4 AIR QUALITY

4.1 INTRODUCTION

This ***Section*** presents the Air Quality Impact Assessment (AQIA) associated with the construction and operation of the proposed Project in accordance with *Clause 3.4.4* of the EIA Study Brief.

4.2 LEGISLATIVE REQUIREMENTS AND EVALUATION CRITERIA

The principal legislation for the management of air quality in Hong Kong is the *Air Pollution Control Ordinance (APCO) (Cap. 311)*. Evaluation criteria for the AQIA will follow the prevailing Air Quality Objectives (AQOs) which stipulate the statutory limits of typical air pollutants in the ambient air and the maximum allowable number of exceedances over the specified periods under *APCO*. The prevailing AQOs are presented in ***Table 4.1***.

Table 4.1 Hong Kong Air Quality Objectives

Air Pollutant	Averaging Time	Concentration ($\mu g\ m^{-3}$) [(a)]	No. of Exceedances Allowed per Year
Sulphur Dioxide (SO_2)	10 minute	500	3
	24-hour	125	3
Respirable Suspended Particulates (RSP) [(b)]	24-hour	100	9
	Annual	50	-
Fine Suspended Particulates (FSP) [(c)]	24-hour	75	9
	Annual	35	-
Nitrogen Dioxide (NO_2)	1-hour	200	18
	Annual	40	-
Carbon Monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
Ozone (O_3)	8-hour	160	9
Lead	Annual	0.5	-

Notes:

(a) Measured at 293K and 101.325 kPa.

(b) Suspended particles in air with a nominal aerodynamic diameter of 10 μm or less

(c) Suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less

In addition to the *APCO*, a maximum hourly average Total Suspended Particulates (TSP) concentration of 500μg m^{-3} at Air Sensitive Receivers (ASRs) is stipulated in Annex 4 of the *Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM)* to address potential construction dust impacts. The measures stipulated in the *Air Pollution Control (Construction Dust) Regulation* will be followed to ensure that potential dust impacts are properly controlled. Requirements stipulated in the *Air Pollution Control (Non-road*

Mobile Machinery) (Emission) Regulation will also be followed to control potential emissions from non-road mobile machinery during construction phase.

4.3 STUDY AREA AND AIR SENSITIVE RECEIVERS

The Study Area for the AQIA is defined as an area within 500m from the boundary of the Project. The Study Area considered in this AQIA is shown in ***Figure 4.1***. No existing, planned and committed ASRs have been identified within the Study Area with reference to current land uses, relevant Outline Zoning Plans, Development Permission Area Plans, Outline Development Plans and Layout Plans. No ASRs are located within approximately 4km from the LNG Terminal. A number of representative ASRs beyond the Study Area for the GRS at the BPPS and the GRS at the LPS have been identified and they are listed in ***Table 4.2***. The locations of the identified ASRs near the BPPS and the LPS are shown in ***Figure 4.2*** and ***Figure 4.3***, respectively.

Table 4.2 Identified Representative Air Sensitive Receivers

Area	ASR	Description	Use	Approximate Distance to nearest Project site (km)	Approximate Maximum Height (m above ground)
BPPS Study Area	A1	Sludge Treatment Facilities (STF) Office	GIC	1.5	40
	A2	Proposed WENT Extension Site Office	GIC	1.4	5
	A3	Lung Kwu Tan	Industrial	1.7	10
	A4	Planned Development in Lung Kwu Tan Reclamation Area	Residential	1.7	60
LPS Study Area	A5	Village house at Tai Shan Central	Residential	1.3	10
	A6	Village house at Wang Long	Residential	1.3	10
	A7	Concerto Inn	Hotel	1.6	10

Note:
(a) GIC = Government, Institutional or Community Uses

4.4 BASELINE CONDITIONS

The LNG Terminal is located in the southern waters of Hong Kong, while the GRS at the BPPS and the GRS at the LPS are located within the existing boundaries of the BPPS and the LPS, respectively. The local air quality of the sites of the GRS at the BPPS and LPS is primarily influenced by emissions from the BPPS and LPS, respectively.

4.4.1 Measured Background Air Quality from Air Quality Monitoring Stations

The nearest EPD air quality monitoring station (AQMS) to the GRS at the BPPS is located in Tuen Mun. There are no AQMSs operated by EPD in the vicinity of the GRS at the LPS or the LNG Terminal.

CLP and HK Electric both operate a number of AQMSs in accordance with the requirements of their respective Specified Process (SP) licences. The CLP AQMSs that are the nearest to the GRS at the BPPS are located in Lung Kwu Tan and Tuen Mun Clinic, while the AQMS in Ap Lei Chau operated by HK Electric is the nearest to the GRS at the LPS. ***Table 4.3*** to ***Table 4.6*** provide the relevant time averaging concentrations of air pollutants measured at the above AQMSs in the most recent five years (i.e. 2013 to 2017) for comparison with the prevailing AQOs.

Table 4.3 Concentrations of Air Pollutants Measured at EPD's Tuen Mun AQMS in the Recent Five Years (2013 - 2017)

Year	Concentration of Pollutants (μg m^{-3})										
	19th highest 1-hr NO_2	**Annual NO_2**	**4th highest 24-hr SO_2**	**4th highest 10-min SO_2**	**10th highest 24-hr RSP**	**Annual RSP**	**10th highest 24-hr FSP**	**Annual FSP**	**10th highest Daily Max 8-hr O_3**	**Daily Max. 1-hr CO**	**Daily Max. 8-hr CO**
2013 (a)	--	--	--	--	--	--	--	--	--	--	--
2014	184	53 (b)	33	128	125 (c)	47	83 (d)	30	146	2,610	1,743
2015	184	48 (b)	27	90	110 (c)	45	76 (d)	30	168 (e)	2,400	2,058
2016	167	51 (b)	28	75	103 (c)	44	63	27	143	2,050	1,843
2017	188	46 (b)	26	88	99	43	65	27	176	1,740	1,630
Prevailing AQOs	**200**	**40**	**125**	**500**	**100**	**50**	**75**	**35**	**160**	**30,000**	**10,000**

Notes:

(a) Tuen Mun AQMS in operation since 2014.

(b) Exceedance of annual average NO_2 criterion.

(c) Exceedance of 24-hour average RSP criterion.

(d) Exceedance of 24-hour average FSP criterion.

(e) Exceedance of daily maximum 8-hour average O_3 criterion.

Table 4.4 Concentrations of Air Pollutants Measured at CLP's Tuen Mun Clinic AQMS in the Recent Five Years (2013 - 2017)

Year	Concentration of Pollutants (μg m^{-3})			
	19th highest 1-hour NO_2	**Annual NO_2**	**4th highest 24-hour SO_2**	**4th highest 10-min SO_2 (c)**
2013	228 (a)	63 (b)	26	-
2014	195	55 (b)	23	90
2015	198	57 (b)	22	74
2016	150	35	26	57
2017	186	41 (b)	34	74
Prevailing AQOs	**200**	**40**	**125**	**500**

Notes:

(a) Exceedance of 1-hour average NO_2 criterion.

(b) Exceedance of annual average NO_2 criterion.

(c) No 10-minute SO_2 monitoring was conducted from 2012 to 2013 (i.e. before the 10-min SO_2 AQO was in place in 2014).

Table 4.5 Concentrations of Air Pollutants Measured at CLP's Lung Kwu Tan AQMS in the Recent Five Years (2013 - 2017)

Year	Concentration of Pollutants (μg m^{-3})			
	19th highest 1-hour NO_2	**Annual NO_2**	**4th highest 24-hour SO_2**	**4th highest 10-min SO_2 (a)**
2013	149	28	34	-
2014	149	27	24	131
2015	125	23	18	100
2016	131	24	33	163
2017	160	25	31	157
Prevailing AQOs	**200**	**40**	**125**	**500**

Note:

(a) No 10-minute SO_2 monitoring was conducted from 2012 to 2013 (i.e. before the 10-min SO_2 AQO was in place in 2014).

Table 4.6 Concentrations of Air Pollutants Measured at HK Electric's Ap Lei Chau AQMS in the Recent Five Years (2013 - 2017)

Year	Concentration of Pollutants (μg m^{-3})			
	19th highest 1-hour NO_2	**Annual NO_2**	**4th highest 24-hour SO_2**	**4th highest 10-min SO_2 [(a)]**
2013	173	29	44	-
2014	130	17	53	251
2015	132	16	38	239
2016 [(b)]	121	24	33	176
2017	135	16	35	247
Prevailing AQOs	**200**	**40**	**125**	**500**

Note:

(a) No 10-minute SO_2 monitoring was conducted from 2012 to 2013 (i.e. before the 10-min SO_2 AQO was in place in 2014).

(b) Averaging values are based on measurement data from January to May 2016 as the operation of the Ap Lei Chau AQMS was suspended between June and December 2016 due to renovation work.

NO_2

Exceedances of 1-hour average NO_2 criterion were recorded at CLP's AQMS in Tuen Mun Clinic in 2013. However, there was no exceedance from 2014 to 2017. No exceedance of 1-hour average NO_2 criterion was recorded at EPD's Tuen Mun AQMS from 2014 to 2017, or at CLP's AQMS in Lung Kwu Tan and HK Electric's AQMS in Ap Lei Chau in the past five years (2013-2017).

The annual average NO_2 concentrations exceeded the relevant AQO criterion at EPD's AQMS in Tuen Mun for the past four years (2014-2017). Exceedances of the annual average NO_2 concentrations were also recorded at CLP's AQMS in Tuen Mun Clinic from 2013 to 2015 and 2017. No exceedance of annual average NO_2 criterion was recorded at CLP's AQMS in Lung Kwu Tan and HK Electric's AQMS in Ap Lei Chau in the past five years (2013-2017).

SO_2

No exceedance of 24-hour average SO_2 criterion was recorded at the AQMSs operated by EPD, CLP and HK Electric for the past five years (2013-2017). No exceedance of 10-minute average SO_2 criterion was recorded at the AQMSs operated by EPD, CLP and HK Electric for the past three years (2013-2017).

RSP (PM_{10})

Exceedances of 24-hour average RSP criterion were recorded at EPD's AQMS in Tuen Mun from 2014 to 2016, but no exceedance of the annual average RSP criterion was recorded in the past four years (2014-2017).

No RSP monitoring was conducted at the CLP and HK Electric AQMSs.

FSP ($PM_{2.5}$)

Exceedances of 24-hour average FSP criterion were recorded at EPD's AQMS in Tuen Mun in 2014 and 2015. No exceedance of the annual average FSP criterion was recorded at the EPD Tuen Mun AQMS in the past four years (2014-2017).

No FSP monitoring was conducted at the CLP and HK Electric AQMSs.

O_3

The measured daily maximum 8-hour average O_3 concentrations at the EPD Tuen Mun AQMS complied with the relevant AQO criterion except in 2015.

No O_3 monitoring was conducted at the CLP and HK Electric AQMSs.

CO

The measured daily maximum 1-hour and 8-hour average CO concentrations at the EPD Tuen Mun AQMS were well within the respective criteria for the past four years.

No CO monitoring was conducted at the CLP and HK Electric AQMSs.

4.4.2 Predicted Future Background Air Quality

The background air pollutant concentrations predicted by the PATH-2016 model (i.e. Pollutants in the Atmosphere and their Transport over Hong Kong) in 2020 for the PATH grids of the identified ASRs (downloaded from EPD's website) are presented in ***Table 4.7***.

Table 4.7 Background Air Pollutant Concentrations Predicted by the PATH-2016 Model in 2020

PATH Grid	Concentration of Pollutants (μg m^{-3})								
	19th highest 1-hour NO_2	Annual NO_2	4th highest 24-hour SO_2	4th highest 10-min SO_2 (a)	10th highest 24-hour RSP	Annual RSP	10th highest Daily Max. 8-hour O_3	Daily Max. 1-hour CO	Daily Max. 8-hour CO
Area near the BPPS									
14, 42	106	24	35	150	83	36	154	973	826
15, 44	107	20	34	182	85	35	162 (b)	984	830
Area near the LPS									
34, 23	117	19	33	157	79	34	149	1,008	807
35, 22	110	16	33	149	76	33	154	1,006	807
Prevailing AQOs	**200**	**40**	**125**	**500**	**100**	**50**	**160**	**30,000**	**10,000**

Notes:

(a) The multiplicative factor for the stability class calculated for each hour was applied to the 1-hour SO_2 concentrations to estimate the 10-minute SO_2 concentrations.

(b) Exceedance of daily maximum 8-hour average O_3 criterion.

As shown in ***Table 4.7***, the background air pollutant concentrations in the relevant PATH grids in 2020 are well below the relevant AQO criteria, except for a slight exceedance of the daily maximum 8-hour average O_3 criterion in PATH grid (15, 44).

4.5 POTENTIAL SOURCES OF IMPACT

4.5.1 Construction Phase

The construction site and all construction activities associated with the construction of the Project will be located within the existing boundaries of the BPPS and the LPS, as well as in marine waters where the LNG Terminal and the two subsea pipelines will be located. The construction of the Project will include the following key activities (see ***Section 3.4*** for details):

- LNG Terminal Jetty and topsides construction;
- Construction of the BPPS Pipeline and LPS Pipeline; and
- Construction of the GRS at the BPPS and the GRS at the LPS.

No major earthworks or site formation works will be required during the construction of the Project. Piling activities at the LNG Terminal Jetty and pipeline trenching works are not expected to generate fugitive dust given the marine nature of these activities. Armour rock will be used for protection of the two subsea pipelines. Typically a derrick lighter or flat top barge will carry the armour rock stockpile and will move along the routes of the BPPS Pipeline and the LPS Pipeline. The stockpiling and handling of armour rocks has low potential to give rise to fugitive dust emissions.

The potential dust generating activities are expected to include soil excavation, materials handling, truck movements and wind erosion from open stockpiling of dusty materials during construction of the GRS at the BPPS and the GRS at the LPS.

4.5.2 Operation Phase

Emissions from the LNG Terminal, the GRS at the BPPS and the GRS at the LPS

The key air emissions associated with the operation of the LNG Terminal include the emissions from the FSRU Vessel and the Jetty during LNG unloading operation and LNG regasification process. For normal operation, the FSRU Vessel will provide natural gas fuelled power for the vessel itself and the Jetty and the associated emissions are expected to be continuous. On the Jetty, there will be a diesel-fired generator to provide backup power that will be used intermittently. The key air pollutants from these emissions are NO_2, SO_2, RSP and FSP.

LNG will be transported to the LNG Terminal by visiting LNGCs, the frequency of LNG deliveries (on average) will be one LNGC arriving every five to eight

days (subject to actual gas demand). The LNGCs will be operated using boil off gas or low sulphur marine fuel, and the key air pollutants associated with these emissions include NO_2, SO_2, RSP and FSP.

The gas heaters of the GRS at the BPPS and the GRS at the LPS are the key air emission sources associated with the operation of the Project. The gas heaters of the GRS at the BPPS will be operated using regasified LNG from the LNG Terminal, while the gas heaters of the GRS at the LPS will be operated using gas from both the Guangdong LNG Terminal (existing source) and the LNG Terminal. The LNG will be well refined prior to supplying to the LNG Terminal and the regasified LNG sent to the GRS at the BPPS and the GRS at the LPS typically has very low content of sulphur or particulate matters. Similarly, the regasified LNG from the Guangdong LNG Terminal to the GRS at the LPS also has negligible content of sulphur or particulate matters. CO, which is produced as a result of incomplete combustion, is also not considered a key air pollutant from the gas heaters based on the operation experience of the existing GRSs at the BPPS and the LPS. The gas heaters will be operated under favourable conditions such that combustion efficiency is high to minimise CO emissions. Therefore, the key air pollutant from the stack emissions of the GRS at the BPPS and the GRS at the LPS is NO_2, with negligible amount of CO, SO_2, RSP and FSP.

Emissions from Existing and Planned Air Emission Sources within the BPPS and the LPS

The existing GRS gas heaters and the two stacks serving the existing eight combined-cycle gas turbine (CCGT) units (C1 to C8) are the key existing air emission sources within the BPPS. The existing auxiliary boiler (C18), which only operates during weekly routine testing or when the first BPPS unit is started after plant shutdown, has limited operational durations and is not considered a key emission source. At the BPPS, additional CCGT unit No. 1 served by one new stack is currently under construction. According to the tentative programme in the approved EIA Report of the Additional Gas-fired Generation Units Project, commercial operation of CCGT Unit No. 1 is anticipated by the end of 2019 and the commencement date for the construction of CCGT Unit No. 2 will be after 2019. The key air pollutant due to emissions from the existing GRS gas heaters, the existing CCGT units and the additional CCGT units during normal operation (gas-fired) is NO_2.

