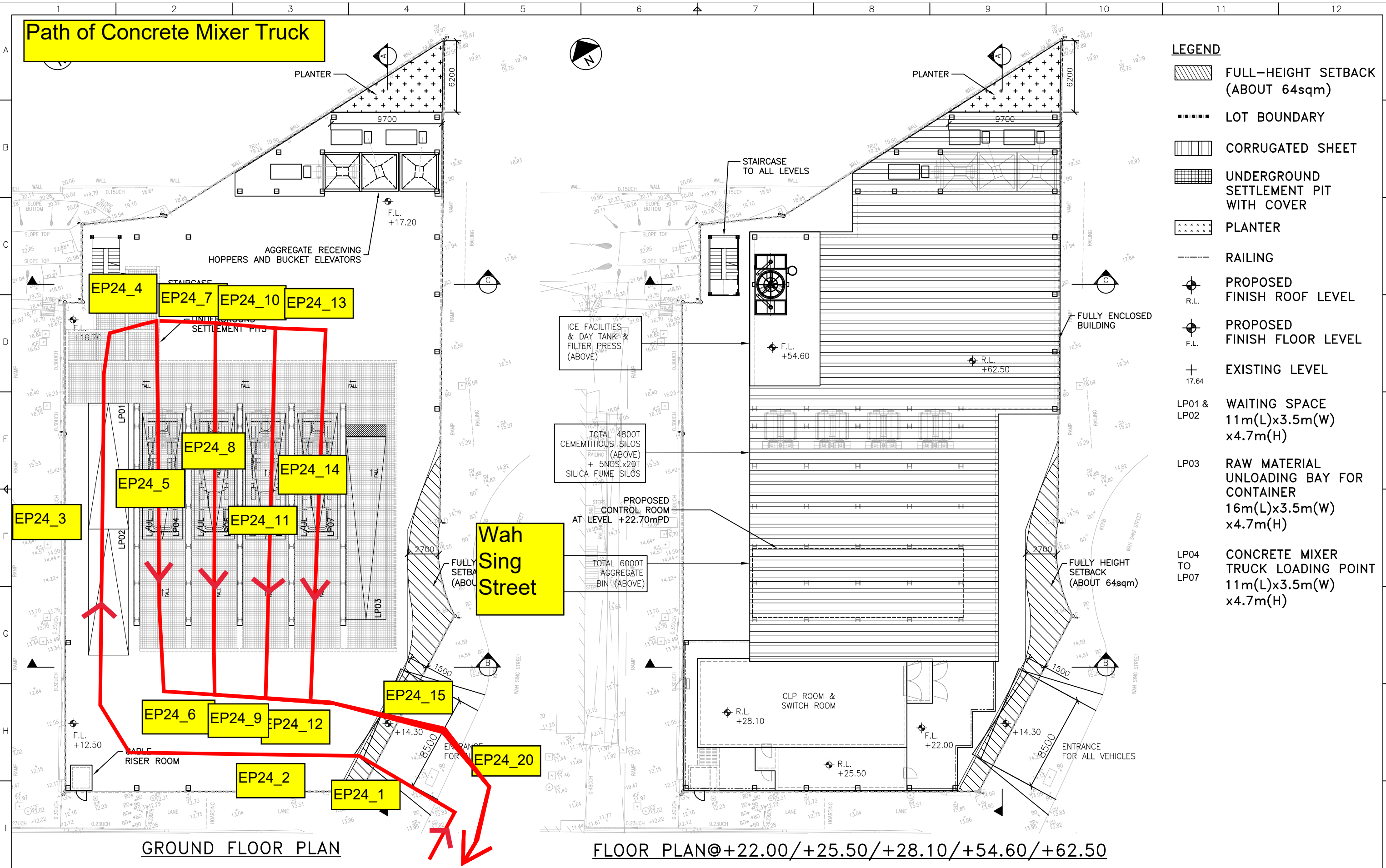
NO Emission Factors of the Paved Road

Segment ID	Coordinates		Road Length	NO Emission Factor (g/s)							
	X	Y		Emission Factor, g/km-veh	Start Emission, g/trip					Loader	Total
EP24_1			10	5.37E+00	3.14E-01						9.81E-03
EP24_2			22.6	5.37E+00	3.14E-01						1.16E-02
EP24_3			33.2	5.37E+00	3.14E-01						1.31E-02
EP24_4			4.7	5.37E+00	3.14E-01						9.05E-03
EP24_5			28.3	5.37E+00	3.14E-01						1.30E-03
EP24_6			4.7	5.37E+00	3.14E-01						9.43E-04
EP24_7			4.7	5.37E+00	3.14E-01						8.11E-03
EP24_8			28.3	5.37E+00	3.14E-01						1.30E-03
EP24_9			4.7	5.37E+00	3.14E-01						1.89E-03
EP24_10			4.7	5.37E+00	3.14E-01						3.39E-03
EP24_11			28.3	5.37E+00	3.14E-01						1.30E-03
EP24_12			4.7	5.37E+00	3.14E-01						2.83E-03
EP24_13			4.7	5.37E+00	3.14E-01						2.45E-03
EP24_14			28.3	5.37E+00	3.14E-01						1.30E-03
EP24_15			4.7	5.37E+00	3.14E-01						3.77E-03
EP24_16			4.7	5.37E+00	3.14E-01						1.51E-03
EP24_17			16.8	5.37E+00	3.14E-01						4.49E-03
EP24_18			9.2	5.37E+00	3.14E-01						4.04E-03
EP24_19			28.3	5.37E+00	3.14E-01						7.25E-03
EP24_20			11.4	5.37E+00	3.14E-01						1.00E-02
Note: All Vehicles are as HGV 15t-24t at speed 10kph and start emission for 10min (approx duration from switch off engine to start-up)										Total via EP21	9.95E-02

NO2 Emission Factors of the Paved Road

Segment ID	Coordinates		Road Length	NO2 Emission Factor (g/s)							
	X	Y		Emission Factor, g/km-veh	Start Emission, g/trip					Loader	Total
EP24_1			10	1.29E+00	4.70E-02						1.60E-03
EP24_2			22.6	1.29E+00	4.70E-02						2.03E-03
EP24_3			33.2	1.29E+00	4.70E-02						2.40E-03
EP24_4			4.7	1.29E+00	4.70E-02						1.42E-03
EP24_5			28.3	1.29E+00	4.70E-02						2.32E-04
EP24_6			4.7	1.29E+00	4.70E-02						1.47E-04
EP24_7			4.7	1.29E+00	4.70E-02						1.27E-03
EP24_8			28.3	1.29E+00	4.70E-02						2.32E-04
EP24_9			4.7	1.29E+00	4.70E-02						2.95E-04
EP24_10			4.7	1.29E+00	4.70E-02						5.31E-04
EP24_11			28.3	1.29E+00	4.70E-02						2.32E-04
EP24_12			4.7	1.29E+00	4.70E-02						4.42E-04
EP24_13			4.7	1.29E+00	4.70E-02						3.83E-04
EP24_14			28.3	1.29E+00	4.70E-02						2.32E-04
EP24_15			4.7	1.29E+00	4.70E-02						5.90E-04
EP24_16			4.7	1.29E+00	4.70E-02						2.36E-04
EP24_17			16.8	1.29E+00	4.70E-02						7.63E-04
EP24_18			9.2	1.29E+00	4.70E-02						6.54E-04
EP24_19			28.3	1.29E+00	4.70E-02						1.30E-03
EP24_20			11.4	1.29E+00	4.70E-02						1.65E-03
Note: All Vehicles are as HGV 15t-24t at speed 10kph and start emission for 10min (approx duration from switch off engine to start-up)										Total via EP21	1.66E-02

Path of Concrete Mixer Truck



- LEGEND**
- FULL-HEIGHT SETBACK (ABOUT 64sqm)
 - LOT BOUNDARY
 - CORRUGATED SHEET
 - UNDERGROUND SETTLEMENT PIT WITH COVER
 - PLANTER
 - RAILING
 - PROPOSED FINISH ROOF LEVEL
 - PROPOSED FINISH FLOOR LEVEL
 - EXISTING LEVEL
 - 17.64
 - LP01 & LP02 WAITING SPACE 11m(L)x3.5m(W) x4.7m(H)
 - LP03 RAW MATERIAL UNLOADING BAY FOR CONTAINER 16m(L)x3.5m(W) x4.7m(H)
 - LP04 TO LP07 CONCRETE MIXER TRUCK LOADING POINT 11m(L)x3.5m(W) x4.7m(H)

GROUND FLOOR PLAN

FLOOR PLAN@+22.00/+25.50/+28.10/+54.60/+62.50

1. ALL DIMENSIONS TO BE IN MM UNLESS NOTED OTHERWISE.

REV	DESCRIPTION	BY	DATE	APPROVED
C	AMENDED REGARDING THE COMMENTS	LL	22/01/23	
B	LEGEND AMENDED	LL	19/11/24	
A	TPB SUBMISSION	LL	14/10/24	

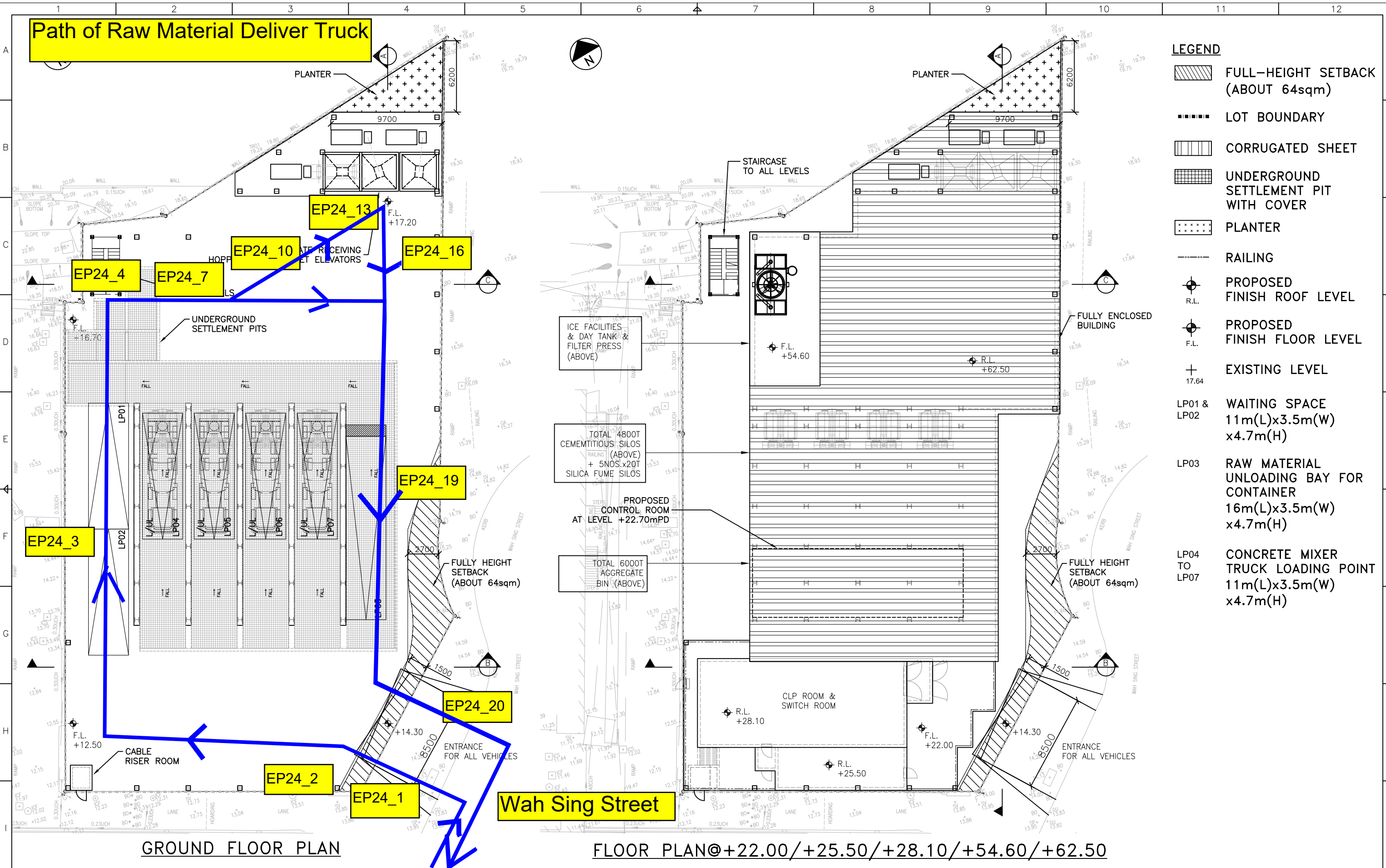
DRAWN	LAWRENCE
DESIGNED	-
CHECKED	-
APPROVED	-
DATE	2023-12-05

ELIL EDWIN LAI INTERNATIONAL LTD.
 403, KWONG FAT COMM. BLDG.,
 582, CANTON ROAD, KOWLOON, HONG KONG.
 Tel: (852) 27701387 Fax: (852) 27800706

TITLE **SOUNDWILL**
KWAI CHUNG PROPOSED BATCHING PLANT
 -
GENERAL LAYOUT PLAN
 -

SCALE **AS SHOWN (A3)** DRAWING NO. **SW-KC-CBP-GP-01** JOB NO. **XXX** REV. **C**

Path of Raw Material Deliver Truck



- LEGEND**
- FULL-HEIGHT SETBACK (ABOUT 64sqm)
 - LOT BOUNDARY
 - CORRUGATED SHEET
 - UNDERGROUND SETTLEMENT PIT WITH COVER
 - PLANTER
 - RAILING
 - PROPOSED FINISH ROOF LEVEL
 - PROPOSED FINISH FLOOR LEVEL
 - EXISTING LEVEL
 - 17.64
 - LP01 & LP02 WAITING SPACE 11m(L)x3.5m(W) x4.7m(H)
 - LP03 RAW MATERIAL UNLOADING BAY FOR CONTAINER 16m(L)x3.5m(W) x4.7m(H)
 - LP04 TO LP07 CONCRETE MIXER TRUCK LOADING POINT 11m(L)x3.5m(W) x4.7m(H)

GROUND FLOOR PLAN

FLOOR PLAN@+22.00/+25.50/+28.10/+54.60/+62.50

1. ALL DIMENSIONS TO BE IN MM UNLESS NOTED OTHERWISE.

REV	DESCRIPTION	BY	DATE	APPROVED
C	AMENDED REGARDING THE COMMENTS	LL	22/01/23	
B	LEGEND AMENDED	LL	19/11/24	
A	TPB SUBMISSION	LL	14/10/24	

DRAWN	LAWRENCE
DESIGNED	-
CHECKED	-
APPROVED	-
DATE	2023-12-05

ELIL EDWIN LAI INTERNATIONAL LTD.
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 Tel: (852) 27701387 Fax: (852) 27800706

CADD REF. SW_KC_CBP_01 (20250122) TPB.DWG

TITLE **SOUNDWILL**
KWAI CHUNG PROPOSED BATCHING PLANT
 -
GENERAL LAYOUT PLAN
 -

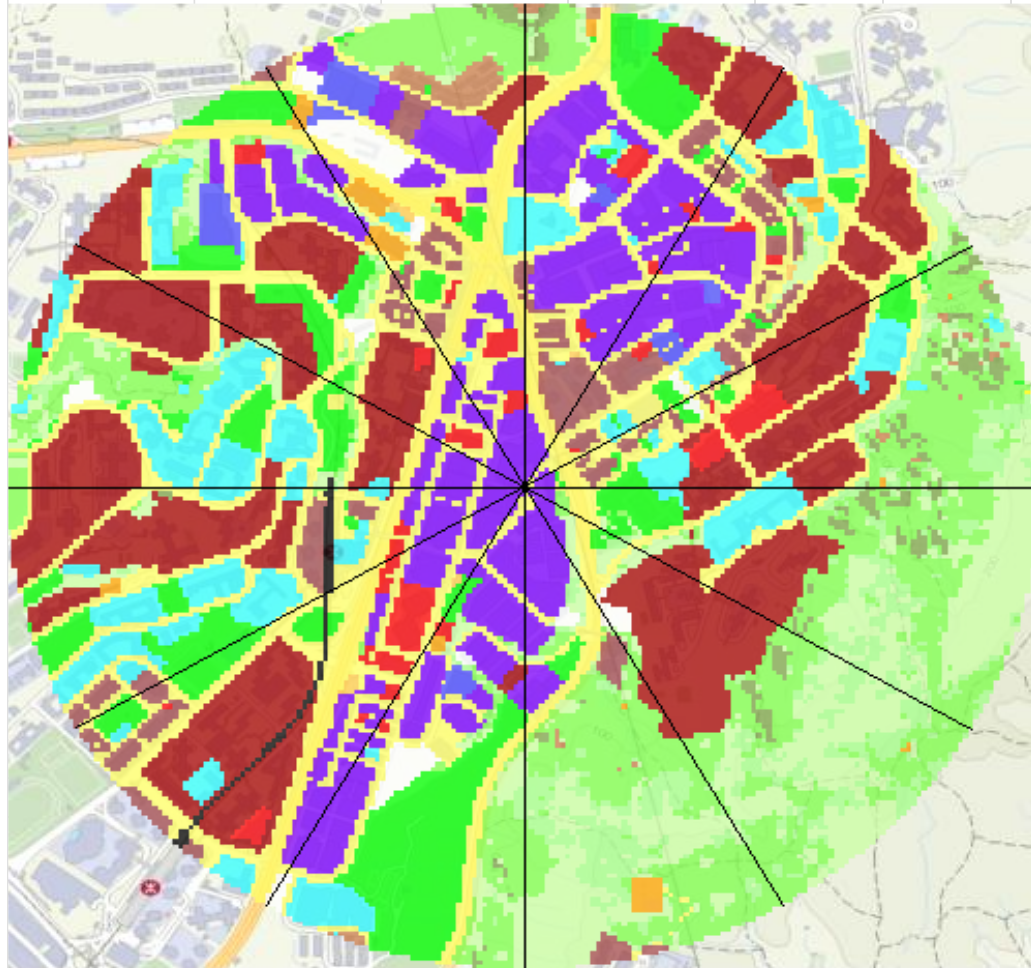
SCALE AS SHOWN (A3) DRAWING NO. SW-KC-CBP-GP-01 JOB NO. XXX REV. C

Appendix B Landuse Characteristics Parameters for AERMET

Roughness (36,38)

Angle	Group	Inverse-dist	Roughness
0	0 - 30	5.176452751	0.616253
30	30 - 60	5.31768931	0.671694
60	60 - 90	5.176452751	0.587344
90	90 - 120	5.176452751	0.343580
120	120 - 150	5.31768931	0.428275
150	150 - 180	5.176452751	0.439955
180	180 - 210	5.176452751	0.325068
210	210 - 240	5.31768931	0.658359
240	240 - 270	5.176452751	0.605491
270	270 - 300	5.176452751	0.569820
300	300 - 330	5.31768931	0.554514
330	330 - 360	5.176452751	0.631256

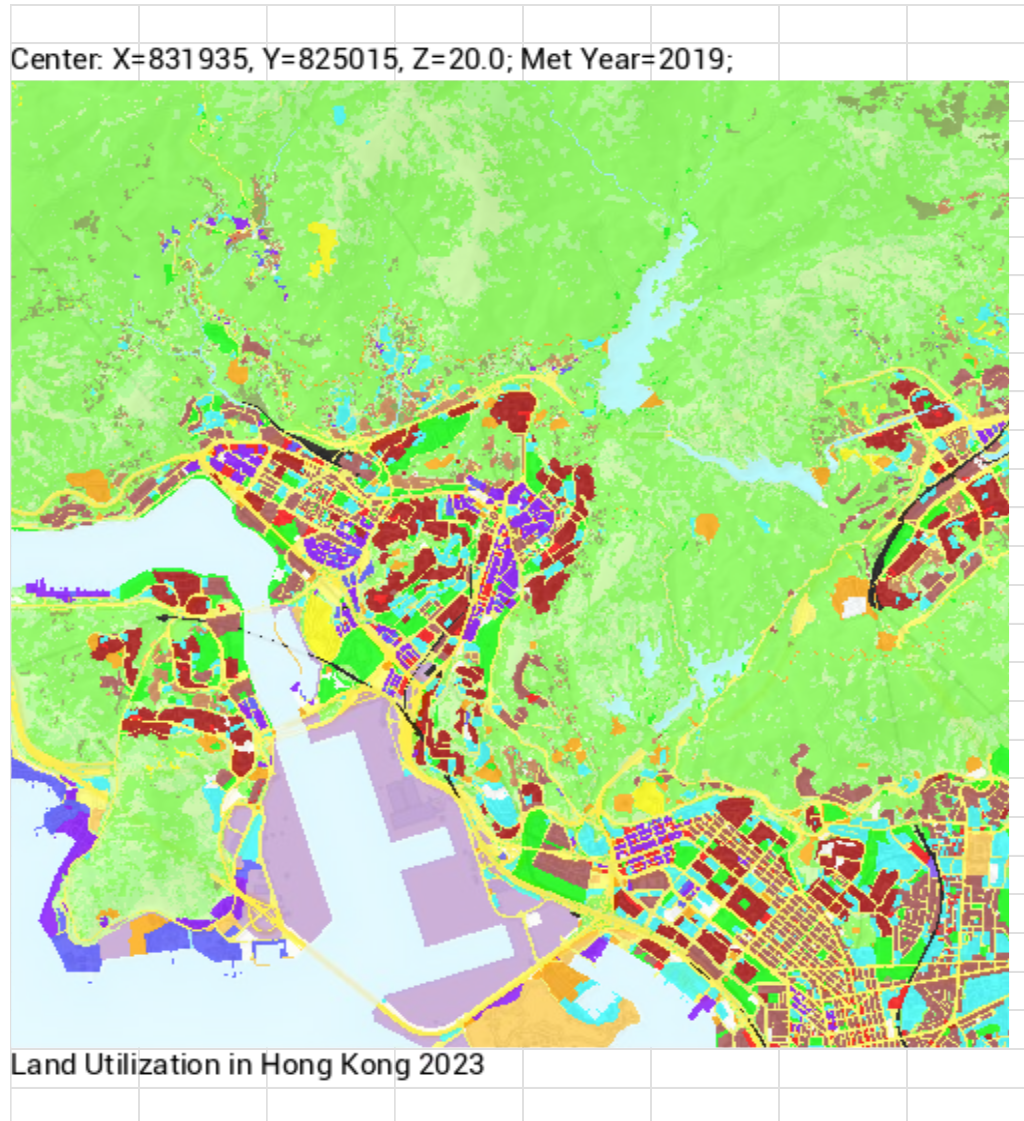
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Land Utilization in Hong Kong 2023

Albedo (36,38)

Code	Hong Kong Planning Department Classification	Roughness	Albedo	Bowen Ratio	Grid Count	Percent	Albedo x Pe	b^n/Sn
1	Private Residential	1	0.18	1.5	40077	4.01%	0.00721386	1.016382572
2	Public Residential	1	0.18	1.5	37042	3.70%	0.00666756	1.015132594
3	Rural Settlement	0.375	0.165	0.9	9622	0.96%	0.00158763	0.998986735
11	Commercial/Business and Office	1	0.18	1.5	5434	0.54%	0.00097812	1.002205726
21	Industrial Land	0.7	0.18	1.5	14642	1.46%	0.00263556	1.005954478
22	Industrial Estates/Science and Technology Parks	0.7	0.18	1.5	132	0.01%	0.00002376	1.000053523
23	Warehouse and Open Storage	0.7	0.18	1.5	8254	0.83%	0.00148572	1.003352315
31	Government, Institutional and Community Facilities	0.7	0.18	1.5	35267	3.53%	0.00634806	1.014402265
32	Open Space and Recreation	0.04	0.15	1	29271	2.93%	0.00439065	1
41	Roads and Transport Facilities	0.7	0.18	1.5	85060	8.51%	0.0153108	1.0350905
42	Railways	0.7	0.18	1.5	3561	0.36%	0.00064098	1.001444904
43	Airport	0.07	0.18	1.5	0	0.00%	0	1
44	Port Facilities	0.7	0.18	1.5	36273	3.63%	0.00652914	1.014816122
51	Cemeteries/Funeral Facilities	0.7	0.18	1.5	4605	0.46%	0.0008289	1.001868911
52	Utilities	0.7	0.18	1.5	13620	1.36%	0.0024516	1.005537712
53	Vacant Land/Construction in Progress	0.2	0.18	1	6837	0.68%	0.00123066	1
54	Others	0.2	0.18	1	9709	0.97%	0.00174762	1
61	Agricultural Land	0.1575	0.18	0.55	13595	1.36%	0.0024471	0.991905346
62	Fish Ponds/Gei Wais	0.001	0.1	0.1	0	0.00%	0	1
71	Woodland	1.05	0.1625	0.75	365173	36.52%	0.059340613	0.900276154
72	Shrubland	0.3	0.18	1.25	96238	9.62%	0.01732284	1.021707134
73	Grassland	0.065	0.185	0.8	68191	6.82%	0.012615335	0.984898802
74	Mangrove/Swamp	0.065	0.14	0.225	1	0.00%	0.00000014	0.999998508
81	Badland	0.15	0.1625	0.75	0	0.00%	0	1
83	Rocky Shore	0.05	0.2	4.75	0	0.00%	0	1
91	Reservoirs	0.001	0.1	0.1	12560	1.26%	0.001256	0.971493725
92	Streams and Nullahs	0.001	0.1	0.1	2480	0.25%	0.000248	0.994305862
99	SZ Residential *	1	0.18	1.5	0	0.00%	0	1
0	Open Sea *	0.001	0.1	0.1	102356	10.24%	0.0102356	0.790030758
			0.163536	0.768655	1000000			



Appendix C EMFAC-HK Model Input

Methodology and Assumptions for Calculation of Vehicular Emission Source

Model Year

Three years of traffic data were provided by the traffic consultant. The 24-hourly vehicle flows for the modelling are shown in **Appendix G-1**.

- 2026 (the commencing year of the proposed CBP)
- 2033 (7 years after the commencement year)
- 2041 (15 years after commencement year)

Model

EMFAC-HK as built in EPD's Smart Air Modelling Platform ("SAMP") was used to estimate the composite emission factors. "Zero Emission Vehicle" ("ZEV") Scenario was selected in SAMP.

Vehicle Speed

Vehicle speed on each road link at each hour was provided by the traffic consultant as summarized in **Appendix C-1**. All the vehicle classes on the same road link were assumed to have the same travelling speed.

Trips

Start emissions of vehicles were assumed for all the assessed road links except Kwai Chung Road and Castle Peak Road.

Composite Emission Factors

The composite emission factors for the assessed roads as estimated through the SAMP are shown in **Appendix C-2**. Based on the PATH meteorological data of temperature and relative humidity for the relevant grids of the assessed roads, three types of composite emission factors were estimated, annual hour minimum, monthly hour minimum and monthly hour average.

For long-term air quality impact, monthly hour average composite emission factors were adopted. For short-term air quality, monthly hour minimum composite emission factors were used.

Jenkin Method

Jenkin method was adopted for the conversion of cumulative NO_x to NO₂ by using the functional form of annual mean of NO₂-to-NO_x with reference to the Review of Methods for NO to NO₂ Conversion in plumes at short range for the long-term cumulative NO₂ assessment. The mentioned functional form is presented as equation below.

$$[NO_2] = \frac{\left([NO_x] + [OX] + \frac{J}{k}\right) - \sqrt{\left([NO_x] + [OX] + \frac{J}{k}\right)^2 - 4[NO_x][OX]}}{2}$$

Where [NO₂] is the NO₂ concentration

[NO_x] is the NO_x concentration

[OX] is the sum of NO₂ concentration and O₃ concentration (i.e. [OX] = [NO₂] + [O₃])

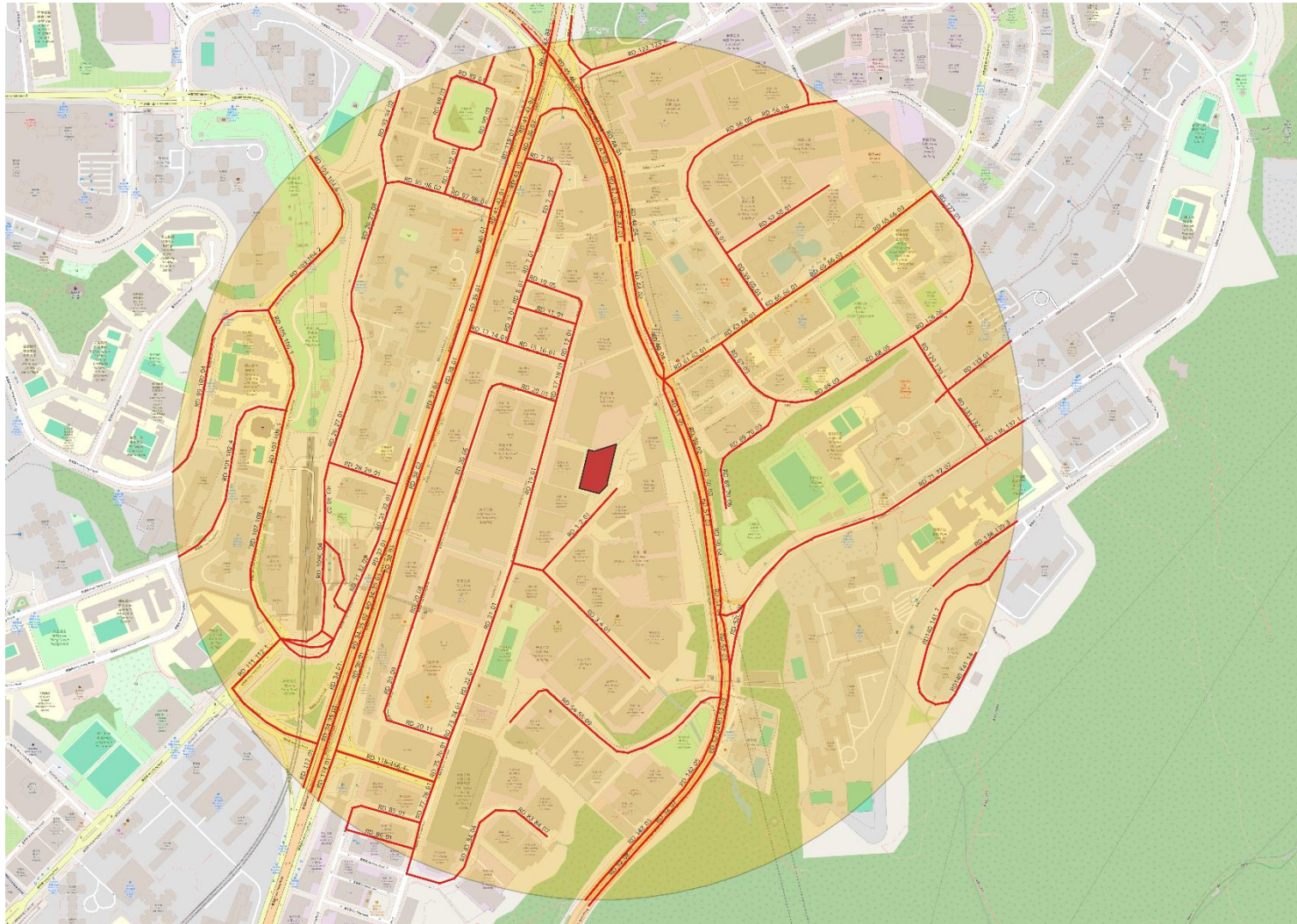
J is the photolysis rate of NO₂

k is the rate constant for reaction between NO and O₃

The derivation of cumulative annual average NO_x to NO₂ conversion equation using Jenkin Method for this assessment by SAMP are shown in **Appendix C-3**.

Appendix C-1 Traffic Flows

Figure C-1



Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Emission Estimation by Road Type (g/kWh)	Hour	Total Vehicles (Veh/hr)	Private - 01 - 17 - Heavy Goods																		Total	
								02 - 03 - 04 - 05 - 06 - 07 - 08 - 09 - 10 - 11 - Non-franchisee																			
								01 - Private	02 - Tax	03 - 04 - Light	04 - Light	05 - Light	06 - Medium	07 - Medium	08 - Light	09 - Light	10 - Light	11 - Non-franchisee	12 - Non-franchisee	13 - Non-franchisee	14 - Franchisee	15 - Franchisee	16 - Franchisee	17 - Heavy Goods			
Wo Tung Tai Street	RD_95_96	LD	50	22.7	Y	0900-1000	810	15.28%	27.82%	0.37%	20.86%	10.13%	10.57%	0.87%	4.51%	0.17%	0.37%	0.67%	0.17%	0.37%	0.20%	3.89%	3.49%	1.34%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	23.7	Y	1000-1100	550	18.28%	20.71%	0.38%	21.46%	10.74%	11.67%	1.07%	5.35%	0.00%	0.75%	0.38%	0.19%	0.38%	0.19%	3.09%	3.19%	1.14%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	24.8	Y	1100-1200	410	18.03%	18.41%	0.38%	24.13%	12.79%	12.79%	1.14%	5.08%	0.00%	0.23%	0.41%	0.23%	0.41%	0.23%	3.81%	4.16%	1.60%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	25.2	Y	1200-1300	440	17.80%	17.38%	0.48%	22.83%	10.63%	11.72%	1.11%	5.80%	0.00%	0.91%	0.48%	0.23%	0.48%	0.23%	3.80%	3.98%	1.46%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	25.8	Y	1300-1400	410	20.87%	18.07%	0.51%	23.15%	11.15%	8.89%	1.75%	3.71%	0.00%	0.51%	0.25%	0.00%	0.51%	0.25%	4.50%	4.68%	1.24%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	26.1	Y	1400-1500	410	20.87%	18.07%	0.51%	23.15%	11.15%	8.89%	1.75%	3.71%	0.00%	0.51%	0.25%	0.00%	0.51%	0.25%	4.50%	4.68%	1.24%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	25.7	Y	1500-1600	420	20.52%	21.03%	0.51%	23.07%	10.87%	7.67%	1.74%	3.52%	0.27%	0.10%	0.77%	0.27%	0.51%	0.50%	3.90%	3.18%	0.76%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	24.0	Y	1600-1700	530	22.45%	16.16%	0.38%	20.70%	9.39%	9.26%	1.15%	5.80%	0.00%	2.29%	0.98%	0.00%	0.38%	0.41%	4.79%	1.91%	0.00%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	23.6	Y	1700-1800	560	22.56%	14.88%	0.38%	20.70%	9.39%	9.26%	1.15%	5.80%	0.00%	2.29%	0.98%	0.00%	0.38%	0.41%	4.79%	1.91%	0.00%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	23.9	Y	1800-1900	540	34.1%	15.61%	0.38%	16.38%	5.07%	2.84%	0.93%	5.73%	0.00%	0.37%	0.74%	0.00%	0.00%	0.18%	5.73%	8.65%	3.73%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	26.4	Y	1900-2000	370	27.56%	25.50%	0.00%	13.18%	4.12%	2.17%	2.89%	7.14%	0.00%	0.26%	0.80%	0.00%	0.54%	0.26%	6.88%	10.99%	0.28%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	25.9	Y	2000-2100	310	23.52%	30.68%	0.00%	13.54%	4.64%	2.39%	3.89%	0.35%	0.00%	0.96%	0.35%	0.62%	6.62%	11.89%	0.35%	0.00%	0.00%	100.00%		
Wo Tung Tai Street	RD_95_96	LD	50	28.0	Y	2100-2200	250	22.47%	33.81%	0.00%	8.60%	3.53%	2.75%	0.77%	4.74%	0.00%	0.00%	1.17%	0.00%	0.00%	0.39%	7.70%	11.75%	0.00%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	28.2	Y	2200-2300	250	22.51%	39.00%	0.00%	8.62%	2.39%	3.21%	0.40%	7.25%	0.00%	0.00%	0.77%	0.00%	0.00%	0.38%	6.78%	8.42%	0.40%	0.00%	100.00%	
Wo Tung Tai Street	RD_95_96	LD	50	28.8	Y	2300-2400	200	20.52%	41.63%	0.00%	8.60%	2.39%	3.21%	0.40%	7.25%	0.00%	0.00%	0.77%	0.00%	0.00%	0.52%	8.45%	8.95%	0.00%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	28.0	Y	0000-0100	200	22.34%	52.74%	0.00%	7.48%	3.18%	3.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.76%	4.76%	0.56%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	29.2	Y	0100-0200	140	19.37%	60.53%	0.00%	8.03%	4.81%	2.40%	0.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.78%	3.20%	0.00%	0.00%	100.00%
Wo Kwa Lane	RD_97_98	LD	50	29.6	Y	0200-0300	120	15.65%	64.27%	0.00%	7.83%	4.38%	2.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.38%	4.38%	0.00%	0.00%	100.00%
Wo Kwa Lane	RD_97_98	LD	50	30.0	Y	0300-0400	100	15.65%	58.26%	0.00%	10.42%	8.34%	5.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.08%	2.08%	0.00%	0.00%	100.00%
Wo Kwa Lane	RD_97_98	LD	50	29.7	Y	0400-0500	110	9.91%	57.67%	0.00%	14.82%	6.37%	4.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.65%	2.02%	0.00%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	29.4	Y	0500-0600	100	15.65%	52.29%	0.00%	15.47%	8.12%	4.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.72%	2.47%	0.00%	0.00%	100.00%
Wo Kwa Lane	RD_97_98	LD	50	27.1	Y	0600-0700	200	11.52%	33.62%	0.00%	11.95%	6.17%	2.86%	0.43%	17.16%	0.00%	1.65%	0.82%	0.43%	0.82%	0.38%	7.68%	3.69%	0.83%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	22.2	Y	0700-0800	500	19.20%	27.58%	0.00%	16.03%	7.19%	3.93%	0.00%	8.33%	0.61%	0.62%	0.43%	1.19%	0.19%	5.83%	5.91%	0.68%	0.00%	100.00%		
Wo Kwa Lane	RD_97_98	LD	50	21.0	Y	0800-0900	560	17.85%	29.44%	0.00%	18.75%	7.62%	7.08%	0.94%	5.12%	1.07%	1.11%	0.37%	0.36%	0.47%	5.73%	4.57%	0.83%	0.00%	100.00%		
Wo Kwa Lane	RD_97_98	LD	50	18.3	Y	0900-1000	700	16.85%	26.76%	0.27%	24.48%	9.79%	8.77%	0.74%	3.88%	0.14%	0.27%	0.27%	0.14%	0.27%	0.13%	3.34%	3.59%	0.29%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	18.4	Y	1000-1100	630	20.87%	20.87%	0.00%	23.26%	10.58%	11.29%	1.00%	4.47%	0.00%	0.00%	0.00%	0.00%	0.59%	2.10%	7.99%	0.02%	0.00%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	21.1	Y	1100-1200	550	20.45%	16.78%	0.38%	26.60%	12.15%	8.65%	1.28%	4.44%	0.19%	0.75%	0.56%	0.00%	0.00%	0.37%	3.34%	3.33%	0.72%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	21.7	Y	1200-1300	520	20.33%	17.72%	0.38%	24.83%	10.25%	10.25%	0.95%	5.12%	0.00%	0.81%	0.38%	0.19%	0.38%	0.37%	3.32%	4.15%	0.78%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	22.7	Y	1300-1400	420	22.56%	18.41%	0.38%	25.42%	10.73%	8.12%	1.49%	4.89%	0.00%	0.00%	0.00%	0.00%	0.00%	0.36%	4.89%	2.86%	0.00%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	21.0	Y	1400-1500	550	23.52%	17.78%	0.38%	26.26%	12.64%	6.12%	0.54%	3.88%	0.20%	0.18%	0.56%	0.20%	0.38%	3.86%	2.44%	3.72%	0.74%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	22.4	Y	1500-1600	480	23.05%	20.93%	0.38%	25.88%	10.46%	6.60%	0.38%	3.35%	0.20%	0.80%	0.62%	0.00%	0.38%	4.42%	3.38%	2.56%	0.44%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	19.2	Y	1600-1700	550	25.28%	16.02%	0.34%	25.88%	10.46%	6.60%	0.38%	3.35%	0.20%	0.80%	0.62%	0.00%	0.38%	4.42%	3.38%	2.56%	0.44%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	19.2	Y	1700-1800	640	33.64%	16.32%	0.34%	18.52%	7.73%	5.52%	0.49%	4.51%	0.00%	0.65%	0.98%	0.00%	0.00%	0.30%	4.63%	4.91%	0.67%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	19.6	Y	1800-1900	520	38.48%	17.22%	0.34%	15.90%	4.84%	2.46%	0.65%	6.90%	0.00%	0.36%	0.98%	0.00%	0.00%	0.18%	5.07%	5.89%	0.68%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	19.5	Y	1900-2000	450	31.06%	18.81%	0.34%	18.81%	4.84%	2.46%	0.65%	6.90%	0.00%	0.36%	0.98%	0.00%	0.00%	0.18%	5.07%	5.89%	0.68%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	25.1	Y	2000-2100	350	27.01%	32.58%	0.00%	9.74%	4.64%	2.65%	0.00%	5.80%	0.00%	0.00%	0.86%	0.30%	0.13%	5.78%	9.58%	0.00%	0.00%	100.00%		
Wo Kwa Lane	RD_97_98	LD	50	26.1	Y	2100-2200	300	25.98%	34.66%	0.00%	9.93%	3.45%	2.42%	0.65%	6.55%	0.00%	0.00%	1.03%	0.00%	0.00%	0.32%	6.27%	9.35%	0.00%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	26.3	Y	2200-2300	250	25.98%	34.66%	0.00%	9.93%	3.45%	2.42%	0.65%	6.55%	0.00%	0.00%	1.03%	0.00%	0.00%	0.32%	6.27%	9.35%	0.00%	0.00%	100.00%	
Wo Kwa Lane	RD_97_98	LD	50	27.7	Y	2300-2400	220	22.88%	42.50%	0.00%	6.09%	2.31%	2.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.45%	7.75%	6.55%	0.00%	0.00%	100.00%		
Kwai Shing Circuit	RD_99_100	DD	50	40.0	Y	0000-0100	130	19.87%	52.95%	0.00%	4.15%	0.86%	0.78%	0.00%	4.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.31%	5.85%	0.78%	0.00%	100.00%	
Kwai Shing Circuit	RD_99_100	DD	50	40.0	Y	0100-0200	130	19.87%	52.95%	0.00%	4.15%	0.86%	0.78%	0.00%	4.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.31%	5.85%	0.78%	0.00%	100.00%	
Kwai Shing Circuit	RD_99_100	DD	50	40.0	Y	0200-0300	80	14.15%	67.00%	0.00%	4.20%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.15%	5.80%	0.00%	0.00%	100.00%	
Kwai Shing Circuit	RD_99_100	DD	50	40.0	Y	0300-0400	80	16.05%</																			

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Estimation by Broad Bus Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	Private		Light		Medium		Heavy		11-Non		12-Non		13-Non		14-Non		15-Non		16-Non		17-Heavy		18-Heavy		Total				
								01 - Cars	02 - Tax	03 - Light	04 - Light	05 - Light	06 - Medium	07 - Medium	08 - Light	09 - Light	10 - Light	11 - Non	12 - Non	13 - Non	14 - Non	15 - Non	16 - Non	17 - Heavy	18 - Heavy	19 - Heavy	20 - Heavy	21 - Heavy	22 - Heavy	23 - Heavy	24 - Heavy		25 - Heavy	26 - Heavy	27 - Heavy	28 - Heavy
								PC	TAXI	LGV	LCV1	LCV2	HGV1	HGV2	PLB	PLA	PUB	NEB1	NEB2	NEB3	FBSB	FBSK	FRD	MC	HGV1	HGV2	NEB1	NEB2	NEB3	FRD	MC		HGV1	HGV2	NEB1	NEB2
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0300-0400	200	12.45%	52.55%	0.00%	7.80%	7.25%	2.65%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.10%	4.70%	0.00%	100.00%						
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0400-0500	200	22.45%	55.45%	0.00%	11.90%	6.20%	2.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.15%	5.20%	0.00%	100.00%						
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0500-0600	200	12.45%	52.55%	0.00%	7.80%	7.25%	2.65%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.10%	4.70%	0.00%	100.00%						
Kwai Yik Road	RD-113.114	DD	50	39.8	Y	0600-0700	110	15.73%	29.90%	0.00%	8.25%	6.87%	1.60%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.41%	4.41%	8.06%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	37.1	Y	0700-0800	110	31.26%	21.58%	0.00%	11.16%	6.31%	2.19%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.89%	6.20%	4.02%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	36.7	Y	0800-0900	110	24.22%	21.09%	0.00%	10.22%	7.07%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.65%	4.02%	0.00%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	35.6	Y	0900-1000	1480	29.70%	22.47%	0.00%	18.13%	9.14%	3.88%	0.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.15%	3.35%	0.00%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	36.8	Y	1000-1100	1250	29.43%	19.90%	0.00%	18.36%	9.86%	5.94%	1.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.60%	3.15%	5.15%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	37.3	Y	1100-1200	1980	29.87%	15.37%	0.00%	15.37%	10.00%	11.43%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.84%	4.80%	0.00%	0.00%	100.00%				
Kwai Yik Road	RD-113.114	DD	50	37.6	Y	1200-1300	1280	28.54%	16.25%	0.00%	19.81%	9.47%	5.97%	0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.89%	5.10%	5.11%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	37.9	Y	1300-1400	950	31.12%	16.50%	0.00%	19.86%	9.86%	4.54%	1.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.15%	5.40%	5.25%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	38.7	Y	1400-1500	1150	32.56%	15.90%	0.00%	12.57%	10.82%	3.49%	0.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.64%	4.45%	4.45%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	37.8	Y	1500-1600	970	31.37%	18.60%	0.00%	19.71%	9.51%	3.79%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.85%	2.95%	4.70%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	37.1	Y	1600-1700	1140	30.07%	17.47%	0.00%	16.62%	7.87%	6.98%	0.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.03%	4.17%	4.15%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	38.7	Y	1700-1800	1150	32.56%	15.90%	0.00%	12.57%	10.82%	3.49%	0.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.64%	4.45%	4.45%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	36.7	Y	1800-1900	1230	43.48%	16.03%	0.00%	12.54%	4.08%	2.02%	0.55%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.54%	7.52%	3.20%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	38.0	Y	1900-2000	930	39.41%	21.41%	0.00%	10.25%	3.30%	1.10%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.05%	9.70%	3.90%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	39.2	Y	2000-2100	650	32.50%	28.28%	0.00%	6.90%	2.80%	1.24%	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.14%	10.80%	5.48%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	38.9	Y	2100-2200	1150	32.80%	32.91%	0.00%	6.75%	2.50%	1.60%	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.24%	7.65%	6.00%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	2200-0000	450	31.64%	27.00%	0.00%	7.10%	1.95%	1.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.14%	7.80%	2.05%	0.00%	100.00%					
Kwai On Road	RD-115.116	DD	50	39.5	Y	0000-0100	450	22.84%	55.73%	0.00%	6.47%	2.55%	2.78%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.38%	5.04%	0.00%	0.00%	100.00%					
Kwai On Road	RD-115.116	DD	50	40.0	Y	0100-0200	300	14.66%	61.18%	0.00%	8.71%	3.00%	3.14%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	40.0	Y	0200-0300	300	14.66%	61.18%	0.00%	8.71%	3.00%	3.14%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	40.0	Y	0300-0400	300	14.62%	56.66%	0.00%	8.32%	5.73%	3.76%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.86%	8.68%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	40.0	Y	0400-0500	300	14.62%	56.66%	0.00%	8.32%	5.73%	3.76%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.86%	8.68%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	40.0	Y	0500-0600	300	8.52%	56.66%	0.00%	13.41%	6.15%	4.44%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.65%	7.12%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	39.2	Y	0600-0700	510	13.06%	40.25%	0.00%	11.91%	5.78%	2.78%	0.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.57%	16.89%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	38.0	Y	0700-0800	1070	26.86%	35.00%	0.00%	12.68%	6.83%	3.80%	0.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	35.0	Y	0800-0900	1250	27.77%	0.00%	0.00%	16.86%	7.28%	6.44%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.42%	7.14%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	33.1	Y	0900-1000	1590	25.58%	24.70%	0.00%	21.18%	8.94%	7.86%	0.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.52%	5.84%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	34.3	Y	1000-1100	1280	22.32%	22.32%	0.00%	15.62%	7.12%	3.29%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.23%	2.53%	4.22%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	35.5	Y	1100-1200	1170	22.33%	19.23%	0.00%	25.17%	11.03%	8.43%	1.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	36.0	Y	1200-1300	1190	22.15%	20.42%	0.00%	23.36%	9.23%	9.71%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	36.2	Y	1300-1400	1190	25.05%	20.18%	0.00%	24.16%	10.51%	10.32%	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	35.4	Y	1400-150																														