At the LPS, the existing unit L1 has been retired in May 2017 while unit L3 is scheduled to be retired on 1 May 2018 (1). Therefore, stacks of existing units L2 and L4 to L8 (coal-fired) and L9 (gas-fired) as well as the converted CCGT unit (referred to as GT57) and the existing GRS gas heaters are the key existing air emission sources at the LPS during the operation of the Project. Existing gas turbines GT1, 2, 3, 4 and 6 only operate during peak lopping and emergency situation with limited operation durations and they are not considered key

(1) 2014 – 2018 Development Plan and 2014 Tariff Review
https://www.hkelectric.com/en/OurOperations/Documents/edev1210cb14545e.pdf

emission sources. Nevertheless, GT1, 2, 3, 4 and 6 have been included in the assessment as a conservative approach. Two new CCGT units (L10 and L11) are planned to be constructed within the LPS extension site. Tentatively, L10 and L11 will commence operation in 2020 and 2022, respectively. The existing stack housing the steel flue of L9 is designed to encase three steel flues including the two new ones of L10 and L11 during the future operation at the LPS extension. In addition, three additional CCGT units (i.e. L12, L13 and L14) may be constructed in the future with reference to the approved EIA report of *1800MW Gas-fired Power Station at Lamma Extension (AEIAR-010/1999),* subject to future discussion and approval by the Environment Bureau. Although currently there is no plan or schedule for the construction of the potential L12 to L14, these three potential CCGT units have been included for a worst case assessment. The key air pollutant due to emissions from the GRS gas heaters, GT57, L9, the planned L10 and L11 and the potential L12 to L14 during normal operation (gas-fired) is NO_2, while the key air pollutants arising from emissions from L2 and L4 to L8 (coal-fired), as well as GT1, 2, 3, 4 and 6 (oil fired), are NO_2, SO_2, RSP and FSP.

Other Major Emissions in the Vicinity of the Project

A number of major air emission sources (existing and planned) in the vicinity of the BPPS have been identified, including the STF, WENT Landfill (both existing landfill and future extension), marine emissions associated with the operation of the WENT Landfill, the proposed Integrated Waste Management Facilities (IWMF), Castle Peak Power Station (CPPS), Green Island Cement, Shiu Wing Steel Mill, Permanent Aviation Fuel Facility (PAFF) and EcoPark. In addition, a total of seven landfill gas power generation units (LFGPGUs) are proposed to be installed at the existing WENT Landfill. Two asphalt plants in Lung Kwu Sheung Tan have also been identified to be currently operating under a SP licence. The key air pollutants associated with these major air emission sources include NO_2, SO_2, RSP and FSP.

No other major emission sources have been identified in the vicinity of the LPS or the LNG Terminal.

Vehicular Emissions from Open Roads

It should be noted that additional traffic is not expected to be induced during operation of the Project. However, vehicular emissions from open roads may contribute to the cumulative air quality impact to identified ASRs in the vicinity of the BPPS (i.e. ASR A1 to A4). Key air pollutants from vehicular emissions include NO_2, RSP and FSP. No open roads have been identified within 500m from the other identified ASRs in the vicinity of the LPS.

4.6 ASSESSMENT METHODOLOGY FOR CONSTRUCTION PHASE

As discussed in ***Section 4.5.1***, fugitive dust emissions may arise during the construction of the GRS at the BPPS and the GRS at the LPS, while the construction of the LNG Terminal as well as the two subsea pipelines are not

considered to be dust generating activities. The construction activities at the GRS at the BPPS and the GRS at the LPS mainly include site clearance, foundation works and building works which will generate limited fugitive dust emissions. There are no ASRs within 500m from the construction sites at the BPPS and the LPS. In view of the nature of construction works and large separation distance between the construction sites and the nearest ASRs, no significant fugitive dust impact during the construction phase of the Project is anticipated. A quantitative assessment of the construction air quality impact arising from the Project is considered not necessary and the construction air quality impact is addressed qualitatively in ***Section 4.8***.

4.7 ASSESSMENT METHODOLOGY FOR OPERATION PHASE

4.7.1 Overview of Assessment Approach

Emissions are expected to be generated from the operation of the LNG Terminal (including FSRU Vessel and Jetty) and the visiting LNGCs. As no ASR has been identified within approximately 4 km from the LNG Terminal or from the Berthing Route of the visiting LNGCs as shown in ***Figure 3.7***, no significant air quality impact associated with the operation of the LNG Terminal and the visiting LNGCs is anticipated. Potential air quality impact due to the operation of the LNG Terminal and LNGCs is addressed qualitatively in ***Section 4.9.1***.

No ASR has been identified within 500m from the GRS at the BPPS and the GRS at the LPS. Nevertheless, a quantitative assessment has been undertaken to evaluate the potential air quality impacts arising from the operation of the gas heaters at the GRS at the BPPS and the GRS at the LPS. NO_2 has been assessed quantitatively as it is the key air pollutant arising from the emissions of the gas heaters as discussed in ***Section 4.5.2***.

A three-tier approach recommended in the EPD's *Guidelines on Assessing the 'TOTAL' Air Quality Impacts* has been followed to assess the potential cumulative air quality impact at the identified ASRs.

Determination of Assessment Year

The Project is expected to commence operation at the earliest the end of 2020 and that the Project emissions are expected to be consistent throughout the operation phase.

Although currently not planned, additional CCGT units (i.e. L12 to L14) may be constructed at the LPS in the future with reference to the approved EIA report of *1800MW Gas-fired Power Station at Lamma Extension (AEIAR-010/1999)*. L12 to L14, if constructed after 2020, will become the base load and serve as replacement for existing coal-fired power generation units at the LPS. Also, the future operation of the additional CCGT Unit No. 1 and No. 2 at the BPPS will also serve to displace power generation from the existing coal-fired power generation units at the CPPS and the existing gas-fired generation units at the

BPPS; therefore, the overall emissions from the power plants are expected to reduce beyond 2020.

The Climate Action Plan 2030+ Report also requires an increase in the local gas-fired power generation to around 50% by 2020, and to phase down coal units and replace them by natural gas by 2030. This also suggests the emissions after 2020 will only get better, meaning the 2020 case represents the worst scenario.

As emissions are expected to be the highest in 2020 during the operation phase of the Project, 2020 has been selected as the assessment year for this assessment as a reasonably conservative approach.

Tier 1 – Project Contributions

Tier 1 contributions include emissions from the operation of the gas heaters at the GRS at the BPPS and the GRS at the LPS.

Tier 2 – Secondary Contributions

Tier 2 contributions include major emission sources in the vicinity of the Project that have the potential to contribute to cumulative impact with Project contributions. A number of existing and planned air emission sources have been considered as tier 2 contributions in the quantitative assessment in 2020, which include:

- Emissions from gas heaters in the existing GRSs at the BPPS;
- Main stack emissions from existing gas-fired generation units (C1 to C8) at the BPPS;
- Main stack emissions from the proposed additional CCGT units No. 1 and No. 2 at the BPPS;
- Emissions from gas heaters in the existing the GRS at the LPS;
- Main stack emissions from existing power generation units (GT57 and L9 (gas-fired), GT1, 2, 3, 4, 6 (oil-fired), L2 and L4 to L8 (coal-fired)) at the LPS;
- Main stack emissions from the proposed additional CCGT units (L10 and L11) at the LPS;
- Main stack emissions from the potential additional CCGT units (L12 to L14) at the LPS;
- Emissions from existing ash handling and disposal plant (36a&b, 37a&b and 38a&b) at the LPS.
- Other emissions from major emission point sources in the vicinity of the BPPS, including STF, WENT Landfill (both existing landfill and future extension), marine emissions associated with the operation of the WENT Landfill, the proposed IWMF, CPPS, Green Island Cement, Shiu Wing Steel

Mill, PAFF, EcoPark, the proposed LFGPGUs at the existing WENT Landfill, and the two asphalt plants; and

- Vehicular emissions from open roads within 500m from ASRs A1 to A4.

Tier 3 – Background Contributions

For the assessment year 2020, all identified major emission point sources including the existing BPPS stacks (C1 to C8), existing LPS stacks (L1 to L9), STF, WENT Landfill (both existing landfill and future extension), the proposed IWMF, CPPS, Green Island Cement, Shiu Wing Steel Mill, PAFF and EcoPark have been included in the PATH-2016 model. To avoid double counting of the impacts from these emission sources, the PATH-2016 model for Year 2020 was re-run with the aforementioned major emission point sources removed. The predicted hourly background NO_2 concentrations in 2020 obtained from the PATH-2016 model re-run were adopted as the Tier-3 contributions.

Cumulative Air Quality Impact

The cumulative NO_2 concentrations (1) at the ASRs were estimated by adding together the hour-by-hour contributions from modelled results for Tier 1, Tier 2 and the PATH-2016 hourly background concentrations (in Year 2020). Different time-period averages of the 8,760 hourly results at each ASR were derived for comparison with the relevant assessment criteria (i.e. 1-hour NO_2 and annual NO_2).

4.7.2 Emissions from Gas Heaters of the New and Existing GRSs at the BPPS

Gas Heaters at the New GRS at the BPPS

Two gas heaters (BP1-1 and BP1-2) are proposed within the new GRS at the BPPS. For a conservative assessment, both gas heaters were assumed to be operating continuously in modelling. Each gas heater is equipped with two burners which are served by two separate stacks (A1 to A4). The locations of the two gas heaters and the associated stacks are shown in ***Figure 4.4***. The stack design parameters and emission information for the gas heaters are presented in ***Table 4.8*** and ***Annex 4A***.

(1) NO_2 is the key air pollutant to be emitted from the operation of the GRS during the operation phase.

Table 4.8 ***Stack Design Parameters and Emission Information for the New Gas Heaters at the BPPS***

Parameters	BP1-1		BP1-2	
	Stack A1	**Stack A2**	**Stack A3**	**Stack A4**
No. of sources (stacks)	1	1	1	1
Stack Diameter (m)	0.6	0.6	0.6	0.6
Stack Height (mPD)	21	21	21	21
Exit Velocity (m s^{-1}) (b)	10	10	10	10
Exit Temperature (^oC) (c)	280	280	280	280
Emission Rate of NO_x per stack (g s^{-1})	0.2025	0.2025	0.2025	0.2025

Notes:
(a) The stack design and emission information are provided by CLP.
(b) Minimum exit velocity at full load condition.
(c) Minimum exit temperature at full load condition.

Gas Heaters at the Existing GRSs at the BPPS

There are a total of 10 gas heaters (BP2-1 to BP2-10) within the existing GRS complex at the BPPS. Gas heaters BP2-1 to BP2-7 are each equipped with an individual stack (stacks W1 to W7), while two stacks are connected to each of the gas heaters BP2-8 to BP2-10 (stacks W8 to W13). During operation, the BP2-1 to BP2-7 gas heaters as well as two of BP2-8 to BP2-10 gas heaters would be operating using natural gas continuously. One of BP2-8 to BP2-10 would be on stand-by. The locations of the existing gas heaters and the associated stacks are shown in ***Figure 4.4***. The stack design parameters and emission information for the existing gas heaters are referenced from the current BPPS SP licence and are presented in **T*able 4.9*** and ***Annex 4B***.

Table 4.9 ***Stack Design Parameters and Emission Information for the Gas Heaters at the Existing GRSs at the BPPS***

Parameters	BP2-1 to BP2-7	BP2-8 to BP2-10
	Stacks W1 – W7	**Stacks W8 – W13**
No. of sources (stacks)	7	6
Stack Diameter (m)	0.9	1.15
Stack Height (mPD)	14.4	22
Exit Velocity (m s^{-1}) (a)	10	10
Exit Temperature (^oC) (b)	300	280
Emission Rate of NO_x per stack (g s^{-1}) (c)	0.64	0.57

Notes:
(a) Minimum exit velocity at full load condition.
(b) Minimum exit temperature at full load condition.
(c) The maximum NO_x emission rate per stack as per the current BPPS SP licence.

4.7.3 Emissions from Gas Heaters of the New and Existing GRSs at the LPS

Gas Heaters at the New GRS at the LPS

Following the same design philosophy as the existing GRS, facilities in the new GRS are designed on a unitised basis, i.e. a separate gas supply stream including gas heater will serve each CCGT unit. Four gas heaters (LP1-1 to LP1-4) are proposed within the new GRS at the LPS. The gas heaters are required in the unitised gas supply streams, i.e. one gas heater will serve one CCGT unit. Gas heaters LP1-1 to LP1-4 are each equipped with an individual stack (stacks B1 to B4). During operation, LP1-1 to LP1-4 gas heaters would be operating using natural gas continuously. The location of the gas heaters and the associated stacks are shown in ***Figure 4.5***. The stack design parameters and emission information for the gas heaters are presented in ***Table 4.10*** and ***Annex 4A***.

Table 4.10 Stack Design Parameters and Emission Information for the New Gas Heaters at LPS

Parameters	**LP1-1**	**LP1-2**	**LP1-3**	**LP1-4**
	Stack B1	**Stack B2**	**Stack B3**	**Stack B4**
No. of sources (stacks)	1	1	1	1
Stack Diameter (m)	0.61	0.61	0.61	0.61
Stack Height (mPD) (b)	18.9	18.9	18.9	18.9
Exit Velocity (m s^{-1}) (c)	2.6	2.6	2.6	2.6
Exit Temperature (^oC) (d)	300	300	300	300
Emission Rate of NO_x per stack (g s^{-1}) (e)	0.139	0.139	0.139	0.139

Notes:

(a) The stack design and emission information are provided by HK Electric.

(b) The stack height including base elevation is 18.9mPD. The actual stack height from ground level is 11.15m.

(c) Minimum exit velocity at full load condition.

(d) Minimum exit temperature at full load condition.

(e) The maximum NO_x emission loading from operation of each new gas heater is 0.5kg per hour.

Gas Heaters at the Existing GRS at the LPS

For the assessment year 2020, there will be a total of four gas heaters within the existing GRS at the LPS, including two gas heaters (LP2-1 and LP2-2) for the GT57 at the LPS, one each for L9 (LP2-3) and L10 (LP2-4) at the LPS extension. Each of the four gas heaters is served by one individual stack (S1 to S4). During operation of the CCGT units, only three of the four gas heaters would be operating using natural gas continuously, while the remaining one in the converted CCGT unit gas supply stream would be on standby. The locations of the gas heaters and the associated stacks in 2020 are shown in ***Figure 4.5***. The stack design parameters and emission information for the gas heaters as referenced from the current LPS SP licence with the same adopted for the gas heater (LP2-4) of L10 gas supply stream are presented in ***Table 4.11*** and ***Annex 4B***.

Table 4.11 Stack Design Parameters and Emission Information for the Gas Heaters at the Existing GRS at the LPS

Parameters	LP2-1	LP 2-2	LP2-3	LP2-4 (d)
	Stack S1	Stack S2	Stack S3	Stack S4
No. of sources (stacks)	1	1	1	1
Stack Diameter (m)	0.61	0.61	0.61	0.61
Stack Height (mPD)	18.9	18.8	15.2	18.9
Exit Velocity (m s^{-1}) (a)	2.6	2.6	4	2.6
Exit Temperature (^oC) (b)	300	300	400	300
Emission Rate of NO_x per stack (g s^{-1}) (c)	0.139	0.139	0.139	0.139

Notes:

(a) Minimum exit velocity at full load condition.

(b) Minimum exit temperature at full load condition.

(c) The maximum NO_x emission rate per stack is provided by HK Electric based on the current LPS SP licence.

(d) The stack design parameters (i.e. stack diameter, exit velocity and exit temperature) and emission information adopted were referenced from LP2-1 and LP2-2, which are considered conservative assumptions for the assessment. The stack height of S4 is 18.9mPD based on the preliminary design information. The stack design parameters and emission information will be finalised during detailed engineering stage for L10 GRS in 2018-2019.

4.7.4 Main Stack Emissions from the Existing CCGT Units and the Proposed Additional CCGT Units at the BPPS

Stack emissions due to the operation of the existing CCGT units (C1 to C8) and the proposed additional CCGT units at the BPPS were considered as Tier-2 contributions in the assessment. The existing auxiliary boiler with its limited operational durations would cause minimal air quality impact and are thus not included in the Tier-2 assessment. The stack design parameters and emission details for C1 to C8 have made reference to the current BPPS SP licence, while those for the proposed additional CCGT units were referenced from the approved EIA report for the *Additional Gas-fired Generation Units Project (AEIAR-197/2016)*. All stacks were assumed to be operating continuously, for the purpose of a reasonably worst-case assessment. The stack locations are shown in ***Figure 4.6***. The stack design parameters and emission information for the existing CCGT units and the proposed additional CCGT units at the BPPS are presented in ***Table 4.12*** and ***Annex 4B***.

Table 4.12 Stack Design Parameters and Emission Information for the Existing CCGT Units and the Proposed Additional CCGT Units at the BPPS

Parameters	Existing Stack for C1 to C4	Existing Stack for C5 to C8	New CCGT Stack No.1	New CCGT Stack No.2
No. of sources (stacks)	1 (a)	1 (a)	1	1
Stack Diameter (m)	11.8 (b)	11.8 (b)	8	8
Stack Height (mPD)	106 (c)	106 (c)	86 (d)	86 (d)
Exit Velocity (m s^{-1})	15	15	15	15
Exit Temperature (^{o}C)	80	80	80	80
Emission Rate of NO_x (g s^{-1})	188.9	188.9	4.66 (e)	4.66 (e)

Notes:

(a) Each stack consists of four flues, each flue serves one CCGT unit.

(b) Equivalent stack diameter. The diameter for each flue is 5.9m.

(c) The stack height above ground (mAG) is 100m.

(d) The stack height of the new CCGT units is between 80m to 100m above ground level. With reference to the approved EIA report for the Additional Gas-fired Generation Units Project (AEIAR-197/2016), the air quality impact at the identified ASRs arising from the new CCGT units is generally higher with a lower stack height of 80m above ground level. Therefore, the stack height of 80m is chosen for conservative assessment.

(e) Emission rate is based on maximum allowable NO_x emission limit of 5mg Nm^{-3} as per *Best Practicable Means for Electricity Works (Coal-fired Plant, Gas-fired Gas Turbine, and Oil-fired Gas Turbine (Peak Lopping Plant)) (BPM 7/1 (2014))* and the highest proposed design capacity of 600MW per new CCGT unit.

4.7.5 Main Stack Emissions from the Existing Units and the Proposed Additional CCGT Units at the LPS

Stack emissions due to operation of the existing power generation units (GT57, L2 and L4 to L9), the proposed additional CCGT units (L10 and L11) and the potential additional CCGT units (L12 to L14) at the LPS were considered as Tier-2 contributions in the assessment. Gas turbines GT1, 2, 3, 4 and 6 only operate during peak lopping and emergency situation with limited operation duration, while NO_x emission from the existing ash handling and disposal plant, if any at all, is expected to be very minor. Nevertheless, as a conservative approach, emissions from GT1, 2, 3, 4, and 6 as well as the ash handling and disposal plant (36a&b, 37a&b and 38a&b) were included in the Tier-2 assessment. The stack design parameters and emission details for the existing power generation units (GT57, L2 and L4 to L9) were referenced from the current LPS SP licence, while those for the proposed additional CCGT units (L10 and L11) and the potential additional CCGT units (L12 to L14) are provided by HK Electric, with reference to the emission requirements as specified in *BPM 7/1 (2014)*. All stacks as shown in ***Figure 4.7*** were assumed to be operating continuously, for the purpose of a reasonably worst-case assessment. The stack design parameters and emission information for the key emission sources (i.e. GT57, L2, L4 to L14) at the LPS are presented in ***Table 4.13*** and ***Annex 4B***. Details for other emission sources (i.e. GT1, 2, 3, 4 and 6, 36a&b, 37a&b and 38a&b) at the LPS were referenced from the LPS SP licence and shown in ***Annex 4B***.

Table 4.13 Stack Design Parameters and Emission Information for GT57, L2, L4 to L14 at the LPS

Parameters	Existing Stack for L2	Existing Stack for L4 to L6 (a)	Existing Stack for L7 and L8 (b)	Existing Stacks for GT57	Stack of L9 – L11 (c)(d)	Stack of L12 – L14 (e)
Stack Diameter (m)	5.11	9.73	7.83	5.6	10.39	10.39
Stack Height (mPD)	215	215	215	86	110	110
Exit Velocity (m s^{-1})	15	15	15	20	15	15
Exit Temperature (^oC)	80	80	80	150	80	80
Emission Rate of NO_x (g s^{-1})	341.67	700.56	273.89	34.72	55.64	8.88

Notes:

(a) The stack consists of 3 flues serving L4 to L6. The diameter of each flue is 5.62m. The equivalent stack diameter is 9.73m.

(b) The stack consists of 2 flues serving L7 and L8. The diameter of each flue is 5.54m. The equivalent stack diameter is 7.83m.

(c) The NOx emission rate for the proposed CCGT units (L10 to L14) is estimated based on the maximum allowable NO_x emission limit of 5mg Nm^{-3} as per *BPM 7/1 (2014)* and the design maximum flue gas flow rate (i.e. 2,131,200Nm^3/hour) per CCGT unit as provided by HKE. The NOx emission rate per CCGT unit is estimated to be 2.96g s^{-1} based on the following calculation:
2,131,200Nm^3 $hour^{-1}$ x 5mg Nm^{-3} /1000/3600 = 2.96 g s^{-1}.

(d) The stack consists of 3 flues serving L9 to L11. The diameter of each flue is 6m. The equivalent stack diameter is 10.39m. The NOx emission rate for L9 is 49.72g s^{-1} making reference to the LPS SP licence. The NOx emission rate for L10 and L11 is 2.96g s^{-1} each.

(e) The stack consists of 3 flues serving L12 to L14. The diameter of each flue is 6m. The equivalent stack diameter is 10.39m. The NOx emission rate for L12, L13 and L14 is 2.96g s^{-1} each.

4.7.6 Other Major Emissions in the Vicinity of the BPPS

Emissions from STF, WENT Landfill (both existing landfill and future extension), marine emissions associated with the operation of WENT Landfill, the proposed IWMF, CPPS, Green Island Cement, Shiu Wing Steel Mill, PAFF, EcoPark and the asphalt plants have been identified as the major emission point sources in the vicinity of the BPPS and were included as Tier-2 contributions in the quantitative assessment. These major emission point sources are shown in ***Figure 4.6*** and the emission inventory is provided in ***Annex 4B***.

In addition, emissions from the three stacks associated with the seven proposed LFGPGUs were included as Tier-2 contributions in the assessment. With reference to the *Project Profile for the Landfill Gas Power Generation Project at the West New Territories (WENT) Landfill (DIR-251/2017)* and information provided by CLP, the stack design parameters and emission details for the proposed LFGPGUs are presented in ***Table 4.14*** and ***Annex 4B***. The stack locations of the proposed LFGPGUs are shown in ***Figure 4.6***.

Table 4.14 ***Stack Design Parameters and Emission Information for the Proposed LFGPGUs at WENT Landfill***

Parameters	Stack 1 (3 LFGPGUs)[b]	Stack 2 (2 LFGPGUs) [b]	Stack 3 (2 LFGPGUs) [b]
Stack Diameter (m)	0.5	0.5	0.5
Stack Height (mAG)	20	20	20
Exit Velocity (m s^{-1})	34	34	34
Exit Temperature (^oC)	180	180	180
Emission Rate of NO_x per stack (g s^{-1})	0.36 [a]	0.24 [a]	0.24 [a]

Notes:

(a) NO_x emission rate for each LFGPGU is 0.12g s^{-1}. The total NO_x emission rate for the seven LFGPGUs is 0.84g s^{-1}.

(b) Stack arrangement provided by CLP.

4.7.7 Vehicular Emissions from Open Roads

Vehicular emissions from open roads within 500m from ASR A1 to A4 as shown in ***Figure 4.8*** and ***Figure 4.9*** were assessed as Tier-2 contributions in the quantitative assessment. Projected hourly vehicle speed, hourly traffic flows and vehicle breakdown of 16 vehicle types for 24 hours for the identified open roads in 2020 (assessment year) were provided by the Project's traffic consultant and are presented in ***Annex 4C***.

4.7.8 Assumptions and Modelling Approach

Modelling Scenarios

One reasonably worst-case scenario under normal operating condition has been assessed in accordance with *Clause 4(i)* of *Appendix A* of the EIA Study Brief. The emission sources considered in the reasonably worst-case scenario for the assessment of cumulative impact are summarised in ***Table 4.15***.

Table 4.15 ***Emission Sources Considered in the Reasonably Worst-case Scenario***

Type of Source	Details of Emission Source	Remark
Tier 1	• Stack emissions (A1 to A4) from two proposed gas heaters of the new GRS at the BPPS	• Emission rates as shown in ***Table 4.8*** were based on information from CLP. • The two new gas heaters at BPPS were assumed to be operating continuously for conservative assessment.
	• Stack emissions (B1 to B4) from four proposed gas heaters of the new GRS at the LPS	• Emission rates as shown in ***Table 4.10*** were based on information from HK Electric. • The four new gas heaters at LPS were assumed to be operating continuously for conservative assessment.
Tier 2	• Stack emissions (W1 to W11) from gas heaters of the existing GRSs at the BPPS during normal operation	• Emission rates as shown in ***Table 4.9*** were referenced from the current BPPS SP licence. • It is assumed that BP2-1 to BP2-9 would be operating during normal operation while BP2-10 would be on standby.

Type of Source	Details of Emission Source	Remark
	• Stack emissions (S1, S3 and S4) from gas heaters of the existing GRS at the LPS during normal operation	• Emission rates as shown in ***Table 4.11*** were based on information from HK Electric and the current LPS SP licence. • It is assumed that LP2-1, LP2-3 and LP2-4 would be operating during normal operation while LP2-2 would be on standby.
	• Main stack emissions from the proposed additional CCGT units (CCGT No. 1 and No. 2) at the BPPS	• Emission rates as shown in ***Table 4.12*** were based on the emission limit stipulated in *BPM 7/1 (2014)*.
	• Main stack emissions from the existing CCGT units (C1 to C8) at the BPPS	• Emission rates as shown in ***Table 4.12*** were referenced from the current BPPS SP licence.
	• Main stack emissions from the proposed additional CCGT units (L10 and L11) and the potential additional CCGT units (L12 to L14) at the LPS	• Emission rates as shown in ***Table 4.13*** were based on the emission limit stipulated in *BPM 7/1 (2014)*.
	• Main stack emissions from the existing units (GT1, 2, 3, 4 and 6, GT57, L2 and L4 to L9) at the LPS	• Emission rates as shown in ***Annex 4B*** were referenced from the current LPS SP licence.
	• Emissions from the existing ash handling and disposal plant (36a&b, 37a&b and 38a&b)	• Emission rates as shown in ***Annex 4B*** were referenced from the current LPS SP licence.
	• Other major emissions in the vicinity of the BPPS	• Emission rates for the identified major emission sources and their references are provided in ***Annex 4B***. • Stack emissions from the proposed LFGPGUs at WENT landfill as shown in ***Table 4.14*** are referenced from the *Project Profile* for the *Landfill Gas Power Generation Project at the West New Territories (WENT) Landfill (DIR-251/2017)* supplemented with information provided by CLP.
	• Vehicular emissions from open roads within 500m from ASR A1 to A4	• Vehicular emissions based on traffic forecast in 2020 provided by Project's traffic consultant. The traffic forecast is provided in ***Annex 4C***.
Tier 3	• PATH-2016 predicted background NO_2 concentration in Year 2020	• Major emission sources included in Tier 2 were removed.

Air Dispersion Model and Meteorological Data

An EPD recommended air dispersion model, AERMOD, was used to assess the air quality impact at the identified ASRs due to emissions from the GRS at the BPPS and the GRS at the LPS as well as the key existing and planned emission point sources as identified in ***Table 4.15***. The quantitative assessment has been conducted following the latest EPD's *Guidelines for Local-scale Air Quality Assessment Using Models*.

The relevant PATH grids in which the identified ASRs are located have been identified. The predicted meteorological data for the relevant PATH grids

were used for model input. The relevant PATH grids for the identified ASRs are shown in ***Table 4.16***.

Table 4.16 Relevant PATH Grids for the Representative ASRs

Area	ASR	Description	Relevant PATH Grid
BPPS Study Area	A1	STF Office	15, 44
	A2	Proposed WENT Extension Site Office	15, 44
	A3	Lung Kwu Tan	14, 42
	A4	Planned Development in Lung Kwu Tan Reclamation Area	14, 42
LPS Study Area	A5	Village house at Tai Shan Central	34, 23
	A6	Village house at Wang Long	34, 23
	A7	Concerto Inn	35, 22

AERMET was run to generate AERMOD-ready meteorological data for AERMOD model input. The land use parameters, including albedo, bowen ratio and surface roughness are required inputs for AERMET. The land use of 1km from the identified ASRs within each PATH grid has been evaluated to determine the PATH-grid specific surface roughness values. The land use of 10km x 10km from the GRS at the BPPS and the GRS at the LPS has also been evaluated to determine the values of albedo and bowen ratio for the PATH grids. Detailed calculations of albedo, bowen ratio and surface roughness are presented in ***Annex 4D***. Land use maps illustrating the determination of the albedo, bowen ratio and surface roughness are also shown in ***Annex 4D***.

The AERMOD model input parameters and assumptions for the assessment are summarised in ***Table 4.17***.

Table 4.17 Model Input Parameters and Assumptions for Assessment

Input Parameters & Assumptions	Descriptions
Air dispersion model	AERMOD
Type of source	• Point sources
Assessment parameter	• 1-hour and annual average NO_2
Assessment Heights	• 1.5m, 5m, 10m, 20m, 30m and 40m above ground (for ASR A1 and A2); • 1.5m, 5m, 10m, 20m, 30m, 40m, 50m and 60m above ground (for ASR A3 and A4); • 1.5m, 5m and 10m above ground (for ASR A5, A6 and A7);
Meteorological data	• Weather Research and Forecasting Model (WRF) data in 2010 from PATH-2016 to be used to input into AERMET to produce AERMOD-ready meteorological data • PATH Grid – (14,42), (15,44), (34,23) and (35,22) • Actual mixing heights recorded by the Hong Kong Observatory (HKO) in 2010 were in the range of 121m to 1667m. Mixing heights from WRF data which are lower than 121m or higher than 1667m to be adjusted to 121m and 1667m, respectively • Wind direction of 0^o to be adjusted to 360^o • Wind speed smaller than 1m/s to be adjusted to 1m/s • Anemometer height of WRF data = 9m

An EPD recommended model, EMFAC-HK v3.3, was used to predict the vehicular emission factors of NO_x for the 16 vehicle types in 2020. "EMFAC" model was used for the model run and the average ambient temperature (23^oC) and relative humidity (80%) recorded at the Hong Kong Observatory (HKO) Tuen Mun weather station in 2016 were used. The NO_x emission factors for the 16 vehicle types and the calculation of the composite emission factors are presented in ***Annex 4C***.

An EPD recommended air dispersion model, CALINE4, was used for predicting the NO_2 impacts due to vehicular emissions from the identified open roads. Since the highest road height allowed in the input into CALINE4 model is limited at 10m, any road with road height greater than 10m was set at a height of 10m in the CALINE4 model. Details of the road configurations are provided in ***Annex 4C***. The land use types have been examined within an area of 3km radius from the concerned PATH grid (i.e. 14, 42 and 15, 44). As industrial, commercial and residential land uses account for less than 50% of the examined area, rural area was assumed and the surface roughness height of 100cm for rural area was adopted for the CALINE4 model run. Wind directional variability was calculated based on the following formula according to the stability class with reference to Irwin, J.S., 1980 (1).

$$S_o = S \times (Z_o/15cm)^{0.2}$$

(1) Dispersion Estimate Suggestion #8: Estimation of Pasquill Stability Categories. U.S. Environmental Protection Agency, Research Triangle Park, NC. (Docket Reference No.II-B-10), Irwin, J.S., 1980.

Where

Z_o = is the surface roughness length (in cm) of the PATH grid;
S_o = is the standard deviation of the horizontal wind direction Fluctuations (in degrees)
S = is the standard deviation of the horizontal wind direction fluctuations (in degrees) for an aerodynamic surface roughness length of 15cm with reference to Irwin, J.S., 1980. S is a function of Pasquill stability class.

Table 4.18 shows the standard deviations of the horizontal wind direction fluctuations under different Pasquill Stability categories for the concerned PATH grid.

Table 4.18 The Standard Deviation of the Horizontal Wind Direction Fluctuations under Different Pasquill Stability Categories

Pasquill Stability Class	Standard Deviation of the Horizontal Wind Direction Fluctuations (in degrees)
PATH Grid (14,42), (15,44)	
A	32.9
B	32.9
C	25.6
D	18.3
E	11.0
F	5.6

The CALINE4 model input parameters and assumptions are summarised in ***Table 4.19***.

Table 4.19 Model Input Parameters and Assumptions for Assessment of Vehicular Emissions

Input Parameters & Assumptions	Descriptions
Air dispersion model	• CALINE4
Year of traffic flow	• Year 2020
Vehicle emission factors	• EMFAC-HK emission factors for 2020
Assessment parameter	• 1-hour and annual average NO_2
Assessment Heights	• 1.5m, 5m, 10m, 20m, 30m and 40m above ground (for ASR A1 and A2); • 1.5m, 5m, 10m, 20m, 30m, 40m, 50m and 60m above ground (for ASR A3 and A4);
Meteorological data	• Weather Research and Forecasting Model (WRF) data in 2010 from PATH-2016 • PATH Grid – (14,42) and (15,44) • Actual mixing heights recorded by the Hong Kong Observatory (HKO) in 2010 were in the range of 121m to 1667m. Mixing heights from WRF data which are lower than 121m or higher than 1667m to be adjusted to 121m and 1667m, respectively • Wind speeds smaller than the 0.5ms^{-1} recommended by the CALINE4 model were adjusted to 0.5ms^{-1}. • Stability class calculated by PCRAMMET (version 99169) • Calculation of wind directional variability based on stability class and surface roughness length of 100cm for rural areas.

Post-processing of Modelling Results

The hourly concentrations of NO_x were predicted at the relevant assessment heights of the identified ASRs. Ozone Limiting Method (OLM) was adopted for the conversion of NO_x to NO_2.