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	Private		04 - Light		05 - Light		06 - Medium		07 - Medium		08 - Light		09 - Light		10 - Light		11 - Non		12 - Non		13 - Non		14 - Franchise		15 - Franchise		16 - Franchise		17 - Heavy		18 - Heavy		Total				
								01 -		02 -		03 -		04 -		05 -		06 -		07 -		08 -		09 -		10 -		11 -		12 -		13 -		14 -		15 -		16 -			17 -		18 -	
								PC	TAXI	LOV1	LOV2	LOV3	LOV4	LOV5	LOV6	LOV7	LOV8	LOV9	LOV10	LOV11	LOV12	LOV13	LOV14	LOV15	LOV16	LOV17	LOV18	LOV19	LOV20	LOV21	LOV22	LOV23	LOV24	LOV25	LOV26	LOV27	LOV28	LOV29	LOV30		LOV31	LOV32	LOV33	LOV34
Shak Pul Street	RD_69.70	LD	50	30.0	Y	1500-1600	40	36.20%	12.20%	0.00%	27.90%	8.00%	3.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_69.70	LD	50	30.0	Y	1600-1700	40	31.20%	12.55%	0.00%	31.00%	6.30%	2.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_69.70	LD	50	30.0	Y	1700-1800	60	35.10%	9.70%	0.00%	25.00%	8.00%	3.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_69.70	LD	50	30.0	Y	1800-1900	60	40.45%	9.50%	0.00%	19.00%	4.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_69.70	LD	50	30.0	Y	1900-2000	40	38.45%	15.40%	0.00%	15.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_69.70	LD	50	30.0	Y	2000-2100	30	31.25%	18.75%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_69.70	LD	50	30.0	Y	2100-2200	20	31.25%	25.00%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_69.70	LD	50	30.0	Y	2200-2300	20	33.30%	20.00%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	38.7	Y	0000-0100	280	30.00%	56.43%	0.00%	4.01%	1.44%	0.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%					
RD_71.72	DD	50	38.7	Y	0100-0200	200	25.00%	62.86%	0.00%	4.38%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	38.7	Y	0200-0300	180	23.78%	69.90%	0.00%	15.80%	5.49%	1.52%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	40.0	Y	0300-0400	140	22.98%	65.59%	0.00%	5.34%	3.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	40.0	Y	0400-0500	140	13.78%	66.56%	0.00%	8.40%	3.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	39.8	Y	0500-0600	170	13.93%	69.67%	0.00%	8.65%	3.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	38.2	Y	0600-0700	300	17.05%	61.09%	0.00%	7.43%	2.94%	0.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	34.2	Y	0700-0800	660	37.05%	27.77%	0.00%	0.37%	3.22%	0.46%	0.13%	0.95%	1.36%	1.58%	1.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	33.5	Y	0800-0900	710	35.38%	22.82%	0.00%	0.37%	3.21%	0.59%	0.19%	5.57%	2.59%	1.83%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	32.2	Y	0900-1000	830	36.44%	30.47%	0.00%	14.34%	4.98%	0.89%	0.13%	4.22%	3.36%	0.62%	0.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	34.7	Y	1000-1100	720	35.98%	28.28%	0.00%	15.80%	5.49%	1.52%	0.12%	4.22%	3.36%	0.62%	0.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	34.7	Y	1100-1200	60	15.01%	73.90%	0.00%	18.53%	6.89%	1.14%	0.17%	1.48%	1.48%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	35.2	Y	1200-1300	580	34.81%	24.20%	0.00%	16.82%	5.58%	1.58%	0.18%	4.70%	3.35%	1.41%	0.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	35.5	Y	1300-1400	550	37.35%	24.42%	0.00%	16.80%	5.50%	1.59%	0.19%	4.22%	3.36%	1.10%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	34.4	Y	1400-1500	650	38.99%	23.23%	0.00%	17.30%	6.22%	0.76%	0.00%	3.44%	1.10%	0.34%	0.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	35.2	Y	1500-1600	580	36.98%	28.28%	0.00%	16.44%	5.30%	0.92%	0.00%	3.01%	1.40%	1.58%	1.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	33.3	Y	1600-1700	740	33.25%	27.57%	0.00%	13.85%	4.78%	1.73%	0.00%	4.22%	3.36%	1.10%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	32.1	Y	1700-1800	840	41.49%	23.84%	0.00%	12.81%	3.61%	1.09%	0.00%	2.76%	0.48%	1.16%	1.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50	32.0	Y	1800-1900	580	44.84%	23.87%	0.00%	10.22%	2.15%	0.42%	0.00%	3.71%	0.00%	0.61%	1.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
RD_71.72	DD	50																																										

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Estimated by Broad Brush Approach (%)	Hour	Total Vehicles (Veh/hr)	Private		Light		Medium		Heavy		11-Non		12-Non		13-Non		14-Non		15-Non		16-Non		17-Heavy		18-Heavy		Total			
								01 - Cars	02 - Tax	03 - Light	04 - Light	05 - Light	06 - Medium	07 - Medium	08 - Light	09 - Light	10 - Private	11 - Non	12 - Non	13 - Non	14 - Non	15 - Non	16 - Motorist	17 - Heavy	18 - Heavy										
								PC	TAXI	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV	LGV		LGV	LGV	LGV
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0300-0400	220	23.55%	51.55%	0.00%	72.80%	6.85%	2.45%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.90%	4.40%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0400-0500	220	23.55%	51.55%	0.00%	72.80%	6.85%	2.45%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.90%	4.40%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0500-0600	220	23.55%	51.55%	0.00%	72.80%	6.85%	2.45%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.90%	4.40%	0.00%	100.00%					
Kwai Yik Road	RD-113.114	DD	50	36.8	Y	0600-0700	530	16.84%	21.06%	0.00%	11.01%	6.08%	1.99%	0.50%	12.95%	0.15%	1.35%	0.75%	0.15%	0.85%	0.10%	2.69%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	36.8	Y	0700-0800	530	16.84%	21.06%	0.00%	11.01%	6.08%	1.99%	0.50%	12.95%	0.15%	1.35%	0.75%	0.15%	0.85%	0.10%	2.69%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	35.1	Y	0800-0900	1340	31.67%	21.93%	0.00%	10.87%	8.78%	3.68%	0.55%	3.29%	0.15%	0.50%	1.85%	0.25%	0.50%	0.10%	1.50%	0.10%	3.19%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	36.2	Y	0900-1000	1340	31.67%	21.93%	0.00%	10.87%	8.78%	3.68%	0.55%	3.29%	0.15%	0.50%	1.85%	0.25%	0.50%	0.10%	1.50%	0.10%	3.19%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%				
Kwai Yik Road	RD-113.114	DD	50	37.0	Y	1000-1100	1150	32.18%	16.85%	0.00%	18.26%	9.37%	5.83%	1.05%	3.64%	0.05%	0.75%	1.00%	0.15%	0.50%	0.10%	1.50%	0.15%	4.95%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	37.3	Y	1100-1200	1080	29.80%	16.00%	0.00%	19.88%	9.17%	5.82%	0.80%	4.00%	0.10%	0.95%	0.85%	0.20%	0.70%	0.10%	1.79%	0.50%	4.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	37.6	Y	1200-1300	1020	32.65%	16.15%	0.00%	19.80%	9.33%	4.33%	1.10%	2.58%	0.00%	0.80%	0.60%	0.10%	0.40%	0.20%	2.00%	0.50%	5.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	38.9	Y	1300-1400	1180	30.22%	15.00%	0.00%	18.51%	13.50%	8.81%	1.00%	3.84%	0.50%	2.38%	0.15%	0.25%	1.55%	0.15%	1.50%	4.20%	4.19%	6.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	37.5	Y	1500-1600	1440	26.84%	18.20%	0.00%	19.61%	9.22%	3.73%	0.40%	2.63%	0.20%	1.00%	1.55%	0.20%	0.80%	0.20%	1.75%	2.95%	4.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	36.8	Y	1600-1700	1210	31.43%	17.33%	0.00%	16.22%	7.88%	6.91%	0.55%	3.57%	0.00%	2.50%	2.14%	0.24%	0.84%	0.19%	1.93%	4.27%	3.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	38.5	Y	1800-1900	1180	30.00%	16.00%	0.00%	17.01%	3.76%	1.40%	0.25%	4.13%	0.00%	0.25%	0.00%	0.75%	0.15%	2.70%	10.70%	4.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	36.3	Y	1900-2000	890	44.72%	15.79%	0.00%	12.39%	3.98%	1.97%	0.55%	4.57%	0.00%	0.48%	1.55%	0.24%	0.70%	0.14%	2.33%	7.62%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai Yik Road	RD-113.114	DD	50	37.7	Y	2000-2100	980	41.22%	21.00%	0.00%	10.10%	3.15%	1.20%	0.20%	4.38%	0.00%	0.20%	1.75%	0.10%	0.60%	0.20%	2.83%	9.80%	3.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai Yik Road	RD-113.114	DD	50	39.0	Y	2100-2200	890	34.11%	27.86%	0.00%	6.78%	2.81%	1.20%	0.45%	4.70%	0.00%	0.00%	2.50%	0.00%	0.30%	0.15%	2.84%	10.64%	5.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai Yik Road	RD-113.114	DD	50	38.3	Y	2200-2300	870	33.83%	32.16%	0.00%	6.60%	2.10%	1.50%	0.30%	4.19%	0.00%	0.00%	2.50%	0.15%	0.45%	0.15%	3.00%	7.35%	5.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai Yik Road	RD-113.114	DD	50	38.9	Y	2300-0000	470	33.71%	0.00%	0.00%	6.87%	1.80%	1.50%	0.00%	4.50%	0.00%	0.00%	0.00%	0.00%	0.40%	0.20%	2.84%	7.94%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai On Road	RD-115.116	DD	50	39.4	Y	0000-0100	480	24.88%	54.34%	0.00%	6.41%	2.53%	2.58%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.29%	4.67%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	39.4	Y	0100-0200	480	24.88%	54.34%	0.00%	6.41%	2.53%	2.58%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.29%	4.67%	0.00%	100.00%				
Kwai On Road	RD-115.116	DD	50	40.0	Y	0200-0300	310	16.87%	81.84%	0.00%	5.87%	2.89%	1.95%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	40.0	Y	0300-0400	270	16.79%	55.61%	0.00%	6.17%	5.88%	3.47%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	40.0	Y	0400-0500	270	16.79%	55.61%	0.00%	6.17%	5.88%	3.47%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	40.0	Y	0500-0600	310	9.68%	56.35%	0.00%	13.28%	6.45%	4.15%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	39.0	Y	0600-0700	350	14.74%	39.89%	0.00%	12.05%	5.65%	2.85%	0.53%	1.89%	0.00%	1.33%	0.74%	0.21%	0.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	35.4	Y	0700-0800	550	15.85%	47.7%	0.00%	10.59%	4.75%	3.05%	0.95%	0.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	34.4	Y	0800-0900	360	20.09%	26.67%	0.00%	16.42%	6.89%	6.07%	0.45%	1.89%	0.00%	0.79%	0.52%	0.00%	0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai On Road	RD-115.116	DD	50	32.3	Y	0900-1000	1730	28.48%	23.84%	0.00%	20.88%	8.45%	7.40%	0.43%	0.82%	0.00%	0.28%	0.62%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai On Road	RD-115.116	DD	50	35.9	Y	1000-1100	1480	25.85%	16.00%	0.00%	21.11%	13.50%	8.25%	0.90%	2.38%	0.15%	0.25%	1.55%	0.15%	0.50%	0.15%	1.50%	4.20%	4.19%	6.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai On Road	RD-115.116	DD	50	35.0	Y	1100-1200	1260	24.57%	18.70%	0.00%	25.03%	10.50%	8.13%	1.27%	0.47%	0.07%	0.37%	0.40%	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai On Road	RD-115.116	DD	50	35.5	Y	1200-1300	1180	24.22%	18.85%	0.00%	23.22%	8.80%	9.41%	0.93%	0.50%	0.00%	0.47%	0.30%	0.07%	0.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Kwai On Road	RD-115.116	DD	50	34.8	Y	1300-1400	1120	25.48%	19.98%	0.00%	18.58%	5.80%	3.82%	0.90%	2.38%	0.00%	0.28%	0.62%	0.00%	0.14%	0.48%	0.14%	2.18%	6.46%	3.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kwai On Road	RD-115.116	DD	50	34.9																															

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start/End (km)	Estimation by Broad Brush (Y/N)	Hour	Total Vehicles (Veh/hr)	Private		Light		Medium		Heavy		Motorcycle		Heavy Goods		Total	
									01 - Private		02 - Light		03 - Medium		04 - Heavy		05 - Motorcycle		06 - Heavy Goods			
									PC	TAXI	LGV	LCV	LGW	HGV1	HGV2	PLB	P14	P15	NEB1	NEB2		NEB3
Wah Sing Street	RD_1_2	LD	50	29.8	Y	0000-0100	130	33.06%	20.02%	0.00%	6.07%	4.34%	3.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	30.0	Y	0000-0200	90	25.66%	19.72%	0.00%	5.82%	5.82%	2.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	30.0	Y	0000-0300	21	1.24%	0.00%	0.00%	6.20%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	30.0	Y	0000-0400	80	18.35%	17.10%	0.00%	6.55%	7.90%	5.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	30.0	Y	0400-0500	80	12.30%	17.75%	0.00%	8.55%	8.25%	5.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	30.0	Y	0500-0600	12	0.64%	0.00%	0.00%	12.41%	0.83%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	28.5	Y	0600-0700	210	12.47%	8.10%	0.00%	7.20%	6.21%	2.90%	0.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	26.2	Y	0700-0800	350	35.40%	6.39%	0.00%	10.10%	9.58%	5.82%	0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	24.8	Y	0800-0900	430	24.8%	9.39%	0.00%	12.11%	11.29%	6.21%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	23.3	Y	0900-1000	520	29.08%	6.04%	0.00%	14.97%	12.01%	9.15%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	23.3	Y	1000-1100	520	23.13%	5.81%	0.00%	14.39%	10.68%	9.69%	1.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	24.7	Y	1400-1600	440	23.10%	7.55%	0.00%	15.09%	7.50%	6.22%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	25.0	Y	1200-1300	440	22.81%	5.13%	0.00%	15.63%	10.25%	9.78%	0.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	25.3	Y	1300-1400	400	24.29%	4.83%	0.00%	15.10%	10.66%	7.08%	1.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	24.7	Y	1400-1600	440	26.47%	5.05%	0.00%	15.09%	9.44%	5.95%	0.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	25.5	Y	1500-1600	380	25.26%	6.02%	0.00%	15.62%	10.73%	6.25%	0.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	24.7	Y	1600-1700	440	24.23%	5.14%	0.00%	16.32%	9.82%	8.52%	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	24.0	Y	1700-1800	460	32.24%	7.50%	0.00%	15.09%	7.50%	6.22%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	24.5	Y	1800-1900	450	37.42%	7.95%	0.00%	12.74%	5.02%	3.17%	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	24.7	Y	1900-2000	350	34.57%	7.30%	0.00%	8.83%	8.95%	1.74%	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	27.0	Y	2000-2100	300	28.82%	9.00%	0.00%	5.84%	4.50%	2.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	27.5	Y	2100-2200	270	25.90%	8.79%	0.00%	5.11%	3.09%	2.29%	0.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	27.7	Y	2200-2300	250	26.30%	10.21%	0.00%	5.12%	2.80%	2.40%	0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Wah Sing Street	RD_1_2	LD	50	28.8	Y	2300-0000	130	36.22%	16.88%	0.00%	8.02%	3.22%	3.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	30.0	Y	0000-0100	80	30.70%	38.45%	0.00%	12.35%	7.65%	3.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	30.0	Y	0100-0200	24	1.24%	0.00%	0.00%	13.40%	11.00%	4.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	30.0	Y	0200-0300	50	22.28%	45.68%	0.00%	14.58%	9.70%	4.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	30.0	Y	0300-0400	40	18.35%	36.85%	0.00%	15.85%	18.35%	5.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	30.0	Y	0400-0500	40	21.1%	0.00%	0.00%	21.1%	15.40%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	30.0	Y	0500-0600	60	10.75%	37.00%	0.00%	26.30%	17.15%	4.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	30.0	Y	0600-0700	80	17.55%	28.35%	0.00%	24.35%	18.90%	2.70%	1.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	27.8	Y	0700-0800	210	32.82%	20.00%	0.00%	18.51%	21.31%	8.07%	1.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	27.3	Y	0800-0900	230	28.20%	21.06%	0.00%	21.49%	13.16%	6.57%	1.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	26.7	Y	0900-1000	310	25.93%	17.96%	0.00%	25.89%	15.57%	7.67%	1.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	26.0	Y	1000-1100	290	22.15%	16.00%	0.00%	30.16%	18.67%	8.67%	2.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	25.7	Y	1100-1200	260	25.87%	9.09%	0.00%	33.95%	9.25%	7.58%	2.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	27.3	Y	1200-1300	230	21.42%	8.93%	0.00%	33.13%	20.04%	9.35%	1.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	23.3	Y	1300-1400	230	23.17%	9.30%	0.00%	32.42%	13.84%	7.40%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	26.7	Y	1400-1500	260	23.83%	9.55%	0.00%	33.34%	22.62%	5.15%	1.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	27.5	Y	1500-1600	220	24.31%	11.87%	0.00%	34.24%	20.04%	5.72%	0.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	26.4	Y	1600-1700	270	23.45%	10.00%	0.00%	35.75%	23.37%	7.20%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	25.9	Y	1700-1800	290	22.77%	6.86%	0.00%	34.19%	19.14%	5.77%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	26.8	Y	1800-1900	250	35.78%	8.03%	0.00%	31.89%	13.94%	2.92%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	26.5	Y	1900-2000	170	38.11%	8.20%	0.00%	22.82%	8.78%	2.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	29.1	Y	2000-2100	140	35.10%	22.45%	0.00%	16.00%	11.15%	3.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	29.8	Y	2100-2200	110	35.93%	24.82%	0.00%	15.84%	8.89%	2.00%	0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	26.8	Y	2200-2300	110	34.67%	23.00%	0.00%	15.67%	9.37%	1.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_3_4	LD	50	30.0	Y	2300-0000	80	32.70%	32.85%	0.00%	17.15%	5.75%	2.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_5_6	DD	50	40.0	Y	0000-0100	190	32.28%	26.54%	0.00%	8.45%	5.06%	3.39%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Kung Yip Street	RD_5_6	DD	50	40.0	Y	0100-0200	190	29.00%	26.54%	0.00%	8.45%	5.06%	3.39%	0.57%	0.00%	0.00%	0.00%	0.00%				

Road Name	Road ID	Road Type	Speed Limit (km/h)	Average Speed (km/h)	Start Estimated by Broad Bus (Approx)	Hour	Total Vehicles (Veh/h)	Private		04 - Light		05 - Light		06 - Medium		07 - Medium		08 - Light		09 - Light		10 - Light		11 - Non		12 - Non		13 - Non		14 - Franchise		15 - Franchise		16 - Motorist		17 - Heavy		18 - Non		Total			
								01 - Cars	02 - Tax	03 - Cab	04 - Light	05 - Light	06 - Medium	07 - Medium	08 - Light	09 - Light	10 - Light	11 - Non	12 - Non	13 - Non	14 - Franchise	15 - Franchise	16 - Motorist	17 - Heavy	18 - Non	19 - Bus	20 - Bus	21 - Bus	22 - Bus	23 - Bus	24 - Bus	25 - Bus	26 - Bus	27 - Bus	28 - Bus	29 - Bus	30 - Bus	31 - Bus	32 - Bus		33 - Bus	34 - Bus	35 - Bus
								PC	TAXI	LGU	LGU	LGU	HQV	HQV	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB		PLB	PLB	PLB
Tai Lin Pa Road	RD_21	DD	50	25.0	Y	1800-1900	850	40.00%	18.00%	0.10%	17.80%	5.30%	2.90%	1.20%	0.00%	0.00%	0.10%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Estimated by Broad Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private	02 - Taxi	03 - Cab	04 - Light Vehicle <2.5t	05 - Light Vehicle 2.5-3.5t	06 - Light Vehicle >3.5t	07 - Medium Goods Vehicle <1t	08 - Medium Goods Vehicle 1-1.5t	09 - Light Bus <3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise Bus <5.4t	12 - Non-franchise Bus 5.4-6.4t	13 - Non-franchise Bus >6.4t	14 - Franchise Bus Single Deck	15 - Franchise Bus Double Deck	16 - Motorist	17 - Heavy Goods >2t	18 - Heavy Goods >8t	Total																		
																											PC	TAXI	LGV	LVG	LVH	MGV	HGV	PLB	PUB	PVB	NFB1	NFB2	NFB3	FBSK	FDDC	MC	HGV1	HGV2
																											PC	TAXI	LGV	LVG	LVH	MGV	HGV	PLB	PUB	PVB	NFB1	NFB2	NFB3	FBSK	FDDC	MC	HGV1	HGV2
Kwai Chung Road	RD_43	PD	50	44.1	N	1200-1300	1520	23.00%	13.30%	0.30%	19.30%	12.20%	5.10%	1.80%	2.60%	0.00%	0.20%	0.40%	0.30%	0.40%	0.10%	6.10%	3.80%	5.00%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	44.5	N	1300-1400	1520	21.00%	13.20%	0.20%	18.80%	12.00%	5.10%	1.80%	2.60%	0.00%	0.10%	0.30%	0.10%	0.20%	0.10%	6.70%	4.00%	5.20%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	42.9	N	1400-1500	1740	21.00%	13.20%	0.20%	18.80%	12.00%	5.10%	1.80%	2.60%	0.00%	0.10%	0.30%	0.10%	0.20%	0.10%	6.30%	4.00%	5.30%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	44.7	N	1500-1600	1620	23.00%	15.30%	0.30%	19.40%	12.30%	3.30%	0.90%	1.70%	0.00%	0.20%	0.90%	0.30%	0.40%	0.10%	6.00%	2.30%	4.60%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	42.8	N	1600-1700	1760	20.00%	17.20%	0.20%	18.20%	7.80%	6.70%	2.00%	2.30%	0.00%	0.20%	0.70%	0.20%	0.20%	0.10%	5.80%	3.00%	4.40%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	41.4	N	1700-1800	1820	21.00%	18.10%	0.30%	19.10%	6.00%	6.00%	1.00%	1.00%	0.00%	0.10%	0.60%	0.10%	0.10%	0.10%	5.20%	3.60%	4.50%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	41.6	N	1800-1900	1920	40.00%	19.70%	0.20%	12.00%	3.80%	1.90%	1.70%	2.50%	0.00%	0.10%	0.50%	0.20%	0.20%	0.10%	7.20%	3.30%	3.50%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	45.4	N	1900-2000	1410	40.00%	17.90%	0.20%	10.20%	4.30%	0.90%	0.40%	2.80%	0.00%	0.10%	0.90%	0.10%	0.40%	0.10%	10.10%	7.70%	3.40%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	42.3	N	2000-2100	1140	36.00%	22.00%	0.10%	7.80%	2.70%	0.40%	2.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.20%	8.90%	4.00%	0.00%	100.00%																			
Kwai Chung Road	RD_43	PD	50	48.5	N	2100-2200	980	34.40%	24.00%	0.00%	6.80%	3.80%	1.10%	1.10%	3.10%	0.00%	0.00%	1.50%	0.10%	0.20%	0.10%	10.50%	8.50%	4.80%	0.00%	100.00%																		
Kwai Chung Road	RD_43	PD	50	46.7	N	2200-2300	950	34.60%	27.80%	0.00%	6.80%	2.80%	1.30%	0.60%	2.90%	0.00%	0.00%	1.70%	0.10%	0.30%	0.10%	10.50%	5.80%	5.60%	0.00%	100.00%																		
Kwai Chung Road	RD_44	PD	50	50.0	N	2300-2400	890	30.80%	24.00%	0.00%	3.90%	1.90%	0.90%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	3.70%	6.00%	0.00%	100.00%																			
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	0000-0100	210	38.30%	38.70%	0.00%	3.50%	2.50%	1.50%	0.50%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.20%	2.20%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	0100-0200	130	35.80%	47.90%	0.00%	4.10%	4.10%	1.60%	0.80%	0.80%	0.00%	0.00%	0.80%	0.00%	0.00%	0.00%	1.60%	3.30%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	0200-0300	110	32.80%	48.80%	0.00%	4.20%	4.20%	1.60%	0.80%	0.80%	0.00%	0.00%	0.80%	0.00%	0.00%	0.00%	1.60%	3.30%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	0300-0400	90	31.00%	48.90%	0.00%	5.60%	5.60%	2.20%	1.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.20%	2.20%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	0400-0500	90	20.20%	54.80%	0.00%	6.30%	7.10%	2.40%	0.00%	0.00%	0.00%	0.00%	2.40%	0.00%	0.00%	0.00%	2.40%	2.40%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	0500-0600	110	18.30%	48.60%	0.00%	9.20%	7.30%	2.80%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.90%	2.90%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	0600-0700	240	21.60%	27.00%	0.00%	6.10%	5.10%	1.30%	0.80%	16.10%	0.80%	2.10%	1.70%	0.40%	0.80%	0.00%	11.10%	3.40%	0.80%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	0700-0800	280	25.80%	17.10%	0.00%	6.10%	4.70%	1.40%	0.20%	10.10%	0.50%	0.30%	0.90%	0.00%	0.00%	0.00%	8.10%	3.80%	0.90%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	48.9	N	0800-0900	280	25.80%	18.90%	0.00%	7.50%	5.40%	2.00%	0.30%	3.60%	1.00%	0.80%	1.10%	0.30%	0.50%	0.00%	7.50%	3.60%	0.90%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	47.7	N	0900-1000	730	46.20%	18.80%	0.10%	10.30%	7.10%	2.60%	0.30%	2.90%	0.10%	0.30%	1.40%	0.10%	0.30%	0.00%	6.00%	3.00%	0.50%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	1000-1100	520	39.20%	17.10%	0.20%	14.10%	10.30%	4.60%	0.80%	0.30%	0.80%	1.00%	1.20%	0.00%	0.20%	0.00%	4.80%	3.00%	0.50%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	1100-1200	520	39.20%	17.10%	0.20%	14.10%	10.30%	4.60%	0.80%	0.30%	0.80%	1.00%	1.20%	0.00%	0.20%	0.00%	4.80%	3.00%	0.50%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	1200-1300	540	39.70%	14.60%	0.20%	13.50%	8.80%	5.40%	1.30%	5.00%	0.40%	0.80%	0.80%	0.20%	0.40%	0.00%	4.80%	4.00%	0.60%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	1300-1400	520	42.80%	14.20%	0.20%	13.00%	8.80%	4.20%	0.80%	0.30%	0.30%	2.10%	0.10%	0.10%	0.10%	0.10%	5.20%	4.00%	0.20%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	49.8	N	1400-1500	540	43.80%	14.20%	0.20%	13.50%	9.80%	3.00%	0.90%	3.60%	0.90%	0.20%	1.30%	0.20%	0.40%	0.00%	4.10%	3.40%	0.60%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	1500-1600	570	42.70%	16.60%	0.20%	12.80%	6.60%	3.40%	0.60%	3.20%	1.30%	1.10%	1.50%	0.20%	0.40%	0.00%	4.50%	2.40%	0.40%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	49.4	N	1600-1700	570	42.70%	16.60%	0.20%	12.80%	6.60%	3.40%	0.60%	3.20%	1.30%	1.10%	1.50%	0.20%	0.40%	0.00%	4.50%	2.40%	0.40%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	48.8	N	1700-1800	630	43.40%	14.50%	0.20%	11.40%	6.80%	4.70%	1.40%	1.00%	1.40%	0.00%	0.20%	0.20%	0.40%	0.00%	4.30%	4.80%	0.20%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	48.9	N	1800-1900	620	47.90%	14.70%	0.20%	8.40%	4.20%	2.10%	1.80%	7.10%	0.00%	0.50%	1.30%	0.00%	0.20%	0.00%	4.70%	5.70%	0.20%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	1900-2000	620	45.80%	16.70%	0.20%	8.40%	4.20%	2.10%	1.80%	7.10%	0.00%	0.50%	1.30%	0.00%	0.20%	0.00%	4.70%	5.70%	0.20%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	2000-2100	630	44.70%	23.10%	0.00%	4.50%	3.40%	1.30%	0.30%	4.80%	0.00%	0.30%	1.60%	0.30%	0.50%	0.00%	7.20%	6.00%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	2100-2200	320	42.80%	24.70%	0.00%	4.40%	2.50%	0.90%	0.60%	5.60%	0.00%	0.00%	2.50%	0.00%	0.30%	0.30%	0.00%	7.50%	8.10%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	2200-2300	320	42.80%	24.70%	0.00%	4.40%	2.50%	0.90%	0.60%	5.60%	0.00%	0.00%	2.50%	0.00%	0.30%	0.30%	0.00%	7.50%	8.10%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_44	PD	50	50.0	N	2300-2400	230	40.10%	31.70%	0.00%	4.40%	1.80%	1.30%	0.00%	5.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.70%	9.70%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung - Elevated	RD_45	PD	50	49.5	N	0000-0100	440	36.83%	54.33%	0.00%	2.23%	0.80%	0.48%	0.00%	0.00%	0.00%	0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	4.52%	0.48%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung - Elevated	RD_45	PD	50	48.1	N	0100-0200	310	31.43%	48.80%	0.00%	2.60%	0.90%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.20%	0.37%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung - Elevated	RD_45	PD	50	50.0	N	0200-0300	280	25.95%	66.28%	0.00%	2.16%	0.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.69%	0.00%	0.00%	0.00%	100.00%																
Castle Peak Road - Kwai Chung - Elevated	RD_45	PD	50	50.0	N	0300-0400	220	28.53%	64.35%	0.00%	3.33%	1.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.90%	0.00%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung - Elevated	RD_45	PD	50	50.0	N	0400-0500	220	28.53%	64.35%	0.00%	3.33%	1.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.90%	0.00%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung - Elevated	RD_45	PD	5																																									

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Emission Est. by Broad Bus Approach (%)	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Vehicle 2.5-3.5	04 - Light Vehicle 3.5-4.5	05 - Light Vehicle 4.5-5.5	06 - Medium Goods Vehicle >1t	07 - Medium Goods Vehicle >1t	08 - Light Bus <3.5t	09 - Private Light Bus >3.5t	10 - Non-franchise Bus >3.5t	11 - Non-franchise Bus >3.5t	12 - Non-franchise Bus >3.5t	13 - Non-franchise Bus >3.5t	14 - Franchise Bus >3.5t	15 - Franchise Bus >3.5t	16 - Motorist	17 - Heavy Goods >2t	18 - Non-franchise Bus >2t	Total																		
																											PC	TAXI	LV1	LV2	LV3	HGV1	HGV2	PLB	P14	P15	NFB1	NFB2	NFB3	FBS1	FBS2	MC	HGV4	NFB4
Castle Peak Road - Kwai Chung	RD_S1	PD	50	46.5	N	2100-2200	840	38.80%	38.10%	0.00%	4.30%	1.60%	0.50%	0.40%	2.00%	0.00%	0.00%	1.40%	0.10%	0.40%	0.00%	2.80%	9.30%	0.10%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S1	PD	50	46.5	N	2200-2300	840	38.80%	38.10%	0.00%	4.30%	1.60%	0.50%	0.40%	2.00%	0.00%	0.00%	1.40%	0.10%	0.40%	0.00%	2.80%	9.30%	0.10%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S1	PD	50	46.5	N	2300-2400	840	38.80%	38.10%	0.00%	4.30%	1.60%	0.50%	0.40%	2.00%	0.00%	0.00%	1.40%	0.10%	0.40%	0.00%	2.80%	9.30%	0.10%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	50.0	N	0000-0100	370	43.60%	40.60%	0.00%	2.70%	1.10%	0.50%	0.30%	0.00%	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	5.20%	5.20%	0.50%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	50.0	N	0100-0200	370	43.60%	40.60%	0.00%	2.70%	1.10%	0.50%	0.30%	0.00%	0.00%	0.00%	0.30%	0.00%	0.00%	5.20%	5.20%	0.50%	0.00%	100.00%																			
Castle Peak Road - Kwai Chung	RD_S2	PD	50	50.0	N	0200-0300	370	43.60%	40.60%	0.00%	2.70%	1.10%	0.50%	0.30%	0.00%	0.00%	0.00%	0.30%	0.00%	0.00%	5.20%	5.20%	0.50%	0.00%	100.00%																			
Castle Peak Road - Kwai Chung	RD_S2	PD	50	50.0	N	0300-0400	370	43.60%	40.60%	0.00%	2.70%	1.10%	0.50%	0.30%	0.00%	0.00%	0.00%	0.30%	0.00%	0.00%	5.20%	5.20%	0.50%	0.00%	100.00%																			
Castle Peak Road - Kwai Chung	RD_S2	PD	50	50.0	N	0400-0500	150	24.00%	23.70%	0.00%	1.30%	0.30%	0.70%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	2.70%	0.50%	0.60%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	50.0	N	0500-0600	150	24.00%	23.70%	0.00%	1.30%	0.30%	0.70%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	2.70%	0.50%	0.60%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	50.0	N	0600-0700	150	24.00%	23.70%	0.00%	1.30%	0.30%	0.70%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	2.70%	0.50%	0.60%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	43.8	N	0700-0800	1100	47.80%	45.10%	0.00%	4.80%	1.70%	0.50%	1.00%	0.50%	1.70%	3.70%	4.00%	0.70%	0.00%	7.60%	4.20%	1.20%	0.00%	100.00%																			
Castle Peak Road - Kwai Chung	RD_S2	PD	50	43.8	N	0800-0900	1100	47.80%	45.10%	0.00%	4.80%	1.70%	0.50%	1.00%	0.50%	1.70%	3.70%	4.00%	0.70%	0.00%	7.60%	4.20%	1.20%	0.00%	100.00%																			
Castle Peak Road - Kwai Chung	RD_S2	PD	50	43.8	N	0900-1000	1100	47.80%	45.10%	0.00%	4.80%	1.70%	0.50%	1.00%	0.50%	1.70%	3.70%	4.00%	0.70%	0.00%	7.60%	4.20%	1.20%	0.00%	100.00%																			
Castle Peak Road - Kwai Chung	RD_S2	PD	50	43.8	N	1000-1100	1040	48.30%	45.80%	0.10%	10.30%	4.40%	1.70%	0.50%	1.00%	5.30%	4.40%	0.70%	1.40%	0.20%	0.20%	0.00%	2.90%	3.10%	1.30%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_S2	PD	50	43.8	N	1100-1200	800	47.00%	45.00%	0.10%	12.00%	4.30%	1.60%	0.60%	0.50%	0.80%	0.50%	0.20%	0.10%	0.20%	0.00%	3.60%	4.00%	1.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	46.5	N	1200-1300	840	47.00%	45.00%	0.10%	11.20%	4.30%	1.60%	0.60%	0.50%	0.80%	0.50%	0.20%	0.10%	0.20%	0.40%	0.50%	4.90%	1.20%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	46.5	N	1300-1400	800	50.50%	46.20%	0.10%	10.80%	4.40%	1.40%	0.90%	0.30%	0.80%	0.60%	0.90%	0.10%	0.10%	0.10%	0.00%	3.80%	5.10%	1.30%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_S2	PD	50	46.5	N	1400-1500	800	52.90%	45.30%	0.10%	11.10%	4.30%	1.60%	0.40%	0.20%	1.20%	0.20%	0.00%	0.00%	0.00%	0.00%	3.40%	4.10%	1.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	46.8	N	1500-1600	800	49.30%	47.00%	0.00%	10.60%	4.20%	1.10%	0.40%	3.70%	1.60%	1.60%	2.70%	0.20%	0.40%	0.00%	3.30%	2.80%	0.80%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	46.8	N	1600-1700	970	45.70%	45.60%	0.10%	17.00%	6.00%	2.00%	1.10%	4.80%	1.60%	0.80%	0.20%	0.20%	0.10%	0.00%	3.20%	4.40%	1.70%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	43.0	N	1700-1800	1150	54.80%	52.80%	0.10%	9.10%	4.00%	1.10%	0.70%	4.10%	0.80%	0.30%	1.80%	0.10%	0.10%	0.00%	3.40%	6.00%	0.70%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	42.6	N	1800-1900	1190	58.00%	52.60%	0.10%	7.10%	2.40%	0.50%	0.80%	5.40%	0.00%	0.20%	1.60%	0.20%	0.10%	0.00%	3.60%	6.80%	0.60%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	42.6	N	1900-2000	1190	58.00%	52.60%	0.10%	7.10%	2.40%	0.50%	0.80%	5.40%	0.00%	0.20%	1.60%	0.20%	0.10%	0.00%	3.60%	6.80%	0.60%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	47.8	N	2000-2100	720	48.80%	48.10%	0.00%	4.80%	1.20%	0.90%	0.40%	0.10%	5.30%	0.00%	0.10%	2.50%	0.30%	0.30%	0.00%	4.70%	2.00%	0.10%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_S2	PD	50	48.9	N	2100-2200	620	46.50%	44.40%	0.00%	3.30%	1.10%	0.30%	0.30%	0.60%	0.00%	0.00%	3.70%	0.00%	0.20%	0.00%	5.00%	9.00%	0.20%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	48.9	N	2200-2300	620	46.50%	44.40%	0.00%	3.30%	1.10%	0.30%	0.30%	0.60%	0.00%	0.00%	3.70%	0.00%	0.20%	0.00%	5.00%	9.00%	0.20%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	PD	50	50.0	N	2300-2400	430	22.00%	21.90%	0.00%	1.30%	0.30%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.50%	6.50%	0.20%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_S2	DD	50	39.2	N	0000-0100	120	36.80%	35.80%	0.00%	1.40%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.10%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	39.2	N	0100-0200	80	21.10%	20.90%	0.00%	1.40%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.10%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	40.0	N	0200-0300	70	26.10%	25.90%	0.00%	1.30%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.30%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	40.0	N	0300-0400	60	27.80%	27.60%	0.00%	1.50%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.90%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	40.0	N	0400-0500	60	17.60%	17.50%	0.00%	0.80%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	40.0	N	0500-0600	70	17.00%	16.60%	0.00%	1.10%	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.20%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_S2	DD	50	38.9	N	0600-0700	130	21.70%	21.60%	0.00%	1.80%	0.30%	0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.70%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_S2	DD	50	38.9	N	0700-0800	130	21.70%	21.60%	0.00%	1.80%	0.30%	0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.70%	0.00%	0.00%	100.00%																	
Castle Peak Road - Kwai Chung	RD_S2	DD	50	44.9	N	0800-0900	320	45.80%	44.00%	0.00%	8.50%	2.70%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.30%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	44.9	N	0900-1000	320	45.80%	44.00%	0.00%	8.50%	2.70%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.30%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	32.8	N	0900-1000	300	44.80%	44.90%	0.00%	15.70%	4.20%	1.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.00%	0.00%	0.00%	3.10%	0.00%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	32.8	N	1000-1100	270	40.40%	40.10%	0.00%	18.30%	5.20%	1.10%	0.40%	5.20%	0.40%	1.90%	0.40%	0.40%	0.00%	0.00%	0.00%	4.50%	0.70%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	35.4	N	1100-1200	280	44.30%	44.00%	0.00%	17.90%	4.40%	1.60%	0.40%	6.00%	0.00%	1.60%	0.40%	0.40%	0.00%	0.00%	0.00%	5.60%	0.80%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	35.4	N	1200-1300	280	44.30%	44.00%	0.00%	17.90%	4.40%	1.60%	0.40%	6.00%	0.00%	1.60%	0.40%	0.40%	0.00%	0.00%	0.00%	5.60%	0.80%	0.00%	100.00%																		
Castle Peak Road - Kwai Chung	RD_S2	DD	50	36.1	N	1300-1400	280	44.30%	44.00%	0.																																		

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start/End Time	Start/End Day	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Vehicle <2.5t	04 - Light Vehicle 2.5-3.5t	05 - Light Vehicle >3.5t	06 - Medium Goods Vehicle <10t	07 - Medium Goods Vehicle 10-15t	08 - Light Bus <10t	09 - Light Bus 10-15t	10 - Light Bus >15t	11 - Non-franchise Bus <6.4m	12 - Non-franchise Bus 6.4-8m	13 - Non-franchise Bus >8m	14 - Franchise Bus Single Deck	15 - Franchise Bus Double Deck	16 - Motorcyclist	17 - Heavy Goods <4m	18 - Heavy Goods >4m	Total																		
																												PC	TAXI	LV1	LV2	LV3	HGV1	HGV2	PLB	P14	P15	NFB1	NFB2	NFB3	FBS1	FBS2	MC	HGV1	HGV2
																												%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Wo Tung Tai Street	RD_95_96	LD	50	22.3	Y	0900-1000	640	15.38%	28.18%	0.30%	20.89%	10.09%	10.71%	0.94%	4.24%	0.17%	0.30%	0.64%	0.17%	0.30%	0.13%	3.61%	3.46%	0.48%	0.00%	100.00%																			
Wo Tung Tai Street	RD_95_96	LD	50	23.3	Y	1000-1100	580	16.38%	20.62%	0.38%	21.58%	10.75%	11.77%	1.17%	5.00%	0.00%	0.69%	0.38%	0.19%	0.38%	0.19%	2.52%	2.36%	1.21%	0.00%	100.00%																			
Wo Tung Tai Street	RD_95_96	LD	50	24.1	Y	1100-1200	520	11.00%	17.37%	0.41%	24.43%	12.17%	12.79%	1.82%	6.82%	0.19%	0.38%	0.19%	0.38%	0.19%	0.38%	4.72%	4.38%	1.41%	0.00%	100.00%																			
Wo Tung Tai Street	RD_95_96	LD	50	24.8	Y	1200-1300	480	17.55%	17.55%	0.41%	22.81%	11.15%	11.65%	1.60%	3.49%	0.00%	0.85%	0.41%	0.23%	0.41%	0.23%	0.41%	3.56%	5.10%	1.24%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	25.3	Y	1300-1400	440	20.55%	15.00%	0.47%	23.41%	11.11%	9.05%	1.57%	3.49%	0.00%	0.45%	0.25%	0.00%	0.45%	0.25%	0.00%	4.05%	5.54%	1.16%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	24.5	Y	1400-1500	520	21.15%	17.48%	0.39%	20.45%	12.48%	12.48%	1.50%	4.21%	0.19%	0.38%	0.19%	0.38%	0.19%	0.38%	0.19%	3.22%	3.04%	0.39%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	25.4	Y	1500-1600	440	20.88%	21.17%	0.48%	23.06%	11.16%	7.65%	1.71%	3.68%	0.23%	0.91%	0.62%	0.23%	0.48%	0.43%	0.62%	3.04%	3.07%	0.73%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	23.5	Y	1600-1700	570	22.68%	16.64%	0.38%	21.06%	9.45%	9.00%	1.09%	5.44%	0.00%	2.15%	0.92%	0.00%	0.36%	0.41%	0.26%	4.87%	4.87%	1.81%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	23.0	Y	1700-1800	600	15.12%	18.29%	0.39%	25.15%	11.12%	11.12%	1.12%	4.12%	0.19%	0.38%	0.19%	0.38%	0.19%	0.38%	0.19%	3.62%	3.62%	0.00%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	23.3	Y	1800-1900	580	34.23%	15.92%	0.34%	16.82%	5.32%	2.64%	0.87%	7.40%	0.00%	0.36%	0.70%	0.00%	0.00%	0.18%	0.54%	9.02%	7.07%	0.70%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	26.1	Y	1900-2000	380	27.73%	26.26%	0.00%	13.27%	4.14%	2.33%	2.25%	6.71%	0.00%	0.26%	0.76%	0.00%	0.51%	0.26%	0.41%	10.90%	0.25%	0.00%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	25.9	Y	2000-2100	330	23.77%	31.78%	0.00%	9.29%	1.00%	3.09%	3.09%	3.09%	0.00%	0.00%	0.00%	0.00%	0.52%	0.80%	9.02%	0.00%	0.00%	0.00%	100.00%																			
Wo Tung Tai Street	RD_95_96	LD	50	27.8	Y	2100-2200	280	22.91%	33.91%	0.00%	8.50%	3.69%	2.97%	1.14%	7.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.39%	0.62%	11.79%	0.00%	0.00%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	27.9	Y	2200-2300	270	23.01%	32.23%	0.00%	8.71%	2.69%	3.04%	0.37%	6.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.38%	0.38%	8.30%	0.37%	0.00%	0.00%	100.00%																		
Wo Tung Tai Street	RD_95_96	LD	50	25.8	Y	2300-2400	200	24.05%	42.43%	0.00%	8.25%	1.58%	1.58%	1.58%	3.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.52%	0.80%	9.02%	0.00%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	27.8	Y	0000-0100	210	22.69%	52.51%	0.00%	7.28%	3.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.51%	5.43%	0.50%	0.00%	100.00%																			
Wo Kwa Lane	RD_97_98	LD	50	29.2	Y	0100-0200	140	19.54%	61.13%	0.00%	8.77%	4.51%	2.26%	0.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.74%	3.77%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	29.2	Y	0200-0300	140	16.36%	64.87%	0.00%	7.78%	4.07%	2.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	4.07%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	29.8	Y	0300-0400	110	16.63%	58.87%	0.00%	9.79%	7.82%	4.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.97%	0.00%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	29.8	Y	0400-0500	120	9.24%	58.51%	0.00%	15.62%	10.26%	7.38%	4.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.68%	1.89%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	29.2	Y	0500-0600	140	16.63%	58.87%	0.00%	15.99%	7.82%	4.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.03%	2.49%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	26.7	Y	0600-0700	270	11.67%	34.59%	0.00%	12.47%	6.22%	3.11%	0.41%	16.13%	0.00%	1.54%	0.79%	0.41%	0.79%	0.38%	1.71%	3.49%	0.81%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	21.0	Y	0700-0800	530	19.23%	23.43%	0.00%	16.19%	7.10%	10.11%	0.00%	8.45%	0.57%	0.77%	0.00%	0.39%	0.19%	0.38%	0.19%	3.56%	5.53%	0.51%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	20.2	Y	0800-0900	600	17.69%	20.27%	0.00%	19.00%	7.88%	6.94%	0.84%	7.47%	1.03%	1.02%	0.37%	0.33%	0.58%	0.19%	0.40%	1.68%	0.33%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	17.3	Y	0900-1000	750	20.85%	27.10%	0.27%	24.82%	9.83%	8.78%	0.64%	3.61%	0.14%	0.27%	0.27%	0.14%	0.27%	0.14%	0.27%	0.14%	3.69%	2.52%	0.25%	0.00%	100.00%																	
Wo Kwa Lane	RD_97_98	LD	50	18.4	Y	1000-1100	690	21.15%	23.11%	0.27%	23.11%	10.42%	10.19%	0.19%	3.19%	0.19%	0.19%	0.19%	0.19%	0.19%	0.19%	0.19%	0.19%	3.29%	2.26%	0.25%	0.00%	100.00%																	
Wo Kwa Lane	RD_97_98	LD	50	20.3	Y	1100-1200	590	16.54%	16.89%	0.34%	28.95%	12.22%	8.79%	1.35%	4.15%	0.16%	0.64%	0.52%	0.00%	0.00%	0.37%	3.11%	3.28%	0.69%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	21.1	Y	1200-1300	550	20.33%	17.93%	0.38%	25.01%	10.31%	10.16%	0.91%	4.81%	0.00%	0.75%	0.38%	0.19%	0.38%	0.19%	0.38%	3.77%	3.15%	0.45%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	21.8	Y	1300-1400	520	22.58%	16.64%	0.38%	22.58%	10.26%	10.26%	1.02%	4.12%	0.19%	0.38%	0.19%	0.38%	0.19%	0.38%	0.19%	3.62%	3.62%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	20.3	Y	1400-1500	590	23.62%	17.90%	0.34%	26.51%	12.24%	6.07%	0.69%	3.63%	0.16%	0.16%	0.52%	0.16%	0.34%	0.37%	2.15%	4.05%	0.85%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	18.1	Y	1500-1600	610	33.11%	21.12%	0.38%	25.70%	10.54%	6.59%	0.57%	3.20%	0.20%	0.80%	0.62%	0.00%	0.38%	0.43%	3.22%	3.26%	0.59%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	19.1	Y	1600-1700	690	25.52%	18.06%	0.29%	24.63%	10.26%	10.26%	1.02%	4.12%	0.19%	0.38%	0.19%	0.38%	0.19%	0.38%	0.19%	3.62%	3.62%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	21.8	Y	1700-1800	690	23.08%	16.35%	0.34%	19.21%	7.68%	5.59%	0.59%	4.53%	0.00%	0.58%	0.27%	0.00%	0.00%	0.29%	0.42%	4.89%	0.76%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	18.8	Y	1800-1900	380	38.85%	17.32%	0.34%	16.02%	4.80%	2.67%	0.78%	6.43%	0.00%	0.30%	0.88%	0.00%	0.00%	0.18%	0.47%	5.98%	0.58%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	19.1	Y	1900-2000	370	31.23%	17.32%	0.34%	16.02%	4.80%	2.67%	0.78%	6.43%	0.00%	0.30%	0.88%	0.00%	0.00%	0.18%	0.47%	5.98%	0.58%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	24.7	Y	2000-2100	370	20.02%	32.70%	0.00%	10.00%	4.63%	2.71%	0.28%	5.45%	0.00%	0.00%	0.00%	0.00%	0.25%	0.51%	9.47%	0.26%	0.00%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	25.7	Y	2100-2200	320	26.28%	36.15%	0.00%	9.44%	3.25%	2.67%	0.65%	6.13%	0.00%	0.00%	0.98%	0.00%	0.00%	0.31%	5.81%	9.43%	0.00%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	23.8	Y	2200-2300	240	25.62%	40.88%	0.00%	8.46%	2.67%	2.67%	0.65%	6.13%	0.00%	0.00%	0.98%	0.00%	0.00%	0.00%	0.44%	6.88%	6.53%	0.00%	0.00%	100.00%																		
Wo Kwa Lane	RD_97_98	LD	50	27.3	Y	2300-2400	240	23.83%	42.99%	0.00%	8.11%	2.21%	2.65%	0.00%	5.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	6.88%	6.53%	0.00%	0.00%	0.00%	100.00%																		
Kwai Shing Circuit	RD_99_100	LD	50	40.0	Y	0000-0100	140	19.85%	51.65%	0.00%	8.00%	0.75%	0.80%	0.00%	4.60%	0.00%																													