The initial NO_2/NO_x ratio for stack emissions was assumed to be 0.1 (1). The conversion of NO_x to NO_2 for stack emissions was calculated as follows:

$$[NO_2]_{pred} = 0.1x[NO_X]_{pred} + MIN \{0.9x[NO_X]_{pred}, \text{ or } (46/48)x[O_3]_{bkgd}\}$$

where

$[NO_2]_{pred}$	=	*the predicted NO_2 concentration*
$[NO_X]_{pred}$	=	*is the predicted NO_X concentration*
MIN		*means the minimum of the two values within the brackets*
$[O_3]_{bkgd}$	=	*the representative O_3 background concentration; (46/48) is the molecular weight of NO_2 divided by the molecular weight of O_3*

The initial NO_2/NO_x ratio for vehicular emissions was conservatively assumed to be 0.28 with reference to EPD's *Guidelines for Local-scale Air Quality Assessment Using Models*. The conversion of NO_x to NO_2 for vehicular emissions was calculated as follows:

$$[NO_2]_{pred} = 0.28x[NO_X]_{pred} + MIN \{0.72x[NO_X]_{pred}, \text{ or } (46/48)x[O_3]_{bkgd}\}$$

where

$[NO_2]_{pred}$	=	*the predicted NO_2 concentration*
$[NO_X]_{pred}$	=	*is the predicted NO_X concentration*
MIN		*means the minimum of the two values within the brackets*
$[O_3]_{bkgd}$	=	*the representative O_3 background concentration; (46/48) is the molecular weight of NO_2 divided by the molecular weight of O_3*

Predicted ozone concentrations obtained from the PATH-2016 model re-run were used for the conversion of NO_x to NO_2 in OLM.

Background Air Quality

The hourly background NO_2 concentrations in 2020 predicted by the PATH-2016 model were used to establish the background contributions for the cumulative impact assessment. The identified major emission point sources which were included as Tier-2 contributions have been removed from the PATH-2016 model to avoid double counting of these emission sources. The predicted PATH-2016 background NO_2 concentrations from the PATH-2016 model re-run in 2020 specific to the PATH grids that cover the locations of the identified representative ASRs were adopted.

Cumulative Impact

The predicted NO_2 results (Tier 1 and Tier 2 contributions) at each ASR were added up with the PATH-2016 predicted background NO_2 concentrations on an hour-by-hour basis. The relevant time period averages for NO_2 (i.e. 1-hour

(1) Air Quality Studies for Heathrow: Base Case, Segregated Mode, Mixed Mode and Third Runway Scenarios modelled using ADMS-Airport, 2007.

NO_2 and annual NO_2) were calculated and compared with the relevant NO_2 criteria to evaluate the cumulative air quality impact at the identified ASRs.

4.8 EVALUATION OF IMPACTS (CONSTRUCTION PHASE)

4.8.1 LNG Terminal Jetty and Topsides Construction

The LNG Terminal Jetty with mooring facilities for the FSRU Vessel and the visiting LNGCs will be constructed at the Site as shown in ***Figure 4.1***. The FSRU Vessel will be constructed outside of Hong Kong. Jackets method will be used for construction of the Jetty and is not expected to generate fugitive dust.

Once all of the piles for a Jetty structure have been installed, the construction of the Jetty Platform, or the decks of the Mooring Dolphins, Walkways, Vent Stack structures and various topsides equipment will take place, using either pre-cast concrete beams / panels or concrete poured in-situ to form slabs. No concrete batching facilities will be established at the worksite of the LNG Terminal and only very limited fugitive dust emission is expected.

No ASR has been identified within approximately 4km from the LNG Terminal. Due to large separation distance between the worksite and the nearest ASR, adverse dust impact arising from the construction activities of the Project is not anticipated.

4.8.2 Construction of the BPPS Pipeline and LPS Pipeline

The construction of the two subsea pipelines will involve dredging, pipelaying, jetting, rock armour placement, testing and commissioning. These activities are not expected to generate fugitive dust. Rock armour may be required to be placed at various locations along the pipelines to achieve adequate protection of the pipelines against anchor drop and drag. The armour rock stockpile on the floating storage barge will be kept wet to limit potential fugitive dust emissions. Typically, a derrick lighter, fall-pipe barge or side dump vessel will be used to place rock armour onto the pipelines and no fugitive dust emission is expected.

As there is no ASR within 500m along the subsea pipeline routes, no adverse dust impact is anticipated.

4.8.3 Construction of the GRS at the BPPS and the GRS at the LPS

The construction of the GRS at the BPPS and the GRS at the LPS involve minor site clearance, building works (i.e. construction of new gas receiving facilities), trenching and installation of pipe racks, fences and a blast wall for the GRS at the BPPS. These construction activities would not require significant land excavation works, and the quantity of construction and demolition materials (including excavated materials) generated is expected to be insignificant. Due to the generation of small quantities of waste materials that require off-site disposal, the number of additional truck trips generated per day would be very

limited. The potential air quality impact due to vehicular emissions from additional trucks during the construction phase of the Project is minimal.

As there is no ASR within 500m from the Project, no adverse dust impact is anticipated.

4.9 EVALUATION OF IMPACTS (OPERATION PHASE)

4.9.1 LNG Terminal

FSRU Vessel and Jetty

The FSRU Vessel will be permanently moored at the Jetty during the operation of the Project (except under adverse weather conditions). During normal operation, the FSRU Vessel and the Jetty will be fueled by natural gas. A diesel-fired generator is also provided at the Jetty for backup power that will be used intermittently.

No ASR has been identified within approximately 4km from the LNG Terminal. Due to large separation distance between the LNG Terminal and the nearest ASR, adverse air quality impact associated with the operation of the LNG terminal is not anticipated.

Visiting LNGC Transit

LNG will be transported to the LNG Terminal by visiting LNGCs. The indicative Berthing Route of visiting LNGCs to the LNG Terminal is shown in ***Figure 3.7***. The LNG deliveries are infrequent (on average one LNGC arriving every five to eight days, subject to actual gas demand). The visiting LNGCs will be operated using boil off gas or low sulphur marine fuel. In addition, while berthed at the LNG Terminal, the fuel used shall have sulphur content of not exceeding 0.5% in accordance with the *Air Pollution Control (Ocean Going Vessels) (Fuel at berth) Regulation*.

No ASR has been identified within at least 4km from the Berthing Route of the visiting LNGCs. Due to large separation distance between the LNGC Berthing Route and the nearest ASR, adverse air quality impact associated with the marine emissions from visiting LNGCs is not anticipated.

4.9.2 GRS at the BPPS and the GRS at the LPS

As discussed in ***Section 4.7***, cumulative NO_2 impacts on the identified ASRs in the vicinity of the GRS at the BPPS and the GRS at the LPS have been assessed, taking into account emissions from the proposed new GRSs, other emissions in the vicinity of the Project, as well as PATH-2016 predicted background NO_2 concentrations in 2020.

The predicted cumulative 19th highest 1-hour average and annual average NO_2 concentrations at the worst affected height of the identified ASRs are presented in ***Table 4.20***. The predicted maximum NO_2 (project contributions only) are

also presented in ***Table 4.20***. Detailed results of all relevant assessment heights of each ASR are provided in ***Annex 4E***.

Table 4.20 ***Predicted Cumulative 19th Highest Hourly Average and Annual Average NO_2 Concentrations at the Worst Affected Height at Identified ASRs***

ASR	Description	Cumulative NO_2 Concentration (μg m^{-3})		NO_2 Concentration (Project Only) (μg m^{-3})	
		19th Highest Hourly Average (a)	Annual Average	Maximum Hourly Average (b)	Annual Average
A1	STF Office	137.2	36.2	65.5	0.18
A2	Proposed WENT Extension Site Office	128.8	30.9	8.3	0.05
A3	Lung Kwu Tan	153.7	35.5	7.4	0.05
A4	Planned Development in Lung Kwu Tan Reclamation Area	146.7	37.7	34.2	0.13
A5	Village house at Tai Shan Central	133.4	24.9	19.5	0.10
A6	Village house at Wang Long	124.7	22.8	20.5	0.08
A7	Concerto Inn	118.6	18.2	19.4	0.09
	NO_2 Criterion (μg m^{-3}) :	**200**	**40**	**-**	**-**

Notes:

(a) The AQO allows 18 exceedances over a year, therefore, the results presented are in the 19th highest.

(b) The maximum hourly average project contribution does not correspond to the same hour as the cumulative 19th highest hourly average concentration.

The assessment results show that the cumulative 19th highest hourly average and annual average NO_2 concentrations at all relevant assessment heights of all identified ASRs comply with the relevant AQO criteria. For BPPS, contour plots for the assessment heights at which the highest cumulative impact is likely to occur have been prepared. For ASR A1 and A2, the highest cumulative hourly and annual NO_2 impacts were identified at 40m above ground and the contour plots are presented in ***Figure 4.10*** and ***Figure 4.12***. For A3 and A4, the highest cumulative hourly and annual NO_2 impacts were identified at 60m and 50m, respectively, and the contour plots are shown in ***Figure 4.11*** and ***Figure 4.13***. For LPS, contour plots for cumulative 1-hour and annual NO_2 impacts at 10m above ground in the LPS area are shown in ***Figure 4.14*** and ***Figure 4.15***. For BPPS, as shown in ***Figure 4.10*** to ***Figure 4.13,*** there is no existing or planned air sensitive use located within the predicted area of exceedances of cumulative 1-hour and annual NO_2 at high levels (i.e. 40m, 50m or 60m above ground). No exceedance of cumulative 1-hour or annual NO_2 impacts was identified from the contour plots for LPS. Therefore, adverse air quality impact due to the operation of the GRS at the BPPS and the GRS at the LPS is not anticipated.

4.10 MITIGATION MEASURES

4.10.1 Construction Phase

The following dust control measures stipulated in the *Air Pollution Control (Construction Dust) Regulations* and good site practices will be incorporated into the Contract Specifications and implemented at the land-based construction sites at the BPPS and the LPS throughout the construction period:

- Impervious sheet shall be provided for skip hoist for material transport;
- The area where dusty work takes place should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after dusty activities as far as practicable;
- All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation;
- Dropping heights for excavated materials should be controlled to a practical height to minimise the fugitive dust arising from unloading;
- During transportation by truck, materials should not be loaded to a level higher than the side and tail boards, and should be dampened or covered before transport;
- Wheel washing device should be provided at the exits of the work sites. Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty material from its body and wheels as far as practicable;
- Road sections between vehicle-wash areas and vehicular entrance shall be paved;
- Haul roads shall be kept clear of dusty materials and will be sprayed with water so as to maintain the entire road surface wet at all times;
- Temporary stockpiles of dusty materials shall be either covered entirely by impervious sheets or sprayed with water to maintain the entire surface wet all the time;
- Stockpiles of more than 20 bags of cement, dry pulverised fuel ash and dusty construction materials shall be covered entirely by impervious sheeting sheltered on top and 3-sides;
- All exposed areas shall be kept wet to minimise dust emission;
- Ultra-low sulphur diesel (ULSD) will be used for all construction plant on-site, as defined as 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;

- The engine of the construction equipment during idling shall be switched off;

- Regular maintenance of construction equipment deployed on-site shall be conducted to prevent black smoke emission; and

- In accordance with the *Air Pollution Control (Marine Light Diesel) Regulation*, all marine vessels fuelled in Hong Kong are required to operate using marine light diesel with sulphur content lower than 0.05%.

- In accordance with the *Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation,* non-road mobile machinery (NRMMs), e.g. mobile generator and air compressor, shall comply with the prescribed emission standards and approved with a proper label by EPD.

4.10.2 Operation Phase

Natural gas should be used during normal operation of the FSRU Vessel and the Jetty to minimise the associated emissions. The operation of the visiting LNGCs shall comply with the fuel restriction requirement under the *Air Pollution Control (Ocean Going Vessels) (Fuel at berth) Regulation*. Emissions from the proposed new gas heaters at the GRSs during operation should be kept at or below the assumed emission rates as presented in ***Section 4.7***. Provided that the mentioned measures are implemented and relevant regulations are complied with, additional measures during the operation phase of the Project is not required.

4.11 RESIDUAL IMPACTS

4.11.1 Construction Phase

As discussed in ***Section 4.8***, no adverse fugitive dust impact arising from the construction of the Project is expected. Hence, no adverse residual dust impact is anticipated during the construction of the Project.

4.11.2 Operation Phase

As discussed in ***Section 4.9***, no adverse air quality impact is expected to arise from the operation of the Project. Hence, there would be no adverse residual impact during the operation phase of the Project.

4.12 ENVIRONMENTAL MONITORING AND AUDIT

4.12.1 Construction Phase

No adverse fugitive dust impact is anticipated during the construction phase, and so dust monitoring is considered not necessary. However, it is recommended to conduct regular environmental site inspections, i.e. on a monthly basis, at the GRSs at the BPPS and the LPS to check the implementation

of the dust control measures and good site practices as recommended in ***Section 4.10.1*** throughout the construction phase.

4.12.2 Operation Phase

No adverse air quality impact is anticipated during the operation of the Project. Environmental monitoring and audit during the operation phase is considered not necessary.

4.13 CONCLUSION

4.13.1 Construction Phase

All construction works associated with the Project are expected to generate limited fugitive dust emissions. No ASR has been identified within 500m from the boundary of the Project. Due to large separation distance between the worksite and the nearest ASR as well as the nature of the construction works, unacceptable dust impact is not anticipated to arise from the construction activities of the Project.

Proper dust control measures, site management and good housekeeping shall be implemented to further minimise any potential fugitive dust emissions arising from the construction of the Project. Regular environmental site audits on a monthly basis shall be conducted to ensure that dust control measures and good site practices are properly implemented throughout the construction period.

4.13.2 Operation Phase

The operation of the LNG Terminal and visiting LNGCs will follow the requirements of all relevant regulations and recommended measures to minimise potential emissions. There is no ASR identified within approximately 4km from the LNG Terminal or the Berthing Route of visiting LNGCs. No unacceptable air quality impact is expected to arise from the operation of the LNG Terminal and from visiting LNGCs.

No ASR has been identified within 500m from the GRS at the BPPS and the GRS at the LPS. A quantitative assessment has been carried out to evaluate the potential NO_2 impacts from the operation of the proposed GRSs on identified ASRs beyond the BPPS and the LPS Study Areas in 2020. A number of existing and planned key emission sources identified in the vicinity of the project sites at the BPPS and the LPS have also been considered for assessing cumulative impacts. The assessment results show that the predicted cumulative 1-hour average and annual average concentrations at the identified ASRs comply with the relevant AQO criteria. Hence, there would be no unacceptable air quality impact during the operation of the GRS at the BPPS and the GRS at the LPS.

Legend

- Boundary of HKSAR
- Proposed GRS Location at BPPS
- Proposed GRS Location at LPS
- Proposed Route of BPPS Pipeline
- Proposed Route of LPS Pipeline
- Proposed Site for LNG Terminal
- 500m Study Area

NEW TERRITORIES

Tsing Yi

KOWLOON

Hong Kong International Airport

LANTAU ISLAND

HONG KONG ISLAND

LAMMA ISLAND

N

Kilometres

0 5 10

Note: 500m Study Area includes 500m from Project Site.