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start/End of Road Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	Vehicle Type																	Total			
								Private		Taxi		Light		Vehicles		Vehicles		Medium		Goods		Light		Buses				
								PC	CV	TA	LV	LV1	LV2	HV1	HV2	PLB	PLA	PUB	PUB	FB	FB	FB	FB	FB		FB	FB	
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0300-0400	220	23.35%	51.90%	0.00%	61.10%	6.65%	2.40%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.85%	4.25%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0400-0500	220	23.35%	51.90%	0.00%	61.10%	6.65%	2.40%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.85%	4.25%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	40.0	Y	0500-0600	270	18.00%	68.90%	0.00%	7.00%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	13.10%	100.00%
Kwai Yik Road	RD-113.114	DD	50	39.6	Y	0600-0700	550	16.80%	30.42%	0.00%	10.70%	5.57%	1.50%	0.35%	12.66%	0.16%	2.43%	2.23%	0.36%	1.27%	0.18%	0.40%	4.65%	7.64%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	36.6	Y	0700-0800	1240	33.87%	21.21%	0.00%	11.60%	6.01%	2.04%	0.50%	6.96%	0.51%	1.30%	2.80%	0.15%	0.80%	0.10%	2.59%	6.20%	3.82%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	36.2	Y	0800-0900	1340	32.00%	18.83%	0.00%	13.10%	6.83%	2.89%	0.50%	3.24%	0.85%	1.40%	3.40%	0.15%	0.80%	0.10%	2.59%	6.20%	3.82%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	34.9	Y	0900-1000	1440	31.74%	21.99%	0.00%	16.18%	8.83%	3.71%	0.55%	3.17%	0.15%	0.50%	1.85%	0.25%	0.50%	0.25%	0.50%	1.80%	4.09%	3.05%	0.00%	100.00%	
Kwai Yik Road	RD-113.114	DD	50	36.0	Y	1000-1100	1380	31.11%	16.78%	0.00%	18.46%	9.42%	5.78%	0.05%	3.49%	0.05%	0.75%	0.95%	0.15%	0.50%	0.05%	1.40%	3.09%	4.80%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	36.8	Y	1100-1200	1150	32.10%	15.08%	0.00%	15.10%	11.08%	5.07%	0.95%	3.60%	0.05%	0.90%	0.05%	0.20%	0.20%	0.10%	1.20%	4.00%	4.00%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	37.1	Y	1200-1300	1120	30.10%	16.05%	0.00%	19.78%	9.22%	5.87%	0.70%	3.90%	0.10%	0.90%	0.20%	0.60%	0.10%	1.60%	2.50%	4.81%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	37.4	Y	1300-1400	1100	32.73%	16.20%	0.00%	19.68%	9.36%	4.29%	1.05%	2.52%	0.00%	0.80%	0.70%	0.10%	0.40%	0.20%	1.90%	5.49%	4.85%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	38.4	Y	1400-1500	1200	34.36%	15.30%	0.00%	17.20%	9.60%	5.67%	1.00%	3.39%	0.50%	2.83%	0.15%	0.25%	1.60%	0.15%	1.50%	4.45%	4.00%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	37.4	Y	1500-1600	1300	32.78%	18.30%	0.00%	19.61%	9.26%	3.69%	0.40%	2.57%	0.20%	1.05%	0.20%	0.75%	0.20%	0.75%	2.00%	3.05%	4.30%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	36.6	Y	1600-1700	1250	31.48%	17.43%	0.00%	16.62%	7.58%	6.81%	0.55%	3.41%	0.00%	2.71%	2.19%	0.24%	0.79%	0.14%	1.80%	4.27%	3.94%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	36.0	Y	1700-1800	1300	40.35%	15.38%	0.00%	16.30%	11.30%	3.93%	4.29%	0.35%	0.00%	0.81%	1.64%	0.14%	0.50%	0.14%	2.19%	6.87%	3.10%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	36.1	Y	1800-1900	1300	44.83%	15.84%	0.00%	12.43%	3.94%	1.92%	0.55%	4.42%	0.00%	0.51%	1.54%	0.24%	0.70%	0.14%	2.70%	7.14%	2.94%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	37.5	Y	1900-2000	1030	41.22%	21.10%	0.00%	10.15%	3.19%	1.00%	0.20%	4.22%	0.00%	0.20%	0.70%	0.10%	0.60%	0.20%	2.29%	9.85%	3.55%	0.00%	100.00%		
Kwai Yik Road	RD-113.114	DD	50	38.4	Y	2000-2100	840	34.36%	26.60%	0.00%	7.20%	3.85%	1.30%	0.20%	3.85%	0.00%	0.20%	0.20%	0.70%	0.10%	2.80%	10.90%	4.30%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	38.9	Y	2100-2200	710	34.36%	27.95%	0.00%	6.80%	2.71%	1.10%	0.45%	4.40%	0.00%	0.00%	0.00%	0.30%	0.15%	2.85%	10.90%	4.95%	0.00%	100.00%			
Kwai Yik Road	RD-113.114	DD	50	39.2	Y	2200-2300	580	35.85%	32.41%	0.00%	6.70%	2.05%	1.50%	0.30%	4.09%	0.00%	0.00%	0.45%	0.15%	2.80%	7.80%	5.55%	0.00%	100.00%				
Kwai Yik Road	RD-113.114	DD	50	38.9	Y	2300-0000	480	33.00%	37.68%	0.00%	7.07%	1.85%	1.64%	0.00%	4.38%	0.00%	0.00%	0.00%	0.40%	0.20%	3.74%	7.90%	2.00%	0.00%	100.00%			
Kwai On Road	RD-115.116	DD	50	39.3	Y	0000-0100	480	24.71%	54.55%	0.00%	6.40%	2.49%	2.82%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.50%	4.51%	0.00%	100.00%			
Kwai On Road	RD-115.116	DD	50	39.8	Y	0100-0200	380	19.58%	57.78%	0.00%	8.60%	3.40%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.80%	2.80%	0.00%	100.00%			
Kwai On Road	RD-115.116	DD	50	39.3	Y	0200-0300	330	16.40%	60.00%	0.00%	6.33%	2.81%	2.20%	0.28%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	1.12%	6.52%	0.00%	100.00%			
Kwai On Road	RD-115.116	DD	50	40.0	Y	0300-0400	270	16.61%	56.27%	0.00%	7.94%	5.66%	3.37%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.90%	7.91%	0.00%	100.00%			
Kwai On Road	RD-115.116	DD	50	40.0	Y	0400-0500	260	16.40%	56.41%	0.00%	8.64%	5.66%	3.37%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.90%	7.91%	0.00%	100.00%			
Kwai On Road	RD-115.116	DD	50	39.9	Y	0500-0600	330	9.85%	56.66%	0.00%	13.48%	6.25%	4.32%	0.28%	0.00%	0.00%	0.00%	0.28%	0.00%	0.28%	0.00%	2.22%	6.52%	0.00%	100.00%			
Kwai On Road	RD-115.116	DD	50	38.9	Y	0600-0700	560	14.68%	39.92%	0.00%	12.18%	5.80%	2.89%	0.53%	1.83%	0.00%	1.47%	0.74%	0.21%	0.74%	0.00%	3.62%	15.43%	0.00%	100.00%			
Kwai On Road	RD-115.116	DD	50	35.1	Y	0700-0800	1220	35.20%	27.60%	0.00%	14.60%	8.47%	5.00%	0.40%	2.80%	0.00%	1.47%	0.74%	0.21%	0.74%	0.00%	2.80%	14.60%	4.00%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	34.1	Y	0800-0900	1410	30.94%	26.79%	0.00%	16.46%	6.85%	6.07%	0.53%	0.99%	0.00%	0.75%	0.52%	0.00%	0.19%	0.00%	0.00%	3.62%	15.43%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	32.0	Y	0900-1000	1790	28.35%	23.95%	0.00%	20.88%	8.51%	7.51%	0.43%	0.82%	0.00%	0.28%	0.62%	0.00%	0.11%	0.00%	0.00%	3.32%	5.25%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	33.4	Y	1000-1100	1790	24.22%	15.50%	0.00%	21.42%	10.60%	8.16%	0.30%	0.42%	0.07%	0.44%	0.07%	0.13%	0.00%	0.13%	0.00%	3.10%	6.96%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	35.2	Y	1200-1300	1220	24.42%	19.88%	0.00%	23.28%	8.83%	9.39%	0.97%	0.47%	0.00%	0.47%	0.33%	0.07%	0.33%	0.00%	0.00%	3.67%	7.83%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	34.6	Y	1300-1400	1160	26.38%	19.11%	0.00%	26.38%	11.10%	11.10%	1.02%	0.28%	0.00%	0.28%	0.00%	0.28%	0.00%	0.28%	0.00%	3.67%	7.83%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	34.6	Y	1400-1500	1330	27.73%	19.70%	0.00%	24.38%	10.30%	5.52%	0.60%	0.40%	0.07%	0.13%	0.46%	0.07%	0.27%	0.00%	0.00%	3.27%	7.06%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	35.5	Y	1500-1600	1170	26.67%	22.93%	0.00%	23.20%	8.83%	5.97%	0.43%	0.37%	0.07%	0.53%	0.70%	0.07%	0.43%	0.00%	0.00%	2.19%	7.67%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	34.2	Y	1700-1800	1440	21.80%	24.51%	0.00%	19.46%	6.41%	5.64%	0.84%	0.00%	0.07%	0.50%	0.57%	0.07%	0.27%	0.00%	0.00%	4.18%	6.05%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	34.6	Y	1800-1900	1350	36.08%	26.32%	0.00%	16.67%	4.06%	2.70%	1.14%	0.00%	0.00%	0.28%	0.50%	0.14%	0.34%	0.00%	0.00%	5.50%	6.22%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	37.2	Y	1900-2000	1040	35.20%	26.00%	0.00%	16.67%	4.06%	2.70%	1.14%	0.00%	0.00%	0.28%	0.50%	0.14%	0.34%	0.00%	0.00%	5.50%	6.22%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	37.2	Y	2000-2100	870	30.52%	34.62%	0.00%	8.90%	3.80%	2.41%	0.14%	0.60%	0.00%	0.13%	0.67%	0.14%	0.47%	0.00%	0.00%	8.30%	9.31%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	37.9	Y	2100-2200	750	29.80%	36.18%	0.00%	8.36%	2.73%	2.18%	0.54%	0.87%	0.00%	0.00%	1.10%	0.00%	0.14%	0.00%	0.00%	8.22%	10.89%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	38.1	Y	2200-2300	590	27.47%	40.00%	0.00%	7.20%	2.60%	2.60%	0.40%	0.80%	0.00%	0.40%	0.54%	0.00%	0.14%	0.00%	0.00%	8.22%	10.89%	0.00%	100.00%		
Kwai On Road	RD-115.116	DD	50	38.1	Y	2300-0000	520	27.95%	48.17%	0.0																		

Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Emission Estimation by Broad Bus (Approx) (%)	Start Hour	End Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Van	04 - Light Goods Vehicle <2.5t	05 - Light Vehicle 2.5-3.5t	06 - Medium Goods Vehicle >3.5t	07 - Medium Goods Vehicle >15t	08 - Light Bus	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise Bus	12 - Non-franchise Bus <6.4t	13 - Non-franchise Bus 6.4-24t	14 - Franchise Bus Single Deck	15 - Franchise Bus Double Deck	16 - Motorcyclist	17 - Heavy Goods <8t	18 - Heavy Goods >8t	Total																		
																												PC	TAXI	GVG	LVG	LGW	HGV	HLB	PUB	PUB	PUB	NEB	NEB	NEB	NEB	NEB	MC	HGV	HGV
																												RC	TAXI	GVG	LVG	LGW	HGV	HLB	PUB	PUB	PUB	NEB	NEB	NEB	NEB	NEB	MC	HGV	HGV
Leik Road	RD_122_123	DD	50	37.4	Y	1200-1300	370	39.36%	12.74%	0.00%	17.15%	14.97%	4.69%	1.98%	3.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.69%	1.98%	0.00%	100.00%																		
Leik Road	RD_122_123	DD	50	37.5	Y	1300-1400	360	42.10%	12.30%	0.00%	16.33%	15.18%	3.47%	2.57%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.69%	1.77%	0.00%	100.00%																	
Leik Road	RD_122_123	DD	50	36.9	Y	1400-1500	420	42.86%	14.00%	0.00%	14.60%	16.79%	6.29%	1.99%	1.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.17%	0.00%	0.00%	100.00%																	
Leik Road	RD_122_123	DD	50	37.6	Y	1500-1600	350	43.36%	14.47%	0.00%	17.14%	15.08%	2.90%	1.12%	1.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.57%	0.83%	0.00%	100.00%																
Leik Road	RD_122_123	DD	50	36.6	Y	1600-1700	440	36.23%	13.77%	0.00%	18.32%	15.35%	6.17%	2.99%	1.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.16%	1.35%	0.00%	100.00%																
Leik Road	RD_122_123	DD	50	36.1	Y	1700-1800	520	36.81%	12.68%	0.00%	17.00%	15.89%	5.20%	2.89%	1.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%	0.38%	0.00%	100.00%																
Leik Road	RD_122_123	DD	50	36.2	Y	1800-1900	440	52.01%	12.66%	0.00%	13.67%	7.74%	1.65%	2.51%	1.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.35%	0.59%	0.00%	100.00%																
Leik Road	RD_122_123	DD	50	37.7	Y	1900-2000	340	54.12%	16.99%	0.00%	8.77%	5.15%	0.89%	3.33%	1.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.14%	0.33%	0.00%	100.00%																
Leik Road	RD_122_123	DD	50	37.4	Y	2000-2100	370	52.74%	17.44%	0.00%	11.15%	6.44%	1.15%	1.44%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.39%	0.15%	0.00%	100.00%																
Leik Road	RD_122_123	DD	50	38.9	Y	2100-2200	220	47.5%	23.11%	0.00%	6.3%	4.95%	1.37%	1.37%	0.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.49%	0.00%	0.00%	100.00%																
Leik Road	RD_122_123	DD	50	36.9	Y	2200-2300	220	48.5%	27.41%	0.00%	6.25%	3.37%	1.49%	0.49%	3.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.70%	0.49%	0.00%	100.00%																
Leik Road	RD_122_123	DD	50	29.5	Y	0000-0100	110	35.8%	31.8%	0.00%	11.1%	8.1%	1.1%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.14%	0.98%	0.00%	100.00%																
Chun Pin Street	RD_124_125	LD	50	28.8	Y	0000-0100	110	37.43%	41.22%	0.00%	8.10%	4.17%	1.98%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.14%	0.98%	0.00%	100.00%																
Chun Pin Street	RD_124_125	LD	50	29.5	Y	0100-0200	80	32.75%	44.08%	0.00%	9.10%	4.49%	1.35%	1.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.98%	0.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	29.5	Y	0200-0300	70	16.9%	45.17%	0.00%	19.37%	11.27%	3.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.84%	0.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	29.8	Y	0300-0400	60	26.17%	45.73%	0.00%	12.00%	10.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.08%	0.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	29.8	Y	0400-0500	60	16.67%	47.97%	0.00%	18.88%	10.30%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.38%	0.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	29.5	Y	0500-0600	70	25.86%	31.00%	0.00%	15.37%	10.30%	2.80%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.97%	3.11%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	28.8	Y	0600-0700	110	24.29%	32.95%	0.00%	17.82%	10.95%	1.98%	0.98%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.97%	3.11%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	29.5	Y	0700-0800	250	46.58%	11.95%	0.00%	15.37%	10.30%	2.80%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.49%	2.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	25.0	Y	0800-0900	280	42.73%	19.00%	0.00%	18.39%	11.24%	4.37%	1.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.48%	1.10%	0.00%	100.00%														
Chun Pin Street	RD_124_125	LD	50	22.8	Y	0900-1000	300	38.89%	11.19%	0.24%	22.77%	13.44%	5.11%	1.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.01%	1.14%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	23.0	Y	1000-1100	360	33.29%	15.14%	0.11%	24.82%	13.39%	6.50%	2.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.16%	1.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	24.0	Y	1100-1200	320	30.60%	11.85%	0.31%	28.17%	15.52%	5.48%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.65%	1.62%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	24.8	Y	1200-1300	290	31.17%	13.02%	0.32%	26.82%	13.44%	6.73%	1.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.28%	1.78%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	23.0	Y	1300-1400	320	33.17%	13.02%	0.32%	26.82%	13.44%	6.73%	1.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.28%	1.78%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	23.8	Y	1400-1500	330	34.76%	12.45%	0.32%	26.82%	15.04%	3.79%	0.95%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.71%	1.58%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	25.0	Y	1500-1600	280	34.76%	14.84%	0.39%	26.81%	13.48%	4.07%	0.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.59%	1.09%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	22.5	Y	1600-1700	380	32.22%	15.14%	0.11%	24.82%	13.39%	6.50%	2.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.16%	1.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	21.8	Y	1700-1800	410	36.89%	19.65%	0.23%	29.91%	9.30%	4.21%	1.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.21%	1.53%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	22.3	Y	1800-1900	380	42.58%	21.37%	0.23%	20.06%	6.07%	1.87%	1.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.02%	1.62%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	23.0	Y	1900-2000	360	46.58%	31.00%	0.00%	15.37%	10.30%	2.80%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.49%	2.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	27.3	Y	2000-2100	190	43.23%	25.04%	0.00%	11.34%	5.92%	2.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.73%	0.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	27.8	Y	2100-2200	180	41.79%	26.89%	0.00%	11.11%	5.19%	1.30%	1.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.13%	0.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	27.8	Y	2200-2300	150	43.23%	25.04%	0.00%	11.11%	5.19%	1.30%	1.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.13%	0.00%	0.00%	100.00%															
Chun Pin Street	RD_124_125	LD	50	28.8	Y	2300-0000	110	40.01%	35.05%	0.00%	11.07%	3.75%	1.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.33%	0.00%	0.00%	100.00%															
Ta Chuen Ping Street	RD_126	LD	50	30.0	Y	0000-0100																																							

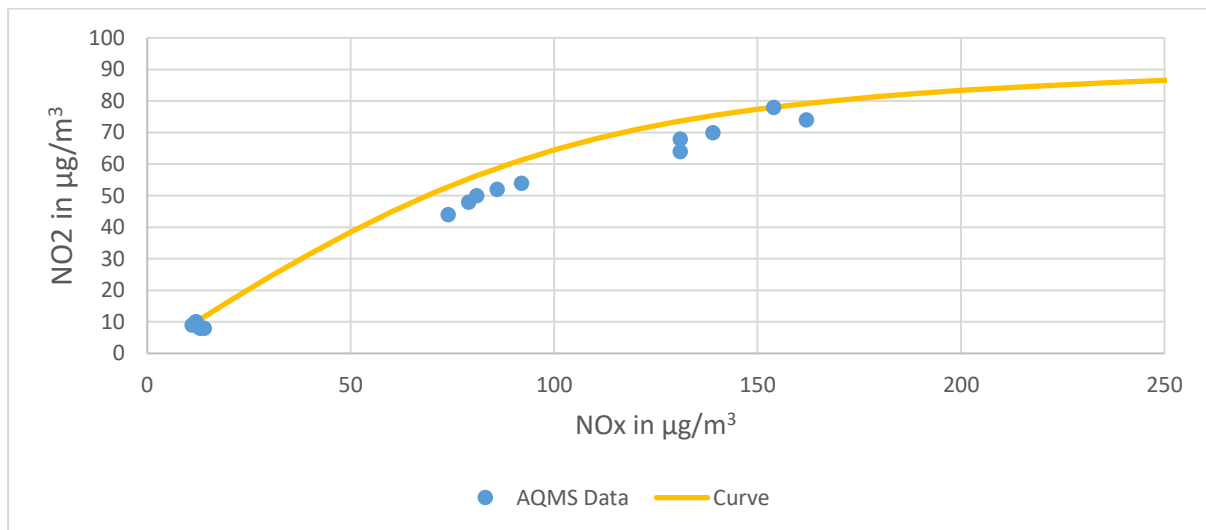
Road Name	Road ID	Road Type	Speed Limit (km/h)	Average Speed (km/h)	Emission Estimation by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/h)	Mode																		Total																		
								01 - Private Cars		02 - Taxicab		03 - Light Goods Vehicles <2.5t		04 - Light Goods Vehicles 2.5-3.5t		05 - Light Goods Vehicles >3.5t		06 - Medium Goods Vehicles <10t		07 - Medium Goods Vehicles 10-15t		08 - Light Buses		09 - Heavy Goods >3.5t			10 - Non-franchise Light Bus >3.5t		11 - Non-franchise Light Bus <3.5t		12 - Non-franchise Bus 6.4-11.9t		13 - Non-franchise Bus 12-15.9t		14 - Franchise Bus 6.4-11.9t		15 - Franchise Bus 12-15.9t		16 - Heavy Goods >3.5t		17 - Heavy Goods 3.5-6.4t		18 - Non-franchise Bus >11.9t	
								PC	TAXI	LGUV	LG2.5-3.5	LG3.5	MGV1	MGV2	MGV3	MLB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB		PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB	PMB
Shek U Street	RD_133	LD	50	30.0	Y	2100-2200	80	26.30%	13.80%	0.00%	5.00%	2.50%	1.30%	0.00%	38.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	100.00%									
Shek U Street	RD_133	LD	50	30.0	Y	2200-2300	80	27.40%	16.40%	0.00%	5.50%	2.70%	1.40%	0.00%	35.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	100.00%										
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	0000-0100	40	41.80%	8.30%	0.00%	8.30%	8.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.30%	0.00%	0.00%	0.00%	100.00%										
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	0100-0200	40	37.50%	12.50%	0.00%	12.50%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	0200-0300	40	28.50%	8.50%	0.00%	8.50%	8.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	0300-0400	40	33.20%	16.70%	0.00%	16.70%	16.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.70%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	0400-0500	20	20.00%	20.00%	0.00%	20.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	0500-0600	20	18.35%	18.35%	0.00%	18.35%	18.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.35%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	0600-0700	40	21.55%	7.20%	0.00%	17.70%	14.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.70%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	0700-0800	40	32.75%	2.90%	0.00%	17.15%	15.70%	2.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.75%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	29.5	Y	0800-0900	80	29.75%	2.90%	0.00%	19.45%	15.70%	2.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.95%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	29.5	Y	0900-1000	100	29.30%	2.10%	0.00%	28.15%	22.30%	4.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.65%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	29.5	Y	1000-1100	100	34.05%	4.25%	0.00%	25.45%	15.13%	3.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.85%	0.00%	0.00%	0.00%	100.00%												
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	29.5	Y	1100-1200	100	33.65%	2.25%	0.00%	27.20%	15.20%	2.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.10%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	29.5	Y	1200-1300	100	28.50%	2.40%	0.00%	25.05%	15.50%	3.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.40%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	29.8	Y	1300-1400	80	31.77%	2.49%	0.00%	24.27%	15.13%	2.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.37%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	29.5	Y	1400-1500	100	33.65%	2.25%	0.00%	25.80%	15.80%	2.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.15%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	1500-1600	80	36.10%	2.80%	0.00%	28.30%	15.30%	2.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.55%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	29.5	Y	1600-1700	30	37.55%	6.20%	0.00%	22.65%	7.25%	1.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.65%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	28.5	Y	1700-1800	140	40.45%	4.75%	0.00%	17.50%	5.80%	0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	36.15%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	28.5	Y	1800-1900	140	43.35%	4.65%	0.00%	18.00%	3.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	34.10%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	1900-2000	80	34.55%	6.40%	0.00%	14.00%	6.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	44.25%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	2100-2200	40	35.30%	3.90%	0.00%	8.95%	3.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	47.05%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	2200-2300	40	31.00%	8.10%	0.00%	8.10%	8.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	36.25%	0.00%	0.00%	0.00%	100.00%											
Access road to Shek Lei Shopping Centre and Marke	RD_134_135	LD	50	30.0	Y	2300-0000	40	40.00%	6.70%	0.00%	10.00%	6.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	36.60%	0.00%	0.00%	0.00%	100.00%											
Shek Pai Street	RD_136_137	DD	50	38.7	Y	0000-0100	280	37.79%	43.89%	0.00%	3.65%	1.12%	0.77%	0.00%	1.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.27%	7.27%	0.00%	0.00%	100.00%												
Shek Pai Street	RD_136_137	DD	50	38.8	Y	0100-0200	190	34.55%	5.00%	0.00%	12.50%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.65%	0.00%	0.00%	0.00%	100.00%											
Shek Pai Street	RD_136_137	DD	50	39.9	Y	0200-0300	170	27.99%	56.55%	0.00%	3.79%	1.25%	0.00%	0.00%	2.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.27%	5.67%	0.00%	0.00%	100.00%												
Shek Pai Street	RD_136_137	DD	50	40.0	Y	0300-0400	130	30.14%	53.93%	0.00%	6.38%	2.40%	0.81%	0.00%	1.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.82%	3.14%	0.00%	0.00%	100.00%												
Shek Pai Street	RD_136_137	DD	50	40.0	Y	0400-0500	130	30.14%	53.93%	0.00%	6.38%	2.40%	0.81%	0.00%	1.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.82%	3.14%	0.00%	0.00%	100.00%												
Shek Pai Street	RD_136_137	DD	50	40.0	Y	0500-0600	150	18.60%	57.30%	0.00%	10.35%	2.73%	1.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.51%	4.13%	0.00%	0.00%	100.00%												
Shek Pai Street	RD_136_137	DD	50	37.8	Y	0600-0700	360	19.78%	28.24%	0.00%	8.88%	1.73%	0.55%	0.00%	27.09%	0.28%	1.71%	0.88%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%	7.36%	5.07%	0.00%	0.00%	100.00%												
Shek Pai Street	RD_136_137	DD	50	38.1	Y	0700-0800	760	44.08%																																				

Appendix C-2 Composite Emission Factors

Appendix C-3 Derivation of Cumulative Annual Average Nox to NO₂ Conversion Equation using Jenkin Method by SAMP

Annual Average NO_x, NO₂ and OX concentration in Recent Five Years (Year 201 – 2023) at Selected EPD AQMS

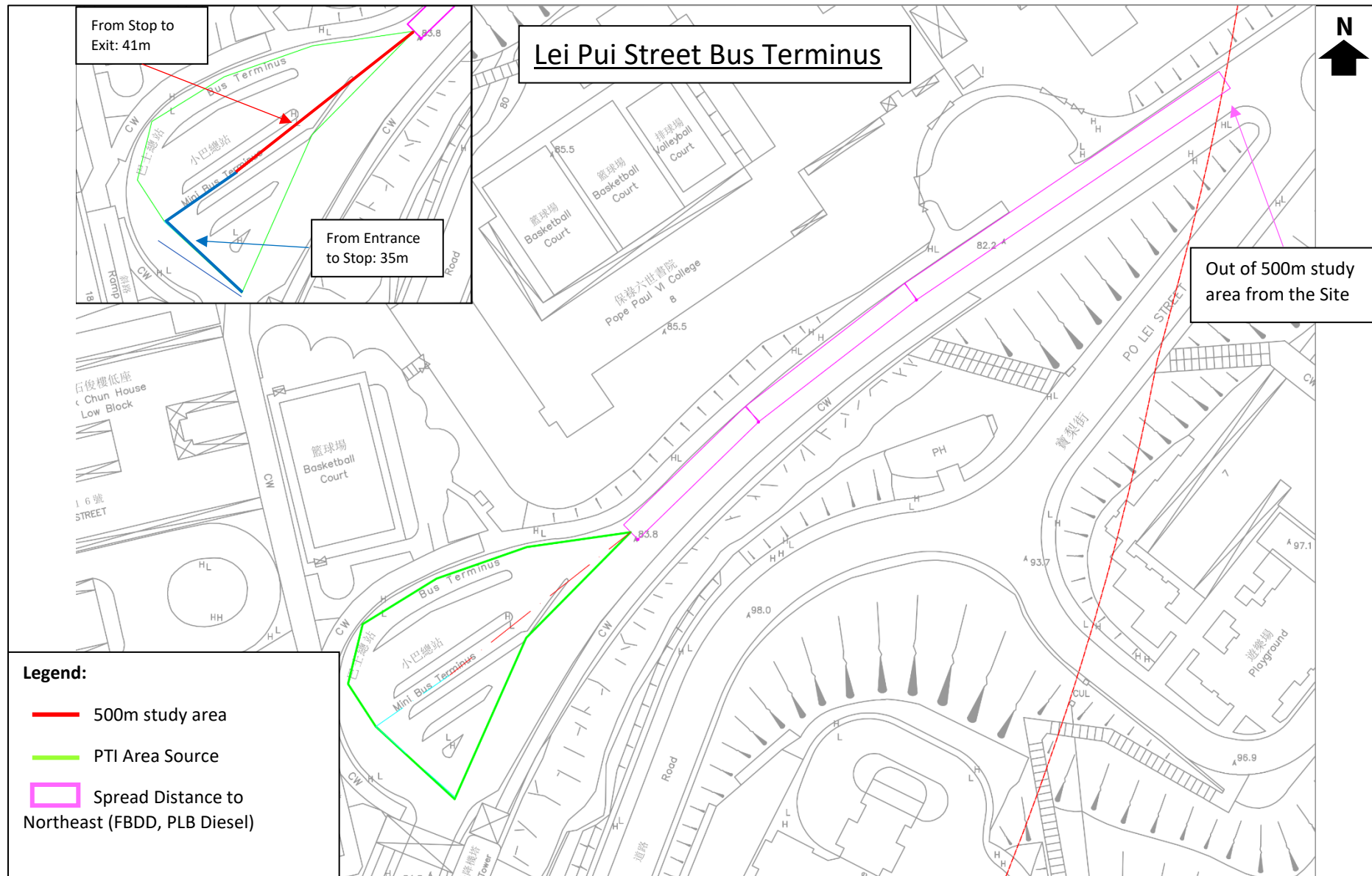
AQMS Data of the Past 5 Years				
Year	Station	NO ₂ (ug/m ³)	NO _x (ug/m ³)	Conversion
2019	KWAI CHUNG	54	92	61.3
2020	KWAI CHUNG	48	79	55.4
2021	KWAI CHUNG	52	86	58.7
2022	KWAI CHUNG	44	74	52.8
2023	KWAI CHUNG	50	81	56.4
2019	TAP MUN	10	12	10.0
2020	TAP MUN	9	11	9.2
2021	TAP MUN	10	12	10.0
2022	TAP MUN	8	13	10.8
2023	TAP MUN	8	14	11.6
2019	MONG KOK	78	154	78.0
2020	MONG KOK	74	162	79.2
2021	MONG KOK	70	139	75.3

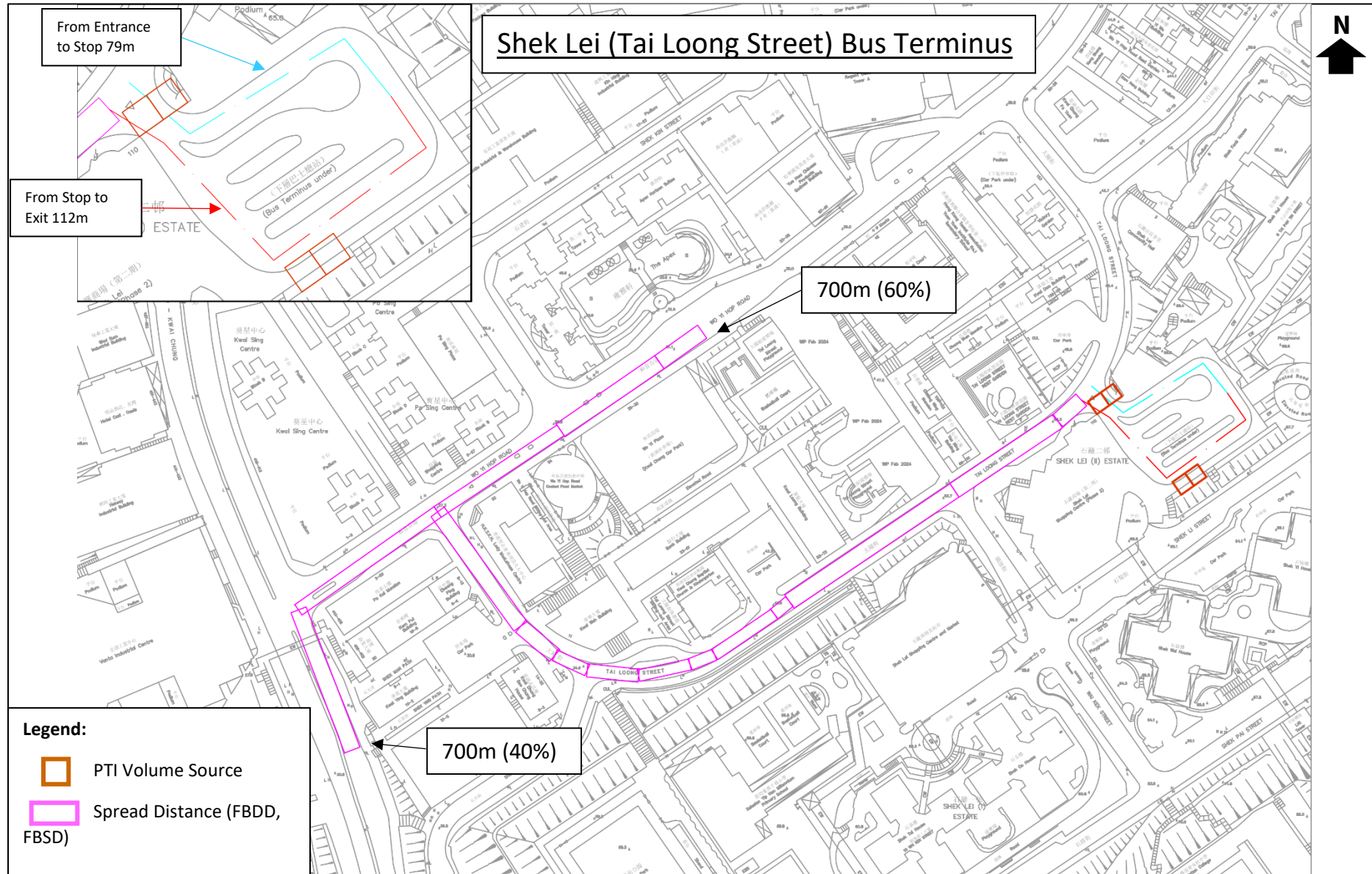


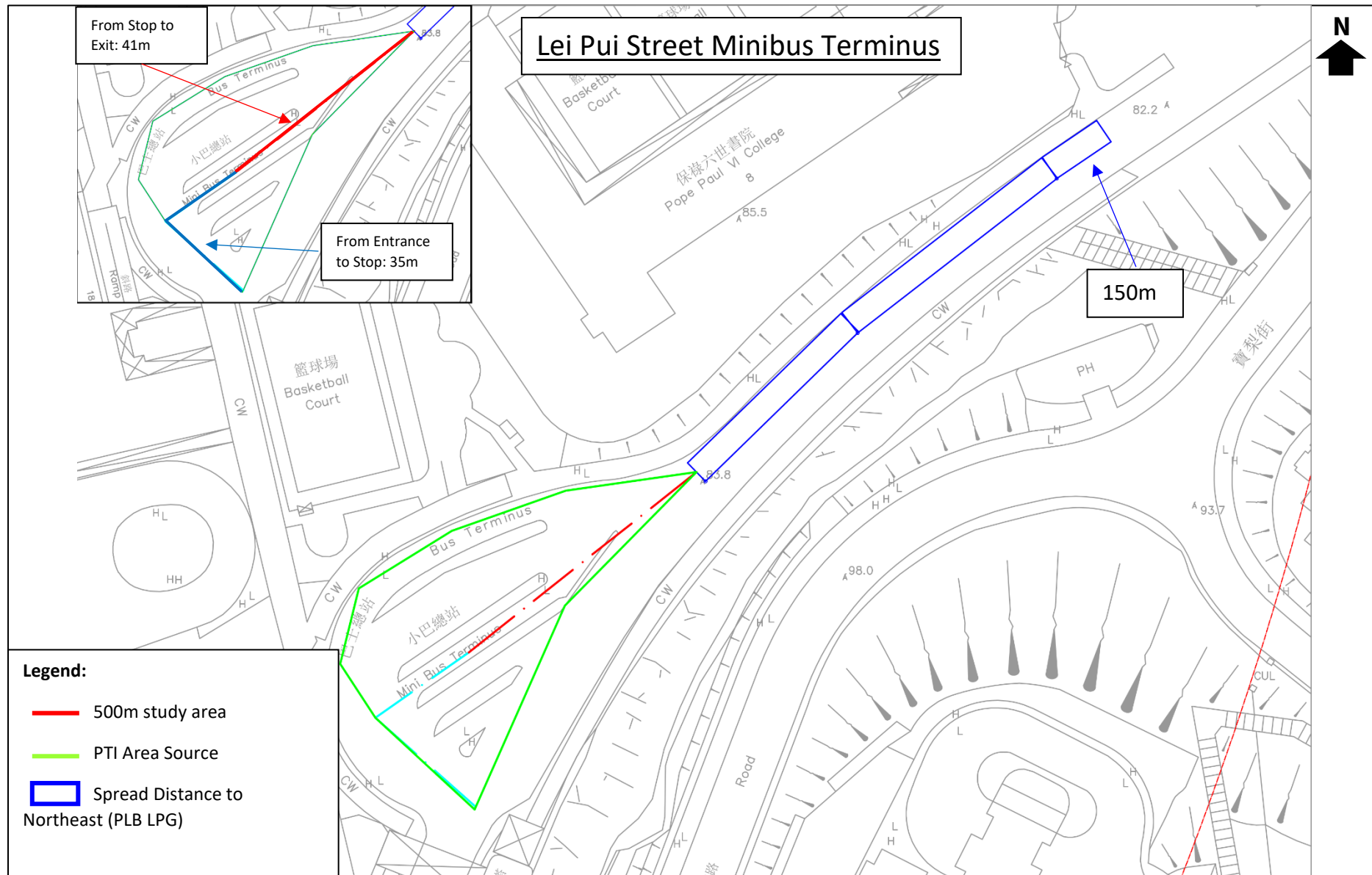
OX = 95.57

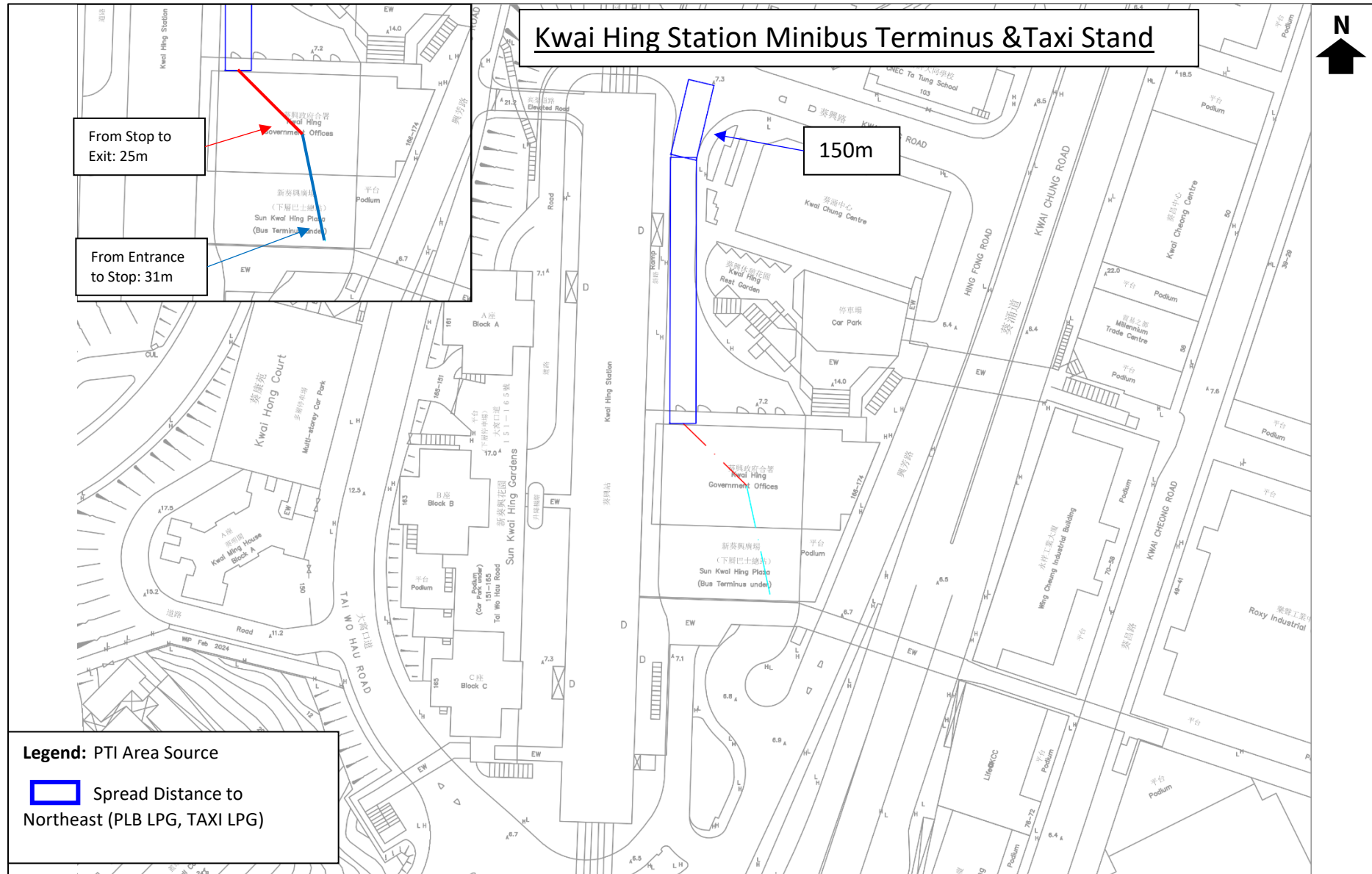
J/K = 17.114

Appendix D Detailed Calculation of Emissions Associated with Bus and Minibus Termini, Taxi Stand

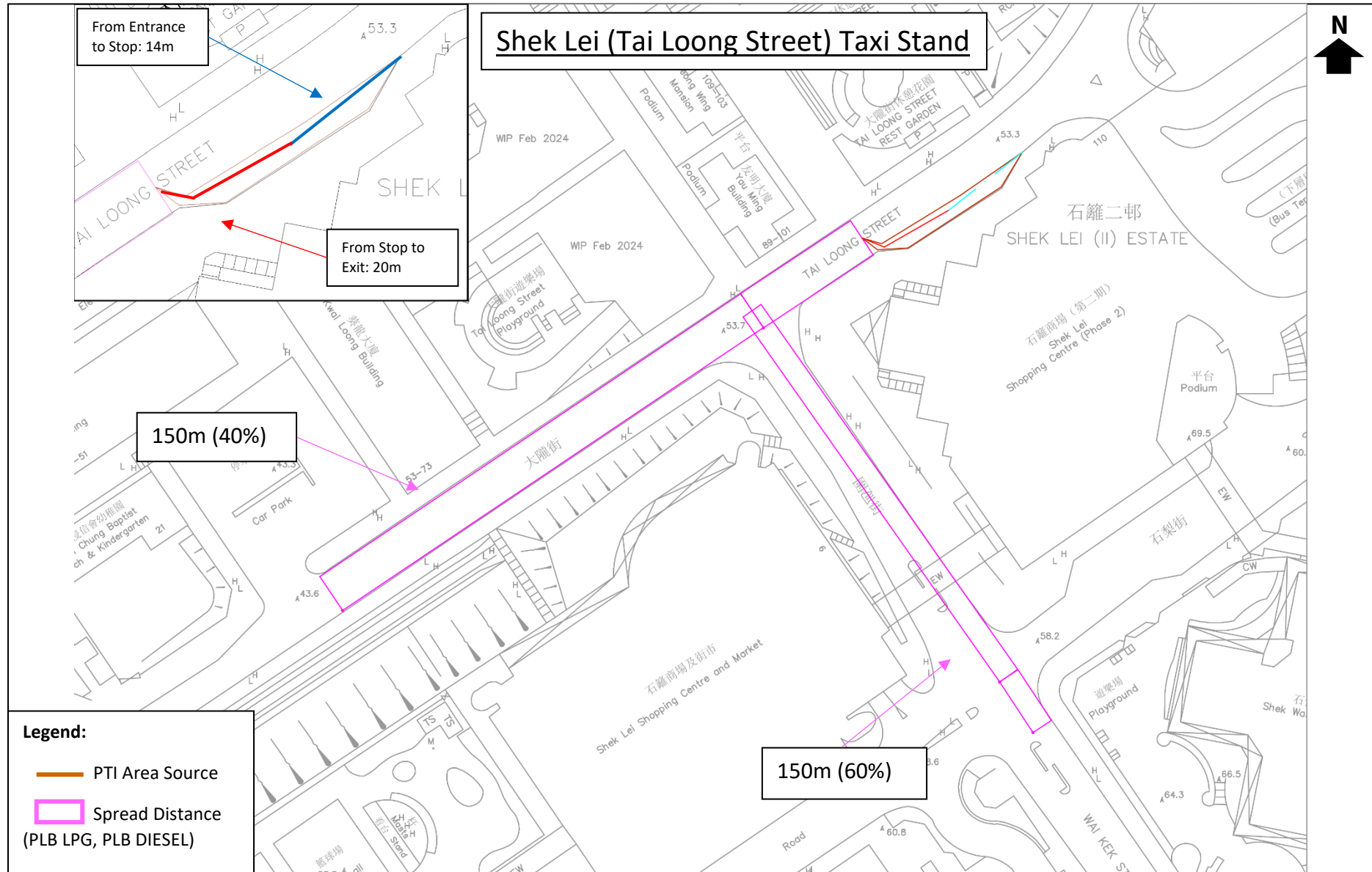












Terminus	Type	Vehicle Type	Source Type	X	Y	Length, m	Width, m	Angle	Base Elevation, m	Length of Portal, m	Average Vehicle Height, m	Release Height, m	Initial Lateral Dimension Coefficient	Initial Vertical Dimension Coefficient	Area, m2	Baseline Emission, g/s				Baseline Emission, g/s/m2								
																NO	NO2	RSP	FSP	NO	NO2	RSP	FSP					
Kwai Hing Station	Semi-Confined	FBSD,FBDD,PLB,Taxi, PV4,PV5,NFB6	Volume	831582.352	824849.4	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831588.849	824849.2	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831595.345	824849	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831601.842	824848.7	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831608.338	824848.5	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831582.371	824904	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831588.868	824903.7	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831595.364	824903.5	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831601.861	824903.3	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				831608.357	824903.1	--	--	--	7.2	6.5	2.66	2.10	1.51	3.02	--	9.76E-03	5.32E-04	3.49E-05	3.26E-05	--	--	--	--					
				Kwai Hing Station - Spread Distance	Open Area	FBSD,FBDD,PLB Diesel	Area	831579.682	824904.4	7.2	70.1	0	7.2	--	4.03	3.18	--	--	504.72	--	--	--	--	2.31E-06	1.41E-07	0.00E+00	0.00E+00	
								831579.913	824975.4	7.2	26.86	14	7.2	--	4.03	3.18	--	--	193.392	--	--	--	--	6.03E-06	3.69E-07	0.00E+00	0.00E+00	
831590.871	825003	5.2	90.55					108	7.2	--	4.03	3.18	--	--	470.86	--	--	--	--	2.48E-06	1.51E-07	0.00E+00	0.00E+00					
831673.904	824973.9	80.18	5.2					109	7.2	--	4.03	3.18	--	--	416.936	--	--	--	--	2.80E-06	1.71E-07	0.00E+00	0.00E+00					
831647.925	824898.2	94	5.2					113	7.2	--	4.03	3.18	--	--	488.8	--	--	--	--	2.38E-06	1.46E-07	0.00E+00	0.00E+00					
831611.485	824811.5	36.54	5.2					115	7.2	--	4.03	3.18	--	--	190.008	--	--	--	--	6.13E-06	3.75E-07	0.00E+00	0.00E+00					
831594.739	824780.4	16.57	9					132	7.2	--	4.03	3.18	--	--	149.13	--	--	--	--	7.82E-06	4.78E-07	0.00E+00	0.00E+00					
831584.03	824767.9	12.3	8					147	7.2	--	4.03	3.18	--	--	98.4	--	--	--	--	1.18E-05	7.25E-07	0.00E+00	0.00E+00					
831576.326	824762.1	12.95	7.6					172	7.2	--	4.03	3.18	--	--	98.42	--	--	--	--	1.18E-05	7.25E-07	0.00E+00	0.00E+00					
831553.559	824762.7	6.7	11.66					105	7.2	--	4.03	3.18	--	--	78.122	--	--	--	--	1.49E-05	9.13E-07	0.00E+00	0.00E+00					
831542.083	824771.6	7.3	15.58					126	7.2	--	4.03	3.18	--	--	113.734	--	--	--	--	1.02E-05	6.27E-07	0.00E+00	0.00E+00					
831535.239	824779.8	8.6	11.32					136	7.2	--	4.03	3.18	--	--	97.352	--	--	--	--	1.20E-05	7.32E-07	0.00E+00	0.00E+00					
831529.336	824779.6	80.53	7.8					134	7.2	--	4.03	3.18	--	--	628.134	--	--	--	--	1.86E-06	1.14E-07	0.00E+00	0.00E+00					
831472.968	824716.8	19.24	7.6					52	7.2	--	4.03	3.18	--	--	146.224	--	--	--	--	7.97E-06	4.88E-07	0.00E+00	0.00E+00					
831485.24	824701	19.81	7.6					40	7.2	--	4.03	3.18	--	--	150.556	--	--	--	--	7.74E-06	4.74E-07	0.00E+00	0.00E+00					
831500.23	824687.3	14.7	9					35	7.2	--	4.03	3.18	--	--	132.3	--	--	--	--	8.81E-06	5.39E-07	0.00E+00	0.00E+00					
831512.551	824678.7	27.1	9.2					30	7.2	--	4.03	3.18	--	--	249.32	--	--	--	--	4.68E-06	2.86E-07	0.00E+00	0.00E+00					
Kwai Hing Station - Spread Distance	Open Area	Taxi, PLB LPG	Area					831536.252	824664.9	8.15	9.2	26	7.2	--	4.03	3.18	--	--	74.98	--	--	--	1.55E-05	9.51E-07	0.00E+00	0.00E+00		
								831579.622	824901.1	7.2	73.44	0	7.2	--	1.68	1.33	--	--	528.768	--	--	--	--	2.62E-07	1.54E-09	0.00E+00	0.00E+00	
Shek Lei Bus Terminus	Semi-Confined	FBDD	Volume					831579.896	824975.3	7.2	21.25	13	7.2	--	1.68	1.33	--	--	153	--	--	--	9.06E-07	5.31E-09	0.00E+00	0.00E+00		
				832371.908	825193.5	--	--	--	53.2	7	4.4	3.48	1.63	3.26	--	0.0201	0.001065	0.000225	0.000208	--	--	--	--					
Shek Lei Bus Terminus - Spread Distance	Open Area	FBDD	Area	832377.625	825197.5	--	--	--	53.2	7	4.4	3.48	1.63	3.26	--	0.0201	0.001065	0.000225	0.000208	--	--	--	--					
				832410.247	825156.9	--	--	--	53.2	7	4.4	3.48	1.63	3.26	--	0.0201	0.001065	0.000225	0.000208	--	--	--	--					
Shek Lei Bus Terminus - Spread Distance	Open Area	FBDD	Area	832415.964	825161	--	--	--	53.2	7	4.4	3.48	1.63	3.26	--	0.0201	0.001065	0.000225	0.000208	--	--	--	--					
				832350.866	825188.2	7.2	14.33	48	53.2	--	4.4	3.48	--	--	103.176	--	--	--	--	2.94E-05	1.80E-06	0.00E+00	0.00E+00					
				832304.244	825157.2	7.5	56.52	56	53.2	--	4.4	3.48	--	--	423.9	--	--	--	--	7.16E-06	4.37E-07	0.00E+00	0.00E+00					
				832229.23	825106.6	7.4	90.4	56	53.2	--	4.4	3.48	--	--	668.96	--	--	--	--	4.53E-06	2.77E-07	0.00E+00	0.00E+00					
				832222.623	825100	5.6	8.9	50	53.2	--	4.4	3.48	--	--	49.84	--	--	--	--	6.09E-05	3.72E-06	0.00E+00	0.00E+00					
				832195.778	825081.7	5.4	32.78	56	53.2	--	4.4	3.48	--	--	177.012	--	--	--	--	1.71E-05	1.05E-06	0.00E+00	0.00E+00					
				832185.13	825077.5	5.4	12	68	53.2	--	4.4	3.48	--	--	64.8	--	--	--	--	4.68E-05	2.86E-06	0.00E+00	0.00E+00					
				832162.219	825072.4	5.2	23.9	78	53.2	--	4.4	3.48	--	--	124.28	--	--	--	--	2.44E-05	1.49E-06	0.00E+00	0.00E+00					
				832139.71	825075.3	6	23.5	96	53.2	--	4.4	3.48	--	--	141	--	--	--	--	2.15E-05	1.31E-06	0.00E+00	0.00E+00					
				832125.777	825081.5	5.3	16.2	115	53.2	--	4.4	3.48	--	--	85.86	--	--	--	--	3.53E-05	2.16E-06	0.00E+00	0.00E+00					
				832111.352	825095	7	20.41	130	53.2	--	4.4	3.48	--	--	142.87	--	--	--	--	2.12E-05	1.30E-06	0.00E+00	0.00E+00					
				832074.403	825146.4	7.4	64.17	144	53.2	--	4.4	3.48	--	--	474.858	--	--	--	--	6.39E-06	3.90E-07	0.00E+00	0.00E+00					
				832006.533	825102.1	5.7	77.3	55	53.2	--	4.4	3.48	--	--	440.61	--	--	--	--	4.13E-06	2.52E-07	0.00E+00	0.00E+00					
				832029.148	825034.8	7.4	68.15	-21	53.2	--	4.4	3.48	--	--	504.31	--	--	--	--	3.61E-06	2.20E-07	0.00E+00	0.00E+00					
				832069.805	825146.7	5.8	67.06	56	53.2	--	4.4	3.48	--	--	388.948	--	--	--	--	3.12E-06	1.91E-07	0.00E+00	0.00E+00					
				832125.257	825184.3	7.2	54.53	55	53.2	--	4.4	3.48	--	--	392.616	--	--	--	--	3.09E-06	1.89E-07	0.00E+00	0.00E+00					
				832170.111	825215.2	7.2	23.86	55	53.2	--	4.4	3.48	--	--	171.792	--	--	--	--	7.06E-06	4.31E-07	0.00E+00	0.00E+00					
				Taxi Stand near Shek Lei Bus Terminus	Open Area	Taxi	Polygon Ar	832326.372	825167.4	--	--	--	53.2	--	1.4	1.11	--	--	--	--	--	--	--	--	--	--	--	
								832329.929	825166.4	--	--	--	53.2	--	1.4	1.11	--	--	--	--	--	--	--	--	--	--	--	--
								832344.157	825175.1	--	--	--	53.2	--	1.4	1.11	--	--	--	--	--	--	--	--	--	--	--	--
832355.438	825183	--	--					--	53.2	--	1.4	1.11	--	--	--	--	--	--	--	--	--	--	--	--	--			
832351.646	825176.7	--	--					--	53.2	--	1.4	1.11	--	--	--	--	--	--	--	--	--	--	--	--	--			
832334.738	825165.6	--	--					--	53.2	--	1.4	1.11	--	--	--	--	--	--	--	--	--	--	--	--	--			
832329.209	825165.3	--	--					--	53.2	--	1.4	1.11	--	--	--	--	80.42	--	--	--	--	7.28209E-06	2.01547E-07	1.24565E-11	1.15482E-11			
832308.524	825151.1	23.9	7.5					-34	53.2	--	1.4	1.11	--	--	179.25	--	--	--	--	--	1.73E-05	4.83E-07	0.00E+00	0.00E+00				
832351.357	825086.9	4	80.93					-35	53.2	--	1.4	1.11	--	--	323.72	--	--	--	--	--	5.74E-06	1.61E-						

Terminus	Type	Vehicle Type	Source Type	X	Y	Length, m	Width, m	Angle	Base Elevation, m	Length of Portal, m	Average Vehicle Height, m	Release Height, m	Initial Lateral Dimension Coefficient	Initial Vertical Dimension Coefficient	Area, m2	Baseline Emission, g/s				Baseline Emission, g/s/m2			
																NO	NO2	RSP	FSP	NO	NO2	RSP	FSP
Shek Lei Bus Terminus	Open Area	PLB	Polygon Ar	832427.775	825140.8	--	--	--	60.1	--	3	2.37	--	--	235.83	--	--	--	--	5.77503E-06	6.83348E-07	1.3577E-07	1.32165E-07
Minibus Terminus near Shek Lei Bus Terminus	Open Area	PLB LPG	Area	832354.021	825086.8	31.33	6.4	-37	60.1	--	3	2.37	--	--	200.512	--	--	--	--	6.44E-06	3.77E-08	0.00E+00	0.00E+00
				832350.517	825088.2	3.8	55.5	-35	60.1	--	3	2.37	--	--	210.9	--	--	--	--	6.12E-06	3.59E-08	0.00E+00	0.00E+00
				832354.021	825086.8	31.33	6.4	-37	60.1	--	3	2.37	--	--	200.512	--	--	--	--	5.67E-08	2.24E-08	0.00E+00	0.00E+00
				832350.517	825088.2	3.8	55.5	-35	60.1	--	3	2.37	--	--	210.9	--	--	--	--	5.39E-08	2.13E-08	0.00E+00	0.00E+00
				832318.858	825133.9	3.8	23.73	-35	60.1	--	3	2.37	--	--	90.174	--	--	--	--	1.26E-07	4.99E-08	0.00E+00	0.00E+00
				832229.23	825106.6	92.09	7.4	56	60.1	--	3	2.37	--	--	681.466	--	--	--	--	1.67E-08	6.60E-09	0.00E+00	0.00E+00
				832222.623	825100	5.6	8.9	50	60.1	--	3	2.37	--	--	49.84	--	--	--	--	2.28E-07	9.02E-08	0.00E+00	0.00E+00
				832195.778	825081.7	5.4	32.78	56	60.1	--	3	2.37	--	--	177.012	--	--	--	--	6.43E-08	2.54E-08	0.00E+00	0.00E+00
				832185.13	825077.5	5.4	12	68	60.1	--	3	2.37	--	--	64.8	--	--	--	--	1.76E-07	6.94E-08	0.00E+00	0.00E+00
				832162.219	825072.4	5.2	23.9	78	60.1	--	3	2.37	--	--	124.28	--	--	--	--	9.15E-08	3.62E-08	0.00E+00	0.00E+00
				832139.71	825075.3	6	23.5	96	60.1	--	3	2.37	--	--	141	--	--	--	--	8.07E-08	3.19E-08	0.00E+00	0.00E+00
				832125.777	825081.5	5.3	16.2	115	60.1	--	3	2.37	--	--	85.86	--	--	--	--	1.32E-07	5.24E-08	0.00E+00	0.00E+00
				832111.352	825095	7	20.41	130	60.1	--	3	2.37	--	--	142.87	--	--	--	--	7.96E-08	3.15E-08	0.00E+00	0.00E+00
				832074.403	825146.4	7.4	64.17	144	60.1	--	3	2.37	--	--	474.858	--	--	--	--	2.40E-08	9.47E-09	0.00E+00	0.00E+00
				832069.805	825146.7	5.8	67.06	56	60.1	--	3	2.37	--	--	388.948	--	--	--	--	2.92E-08	1.16E-08	0.00E+00	0.00E+00
				832125.257	825184.3	7.2	54.53	55	60.1	--	3	2.37	--	--	392.616	--	--	--	--	2.90E-08	1.15E-08	0.00E+00	0.00E+00
				832174.409	825209.2	62.16	7.6	-36	60.1	--	3	2.37	--	--	472.416	--	--	--	--	2.41E-08	9.52E-09	0.00E+00	0.00E+00
Minibus Terminus near Shek Lei Bus Terminus - Spreadsheet Distance	Open Area	PLB Diesel	Area	832224.418	825246.2	48.57	5.6	-37	60.1	--	3	2.37	--	--	271.992	--	--	--	--	4.18E-08	1.65E-08	0.00E+00	0.00E+00
				832299.813	824799.5	--	--	--	83.8	--			--	--		--	--	--	--				
				832285.915	824812.4	--	--	--	83.8	--			--	--		--	--	--	--				
				832281.007	824819.9	--	--	--	83.8	--			--	--		--	--	--	--				
				832283.607	824830.5	--	--	--	83.8	--			--	--		--	--	--	--				
				832296.647	824838.5	--	--	--	83.8	--			--	--		--	--	--	--				
				832312.581	824844.1	--	--	--	83.8	--			--	--		--	--	--	--				
				832330.895	824846.8	--	--	--	83.8	--			--	--		--	--	--	--				
Lei Pui Street Bus Terminus	Open Area	FBDD,PLB	Polygon Ar	832312.46	824828.1	--	--	--	83.8	--	3.4	2.7	--	--	980.6	--	--	--	--	3.79E-06	2.68E-07	9.98E-08	9.32E-08
Lei Pui Street Bus Terminus - Spread Distance	Open Area	FBDD,PLB Diesel	Area	832332.16	824845.5	29.9	3.6	-44	83.8	--	3.44826	2.726531	--	--	107.64	--	--	--	--	1.72E-05	1.06E-06	0.00E+00	0.00E+00
				832353.452	824866.2	35.38	3.6	-38	83.8	--	3.44826	2.726531	--	--	127.368	--	--	--	--	1.45E-05	8.92E-07	0.00E+00	0.00E+00
				832381.336	824887.8	66.87	3.6	-34	83.8	--	3.44826	2.726531	--	--	240.732	--	--	--	--	7.69E-06	4.72E-07	0.00E+00	0.00E+00
				832332.16	824845.5	29.9	3.6	-44	83.8	--	3.44826	2.726531	--	--	107.64	--	--	--	--	2.24E-06	1.32E-08	0.00E+00	0.00E+00
				832353.452	824866.2	35.38	3.6	-38	83.8	--	3.44826	2.726531	--	--	127.368	--	--	--	--	1.90E-06	1.11E-08	0.00E+00	0.00E+00
				832381.338	824887.8	9.19	3.6	-34	83.8	--	3.44826	2.726531	--	--	33.084	--	--	--	--	7.30E-06	4.28E-08	0.00E+00	0.00E+00
				832302.938	824799.5	--	--	--	83.8	--	1.4	1.106977	--	--		--	--	--	--				
				832310.021	824810.9	--	--	--	83.8	--	1.4	1.106977	--	--		--	--	--	--				
				832316.182	824822.5	--	--	--	83.8	--	1.4	1.106977	--	--		--	--	--	--				
				832318.308	824820.9	--	--	--	83.8	--	1.4	1.106977	--	--		--	--	--	--				
				832312.278	824810.8	--	--	--	83.8	--	1.4	1.106977	--	--		--	--	--	--				
Taxi Stand near Lei Pui Bus Terminus	Open Area	Taxi	Polygon Ar	832307.087	824801.4	--	--	--	83.8	--	1.4	1.106977	--	--	56.97	--	--	--	--	1.09E-05	3.03E-07	1.12E-07	1.12E-07
				832317.72	824821.6	28.36	3.6	-59	83.8	--	1.4	1.106977	--	--	102.096	--	--	--	--	1.14E-05	3.20E-07	0.00E+00	0.00E+00
				832332.16	824845.5	29.9	3.6	-44	83.8	--	1.4	1.106977	--	--	107.64	--	--	--	--	1.08E-05	3.03E-07	0.00E+00	0.00E+00
				832353.452	824866.2	35.38	3.6	-38	83.8	--	1.4	1.106977	--	--	127.368	--	--	--	--	9.15E-06	2.56E-07	0.00E+00	0.00E+00
				832381.338	824887.8	29.82	3.6	-34	83.8	--	1.4	1.106977	--	--	107.352	--	--	--	--	1.09E-05	3.04E-07	0.00E+00	0.00E+00

Note
60% of Total Emission
40% of Total Emission

Idling Emission Factors

FBSD (Diesel)

NO2/NOx Ratio = 0.033347743 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro IV	19.636429876631%	5.73E-02	5.56E-05	2.09E-03	5.56E-05	1.20	1.30	4.40E-02	4.25E-02	1.47E-03	4.66E-05	4.14E-03	4.00E-03	1.38E-04	4.66E-05
Euro V	66.909317586370%	4.74E-02	2.78E-05	3.25E-03	2.78E-05										
Euro VI	13.454252536998%	7.70E-03	2.78E-06	4.86E-04	2.78E-06										

FBDD (Diesel)

NO2/NOx Ratio = 0.050285644 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro III	0.000037651852%	7.37E-02	3.58E-04	1.17E-02	3.58E-04	1.2	1.3	1.23E-01	1.17E-01	6.19E-03	3.51E-05	4.04E-03	3.84E-03	2.03E-04	3.51E-05
Euro IV	1.951090373895%	1.54E-01	5.56E-05	2.09E-03	5.56E-05										
Euro V	74.87586918882%	1.54E-01	2.78E-05	3.25E-03	2.78E-05										
Euro VI	23.173011055381%	2.25E-02	2.78E-06	4.86E-04	2.78E-06										

PV4 (Petrol - CAT)⁽⁶⁾

NO2/NOx Ratio = 0.050092275 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro II	0.636115273219%	1.67E-04	2.78E-06	1.67E-04	2.78E-06										
Euro III	28.203650699794%	9.44E-05	0.00E+00	9.44E-05	0.00E+00										
Euro IV	71.160234028987%	4.72E-05	0.00E+00	4.72E-05	0.00E+00										
Euro V	0.000000000000%	1.67E-05	0.00E+00	1.67E-05	0.00E+00										

PV4 (Diesel)

NO2/NOx Ratio = 0.199014894 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro IV	0.448626389409%	1.01E-03	4.44E-05	1.01E-03	4.44E-05										
Euro V	13.71042019960%	1.00E-03	5.56E-06	1.00E-03	5.56E-06										
Euro VI	85.842940094101%	1.00E-03	5.56E-06	3.56E-04	5.56E-06										

PLB (Diesel)

NO2/NOx Ratio = 0.279991081 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro IV	0.06435516393%	1.01E-03	4.44E-05	1.01E-03	4.44E-05										
Euro VI	26.112657912320%	1.00E-03	5.56E-06	1.00E-03	5.56E-06										
Euro VII	73.82296571287%	1.00E-03	5.56E-06	3.56E-04	5.56E-06										

PLB (LPG)

NO2/NOx Ratio = 0.005602689 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro III	10.960612381896%	1.14E-03	2.78E-05	1.14E-03	2.78E-05										
Euro IV	8.356806293842%	1.01E-03	4.44E-05	1.01E-03	4.44E-05										
Euro V	80.682581524463%	1.01E-03	4.44E-05	1.01E-03	4.44E-05										

Assume same as diesel for conservative approach

PV5 (Petrol - CAT)⁽⁶⁾

NO2/NOx Ratio = 0.050040247 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro I	0.07332429930%	4.69E-04	2.78E-06	4.69E-04	2.78E-06										
Euro IV	0.051709441999%	4.72E-05	0.00E+00	4.72E-05	0.00E+00										
Euro V	0.181007052472%	1.67E-05	0.00E+00	1.67E-05	0.00E+00										
Euro VI	99.693958035598%	1.94E-05	0.00E+00	1.94E-05	0.00E+00										

PV5 (Diesel)

NO2/NOx Ratio = 0.28 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro IV	0.914149094191%	1.01E-03	4.44E-05	1.01E-03	4.44E-05										
Euro VI	41.698597531465%	1.00E-03	5.56E-06	1.00E-03	5.56E-06										
Euro VII	57.387253418161%	1.00E-03	5.56E-06	3.56E-04	5.56E-06										

PV5 (LPG)

NO2/NOx Ratio = 0.005442499 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro III	5.835664611474%	1.14E-03	2.78E-05	1.14E-03	2.78E-05										
Euro IV	18.728193061410%	1.01E-03	4.44E-05	1.01E-03	4.44E-05										
Euro V	75.441142327116%	1.00E-03	5.56E-06	1.00E-03	5.56E-06										

Assume same as diesel for conservative approach

Taxi (Petrol - CAT)⁽⁶⁾

NO2/NOx Ratio = 0.04957265 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro V	100.000000000000%	2.22E-05	2.78E-06	2.22E-05	2.78E-06										
Euro VI	0.000000000000%	1.67E-05	0.00E+00	1.67E-05	0.00E+00										

Taxi (Diesel)

NO2/NOx Ratio = 0.0 From EMFAC 0.05

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro V	0.000000000000%	9.58E-04	5.56E-06	9.58E-04	5.56E-06										
Euro VI	0.000000000000%	4.47E-04	1.39E-05	4.47E-04	1.39E-05										

Taxi (LPG)

NO2/NOx Ratio = 0.026931476 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro II & III	0.382931760893%	5.70E-03	1.56E-04	1.58E-03	1.56E-04										
Euro IV	0.845956827446%	3.00E-03	4.44E-05	1.66E-03	4.44E-05										
Euro V	35.381949391425%	2.80E-03	5.56E-06	9.58E-04	5.56E-06										
Euro VI	63.38916220235%	2.80E-03	1.39E-05	4.47E-04	1.39E-05										

NFB6 (Diesel)

NO2/NOx Ratio = 0.28000512 From EMFAC

Vehicle Emission Standard	Population %	EmFactor (g/s)		EmFactor (g/s)		Mass Factor ⁽⁸⁾	A/C Factor ⁽⁷⁾	Weighted Average Emission Factor (g/s)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx ⁽¹⁾	PM ⁽²⁾	NOx ⁽¹⁾	PM ⁽²⁾			NOx	NO	NO2	PM	NOx	NO	NO2	PM
Euro IV	1.351983295556%	2.09E-03	5.56E-05	2.09E-03	5.56E-05										
Euro V	42.029465569951%	3.25E-03	2.78E-05	3.25E-03	2.78E-05										
Euro VI	56.618551134493%	4.86E-04	2.78E-06	4.86E-04	2.78E-06										

Remark: The above tables are for reference only, please revise the vehicle classes, emission standards and air pollutants when necessary.

Remark:

In this section, Road Tunnels: Vehicle Emissions and Air Demand for Ventilation (2019R02EN) published by World Road Association is used as reference on hot idling (hereinafter PIARC-VEADV); and with Gradient 0%, v=0kph.

[1] NO and NO2 ratio was calculated based on Running Emission Factors extracted from latest EMFAC-HK (i.e. EMFAC-HK v4.3).
 [2] For NOx cold idling, referenced from Calculation of Start Emissions in Air Quality Impact Assessment (2021) published by EPD.
 [3] For PM cold idling, referenced to hot idling emission factors from PIARC-VEADV to its respective fuels (i.e. FBDD = HGV Diesel; FBSD = HGV Diesel; PV5 Diesel/LPG = LCV Diesel; PV5 Petrol = LCV Gasoline; PC Diesel = PC Diesel, PC Petrol = PC Gasoline; NFB6 = HGV Diesel; HGV7/9 = HGV Diesel).
 [4] For cold idling which not listed in Calculation of Start Emissions in Air Quality Impact Assessment (2021) published by EPD, hot idling of its respective Euro Emission Standard, Fuel Type and Vehicle Type is used.
 [5] For hot idling, referenced to hot idling emission factors from PIARC

Running Emission - Terminating Bus and Bypass Bus

The Longest Travelling Distance within bus terminus =	52	m
Average Travelling Speed =	10	km/h

Hour	Frequency	FBSD (Diesel)									
		Running Emission Factor (g/km-vehicle)					Running Emission (g)				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	0	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0600 - 0700	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
0700 - 0800	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
0800 - 0900	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
0900 - 1000	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
1000 - 1100	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
1100 - 1200	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
1200 - 1300	2	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	1.01E+00	9.74E-01	3.36E-02	2.95E-02	2.71E-02
1300 - 1400	2	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	1.01E+00	9.74E-01	3.36E-02	2.95E-02	2.71E-02
1400 - 1500	2	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	1.01E+00	9.74E-01	3.36E-02	2.95E-02	2.71E-02
1500 - 1600	2	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	1.01E+00	9.74E-01	3.36E-02	2.95E-02	2.71E-02
1600 - 1700	2	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	1.01E+00	9.74E-01	3.36E-02	2.95E-02	2.71E-02
1700 - 1800	2	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	1.01E+00	9.74E-01	3.36E-02	2.95E-02	2.71E-02
1800 - 1900	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
1900 - 2000	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
2000 - 2100	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
2100 - 2200	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
2200 - 2300	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02
2300 - 2400	1	9.72E+00	9.39E+00	3.24E-01	2.84E-01	2.61E-01	5.04E-01	4.87E-01	1.68E-02	1.47E-02	1.35E-02

Release Height

3.4

No. Veh

24

81.6

Total Hourly Emission

Hour	Total Emission inside bus terminus (g) (Running + Idling + Start) [g]					Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0600 - 0700	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
0700 - 0800	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
0800 - 0900	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
0900 - 1000	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
1000 - 1100	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
1100 - 1200	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
1200 - 1300	1.50E+00	1.45E+00	5.02E-02	3.50E-02	3.27E-02	4.178E-04	4.039E-04	1.393E-05	9.736E-06	9.079E-06
1300 - 1400	1.50E+00	1.45E+00	5.02E-02	3.50E-02	3.27E-02	4.178E-04	4.039E-04	1.393E-05	9.736E-06	9.079E-06
1400 - 1500	1.50E+00	1.45E+00	5.02E-02	3.50E-02	3.27E-02	4.178E-04	4.039E-04	1.393E-05	9.736E-06	9.079E-06
1500 - 1600	1.50E+00	1.45E+00	5.02E-02	3.50E-02	3.27E-02	4.178E-04	4.039E-04	1.393E-05	9.736E-06	9.079E-06
1600 - 1700	1.50E+00	1.45E+00	5.02E-02	3.50E-02	3.27E-02	4.178E-04	4.039E-04	1.393E-05	9.736E-06	9.079E-06
1700 - 1800	1.50E+00	1.45E+00	5.02E-02	3.50E-02	3.27E-02	4.178E-04	4.039E-04	1.393E-05	9.736E-06	9.079E-06
1800 - 1900	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
1900 - 2000	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
2000 - 2100	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
2100 - 2200	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
2200 - 2300	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06
2300 - 2400	7.52E-01	7.27E-01	2.51E-02	1.75E-02	1.63E-02	2.089E-04	2.019E-04	6.966E-06	4.868E-06	4.539E-06

Kwai Hing Station

Temp: 10 RH: 18

Start Emission - Terminating Bus

Soaking Time (min)	Double-Deck Franchised Bus (FBDD - Diesel) Start Emission Factor (g/trip)																	
	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720
NOx	0.793	1.427	1.903	2.696	3.331	4.441	6.503	8.089	11.895	15.543	17.446	20.618	22.680	23.790	24.425	25.059	25.376	25.376
NO	0.749	1.348	1.797	2.546	3.144	4.193	6.139	7.637	11.230	14.674	16.471	19.466	21.412	22.461	23.060	23.658	23.958	23.958
NO2	0.044	0.080	0.106	0.151	0.186	0.248	0.364	0.452	0.665	0.869	0.975	1.152	1.268	1.330	1.365	1.401	1.418	1.418
RSP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FSP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Soaking Time (min)	No. of Trips of FBDD (Diesel)																	
	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720
Hour																		
0000 - 0100																		
0100 - 0200																		
0200 - 0300																		
0300 - 0400																		
0400 - 0500																		
0500 - 0600																		
0600 - 0700												2						
0700 - 0800	4	2																
0800 - 0900	2	3																
0900 - 1000	2	3																
1000 - 1100		2	2															
1100 - 1200		2	2															
1200 - 1300		2	2															
1300 - 1400		2	2															
1400 - 1500		2	2															
1500 - 1600	2	3																
1600 - 1700	2	3																
1700 - 1800	4	2																
1800 - 1900	4	2																
1900 - 2000	2	3																
2000 - 2100		2	2															
2100 - 2200		2	2															
2200 - 2300		2	2															
2300 - 2400		2	2															

Note: The numbers of trips is based on the full day bus counting survey.

Total Start Emission of FBSD & FBDD (g)				
NOx	NO	NO2	RSP	FSP
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	0	0
2	41	39	2	0
6	6	6	0	0
5	6	6	0	0
5	6	6	0	0
4	7	6	0	0
4	7	6	0	0
4	7	6	0	0
4	7	6	0	0
4	7	6	0	0
4	7	6	0	0
5	6	6	0	0
5	6	6	0	0
6	6	6	0	0
6	6	6	0	0
5	6	6	0	0
4	7	6	0	0
4	7	6	0	0
4	7	6	0	0
4	7	6	0	0

Cold Idling Emission - Terminating Bus

Idling Time =	1	min
Max. Idling Time for Adjusting Start Emission =	1	min

Note: The Idling time was based on the full day bus counting survey.

Hour	Frequency	FBDD (Diesel)									
		Cold Idling Emission Factor (g/s)					Cold Idling Emission (g) [1]				
		NOx	NO	NO2	RSP	FSP	NOx	NO	NO2	RSP	FSP
0000 - 0100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0600 - 0700	2	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	1.48E+01	1.40E+01	7.43E-01	4.22E-03	4.22E-03
0700 - 0800	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0800 - 0900	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0900 - 1000	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000 - 1100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1100 - 1200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1200 - 1300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1300 - 1400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1400 - 1500	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1500 - 1600	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1600 - 1700	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1700 - 1800	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1800 - 1900	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900 - 2000	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2000 - 2100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2100 - 2200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200 - 2300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2300 - 2400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Hot Idling Emission - Terminating Bus

Idling Time =	1	min
Max. Idling Time for Adjusting Start Emission =	1	min

Note: The Idling time was based on the full day bus counting survey.

Hour	Frequency	FBDD (Diesel)									
		Hot Idling Emission Factor (g/s)					Hot Idling Emission (g) [1]				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0600 - 0700	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0700 - 0800	6	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02
0800 - 0900	5	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
0900 - 1000	5	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
1000 - 1100	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1100 - 1200	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1200 - 1300	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1300 - 1400	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1400 - 1500	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1500 - 1600	5	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
1600 - 1700	5	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
1700 - 1800	6	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02
1800 - 1900	6	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02
1900 - 2000	5	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
2000 - 2100	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2100 - 2200	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2200 - 2300	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2300 - 2400	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03

Average Distance from Starting Place to Egress =	31.46	m
Average Spread Distance outside bus terminus =	668.54	m

Hour	Total Idling Emission (g) [2]					Idling Emission for Start Emission Adjustment (g) [3]				
	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0600 - 0700	1.48E+01	1.40E+01	7.43E-01	4.22E-03	4.22E-03	1.48E+01	1.40E+01	7.43E-01	4.22E-03	4.22E-03
0700 - 0800	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02
0800 - 0900	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
0900 - 1000	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
1000 - 1100	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1100 - 1200	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1200 - 1300	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1300 - 1400	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1400 - 1500	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
1500 - 1600	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
1600 - 1700	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
1700 - 1800	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02
1800 - 1900	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02
1900 - 2000	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02	1.21E+00	1.15E+00	6.09E-02	1.05E-02	1.05E-02
2000 - 2100	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2100 - 2200	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2200 - 2300	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2300 - 2400	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03

Adjusted Start Emission within bus terminus (g) [4]					Adjusted Start Emission outside bus terminus (g) [5]					Start Emission Rate outside bus terminus (g/s)				
NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
1.19E+00	1.12E+00	7.02E-02	0	0	2.53E+01	2.38E+01	1.49E+00	0	0	7.02E-03	6.61E-03	4.14E-04	0	0
2.06E-01	1.94E-01	1.19E-02	0	0	4.37E+00	4.12E+00	2.52E-01	0	0	1.21E-03	1.14E-03	7.00E-05	0	0
2.09E-01	1.97E-01	1.20E-02	0	0	4.45E+00	4.19E+00	2.55E-01	0	0	1.24E-03	1.16E-03	7.09E-05	0	0
2.09E-01	1.97E-01	1.20E-02	0	0	4.45E+00	4.19E+00	2.55E-01	0	0	1.24E-03	1.16E-03	7.09E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0
2.56E-01	2.41E-01	1.45E-02	0	0	5.44E+00	5.13E+00	3.09E-01	0	0	1.51E-03	1.42E-03	8.59E-05	0	0

Hot Idling Emission - Bypass Bus

Idling Time =	1	min
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Hour	Frequency	FBDD (Diesel)									
		Hot Idling Emission Factor (g/s)					Hot Idling Emission (g) [1]				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	16	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	118.218	112.273	5.945	0.034	0.034
0100 - 0200	2	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	14.777	14.034	0.743	0.004	0.004
0200 - 0300	1	1.23E-01	1.17E-01	6.19E-03							

0600 - 0700	30	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	221.658	210.512	11.146	0.063	0.063
0700 - 0800	38	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	280.767	266.648	14.119	0.080	0.080
0800 - 0900	44	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	325.098	308.751	16.348	0.093	0.093
0900 - 1000	32	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	236.435	224.546	11.889	0.067	0.067
1000 - 1100	25	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	184.715	175.426	9.289	0.053	0.053
1100 - 1200	24	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	177.326	168.409	8.917	0.051	0.051
1200 - 1300	22	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	162.549	154.375	8.174	0.046	0.046
1300 - 1400	25	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	184.715	175.426	9.289	0.053	0.053
1400 - 1500	22	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	162.549	154.375	8.174	0.046	0.046
1500 - 1600	24	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	177.326	168.409	8.917	0.051	0.051
1600 - 1700	30	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	221.658	210.512	11.146	0.063	0.063
1700 - 1800	38	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	280.767	266.648	14.119	0.080	0.080
1800 - 1900	39	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	288.155	273.665	14.490	0.082	0.082
1900 - 2000	28	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	206.881	196.478	10.403	0.059	0.059
2000 - 2100	28	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	206.881	196.478	10.403	0.059	0.059
2100 - 2200	21	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	155.161	147.358	7.802	0.044	0.044
2200 - 2300	20	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	147.772	140.341	7.431	0.042	0.042
2300 - 2400	17	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	125.606	119.290	6.316	0.036	0.036

Running Emission - Terminating Bus and Bypass Bus

The Longest Travelling Distance within bus terminus =	51.86	m
Average Travelling Speed =	10	km/h

Hour	Frequency	FBDD (Diesel)									
		Running Emission Factor (g/km-vehicle)					Running Emission (g)				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	16	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.07E+01	1.02E+01	5.39E-01	3.18E-01	2.93E-01
0100 - 0200	2	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.34E+00	1.27E+00	6.74E-02	3.98E-02	3.66E-02
0200 - 0300	1	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.70E-01	6.36E-01	3.37E-02	1.99E-02	1.83E-02
0300 - 0400	0	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	8	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.36E+00	5.09E+00	2.70E-01	1.59E-01	1.46E-01
0600 - 0700	32	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.14E+01	2.04E+01	1.08E+00	6.36E-01	5.85E-01
0700 - 0800	44	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.95E+01	2.80E+01	1.48E+00	8.75E-01	8.05E-01
0800 - 0900	49	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	3.28E+01	3.12E+01	1.65E+00	9.74E-01	8.96E-01
0900 - 1000	37	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.48E+01	2.35E+01	1.25E+00	7.36E-01	6.77E-01
1000 - 1100	29	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.94E+01	1.85E+01	9.77E-01	5.77E-01	5.30E-01
1100 - 1200	28	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.88E+01	1.78E+01	9.43E-01	5.57E-01	5.12E-01
1200 - 1300	26	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.74E+01	1.65E+01	8.76E-01	5.17E-01	4.76E-01
1300 - 1400	29	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.94E+01	1.85E+01	9.77E-01	5.77E-01	5.30E-01
1400 - 1500	26	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.74E+01	1.65E+01	8.76E-01	5.17E-01	4.76E-01
1500 - 1600	29	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.94E+01	1.85E+01	9.77E-01	5.77E-01	5.30E-01
1600 - 1700	35	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.34E+01	2.23E+01	1.18E+00	6.96E-01	6.40E-01
1700 - 1800	44	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.95E+01	2.80E+01	1.48E+00	8.75E-01	8.05E-01
1800 - 1900	45	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	3.01E+01	2.86E+01	1.52E+00	8.95E-01	8.23E-01
1900 - 2000	33	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.21E+01	2.10E+01	1.11E+00	6.56E-01	6.04E-01
2000 - 2100	32	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.14E+01	2.04E+01	1.08E+00	6.36E-01	5.85E-01
2100 - 2200	25	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.67E+01	1.59E+01	8.42E-01	4.97E-01	4.57E-01
2200 - 2300	24	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.61E+01	1.53E+01	8.09E-01	4.77E-01	4.39E-01
2300 - 2400	21	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.41E+01	1.34E+01	7.07E-01	4.18E-01	3.84E-01

Release Height

4.4

No. Veh

615

2706

Total Hourly Emission

Hour	Total Emission inside bus terminus (g) (Running + Idling + Start) [6]					Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.29E+02	1.22E+02	6.48E+00	3.52E-01	3.26E-01	3.582E-02	3.401E-02	1.801E-03	9.774E-05	9.066E-05
0100 - 0200	1.61E+01	1.53E+01	8.10E-01	4.40E-02	4.08E-02	4.477E-03	4.252E-03	2.251E-04	1.222E-05	1.133E-05
0200 - 0300	8.06E+00	7.65E+00	4.05E-01	2.20E-02	2.04E-02	2.238E-03	2.126E-03	1.126E-04	6.109E-06	5.667E-06
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0500 - 0600	6.45E+01	6.12E+01	3.24E+00	1.76E-01	1.63E-01	1.791E-02	1.701E-02	9.005E-04	4.887E-05	4.533E-05
0600 - 0700	2.59E+02	2.46E+02	1.30E+01	7.04E-01	6.53E-01	7.196E-02	6.834E-02	3.622E-03	1.955E-04	1.813E-04
0700 - 0800	3.12E+02	2.96E+02	1.57E+01	9.68E-01	8.98E-01	6.664E-02	6.228E-02	4.357E-03	2.688E-04	2.493E-04
0800 - 0900	3.59E+02	3.41E+02	1.81E+01	1.08E+00	1.00E+00	9.982E-02	9.480E-02	5.020E-03	2.993E-04	2.777E-04
0900 - 1000	2.63E+02	2.49E+02	1.32E+01	8.14E-01	7.55E-01	7.296E-02	6.929E-02	3.689E-03	2.260E-04	2.097E-04
1000 - 1100	2.05E+02	1.95E+02	1.03E+01	6.38E-01	5.92E-01	5.705E-02	5.418E-02	2.869E-03	1.772E-04	1.643E-04
1100 - 1200	1.97E+02	1.87E+02	9.92E+00	6.16E-01	5.71E-01	5.481E-02	5.205E-02	2.757E-03	1.710E-04	1.587E-04
1200 - 1300	1.81E+02	1.72E+02	9.11E+00	5.72E-01	5.30E-01	5.033E-02	4.780E-02	2.531E-03	1.588E-04	1.473E-04
1300 - 1400	2.05E+02	1.95E+02	1.03E+01	6.38E-01	5.92E-01	5.705E-02	5.418E-02	2.869E-03	1.772E-04	1.643E-04
1400 - 1500	1.81E+02	1.72E+02	9.11E+00	5.72E-01	5.30E-01	5.033E-02	4.780E-02	2.531E-03	1.588E-04	1.473E-04
1500 - 1600	1.98E+02	1.88E+02	9.97E+00	6.38E-01	5.92E-01	5.505E-02	5.228E-02	2.769E-03	1.772E-04	1.643E-04
1600 - 1700	2.47E+02	2.34E+02	1.24E+01	7.70E-01	7.14E-01	6.848E-02	6.504E-02	3.444E-03	2.138E-04	1.983E-04
1700 - 1800	3.12E+02	2.96E+02	1.57E+01	9.68E-01	8.98E-01	6.664E-02	6.228E-02	4.357E-03	2.688E-04	2.493E-04
1800 - 1900	3.20E+02	3.04E+02	1.61E+01	9.90E-01	9.18E-01	8.888E-02	8.441E-02	4.470E-03	2.749E-04	2.550E-04
1900 - 2000	2.30E+02	2.19E+02	1.16E+01	7.26E-01	6.73E-01	6.400E-02	6.078E-02	3.219E-03	2.016E-04	1.870E-04
2000 - 2100	2.30E+02	2.18E+02	1.15E+01	7.04E-01	6.53E-01	6.376E-02	6.056E-02	3.207E-03	1.955E-04	1.813E-04
2100 - 2200	1.73E+02	1.64E+02	8.71E+00	5.50E-01	5.10E-01	4.809E-02	4.567E-02	2.419E-03	1.527E-04	1.417E-04
2200 - 2300	1.65E+02	1.57E+02	8.30E+00	5.28E-01	4.90E-01	4.585E-02	4.355E-02	2.306E-03	1.466E-04	1.360E-04
2300 - 2400	1.41E+02	1.34E+02	7.09E+00	4.62E-01	4.28E-01	3.914E-02	3.717E-02	1.969E-03	1.283E-04	1.190E-04

Kwai Ming Station

Start Estimation

Table with columns: No. of Trips of PMS (g/hour), PMS (g/hour), and various pollutant columns (CO, HC, NOx, etc.).

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Table with columns: No. of Trips of PMS (g/hour), PMS (g/hour), and various pollutant columns (CO, HC, NOx, etc.).

Table with columns: Total Start Estimation (g/hour) for PMS, CO, HC, NOx, and SO2.

Table with columns: Total Start Estimation (g/hour) for PMS, CO, HC, NOx, and SO2.

Table with columns: Total Start Estimation (g/hour) for PMS, CO, HC, NOx, and SO2.

Large data table with multiple columns for PMS and PMS (II) start estimation, including pollutant breakdowns.

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Large data table with multiple columns for PMS and PMS (II) start estimation, including pollutant breakdowns.

Large data table with multiple columns for PMS and PMS (II) start estimation, including pollutant breakdowns.

Summary table with columns: Adjusted Start Estimation (with parking site) for PMS, CO, HC, NOx, and SO2.

Hour	Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	3.701E-02	3.517E-02	1.833E-03	1.077E-04	1.006E-04
0100 - 0200	5.203E-03	4.952E-03	2.509E-04	1.933E-05	1.840E-05
0200 - 0300	2.769E-04	2.642E-03	1.269E-04	1.069E-05	1.025E-06
0300 - 0400	2.009E-04	1.954E-05	5.409E-06	1.781E-06	1.781E-06
0400 - 0500	8.608E-05	8.376E-05	2.318E-06	7.632E-07	7.632E-07
0500 - 0600	1.802E-02	1.712E-02	9.036E-04	4.989E-05	4.635E-05
0600 - 0700	7.325E-02	6.955E-02	3.703E-03	2.166E-04	2.018E-04
0700 - 0800	8.908E-02	8.448E-02	4.604E-03	3.096E-04	2.887E-04
0800 - 0900	1.029E-01	9.757E-02	5.323E-03	3.489E-04	3.266E-04
0900 - 1000	7.637E-02	7.245E-02	3.918E-03	2.759E-04	2.581E-04
1000 - 1100	6.131E-02	5.816E-02	3.147E-03	2.308E-04	2.167E-04
1100 - 1200	5.823E-02	5.519E-02	3.041E-03	2.196E-04	2.058E-04
1200 - 1300	5.472E-02	5.189E-02	2.830E-03	2.166E-04	2.038E-04
1300 - 1400	6.161E-02	5.853E-02	3.076E-03	2.343E-04	2.201E-04
1400 - 1500	5.584E-02	5.292E-02	2.927E-03	2.346E-04	2.209E-04
1500 - 1600	5.989E-02	5.684E-02	3.052E-03	2.399E-04	2.255E-04
1600 - 1700	7.293E-02	6.915E-02	3.774E-03	2.812E-04	2.636E-04
1700 - 1800	9.088E-02	8.627E-02	4.613E-03	3.281E-04	3.069E-04
1800 - 1900	9.132E-02	8.659E-02	4.722E-03	3.184E-04	2.970E-04
1900 - 2000	6.817E-02	6.275E-02	3.426E-03	2.395E-04	2.236E-04
2000 - 2100	6.862E-02	6.388E-03	3.444E-03	2.381E-04	2.227E-04
2100 - 2200	5.077E-02	4.812E-02	2.652E-03	1.932E-04	1.809E-04
2200 - 2300	4.841E-02	4.592E-02	2.493E-03	1.827E-04	1.711E-04
2300 - 2400	4.064E-02	3.862E-02	2.016E-03	1.448E-04	1.352E-04

10 Vol sources

Hour	Total Emission Rate (g/s) each Vol Source				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	3.701E-03	3.517E-03	1.833E-04	1.077E-05	1.006E-05
0100 - 0200	5.203E-04	4.952E-04	2.509E-05	1.933E-06	1.840E-06
0200 - 0300	2.769E-04	2.642E-04	1.269E-05	1.069E-06	1.025E-06
0300 - 0400	2.009E-05	1.954E-05	5.409E-07	1.781E-07	1.781E-07
0400 - 0500	8.608E-06	8.376E-06	2.318E-07	7.632E-08	7.632E-08
0500 - 0600	1.802E-03	1.712E-03	9.036E-05	4.989E-06	4.635E-06
0600 - 0700	7.325E-03	6.955E-03	3.703E-04	2.166E-05	2.018E-05
0700 - 0800	8.908E-03	8.448E-03	4.604E-04	3.096E-05	2.887E-05
0800 - 0900	1.029E-02	9.757E-03	5.323E-04	3.489E-05	3.266E-05
0900 - 1000	7.637E-03	7.245E-03	3.918E-04	2.759E-05	2.581E-05
1000 - 1100	6.131E-03	5.816E-03	3.147E-04	2.308E-05	2.167E-05
1100 - 1200	5.823E-03	5.519E-03	3.041E-04	2.196E-05	2.058E-05
1200 - 1300	5.472E-03	5.189E-03	2.830E-04	2.166E-05	2.038E-05
1300 - 1400	6.161E-03	5.853E-03	3.076E-04	2.343E-05	2.201E-05
1400 - 1500	5.584E-03	5.292E-03	2.927E-04	2.346E-05	2.209E-05
1500 - 1600	5.989E-03	5.684E-03	3.052E-04	2.399E-05	2.255E-05
1600 - 1700	7.293E-03	6.915E-03	3.774E-04	2.812E-05	2.636E-05
1700 - 1800	9.088E-03	8.627E-03	4.613E-04	3.281E-05	3.069E-05
1800 - 1900	9.132E-03	8.659E-03	4.722E-04	3.184E-05	2.970E-05
1900 - 2000	6.817E-03	6.275E-03	3.426E-04	2.395E-05	2.236E-05
2000 - 2100	6.862E-03	6.388E-03	3.444E-04	2.381E-05	2.227E-05
2100 - 2200	5.077E-03	4.812E-03	2.652E-04	1.932E-05	1.809E-05
2200 - 2300	4.841E-03	4.592E-03	2.493E-04	1.827E-05	1.711E-05
2300 - 2400	4.064E-03	3.862E-03	2.016E-04	1.448E-05	1.352E-05

Adjusted Start Emission

Diesel
(FBSD+FBDD+PLB)

Hour	Start Emission Rate outside bus terminus (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.000E+00	0.000E+00	0.000E+00	0	0
0100 - 0200	0.000E+00	0.000E+00	0.000E+00	0	0
0200 - 0300	0.000E+00	0.000E+00	0.000E+00	0	0
0300 - 0400	0.000E+00	0.000E+00	0.000E+00	0	0
0400 - 0500	0.000E+00	0.000E+00	0.000E+00	0	0
0500 - 0600	0.000E+00	0.000E+00	0.000E+00	0	0
0600 - 0700	7.019E-03	6.613E-03	4.14E-04	0	0
0700 - 0800	1.213E-03	1.14E-03	7.00E-05	0	0
0800 - 0900	1.237E-03	1.17E-03	7.13E-05	0	0
0900 - 1000	1.235E-03	1.16E-03	7.09E-05	0	0
1000 - 1100	1.513E-03	1.43E-03	8.86E-05	0	0
1100 - 1200	1.512E-03	1.43E-03	8.83E-05	0	0
1200 - 1300	1.513E-03	1.43E-03	8.86E-05	0	0
1300 - 1400	1.512E-03	1.43E-03	8.83E-05	0	0
1400 - 1500	1.512E-03	1.43E-03	8.83E-05	0	0
1500 - 1600	1.237E-03	1.17E-03	7.13E-05	0	0
1600 - 1700	1.239E-03	1.17E-03	7.16E-05	0	0
1700 - 1800	1.215E-03	1.14E-03	7.04E-05	0	0
1800 - 1900	1.215E-03	1.14E-03	7.04E-05	0	0
1900 - 2000	1.235E-03	1.16E-03	7.09E-05	0	0
2000 - 2100	1.510E-03	1.42E-03	8.89E-05	0	0
2100 - 2200	1.532E-03	1.44E-03	9.19E-05	0	0
2200 - 2300	1.510E-03	1.42E-03	8.89E-05	0	0
2300 - 2400	1.510E-03	1.42E-03	8.89E-05	0	0

LPG
(Taxi + PLB)

Hour	Start Emission Rate outside bus terminus (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.12E-03	1.09E-03	3.05E-05	0	0
0100 - 0200	5.09E-04	4.95E-04	1.38E-05	0	0
0200 - 0300	2.24E-04	2.17E-04	6.09E-06	0	0
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0	0
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0	0
0500 - 0600	0.00E+00	0.00E+00	0.00E+00	0	0
0600 - 0700	4.39E-04	4.28E-04	1.20E-05	0	0
0700 - 0800	2.20E-04	2.14E-04	5.99E-06	0	0
0800 - 0900	1.39E-04	1.39E-04	8.13E-07	0	0
0900 - 1000	1.65E-03	1.60E-03	4.21E-05	0	0
1000 - 1100	3.83E-03	3.73E-03	9.81E-05	0	0
1100 - 1200	1.46E-03	1.42E-03	3.67E-05	0	0
1200 - 1300	4.11E-03	4.01E-03	1.06E-04	0	0
1300 - 1400	5.09E-03	4.96E-03	1.35E-04	0	0
1400 - 1500	4.80E-03	4.67E-03	1.27E-04	0	0
1500 - 1600	4.81E-03	4.68E-03	1.28E-04	0	0
1600 - 1700	2.84E-03	2.86E-03	7.40E-05	0	0
1700 - 1800	3.00E-03	2.92E-03	7.86E-05	0	0
1800 - 1900	1.39E-04	1.39E-04	8.13E-07	0	0
1900 - 2000	0.00E+00	0.00E+00	0.00E+00	0	0
2000 - 2100	2.21E-03	2.15E-03	6.62E-05	0	0
2100 - 2200	1.33E-03	1.30E-03	2.66E-05	0	0
2200 - 2300	1.98E-03	1.93E-03	5.39E-05	0	0
2300 - 2400	1.34E-03	1.30E-03	3.65E-05	0	0

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0600 - 0700	1.71E+00	1.65E+00	3.91E+00	0.00E+00	0.00E+00
0700 - 0800	2.95E+01	2.85E+01	6.61E+01	0.00E+00	0.00E+00
0800 - 0900	3.01E+01	2.91E+01	6.73E+01	0.00E+00	0.00E+00
0900 - 1000	3.00E+01	2.91E+01	6.69E+01	0.00E+00	0.00E+00
1000 - 1100	3.68E+01	3.56E+01	8.20E+01	0.00E+00	0.00E+00
1100 - 1200	3.68E+01	3.56E+01	8.15E+01	0.00E+00	0.00E+00
1200 - 1300	3.68E+01	3.56E+01	8.20E+01	0.00E+00	0.00E+00
1300 - 1400	3.68E+01	3.56E+01	8.15E+01	0.00E+00	0.00E+00
1400 - 1500	3.68E+01	3.56E+01	8.15E+01	0.00E+00	0.00E+00
1500 - 1600	3.01E+01	2.91E+01	6.73E+01	0.00E+00	0.00E+00
1600 - 1700	3.01E+01	2.91E+01	6.78E+01	0.00E+00	0.00E+00
1700 - 1800	2.95E+01	2.86E+01	6.65E+01	0.00E+00	0.00E+00
1800 - 1900	2.95E+01	2.86E+01	6.65E+01	0.00E+00	0.00E+00
1900 - 2000	3.00E+01	2.91E+01	6.69E+01	0.00E+00	0.00E+00
2000 - 2100	3.67E+01	3.56E+01	8.11E+01	0.00E+00	0.00E+00
2100 - 2200	3.73E+01	3.59E+01	8.68E+01	0.00E+00	0.00E+00
2200 - 2300	3.67E+01	3.56E+01	8.11E+01	0.00E+00	0.00E+00
2300 - 2400	3.67E+01	3.56E+01	8.11E+01	0.00E+00	0.00E+00

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	8.04E+00	7.87E+00	3.75E+01	0.00E+00	0.00E+00
0100 - 0200	3.65E+00	3.57E+00	1.70E+01	0.00E+00	0.00E+00
0200 - 0300	1.81E+00	1.57E+00	7.47E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0600 - 0700	3.15E+00	3.06E+00	1.47E+01	0.00E+00	0.00E+00
0700 - 0800	1.58E+00	1.54E+00	7.36E+00	0.00E+00	0.00E+00
0800 - 0900	1.00E+00	1.00E+00	5.00E+00	0.00E+00	0.00E+00
0900 - 1000	1.11E+01	1.08E+01	5.17E+01	0.00E+00	0.00E+00
1000 - 1100	2.74E+01	2.69E+01	1.21E+02	0.00E+00	0.00E+00
1100 - 1200	1.05E+01	1.03E+01	4.52E+01	0.00E+00	0.00E+00
1200 - 1300	2.95E+01	2.89E+01	1.30E+02	0.00E+00	0.00E+00
1300 - 1400	3.65E+01	3.57E+01	1.67E+02	0.00E+00	0.00E+00
1400 - 1500	3.44E+01	3.37E+01	1.57E+02	0.00E+00	0.00E+00
1500 - 1600	3.45E+01	3.37E+01	1.57E+02	0.00E+00	0.00E+00
1600 - 1700	2.11E+01	2.07E+01	9.17E+01	0.00E+00	0.00E+00
1700 - 1800	2.15E+01	2.10E+01	9.67E+01	0.00E+00	0.00E+00
1800 - 1900	1.00E+00	1			

Shek Lei Bus Terminus

Temp: 10 RH: 18

Start Emission - Terminating Bus

Soaking Time (min)	Double-Deck Franchised Bus (FBDD - Diesel) Start Emission Factor (g/trip)																	
	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720
NOx	0.793	1.427	1.903	2.696	3.331	4.441	6.503	8.089	11.895	15.543	17.446	20.618	22.680	23.790	24.425	25.059	25.376	25.376
NO	0.749	1.348	1.797	2.546	3.144	4.193	6.139	7.637	11.230	14.674	16.471	19.466	21.412	22.461	23.060	23.658	23.958	23.958
NO2	0.044	0.080	0.106	0.151	0.186	0.248	0.364	0.452	0.665	0.869	0.975	1.152	1.268	1.330	1.365	1.401	1.418	1.418
RSP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FSP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Soaking Time (min)	No. of Trips of FBDD (Diesel)																	
	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720
Hour																		
0000 - 0100		4	2															
0100 - 0200																		
0200 - 0300																		
0300 - 0400																		
0400 - 0500																		
0500 - 0600			1								1							
0600 - 0700		7	1									1						
0700 - 0800	10	7																
0800 - 0900	10	7																
0900 - 1000	9	7																
1000 - 1100	8	6																
1100 - 1200		6	6	1														
1200 - 1300		6	6	1														
1300 - 1400	6	8	1															
1400 - 1500	3	7	3															
1500 - 1600	4	7	2															
1600 - 1700	5	10																
1700 - 1800	10	11																
1800 - 1900	10	10																
1900 - 2000	10	8																
2000 - 2100	9	6																
2100 - 2200	4	10																
2200 - 2300	4	10																
2300 - 2400	2	10																

Note: The numbers of trips is based on the full day bus counting survey.