Figure 4.1

Project Site Locations and 500m Study Area

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_ASR.mxd
Date: 30/4/2018

Environmental Resources Management

ERM

ASRs	Location
A1	Sludge Treatment Facilities (STF) Office
A2	WENT Extension Site Office
A3	Lung Kwu Tan
A4	Planned Development at Lung Kwu Tan

Legend

- Proposed GRS Location at BPPS
- Proposed Route of BPPS Pipeline
- ASR
- 500m Study Area

N

Metres

0 500 1,000

Figure 4.2

Proposed Gas Receiving Station at Black Point Power Station and Identified Air Sensitive Receivers

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_ASR_BPPS.mxd
Date: 30/11/2017

Environmental Resources Management

ERM

Legend

- Proposed GRS Location at LPS
- Proposed Route of LPS Pipeline
- 500m Study Area
- ASR

ASRs	Location
A5	Village House at Tai Shan Central
A6	Village House at Wang Long
A7	Concerto Inn

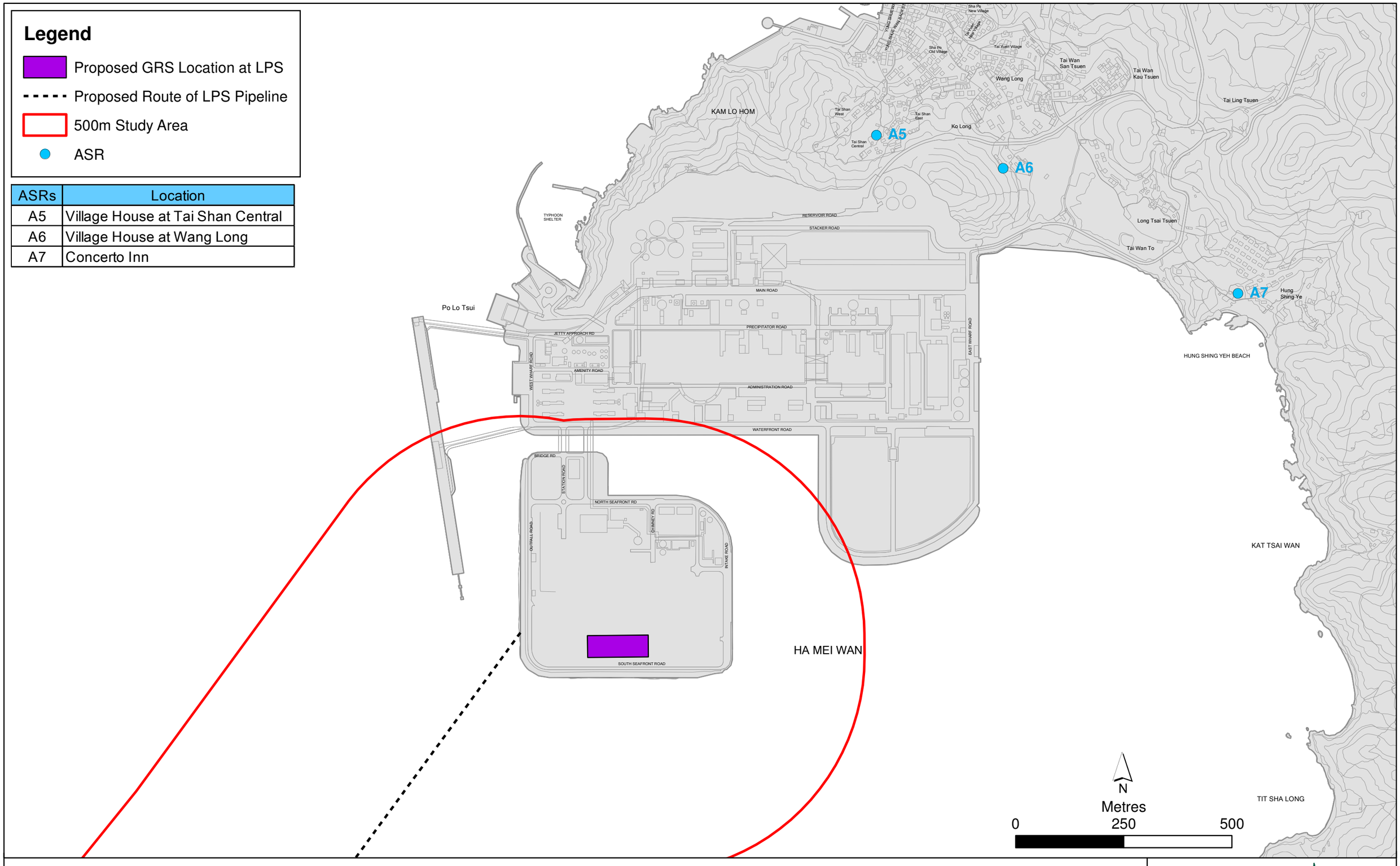


Figure 4.3

Proposed Gas Receiving Station Location at Lamma Power Station and Identified Air Sensitive Receivers

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_ASR_LPS.mxd
Date: 16/4/2018

Environmental Resources Management

ERM

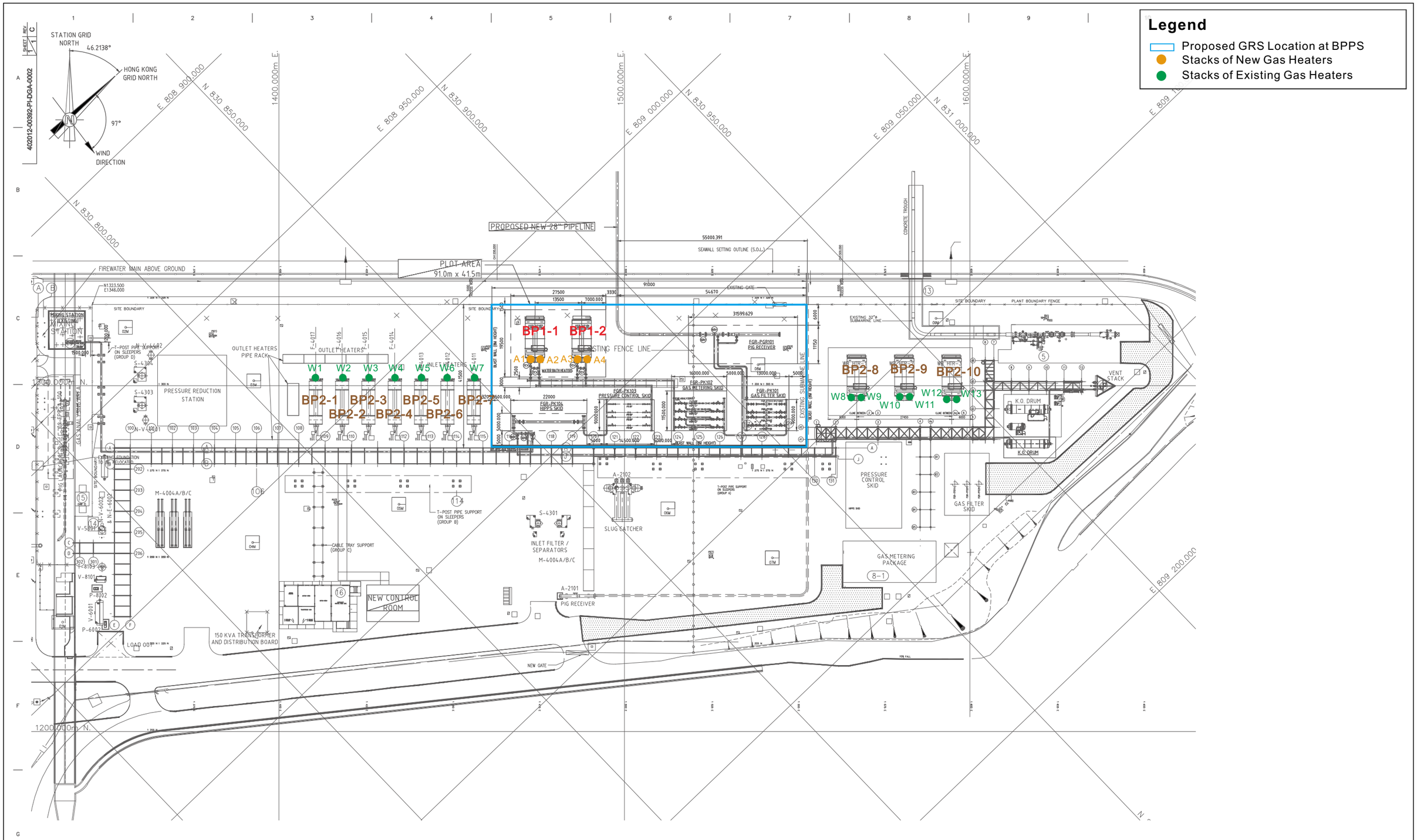


Figure 4.4

Stack Locations of Gas Heaters within Black Point Power Station

FILE: 0359722c3.cdr
DATE: 30/11/2017

Environmental Resources Management

ERM

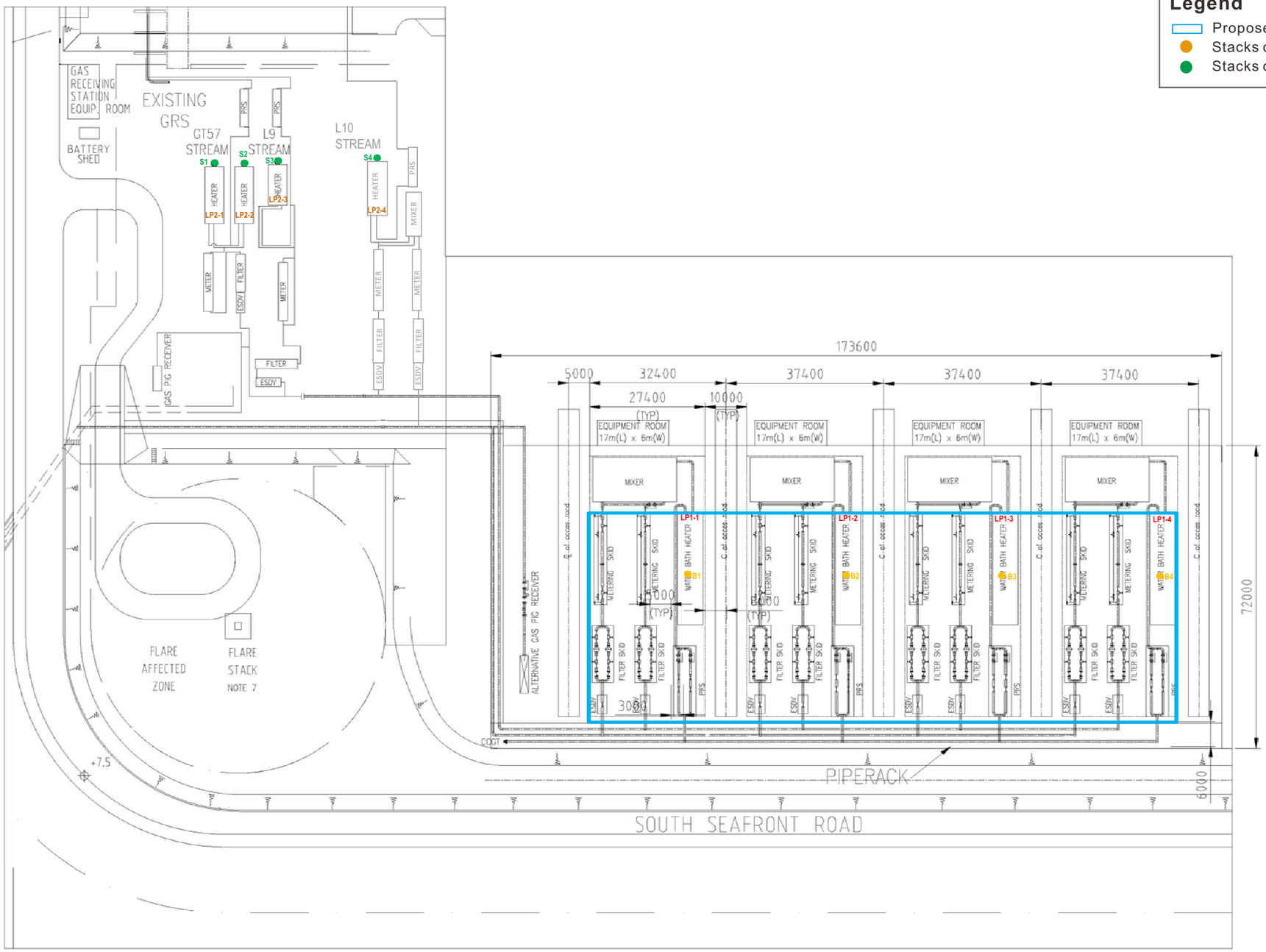


Figure 4.5

Stack Locations of Gas Heaters within Lamma Power Station

FILE: 0359722e.cdr
DATE: 16/04/2018

Environmental Resources Management

ERM

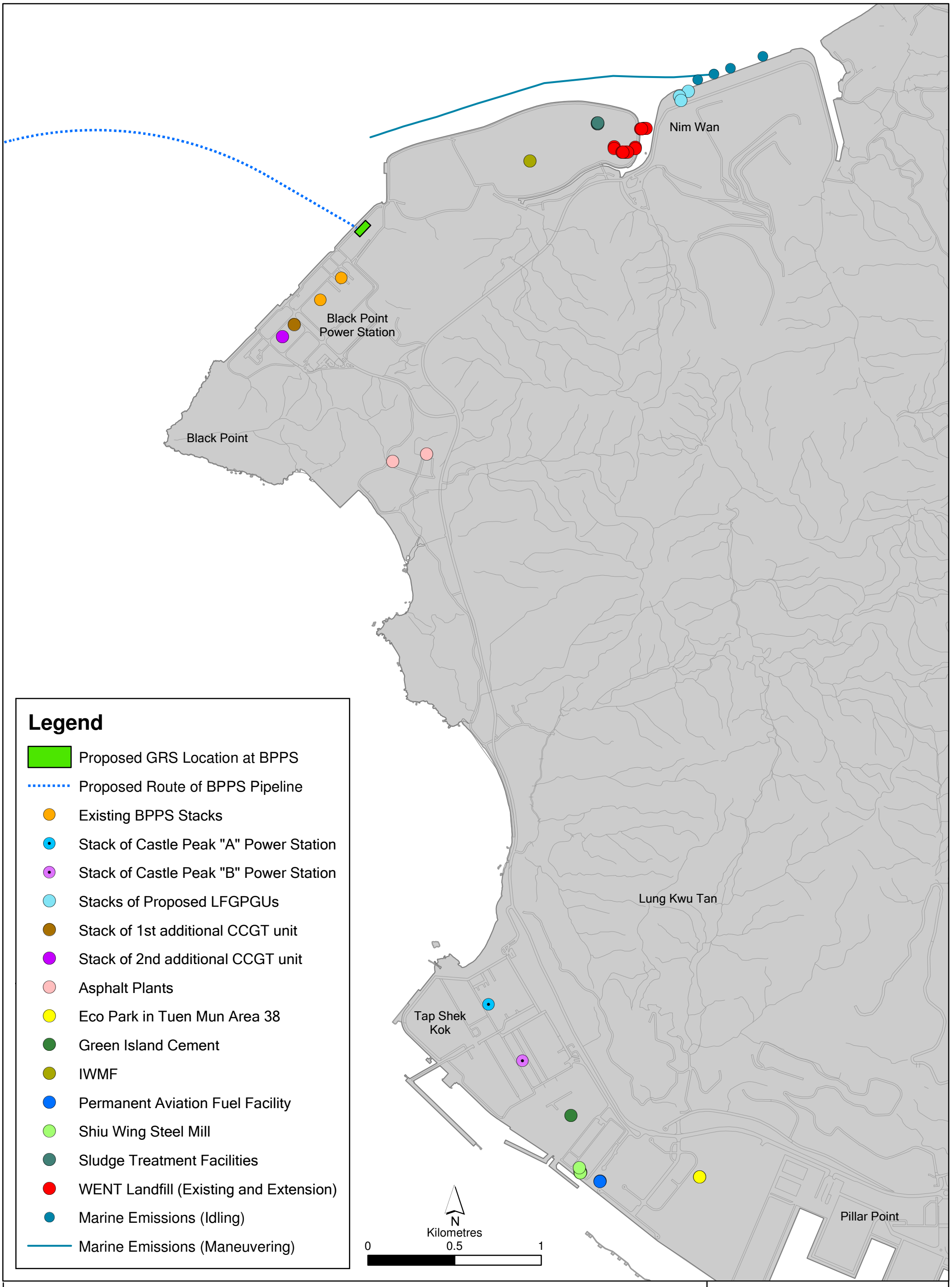


Figure 4.6

Major Emission Sources in the Vicinity of the Project Site at Black Point

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_Emission_Sources_BPPS.mxd
Date: 31/10/2017

Environmental Resources Management

ERM

Legend

- Proposed GRS Location at LPS
- Proposed Route of LPS Pipeline
- Emission Sources

GTL1a
GTL1b
Stack of Units L1 to L3
Stack of Units L4 to L6
Stack of Units L7 and L8
Stack of 36a&b and 37a&b
Stack of 38a&b
Stack of GT2-4
Stack of GT6 and Unit 57
Stack of L9 and the proposed L10 and L11
Indicative Stack of L12 to L14

KAM LO HOM
Po Lo Tsui
HA MEI WAN
KAT TSAI WAN
TIT SHA LONG
HUNG SHING YEH BEACH
Sha Po New Village
Sha Po Old Village
Tai Yuen Village
Wang Long
Tai Wan San Tsuen
Tai Wan Kau Tsuen
Tai Ling Tsuen
Tai Shan West
Tai Shan East
Tai Shan Central
Ko Long
Long Tsai Tsuen
Tai Wan To
Hung Shing Ye
TYPHOON SHELTER
RESERVOIR ROAD
STACKER ROAD
PRECIPITATOR ROAD
JETTY ACCESS RD
WEST WHARF ROAD
EAST WHARF ROAD
AMENITY ROAD
ADMINISTRATION ROAD
WATERFRONT ROAD
BRIDGE RD
STATION ROAD
NORTH SEAFRONT RD
OUTFALL ROAD
FISH MARKET RD
INTAKE ROAD
SOUTH SEAFRONT ROAD

N
Metres
0 250 500

Figure 4.7

Major Emission Sources in the Vicinity of the Project Site at Lamma Island

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_Emission_Source_LPS.mxd
Date: 16/4/2018