Total Start Emission of FBSD & FBDD (g)					
NOx	NO	NO2	RSP	FSP	
6	10	9	1	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
2	19	18	1	0	0
9	33	31	2	0	0
17	18	17	1	0	0
17	18	17	1	0	0
16	17	16	1	0	0
14	15	14	1	0	0
13	23	21	1	0	0
13	23	21	1	0	0
15	18	17	1	0	0
13	18	17	1	0	0
13	17	16	1	0	0
15	18	17	1	0	0
21	24	22	1	0	0
20	22	21	1	0	0
18	19	18	1	0	0
15	16	15	1	0	0
14	17	16	1	0	0
14	17	16	1	0	0
12	16	15	1	0	0

Cold Idling Emission - Terminating Bus

Idling Time =	1	min
Max. Idling Time for Adjusting Start Emission =	1	min

Note: The Idling time was based on the full day bus counting survey.

Hour	Frequency	FBDD (Diesel)									
		Cold Idling Emission Factor (g/s)					Cold Idling Emission (g) [1]				
		NOx	NO	NO2	RSP	FSP	NOx	NO	NO2	RSP	FSP
0000 - 0100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	1	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	7.39E+00	7.02E+00	3.72E-01	2.11E-03	2.11E-03
0600 - 0700	1	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	7.39E+00	7.02E+00	3.72E-01	2.11E-03	2.11E-03
0700 - 0800	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0800 - 0900	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0900 - 1000	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000 - 1100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1100 - 1200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1200 - 1300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1300 - 1400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1400 - 1500	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1500 - 1600	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1600 - 1700	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1700 - 1800	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1800 - 1900	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900 - 2000	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2000 - 2100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2100 - 2200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200 - 2300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2300 - 2400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Hot Idling Emission - Terminating Bus

Idling Time =	1	min
Max. Idling Time for Adjusting Start Emission =	1	min

Note: The Idling time was based on the full day bus counting survey.

Hour	Frequency	FBDD (Diesel)									
		Hot Idling Emission Factor (g/s)					Hot Idling Emission (g) [1]				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	6	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02
0100 - 0200	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	1	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	2.42E-01	2.30E-01	1.22E-02	2.11E-03	2.11E-03
0600 - 0700	8	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
0700 - 0800	17	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	4.12E+00	3.91E+00	2.07E-01	3.58E-02	3.58E-02
0800 - 0900	17	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	4.12E+00	3.91E+00	2.07E-01	3.58E-02	3.58E-02
0900 - 1000	16	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.88E+00	3.68E+00	1.95E-01	3.37E-02	3.37E-02
1000 - 1100	14	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02
1100 - 1200	13	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02
1200 - 1300	13	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02
1300 - 1400	15	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02
1400 - 1500	13	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02
1500 - 1600	13	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02
1600 - 1700	15	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02
1700 - 1800	21	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	5.09E+00	4.83E+00	2.56E-01	4.43E-02	4.43E-02
1800 - 1900	20	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	4.85E+00	4.60E+00	2.44E-01	4.22E-02	4.22E-02
1900 - 2000	18	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	4.36E+00	4.14E+00	2.19E-01	3.80E-02	3.80E-02
2000 - 2100	15	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02
2100 - 2200	14	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02
2200 - 2300	14	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02
2300 - 2400	12	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	2.91E+00	2.76E+00	1.46E-01	2.53E-02	2.53E-02

Average Distance from Starting Place to Egress =	112	m
Average Spread Distance outside bus terminus =	587.6	m

Hour	Total Idling Emission (g) [2]					Idling Emission for Start Emission Adjustment (g) [3]				
	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02	1.45E+00	1.38E+00	7.31E-02	1.27E-02	1.27E-02
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	7.63E+00	7.25E+00	3.84E-01	4.22E-03	4.22E-03	7.63E+00	7.25E+00	3.84E-01	4.22E-03	4.22E-03
0600 - 0700	9.33E+00	8.86E+00	4.69E-01	1.90E-02	1.90E-02	9.33E+00	8.86E+00	4.69E-01	1.90E-02	1.90E-02
0700 - 0800	4.12E+00	3.91E+00	2.07E-01	3.58E-02	3.58E-02	4.12E+00	3.91E+00	2.07E-01	3.58E-02	3.58E-02
0800 - 0900	4.12E+00	3.91E+00	2.07E-01	3.58E-02	3.58E-02	4.12E+00	3.91E+00	2.07E-01	3.58E-02	3.58E-02
0900 - 1000	3.88E+00	3.68E+00	1.95E-01	3.37E-02	3.37E-02	3.88E+00	3.68E+00	1.95E-01	3.37E-02	3.37E-02
1000 - 1100	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02
1100 - 1200	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02
1200 - 1300	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02
1300 - 1400	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02
1400 - 1500	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02
1500 - 1600	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02	3.15E+00	2.99E+00	1.58E-01	2.74E-02	2.74E-02
1600 - 1700	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02
1700 - 1800	5.09E+00	4.83E+00	2.56E-01	4.43E-02	4.43E-02	5.09E+00	4.83E+00	2.56E-01	4.43E-02	4.43E-02
1800 - 1900	4.85E+00	4.60E+00	2.44E-01	4.22E-02	4.22E-02	4.85E+00	4.60E+00	2.44E-01	4.22E-02	4.22E-02
1900 - 2000	4.36E+00	4.14E+00	2.19E-01	3.80E-02	3.80E-02	4.36E+00	4.14E+00	2.19E-01	3.80E-02	3.80E-02
2000 - 2100	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02	3.63E+00	3.45E+00	1.83E-01	3.16E-02	3.16E-02
2100 - 2200	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02
2200 - 2300	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02	3.39E+00	3.22E+00	1.71E-01	2.95E-02	2.95E-02
2300 - 2400	2.91E+00	2.76E+00	1.46E-01	2.53E-02	2.53E-02	2.91E+00	2.76E+00	1.46E-01	2.53E-02	2.53E-02

Hot Idling Emission - Bypass Bus

Idling Time =	1	min
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Hour	Frequency	FBDD (Diesel)									
		Hot Idling Emission Factor (g/s)					Hot Idling Emission (g) [1]				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	3	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	22.166	21.051	1.115	0.006	0.006
0100 - 0200	2	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	14.777	14.034	0.743	0.004	0.004
0200 - 0300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
0300 - 0400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
0400 - 0500	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
0500 - 0600	3	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	22.166	21.051	1.115	0.006	0.006

Adjusted Start Emission within bus terminus (g) [4]						Adjusted Start Emission outside bus terminus (g) [5]					Start Emission Rate outside bus terminus (g/s)				
NOx	NO	NO ₂	RSP	FSP		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
1.29E+00	1.22E+00	7.37E-02	0	0	6.77E+00	6.38E+00	3.85E-01	0	0	1.88E-03	1.77E-03	1.07E-04	0	0	
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	
1.88E+00	1.77E+00	1.12E-01	0	0	9.84E+00	9.25E+00	5.86E-01	0	0	2.73E-03	2.57E-03	1.63E-04	0	0	
3.72E+00	3.51E+00	2.17E-01	0	0	1.95E+01	1.83E+01	1.13E+00	0	0	5.41E-03	5.09E-03	3.14E-04	0	0	
2.22E+00	2.09E+00	1.28E-01	0	0	1.16E+01	1.09E+01	6.67E-01	0	0	3.22E-03	3.03E-03	1.85E-04	0	0	
2.22E+00	2.09E+00	1.28E-01	0	0	1.16E+01	1.09E+01	6.67E-01	0	0	3.22E-03	3.03E-03	1.85E-04	0	0	
2.13E+00	2.01E+00	1.22E-01	0	0	1.11E+01	1.05E+01	6.40E-01	0	0	3.09E-03	2.91E-03	1.78E-04	0	0	
1.85E+00	1.74E+00	1.06E-01	0	0	9.67E+00	9.11E+00	5.56E-01	0	0	2.69E-03	2.53E-03	1.55E-04	0	0	
3.14E+00	2.96E+00	1.78E-01	0	0	1.64E+01	1.55E+01	9.31E-01	0	0	4.55E-03	4.30E-03	2.59E-04	0	0	
3.14E+00	2.96E+00	1.78E-01	0	0	1.64E+01	1.55E+01	9.31E-01	0	0	4.55E-03	4.30E-03	2.59E-04	0	0	
2.32E+00	2.19E+00	1.33E-01	0	0	1.21E+01	1.14E+01	6.95E-01	0	0	3.37E-03	3.18E-03	1.93E-04	0	0	
2.40E+00	2.26E+00	1.37E-01	0	0	1.25E+01	1.18E+01	7.15E-01	0	0	3.48E-03	3.28E-03	1.99E-04	0	0	
2.22E+00	2.09E+00	1.27E-01	0	0	1.16E+01	1.09E+01	6.63E-01	0	0	3.22E-03	3.04E-03	1.84E-04	0	0	
2.35E+00	2.21E+00	1.34E-01	0	0	1.23E+01	1.16E+01	7.02E-01	0	0	3.41E-03					

0600 - 0700	11	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	81.275	77.188	4.087	0.023	0.023
0700 - 0800	28	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	206.881	196.478	10.403	0.059	0.059
0800 - 0900	26	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	192.104	182.444	9.660	0.055	0.055
0900 - 1000	23	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	169.938	161.392	8.545	0.048	0.048
1000 - 1100	20	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	147.772	140.341	7.431	0.042	0.042
1100 - 1200	18	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	132.995	126.307	6.688	0.038	0.038
1200 - 1300	18	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	132.995	126.307	6.688	0.038	0.038
1300 - 1400	16	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	118.218	112.273	5.945	0.034	0.034
1400 - 1500	15	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	110.829	105.256	5.573	0.032	0.032
1500 - 1600	16	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	118.218	112.273	5.945	0.034	0.034
1600 - 1700	17	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	125.606	119.290	6.316	0.036	0.036
1700 - 1800	24	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	177.326	168.409	8.917	0.051	0.051
1800 - 1900	22	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	162.549	154.375	8.174	0.046	0.046
1900 - 2000	23	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	169.938	161.392	8.545	0.048	0.048
2000 - 2100	18	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	132.995	126.307	6.688	0.038	0.038
2100 - 2200	17	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	125.606	119.290	6.316	0.036	0.036
2200 - 2300	18	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	132.995	126.307	6.688	0.038	0.038
2300 - 2400	14	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	103.440	98.239	5.202	0.030	0.030

Running Emission - Terminating Bus and Bypass Bus

The Longest Travelling Distance within bus terminus =	191	m
Average Travelling Speed =	10	km/h

Hour	Frequency	FBDD (Diesel)									
		Running Emission Factor (g/km-vehicle)					Running Emission (g)				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	9	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.23E+01	2.11E+01	1.12E+00	6.61E-01	6.08E-01
0100 - 0200	2	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	4.95E+00	4.70E+00	2.49E-01	1.47E-01	1.35E-01
0200 - 0300	0	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	5	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.24E+01	1.17E+01	6.22E-01	3.67E-01	3.38E-01
0600 - 0700	20	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	4.95E+01	4.70E+01	2.49E+00	1.47E+00	1.35E+00
0700 - 0800	45	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.11E+02	1.06E+02	5.60E+00	3.30E+00	3.04E+00
0800 - 0900	43	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.06E+02	1.01E+02	5.35E+00	3.16E+00	2.90E+00
0900 - 1000	39	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	9.64E+01	9.16E+01	4.85E+00	2.86E+00	2.63E+00
1000 - 1100	34	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	8.41E+01	7.99E+01	4.23E+00	2.50E+00	2.30E+00
1100 - 1200	31	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.67E+01	7.28E+01	3.86E+00	2.28E+00	2.09E+00
1200 - 1300	31	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.67E+01	7.28E+01	3.86E+00	2.28E+00	2.09E+00
1300 - 1400	31	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.67E+01	7.28E+01	3.86E+00	2.28E+00	2.09E+00
1400 - 1500	28	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.92E+01	6.58E+01	3.49E+00	2.06E+00	1.89E+00
1500 - 1600	29	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.17E+01	6.81E+01	3.61E+00	2.13E+00	1.96E+00
1600 - 1700	32	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.91E+01	7.52E+01	3.98E+00	2.35E+00	2.16E+00
1700 - 1800	45	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.11E+02	1.06E+02	5.60E+00	3.30E+00	3.04E+00
1800 - 1900	42	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.04E+02	9.86E+01	5.22E+00	3.08E+00	2.84E+00
1900 - 2000	41	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.01E+02	9.63E+01	5.10E+00	3.01E+00	2.77E+00
2000 - 2100	33	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	8.16E+01	7.75E+01	4.10E+00	2.42E+00	2.23E+00
2100 - 2200	31	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.67E+01	7.28E+01	3.86E+00	2.28E+00	2.09E+00
2200 - 2300	32	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.91E+01	7.52E+01	3.98E+00	2.35E+00	2.16E+00
2300 - 2400	26	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.43E+01	6.11E+01	3.23E+00	1.91E+00	1.76E+00

Total Hourly Emission

Hour	Total Emission inside bus terminus (g) (Running + Idling + Start) [6]					Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	4.72E+01	4.48E+01	2.38E+00	6.80E-01	6.27E-01	1.310E-02	1.244E-02	6.613E-04	1.888E-04	1.741E-04
0100 - 0200	1.97E+01	1.87E+01	9.92E-01	1.51E-01	1.39E-01	5.479E-03	5.203E-03	2.755E-04	4.195E-05	3.868E-05
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0500 - 0600	4.40E+01	4.18E+01	2.23E+00	3.78E-01	3.48E-01	1.223E-02	1.161E-02	6.201E-04	1.049E-04	9.671E-05
0600 - 0700	1.44E+02	1.37E+02	7.26E+00	1.51E+00	1.39E+00	3.994E-02	3.792E-02	2.017E-03	4.195E-04	3.868E-04
0700 - 0800	3.25E+02	3.08E+02	1.63E+01	3.40E+00	3.13E+00	9.014E-02	8.560E-02	4.537E-03	9.438E-04	8.704E-04
0800 - 0900	3.05E+02	2.89E+02	1.53E+01	3.25E+00	2.99E+00	8.466E-02	8.040E-02	4.262E-03	9.019E-04	8.317E-04
0900 - 1000	2.72E+02	2.59E+02	1.37E+01	2.94E+00	2.72E+00	7.566E-02	7.186E-02	3.809E-03	8.180E-04	7.543E-04
1000 - 1100	2.37E+02	2.25E+02	1.19E+01	2.57E+00	2.37E+00	6.586E-02	6.254E-02	3.316E-03	7.131E-04	6.576E-04
1100 - 1200	2.16E+02	2.05E+02	1.09E+01	2.34E+00	2.16E+00	5.998E-02	5.696E-02	3.022E-03	6.502E-04	5.996E-04
1200 - 1300	2.16E+02	2.05E+02	1.09E+01	2.34E+00	2.16E+00	5.998E-02	5.696E-02	3.022E-03	6.502E-04	5.996E-04
1300 - 1400	2.01E+02	1.91E+02	1.01E+01	2.34E+00	2.16E+00	5.579E-02	5.295E-02	2.810E-03	6.502E-04	5.996E-04
1400 - 1500	1.86E+02	1.76E+02	9.35E+00	2.11E+00	1.95E+00	5.156E-02	4.896E-02	2.597E-03	5.873E-04	5.416E-04
1500 - 1600	1.95E+02	1.85E+02	9.84E+00	2.19E+00	2.02E+00	5.425E-02	5.152E-02	2.732E-03	6.082E-04	5.609E-04
1600 - 1700	2.11E+02	2.00E+02	1.06E+01	2.42E+00	2.23E+00	6.853E-02	6.559E-02	2.948E-03	6.712E-04	6.189E-04
1700 - 1800	2.97E+02	2.82E+02	1.49E+01	3.40E+00	3.13E+00	9.241E-02	8.726E-02	4.150E-03	9.438E-04	8.704E-04
1800 - 1900	2.74E+02	2.60E+02	1.38E+01	3.17E+00	2.92E+00	7.613E-02	7.229E-02	3.834E-03	8.809E-04	8.123E-04
1900 - 2000	2.78E+02	2.64E+02	1.40E+01	3.10E+00	2.85E+00	7.725E-02	7.336E-02	3.889E-03	8.599E-04	7.930E-04
2000 - 2100	2.20E+02	2.09E+02	1.11E+01	2.49E+00	2.30E+00	6.116E-02	5.808E-02	3.079E-03	6.921E-04	6.383E-04
2100 - 2200	2.08E+02	1.97E+02	1.05E+01	2.34E+00	2.16E+00	5.776E-02	5.485E-02	2.909E-03	6.502E-04	5.996E-04
2200 - 2300	2.18E+02	2.07E+02	1.10E+01	2.42E+00	2.23E+00	6.049E-02	5.745E-02	3.046E-03	6.712E-04	6.189E-04
2300 - 2400	1.73E+02	1.64E+02	8.70E+00	1.96E+00	1.81E+00	4.798E-02	4.556E-02	2.417E-03	5.453E-04	5.029E-04

SL Bus Total Efs

Hour	Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.310E-02	1.244E-02	6.813E-04	1.898E-04	1.741E-04
0100 - 0200	5.479E-03	5.203E-03	2.755E-04	4.195E-05	3.868E-05
0200 - 0300	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0300 - 0400	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0400 - 0500	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0500 - 0600	1.223E-02	1.161E-02	6.201E-04	1.049E-04	9.671E-05
0600 - 0700	3.994E-02	3.792E-02	2.017E-03	4.195E-04	3.969E-04
0700 - 0800	9.014E-02	8.565E-02	4.537E-03	9.439E-04	8.704E-04
0800 - 0900	8.466E-02	8.040E-02	4.262E-03	9.019E-04	8.317E-04
0900 - 1000	7.566E-02	7.186E-02	3.809E-03	8.180E-04	7.543E-04
1000 - 1100	6.588E-02	6.254E-02	3.316E-03	7.131E-04	6.576E-04
1100 - 1200	5.998E-02	5.696E-02	3.022E-03	6.502E-04	5.996E-04
1200 - 1300	5.998E-02	5.696E-02	3.022E-03	6.502E-04	5.996E-04
1300 - 1400	5.978E-02	5.298E-02	2.810E-03	6.502E-04	5.996E-04
1400 - 1500	5.156E-02	4.896E-02	2.597E-03	5.873E-04	5.418E-04
1500 - 1600	5.425E-02	5.152E-02	2.732E-03	6.082E-04	5.609E-04
1600 - 1700	5.853E-02	5.559E-02	2.946E-03	6.712E-04	6.189E-04
1700 - 1800	8.241E-02	7.826E-02	4.150E-03	9.439E-04	8.704E-04
1800 - 1900	7.613E-02	7.229E-02	3.834E-03	8.809E-04	8.123E-04
1900 - 2000	7.725E-02	7.336E-02	3.889E-03	8.599E-04	7.930E-04
2000 - 2100	6.116E-02	5.808E-02	3.079E-03	6.921E-04	6.383E-04
2100 - 2200	5.776E-02	5.485E-02	2.909E-03	6.502E-04	5.996E-04
2200 - 2300	6.049E-02	5.745E-02	3.046E-03	6.712E-04	6.189E-04
2300 - 2400	4.798E-02	4.556E-02	2.417E-03	5.453E-04	5.029E-04

4 Vol sources

Hour	Total Emission Rate (g/s) each Vol Source				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	3.278E-03	3.110E-03	1.653E-04	4.719E-05	4.352E-05
0100 - 0200	1.370E-03	1.301E-03	6.887E-05	1.049E-05	9.671E-06
0200 - 0300	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0300 - 0400	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0400 - 0500	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0500 - 0600	3.059E-03	2.904E-03	1.550E-04	2.622E-05	2.418E-05
0600 - 0700	9.985E-03	9.481E-03	5.041E-04	1.049E-04	9.671E-05
0700 - 0800	2.354E-02	2.140E-02	1.134E-03	2.380E-04	2.176E-04
0800 - 0900	2.117E-02	2.010E-02	1.065E-03	2.255E-04	2.079E-04
0900 - 1000	1.892E-02	1.796E-02	9.523E-04	2.045E-04	1.886E-04
1000 - 1100	1.647E-02	1.564E-02	8.289E-04	1.783E-04	1.644E-04
1100 - 1200	1.500E-02	1.424E-02	7.555E-04	1.625E-04	1.499E-04
1200 - 1300	1.500E-02	1.424E-02	7.555E-04	1.625E-04	1.499E-04
1300 - 1400	1.395E-02	1.324E-02	7.025E-04	1.625E-04	1.499E-04
1400 - 1500	1.289E-02	1.224E-02	6.493E-04	1.469E-04	1.354E-04
1500 - 1600	1.356E-02	1.288E-02	6.831E-04	1.521E-04	1.402E-04
1600 - 1700	1.463E-02	1.390E-02	7.370E-04	1.679E-04	1.547E-04
1700 - 1800	2.060E-02	1.957E-02	1.038E-03	2.360E-04	2.176E-04
1800 - 1900	1.903E-02	1.807E-02	9.584E-04	2.202E-04	2.031E-04
1900 - 2000	1.931E-02	1.834E-02	9.724E-04	2.150E-04	1.983E-04
2000 - 2100	1.529E-02	1.452E-02	7.699E-04	1.730E-04	1.596E-04
2100 - 2200	1.444E-02	1.371E-02	7.272E-04	1.625E-04	1.499E-04
2200 - 2300	1.512E-02	1.436E-02	7.616E-04	1.679E-04	1.547E-04
2300 - 2400	1.199E-02	1.139E-02	6.042E-04	1.363E-04	1.257E-04

Adjusted Start Emission

Diesel

Hour	Start Emission Rate outside bus terminus (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.800E-03	1.77E-03	1.07E-04	0	0
0100 - 0200	0.000E+00	0.000E+00	0.000E+00	0	0
0200 - 0300	0.000E+00	0.000E+00	0.000E+00	0	0
0300 - 0400	0.000E+00	0.000E+00	0.000E+00	0	0
0400 - 0500	0.000E+00	0.000E+00	0.000E+00	0	0
0500 - 0600	2.732E-03	2.57E-03	1.63E-04	0	0
0600 - 0700	5.406E-03	5.09E-03	3.14E-04	0	0
0700 - 0800	3.218E-03	3.03E-03	1.85E-04	0	0
0800 - 0900	3.218E-03	3.03E-03	1.85E-04	0	0
0900 - 1000	3.090E-03	2.91E-03	1.78E-04	0	0
1000 - 1100	2.685E-03	2.53E-03	1.55E-04	0	0
1100 - 1200	4.554E-03	4.30E-03	2.59E-04	0	0
1200 - 1300	4.554E-03	4.30E-03	2.59E-04	0	0
1300 - 1400	3.368E-03	3.18E-03	1.93E-04	0	0
1400 - 1500	3.481E-03	3.28E-03	1.99E-04	0	0
1500 - 1600	3.222E-03	3.04E-03	1.84E-04	0	0
1600 - 1700	3.405E-03	3.21E-03	1.95E-04	0	0
1700 - 1800	4.324E-03	4.08E-03	2.48E-04	0	0
1800 - 1900	4.047E-03	3.81E-03	2.33E-04	0	0
1900 - 2000	3.495E-03	3.29E-03	2.01E-04	0	0
2000 - 2100	2.814E-03	2.65E-03	1.62E-04	0	0
2100 - 2200	3.277E-03	3.09E-03	1.88E-04	0	0
2200 - 2300	3.277E-03	3.09E-03	1.88E-04	0	0
2300 - 2400	3.020E-03	2.85E-03	1.73E-04	0	0

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	8.94E-01	8.85E-01	8.78E-01	0.00E+00	0.00E+00
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	8.48E-01	8.47E-01	8.47E-01	0.00E+00	0.00E+00
0600 - 0700	1.68E+00	1.68E+00	1.70E+00	0.00E+00	0.00E+00
0700 - 0800	1.00E+00	1.00E+00	1.00E+00	0.00E+00	0.00E+00
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	0.00E+00	0.00E+00
0900 - 1000	9.60E-01	9.60E-01	9.60E-01	0.00E+00	0.00E+00
1000 - 1100	8.34E-01	8.34E-01	8.34E-01	0.00E+00	0.00E+00
1100 - 1200	1.41E+00	1.42E+00	1.40E+00	0.00E+00	0.00E+00
1200 - 1300	1.41E+00	1.42E+00	1.40E+00	0.00E+00	0.00E+00
1300 - 1400	1.05E+00	1.05E+00	1.04E+00	0.00E+00	0.00E+00
1400 - 1500	1.08E+00	1.08E+00	1.07E+00	0.00E+00	0.00E+00
1500 - 1600	1.00E+00	1.00E+00	9.95E-01	0.00E+00	0.00E+00
1600 - 1700	1.06E+00	1.06E+00	1.05E+00	0.00E+00	0.00E+00
1700 - 1800	1.34E+00	1.34E+00	1.34E+00	0.00E+00	0.00E+00
1800 - 1900	1.26E+00	1.26E+00	1.26E+00	0.00E+00	0.00E+00
1900 - 2000	1.09E+00	1.09E+00	1.09E+00	0.00E+00	0.00E+00
2000 - 2100	8.74E-01	8.74E-01	8.74E-01	0.00E+00	0.00E+00
2100 - 2200	1.02E+00	1.02E+00	1.01E+00	0.00E+00	0.00E+00
2200 - 2300	1.02E+00	1.02E+00	1.01E+00	0.00E+00	0.00E+00
2300 - 2400	0.98E-01	0.98E-01	0.92E-01	0.00E+00	0.00E+00

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.55E-01	1.55E-01	1.55E-01	2.09E-01	2.09E-01
0100 - 0200	6.47E-02	6.47E-02	6.46E-02	4.65E-02	4.65E-02
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	1.45E-01	1.44E-01	1.45E-01	1.16E-01	1.16E-01
0600 - 0700	4.72E-01	4.72E-01	4.73E-01	4.66E-01	4.66E-01
0700 - 0800	1.06E+00	1.06E+00	1.06E+00	1.05E+00	1.05E+00
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
0900 - 1000	8.94E-01	8.94E-01	8.94E-01	9.07E-01	9.07E-01
1000 - 1100	7.78E-01	7.78E-01	7.78E-01	7.91E-01	7.91E-01
1100 - 1200	7.09E-01	7.08E-01	7.09E-01	7.21E-01	7.21E-01
1200 - 1300	7.09E-01	7.08E-01	7.09E-01	7.21E-01	7.21E-01
1300 - 1400	6.59E-01	6.59E-01	6.59E-01	6.51E-01	6.51E-01
1400 - 1500	6.09E-01	6.09E-01	6.09E-01	6.51E-01	6.51E-01
1500 - 1600	6.41E-01	6.41E-01	6.41E-01	6.74E-01	6.74E-01
1600 - 1700	6.91E-01	6.91E-01	6.92E-01	7.44E-01	7.44E-01
1700 - 1800	8.73E-01	8.73E-01	8.74E-01	1.05E+00	1.05E+00
1800 - 1900	8.99E-01	8.99E-01	9.00E-01	9.77E-01	9.77E-01
1900 - 2000	9.12E-01	9.12E-01	9.13E-01	9.53E-01	9.53E-01
2000 - 2100	7.22E-01	7.22E-01	7.23E-01	7.67E-01	7.67E-01
2100 - 2200	6.82E-01	6.82E-01	6.83E-01	7.21E-01	7.21E-01
2200 - 2300	7.15E-01	7.15E-01	7.15E-01	7.44E-01	7.44E-01
2300 - 2400	5.67E-01	5.67E-01	5.67E-01	6.05E-01	6.05E-01

SL Taxi Total Efs

Hour	Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	8.271E-04	8.047E-04	2.224E-05	7.632E-06	7.532E-06
0100 - 0200	2.885E-04	2.807E-04	7.789E-06	2.544E-06	2.544E-06
0200 - 0300	1.288E-04	1.254E-04	3.479E-06	1.272E-06	1.272E-06
0300 - 0400	3.842E-04	3.739E-04	1.038E-05	3.816E-06	3.816E-06
0400 - 0500	7.713E-04	7.505E-04	2.083E-05	7.631E-06	7.631E-06
0500 - 0600	1.288E-03	1.253E-03	3.479E-05	1.272E-05	1.272E-05
0600 - 0700	1.507E-03	1.467E-03	4.070E-05	1.399E-05	1.399E-05
0700 - 0800	4.465E-04	4.348E-04	1.203E-05	7.437E-10	6.895E-10
0800 - 0900	6.018E-04	5.856E-04	1.621E-05	1.002E-09	9.287E-10
0900 - 1000	5.015E-04	4.880E-04	1.351E-05	8.348E-10	7.739E-10
1000 - 1100	1.102E-03	1.072E-03	2.976E-05	8.903E-06	8.903E-06
1100 - 1200	1.104E-03	1.074E-03	2.980E-05	8.904E-06	8.903E-06
1200 - 1300	1.322E-03	1.286E-03	3.569E-05	1.272E-05	1.272E-05
1300 - 1400	1.256E-03	1.217E-03	3.370E-05	1.145E-05	1.145E-05
1400 - 1500	1.140E-03	1.109E-03	3.078E-05	1.018E-05	1.018E-05
1500 - 1600	1.877E-03	1.826E-03	5.069E-05	1.781E-05	1.781E-05
1600 - 1700	1.185E-03	1.153E-03	3.201E-05	1.145E-05	1.145E-05
1700 - 1800	1.709E-03	1.663E-03	4.619E-05	1.653E-05	1.653E-05
1800 - 1900	4.519E-04	4.397E-04	1.218E-05	1.272E-06	1.272E-06
1900 - 2000	7.144E-04	6.952E-04	1.929E-05	5.089E-06	5.089E-06
2000 - 2100	7.605E-04	7.403E-04	2.054E-05	6.360E-06	6.360E-06
2100 - 2200	1.630E-03	1.586E-03	4.404E-05	1.653E-05	1.653E-05
2200 - 2300	1.395E-03	1.357E-03	3.767E-05	1.399E-05	1.399E-05
2300 - 2400	1.026E-03	9.980E-04	2.769E-05	1.018E-05	1.018E-05

80.42 m2

Hour	Total Emission Rate (g/m2)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.029E-05	1.001E-05	2.778E-07	9.490E-08	9.490E-08
0100 - 0200	3.587E-06	3.491E-06	9.895E-08	3.163E-08	3.163E-08
0200 - 0300	1.602E-06	1.559E-06	4.326E-08	1.582E-08	1.582E-08
0300 - 0400	4.778E-06	4.649E-06	1.291E-07	4.745E-08	4.745E-08
0400 - 0500	9.591E-06	9.332E-06	2.591E-07	9.489E-08	9.489E-08
0500 - 0600	1.602E-05	1.559E-05	4.326E-07	1.582E-07	1.582E-07
0600 - 0700	1.874E-05	1.824E-05	5.061E-07	1.740E-07	1.740E-07
0700 - 0800	5.556E-06	5.406E-06	1.496E-07	9.249E-12	8.574E-12
0800 - 0900	7.484E-06	7.282E-06	2.015E-07	1.246E-11	1.155E-11
0900 - 1000	6.236E-06	6.068E-06	1.680E-07	1.038E-11	9.624E-12
1000 - 1100	1.371E-05	1.334E-05	3.700E-07	1.107E-07	1.107E-07
1100 - 1200	1.373E-05	1.336E-05	3.706E-07	1.107E-07	1.107E-07
1200 - 1300	1.643E-05	1.599E-05	4.438E-07	1.582E-07	1.582E-07
1300 - 1400	1.555E-05	1.513E-05	4.199E-07	1.423E-07	1.423E-07
1400 - 1500	1.418E-05	1.379E-05	3.829E-07	1.265E-07	1.265E-07
1500 - 1600	2.334E-05	2.271E-05	6.303E-07	2.214E-07	2.214E-07
1600 - 1700	1.474E-05	1.434E-05	3.981E-07	1.423E-07	1.423E-07
1700 - 1800	2.125E-05	2.067E-05	5.739E-07	2.056E-07	2.056E-07
1800 - 1900	5.619E-06	5.467E-06	1.515E-07	1.582E-08	1.582E-08
1900 - 2000	8.884E-06	8.644E-06	2.397E-07	6.327E-08	6.327E-08
2000 - 2100	9.461E-06	9.205E-06	2.554E-07	7.909E-08	7.909E-08
2100 - 2200	2.027E-05	1.973E-05	5.476E-07	2.056E-07	2.056E-07
2200 - 2300	1.734E-05	1.687E-05	4.684E-07	1.740E-07	1.740E-07
2300 - 2400	1.275E-05	1.241E-05	3.444E-07	1.265E-07	1.265E-07

Adjusted Start Emission

LPG

Hour	Start Emission Rate outside Taxi Stand (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.442E-03	1.408E-03	3.92E-05	0	0
0100 - 0200	4.847E-04	4.72E-04	1.32E-05	0	0
0200 - 0300	2.603E-04	2.53E-04	7.07E-06	0	0
0300 - 0400	7.664E-04	7.46E-04	2.08E-05	0	0
0400 - 0500	1.377E-03	1.34E-03	3.75E-05	0	0
0500 - 0600	2.312E-03	2.25E-03	6.29E-05	0	0
0600 - 0700	2.566E-03	2.50E-03	6.98E-05	0	0
0700 - 0800	0.000E+00	0.000E+00	0.000E+00	0	0
0800 - 0900	0.000E+00	0.000E+00	0.000E+00	0	0
0900 - 1000	0.000E+00	0.000E+00	0.000E+00	0	0
1000 - 1100	1.589E-03	1.55E-03	4.32E-05	0	0
1100 - 1200	1.600E-03	1.56E-03	4.35E-05	0	0
1200 - 1300	2.295E-03	2.23E-03	6.24E-05	0	0
1300 - 1400	2.056E-03	1.99E-03	5.58E-05	0	0
1400 - 1500	1.851E-03	1.80E-03	5.03E-05	0	0
1500 - 1600	3.181E-03	3.09E-03	8.66E-05	0	0
1600 - 1700	2.101E-03	2.04E-03	5.71E-05	0	0
1700 - 1800	2.962E-03	2.88E-03	8.06E-05	0	0
1800 - 1900	2.269E-04	2.21E-04	6.18E-06	0	0
1900 - 2000	9.156E-04	8.91E-04	2.48E-05	0	0
2000 - 2100	1.173E-03	1.14E-03	3.19E-05	0	0
2100 - 2200	3.044E-03	2.96E-03	8.28E-05	0	0
2200 - 2300	2.604E-03	2.53E-03	7.08E-05	0	0
2300 - 2400	1.934E-03	1.88E-03	5.25E-05	0	0

Hour	Hourly Profile (1500-1600 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	4.53E-01	4.53E-01	4.53E-01	0.00E+00	0.00E+00
0100 - 0200	1.52E-01	1.52E-01	1.52E-01	0.00E+00	0.00E+00
0200 - 0300	8.18E-02	8.18E-02	8.18E-02	0.00E+00	0.00E+00
0300 - 0400	2.41E-01	2.41E-01	2.41E-01	0.00E+00	0.00E+00
0400 - 0500	4.33E-01	4.33E-01	4.33E-01	0.00E+00	0.00E+00
0500 - 0600	7.27E-01	7.27E-01	7.27E-01	0.00E+00	0.00E+00
0600 - 0700	8.07E-01	8.07E-01	8.06E-01	0.00E+00	0.00E+00
0700 - 0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0800 - 0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0900 - 1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000 - 1100	4.99E-01	4.99E-01	4.99E-01	0.00E+00	0.00E+00
1100 - 1200	5.03E-01	5.03E-01	5.03E-01	0.00E+00	0.00E+00
1200 - 1300	7.21E-01	7.21E-01	7.20E-01	0.00E+00	0.00E+00
1300 - 1400	6.45E-01	6.45E-01	6.44E-01	0.00E+00	0.00E+00
1400 - 1500	5.82E-01	5.82E-01	5.81E-01	0.00E+00	0.00E+00
1500 - 1600	1.00E+00	1.00E+00	1.00E+00	0.00E+00	0.00E+00
1600 - 1700	6.60E-01	6.61E-01	6.60E-01	0.00E+00	0.00E+00
1700 - 1800	9.31E-01	9.31E-01	9.31E-01	0.00E+00	0.00E+00
1800 - 1900	7.13E-02	7.13E-02	7.13E-02	0.00E+00	0.00E+00
1900 - 2000	2.88E-01	2.88E-01	2.88E-01	0.00E+00	0.00E+00
2000 - 2100	3.69E-01	3.69E-01	3.68E-01	0.00E+00	0.00E+00
2100 - 2200	9.57E-01	9.57E-01	9.56E-01	0.00E+00	0.00E+00
2200 - 2300	8.19E-01	8.19E-01	8.18E-01	0.00E+00	0.00E+00
2300 - 2400	6.08E-01	6.08E-01	6.07E-01	0.00E+00	0.00E+00

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.37E+00	1.37E+00	1.38E+00	7.62E+03	8.22E+03
0100 - 0200	4.73E-01	4.73E-01	4.81E-01	2.54E+03	2.74E+03
0200 - 0300	2.14E-01	2.14E-01	2.15E-01	1.27E+03	1.37E+03
0300 - 0400	6.38E-01	6.38E-01	6.40E-01	3.81E+03	4.11E+03
0400 - 0500	1.28E+00	1.28E+00	1.29E+00	7.62E+03	8.22E+03
0500 - 0600	2.14E+00	2.14E+00	2.15E+00	1.27E+04	1.37E+04
0600 - 0700	2.50E+00	2.50E+00	2.51E+00	1.40E+04	1.51E+04
0700 - 0800	7.42E-01	7.42E-01	7.42E-01	7.42E-01	7.42E-01
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
0900 - 1000	8.33E-01	8.33E-01	8.33E-01	8.33E-01	8.33E-01
1000 - 1100	1.83E+00	1.83E+00	1.84E+00	8.89E+03	9.59E+03
1100 - 1200	1.83E+00	1.83E+00	1.84E+00	8.89E+03	9.59E+03
1200 - 1300	2.20E+00	2.20E+00	2.20E+00	1.27E+04	1.37E+04
1300 - 1400	2.08E+00	2.08E+00	2.08E+00	1.14E+04	1.23E+04
1400 - 1500	1.89E+00	1.89E+00	1.90E+00	1.02E+04	1.10E+04
1500 - 1600	3.12E+00	3.12E+00	3.13E+00	1.78E+04	1.92E+04
1600 - 1700	1.97E+00	1.97E+00	1.98E+00	1.14E+04	1.23E+04
1700 - 1800	2.84E+00	2.84E+00	2.85E+00	1.65E+04	1.78E+04
1800 - 1900	7.51E-01	7.51E-01	7.51E-01	1.27E+03	1.37E+03
1900 - 2000	1.19E+00	1.19E+00	1.19E+00	5.08E+03	5.48E+03
2000 - 2100	1.26E+00	1.26E+00	1.27E+00	6.35E+03	6.85E+03
2100 - 2200	2.71E+00	2.71E+00	2.72E+00	1.65E+04	1.78E+04
2200 - 2300	2.32E+00	2.32E+00	2.32E+00	1.40E+04	1.51E+04
2300 - 2400	1.70E+00	1.70E+00	1.71E+00	1.02E+04	1.10E+04

SL PLB Total Efs

Hour	Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.003E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0100 - 0200	2.715E-05	2.300E-05	4.154E-06	7.600E-07	6.993E-07
0200 - 0300	2.715E-05	2.300E-05	4.154E-06	7.600E-07	6.993E-07
0300 - 0400	3.081E-04	2.808E-04	2.734E-05	2.898E-06	2.837E-06
0400 - 0500	7.514E-04	6.847E-04	6.673E-05	8.694E-06	8.511E-06
0500 - 0600	8.929E-04	8.230E-04	6.993E-05	1.159E-05	1.135E-05
0600 - 0700	2.366E-03	2.144E-03	2.226E-04	4.209E-05	4.112E-05
0700 - 0800	1.441E-03	1.294E-03	1.473E-04	2.912E-05	2.833E-05
0800 - 0900	1.523E-03	1.362E-03	1.612E-04	3.202E-05	3.117E-05
0900 - 1000	2.588E-03	2.342E-03	2.460E-04	4.865E-05	4.749E-05
1000 - 1100	1.320E-03	1.187E-03	1.331E-04	2.622E-05	2.549E-05
1100 - 1200	1.186E-03	1.063E-03	1.226E-04	2.409E-05	2.336E-05
1200 - 1300	9.252E-04	8.353E-04	8.984E-05	1.753E-05	1.698E-05
1300 - 1400	8.365E-04	7.636E-04	7.201E-05	1.387E-05	1.345E-05
1400 - 1500	1.054E-03	9.471E-04	1.067E-04	2.057E-05	1.978E-05
1500 - 1600	1.895E-03	1.740E-03	1.551E-04	2.774E-05	2.689E-05
1600 - 1700	1.287E-03	1.173E-03	1.141E-04	2.195E-05	2.122E-05
1700 - 1800	9.316E-04	8.549E-04	7.677E-05	1.249E-05	1.201E-05
1800 - 1900	7.487E-04	6.857E-04	8.295E-05	1.615E-05	1.554E-05
1900 - 2000	3.758E-04	3.419E-04	4.463E-05	8.815E-06	8.554E-06
2000 - 2100	2.229E-04	1.980E-04	2.692E-05	5.178E-06	4.935E-06
2100 - 2200	1.968E-04	1.730E-04	2.276E-05	4.418E-06	4.236E-06
2200 - 2300	1.086E-04	9.200E-05	1.662E-05	3.040E-06	2.797E-06
2300 - 2400	5.431E-05	4.600E-05	8.309E-06	1.520E-06	1.399E-06

235.83 m2

Hour	Total Emission Rate (g/m2)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0100 - 0200	1.151E-07	9.752E-08	1.763E-08	3.223E-09	2.955E-09
0200 - 0300	1.151E-07	9.752E-08	1.762E-08	3.223E-09	2.955E-09
0300 - 0400	1.307E-06	1.191E-06	1.159E-07	1.229E-08	1.203E-08
0400 - 0500	3.186E-06	2.903E-06	2.830E-07	3.686E-08	3.609E-08
0500 - 0600	3.786E-06	3.490E-06	2.965E-07	4.915E-08	4.812E-08
0600 - 0700	1.003E-05	9.090E-06	9.441E-07	1.785E-07	1.744E-07
0700 - 0800	6.112E-06	5.488E-06	6.247E-07	1.235E-07	1.201E-07
0800 - 0900	6.458E-06	5.775E-06	6.833E-07	1.338E-07	1.322E-07
0900 - 1000	1.098E-05	9.933E-06	1.043E-06	2.063E-07	2.014E-07
1000 - 1100	5.597E-06	5.033E-06	5.643E-07	1.112E-07	1.081E-07
1100 - 1200	5.028E-06	4.508E-06	5.197E-07	1.021E-07	9.904E-08
1200 - 1300	3.923E-06	3.542E-06	3.810E-07	7.433E-08	7.201E-08
1300 - 1400	3.543E-06	3.238E-06	3.053E-07	5.882E-08	5.702E-08
1400 - 1500	4.468E-06	4.016E-06	4.523E-07	8.722E-08	8.307E-08
1500 - 1600	8.036E-06	7.379E-06	8.578E-07	1.178E-07	1.140E-07
1600 - 1700	5.458E-06	4.975E-06	4.839E-07	9.306E-08	8.997E-08
1700 - 1800	3.950E-06	3.625E-06	3.255E-07	5.298E-08	5.092E-08
1800 - 1900	3.175E-06	2.823E-06	3.517E-07	6.849E-08	6.591E-08
1900 - 2000	4.138E-06	3.778E-06	3.601E-07	6.849E-08	6.591E-08
2000 - 2100	9.452E-07	8.311E-07	1.141E-07	2.196E-08	2.093E-08
2100 - 2200	8.301E-07	7.335E-07	9.653E-08	1.873E-08	1.796E-08
2200 - 2300	4.606E-07	3.901E-07	7.047E-08	1.289E-08	1.186E-08
2300 - 2400	2.303E-07	1.950E-07	3.523E-08	6.445E-09	5.930E-09

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	1.78E-02	1.69E-02	2.59E-02	2.37E-02	2.24E-02
0200 - 0300	1.78E-02	1.76E-02	2.58E-02	2.37E-02	2.24E-02
0300 - 0400	2.02E-01	2.06E-01	1.70E-01	9.05E-02	9.10E-02
0400 - 0500	4.93E-01	5.03E-01	4.14E-01	2.72E-01	2.73E-01
0500 - 0600	5.86E-01	6.04E-01	4.34E-01	3.62E-01	3.64E-01
0600 - 0700	1.55E+00	1.57E+00	1.38E+00	1.31E+00	1.32E+00
0700 - 0800	9.46E-01	9.50E-01	9.14E-01	9.09E-01	9.09E-01
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
0900 - 1000	1.70E+00	1.72E+00	1.53E+00	1.52E+00	1.52E+00
1000 - 1100	8.67E-01	8.72E-01	8.26E-01	8.19E-01	8.18E-01
1100 - 1200	7.79E-01	7.81E-01	7.61E-01	7.52E-01	7.49E-01
1200 - 1300	6.07E-01	6.13E-01	5.57E-01	5.47E-01	5.45E-01
1300 - 1400	5.49E-01	5.61E-01	4.47E-01	4.33E-01	4.31E-01
1400 - 1500	6.92E-01	6.95E-01	6.62E-01	6.42E-01	6.35E-01
1500 - 1600	1.24E+00	1.29E+00	9.63E-01	8.66E-01	8.63E-01
1600 - 1700	8.45E-01	8.61E-01	7.08E-01	6.85E-01	6.81E-01
1700 - 1800	6.12E-01	6.28E-01	4.78E-01	3.90E-01	3.85E-01
1800 - 1900	4.92E-01	4.89E-01	5.15E-01	5.04E-01	4.99E-01
1900 - 2000	6.41E-01	6.54E-01	5.27E-01	5.04E-01	4.99E-01
2000 - 2100	1.46E-01	1.44E-01	1.67E-01	1.62E-01	1.58E-01
2100 - 2200	1.29E-01	1.27E-01	1.41E-01	1.38E-01	1.36E-01
2200 - 2300	7.13E-02	6.79E-02	1.03E-01	9.49E-02	9.97E-02
2300 - 2400	3.57E-02	3.88E-02	5.16E-02	4.75E-02	4.49E-02

Adjusted Start Emission

Diesel

Hour	Start Emission Rate outside bus terminus (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.000E+00	0.000E+00	0.000E+00	0	0
0100 - 0200	0.000E+00	0.000E+00	0.000E+00	0	0
0200 - 0300	0.000E+00	0.000E+00	0.000E+00	0	0
0300 - 0400	2.353E-04	1.698E-04	6.59E-05	0	0
0400 - 0500	2.985E-04	2.15E-04	8.36E-05	0	0
0500 - 0600	1.144E-04	8.23E-05	3.20E-05	0	0
0600 - 0700	1.195E-04	8.54E-05	3.33E-05	0	0
0700 - 0800	3.410E-05	2.45E-05	9.59E-06	0	0
0800 - 0900	1.587E-05	1.14E-05	4.50E-06	0	0
0900 - 1000	8.654E-05	6.22E-05	2.43E-05	0	0
1000 - 1100	3.912E-05	2.81E-05	1.10E-05	0	0
1100 - 1200	3.093E-05	2.22E-05	8.69E-06	0	0
1200 - 1300	3.109E-05	2.24E-05	8.72E-06	0	0
1300 - 1400	5.263E-06	3.79E-06	1.47E-06	0	0
1400 - 1500	3.769E-05	2.71E-05	1.06E-05	0	0
1500 - 1600	1.835E-04	1.32E-04	5.14E-05	0	0
1600 - 1700	7.234E-05	5.21E-05	2.03E-05	0	0
1700 - 1800	1.326E-04	9.55E-05	3.71E-05	0	0
1800 - 1900	1.295E-05	9.31E-06	3.65E-06	0	0
1900 - 2000	6.991E-06	4.39E-06	1.71E-06	0	0
2000 - 2100	1.587E-06	1.14E-06	4.50E-07	0	0
2100 - 2200	1.587E-06	1.14E-06	4.50E-07	0	0
2200 - 2300	0.000E+00	0.000E+00	0.000E+00	0	0
2300 - 2400	0.000E+00	0.000E+00	0.000E+00	0	0

LPG

Hour	Start Emission Rate outside bus terminus (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.00E+00	0.00E+00	0.00E+00	0	0
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0	0
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0	0
0300 - 0400	5.64E-04	5.61E-04	3.29E-06	0	0
0400 - 0500	1.27E-03	1.26E-03	7.39E-06	0	0
0500 - 0600	1.54E-03	1.53E-03	8.99E-06	0	0
0600 - 0700	2.26E-03	2.24E-03	1.87E-05	0	0
0700 - 0800	1.38E-03	1.37E-03	8.03E-06	0	0
0800 - 0900	1.30E-03	1.29E-03	7.57E-06	0	0
0900 - 1000	2.93E-03	2.91E-03	1.71E-05	0	0
1000 - 1100	1.32E-03	1.31E-03	7.88E-06	0	0
1100 - 1200	1.12E-03	1.11E-03	6.51E-06	0	0
1200 - 1300	1.03E-03	1.02E-03	6.02E-06	0	0
1300 - 1400	1.17E-03	1.17E-03	8.85E-06	0	0
1400 - 1500	1.10E-03	1.09E-03	6.42E-06	0	0
1500 - 1600	3.01E-03	2.99E-03	1.76E-05	0	0
1600 - 1700	1.74E-03	1.73E-03	1.01E-05	0	0
1700 - 1800	1.56E-03	1.55E-03	9.12E-06	0	0
1800 - 1900	5.89E-04	5.85E-04	3.43E-06	0	0
1900 - 2000	1.38E-03	1.37E-03	8.95E-06	0	0
2000 - 2100	1.30E-04	1.29E-04	7.57E-07	0	0
2100 - 2200	1.30E-04	1.29E-04	7.57E-07	0	0
2200 - 2300	0.00E+00	0.00E+00	0.00E+00	0	0
2300 - 2400	0.00E+00	0.00E+00	0.00E+00	0	0

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	1.48E+01	1.49E+01	1.46E+01	0.00E+00	0.00E+00
0400 - 0500	1.88E+01	1.89E+01	1.86E+01	0.00E+00	0.00E+00
0500 - 0600	7.21E+00	7.24E+00	7.12E+00	0.00E+00	0.00E+00
0600 - 0700	7.48E+00	7.51E+00	7.46E+00	0.00E+00	0.00E+00
0700 - 0800	2.15E+00	2.15E+00	2.13E+00	0.00E+00	0.00E+00
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	0.00E+00	0.00E+00
0900 - 1000	5.45E+00	5.47E+00	5.40E+00	0.00E+00	0.00E+00
1000 - 1100	2.46E+00	2.47E+00	2.44E+00	0.00E+00	0.00E+00
1100 - 1200	1.95E+00	1.95E+00	1.93E+00	0.00E+00	0.00E+00
1200 - 1300	1.96E+00	1.97E+00	1.94E+00	0.00E+00	0.00E+00
1300 - 1400	3.32E+00	3.33E+00	3.28E+00	0.00E+00	0.00E+00
1400 - 1500	2.37E+00	2.38E+00	2.35E+00	0.00E+00	0.00E+00
1500 - 1600	1.16E+01	1.16E+01	1.14E+01	0.00E+00	0.00E+00
1600 - 1700	4.56E+00	4.58E+00	4.50E+00	0.00E+00	0.00E+00
1700 - 1800	8.36E+00	8.39E+00	8.25E+00	0.00E+00	0.00E+00
1800 - 1900					

Lei Pui Street Bus Terminus

Temp: 10 RH: 18

Start Emission - Terminating Bus

Soaking Time (min)	Double-Deck Franchised Bus (FBDD - Diesel) Start Emission Factor (g/trip)																	
	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720
NOx	0.793	1.427	1.903	2.696	3.331	4.441	6.503	8.089	11.895	15.543	17.446	20.618	22.680	23.790	24.425	25.059	25.376	25.376
NO	0.749	1.348	1.797	2.546	3.144	4.193	6.139	7.637	11.230	14.674	16.471	19.466	21.412	22.461	23.060	23.658	23.958	23.958
NO2	0.044	0.080	0.106	0.151	0.186	0.248	0.364	0.452	0.665	0.869	0.975	1.152	1.268	1.330	1.365	1.401	1.418	1.418
RSP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FSP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Soaking Time (min)	No. of Trips of FBDD (Diesel)																	
	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720
Hour																		
0000 - 0100			1															
0100 - 0200																		
0200 - 0300																		
0300 - 0400																		
0400 - 0500																		
0500 - 0600		1									1							
0600 - 0700		6	1															
0700 - 0800	1	7																
0800 - 0900	5	4																
0900 - 1000	5	4																
1000 - 1100	4	4																
1100 - 1200		3	4															
1200 - 1300		5	3															
1300 - 1400		3	4															
1400 - 1500		4	4															
1500 - 1600		2	5															
1600 - 1700		2	5															
1700 - 1800	4	5																
1800 - 1900	5	3																
1900 - 2000	4	4																
2000 - 2100		2	2															
2100 - 2200		2	2															
2200 - 2300		2	2															
2300 - 2400		2	2															

Note: The numbers of trips is based on the full day bus counting survey.