Environmental Resources Management

ERM

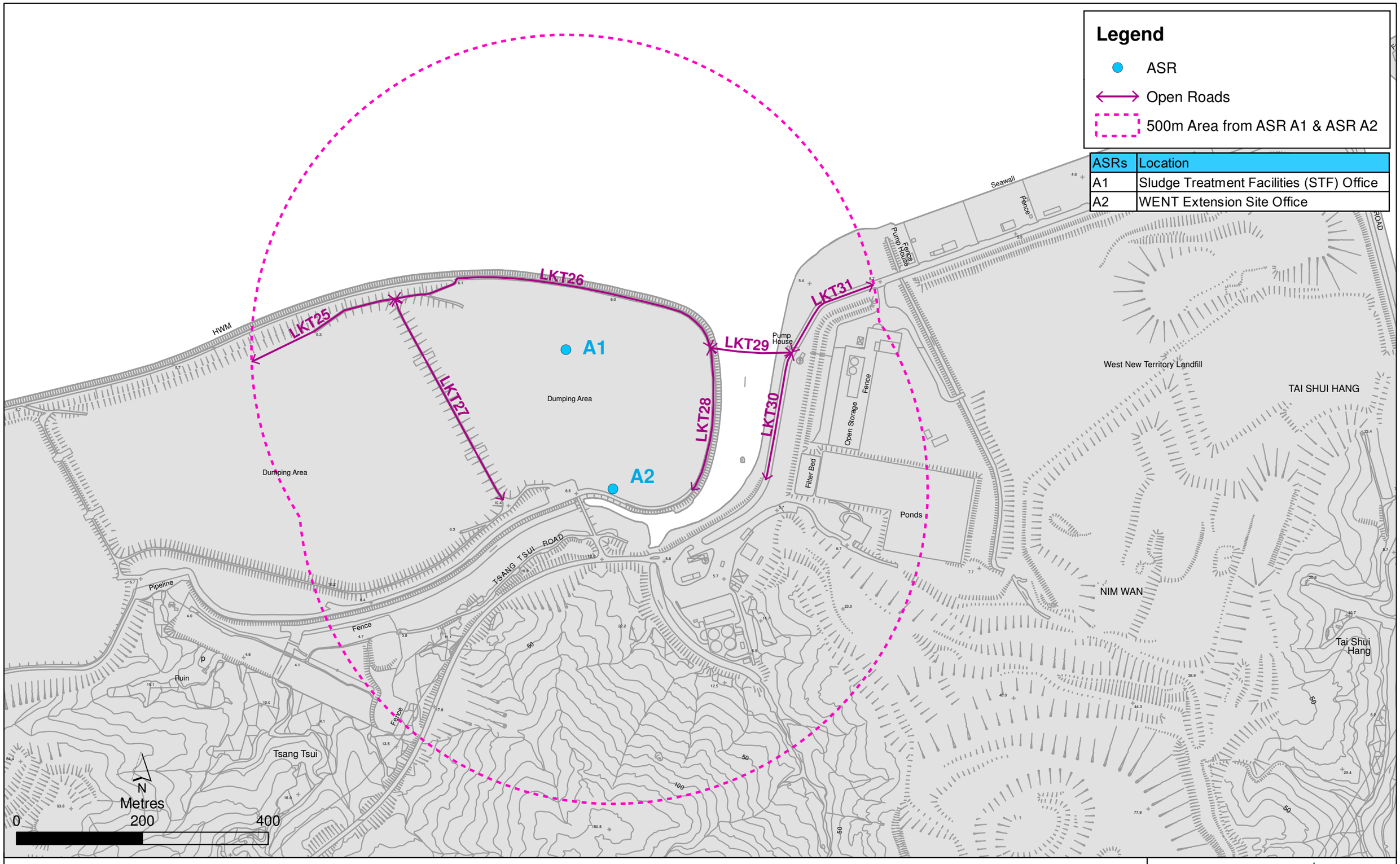


Figure 4.8

Open roads within 500m from ASR A1 and A2

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_ASR_A1nA2_BPPS.mxd
Date: 30/11/2017

Environmental Resources Management

ERM

Legend

- ASR
- Open Roads
- 500m Area from ASR A3 & ASR A4

ASRs	Location
A3	Lung Kwu Tan
A4	Planned Development at Lung Kwu Tan

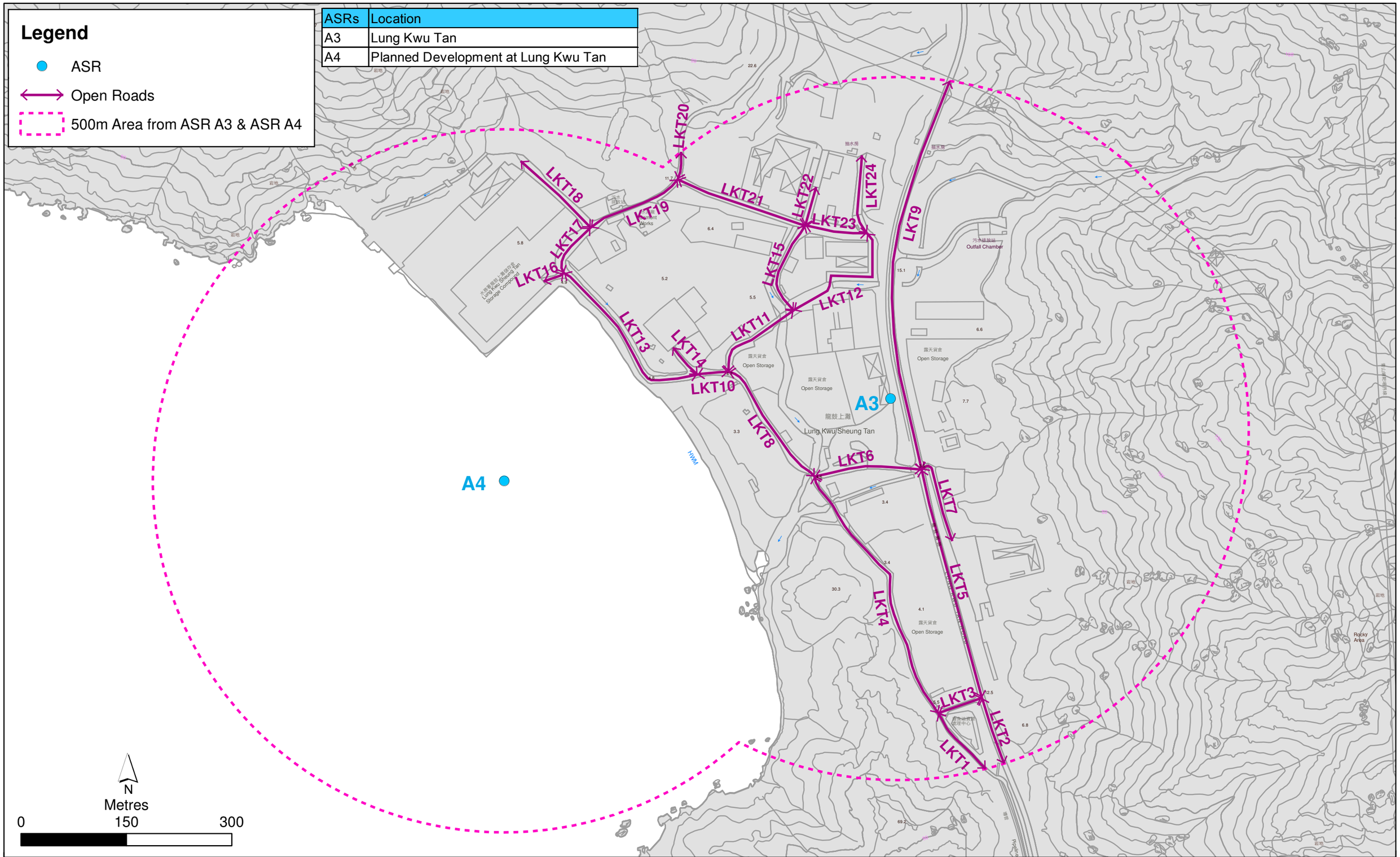


Figure 4.9

Open roads within 500m from ASR A3 and A4

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_ASR_A3nA4_BPPS.mxd
Date: 29/11/2017

Environmental Resources Management

ERM

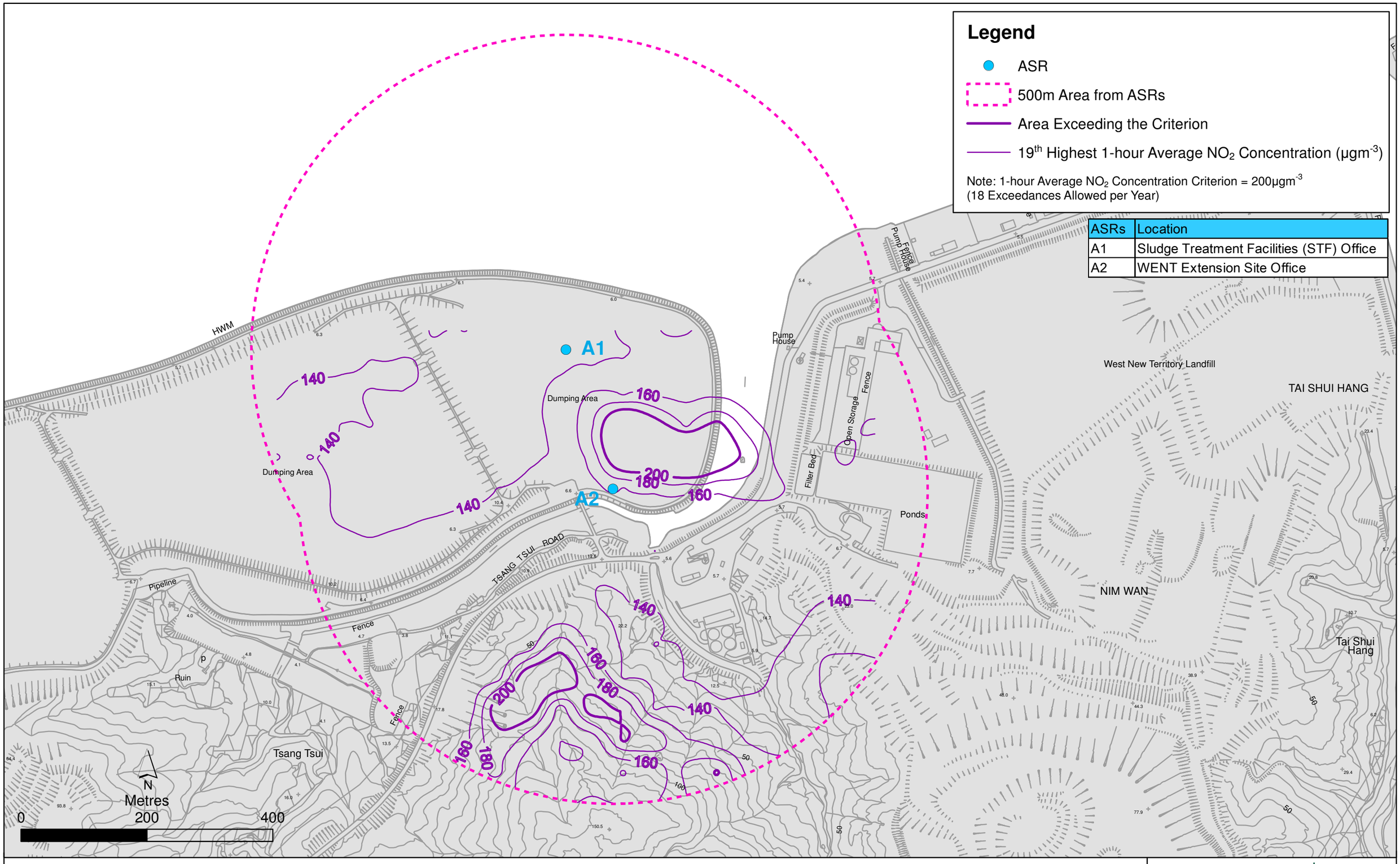


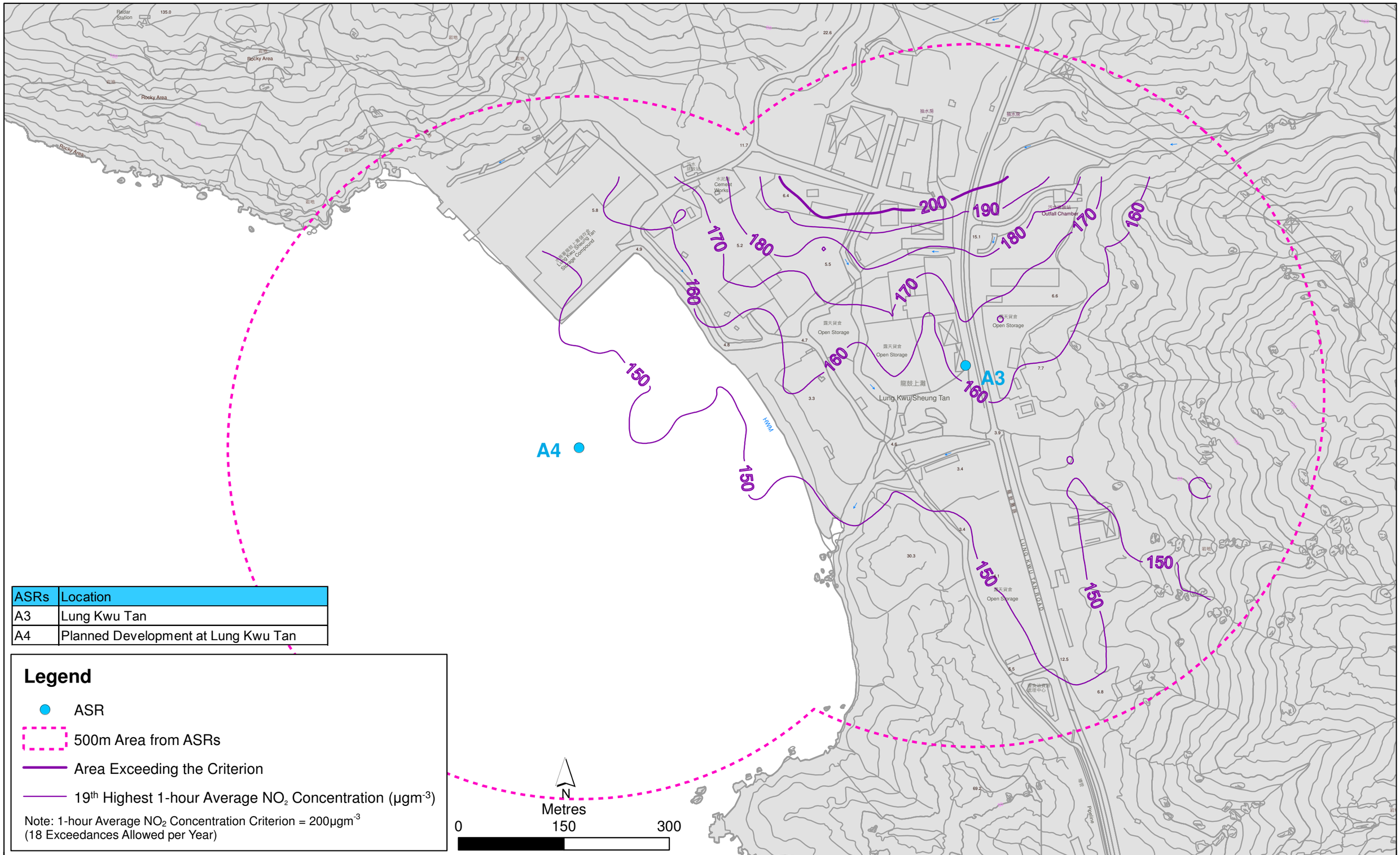
Figure 4.10

Contour of Cumulative 19th Highest 1-hour Average NO_2 Concentration at 40m above ground in the BPPS area

File: T:\GIS\CONTRACT\0359722\Mxd\Air_Contour\0359722_NO2_1hr_40m.mxd
Date: 14/3/2018

Environmental Resources Management

ERM



ASRs	Location
A3	Lung Kwu Tan
A4	Planned Development at Lung Kwu Tan

Legend

- ASR
- 500m Area from ASRs
- Area Exceeding the Criterion
- 19th Highest 1-hour Average NO_2 Concentration (μgm^{-3})

Note: 1-hour Average NO_2 Concentration Criterion = $200\mu gm^{-3}$
(18 Exceedances Allowed per Year)

Figure 4.11

Contour of Cumulative 19th Highest 1-hour Average NO_2 Concentration at 60m above ground in the BPPS area

File: T:\GIS\CONTRACT\0359722\Mxd\Air_Contour\0359722_NO2_1hr_60m.mxd
Date: 6/12/2017