Total Start Emission of FBSD & FBDD (g)				
NOx	NO	NO2	RSP	FSP
2	2	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
2	19	18	1	0
7	10	10	1	0
8	11	10	1	0
9	10	9	1	0
9	10	9	1	0
8	9	8	0	0
7	12	11	1	0
8	13	12	1	0
7	12	11	1	0
8	13	13	1	0
7	12	12	1	0
7	12	12	1	0
9	10	10	1	0
8	8	8	0	0
8	9	8	0	0
4	7	6	0	0
4	7	6	0	0
4	7	6	0	0
4	7	6	0	0

Cold Idling Emission - Terminating Bus

Idling Time =	1	min
Max. Idling Time for Adjusting Start Emission =	1	min

Note: The Idling time was based on the full day bus counting survey.

Hour	Frequency	FBDD (Diesel)									
		Cold Idling Emission Factor (g/s)					Cold Idling Emission (g) [1]				
		NOx	NO	NO2	RSP	FSP	NOx	NO	NO2	RSP	FSP
0000 - 0100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	1	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	7.39E+00	7.02E+00	3.72E-01	2.11E-03	2.11E-03
0600 - 0700	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0700 - 0800	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0800 - 0900	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0900 - 1000	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1000 - 1100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1100 - 1200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1200 - 1300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1300 - 1400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1400 - 1500	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1500 - 1600	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1600 - 1700	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1700 - 1800	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1800 - 1900	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900 - 2000	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2000 - 2100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2100 - 2200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200 - 2300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2300 - 2400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Hot Idling Emission - Terminating Bus

Idling Time =	1	min
Max. Idling Time for Adjusting Start Emission =	1	min

Note: The Idling time was based on the full day bus counting survey.

Hour	Frequency	FBDD (Diesel)									
		Hot Idling Emission Factor (g/s)					Hot Idling Emission (g) [1]				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	2.42E-01	2.30E-01	1.22E-02	2.11E-03	2.11E-03
0100 - 0200	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	1	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	2.42E-01	2.30E-01	1.22E-02	2.11E-03	2.11E-03
0600 - 0700	7	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
0700 - 0800	8	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
0800 - 0900	9	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02
0900 - 1000	9	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02
1000 - 1100	8	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
1100 - 1200	7	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
1200 - 1300	8	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
1300 - 1400	7	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
1400 - 1500	8	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
1500 - 1600	7	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
1600 - 1700	7	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
1700 - 1800	9	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02
1800 - 1900	8	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
1900 - 2000	8	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
2000 - 2100	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2100 - 2200	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2200 - 2300	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2300 - 2400	4	4.04E-03	3.84E-03	2.03E-04	3.51E-05	3.51E-05	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03

Average Distance from Starting Place to Egress =	41	m
Average Spread Distance outside bus terminus =	659.32	m

Hour	Total Idling Emission (g) [2]					Idling Emission for Start Emission Adjustment (g) [3]				
	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	2.42E-01	2.30E-01	1.22E-02	2.11E-03	2.11E-03	2.42E-01	2.30E-01	1.22E-02	2.11E-03	2.11E-03
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	7.63E+00	7.25E+00	3.84E-01	4.22E-03	4.22E-03	7.63E+00	7.25E+00	3.84E-01	4.22E-03	4.22E-03
0600 - 0700	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
0700 - 0800	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
0800 - 0900	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02
0900 - 1000	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02
1000 - 1100	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
1100 - 1200	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
1200 - 1300	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
1300 - 1400	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
1400 - 1500	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
1500 - 1600	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
1600 - 1700	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02	1.70E+00	1.61E+00	8.53E-02	1.48E-02	1.48E-02
1700 - 1800	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02	2.18E+00	2.07E+00	1.10E-01	1.90E-02	1.90E-02
1800 - 1900	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
1900 - 2000	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02	1.94E+00	1.84E+00	9.75E-02	1.69E-02	1.69E-02
2000 - 2100	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2100 - 2200	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2200 - 2300	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03
2300 - 2400	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03	9.69E-01	9.21E-01	4.87E-02	8.43E-03	8.43E-03

Hot Idling Emission - Bypass Bus

Idling Time =	1	min
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Hour	Frequency	FBDD (Diesel)									
		Hot Idling Emission Factor (g/s)					Hot Idling Emission (g) [1]				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
0100 - 0200	2	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	14.777	14.034	0.743	0.004	0.004
0200 - 0300	2	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	14.777	14.034	0.743	0.004	0.004
0300 - 0400	2	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	14.777	14.034	0.743	0.004	0.004
0400 - 0500	2	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	14.777	14.034	0.743	0.004	0.004
0500 - 0600	1	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	7.389	7.017	0.372	0.002	0.002
0600 - 0700	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000

Adjusted Start Emission within bus terminus (g) [4]					Adjusted Start Emission outside bus terminus (g) [5]					Start Emission Rate outside bus terminus (g/s)				
NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
9.65E-02	9.10E-02	5.48E-03	0	0	1.56E+00	1.48E+00	8.87E-02	0	0	4.35E-04	4.10E-04	2.46E-05	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0	0
6.53E-01	6.14E-01	3.90E-02	0	0	1.06E+01	9.96E+00	6.32E-01	0	0	2.94E-03	2.77E-03	1.76E-04	0	0
5.10E-01	4.81E-01	2.91E-02	0	0	8.26E+00	7.79E+00	4.71E-01	0	0	2.29E-03	2.16E-03	1.31E-04	0	0
5.14E-01	4.85E-01	2.94E-02	0	0	8.33E+00	7.86E+00	4.76E-01	0	0	2.31E-03	2.18E-03	1.32E-04	0	0
4.35E-01	4.10E-01	2.50E-02	0	0	7.06E+00	6.65E+00	4.06E-01	0	0	1.96E-03	1.85E-03	1.13E-04	0	0
4.35E-01	4.10E-01	2.50E-02	0	0	7.06E+00	6.65E+00	4.06E-01	0	0	1.96E-03	1.85E-03	1.13E-04	0	0
4.03E-01	3.80E-01	2.32E-02	0	0	6.54E+00	6.16E+00	3.76E-01	0	0	1.82E-03	1.71E-03	1.04E-04	0	0
5.93E-01	5.59E-01	3.37E-02	0	0	9.61E+00	9.06E+00	5.46E-01	0	0	2.67E-03	2.52E-03	1.52E-04	0	0
6.34E-01	5.98E-01	3.61E-02	0	0	1.03E+01	9.69E+00	5.85E-01	0	0	2.85E-03	2.69E-03	1.62E-04	0	0
5.93E-01	5.59E-01	3.37E-02	0	0	9.61E+00	9.06E+00	5.46E-01	0	0	2.67E-03	2.52E-03	1.52E-04	0	0
6.62E-01	6.24E-01	3.76E-02	0	0	1.07E+01	1.01E+01	6.10E-01	0	0	2.98E-03	2.81E-03	1.69E-04	0	0
6.20E-01	5.85E-01	3.52E-02	0	0	1.01E+01	9.48E+00	5.71E-01	0	0	2.79E-03	2.63E-03	1.59E-04	0	

0700 - 0800	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
0800 - 0900	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
0900 - 1000	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1000 - 1100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1100 - 1200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1200 - 1300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1300 - 1400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1400 - 1500	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1500 - 1600	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1600 - 1700	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1700 - 1800	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1800 - 1900	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
1900 - 2000	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
2000 - 2100	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
2100 - 2200	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
2200 - 2300	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000
2300 - 2400	0	1.23E-01	1.17E-01	6.19E-03	3.51E-05	3.51E-05	0.000	0.000	0.000	0.000	0.000

Running Emission - Terminating Bus and Bypass Bus

The Longest Travelling Distance within bus terminus =	76	m
Average Travelling Speed =	10	km/h

Hour	Frequency	FBDD (Diesel)									
		Running Emission Factor (g/km-vehicle)					Running Emission (g)				
		NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	9.76E-01	9.27E-01	4.91E-02	2.90E-02	2.66E-02
0100 - 0200	2	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.95E+00	1.85E+00	9.81E-02	5.79E-02	5.33E-02
0200 - 0300	2	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.95E+00	1.85E+00	9.81E-02	5.79E-02	5.33E-02
0300 - 0400	2	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.95E+00	1.85E+00	9.81E-02	5.79E-02	5.33E-02
0400 - 0500	2	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	1.95E+00	1.85E+00	9.81E-02	5.79E-02	5.33E-02
0500 - 0600	3	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	2.93E+00	2.78E+00	1.47E-01	8.69E-02	7.99E-02
0600 - 0700	7	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.83E+00	6.49E+00	3.43E-01	2.03E-01	1.86E-01
0700 - 0800	8	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.81E+00	7.41E+00	3.93E-01	2.32E-01	2.13E-01
0800 - 0900	9	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	8.78E+00	8.34E+00	4.42E-01	2.61E-01	2.40E-01
0900 - 1000	9	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	8.78E+00	8.34E+00	4.42E-01	2.61E-01	2.40E-01
1000 - 1100	8	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.81E+00	7.41E+00	3.93E-01	2.32E-01	2.13E-01
1100 - 1200	7	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.83E+00	6.49E+00	3.43E-01	2.03E-01	1.86E-01
1200 - 1300	8	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.81E+00	7.41E+00	3.93E-01	2.32E-01	2.13E-01
1300 - 1400	7	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.83E+00	6.49E+00	3.43E-01	2.03E-01	1.86E-01
1400 - 1500	8	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.81E+00	7.41E+00	3.93E-01	2.32E-01	2.13E-01
1500 - 1600	7	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.83E+00	6.49E+00	3.43E-01	2.03E-01	1.86E-01
1600 - 1700	7	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	6.83E+00	6.49E+00	3.43E-01	2.03E-01	1.86E-01
1700 - 1800	9	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	8.78E+00	8.34E+00	4.42E-01	2.61E-01	2.40E-01
1800 - 1900	8	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.81E+00	7.41E+00	3.93E-01	2.32E-01	2.13E-01
1900 - 2000	8	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	7.81E+00	7.41E+00	3.93E-01	2.32E-01	2.13E-01
2000 - 2100	4	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	3.90E+00	3.71E+00	1.96E-01	1.16E-01	1.07E-01
2100 - 2200	4	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	3.90E+00	3.71E+00	1.96E-01	1.16E-01	1.07E-01
2200 - 2300	4	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	3.90E+00	3.71E+00	1.96E-01	1.16E-01	1.07E-01
2300 - 2400	4	1.29E+01	1.23E+01	6.50E-01	3.83E-01	3.53E-01	3.90E+00	3.71E+00	1.96E-01	1.16E-01	1.07E-01

Release Height

4.4

No. Veh

138

607.2

Total Hourly Emission

Hour	Total Emission inside bus terminus (g) (Running + Idling + Start) [G]					Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.31E+00	1.25E+00	6.67E-02	3.11E-02	2.87E-02	3.652E-04	3.466E-04	1.853E-05	8.630E-06	7.986E-06
0100 - 0200	1.67E+01	1.59E+01	8.41E-01	6.21E-02	5.75E-02	4.647E-03	4.413E-03	2.337E-04	1.726E-05	1.597E-05
0200 - 0300	1.67E+01	1.59E+01	8.41E-01	6.21E-02	5.75E-02	4.647E-03	4.413E-03	2.337E-04	1.726E-05	1.597E-05
0300 - 0400	1.67E+01	1.59E+01	8.41E-01	6.21E-02	5.75E-02	4.647E-03	4.413E-03	2.337E-04	1.726E-05	1.597E-05
0400 - 0500	1.67E+01	1.59E+01	8.41E-01	6.21E-02	5.75E-02	4.647E-03	4.413E-03	2.337E-04	1.726E-05	1.597E-05
0500 - 0600	1.86E+01	1.77E+01	9.41E-01	9.32E-02	8.62E-02	5.167E-03	4.905E-03	2.615E-04	2.589E-05	2.396E-05
0600 - 0700	9.04E+00	8.58E+00	4.58E-01	2.17E-01	2.01E-01	2.510E-03	2.383E-03	1.272E-04	6.041E-05	5.590E-05
0700 - 0800	1.03E+01	9.74E+00	5.19E-01	2.49E-01	2.30E-01	2.850E-03	2.705E-03	1.443E-04	6.904E-05	6.388E-05
0800 - 0900	1.14E+01	1.08E+01	5.76E-01	2.80E-01	2.59E-01	3.166E-03	3.006E-03	1.601E-04	7.767E-05	7.187E-05
0900 - 1000	1.14E+01	1.08E+01	5.76E-01	2.80E-01	2.59E-01	3.166E-03	3.006E-03	1.601E-04	7.767E-05	7.187E-05
1000 - 1100	1.01E+01	9.63E+00	5.13E-01	2.49E-01	2.30E-01	2.819E-03	2.676E-03	1.425E-04	6.904E-05	6.388E-05
1100 - 1200	9.12E+00	8.66E+00	4.62E-01	2.17E-01	2.01E-01	2.533E-03	2.405E-03	1.285E-04	6.041E-05	5.590E-05
1200 - 1300	1.04E+01	9.85E+00	5.26E-01	2.49E-01	2.30E-01	2.883E-03	2.737E-03	1.461E-04	6.904E-05	6.388E-05
1300 - 1400	9.12E+00	8.66E+00	4.62E-01	2.17E-01	2.01E-01	2.533E-03	2.405E-03	1.285E-04	6.041E-05	5.590E-05
1400 - 1500	1.04E+01	9.85E+00	5.26E-01	2.49E-01	2.30E-01	2.881E-03	2.744E-03	1.466E-04	6.904E-05	6.388E-05
1500 - 1600	9.15E+00	8.68E+00	4.64E-01	2.17E-01	2.01E-01	2.541E-03	2.412E-03	1.289E-04	6.041E-05	5.590E-05
1600 - 1700	9.15E+00	8.68E+00	4.64E-01	2.17E-01	2.01E-01	2.541E-03	2.412E-03	1.289E-04	6.041E-05	5.590E-05
1700 - 1800	9.14E+01	1.09E+01	5.78E-01	2.80E-01	2.59E-01	3.176E-03	3.016E-03	1.607E-04	7.757E-05	7.187E-05
1800 - 1900	1.01E+01	9.60E+00	5.11E-01	2.49E-01	2.30E-01	2.808E-03	2.667E-03	1.420E-04	6.904E-05	6.388E-05
1900 - 2000	1.01E+01	9.63E+00	5.13E-01	2.49E-01	2.30E-01	2.819E-03	2.676E-03	1.425E-04	6.904E-05	6.388E-05
2000 - 2100	5.20E+00	4.94E+00	2.64E-01	1.24E-01	1.15E-01	1.445E-03	1.372E-03	7.328E-05	3.452E-05	3.194E-05
2100 - 2200	5.20E+00	4.94E+00	2.64E-01	1.24E-01	1.15E-01	1.445E-03	1.372E-03	7.328E-05	3.452E-05	3.194E-05
2200 - 2300	5.20E+00	4.94E+00	2.64E-01	1.24E-01	1.15E-01	1.445E-03	1.372E-03	7.328E-05	3.452E-05	3.194E-05
2300 - 2400	5.20E+00	4.94E+00	2.64E-01	1.24E-01	1.15E-01	1.445E-03	1.372E-03	7.328E-05	3.452E-05	3.194E-05

LB Total Efs

Hour	Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	6.223E-04	5.975E-04	3.470E-05	1.169E-05	1.096E-05
0100 - 0200	4.647E-03	4.413E-03	2.337E-04	1.726E-05	1.597E-05
0200 - 0300	4.647E-03	4.413E-03	2.337E-04	1.726E-05	1.597E-05
0300 - 0400	5.000E-03	4.740E-03	2.600E-04	2.031E-05	1.895E-05
0400 - 0500	4.647E-03	4.413E-03	2.337E-04	1.726E-05	1.597E-05
0500 - 0600	6.297E-03	5.940E-03	3.562E-04	3.679E-05	3.457E-05
0600 - 0700	6.943E-03	6.409E-03	5.345E-04	1.220E-04	1.157E-04
0700 - 0800	4.439E-03	4.137E-03	3.020E-04	9.710E-05	9.102E-05
0800 - 0900	3.984E-03	3.721E-03	2.627E-04	9.787E-05	9.135E-05
0900 - 1000	5.865E-03	5.421E-03	4.442E-04	1.336E-04	1.262E-04
1000 - 1100	6.302E-03	5.821E-03	4.819E-04	1.333E-04	1.262E-04
1100 - 1200	4.640E-03	4.300E-03	3.405E-04	1.016E-04	9.573E-05
1200 - 1300	4.817E-03	4.452E-03	3.650E-04	1.120E-04	1.054E-04
1300 - 1400	4.532E-03	4.197E-03	3.340E-04	9.857E-05	9.275E-05
1400 - 1500	5.623E-03	5.209E-03	4.148E-04	1.212E-04	1.143E-04
1500 - 1600	4.391E-03	4.061E-03	3.301E-04	9.985E-05	9.404E-05
1600 - 1700	4.087E-03	3.782E-03	3.052E-04	9.504E-05	8.937E-05
1700 - 1800	5.582E-03	5.200E-03	3.814E-04	1.184E-04	1.113E-04
1800 - 1900	3.738E-03	3.484E-03	2.541E-04	9.100E-05	8.505E-05
1900 - 2000	4.666E-03	3.792E-03	2.798E-04	9.485E-05	8.890E-05
2000 - 2100	2.348E-03	2.180E-03	1.679E-04	5.328E-05	5.019E-05
2100 - 2200	2.738E-03	2.538E-03	1.996E-04	5.905E-05	5.568E-05
2200 - 2300	2.277E-03	2.112E-03	1.647E-04	5.248E-05	4.932E-05
2300 - 2400	3.800E-03	3.540E-03	2.606E-04	6.242E-05	5.912E-05

980.59 m2

Hour	Total Emission Rate (g/m2)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	6.348E-07	5.991E-07	3.547E-08	1.191E-08	1.118E-08
0100 - 0200	4.739E-06	4.501E-06	2.383E-07	1.760E-08	1.629E-08
0200 - 0300	4.739E-06	4.501E-06	2.383E-07	1.760E-08	1.629E-08
0300 - 0400	5.099E-06	4.834E-06	2.652E-07	2.071E-08	1.932E-08
0400 - 0500	4.739E-06	4.501E-06	2.383E-07	1.760E-08	1.629E-08
0500 - 0600	6.421E-06	6.058E-06	3.633E-07	3.752E-08	3.525E-08
0600 - 0700	7.081E-06	6.535E-06	5.451E-07	1.244E-07	1.180E-07
0700 - 0800	4.527E-06	4.219E-06	3.089E-07	9.902E-08	9.290E-08
0800 - 0900	4.062E-06	3.795E-06	2.670E-07	9.901E-08	9.316E-08
0900 - 1000	5.982E-06	5.528E-06	4.530E-07	1.363E-07	1.287E-07
1000 - 1100	6.427E-06	5.936E-06	4.914E-07	1.360E-07	1.287E-07
1100 - 1200	4.732E-06	4.385E-06	3.472E-07	1.036E-07	9.762E-08
1200 - 1300	4.913E-06	4.540E-06	3.723E-07	1.142E-07	1.075E-07
1300 - 1400	4.622E-06	4.280E-06	3.414E-07	1.005E-07	9.459E-08
1400 - 1500	5.735E-06	5.312E-06	4.227E-07	1.235E-07	1.169E-07
1500 - 1600	4.478E-06	4.141E-06	3.367E-07	1.018E-07	9.590E-08
1600 - 1700	4.168E-06	3.857E-06	3.112E-07	9.692E-08	9.114E-08
1700 - 1800	5.692E-06	5.303E-06	3.890E-07	1.207E-07	1.135E-07
1800 - 1900	3.812E-06	3.553E-06	2.591E-07	9.281E-08	8.674E-08
1900 - 2000	4.147E-06	3.866E-06	2.794E-07	9.673E-08	9.066E-08
2000 - 2100	2.394E-06	2.232E-06	1.712E-07	5.433E-08	5.119E-08
2100 - 2200	2.792E-06	2.589E-06	2.036E-07	6.022E-08	5.679E-08
2200 - 2300	2.322E-06	2.154E-06	1.680E-07	5.325E-08	5.030E-08
2300 - 2400	3.875E-06	3.610E-06	2.657E-07	6.365E-08	6.029E-08

Adjusted Start Emission

Diesel (FBDD+PLB)

Hour	Start Emission Rate outside bus terminus (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	4.537E-04	4.292E-04	3.06E-05	0	0
0100 - 0200	0.000E+00	0.000E+00	0.000E+00	0	0
0200 - 0300	0.000E+00	0.000E+00	0.000E+00	0	0
0300 - 0400	7.077E-05	5.10E-05	1.98E-05	0	0
0400 - 0500	0.000E+00	0.000E+00	0.000E+00	0	0
0500 - 0600	3.541E-03	3.20E-03	3.44E-04	0	0
0600 - 0700	3.897E-03	3.31E-03	5.77E-04	0	0
0700 - 0800	2.585E-03	2.35E-03	2.08E-04	0	0
0800 - 0900	1.964E-03	1.85E-03	1.14E-04	0	0
0900 - 1000	2.010E-03	1.88E-03	1.27E-04	0	0
1000 - 1100	1.955E-03	1.82E-03	1.46E-04	0	0
1100 - 1200	2.745E-03	2.57E-03	1.73E-04	0	0
1200 - 1300	2.898E-03	2.72E-03	1.72E-04	0	0
1300 - 1400	2.793E-03	2.60E-03	1.83E-04	0	0
1400 - 1500	3.092E-03	2.88E-03	1.98E-04	0	0
1500 - 1600	2.832E-03	2.66E-03	1.70E-04	0	0
1600 - 1700	2.820E-03	2.65E-03	1.66E-04	0	0
1700 - 1800	2.271E-03	2.11E-03	1.62E-04	0	0
1800 - 1900	1.667E-03	1.57E-03	9.96E-05	0	0
1900 - 2000	1.842E-03	1.73E-03	1.12E-04	0	0
2000 - 2100	1.497E-03	1.41E-03	8.69E-05	0	0
2100 - 2200	1.541E-03	1.44E-03	9.92E-05	0	0
2200 - 2300	1.507E-03	1.42E-03	8.97E-05	0	0
2300 - 2400	1.862E-03	1.67E-03	1.89E-04	0	0

LPG (PLB)

Hour	Start Emission Rate outside bus terminus (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	3.92E-04	3.90E-04	2.29E-06	0	0
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0	0
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0	0
0300 - 0400	5.56E-04	5.53E-04	3.25E-06	0	0
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0	0
0500 - 0600	1.62E-03	1.62E-03	9.48E-06	0	0
0600 - 0700	5.09E-03	5.05E-03	2.97E-05	0	0
0700 - 0800	1.43E-03	1.42E-03	8.33E-06	0	0
0800 - 0900	2.43E-04	2.42E-04	1.42E-06	0	0
0900 - 1000	1.83E-03	1.82E-03	1.07E-05	0	0
1000 - 1100	3.03E-03	3.01E-03	1.77E-05	0	0
1100 - 1200	1.68E-03	1.65E-03	9.72E-06	0	0
1200 - 1300	1.04E-03	1.03E-03	6.05E-06	0	0
1300 - 1400	1.58E-03	1.57E-03	9.21E-06	0	0
1400 - 1500	2.29E-03	2.27E-03	1.33E-05	0	0
1500 - 1600	1.15E-03	1.14E-03	6.72E-06	0	0
1600 - 1700	8.02E-04	7.97E-04	4.68E-06	0	0
1700 - 1800	2.41E-03	2.40E-03	1.41E-05	0	0
1800 - 1900	3.72E-04	3.70E-04	2.17E-06	0	0
1900 - 2000	8.50E-04	8.45E-04	4.95E-06	0	0
2000 - 2100	6.07E-04	6.04E-04	3.54E-06	0	0
2100 - 2200	1.09E-03	1.09E-03	6.37E-06	0	0
2200 - 2300	4.04E-04	4.91E-04	2.88E-06	0	0
2300 - 2400	3.22E-03	3.20E-03	1.88E-05	0	0

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	3.32E-01	3.30E-01	2.69E-01	0.00E+00	0.00E+00
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	3.60E-02	2.75E-02	1.74E-01	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	1.80E+00	1.73E+00	3.02E+00	0.00E+00	0.00E+00
0600 - 0700	1.98E+00	1.79E+00	5.07E+00	0.00E+00	0.00E+00
0700 - 0800	1.32E+00	1.29E+00	1.83E+00	0.00E+00	0.00E+00
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	0.00E+00	0.00E+00
0900 - 1000	1.02E+00	1.02E+00	1.12E+00	0.00E+00	0.00E+00
1000 - 1100	1.00E+00	9.83E-01	1.28E+00	0.00E+00	0.00E+00
1100 - 1200	1.40E+00	1.39E+00	1.52E+00	0.00E+00	0.00E+00
1200 - 1300	1.47E+00	1.47E+00	1.51E+00	0.00E+00	0.00E+00
1300 - 1400	1.42E+00	1.40E+00	1.61E+00	0.00E+00	0.00E+00
1400 - 1500	1.57E+00	1.56E+00	1.75E+00	0.00E+00	0.00E+00
1500 - 1600	1.44E+00	1.44E+00	1.49E+00	0.00E+00	0.00E+00
1600 - 1700	1.44E+00	1.43E+00	1.46E+00	0.00E+00	0.00E+00
1700 - 1800	1.16E+00	1.14E+00	1.23E+00	0.00E+00	0.00E+00
1800 - 1900	8.49E-01	8.47E-01	8.77E-01	0.00E+00	0.00E+00
1900 - 2000	9.38E-01	9.35E-01	9.82E-01	0.00E+00	0.00E+00
2000 - 2100	7.62E-01	7.62E-01	7.62E-01	0.00E+00	0.00E+00
2100 - 2200	7.85E-01	7.79E-01	8.73E-01	0.00E+00	0.00E+00
2200 - 2300	7.67E-01	7.66E-01	7.89E-01	0.00E+00	0.00E+00
2300 - 2400	9.48E-01	9.04E-01	1.66E+00	0.00E+00	0.00E+00

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	1.61E+00	1.61E+00	1.61E+00	0.00E+00	0.00E+00
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	2.29E+00	2.29E+00	2.29E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	6.89E+00	6.89E+00	6.89E+00	0.00E+00	0.00E+00
0600 - 0700	2.09E+01	2.09E+01	2.10E+01	0.00E+00	0.00E+00
0700 - 0800	5.87E+00	5.87E+00	5.88E+00	0.00E+00	0.00E+00
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	0.00E+00	0.00E+00
0900 - 1000	7.53E+00	7.53E+00	7.54E+00	0.00E+00	0.00E+00
1000 - 1100	1.25E+01	1.25E+01	1.25E+01	0.00E+00	0.00E+00
1100 - 1200	6.89E+00	6.89E+00	6.89E+00	0.00E+00	0.00E+00
1200 - 1300	4.27E+00	4.27E+00	4.27E+00	0.00E+00	0.00E+00
1300 - 1400	6.49E+00	6.49E+00	6.50E+00	0.00E+00	0.00E+00
1400 - 1500	9.40E+00	9.40E+00	9.41E+00	0.00E+00	0.00E+00
1500 - 1600	4.73E+00	4.73E+00	4.74E+00	0.00E+00	0.00E+00
1600 - 1700	3.30E+00	3.30E+00	3.30E+00	0.00E+00	0.00E+00
1700 - 1800	9.93E+00	9.93E+00	9.93E+00	0.00E+00	0.00E+00
1800 - 1					

LB Taxi Total Efs

Hour	Total Emission Rate (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	4.952E-05	4.828E-05	1.336E-06	8.259E-11	7.657E-11
0100 - 0200	7.798E-05	7.588E-05	2.100E-06	1.298E-10	1.203E-10
0200 - 0300	5.671E-05	5.518E-05	1.527E-06	9.439E-11	8.751E-11
0300 - 0400	3.544E-05	3.449E-05	9.546E-07	5.900E-11	5.469E-11
0400 - 0500	4.962E-05	4.828E-05	1.336E-06	8.259E-11	7.657E-11
0500 - 0600	1.038E-03	1.010E-03	2.799E-05	6.360E-06	6.360E-06
0600 - 0700	5.555E-04	5.405E-04	1.499E-05	6.359E-06	6.359E-06
0700 - 0800	5.775E-04	5.619E-04	1.558E-05	5.088E-06	5.088E-06
0800 - 0900	6.401E-04	6.229E-04	1.727E-05	6.359E-06	6.359E-06
0900 - 1000	3.927E-04	3.821E-04	1.059E-05	2.544E-06	2.544E-06
1000 - 1100	1.135E-03	1.105E-03	3.063E-05	8.904E-06	8.904E-06
1100 - 1200	5.396E-04	5.250E-04	1.456E-05	5.088E-06	5.088E-06
1200 - 1300	5.357E-04	5.213E-04	1.445E-05	5.088E-06	5.088E-06
1300 - 1400	4.393E-04	4.261E-04	1.182E-05	3.816E-06	3.816E-06
1400 - 1500	1.639E-04	1.595E-04	4.419E-06	1.272E-06	1.272E-06
1500 - 1600	1.292E-04	1.257E-04	3.486E-06	1.272E-06	1.272E-06
1600 - 1700	3.226E-04	3.139E-04	8.709E-06	3.816E-06	3.816E-06
1700 - 1800	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1800 - 1900	2.127E-05	2.069E-05	5.727E-07	3.540E-11	3.252E-11
1900 - 2000	7.369E-06	6.898E-06	1.909E-07	1.180E-11	1.094E-11
2000 - 2100	1.072E-04	1.043E-04	2.892E-06	1.272E-06	1.272E-06
2100 - 2200	7.089E-06	6.898E-06	1.909E-07	1.180E-11	1.094E-11
2200 - 2300	2.423E-04	2.357E-04	6.538E-06	2.544E-06	2.544E-06
2300 - 2400	1.378E-04	1.341E-04	3.719E-06	1.272E-06	1.272E-06

56.97 m2

Hour	Total Emission Rate (g/s/m2)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	8.710E-07	8.475E-07	2.346E-08	1.450E-12	1.344E-12
0100 - 0200	1.369E-06	1.332E-06	3.886E-08	2.278E-12	2.112E-12
0200 - 0300	9.954E-07	9.686E-07	2.681E-08	1.657E-12	1.536E-12
0300 - 0400	6.221E-07	6.054E-07	1.676E-08	1.036E-12	9.601E-13
0400 - 0500	8.710E-07	8.475E-07	2.346E-08	1.450E-12	1.344E-12
0500 - 0600	1.822E-05	1.773E-05	4.913E-07	1.116E-07	1.116E-07
0600 - 0700	9.750E-06	9.487E-06	2.632E-07	1.116E-07	1.116E-07
0700 - 0800	1.014E-05	9.863E-06	2.735E-07	8.931E-08	8.931E-08
0800 - 0900	1.124E-05	1.093E-05	3.032E-07	1.116E-07	1.116E-07
0900 - 1000	6.893E-06	6.707E-06	1.859E-07	4.466E-08	4.466E-08
1000 - 1100	1.993E-05	1.938E-05	5.376E-07	1.563E-07	1.563E-07
1100 - 1200	9.471E-06	9.215E-06	2.555E-07	8.931E-08	8.931E-08
1200 - 1300	9.403E-06	9.150E-06	2.537E-07	8.931E-08	8.930E-08
1300 - 1400	7.688E-06	7.480E-06	2.074E-07	6.698E-08	6.698E-08
1400 - 1500	2.678E-06	2.595E-06	7.751E-08	2.233E-08	2.233E-08
1500 - 1600	2.268E-06	2.207E-06	6.120E-08	2.233E-08	2.233E-08
1600 - 1700	5.663E-06	5.511E-06	1.529E-07	6.698E-08	6.698E-08
1700 - 1800	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1800 - 1900	3.733E-07	3.632E-07	1.005E-08	6.213E-13	5.760E-13
1900 - 2000	1.244E-07	1.211E-07	3.351E-09	2.071E-13	1.920E-13
2000 - 2100	1.891E-06	1.830E-06	5.076E-08	2.233E-08	2.233E-08
2100 - 2200	1.244E-07	1.211E-07	3.351E-09	2.071E-13	1.920E-13
2200 - 2300	4.263E-06	4.138E-06	1.148E-07	4.466E-08	4.466E-08
2300 - 2400	2.419E-06	2.353E-06	6.527E-08	2.233E-08	2.233E-08

Adjusted Start Emission

LPG

Hour	Start Emission Rate outside Taxi Stand (g/s)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.000E+00	0.000E+00	0.000E+00	0	0
0100 - 0200	0.000E+00	0.000E+00	0.000E+00	0	0
0200 - 0300	0.000E+00	0.000E+00	0.000E+00	0	0
0300 - 0400	0.000E+00	0.000E+00	0.000E+00	0	0
0400 - 0500	0.000E+00	0.000E+00	0.000E+00	0	0
0500 - 0600	1.323E-03	1.29E-03	3.60E-05	0	0
0600 - 0700	1.203E-03	1.17E-03	3.27E-05	0	0
0700 - 0800	9.753E-04	9.49E-04	2.65E-05	0	0
0800 - 0900	1.198E-03	1.17E-03	3.26E-05	0	0
0900 - 1000	4.996E-04	4.86E-04	1.36E-05	0	0
1000 - 1100	1.643E-03	1.60E-03	4.47E-05	0	0
1100 - 1200	1.097E-03	1.07E-03	2.98E-05	0	0
1200 - 1300	9.832E-04	9.56E-04	2.67E-05	0	0
1300 - 1400	7.635E-04	7.43E-04	2.08E-05	0	0
1400 - 1500	2.439E-04	2.37E-04	6.63E-06	0	0
1500 - 1600	2.520E-04	2.45E-04	6.86E-06	0	0
1600 - 1700	7.438E-04	7.24E-04	2.02E-05	0	0
1700 - 1800	0.000E+00	0.000E+00	0.000E+00	0	0
1800 - 1900	0.000E+00	0.000E+00	0.000E+00	0	0
1900 - 2000	0.000E+00	0.000E+00	0.000E+00	0	0
2000 - 2100	2.439E-04	2.37E-04	6.63E-06	0	0
2100 - 2200	0.000E+00	0.000E+00	0.000E+00	0	0
2200 - 2300	4.836E-04	4.70E-04	1.32E-05	0	0
2300 - 2400	2.676E-04	2.60E-04	7.29E-06	0	0

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0100 - 0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0200 - 0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0300 - 0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0400 - 0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0500 - 0600	1.10E+00	1.10E+00	1.10E+00	0.00E+00	0.00E+00
0600 - 0700	1.00E+00	1.00E+00	1.00E+00	0.00E+00	0.00E+00
0700 - 0800	3.14E-01	3.14E-01	3.14E-01	0.00E+00	0.00E+00
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	0.00E+00	0.00E+00
0900 - 1000	4.17E-01	4.17E-01	4.16E-01	0.00E+00	0.00E+00
1000 - 1100	1.37E+00	1.37E+00	1.37E+00	0.00E+00	0.00E+00
1100 - 1200	9.16E-01	9.16E-01	9.14E-01	0.00E+00	0.00E+00
1200 - 1300	8.20E-01	8.20E-01	8.19E-01	0.00E+00	0.00E+00
1300 - 1400	6.37E-01	6.37E-01	6.37E-01	0.00E+00	0.00E+00
1400 - 1500	2.03E-01	2.03E-01	2.03E-01	0.00E+00	0.00E+00
1500 - 1600	2.10E-01	2.10E-01	2.10E-01	0.00E+00	0.00E+00
1600 - 1700	6.21E-01	6.21E-01	6.20E-01	0.00E+00	0.00E+00
1700 - 1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1800 - 1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1900 - 2000	9.00E+00	9.00E+00	9.00E+00	0.00E+00	0.00E+00
2000 - 2100	2.03E-01	2.03E-01	2.03E-01	0.00E+00	0.00E+00
2100 - 2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2200 - 2300	4.03E-01	4.03E-01	4.03E-01	0.00E+00	0.00E+00
2300 - 2400	2.23E-01	2.23E-01	2.23E-01	0.00E+00	0.00E+00

Hour	Hourly Profile (0800-0900 as base)				
	NOx	NO	NO ₂	RSP	FSP
0000 - 0100	7.75E-02	7.75E-02	7.74E-02	1.30E-05	1.20E-05
0100 - 0200	1.22E-01	1.22E-01	1.22E-01	2.04E-05	1.89E-05
0200 - 0300	8.86E-02	8.86E-02	8.84E-02	1.48E-05	1.38E-05
0300 - 0400	5.54E-02	5.54E-02	5.53E-02	9.28E-06	8.60E-06
0400 - 0500	7.75E-02	7.75E-02	7.74E-02	1.30E-05	1.20E-05
0500 - 0600	1.62E+00	1.62E+00	1.62E+00	1.00E+00	1.00E+00
0600 - 0700	8.68E-01	8.68E-01	8.68E-01	1.00E+00	1.00E+00
0700 - 0800	9.02E-01	9.02E-01	9.02E-01	8.00E-01	8.00E-01
0800 - 0900	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
0900 - 1000	6.13E-01	6.13E-01	6.13E-01	4.00E-01	4.00E-01
1000 - 1100	1.77E+00	1.77E+00	1.77E+00	1.40E+00	1.40E+00
1100 - 1200	8.43E-01	8.43E-01	8.43E-01	8.00E-01	8.00E-01
1200 - 1300	8.37E-01	8.37E-01	8.37E-01	8.00E-01	8.00E-01
1300 - 1400	6.84E-01	6.84E-01	6.84E-01	6.00E-01	6.00E-01
1400 - 1500	2.56E-01	2.56E-01	2.56E-01	2.00E-01	2.00E-01
1500 - 1600	2.02E-01	2.02E-01	2.02E-01	2.00E-01	2.00E-01
1600 - 1700	5.04E-01	5.04E-01	5.04E-01	6.00E-01	6.00E-01
1700 - 1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1800 - 1900	3.32E-02	3.32E-02	3.32E-02	5.57E-06	5.16E-06
1900 - 2000	1.11E-02	1.11E-02	1.11E-02	1.86E-06	1.72E-06
2000 - 2100	1.67E-01	1.67E-01	1.67E-01	2.00E-01	2.00E-01
2100 - 2200	1.11E-02	1.11E-02	1.11E-02	1.86E-06	1.72E-06
2200 - 2300	3.78E-01	3.78E-01	3.78E-01	4.00E-01	4.00E-01
2300 - 2400	2.15E-01	2.15E-01	2.15E-01	2.00E-01	2.00E-01

Appendix E Cumulative Air Quality Assessment Results

Table E-1 Predicted FSP and RSP Concentrations at Representative ASRs

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	RSP, $\mu\text{g}/\text{m}^3$		FSP, $\mu\text{g}/\text{m}^3$		
					10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE	19 th HIGHEST DAILY AVERAGE	36 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR1	Hotel Cozi Oasis	(36,38)	33.5	11.5	53.98	21.06	32.78	28.33	13.30
ASR1	Hotel Cozi Oasis	(36,38)	40.5	18.5	53.90	20.98	32.69	28.25	13.23
ASR1	Hotel Cozi Oasis	(36,38)	115.5	93.5	53.78	20.83	32.51	28.13	13.10
ASR2	Kwai Shing Industrial Building	(36,38)	18.5	4.5	54.44	21.34	33.14	28.67	13.57
ASR2	Kwai Shing Industrial Building	(36,38)	51.5	37.5	54.25	21.15	32.62	28.36	13.25
ASR2	Kwai Shing Industrial Building	(36,38)	54.5	40.5	54.43	21.24	32.62	28.41	13.28
ASR2	Kwai Shing Industrial Building	(36,38)	57.5	43.5	54.57	21.31	32.62	28.46	13.30
ASR2	Kwai Shing Industrial Building	(36,38)	60.5	46.5	54.59	21.33	32.62	28.47	13.31
ASR3	Vanta Industrial Centre	(36,38)	30.5	10.5	53.94	20.99	32.73	28.31	13.26
ASR3	Vanta Industrial Centre	(36,38)	33.5	13.5	53.93	20.98	32.71	28.30	13.25
ASR3	Vanta Industrial Centre	(36,38)	36.5	16.5	53.91	20.96	32.68	28.29	13.23
ASR3	Vanta Industrial Centre	(36,38)	39.5	19.5	53.90	20.94	32.66	28.28	13.21
ASR3	Vanta Industrial Centre	(36,38)	42.5	22.5	53.89	20.93	32.63	28.27	13.20
ASR3	Vanta Industrial Centre	(36,38)	51.5	31.5	53.85	20.91	32.65	28.23	13.17
ASR3	Vanta Industrial Centre	(36,38)	54.5	34.5	53.92	20.95	32.70	28.22	13.18

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	RSP, $\mu\text{g}/\text{m}^3$		FSP, $\mu\text{g}/\text{m}^3$		
					10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE	19 th HIGHEST DAILY AVERAGE	36 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR3	Vanta Industrial Centre	(36,38)	60.5	40.5	55.11	22.02	33.18	28.40	13.56
ASR3	Vanta Industrial Centre	(36,38)	63.5	43.5	55.29	22.29	33.19	28.46	13.66
ASR3	Vanta Industrial Centre	(36,38)	69.5	49.5	54.55	21.93	33.12	28.35	13.52
ASR4	Vanta Industrial Centre	(36,38)	30.5	10.5	54.03	21.05	32.77	28.40	13.31
ASR4	Vanta Industrial Centre	(36,38)	33.5	13.5	54.00	21.03	32.74	28.37	13.28
ASR4	Vanta Industrial Centre	(36,38)	36.5	16.5	53.96	21.00	32.72	28.33	13.26
ASR4	Vanta Industrial Centre	(36,38)	39.5	19.5	53.93	20.99	32.69	28.30	13.24
ASR4	Vanta Industrial Centre	(36,38)	42.5	22.5	53.91	20.98	32.67	28.28	13.22
ASR4	Vanta Industrial Centre	(36,38)	51.5	31.5	53.93	21.05	32.72	28.23	13.22
ASR4	Vanta Industrial Centre	(36,38)	54.5	34.5	54.00	21.11	32.84	28.22	13.23
ASR4	Vanta Industrial Centre	(36,38)	60.5	40.5	54.16	21.22	33.01	28.21	13.27
ASR4	Vanta Industrial Centre	(36,38)	63.5	43.5	54.18	21.23	33.00	28.20	13.27
ASR4	Vanta Industrial Centre	(36,38)	69.5	49.5	54.05	21.16	32.86	28.19	13.24
ASR5	Kwai Ying Building	(36,38)	42.5	5.5	53.93	21.00	32.74	28.25	13.26
ASR5	Kwai Ying Building	(36,38)	45.5	8.5	53.90	20.96	32.68	28.24	13.22