Environmental Resources Management

ERM

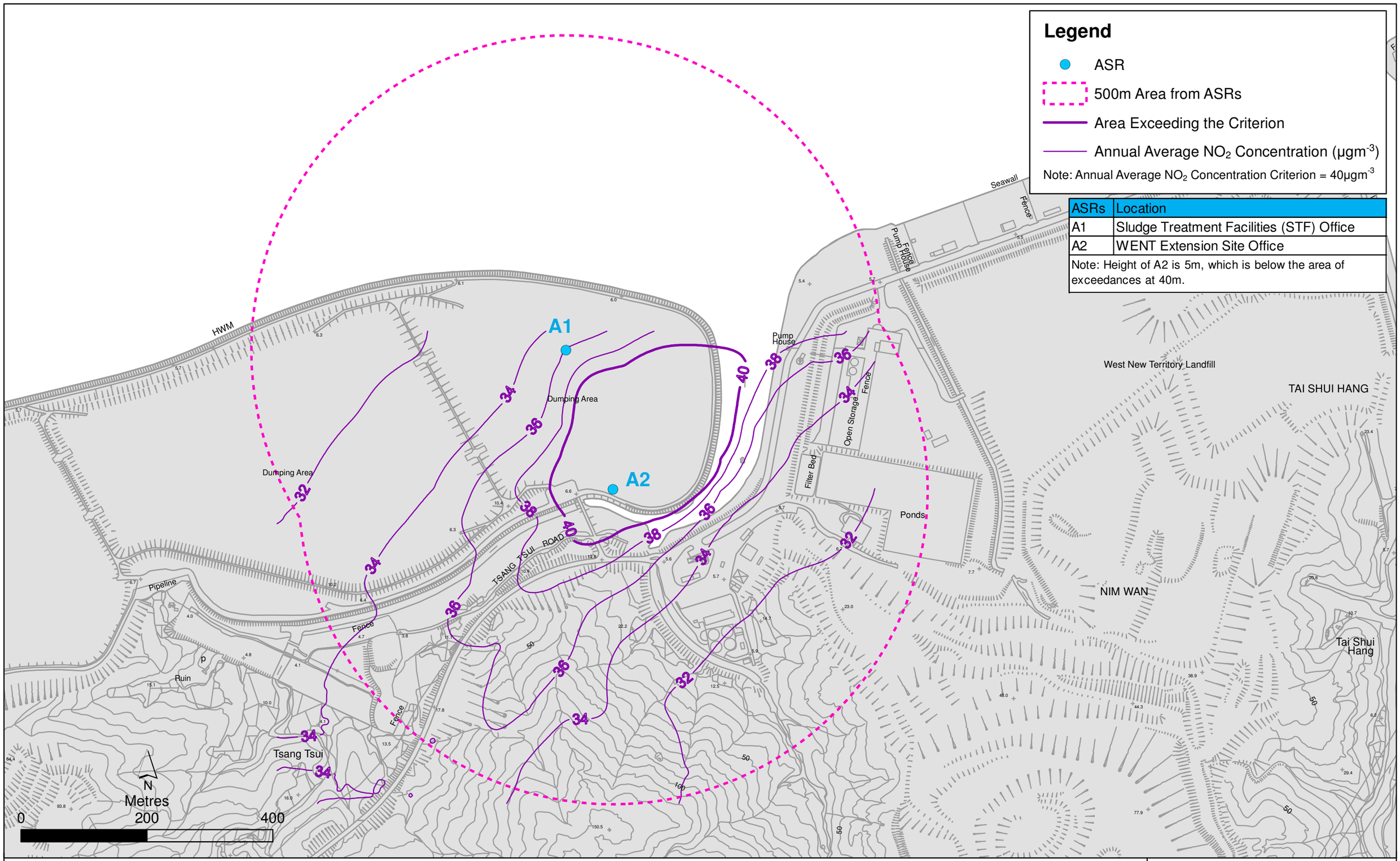


Figure 4.12

Contour of Cumulative Annual Average NO_2 Concentration at 40m above ground in the BPPS area

File: T:\GIS\CONTRACT\0359722\Mxd\Air_Contour\0359722_NO2_Annual_40m.mxd
Date: 14/3/2018

Environmental Resources Management

ERM

ASRs	Location
A3	Lung Kwu Tan
A4	Planned Development at Lung Kwu Tan

Legend

- ASR
- 500m Area from ASRs
- Area Exceeding the Criterion
- Annual Average NO_2 Concentration (μgm^{-3})

Note: Annual Average NO_2 Concentration Criterion = $40\mu gm^{-3}$

N

Metres

0 150 300

Figure 4.13

Contour of Cumulative Annual Average NO_2 Concentration at 50m above ground in the BPPS area

File: T:\GIS\CONTRACT\0359722\Mxd\Air_Contour\0359722_NO2_Annual_50m.mxd
Date: 04/06/2018

Environmental Resources Management

ERM

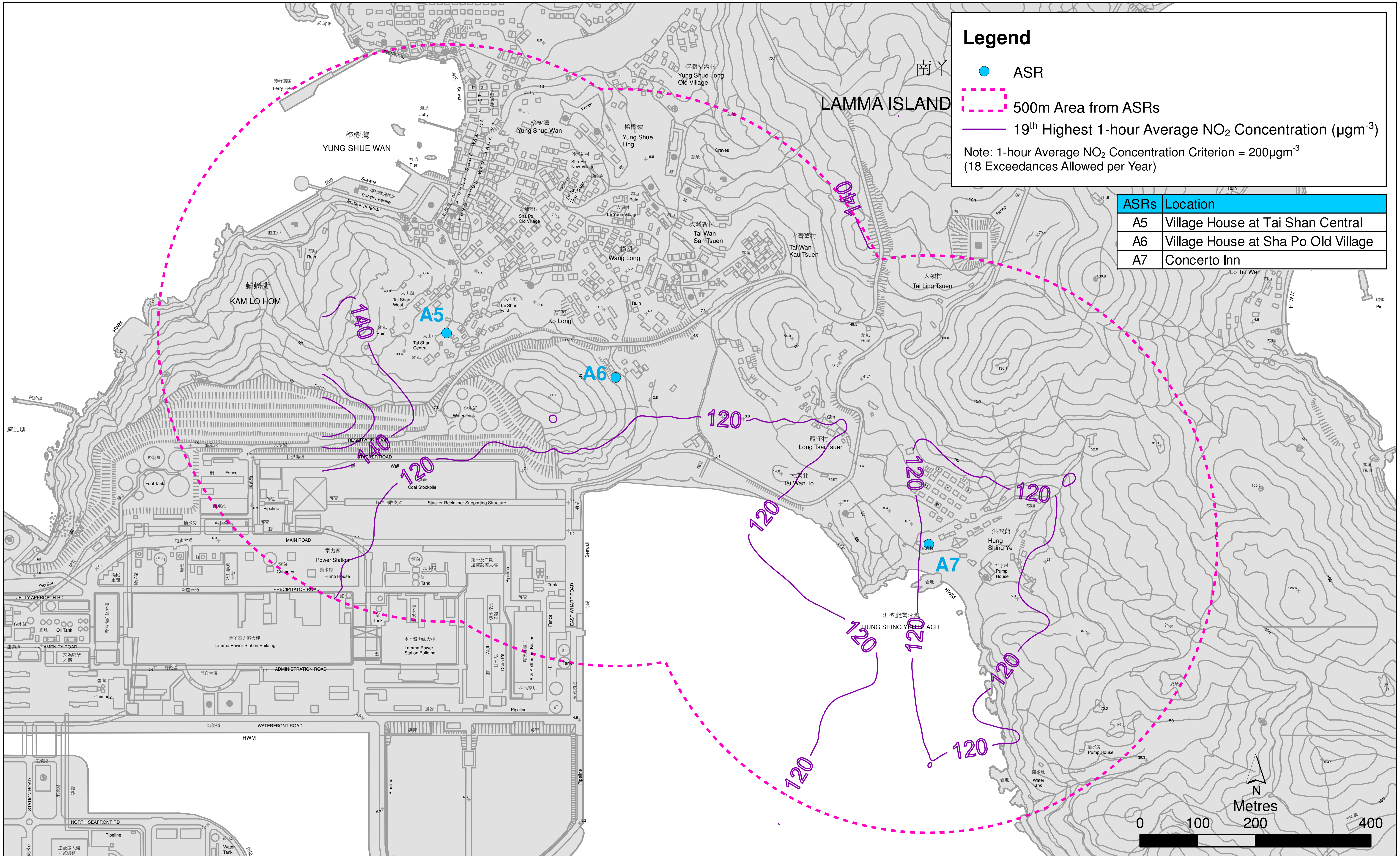


Figure 4.14

Contour of Cumulative 19th Highest 1-hour Average NO_2 Concentration at 10m above ground in the LPS area

File: T:\GIS\CONTRACT\0359722\Mxd\Air_Contour\0359722_NO2_1hr_10m.mxd
Date: 15/2/2018

Environmental Resources Management

ERM

Legend

- Annual Average NO_2 Concentration (μgm^{-3})
- ASR
- 500m Area from ASRs

Note: Annual Average NO_2 Concentration Criterion = $40\mu gm^{-3}$

ASRs	Location
A5	Village House at Tai Shan Central
A6	Village House at Sha Po Old Village
A7	Concerto Inn

Figure 4.15

Contour of Cumulative Annual Average NO_2 Concentration at 10m above ground in the LPS area

File: T:\GIS\CONTRACT\0359722\Mxd\Air_Contour\0359722_NO2_Annual_10m.mxd
Date: 15/2/2018

Environmental Resources Management

ERM

Annex 4A

Emission Inventory for the Proposed New Gas Heaters of the Project at BPPS and LPS

Annex 4A - Emission Inventory for the Proposed New Gas Heaters of the Project at BPPS and LPS

Sources	Emission Point ID (SP Licence)	Model Input ID	X	Y	Ground Level	NOx Emission	Stack height	Temp	Exit Velocity	Diameter	Operation Hour
					mPD	g/s	m	K	m/s	m	
Gas Heaters of New GRS at BPPS	-	A1	809025.9	830865.2	6	0.2025	15	553	10	0.6	24 hours
	-	A2	809027.5	830867	6	0.2025	15	553	10	0.6	24 hours
	-	A3	809035.3	830875	6	0.2025	15	553	10	0.6	24 hours
	-	A4	809036.9	830876.7	6	0.2025	15	553	10	0.6	24 hours
Gas Heaters of New GRS at LPS	-	B1	828850	808152.7	7.75	0.139	11.15	573	2.6	0.61	24 hours
	-	B2	828887.7	808153	7.75	0.139	11.15	573	2.6	0.61	24 hours
	-	B3	828925.3	808153.4	7.75	0.139	11.15	573	2.6	0.61	24 hours
	-	B4	828962.9	808153.8	7.75	0.139	11.15	573	2.6	0.61	24 hours

Annex 4B

Emission Inventory for the Existing and Planned Emissions Sources in the Vicinity of the New GRS at BPPS and LPS

Annex 4B - Emission Inventory of Existing and Planned Emission Sources in the Vicinity of the New GRS at BPPS and LPS

Sources	Emission Point ID (SP Licence)	Model Input ID	X	Y	Ground Level	NOx Emission	Stack height	Temp	Exit Velocity	Diameter	Operation Hour
					mPD	g/s	m	K	m/s	m	
BPPS Existing Stacks (C1 - C8)	C1-C4	C1-C4	808809.7	830475.7	6	188.89	100	353	15	11.8	24 hours
	C5-C8	C5-C8	808930.7	830602.4	6	188.89	100	353	15	11.8	24 hours
BPPS Additional CCGT No. 1 and	-	BPPS_1	808658.8	830333.4	6	4.66	80	353	15	8	24 hours
No. 2	-	BPPS_2	808591.6	830263.3	6	4.66	80	353	15	8	24 hours
Gas Heaters of Existing GRS at	C10	W1	808986	830817.2	5	0.64	9.4	573	10	0.9	24 hours
BPPS	C11	W2	808991.3	830822.6	5	0.64	9.4	573	10	0.9	24 hours
	C12	W3	808996.6	830828.2	5	0.64	9.4	573	10	0.9	24 hours
	C13	W4	809001.9	830833.7	5	0.64	9.4	573	10	0.9	24 hours
	C14	W5	809007.1	830839.1	5	0.64	9.4	573	10	0.9	24 hours
	C15	W6	809012.4	830844.7	5	0.64	9.4	573	10	0.9	24 hours
	C16	W7	809017.7	830850.2	5	0.64	9.4	573	10	0.9	24 hours
	C21	W8	809098.4	830924.9	6	0.57	16	553	10	1.15	24 hours
	C22	W9	809100.1	830926.7	6	0.57	16	553	10	1.15	24 hours
	C23	W10	809107.9	830934.8	6	0.57	16	553	10	1.15	24 hours
	C24	W11	809109.6	830936.6	6	0.57	16	553	10	1.15	24 hours
LPS	2	L2	828997.5	808930	0	341.67	215	353	15	5.11	24 hours
	4-6	L4_L6	829187.8	808930	0	700.56	215	353	15	9.73	24 hours
	59-60	L7_L8	829440	808929.2	0	273.89	215	353	15	7.83	24 hours
	-	L9_L11	828942.5	808384.8	0	55.64	110	353	15	10.39	24 hours
	-	L12_L14	828942.9	808246.9	0	8.88	110	353	15	10.39	24 hours
	GTL5, GTL7	GT57	828896.5	808705.5	0	34.72	86	423	20	5.6	24 hours
	GTL1a	GT1a	829090.1	809100.3	0	31.9	15.7	583	45	2.67	Peak Lopping/ Emergency Only
	GTL1b	GT1b	829123.6	809100.2	0	31.9	15.7	583	45	2.67	Peak Lopping/ Emergency Only
	GTL2	GT2	828714	808703	0	82.99	86	663	32	5.6	Peak Lopping/ Emergency Only
	GTL3	GT3	828714	808703	0	82.99	86	663	32	5.6	Peak Lopping/ Emergency Only
	GTL4	GT4	828714	808703	0	82.99	86	663	32	5.6	Peak Lopping/ Emergency Only
	GTL6	GT6	828896.5	808705.5	0	82.99	86	663	32	5.6	Peak Lopping/ Emergency Only
	36a	36a	828998	808887	0	0.11	37.9	0	0.001	0.4	24 hours
	36b	36b	828998	808887	0	0.11	37.9	0	0.001	0.4	24 hours
	37a	37a	828998	808887	0	0.11	37.9	0	0.001	0.4	24 hours
	37b	37b	828998	808887	0	0.11	37.9	0	0.001	0.4	24 hours
	38a	38a	829067	808887	0	0.11	37.9	0	0.001	0.4	24 hours
	38b	38b	829067	808887	0	0.11	37.9	0	0.001	0.4	24 hours
Gas Heaters of Existing GRS at LPS	LMX HS2	S1	828735.3	808248.4	7.75	0.139	11.15	573	2.6	0.61	24 hours
	LMX HS	S3	828750.5	808249	7.75	0.139	7.45	673	4	0.61	24 hours
	-	S4	828774.9	808252.2	7.75	0.139	11.15	573	2.6	0.61	24 hours
CPPS	A1-A4	CPA	809780.3	826410.2	7.4	2188.89	215	383	17	10.8	24 hours
	B1-B4	CPB	809975.8	826085.4	7.4	1316.67	250	353	17	13.2	24 hours
LFGPGUs at WENT Landfill	-	LFG_1	810881.1	831651	6.6	0.36	20	453	34	0.5	24 hours
	-	LFG_2	810890.4	831627.2	6.6	0.24	20	453	34	0.5	24 hours
	-	LFG_3	810932.7	831679.4	6.6	0.24	20	453	34	0.5	24 hours
WENT Landfill	-	XTD1	810505	831360.4	6.6	0.6786	19	740	7.06	2.33	24 hours
Extension	-	XTD2	810505	831350.4	6.6	0.6786	19	740	7.06	2.33	24 hours
	-	XFS1	810565.9	831329.3	6.6	0.3712	20	1473	6.49	3.25	24 hours
	-	XFS2	810573.9	831329.3	6.6	0.3712	20	1473	6.49	3.25	24 hours
	-	XFS3	810581.9	831329.3	6.6	0.3712	20	1473	6.49	3.25	24 hours
	-	XPG1	810550.2	831329	6.6	0.04266	6	853	37.1	0.5	24 hours
	-	XPG2	810555.2	831329	6.6	0.04266	6	853	37.1	0.5	24 hours
Existing WENT Landfill	-	ETD1	810626	831358	6.6	0.377	19	740	3.92	2.33	24 hours
	-	ETD2	810626	831348	6.6	0.377	19	740	3.92	2.33	24 hours
	-	EFS1	810672.9	831465.9	6.6	0.004856	8.2	1473	3.62	0.5	24 hours
	-	EFS2	810680.9	831465.9	6.6	0.004856	8.2	1473	3.62	0.5	24 hours
	-	EFS3	810688.9	831465.9	6.6	0.004856	8.2	1473	3.62	0.5	24 hours
	-	EPG1	810657.6	831463.8	6.6	0.04266	6	853	37.1	0.5	24 hours
	-	EPG2	810662.6	831463.8	6.6	0.04266	6	853	37.1	0.5	24 hours
STF [c]	-	STF1	810407.5	831493.0	5.75	8.418	65.75	463	20	1.6	24 hours
	-	STF2	810410.1	831493.0	5.75	8.418	65.75	463	20	1.6	24 hours
	-	STF3	810407.5	831497.0	5.75	8.418	65.75	463	20	1.6	24 hours
	-	STF4	810410.1	831497.0	5.75	8.418	65.75	463	20	1.6	24 hours
IWMF	-	IWMF	810018.6	831277.3	5	45.890	150	413	15	4.97	24 hours
Green Island Cement	-	G58	810255	825770	7	111.70	113	383	20.9	3.1	24 hours
Ecopark	-	E2	810997.7	825415.2	7	6	30	353	9	1	24 hours
Shiu Wing Steel Mill	EP1	SW1	810311	825443	7	17.1	50	367	15.2	6.2	24 hours
	EP2	SW2	810307	825449	7	0.4556	35	325	15.7	2.6	24 hours
	EP3	SW3	810310	825442	7	3.717	50	813	10.3	1.9	24 hours
	EP6	SW6	810303	825468	7	0.7194	7	753	14.9	0.2	24 hours
PAFF	-	PA_EP12	810424	825391	6	4	7	666.7	45.1	0.4	24 hours
	-	PA_EP13	810423	825389	6	4	7	666.7	45.1	0.4	24 hours
Aphalt Plant 1	EP1	AP1_EP1	809422.9	829587.2	6	4	15	413	13.2	1.5	24 hours
	EP2	AP1_EP2	809422.9	829587.2	6	2.93	23	403	17.6	1.3	24 hours
	EP4	AP1_EP4	809422.9	829587.2	6	0.025	7	493	9.1	0.39	24 hours
Apsphalt Plant 2	EP1	AP_2_EP1	809226.9	829544.1	6	2.33	32	333	12	1.1	12 hours; assumes 0700 to 1900
Marine Emission	-	MARa1	809097.8	831413.5	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
(IETS Vessel during	-	MARa2	809145.3	831429.1	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
maneuvering)	-	MARa3	809192.8	831444.8	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa4	809240.3	831460.4	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa5	809287.8	831476.1	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa6	809335.8	831489.9	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa7	809383.8	831503.8	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa8	809431.9	831517.7	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa9	809479.9	831531.5	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa10	809527.4	831547.2	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa11	809574.9	831562.9	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa12	809622.3	831578.6	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa13	809669.8	831594.3	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa14	809717.6	831608.9	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa15	809765.5	831623.4	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa16	809813.3	831638	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa17	809861.1	831652.5	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa18	809908.9	831667.2	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200