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	RSP, $\mu\text{g}/\text{m}^3$		FSP, $\mu\text{g}/\text{m}^3$		
					10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE	19 th HIGHEST DAILY AVERAGE	36 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR5	Kwai Ying Building	(36,38)	48.5	11.5	53.88	20.94	32.64	28.23	13.20
ASR5	Kwai Ying Building	(36,38)	51.5	14.5	53.87	20.92	32.61	28.22	13.18
ASR5	Kwai Ying Building	(36,38)	102.5	65.5	53.79	20.83	32.51	28.14	13.10
ASR6	Gold King Industrial Building	(36,38)	24.5	4.5	53.94	21.02	32.77	28.31	13.29
ASR6	Gold King Industrial Building	(36,38)	27.5	7.5	53.94	21.01	32.75	28.30	13.28
ASR6	Gold King Industrial Building	(36,38)	30.5	10.5	53.93	20.99	32.73	28.30	13.26
ASR6	Gold King Industrial Building	(36,38)	51.5	31.5	53.85	20.90	32.62	28.23	13.16
ASR6	Gold King Industrial Building	(36,38)	54.5	34.5	53.94	20.94	32.69	28.23	13.17
ASR6	Gold King Industrial Building	(36,38)	57.5	37.5	55.09	21.54	32.81	28.61	13.39
ASR6	Gold King Industrial Building	(36,38)	60.5	40.5	60.74	25.05	34.02	29.46	14.68
ASR6	Gold King Industrial Building	(36,38)	63.5	43.5	60.20	25.82	33.92	29.57	14.95
ASR6	Gold King Industrial Building	(36,38)	96.5	76.5	53.79	20.82	32.54	28.14	13.10
ASR7	The Venus Industrial Building	(36,38)	24.5	4.5	54.09	21.15	32.93	28.41	13.40
ASR7	The Venus Industrial Building	(36,38)	27.5	7.5	54.00	21.06	32.80	28.34	13.32
ASR7	The Venus Industrial Building	(36,38)	30.5	10.5	53.94	21.00	32.73	28.30	13.27

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	RSP, $\mu\text{g}/\text{m}^3$		FSP, $\mu\text{g}/\text{m}^3$		
					10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE	19 th HIGHEST DAILY AVERAGE	36 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR7	The Venus Industrial Building	(36,38)	33.5	13.5	53.91	20.97	32.69	28.28	13.24
ASR7	The Venus Industrial Building	(36,38)	36.5	16.5	53.90	20.95	32.66	28.27	13.22
ASR8	Boldwin Industrial Building	(36,38)	27.5	6.5	53.97	21.03	32.76	28.34	13.29
ASR8	Boldwin Industrial Building	(36,38)	30.5	9.5	53.97	21.01	32.74	28.34	13.27
ASR8	Boldwin Industrial Building	(36,38)	33.5	12.5	53.96	20.99	32.72	28.33	13.26
ASR8	Boldwin Industrial Building	(36,38)	51.5	30.5	53.87	20.93	32.60	28.23	13.17
ASR8	Boldwin Industrial Building	(36,38)	54.5	33.5	53.87	20.94	32.60	28.22	13.17
ASR8	Boldwin Industrial Building	(36,38)	57.5	36.5	53.88	20.97	32.60	28.22	13.17
ASR8	Boldwin Industrial Building	(36,38)	60.5	39.5	53.90	20.99	32.59	28.22	13.18
ASR8	Boldwin Industrial Building	(36,38)	63.5	42.5	53.90	20.99	32.59	28.22	13.18
ASR8	Boldwin Industrial Building	(36,38)	93.5	72.5	53.79	20.84	32.52	28.15	13.11
ASR9	Wah Sing Industrial Building	(36,38)	24.5	1.5	53.95	21.06	32.80	28.34	13.32
ASR9	Wah Sing Industrial Building	(36,38)	29.5	6.5	53.94	21.00	32.73	28.31	13.26
ASR9	Wah Sing Industrial Building	(36,38)	32.5	9.5	53.94	20.98	32.70	28.31	13.25

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	RSP, $\mu\text{g}/\text{m}^3$		FSP, $\mu\text{g}/\text{m}^3$		
					10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE	19 th HIGHEST DAILY AVERAGE	36 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR9	Wah Sing Industrial Building	(36,38)	50.5	27.5	53.87	20.92	32.60	28.24	13.17
ASR9	Wah Sing Industrial Building	(36,38)	53.5	30.5	53.87	20.92	32.59	28.23	13.17
ASR9	Wah Sing Industrial Building	(36,38)	56.5	33.5	53.87	20.93	32.59	28.22	13.16
ASR9	Wah Sing Industrial Building	(36,38)	62.5	39.5	53.87	20.94	32.58	28.22	13.16
ASR9	Wah Sing Industrial Building	(36,38)	98.5	75.5	53.79	20.83	32.51	28.15	13.10
ASR10	Shek Lei Adventure Playground	(36,38)	42.5	1.5	53.95	21.08	32.91	28.23	13.34
ASR11	Kwai Chung Building	(36,38)	42.5	5.5	53.91	20.99	32.72	28.24	13.25
ASR11	Kwai Chung Building	(36,38)	45.5	8.5	53.88	20.96	32.67	28.23	13.22
ASR11	Kwai Chung Building	(36,38)	48.5	11.5	53.87	20.94	32.63	28.23	13.20
ASR11	Kwai Chung Building	(36,38)	51.5	14.5	53.86	20.92	32.60	28.22	13.18
ASR11	Kwai Chung Building	(36,38)	114.5	77.5	53.78	20.82	32.50	28.13	13.09
Prevailing AQOs					100	50	--	50	25
Proposed 2025 AQOs					75	30	37.5	--	15

Table E-2 Predicted NO₂ Concentrations at Representative ASRs

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	NO ₂ , µg/m ³		
					19 th HIGHEST HOURLY AVERAGE	10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR1	Hotel Cozi Oasis	(36,38)	33.5	11.5	122.54	53.31	27.33
ASR1	Hotel Cozi Oasis	(36,38)	40.5	18.5	112.78	50.28	25.35
ASR1	Hotel Cozi Oasis	(36,38)	115.5	93.5	96.57	43.27	20.79
ASR2	Kwai Shing Industrial Building	(36,38)	18.5	4.5	154.03	68.24	37.73
ASR2	Kwai Shing Industrial Building	(36,38)	51.5	37.5	99.38	45.92	23.61
ASR2	Kwai Shing Industrial Building	(36,38)	54.5	40.5	99.11	45.55	23.52
ASR2	Kwai Shing Industrial Building	(36,38)	57.5	43.5	98.82	45.23	23.48
ASR2	Kwai Shing Industrial Building	(36,38)	60.5	46.5	98.42	44.94	23.54
ASR3	Vanta Industrial Centre	(36,38)	30.5	10.5	125.40	54.37	26.78
ASR3	Vanta Industrial Centre	(36,38)	33.5	13.5	118.50	52.32	26.25
ASR3	Vanta Industrial Centre	(36,38)	36.5	16.5	112.69	50.67	25.73
ASR3	Vanta Industrial Centre	(36,38)	39.5	19.5	110.52	49.28	25.24
ASR3	Vanta Industrial Centre	(36,38)	42.5	22.5	106.13	48.20	24.78
ASR3	Vanta Industrial Centre	(36,38)	51.5	31.5	101.88	46.23	23.63
ASR3	Vanta Industrial Centre	(36,38)	54.5	34.5	101.07	45.88	23.38
ASR3	Vanta Industrial Centre	(36,38)	60.5	40.5	99.75	45.65	23.34

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	NO ₂ , µg/m ³		
					19 th HIGHEST HOURLY AVERAGE	10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR3	Vanta Industrial Centre	(36,38)	63.5	43.5	99.33	45.86	23.95
ASR3	Vanta Industrial Centre	(36,38)	69.5	49.5	143.61	46.75	26.06
ASR4	Vanta Industrial Centre	(36,38)	30.5	10.5	127.87	52.88	28.33
ASR4	Vanta Industrial Centre	(36,38)	33.5	13.5	123.04	51.66	27.63
ASR4	Vanta Industrial Centre	(36,38)	36.5	16.5	117.56	49.99	26.88
ASR4	Vanta Industrial Centre	(36,38)	39.5	19.5	112.40	49.11	26.23
ASR4	Vanta Industrial Centre	(36,38)	42.5	22.5	108.92	48.41	25.63
ASR4	Vanta Industrial Centre	(36,38)	51.5	31.5	102.57	47.09	24.39
ASR4	Vanta Industrial Centre	(36,38)	54.5	34.5	101.79	46.97	24.22
ASR4	Vanta Industrial Centre	(36,38)	60.5	40.5	100.56	47.68	24.24
ASR4	Vanta Industrial Centre	(36,38)	63.5	43.5	102.48	48.99	24.38
ASR4	Vanta Industrial Centre	(36,38)	69.5	49.5	117.25	50.94	24.42
ASR5	Kwai Ying Building	(36,38)	42.5	5.5	127.07	55.57	27.48
ASR5	Kwai Ying Building	(36,38)	45.5	8.5	121.37	52.46	26.62
ASR5	Kwai Ying Building	(36,38)	48.5	11.5	116.17	50.17	25.96
ASR5	Kwai Ying Building	(36,38)	51.5	14.5	110.06	48.91	25.47

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	NO ₂ , µg/m ³		
					19 th HIGHEST HOURLY AVERAGE	10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR5	Kwai Ying Building	(36,38)	102.5	65.5	96.83	44.08	20.95
ASR6	Gold King Industrial Building	(36,38)	24.5	4.5	133.53	57.16	27.70
ASR6	Gold King Industrial Building	(36,38)	27.5	7.5	128.49	56.24	27.22
ASR6	Gold King Industrial Building	(36,38)	30.5	10.5	126.23	54.37	26.67
ASR6	Gold King Industrial Building	(36,38)	51.5	31.5	101.86	46.16	23.53
ASR6	Gold King Industrial Building	(36,38)	54.5	34.5	101.00	45.81	23.29
ASR6	Gold King Industrial Building	(36,38)	57.5	37.5	100.19	45.60	23.19
ASR6	Gold King Industrial Building	(36,38)	60.5	40.5	99.71	45.59	23.56
ASR6	Gold King Industrial Building	(36,38)	63.5	43.5	99.26	45.92	25.28
ASR6	Gold King Industrial Building	(36,38)	96.5	76.5	96.78	43.57	21.15
ASR7	The Venus Industrial Building	(36,38)	24.5	4.5	137.09	61.15	31.78
ASR7	The Venus Industrial Building	(36,38)	27.5	7.5	130.76	57.94	28.79
ASR7	The Venus Industrial Building	(36,38)	30.5	10.5	127.67	54.50	26.88
ASR7	The Venus Industrial Building	(36,38)	33.5	13.5	119.66	51.82	25.74
ASR7	The Venus Industrial Building	(36,38)	36.5	16.5	112.54	50.06	25.08

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	NO ₂ , µg/m ³		
					19 th HIGHEST HOURLY AVERAGE	10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR8	Boldwin Industrial Building	(36,38)	27.5	6.5	127.24	53.95	27.34
ASR8	Boldwin Industrial Building	(36,38)	30.5	9.5	122.31	52.16	26.79
ASR8	Boldwin Industrial Building	(36,38)	33.5	12.5	120.65	51.00	26.28
ASR8	Boldwin Industrial Building	(36,38)	51.5	30.5	102.90	45.93	23.44
ASR8	Boldwin Industrial Building	(36,38)	54.5	33.5	101.74	45.70	23.20
ASR8	Boldwin Industrial Building	(36,38)	57.5	36.5	101.45	45.55	23.04
ASR8	Boldwin Industrial Building	(36,38)	60.5	39.5	100.51	45.46	22.96
ASR8	Boldwin Industrial Building	(36,38)	63.5	42.5	100.80	45.53	22.92
ASR8	Boldwin Industrial Building	(36,38)	93.5	72.5	96.88	43.93	21.19
ASR9	Wah Sing Industrial Building	(36,38)	24.5	1.5	142.41	63.91	28.49
ASR9	Wah Sing Industrial Building	(36,38)	29.5	6.5	126.25	53.60	26.45
ASR9	Wah Sing Industrial Building	(36,38)	32.5	9.5	121.72	51.63	25.86
ASR9	Wah Sing Industrial Building	(36,38)	50.5	27.5	102.90	45.90	23.49
ASR9	Wah Sing Industrial Building	(36,38)	53.5	30.5	102.78	45.70	23.20
ASR9	Wah Sing Industrial Building	(36,38)	56.5	33.5	101.54	45.51	22.98

ASR ID	DESCRIPTION	PATH GRID	HEIGHT (mPD)	HEIGHT (mAG)	NO ₂ , µg/m ³		
					19 th HIGHEST HOURLY AVERAGE	10 th HIGHEST DAILY AVERAGE	ANNUAL AVERAGE
ASR9	Wah Sing Industrial Building	(36,38)	62.5	39.5	100.03	45.27	22.69
ASR9	Wah Sing Industrial Building	(36,38)	98.5	75.5	96.75	43.59	21.03
ASR10	Shek Lei Adventure Playground	(36,38)	42.5	1.5	135.78	61.21	27.33
ASR11	Kwai Chung Building	(36,38)	42.5	5.5	126.91	54.73	26.73
ASR11	Kwai Chung Building	(36,38)	45.5	8.5	119.77	51.95	26.05
ASR11	Kwai Chung Building	(36,38)	48.5	11.5	113.64	49.66	25.48
ASR11	Kwai Chung Building	(36,38)	51.5	14.5	110.19	48.46	25.01
ASR11	Kwai Chung Building	(36,38)	114.5	77.5	96.56	43.65	20.74
Prevailing AQOs					200	--	40
Proposed 2025 AQOs					--	120	--

Appendix F Background Noise Monitoring Data

BN1

Sampling Date: 17 December 2024 Noise Measurement
 Sampling Period: 0700-1900 Noise Meter Model: Rion, NL-52
 Weather Conditions: Sunny Calibration
 Wind Speed: <5 m/s Calibrator Model: Rion, NC-74
 Noise Meter Model: Rion, NL-52 Before: 94.0 dB(A)
 Façade/ Free-field: Free-field After: 94.0 dB(A)

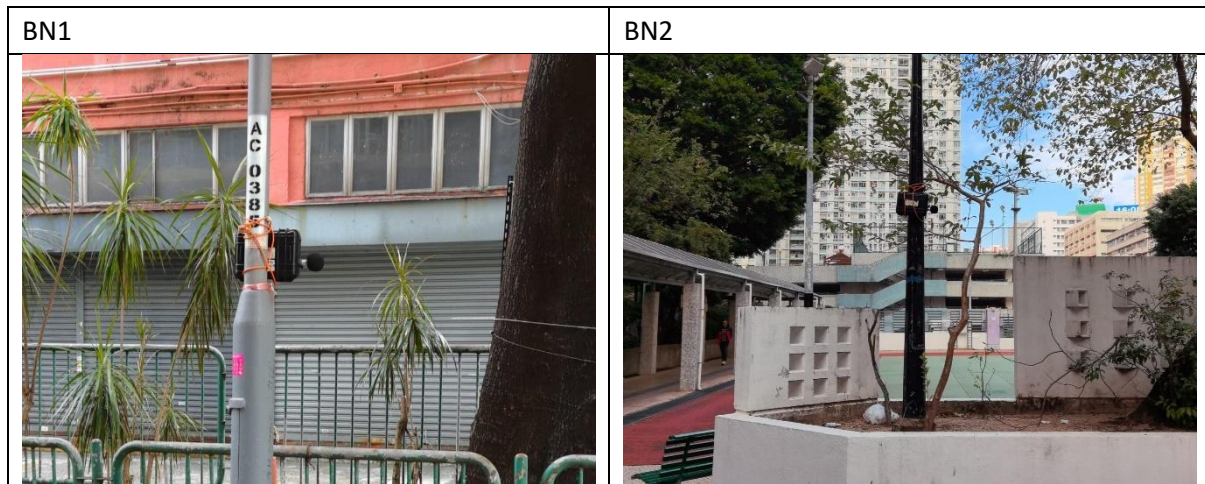
Start Time	Leq	Lmax	Lmin	L10	L90(1hr)
12/17/2024 7:00	67.8	84.1	55	70.8	61.4
12/17/2024 7:30	67.9	78.3	56.2	70.9	
12/17/2024 8:00	68.5	82.1	56.2	71.4	63.2
12/17/2024 8:30	68.5	78.9	58.5	71.5	
12/17/2024 9:00	68.3	81.1	58.3	71	63.5
12/17/2024 9:30	67.8	80.8	56.5	70.9	
12/17/2024 10:00	67.7	81.8	56.7	70.5	62.2
12/17/2024 10:30	67.6	78.9	57.5	70.7	
12/17/2024 11:00	67.4	79	56	70.7	61.1
12/17/2024 11:30	67.3	77.6	55.8	70.4	
12/17/2024 12:00	69	80.1	58.6	71.8	64.5
12/17/2024 12:30	69.4	82.5	59.8	71.6	
12/17/2024 13:00	68.3	89.6	56.5	71	62.5
12/17/2024 13:30	67.6	79.5	57.8	70.7	
12/17/2024 14:00	69.7	85.9	58.7	72	65.0
12/17/2024 14:30	69.7	84.3	61.2	71.9	
12/17/2024 15:00	68.5	79.2	61.3	71.1	64.4
12/17/2024 15:30	68.3	79.1	58.9	71.1	
12/17/2024 16:00	69.3	85	60.4	71.9	65.7
12/17/2024 16:30	69.9	77.1	63.9	72	
12/17/2024 17:00	69.2	80	58.5	71.6	62.6
12/17/2024 17:30	68.3	87.2	56.4	71.3	
12/17/2024 18:00	67.9	89.9	56.7	70.7	61.6
12/17/2024 18:30	67.8	79.5	55.5	70.9	
Minimum	67.3	77.1	55	70.4	61.1
Average	68.4	81.7	58.0	71.2	63.1

BN2

Sampling Date: 17 December 2024 Noise Measurement
 Sampling Period: 0700-1900 Noise Meter Model: Rion, NL-52
 Weather Conditions: Sunny Calibration
 Wind Speed: <5 m/s Calibrator Model: Rion, NC-74
 Noise Meter Model: Rion, NL-52 Before: 93.8 dB(A)
 Façade/ Free-field: Free-field After: 93.8 dB(A)

Start Time	Leq (30min)	Lmax	Lmin	L10	L90(1hr)
12/17/2024 7:00	66.5	78.6	58.9	68.6	63.4
12/17/2024 7:30	68.8	83	61.2	70.9	
12/17/2024 8:00	67.6	79	62.1	69.4	64.9
12/17/2024 8:30	67.6	79	62	69.2	
12/17/2024 9:00	70.2	87.8	62.1	72.3	65.5
12/17/2024 9:30	68.5	84.3	61.1	70	
12/17/2024 10:00	67.3	85.4	59.9	69	64.2
12/17/2024 10:30	66.7	73.9	60.8	68.5	
12/17/2024 11:00	66.9	79.3	60.7	68.7	63.9
12/17/2024 11:30	67	77.8	60.5	68.8	
12/17/2024 12:00	67.2	82.4	61	69	64.6
12/17/2024 12:30	67.9	78.9	60.3	69.8	
12/17/2024 13:00	66.9	81	60.2	68.7	64.1
12/17/2024 13:30	67.7	82.7	59.6	69.7	
12/17/2024 14:00	68.2	84.4	61.4	70.3	64.4
12/17/2024 14:30	67	79.6	60.7	69.1	
12/17/2024 15:00	67.5	84.5	60.7	68.9	64.1
12/17/2024 15:30	67.9	81	61.5	69.7	
12/17/2024 16:00	67.1	80	60.7	68.7	64.2
12/17/2024 16:30	67.3	79.7	60.1	69.1	
12/17/2024 17:00	67.3	87	61.2	69	64.3
12/17/2024 17:30	66.9	77.9	60.7	68.6	
12/17/2024 18:00	66.6	84.9	61.4	68.3	64.2
12/17/2024 18:30	66.7	74.8	60	68.4	
Minimum	66.5	73.9	58.9	68.3	63.4
Average	67.5	81.1	60.8	69.3	64.3

Photographic Record of Prevailing Background Noise Measurement



Appendix G Noise Monitoring Equipment Calibration Certificates



Calibration Certificate

Certificate No. **411656**

Page 1 of 2 Pages

Customer : Enovative Environmental Service Limited

Address : Room 23, 6/F, Block C, Goldfield Industrial Centre, 1 Siu Wo Road, Shatin, N.T.

Order No. : Q44338

Date of receipt : 8-Nov-24

Item Tested

Description : Sound Calibrator

Manufacturer : RION

I.D. : --

Model : NC-74

Serial No. : 34857296

Test Conditions

Date of Test : 18-Nov-24

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

The UUT has an indication that it conforms to IEC 60942:2003 Class 1.

Ref. Document/Procedure : F21, Z02, IEC 60942:2003.

Test Results

All results were within the IEC 60942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	405219	NIM-PRC & SCL-HKSAR
S240	Sound Level Calibrator	405380	NIM-PRC & SCL-HKSAR
S041	Universal Counter	402289	SCL-HKSAR
S206	Sound Level Meter	405379	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.
The test results apply to the above Unit-Under-Test only

Calibrated by : 
Elva Chong

Approved by : 
Kin Wong

Date: 18-Nov-24

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. 411656

Page 2 of 2 Pages

Results :

1. Generated Sound Pressure Level

UUT Nominal Value (dB)	Measured Value (dB)	IEC 60942 Class 1 Spec.
94.0	94.0	± 0.4 dB

Uncertainty : ± 0.2 dB

2. Short-term Level Fluctuation : 0.0 dB

IEC 60942 Class 1 Spec. : ± 0.1 dB

Uncertainty : ± 0.05 dB

3. Frequency

UUT Nominal Value (kHz)	Measured Value (kHz)	IEC 60942 Class 1 Spec.
1	1.002	± 1 %

Uncertainty : ± 3.6 x 10⁻⁶

4. Total Distortion + Noise : < 1.4 %

IEC 60942 Class 1 Spec. : < 3.0 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 007 hPa.

----- END -----

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Calibration Certificate

Certificate No. 411655

Page 1 of 4 Pages

Customer : Enovative Environmental Service Limited

Address : Room 23, 6/F, Block C, Goldfield Industrial Centre, 1 Siu Wo Road, Shatin, N.T.

Order No. : Q44338

Date of receipt : 8-Nov-24

Item Tested

Description : Sound Level Meter

Manufacturer : RION

I.D. : --

Model : NL-52

Serial No. : 00175560

Test Conditions

Date of Test : 18-Nov-24

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

The UUT has an indication that it conforms to IEC 61672-1:2013/2002 Class 1

Ref. Document/Procedure: Z01, IEC 61672-1:2013, IEC 61260-1:2014.

Test Results

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S240	Sound Level Calibrator	405380	NIM-PRC & SCL-HKSAR
S017	Multi-Function Generator	C211339	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.

The test results apply to the above Unit-Under-Test only

Calibrated by : 
Elva Chong

Approved by : 
Kin Wong

Date: 18-Nov-24

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

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Calibration Certificate

Certificate No. **411655**

Page 2 of 4 Pages

Results :

Acoustical signal test

1. Indication at the Calibration Check Frequency (1kHz)

UUT Setting		Applied Value (dB)	UUT Reading (dB)
Weight.	Response		After Adjust.*
A	F	94.0	94.0
	S		94.0
C	F		94.0
Z			94.0

*Adjustment using the customer's sound calibrator was performed immediately before test.

Tolerance : ± 1.0 dB
 Uncertainty : ± 0.1 dB

2. Self-generated noise (Microphone Installed, most sensitive range) : 23.1 dBA (Mfr's Spec. ≤ 17 dBA)

Electrical signal tests

3. Frequency weightings (A ,F)

Frequency	Attenuation (dB)	IEC 61672-1 Class 1 Spec.
31.5 Hz	-39.5	- 39.4 dB, ± 1.5 dB
63 Hz	-26.2	- 26.2 dB, ± 1.0 dB
125 Hz	-16.2	- 16.1 dB, ± 1.0 dB
250 Hz	-8.7	- 8.6 dB, ± 1.0 dB
500 Hz	-3.2	- 3.2 dB, ± 1.0 dB
1 kHz	0.0 (Ref)	0 dB, ± 0.7 dB
2 kHz	+1.2	+ 1.2 dB, ± 1.0 dB
4 kHz	+1.3	+ 1.0 dB, ± 1.0 dB
8 kHz	-1.0	- 1.1 dB, + 1.5 dB \sim -2.5 dB
16 kHz	-2.5	- 6.6 dB, + 2.5 dB \sim - 16.0 dB

Uncertainty : ± 0.1 dB

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Calibration Certificate

Certificate No. **411655**

Page 3 of 4 Pages

4. Frequency & Time weightings

4.1 Frequency Weighting (1kHz)

UUT Setting		Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
Time Weight.	Freq. Weight.			
F	A	94.0	94.0 (Ref.)	--
	C		94.0	± 0.2 dB
	Z		94.0	

Uncertainty : ± 0.1 dB

4.2 Time Weighting (1kHz)

UUT Setting		Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
Time Weight.	Freq. Weight.			
F	A	94.0	94.0 (Ref.)	--
S			94.0	± 0.1 dB
eq			94.0	

Uncertainty : ± 0.1 dB

5. Level Linearity on the Reference Level Range (8 kHz, A, F)

Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
124.0	123.9	± 0.8 dB
114.0	114.0	
104.0	104.0	
94.0	94.0 (Ref.)	
84.0	84.0	
74.0	74.0	
64.0	64.0	
54.0	54.0	
44.0	44.1	

Uncertainty : ± 0.1 dB

6. Level Linearity including the level range control (1 kHz, A, F)

N.A. (UUT is single range)



Calibration Certificate

Certificate No. **411655**

Page 4 of 4 Pages

7. Filter Characteristics

7.1 1/1 – Octave Filter

Frequency	Attenuation (dB)	Tolerance (dB) <small>(Ref: IEC 61260-1 Class 1 Spec.)</small>
125 Hz	-76.7	< - 60
250 Hz	-71.4	< - 40.5
500 Hz	-39.9	< - 16.6
707 Hz	-3.3	+ 0.4 ~ - 5.3
1 kHz (Ref)	--	--
1.414 kHz	-3.3	+ 0.4 ~ - 5.3
2 kHz	-40.9	< - 16.6
4 kHz	-85.7	< - 40.5
8 kHz	-86.3	< - 60

Uncertainty : ± 0.25 dB

7.2 1/3 – Octave Filter

Frequency	Attenuation (dB)	Tolerance (dB) <small>(Ref: IEC 61260-1 Class 1 Spec.)</small>
326 Hz	-65.3	< - 60
530 Hz	-47.3	< - 40.5
772 Hz	-22.5	< - 16.6
891 Hz	-3.6	+ 0.4 ~ - 5.3
1 kHz (Ref)	--	--
1.122 kHz	-3.8	+ 0.4 ~ - 5.3
1.296 kHz	-22.8	< - 16.6
1.887 kHz	-47.7	< - 40.5
3.070 kHz	-92.6	< - 60

Uncertainty : ± 0.25 dB

Remarks : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure: 1 007 hPa.
4. Microphone model: UC-59, S/N: 10989.
5. Preamplifier model: NH-25, S/N: 65662.

----- END -----

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Calibration Certificate

Certificate No. **411654**

Page 1 of 3 Pages

Customer : Enovative Environmental Service Limited

Address : Room 23, 6/F, Block C, Goldfield Industrial Centre, 1 Siu Wo Road, Shatin, N.T.

Order No. : Q44338

Date of receipt : 8-Nov-24

Item Tested

Description : Sound Level Meter

Manufacturer : RION

I.D. : N15-RION-008

Model : NL-52

Serial No. : 01143485

Test Conditions

Date of Test : 18-Nov-24

Supply Voltage : --

Ambient Temperature : (23 ± 3)°C

Relative Humidity : (50 ± 25) %

Test Specifications

Calibration check.

The UUT has an indication that it conforms to IEC 61672-1:2013 Class 1

Ref. Document/Procedure: Z01, IEC 61672-1:2013.

Test Results

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S240	Sound Level Calibrator	405380	NIM-PRC & SCL-HKSAR
S017	Multi-Function Generator	C211339	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.

The test results apply to the above Unit-Under-Test only

Calibrated by : 
Elva Chong

Approved by : 
Kin Wong

Date: 18-Nov-24

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street Kwai Chung, NT, Hong Kong.
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Calibration Certificate

Certificate No. **411654**

Page 2 of 3 Pages

Results :

Acoustical signal test

1. Indication at the Calibration Check Frequency (1kHz)

UUT Setting		Applied Value (dB)	UUT Reading (dB)
Weight.	Response		After Adjust.*
A	F	94.0	93.8
	S		93.8
C	F		93.8
Z			93.8

*Adjustment using the customer's sound calibrator was performed immediately before test.

Tolerance : ± 1.0 dB

Uncertainty : ± 0.1 dB

2. Self-generated noise (Microphone Installed, most sensitive range) : 16.6 dBA (Mfr's Spec. ≤ 17 dBA)

Electrical signal tests

3. Frequency weightings (A ,F)

Frequency	Attenuation (dB)	IEC 61672-1 Class 1 Spec.
31.5 Hz	-39.5	- 39.4 dB, ± 1.5 dB
63 Hz	-26.1	- 26.2 dB, ± 1.0 dB
125 Hz	-16.1	- 16.1 dB, ± 1.0 dB
250 Hz	-8.6	- 8.6 dB, ± 1.0 dB
500 Hz	-3.2	- 3.2 dB, ± 1.0 dB
1 kHz	0.0 (Ref)	0 dB, ± 0.7 dB
2 kHz	+1.2	+ 1.2 dB, ± 1.0 dB
4 kHz	+1.3	+ 1.0 dB, ± 1.0 dB
8 kHz	-1.0	- 1.1 dB, + 1.5 dB \sim -2.5 dB
16 kHz	-2.5	- 6.6 dB, + 2.5 dB \sim - 16.0 dB

Uncertainty : ± 0.1 dB

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Calibration Certificate

Certificate No. **411654**

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4. Frequency & Time weightings

4.1 Frequency Weighting (1kHz)

UUT Setting		Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
Time Weight.	Freq. Weight.			
F	A	94.0	94.0 (Ref.)	--
	C		94.0	± 0.2 dB
	Z		94.0	

Uncertainty : ± 0.1 dB

4.2 Time Weighting (1kHz)

UUT Setting		Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
Time Weight.	Freq. Weight.			
F	A	94.0	94.0 (Ref.)	--
S			94.0	± 0.1 dB
eq			94.0	

Uncertainty : ± 0.1 dB

5. Level Linearity on the Reference Level Range (8 kHz, A, F)

Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
124.0	123.9	± 0.8 dB
114.0	113.9	
104.0	104.0	
94.0	94.0 (Ref.)	
84.0	84.0	
74.0	74.0	
64.0	64.0	
54.0	54.0	
44.0	44.1	

Uncertainty : ± 0.1 dB

6. Level Linearity including the level range control (1 kHz, A, F)

N.A. (UUT is single range)

- Remarks :
1. UUT : Unit-Under-Test
 2. The uncertainty claimed is for a confidence probability of not less than 95%.
 3. Atmospheric Pressure: 1 007 hPa.
 4. Microphone model: UC-59, S/N: 04030.
 5. Preamplifier model: NH-25, S/N: 21113.

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Appendix H Result of Industrial Noise Impact Assessment

Predicted Noise Level at N01

Fixed-noise Sources	Source Type	Ref. Code	SWL/unit, dB(A)	Quantity	At-source Noise Mitigation Measures	Noise Reduction from Mitigation Measures, dB(A)	Corrected SWL, dB(A)	Distance, m	Speed, km/h	Angle of view, degree	Operation (30mins)	% on time	Correction						CNL, dB(A)	Total CNL, dB(A)	Criterion, dB(A)
													Time	Distance	Angle of view	Speed	Screening Effect, dB(A) ⁽¹⁾	Facade			
Concrete Mixer 1 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	150.2	NA	NA	30	100.0%	0.0	-51.5	NA	NA	-10	3	22.5	49	65
Concrete Mixer 2 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	147.5	NA	NA	30	100.0%	0.0	-51.4	NA	NA	-10	3	22.6		
Concrete Mixer 3 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	145.0	NA	NA	30	100.0%	0.0	-51.2	NA	NA	-10	3	22.8		
Concrete Mixer 4 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	142.5	NA	NA	30	100.0%	0.0	-51.1	NA	NA	-10	3	22.9		
Conveyor / Screw Conveyors	Stationary	CNP 041	90	4	Full-enclosure	-15	81.0	135.8	NA	NA	30	100.0%	0.0	-50.6	NA	NA	-10	3	23.4		
Water / Admixture Pump	Stationary	CNP 281	88	1	Full-enclosure	-15	73.0	148.6	NA	NA	30	100.0%	0.0	-51.4	NA	NA	-10	3	14.6		
Air Compressor (Stationary) (Mixer 1)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	150.2	NA	NA	30	100.0%	0.0	-51.5	NA	NA	-10	3	26.5		
Filter Fan (Mixing unit) - Blower (Mixer 1)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	138.0	NA	NA	30	100.0%	0.0	-50.8	NA	NA	-10	3	22.2		
Air Compressor (Stationary) (Mixer 2)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	147.5	NA	NA	30	100.0%	0.0	-51.4	NA	NA	-10	3	26.6		
Filter Fan (Mixing unit) - Blower (Mixer 2)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	138.7	NA	NA	30	100.0%	0.0	-50.8	NA	NA	-10	3	22.2		
Air Compressor (Stationary) (Mixer 3)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	145.0	NA	NA	30	100.0%	0.0	-51.2	NA	NA	-10	3	26.8		
Filter Fan (Mixing unit) - Blower (Mixer 3)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	139.5	NA	NA	30	100.0%	0.0	-50.9	NA	NA	-10	3	22.1		
Air Compressor (Stationary) (Mixer 4)	Stationary	Other PME	100	1	Full-enclosure	-15	85.0	142.5	NA	NA	30	100.0%	0.0	-51.1	NA	NA	-10	3	26.9		
Filter Fan (Mixing unit) - Blower (Mixer 4)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	140.2	NA	NA	30	100.0%	0.0	-50.9	NA	NA	-10	3	22.1		
Air Blower (mounted on unloading tank)	Stationary	Other PME	95	4	Full-enclosure	-15	86.0	143.7	NA	NA	30	100.0%	0.0	-51.1	NA	NA	-10	3	27.9		
Pump (mounted on unloading tank)	Stationary	CNP 281	88	4	Full-enclosure	-15	79.0	143.7	NA	NA	30	100.0%	0.0	-51.1	NA	NA	-10	3	20.9		
Filter Fan (silo) - blower	Stationary	Other PME	95	16	Full-enclosure	-15	92.0	143.7	NA	NA	30	100.0%	0.0	-51.1	NA	NA	-10	3	33.9		
Filter Fan (general) - blower	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	132.5	NA	NA	30	100.0%	0.0	-50.4	NA	NA	-10	3	22.6		
Truck (Concrete Collection at Mixer 1)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	150.2	NA	NA	5	16.7%	-7.8	-51.5	NA	NA	-10	3	37.7		
Truck (Concrete Collection at Mixer 2)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	147.5	NA	NA	5	16.7%	-7.8	-51.4	NA	NA	-10	3	37.8		
Truck (Concrete Collection at Mixer 3)	Stationary	CNP045	109	10	Full-enclosure	-15	104.0	145.0	NA	NA	5	16.7%	-7.8	-51.2	NA	NA	-10	3	38.0		
Truck (Concrete Collection at Mixer 4)	Stationary	CNP046	109	10	Full-enclosure	-15	104.0	142.5	NA	NA	5	16.7%	-7.8	-51.1	NA	NA	-10	3	38.1		
Loader	Stationary	CNP081	112	1	Full-enclosure	-15	97.0	124.3	NA	NA	5	16.7%	-7.8	-49.9	NA	NA	-10	3	32.3		
Rd1	Concrete Truck	Haul Road	CNP044	109	40	NA	NA	170.4	15	7.4	NA	N/A	NA	-22.3	-13.9	-11.8	-10	3	37.0		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	170.4	15	7.4	NA	N/A	NA	-22.3	-13.9	-11.8	-10	3	33.6		
Rd2	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	170.4	15	7.4	NA	N/A	NA	-22.3	-13.9	-11.8	-10	3	34.0		
	Concrete truck	Haul Road	CNP044	109	40	NA	NA	161.4	15	7.4	NA	N/A	NA	-22.1	-13.9	-11.8	-10	3	37.2		
Rd3	Aggregates truck	Haul Road	Other PME	105	46	NA	NA	161.4	15	7.4	NA	N/A	NA	-22.1	-13.9	-11.8	-10	3	33.8		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	161.4	15	7.4	NA	N/A	NA	-22.1	-13.9	-11.8	-10	3	34.2		
Rd4	Concrete truck	Haul Road	CNP044	109	40	NA	NA	145.2	15	1.6	NA	N/A	NA	-21.6	-20.6	-11.8	-10	3	31.0		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	145.2	15	1.6	NA	N/A	NA	-21.6	-20.6	-11.8	-10	3	27.6		
Rd5	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	145.2	15	1.6	NA	N/A	NA	-21.6	-20.6	-11.8	-10	3	28.0		
	Concrete truck	Haul Road	CNP044	109	30	NA	NA	142.1	15	1.5	NA	N/A	NA	-21.5	-20.9	-11.8	-10	3	29.6		
Rd6	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	142.1	15	1.5	NA	N/A	NA	-21.5	-20.9	-11.8	-10	3	27.4		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	142.1	15	1.5	NA	N/A	NA	-21.5	-20.9	-11.8	-10	3	27.8		
Rd7	Concrete truck	Haul Road	CNP044	109	20	NA	NA	139.4	15	1.4	NA	N/A	NA	-21.4	-21.1	-11.8	-10	3	27.7		
Rd8	Concrete truck	Haul Road	CNP044	109	10	NA	NA	136.5	15	1.8	NA	N/A	NA	-21.4	-19.9	-11.8	-10	3	25.9		
Rd9	Concrete truck	Haul Road	CNP044	109	10	NA	NA	156.0	15	6.3	NA	N/A	NA	-21.9	-14.6	-11.8	-10	3	30.7		
Rd10	Concrete truck	Haul Road	CNP044	109	10	NA	NA	153.3	15	6.4	NA	N/A	NA	-21.9	-14.5	-11.8	-10	3	30.8		
Rd11	Concrete truck	Haul Road	CNP044	109	10	NA	NA	151.0	15	6.3	NA	N/A	NA	-21.8	-14.5	-11.8	-10	3	30.9		
Rd12	Concrete truck	Haul Road	CNP044	109	10	NA	NA	148.4	15	6.0	NA	N/A	NA	-21.7	-14.8	-11.8	-10	3	30.7		
Rd13	Lorry	Haul Road	Other PME	105	56	NA	NA	146.3	15	5.9	NA	N/A	NA	-21.7	-14.8	-11.8	-10	3	34.2		
Rd14	Concrete truck	Haul Road	CNP044	109	10	NA	NA	167.7	15	1.5	NA	N/A	NA	-22.2	-20.7	-11.8	-10	3	24.3		
Rd15	Concrete truck	Haul Road	CNP044	109	20	NA	NA	165.3	15	1.4	NA	N/A	NA	-22.2	-21.2	-11.8	-10	3	26.8		
Rd16	Concrete truck	Haul Road	CNP044	109	30	NA	NA	163.2	15	1.5	NA	N/A	NA	-22.1	-20.8	-11.8	-10	3	29.1		
Rd17	Concrete truck	Haul Road	CNP044	109	40	NA	NA	161.3	15	1.4	NA	N/A	NA	-22.1	-21	-11.8	-10	3	30.1		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	132.2	15	2.0	NA	N/A	NA	-21.2	-19.5	-11.8	-10	3	29.1		
Rd18	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	132.2	15	2.0	NA	N/A	NA	-21.2	-19.5	-11.8	-10	3	29.5		
	Concrete truck	Haul Road	CNP044	109	40	NA	NA	161.1	15	1.2	NA	N/A	NA	-22.1	-21.7	-11.8	-10	3	29.4		
Rd19	Lorry	Haul Road	Other PME	105	56	NA	NA	161.1	15	1.2	NA	N/A	NA	-22.1	-21.7	-11.8	-10	3	26.9		

Notes:

1 A 100dB(A) noise reduction was applied at N01. As the CBP is fully enclosed and N01 was blocked by existing buildings located between the CBP and the N01, there is no line of sight to the entire proposed development as well as the haul road.

Predicted Noise Level at IN2

Fixed-noise Sources	Source Type	Ref. Code	SWL/unit, dB(A)	Quantity	At-source Noise Mitigation Measures	Noise Reduction from Mitigation Measures, dB(A)	Corrected SWL, dB(A)	Distance, m	Speed, km/h	Angle of view, degree	Operation (30mins)	% on time	Correction					CNL, dB(A)	Total CNL, dB(A)	Criterion, dB(A)	
													Time	Distance	Angle of view	Speed	Screening Effect, dB(A) ⁽¹⁾				Facade
Concrete Mixer 1 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	144.7	NA	NA	30	100.0%	0.0	-51.2	NA	NA	-10	3	22.8	49	65
Concrete Mixer 2 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	140.8	NA	NA	30	100.0%	0.0	-51.0	NA	NA	-10	3	23.0		
Concrete Mixer 3 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	137.2	NA	NA	30	100.0%	0.0	-50.7	NA	NA	-10	3	23.3		
Concrete Mixer 4 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	133.4	NA	NA	30	100.0%	0.0	-50.5	NA	NA	-10	3	23.5		
Conveyor / Screw Conveyors	Stationary	CNP 041	90	4	Full-enclosure	-15	81.0	131.2	NA	NA	30	100.0%	0.0	-50.3	NA	NA	-10	3	23.7		
Water / Admixture Pump	Stationary	CNP 281	88	1	Full-enclosure	-15	73.0	145.1	NA	NA	30	100.0%	0.0	-51.2	NA	NA	-10	3	14.8		
Air Compressor (Stationary) (Mixer 1)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	144.7	NA	NA	30	100.0%	0.0	-51.2	NA	NA	-10	3	26.8		
Filter Fan (Mixing unit) - Blower (Mixer 1)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	136.3	NA	NA	30	100.0%	0.0	-50.7	NA	NA	-10	3	22.3		
Air Compressor (Stationary) (Mixer 2)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	140.8	NA	NA	30	100.0%	0.0	-51.0	NA	NA	-10	3	27.0		
Filter Fan (Mixing unit) - Blower (Mixer 2)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	136.7	NA	NA	30	100.0%	0.0	-50.7	NA	NA	-10	3	22.3		
Air Compressor (Stationary) (Mixer 3)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	137.2	NA	NA	30	100.0%	0.0	-50.7	NA	NA	-10	3	27.3		
Filter Fan (Mixing unit) - Blower (Mixer 3)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	137.2	NA	NA	30	100.0%	0.0	-50.7	NA	NA	-10	3	22.3		
Air Compressor (Stationary) (Mixer 4)	Stationary	Other PME	100	1	Full-enclosure	-15	85.0	133.4	NA	NA	30	100.0%	0.0	-50.5	NA	NA	-10	3	27.5		
Filter Fan (Mixing unit) - Blower (Mixer 4)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	137.6	NA	NA	30	100.0%	0.0	-50.8	NA	NA	-10	3	22.2		
Air Blower (mounted on unloading tank)	Stationary	Other PME	95	4	Full-enclosure	-15	86.0	140.5	NA	NA	30	100.0%	0.0	-50.9	NA	NA	-10	3	28.1		
Pump (mounted on unloading tank)	Stationary	CNP 281	88	4	Full-enclosure	-15	79.0	140.5	NA	NA	30	100.0%	0.0	-50.9	NA	NA	-10	3	21.1		
Filter Fan (silos) - blower	Stationary	Other PME	95	16	Full-enclosure	-15	92.0	140.5	NA	NA	30	100.0%	0.0	-50.9	NA	NA	-10	3	34.1		
Filter Fan (general) - blower	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	128.0	NA	NA	30	100.0%	0.0	-50.1	NA	NA	-10	3	22.9		
Truck (Concrete Collection at Mixer 1)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	144.7	NA	NA	5	16.7%	-7.8	-51.2	NA	NA	-10	3	38.0		
Truck (Concrete Collection at Mixer 2)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	140.8	NA	NA	5	16.7%	-7.8	-51.0	NA	NA	-10	3	38.2		
Truck (Concrete Collection at Mixer 3)	Stationary	CNP045	109	10	Full-enclosure	-15	104.0	137.2	NA	NA	5	16.7%	-7.8	-50.7	NA	NA	-10	3	38.5		
Truck (Concrete Collection at Mixer 4)	Stationary	CNP046	109	10	Full-enclosure	-15	104.0	133.4	NA	NA	5	16.7%	-7.8	-50.5	NA	NA	-10	3	38.7		
Loader	Stationary	CNP081	112	1	Full-enclosure	-15	97.0	119.0	NA	NA	5	16.7%	-7.8	-49.5	NA	NA	-10	3	32.7		
Rd1 Concrete Truck	Haul Road	CNP044	109	40	NA	NA	NA	156.4	15	7.4	NA	N/A	NA	-21.9	-14	-11.8	-10	3	37.4		
Rd1 Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	NA	156.4	15	7.4	NA	N/A	NA	-21.9	-14	-11.8	-10	3	34.0		
Rd1 Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	NA	156.4	15	7.4	NA	N/A	NA	-21.9	-14	-11.8	-10	3	34.4		
Rd2 Concrete truck	Haul Road	CNP044	109	40	NA	NA	NA	154.8	15	7.4	NA	N/A	NA	-21.9	-14	-11.8	-10	3	37.4		
Rd2 Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	NA	154.8	15	7.4	NA	N/A	NA	-21.9	-14	-11.8	-10	3	34.0		
Rd2 Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	NA	154.8	15	7.4	NA	N/A	NA	-21.9	-14	-11.8	-10	3	34.4		
Rd3 Concrete truck	Haul Road	CNP044	109	40	NA	NA	NA	142.8	15	1.6	NA	N/A	NA	-21.5	-21	-11.8	-10	3	31.1		
Rd3 Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	NA	142.8	15	1.6	NA	N/A	NA	-21.5	-21	-11.8	-10	3	27.7		
Rd3 Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	NA	142.8	15	1.6	NA	N/A	NA	-21.5	-21	-11.8	-10	3	28.1		
Rd4 Concrete truck	Haul Road	CNP044	109	30	NA	NA	NA	138.5	15	1.5	NA	N/A	NA	-21.4	-21	-11.8	-10	3	29.7		
Rd4 Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	NA	138.5	15	1.5	NA	N/A	NA	-21.4	-21	-11.8	-10	3	27.5		
Rd4 Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	NA	138.5	15	1.5	NA	N/A	NA	-21.4	-21	-11.8	-10	3	27.9		
Rd5 Concrete truck	Haul Road	CNP044	109	20	NA	NA	NA	134.6	15	1.4	NA	N/A	NA	-21.3	-21	-11.8	-10	3	27.8		
Rd6 Concrete truck	Haul Road	CNP044	109	10	NA	NA	NA	130.4	15	1.8	NA	N/A	NA	-21.2	-20	-11.8	-10	3	26.1		
Rd7 Concrete truck	Haul Road	CNP044	109	10	NA	NA	NA	148.8	15	6.3	NA	N/A	NA	-21.7	-15	-11.8	-10	3	30.9		
Rd8 Concrete truck	Haul Road	CNP044	109	10	NA	NA	NA	144.8	15	6.4	NA	N/A	NA	-21.6	-15	-11.8	-10	3	31.1		
Rd9 Concrete truck	Haul Road	CNP044	109	10	NA	NA	NA	141.2	15	6.3	NA	N/A	NA	-21.5	-15	-11.8	-10	3	31.2		
Rd10 Concrete truck	Haul Road	CNP044	109	10	NA	NA	NA	137.2	15	6.0	NA	N/A	NA	-21.4	-15	-11.8	-10	3	31.0		
Rd11 Lorry	Haul Road	Other PME	105	56	NA	NA	NA	133.9	15	5.9	NA	N/A	NA	-21.3	-15	-11.8	-10	3	34.6		
Rd12 Concrete truck	Haul Road	CNP044	109	10	NA	NA	NA	156.1	15	1.5	NA	N/A	NA	-21.9	-21	-11.8	-10	3	24.6		
Rd13 Concrete truck	Haul Road	CNP044	109	20	NA	NA	NA	152.5	15	1.4	NA	N/A	NA	-21.8	-21	-11.8	-10	3	27.2		
Rd14 Concrete truck	Haul Road	CNP044	109	30	NA	NA	NA	149.1	15	1.5	NA	N/A	NA	-21.7	-21	-11.8	-10	3	29.5		
Rd15 Concrete truck	Haul Road	CNP044	109	40	NA	NA	NA	145.9	15	1.4	NA	N/A	NA	-21.6	-21	-11.8	-10	3	30.6		
Rd16 Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	NA	127.8	15	2.0	NA	N/A	NA	-21.1	-20	-11.8	-10	3	29.2		
Rd16 Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	NA	127.8	15	2.0	NA	N/A	NA	-21.1	-20	-11.8	-10	3	29.6		
Rd17 Concrete truck	Haul Road	CNP044	109	40	NA	NA	NA	144.5	15	1.2	NA	N/A	NA	-21.6	-22	-11.8	-10	3	29.9		
Rd17 Lorry	Haul Road	Other PME	105	56	NA	NA	NA	144.5	15	1.2	NA	N/A	NA	-21.6	-22	-11.8	-10	3	27.4		

Notes:

1 A 10dB(A) noise reduction was applied at N02. As the CBP is fully enclosed and N02 was blocked by existing buildings located between the CBP and the N02, there is no line of sight to the entire proposed development as well as the haul road.

Predicted Noise Level at IN3

Fixed-noise Sources	Source Type	Ref. Code	SWL/unit, dB(A)	Quantity	At-source Noise Mitigation Measures	Noise Reduction from Mitigation Measures, dB(A)	Corrected SWL, dB(A)	Distance, m	Speed, km/h	Angle of view, degree	Operation (30mins)	% on time	Correction						CNL, dB(A)	Total CNL, dB(A)	Criterion, dB(A)
													Time	Distance	Angle of view	Speed	Screening Effect, dB(A) ⁽¹⁾	Facade			
Concrete Mixer 1 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	237.2	NA	NA	30	100.0%	0.0	-55.5	NA	NA	-10	3	18.5	46	65
Concrete Mixer 2 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	241.6	NA	NA	30	100.0%	0.0	-55.6	NA	NA	-10	3	18.4		
Concrete Mixer 3 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	245.9	NA	NA	30	100.0%	0.0	-55.8	NA	NA	-10	3	18.2		
Concrete Mixer 4 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	250.4	NA	NA	30	100.0%	0.0	-56.0	NA	NA	-10	3	18.0		
Conveyor / Screw Conveyors	Stationary	CNP 041	90	4	Full-enclosure	-15	81.0	248.7	NA	NA	30	100.0%	0.0	-55.9	NA	NA	-10	3	18.1		
Water / Admixture Pump	Stationary	CNP 281	88	1	Full-enclosure	-15	73.0	235.2	NA	NA	30	100.0%	0.0	-55.4	NA	NA	-10	3	10.6		
Air Compressor (Stationary) (Mixer 1)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	237.2	NA	NA	30	100.0%	0.0	-55.5	NA	NA	-10	3	22.5		
Filter Fan (Mixing unit) - Blower (Mixer 1)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	242.4	NA	NA	30	100.0%	0.0	-55.7	NA	NA	-10	3	17.3		
Air Compressor (Stationary) (Mixer 2)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	241.6	NA	NA	30	100.0%	0.0	-55.6	NA	NA	-10	3	22.4		
Filter Fan (Mixing unit) - Blower (Mixer 2)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	242.1	NA	NA	30	100.0%	0.0	-55.7	NA	NA	-10	3	17.3		
Air Compressor (Stationary) (Mixer 3)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	245.9	NA	NA	30	100.0%	0.0	-55.8	NA	NA	-10	3	22.2		
Filter Fan (Mixing unit) - Blower (Mixer 3)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	241.9	NA	NA	30	100.0%	0.0	-55.7	NA	NA	-10	3	17.3		
Air Compressor (Stationary) (Mixer 4)	Stationary	Other PME	100	1	Full-enclosure	-15	85.0	250.4	NA	NA	30	100.0%	0.0	-56.0	NA	NA	-10	3	22.0		
Filter Fan (Mixing unit) - Blower (Mixer 4)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	241.6	NA	NA	30	100.0%	0.0	-55.6	NA	NA	-10	3	17.4		
Air Blower (mounted on unloading tank)	Stationary	Other PME	95	4	Full-enclosure	-15	86.0	239.3	NA	NA	30	100.0%	0.0	-55.6	NA	NA	-10	3	23.4		
Pump (mounted on unloading tank)	Stationary	CNP 281	88	4	Full-enclosure	-15	79.0	239.3	NA	NA	30	100.0%	0.0	-55.6	NA	NA	-10	3	16.4		
Filter Fan (silos) - blower	Stationary	Other PME	95	16	Full-enclosure	-15	92.0	239.3	NA	NA	30	100.0%	0.0	-55.6	NA	NA	-10	3	29.4		
Filter Fan (general) - blower	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	251.6	NA	NA	30	100.0%	0.0	-56.0	NA	NA	-10	3	17.0		
Truck (Concrete Collection at Mixer 1)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	237.2	NA	NA	5	16.7%	-7.8	-55.5	NA	NA	-10	3	33.7		
Truck (Concrete Collection at Mixer 2)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	241.6	NA	NA	5	16.7%	-7.8	-55.6	NA	NA	-10	3	33.6		
Truck (Concrete Collection at Mixer 3)	Stationary	CNP045	109	10	Full-enclosure	-15	104.0	245.9	NA	NA	5	16.7%	-7.8	-55.8	NA	NA	-10	3	33.4		
Truck (Concrete Collection at Mixer 4)	Stationary	CNP046	109	10	Full-enclosure	-15	104.0	250.4	NA	NA	5	16.7%	-7.8	-56.0	NA	NA	-10	3	33.2		
Loader	Stationary	CNP081	112	1	Full-enclosure	-15	97.0	260.3	NA	NA	5	16.7%	-7.8	-56.3	NA	NA	-10	3	25.9		
Rd1	Concrete Truck	CNP044	109	40	NA	NA	NA	238.7	15	7.4	NA	N/A	NA	-23.8	-14	-11.8	-10	3	35.5		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	238.7	15	7.4	NA	N/A	NA	-23.8	-14	-11.8	-10	3	32.1		
Rd2	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	238.7	15	7.4	NA	N/A	NA	-23.8	-14	-11.8	-10	3	32.5		
	Concrete truck	Haul Road	CNP044	109	40	NA	NA	229.6	15	7.4	NA	N/A	NA	-23.6	-14	-11.8	-10	3	35.7		
Rd3	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	229.6	15	7.4	NA	N/A	NA	-23.6	-14	-11.8	-10	3	32.3		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	229.6	15	7.4	NA	N/A	NA	-23.6	-14	-11.8	-10	3	32.7		
Rd4	Concrete truck	Haul Road	CNP044	109	40	NA	NA	236.6	15	1.6	NA	N/A	NA	-23.7	-21	-11.8	-10	3	28.9		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	236.6	15	1.6	NA	N/A	NA	-23.7	-21	-11.8	-10	3	25.5		
Rd5	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	236.6	15	1.6	NA	N/A	NA	-23.7	-21	-11.8	-10	3	25.9		
	Concrete truck	Haul Road	CNP044	109	30	NA	NA	241.4	15	1.5	NA	N/A	NA	-23.8	-21	-11.8	-10	3	27.3		
Rd6	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	241.4	15	1.5	NA	N/A	NA	-23.8	-21	-11.8	-10	3	25.1		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	241.4	15	1.5	NA	N/A	NA	-23.8	-21	-11.8	-10	3	25.5		
Rd7	Concrete truck	Haul Road	CNP044	109	20	NA	NA	245.7	15	1.4	NA	N/A	NA	-23.9	-21	-11.8	-10	3	25.2		
Rd8	Concrete truck	Haul Road	CNP044	109	10	NA	NA	250.4	15	1.8	NA	N/A	NA	-24.0	-20	-11.8	-10	3	23.3		
Rd9	Concrete truck	Haul Road	CNP044	109	10	NA	NA	235.3	15	6.3	NA	N/A	NA	-23.7	-14.6	-11.8	-10	3	28.9		
Rd10	Concrete truck	Haul Road	CNP044	109	10	NA	NA	240.1	15	6.4	NA	N/A	NA	-23.8	-15	-11.8	-10	3	28.9		
Rd11	Concrete truck	Haul Road	CNP044	109	10	NA	NA	244.3	15	6.3	NA	N/A	NA	-23.9	-15	-11.8	-10	3	28.8		
Rd12	Concrete truck	Haul Road	CNP044	109	10	NA	NA	249.3	15	6.0	NA	N/A	NA	-24.0	-15	-11.8	-10	3	28.4		
Rd13	Lorry	Haul Road	Other PME	105	56	NA	NA	253.5	15	5.9	NA	N/A	NA	-24.0	-15	-11.8	-10	3	31.9		
Rd14	Concrete truck	Haul Road	CNP044	109	10	NA	NA	234.9	15	1.5	NA	N/A	NA	-23.7	-21	-11.8	-10	3	22.8		
Rd15	Concrete truck	Haul Road	CNP044	109	20	NA	NA	239.6	15	1.4	NA	N/A	NA	-23.8	-21	-11.8	-10	3	25.2		
Rd16	Concrete truck	Haul Road	CNP044	109	30	NA	NA	244.2	15	1.5	NA	N/A	NA	-23.9	-21	-11.8	-10	3	27.3		
Rd17	Concrete truck	Haul Road	CNP044	109	40	NA	NA	248.6	15	1.4	NA	N/A	NA	-24.0	-21	-11.8	-10	3	28.2		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	251.7	15	2.0	NA	N/A	NA	-24.0	-20	-11.8	-10	3	26.3		
Rd18	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	251.7	15	2.0	NA	N/A	NA	-24.0	-20	-11.8	-10	3	26.7		
	Concrete truck	Haul Road	CNP044	109	40	NA	NA	251.9	15	1.2	NA	N/A	NA	-24.0	-22	-11.8	-10	3	27.5		
Rd19	Lorry	Haul Road	Other PME	105	56	NA	NA	251.9	15	1.2	NA	N/A	NA	-24.0	-22	-11.8	-10	3	25.0		

Notes:

1 A 10dB(A) noise reduction was applied at N03. As the CBP is fully enclosed and N03 was blocked by existing buildings located between the CBP and the N03, there is no line of sight to the entire proposed development as well as the haul road.

Predicted Noise Level at IN4

Fixed-noise Sources	Source Type	Ref. Code	SWL/unit, dB(A)	Quantity	At-source Noise Mitigation Measures	Noise Reduction from Mitigation Measures, dB(A)	Corrected SWL, dB(A)	Distance, m	Speed, km/h	Angle of view, degree	Operation (30mins)	% on time	Correction						CNL, dB(A)	Total CNL, dB(A)	Criterion, dB(A)
													Time	Distance	Angle of view	Speed	Screening Effect, dB(A) ¹⁾	Facade			
Concrete Mixer 1 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	262.3	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	17.6	45	65
Concrete Mixer 2 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	266.8	NA	NA	30	100.0%	0.0	-56.5	NA	NA	-10	3	17.5		
Concrete Mixer 3 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	271.3	NA	NA	30	100.0%	0.0	-56.6	NA	NA	-10	3	17.4		
Concrete Mixer 4 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	275.8	NA	NA	30	100.0%	0.0	-56.8	NA	NA	-10	3	17.2		
Conveyor / Screw Conveyors	Stationary	CNP 041	90	4	Full-enclosure	-15	81.0	271.2	NA	NA	30	100.0%	0.0	-56.6	NA	NA	-10	3	17.4		
Water / Admixture Pump	Stationary	CNP 281	88	1	Full-enclosure	-15	73.0	259.1	NA	NA	30	100.0%	0.0	-56.3	NA	NA	-10	3	9.7		
Air Compressor (Stationary) (Mixer 1)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	262.3	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	21.6		
Filter Fan (Mixing unit) - Blower (Mixer 1)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	263.8	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	16.6		
Air Compressor (Stationary) (Mixer 2)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	266.8	NA	NA	30	100.0%	0.0	-56.5	NA	NA	-10	3	21.5		
Filter Fan (Mixing unit) - Blower (Mixer 2)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	263.8	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	16.6		
Air Compressor (Stationary) (Mixer 3)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	271.3	NA	NA	30	100.0%	0.0	-56.6	NA	NA	-10	3	21.4		
Filter Fan (Mixing unit) - Blower (Mixer 3)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	263.8	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	16.6		
Air Compressor (Stationary) (Mixer 4)	Stationary	Other PME	100	1	Full-enclosure	-15	85.0	275.8	NA	NA	30	100.0%	0.0	-56.8	NA	NA	-10	3	21.2		
Filter Fan (Mixing unit) - Blower (Mixer 4)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	263.7	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	16.6		
Air Blower (mounted on unloading tank)	Stationary	Other PME	95	4	Full-enclosure	-15	86.0	262.2	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	22.6		
Pump (mounted on unloading tank)	Stationary	CNP 281	88	4	Full-enclosure	-15	79.0	262.2	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	15.6		
Filter Fan (silo) - blower	Stationary	Other PME	95	16	Full-enclosure	-15	92.0	262.2	NA	NA	30	100.0%	0.0	-56.4	NA	NA	-10	3	28.6		
Filter Fan (general) - blower	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	273.5	NA	NA	30	100.0%	0.0	-56.7	NA	NA	-10	3	16.3		
Truck (Concrete Collection at Mixer 1)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	262.3	NA	NA	5	16.7%	-7.8	-56.4	NA	NA	-10	3	32.8		
Truck (Concrete Collection at Mixer 2)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	266.8	NA	NA	5	16.7%	-7.8	-56.5	NA	NA	-10	3	32.7		
Truck (Concrete Collection at Mixer 3)	Stationary	CNP045	109	10	Full-enclosure	-15	104.0	271.3	NA	NA	5	16.7%	-7.8	-56.6	NA	NA	-10	3	32.6		
Truck (Concrete Collection at Mixer 4)	Stationary	CNP046	109	10	Full-enclosure	-15	104.0	275.8	NA	NA	5	16.7%	-7.8	-56.8	NA	NA	-10	3	32.4		
Loader	Stationary	CNP081	112	1	Full-enclosure	-15	97.0	281.3	NA	NA	5	16.7%	-7.8	-57.0	NA	NA	-10	3	32.3		
Rd1	Concrete Truck	Haul Road	CNP044	109	40	NA	NA	271.3	15	7.4	NA	N/A	NA	-24.3	-13.9	-11.8	-10	3	35.0		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	271.3	15	7.4	NA	N/A	NA	-24.3	-13.9	-11.8	-10	3	31.6		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	271.3	15	7.4	NA	N/A	NA	-24.3	-13.9	-11.8	-10	3	32.0		
Rd2	Concrete truck	Haul Road	CNP044	109	40	NA	NA	257.2	15	7.4	NA	N/A	NA	-24.1	-13.9	-11.8	-10	3	35.2		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	257.2	15	7.4	NA	N/A	NA	-24.1	-13.9	-11.8	-10	3	31.8		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	257.2	15	7.4	NA	N/A	NA	-24.1	-13.9	-11.8	-10	3	32.2		
Rd3	Concrete truck	Haul Road	CNP044	109	40	NA	NA	259.4	15	1.6	NA	N/A	NA	-24.1	-20.6	-11.8	-10	3	28.5		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	259.4	15	1.6	NA	N/A	NA	-24.1	-20.6	-11.8	-10	3	25.1		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	259.4	15	1.6	NA	N/A	NA	-24.1	-20.6	-11.8	-10	3	25.5		
Rd4	Concrete truck	Haul Road	CNP044	109	30	NA	NA	264.4	15	1.5	NA	N/A	NA	-24.2	-20.9	-11.8	-10	3	26.9		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	264.4	15	1.5	NA	N/A	NA	-24.2	-20.9	-11.8	-10	3	24.7		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	264.4	15	1.5	NA	N/A	NA	-24.2	-20.9	-11.8	-10	3	25.1		
Rd5	Concrete truck	Haul Road	CNP044	109	20	NA	NA	268.8	15	1.4	NA	N/A	NA	-24.3	-21.1	-11.8	-10	3	24.8		
Rd6	Concrete truck	Haul Road	CNP044	109	10	NA	NA	273.6	15	1.8	NA	N/A	NA	-24.4	-19.9	-11.8	-10	3	22.9		
Rd7	Concrete truck	Haul Road	CNP044	109	10	NA	NA	262.2	15	6.3	NA	N/A	NA	-24.2	-14.6	-11.8	-10	3	28.4		
Rd8	Concrete truck	Haul Road	CNP044	109	10	NA	NA	267.2	15	6.4	NA	N/A	NA	-24.3	-14.5	-11.8	-10	3	28.4		
Rd9	Concrete truck	Haul Road	CNP044	109	10	NA	NA	271.5	15	6.3	NA	N/A	NA	-24.3	-14.5	-11.8	-10	3	28.4		
Rd10	Concrete truck	Haul Road	CNP044	109	10	NA	NA	276.6	15	6.0	NA	N/A	NA	-24.4	-14.8	-11.8	-10	3	28.0		
Rd11	Lorry	Haul Road	Other PME	105	56	NA	NA	280.8	15	5.9	NA	N/A	NA	-24.5	-14.8	-11.8	-10	3	31.4		
Rd12	Concrete truck	Haul Road	CNP044	109	10	NA	NA	266.0	15	1.5	NA	N/A	NA	-24.2	-20.7	-11.8	-10	3	22.3		
Rd13	Concrete truck	Haul Road	CNP044	109	20	NA	NA	270.8	15	1.4	NA	N/A	NA	-24.3	-21.2	-11.8	-10	3	24.7		
Rd14	Concrete truck	Haul Road	CNP044	109	30	NA	NA	273.3	15	1.5	NA	N/A	NA	-24.4	-20.8	-11.8	-10	3	26.8		
Rd15	Concrete truck	Haul Road	CNP044	109	40	NA	NA	279.9	15	1.4	NA	N/A	NA	-24.5	-21.0	-11.8	-10	3	27.7		
Rd16	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	273.5	15	2.0	NA	N/A	NA	-24.4	-19.5	-11.8	-10	3	25.9		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	273.5	15	2.0	NA	N/A	NA	-24.4	-19.5	-11.8	-10	3	26.3		
Rd17	Concrete truck	Haul Road	CNP044	109	40	NA	NA	283.5	15	1.2	NA	N/A	NA	-24.5	-21.7	-11.8	-10	3	27.0		
	Lorry	Haul Road	Other PME	105	56	NA	NA	283.5	15	1.2	NA	N/A	NA	-24.5	-21.7	-11.8	-10	3	24.5		

Notes:

1 A 10dB(A) noise reduction was applied at N04. As the CBP is fully enclosed and N04 was blocked by existing buildings located between the CBP and the N04, there is no line of sight to the entire proposed development as well as the haul road.

Predicted Noise Level at INS

Fixed-noise Sources	Source Type	Ref. Code	SWL/unit, dB(A)	Quantity	At-source Noise Mitigation Measures	Noise Reduction from Mitigation Measures, dB(A)	Corrected SWL, dB(A)	Distance, m	Speed, km/h	Angle of view, degree	Operation (30mins)	% on time	Correction					CNL, dB(A)	Total CNL, dB(A)	Criterion, dB(A)	
													Time	Distance	Angle of view	Speed	Screening Effect, dB(A) ¹⁾				Facade
Concrete Mixer 1 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	291.2	NA	NA	30	100.0%	0.0	-57.3	NA	NA	-10	3	16.7	45	65
Concrete Mixer 2 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	295.2	NA	NA	30	100.0%	0.0	-57.4	NA	NA	-10	3	16.6		
Concrete Mixer 3 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	299.2	NA	NA	30	100.0%	0.0	-57.5	NA	NA	-10	3	16.5		
Concrete Mixer 4 (Electric)	Stationary	CNP 045	96	1	Full-enclosure	-15	81.0	303.3	NA	NA	30	100.0%	0.0	-57.6	NA	NA	-10	3	16.4		
Conveyor / Screw Conveyors	Stationary	CNP 041	90	4	Full-enclosure	-15	81.0	294.6	NA	NA	30	100.0%	0.0	-57.4	NA	NA	-10	3	16.6		
Water / Admixture Pump	Stationary	CNP 281	88	1	Full-enclosure	-15	73.0	286.4	NA	NA	30	100.0%	0.0	-57.1	NA	NA	-10	3	8.9		
Air Compressor (Stationary) (Mixer 1)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	291.2	NA	NA	30	100.0%	0.0	-57.3	NA	NA	-10	3	20.7		
Filter Fan (Mixing unit) - Blower (Mixer 1)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	286.6	NA	NA	30	100.0%	0.0	-57.1	NA	NA	-10	3	15.9		
Air Compressor (Stationary) (Mixer 2)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	295.2	NA	NA	30	100.0%	0.0	-57.4	NA	NA	-10	3	20.6		
Filter Fan (Mixing unit) - Blower (Mixer 2)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	287.0	NA	NA	30	100.0%	0.0	-57.1	NA	NA	-10	3	15.9		
Air Compressor (Stationary) (Mixer 3)	Stationary	CNP 001	100	1	Full-enclosure	-15	85.0	299.2	NA	NA	30	100.0%	0.0	-57.5	NA	NA	-10	3	20.5		
Filter Fan (Mixing unit) - Blower (Mixer 3)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	287.4	NA	NA	30	100.0%	0.0	-57.2	NA	NA	-10	3	15.8		
Air Compressor (Stationary) (Mixer 4)	Stationary	Other PME	100	1	Full-enclosure	-15	85.0	303.3	NA	NA	30	100.0%	0.0	-57.6	NA	NA	-10	3	20.4		
Filter Fan (Mixing unit) - Blower (Mixer 4)	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	287.7	NA	NA	30	100.0%	0.0	-57.2	NA	NA	-10	3	15.8		
Air Blower (mounted on unloading tank)	Stationary	Other PME	95	4	Full-enclosure	-15	86.0	287.7	NA	NA	30	100.0%	0.0	-57.2	NA	NA	-10	3	21.8		
Pump (mounted on unloading tank)	Stationary	CNP 281	88	4	Full-enclosure	-15	79.0	287.7	NA	NA	30	100.0%	0.0	-57.2	NA	NA	-10	3	14.8		
Filter Fan (silo) - blower	Stationary	Other PME	95	16	Full-enclosure	-15	92.0	287.7	NA	NA	30	100.0%	0.0	-57.2	NA	NA	-10	3	27.8		
Filter Fan (general) - blower	Stationary	Other PME	95	1	Full-enclosure	-15	80.0	295.7	NA	NA	30	100.0%	0.0	-57.4	NA	NA	-10	3	15.6		
Truck (Concrete Collection at Mixer 1)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	291.2	NA	NA	5	16.7%	-7.8	-57.3	NA	NA	-10	3	31.9		
Truck (Concrete Collection at Mixer 2)	Stationary	CNP044	109	10	Full-enclosure	-15	104.0	295.2	NA	NA	5	16.7%	-7.8	-57.4	NA	NA	-10	3	31.8		
Truck (Concrete Collection at Mixer 3)	Stationary	CNP045	109	10	Full-enclosure	-15	104.0	299.2	NA	NA	5	16.7%	-7.8	-57.5	NA	NA	-10	3	31.7		
Truck (Concrete Collection at Mixer 4)	Stationary	CNP046	109	10	Full-enclosure	-15	104.0	303.3	NA	NA	5	16.7%	-7.8	-57.6	NA	NA	-10	3	31.6		
Loader	Stationary	CNP081	112	1	Full-enclosure	-15	97.0	301.1	NA	NA	5	16.7%	-7.8	-57.6	NA	NA	-10	3	32.3		
Rd1	Concrete Truck	Haul Road	CNP044	109	40	NA	NA	310.3	15	7.4	NA	N/A	NA	-24.9	-13.9	-11.8	-10	3	34.4		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	310.3	15	7.4	NA	N/A	NA	-24.9	-13.9	-11.8	-10	3	31.0		
Rd2	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	310.3	15	7.4	NA	N/A	NA	-24.9	-13.9	-11.8	-10	3	31.4		
	Concrete truck	Haul Road	CNP044	109	40	NA	NA	290.7	15	7.4	NA	N/A	NA	-24.6	-13.9	-11.8	-10	3	34.7		
Rd3	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	290.7	15	7.4	NA	N/A	NA	-24.6	-13.9	-11.8	-10	3	31.3		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	290.7	15	7.4	NA	N/A	NA	-24.6	-13.9	-11.8	-10	3	31.7		
Rd4	Concrete truck	Haul Road	CNP044	109	40	NA	NA	285.1	15	1.6	NA	N/A	NA	-24.5	-20.6	-11.8	-10	3	28.1		
	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	285.1	15	1.6	NA	N/A	NA	-24.5	-20.6	-11.8	-10	3	24.7		
Rd5	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	285.1	15	1.6	NA	N/A	NA	-24.5	-20.6	-11.8	-10	3	25.1		
	Concrete truck	Haul Road	CNP044	109	30	NA	NA	289.5	15	1.5	NA	N/A	NA	-24.6	-20.9	-11.8	-10	3	26.5		
Rd6	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	289.5	15	1.5	NA	N/A	NA	-24.6	-20.9	-11.8	-10	3	24.3		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	289.5	15	1.5	NA	N/A	NA	-24.6	-20.9	-11.8	-10	3	24.7		
Rd7	Concrete truck	Haul Road	CNP044	109	20	NA	NA	293.5	15	1.4	NA	N/A	NA	-24.7	-21.1	-11.8	-10	3	24.4		
Rd8	Concrete truck	Haul Road	CNP044	109	10	NA	NA	297.9	15	1.8	NA	N/A	NA	-24.7	-19.9	-11.8	-10	3	22.6		
Rd9	Concrete truck	Haul Road	CNP044	109	10	NA	NA	293.9	15	6.3	NA	N/A	NA	-24.7	-14.6	-11.8	-10	3	27.9		
Rd10	Concrete truck	Haul Road	CNP044	109	10	NA	NA	298.3	15	6.4	NA	N/A	NA	-24.7	-14.5	-11.8	-10	3	28.0		
Rd11	Concrete truck	Haul Road	CNP044	109	10	NA	NA	302.2	15	6.3	NA	N/A	NA	-24.8	-14.5	-11.8	-10	3	27.9		
Rd12	Concrete truck	Haul Road	CNP044	109	10	NA	NA	306.7	15	6.0	NA	N/A	NA	-24.9	-14.8	-11.8	-10	3	27.5		
Rd13	Lorry	Haul Road	Other PME	105	56	NA	NA	310.6	15	5.9	NA	N/A	NA	-24.9	-14.8	-11.8	-10	3	31.0		
Rd14	Concrete truck	Haul Road	CNP044	109	10	NA	NA	303.4	15	1.5	NA	N/A	NA	-24.8	-20.7	-11.8	-10	3	21.7		
Rd15	Concrete truck	Haul Road	CNP044	109	20	NA	NA	307.6	15	1.4	NA	N/A	NA	-24.9	-21.2	-11.8	-10	3	24.1		
Rd16	Concrete truck	Haul Road	CNP044	109	30	NA	NA	311.7	15	1.5	NA	N/A	NA	-24.9	-20.8	-11.8	-10	3	26.3		
Rd17	Concrete truck	Haul Road	CNP044	109	40	NA	NA	315.8	15	1.4	NA	N/A	NA	-25.0	-21.0	-11.8	-10	3	27.2		
Rd18	Aggregates Truck	Haul Road	Other PME	105	46	NA	NA	295.6	15	2.0	NA	N/A	NA	-24.7	-19.5	-11.8	-10	3	25.6		
	Cement / PFA / GGBS/ Admixture tanker	Haul Road	CNP 141	112	10	NA	NA	295.6	15	2.0	NA	N/A	NA	-24.7	-19.5	-11.8	-10	3	26.0		
Rd19	Concrete truck	Haul Road	CNP044	109	40	NA	NA	319.5	15	1.2	NA	N/A	NA	-25.0	-21.7	-11.8	-10	3	26.5		
	Lorry	Haul Road	Other PME	105	56	NA	NA	319.5	15	1.2	NA	N/A	NA	-25.0	-21.7	-11.8	-10	3	24.0		

Notes:

1 A 10dB(A) noise reduction was applied at N05. As the CBP is fully enclosed and N05 was blocked by existing buildings located between the CBP and the N05, there is no line of sight to the entire proposed development as well as the haul road.

Appendix I Historical Aerial Photographs

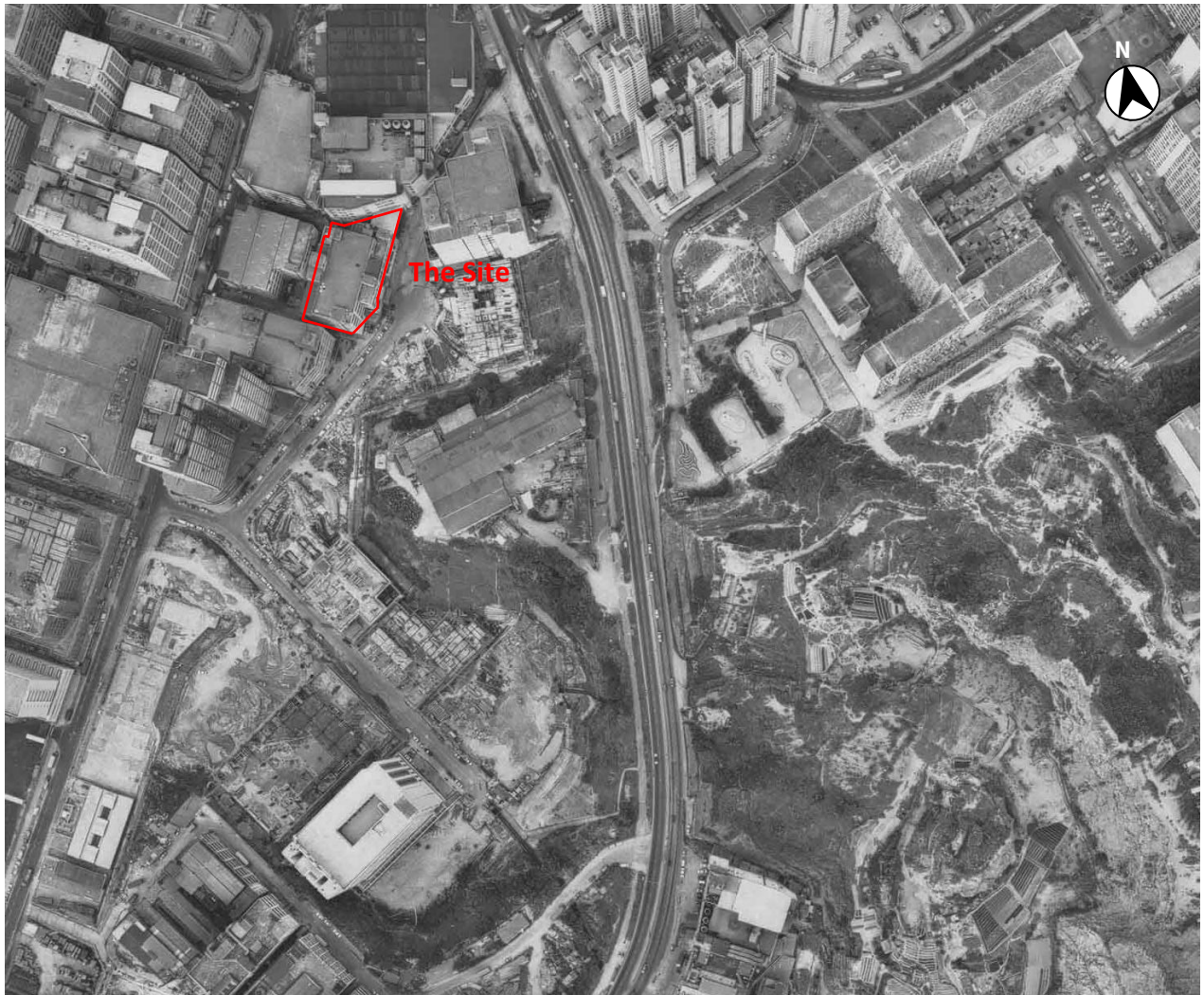
Figure I-1 Aerial Photograph in Year 1963



Source: Lands Department

In 1963, the Site was an agriculture land. No activities likely to result in land contamination were observed.

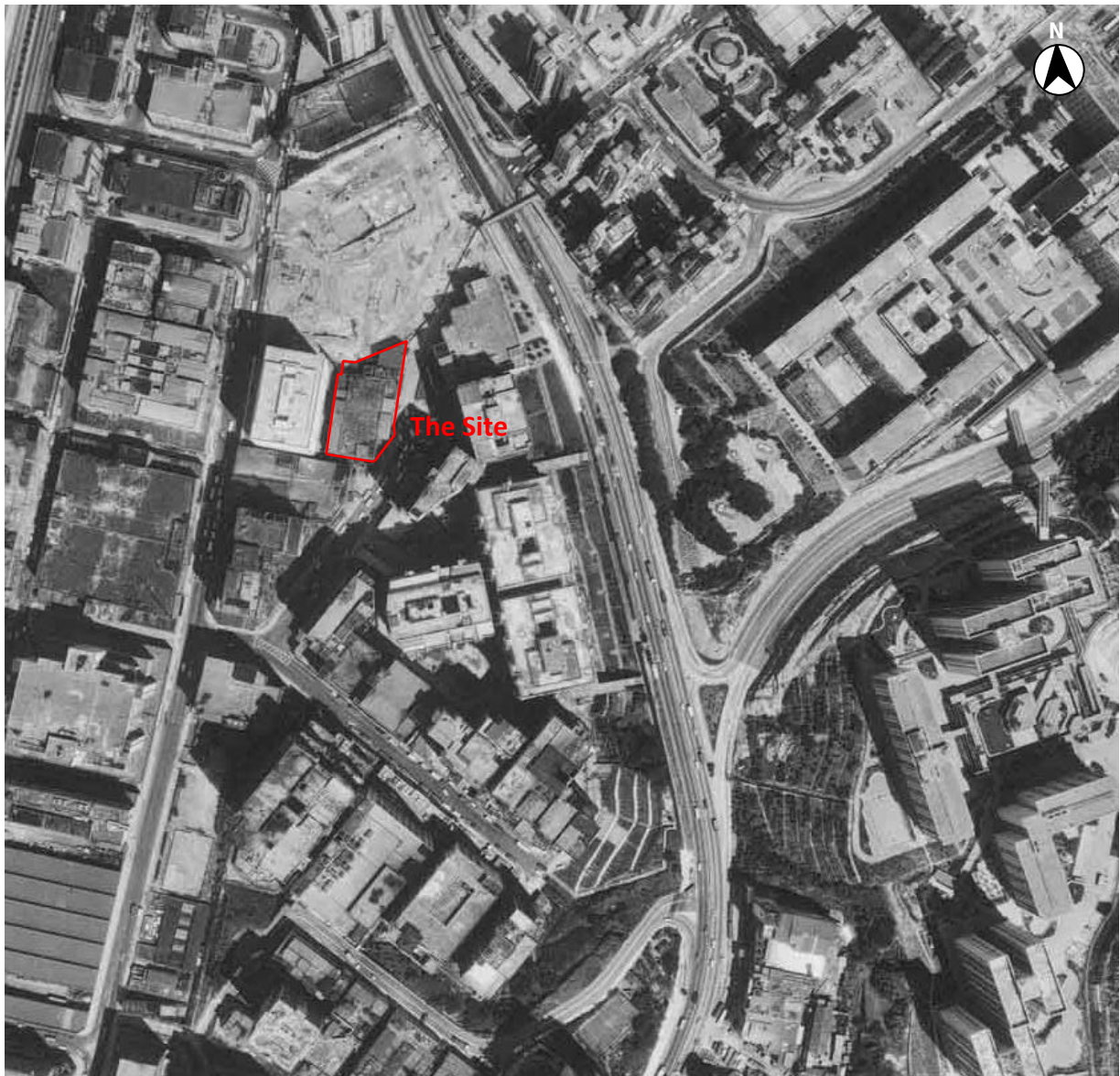
Figure I-2 Aerial Photograph in Year 1976



Source: Lands Department

In 1976, a building was built on the site. No activities likely to result in land contamination were observed.

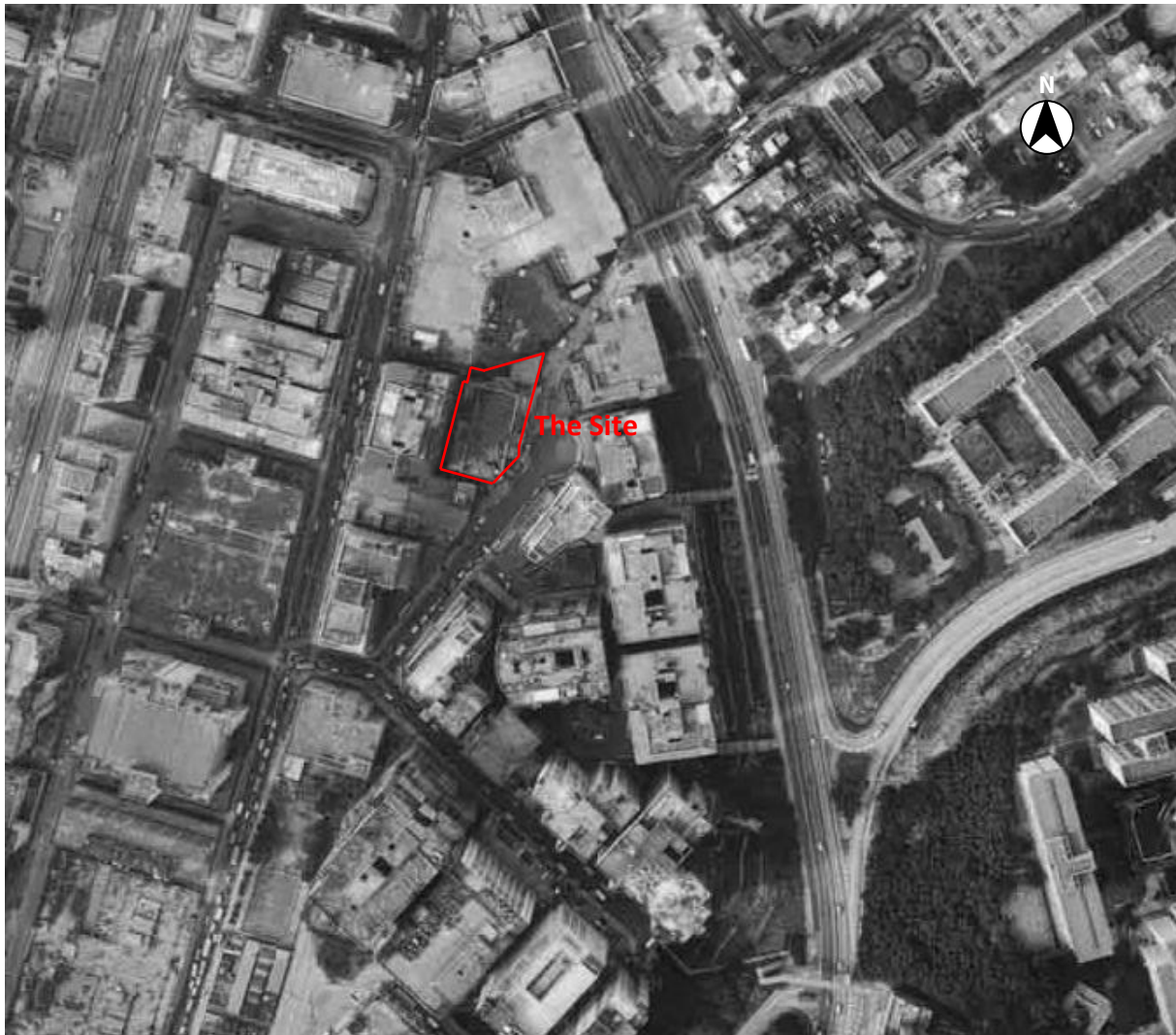
Figure I-3 Aerial Photograph in Year 1986



Source: Lands Department

In 1986, the building remained on the site. No activities likely to result in land contamination were observed.

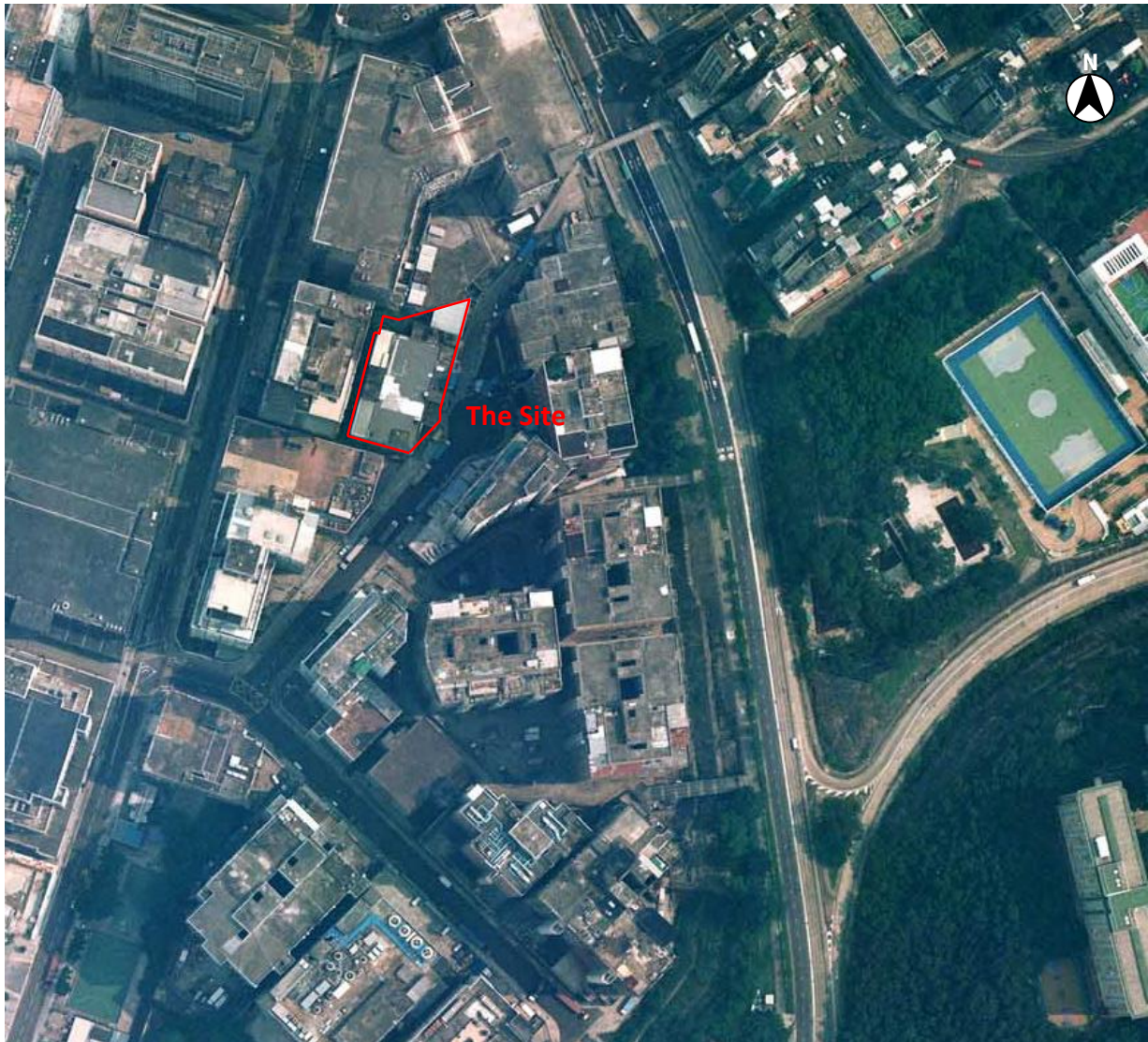
Figure I-4 Aerial Photograph in Year 1997



Source: Lands Department

In 1997, the building remained on the site. No activities likely to result in land contamination were observed.

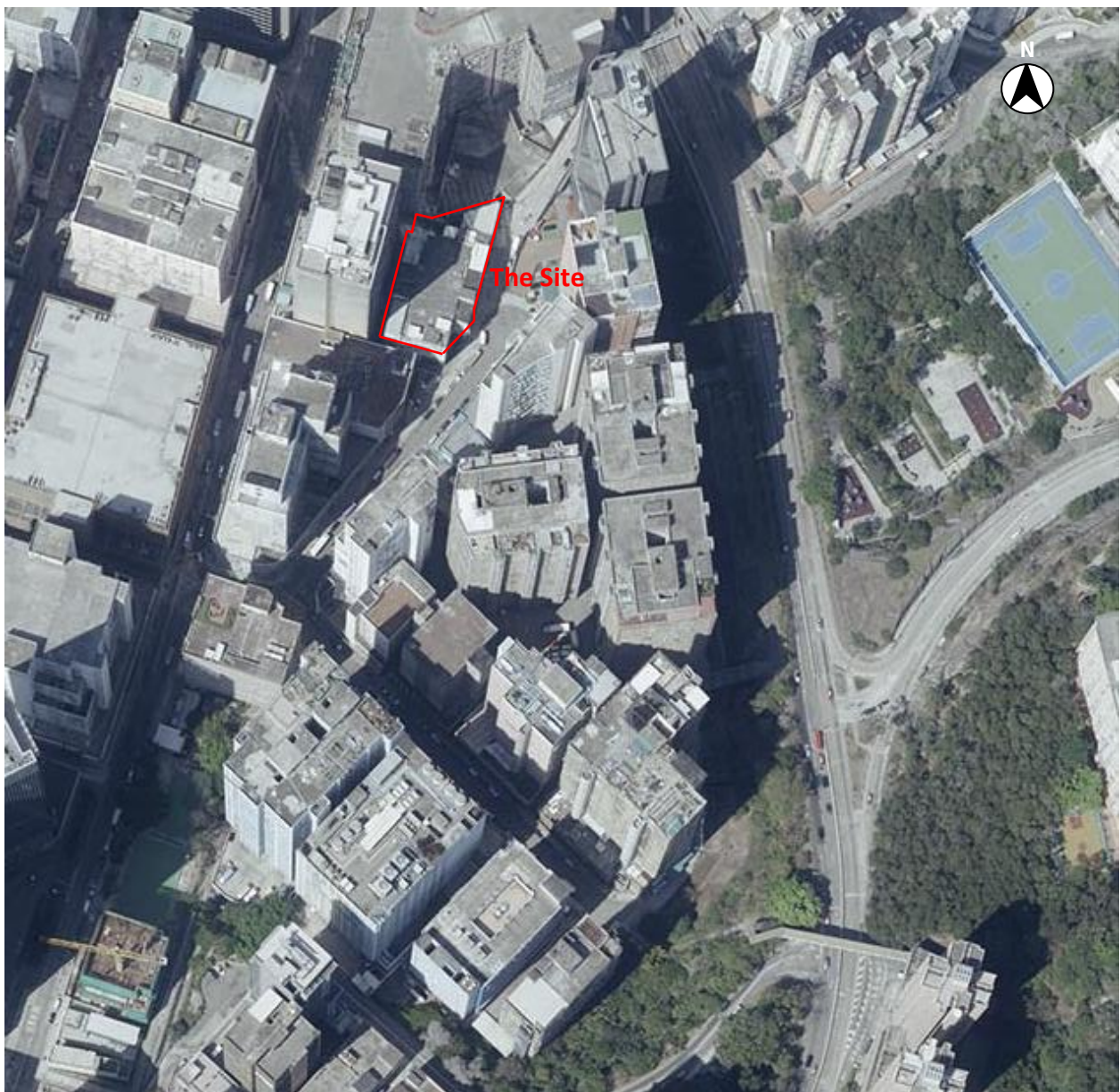
Figure I-5 Aerial Photograph in Year 2008



Source: Lands Department

In 2008, the building remained on the site. No activities likely to result in land contamination were observed.

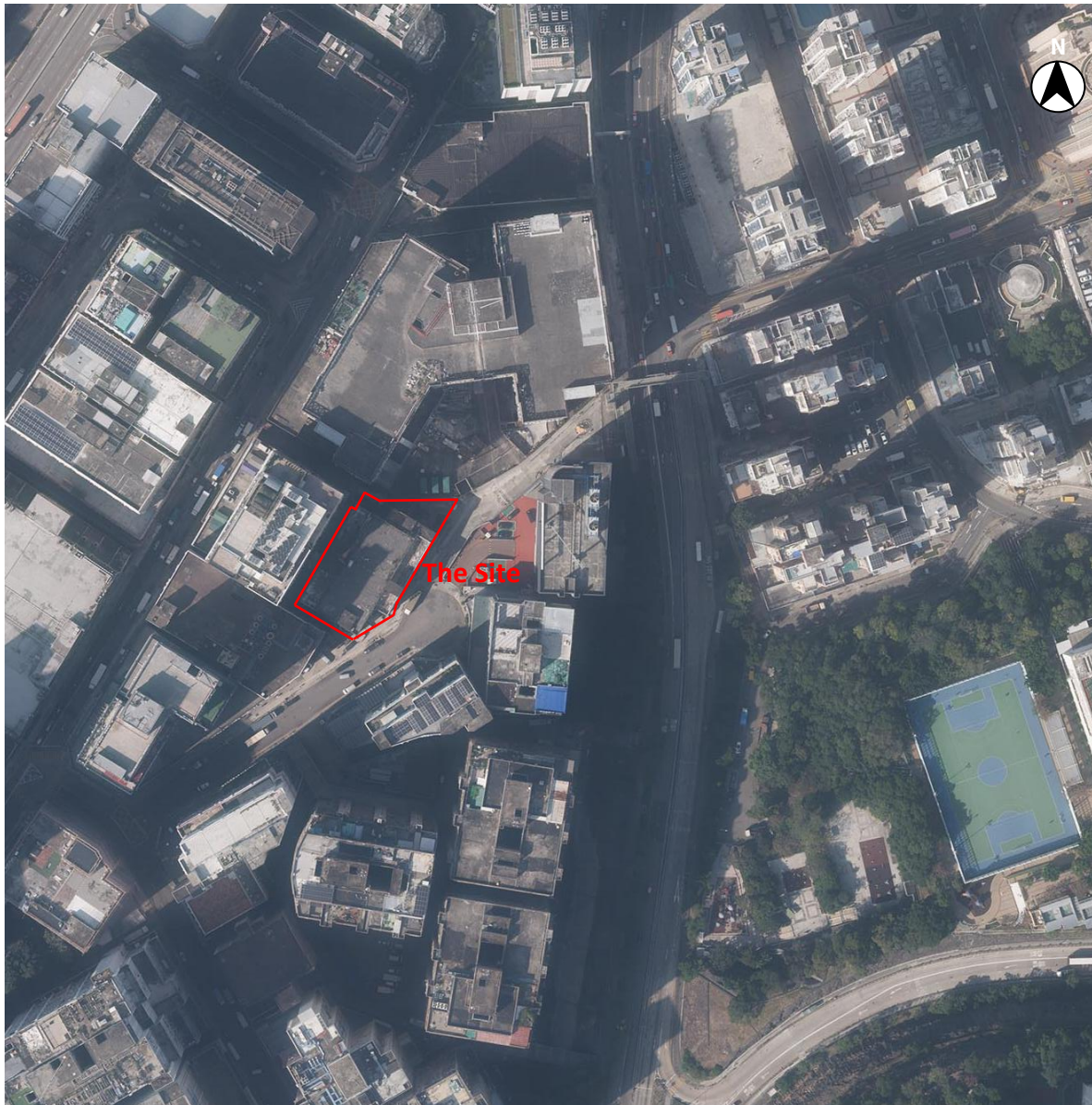
Figure I-6 Aerial Photograph in Year 2018



Source: Lands Department

In 2018, the Site remains unchanged. No activities likely to result in land contamination were observed.

Figure I-7 Aerial Photograph in Year 2022



Source: Lands Department

In 2022, the Site remains unchanged. No activities likely to result in land contamination were observed.



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Accountability

We understand the importance of being accountable to each other and our clients.



Passion

We are completely passionate about providing practical solutions and outcomes that deliver for our clients.



Insight

We work in an environment that encourages and values insight as a critical quality which informs our decisions and our clients and supports practical solutions and project delivery.



Integrity

We behave with respect and honesty toward each other, our clients and our stakeholders.