Annex 4B - Emission Inventory of Existing and Planned Emission Sources in the Vicinity of the New GRS at BPPS and LPS

Sources	Emission Point ID (SP Licence)	Model Input ID	X	Y	Ground Level	NOx Emission	Stack height	Temp	Exit Velocity	Diameter	Operation Hour
					mPD	g/s	m	K	m/s	m	
	-	MARa19	809956.7	831681.9	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa20	810004.5	831696.5	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa21	810052.3	831711.2	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa22	810100.1	831725.9	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa23	810149.9	831731.1	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa24	810199.6	831736.3	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa25	810249.3	831741.5	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa26	810299.1	831746.7	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa27	810348.8	831751.9	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa28	810398.5	831757	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa29	810448.3	831762.2	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa30	810498	831767.4	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa31	810548	831765.7	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa32	810597.9	831764.1	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa33	810647.9	831762.4	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa34	810697.9	831761.7	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa35	810747.9	831761	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa36	810797.9	831760.3	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa37	810847.9	831759.7	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa38	810897.7	831763.4	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa39	810947.6	831767.1	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa40	810997.5	831770.8	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
	-	MARa41	811047.3	831774.5	0	0.01057	8	530.5	8	0.3	1700 to 1800; 2100 to 2200
Marine Emission (IWTS Vessel during maneuvering)	-	MARb1	809097.8	831413.5	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb2	809145.3	831429.1	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb3	809192.8	831444.8	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb4	809240.3	831460.4	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb5	809287.8	831476.1	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb6	809335.8	831489.9	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb7	809383.8	831503.8	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb8	809431.9	831517.7	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb9	809479.9	831531.5	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb10	809527.4	831547.2	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb11	809574.9	831562.9	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb12	809622.3	831578.6	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb13	809669.8	831594.3	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb14	809717.6	831608.9	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb15	809765.5	831623.4	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb16	809813.3	831638	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb17	809861.1	831652.5	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb18	809908.9	831667.2	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb19	809956.7	831681.9	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb20	810004.5	831696.5	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb21	810052.3	831711.2	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb22	810100.1	831725.9	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb23	810149.9	831731.1	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb24	810199.6	831736.3	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb25	810249.3	831741.5	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb26	810299.1	831746.7	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb27	810348.8	831751.9	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb28	810398.5	831757	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb29	810448.3	831762.2	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb30	810498	831767.4	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb31	810548	831765.7	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb32	810597.9	831764.1	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb33	810647.9	831762.4	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb34	810697.9	831761.7	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb35	810747.9	831761	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb36	810797.9	831760.3	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb37	810847.9	831759.7	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb38	810897.7	831763.4	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb39	810947.6	831767.1	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb40	810997.5	831770.8	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
	-	MARb41	811047.3	831774.5	0	0.01057	8	493	8	0.3	1800 to 1900; 2000 to 2100
Marine Emission (OITF Vessel during maneuvering)	-	MARc1	809097.8	831413.5	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc2	809145.3	831429.1	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc3	809192.8	831444.8	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc4	809240.3	831460.4	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc5	809287.8	831476.1	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc6	809335.8	831489.9	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc7	809383.8	831503.8	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc8	809431.9	831517.7	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc9	809479.9	831531.5	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc10	809527.4	831547.2	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc11	809574.9	831562.9	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc12	809622.3	831578.6	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc13	809669.8	831594.3	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc14	809717.6	831608.9	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc15	809765.5	831623.4	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc16	809813.3	831638	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc17	809861.1	831652.5	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc18	809908.9	831667.2	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc19	809956.7	831681.9	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc20	810004.5	831696.5	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc21	810052.3	831711.2	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc22	810100.1	831725.9	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc23	810149.9	831731.1	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc24	810199.6	831736.3	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc25	810249.3	831741.5	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc26	810299.1	831746.7	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500

Annex 4B - Emission Inventory of Existing and Planned Emission Sources in the Vicinity of the New GRS at BPPS and LPS

Sources	Emission Point ID (SP Licence)	Model Input ID	X	Y	Ground Level	NOx Emission	Stack height	Temp	Exit Velocity	Diameter	Operation Hour
					mPD	g/s	m	K	m/s	m	
	-	MARc27	810348.8	831751.9	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc28	810398.5	831757	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc29	810448.3	831762.2	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc30	810498	831767.4	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc31	810548	831765.7	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc32	810597.9	831764.1	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc33	810647.9	831762.4	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc34	810697.9	831761.7	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc35	810747.9	831761	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc36	810797.9	831760.3	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc37	810847.9	831759.7	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc38	810897.7	831763.4	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc39	810947.6	831767.1	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc40	810997.5	831770.8	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
	-	MARc41	811047.3	831774.5	0	0.005808	3.5	425	8	0.2	1000 to 1100; 1400 to 1500
Marine Emission	-	MARd1	809097.8	831413.5	0	0.007664	11	699	8	0.2	0800 to 1000
(North Lantau Vessel	-	MARd2	809145.3	831429.1	0	0.007664	11	699	8	0.2	0800 to 1000
during maneuvering	-	MARd3	809192.8	831444.8	0	0.007664	11	699	8	0.2	0800 to 1000
from propulsion engine)	-	MARd4	809240.3	831460.4	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd5	809287.8	831476.1	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd6	809335.8	831489.9	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd7	809383.8	831503.8	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd8	809431.9	831517.7	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd9	809479.9	831531.5	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd10	809527.4	831547.2	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd11	809574.9	831562.9	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd12	809622.3	831578.6	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd13	809669.8	831594.3	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd14	809717.6	831608.9	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd15	809765.5	831623.4	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd16	809813.3	831638	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd17	809861.1	831652.5	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd18	809908.9	831667.2	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd19	809956.7	831681.9	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd20	810004.5	831696.5	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd21	810052.3	831711.2	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd22	810100.1	831725.9	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd23	810149.9	831731.1	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd24	810199.6	831736.3	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd25	810249.3	831741.5	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd26	810299.1	831746.7	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd27	810348.8	831751.9	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd28	810398.5	831757	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd29	810448.3	831762.2	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd30	810498	831767.4	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd31	810548	831765.7	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd32	810597.9	831764.1	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd33	810647.9	831762.4	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd34	810697.9	831761.7	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd35	810747.9	831761	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd36	810797.9	831760.3	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd37	810847.9	831759.7	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd38	810897.7	831763.4	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd39	810947.6	831767.1	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd40	810997.5	831770.8	0	0.007664	11	699	8	0.2	0800 to 1000
	-	MARd41	811047.3	831774.5	0	0.007664	11	699	8	0.2	0800 to 1000
Marine Emission	-	MARe1	809097.8	831413.5	0	0.00323	11	588	8	0.2	0800 to 1000
(North Lantau Vessel	-	MARe2	809145.3	831429.1	0	0.00323	11	588	8	0.2	0800 to 1000
during maneuvering	-	MARe3	809192.8	831444.8	0	0.00323	11	588	8	0.2	0800 to 1000
from auxiliary engine)	-	MARe4	809240.3	831460.4	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe5	809287.8	831476.1	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe6	809335.8	831489.9	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe7	809383.8	831503.8	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe8	809431.9	831517.7	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe9	809479.9	831531.5	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe10	809527.4	831547.2	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe11	809574.9	831562.9	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe12	809622.3	831578.6	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe13	809669.8	831594.3	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe14	809717.6	831608.9	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe15	809765.5	831623.4	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe16	809813.3	831638	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe17	809861.1	831652.5	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe18	809908.9	831667.2	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe19	809956.7	831681.9	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe20	810004.5	831696.5	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe21	810052.3	831711.2	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe22	810100.1	831725.9	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe23	810149.9	831731.1	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe24	810199.6	831736.3	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe25	810249.3	831741.5	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe26	810299.1	831746.7	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe27	810348.8	831751.9	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe28	810398.5	831757	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe29	810448.3	831762.2	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe30	810498	831767.4	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe31	810548	831765.7	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe32	810597.9	831764.1	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe33	810647.9	831762.4	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe34	810697.9	831761.7	0	0.00323	11	588	8	0.2	0800 to 1000

Annex 4B - Emission Inventory of Existing and Planned Emission Sources in the Vicinity of the New GRS at BPPS and LPS

Sources	Emission Point ID (SP Licence)	Model Input ID	X	Y	Ground Level	NOx Emission	Stack height	Temp	Exit Velocity	Diameter	Operation Hour
					mPD	g/s	m	K	m/s	m	
	-	MARe35	810747.9	831761	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe36	810797.9	831760.3	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe37	810847.9	831759.7	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe38	810897.7	831763.4	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe39	810947.6	831767.1	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe40	810997.5	831770.8	0	0.00323	11	588	8	0.2	0800 to 1000
	-	MARe41	811047.3	831774.5	0	0.00323	11	588	8	0.2	0800 to 1000
Marine Emission	-	MARf1	809097.8	831413.5	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
(West Kowloon Vessel	-	MARf2	809145.3	831429.1	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
during maneuvering)	-	MARf3	809192.8	831444.8	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf4	809240.3	831460.4	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf5	809287.8	831476.1	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf6	809335.8	831489.9	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf7	809383.8	831503.8	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf8	809431.9	831517.7	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf9	809479.9	831531.5	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf10	809527.4	831547.2	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf11	809574.9	831562.9	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf12	809622.3	831578.6	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf13	809669.8	831594.3	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf14	809717.6	831608.9	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf15	809765.5	831623.4	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf16	809813.3	831638	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf17	809861.1	831652.5	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf18	809908.9	831667.2	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf19	809956.7	831681.9	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf20	810004.5	831696.5	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf21	810052.3	831711.2	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf22	810100.1	831725.9	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf23	810149.9	831731.1	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf24	810199.6	831736.3	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf25	810249.3	831741.5	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf26	810299.1	831746.7	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf27	810348.8	831751.9	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf28	810398.5	831757	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf29	810448.3	831762.2	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf30	810498	831767.4	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf31	810548	831765.7	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf32	810597.9	831764.1	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf33	810647.9	831762.4	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf34	810697.9	831761.7	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf35	810747.9	831761	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf36	810797.9	831760.3	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf37	810847.9	831759.7	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf38	810897.7	831763.4	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf39	810947.6	831767.1	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf40	810997.5	831770.8	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
	-	MARf41	811047.3	831774.5	0	0.02143	12	873	8	0.27	0700 to 0800; 1900 to 2000
Marine Emission	-	MARh1	809097.8	831413.5	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
(Additional vessels for	-	MARh2	809145.3	831429.1	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
STF during	-	MARh3	809192.8	831444.8	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
maneuvering)	-	MARh4	809240.3	831460.4	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh5	809287.8	831476.1	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh6	809335.8	831489.9	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh7	809383.8	831503.8	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh8	809431.9	831517.7	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh9	809479.9	831531.5	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh10	809527.4	831547.2	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh11	809574.9	831562.9	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh12	809622.3	831578.6	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh13	809669.8	831594.3	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh14	809717.6	831608.9	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh15	809765.5	831623.4	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh16	809813.3	831638	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh17	809861.1	831652.5	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh18	809908.9	831667.2	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh19	809956.7	831681.9	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh20	810004.5	831696.5	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh21	810052.3	831711.2	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh22	810100.1	831725.9	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh23	810149.9	831731.1	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh24	810199.6	831736.3	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh25	810249.3	831741.5	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh26	810299.1	831746.7	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh27	810348.8	831751.9	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh28	810398.5	831757	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh29	810448.3	831762.2	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh30	810498	831767.4	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh31	810548	831765.7	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh32	810597.9	831764.1	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh33	810647.9	831762.4	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh34	810697.9	831761.7	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh35	810747.9	831761	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh36	810797.9	831760.3	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh37	810847.9	831759.7	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh38	810897.7	831763.4	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh39	810947.6	831767.1	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh40	810997.5	831770.8	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
	-	MARh41	811047.3	831774.5	0	0.02143	12	873	8	0.27	0500 to 0600; 2000 to 2100
Marine Emission	-	IETS	810986	831745.8	0	0.275	8	531	8	0.3	0000 to 1700; 2100 to 2400

Annex 4B - Emission Inventory of Existing and Planned Emission Sources in the Vicinity of the New GRS at BPPS and LPS

Sources	Emission Point ID (SP Licence)	Model Input ID	X	Y	Ground Level	NOx Emission	Stack height	Temp	Exit Velocity	Diameter	Operation Hour
					mPD	g/s	m	K	m/s	m	
(during idling)	-	IWTS	811080	831779.6	0	0.275	8	493	8	0.3	0000 to 1800; 2100 to 2400
	-	OITF	811174.4	831812.6	0	0.2552	3.5	425	8	0.1	1100 to 1500
	-	NLTS	811362.1	831881.8	0	1.254	11	588	8	0.2	0800 to 1000

Notes:

(a) Emissions from CPA and CPB are referenced from the SP licence for Castle Peak Power Station

(b) Emissions for STF, Green Island Cement, PAFF and EcoPark are referenced from the approved EIA Report for the Additional Gas-fired Generation Units Project (AEIAR-197/2016)

(c) There are 3 operational modes for STF operation. Based on sensitivity test, Mode 3 is predicted to cause the highest hourly and annual NOx impact on ASR 2. NOx impact on ASR 1 and ASR 2 is slightly higher in Mode 3 than in Mode 1, by less than 0.1 ug/m3 for annual impact and a maximum of 1.4ug/m3 for hourly impact. NOx impact on ASR 3 and ASR 4 is higher in Mode 1 than in Mode 3, by a maximum of 0.24ug/m3 for annual impac and 8.7ug/m3 for hourly impact. Therefore, STF emission parameters under Mode 1 were selected for assessment as a conservative approach.

(d) Emissions from Shiu Wing Steel Mill are obtained from the SP Licence Register

(e) WENT landfill (existing and extension) and marine emissions are refrenced from the approved EIA Report for West New Territories (WENT) Landfill Extensions (AEIAR-147/2009)

(f) Emissions from IWMF are referenced from the approved EIA Report for Development of the Integrated Waste Management Facilities Phase 1 (AEIAR-163/2012)

(g) Emissions from the asphalt plants are obtained from the SP Licence Register

(h) GT1, 2, 3, 4 and 6 only operate during peak lopping and emergency only. In this assessment, it is assumed to be operating continuously as a conservative approach. According to Clause A.2.1 of the LPS SP licence, the total NOx emissions from GT2 to GT7 are limited to 1,320 kg/hour. Emissions from the two emission points GT1a and GT1b serving GT1 were assumed to be partitioned equally. 36a&b, 37a&b and 38a&b are fugitive dust emission sources from ash handling and disposal plant.

(i) The base elevation of the asphalt plants was estimated based on Google Earth data.

(j) Emissions from LFGPGUs were referenced from the Project Profile for the Landfill Gas Power Generation Project at the West New Territories (WENT) Landfill (DIR-251/2017) and latest information provided by CLP.

Annex 4C

Vehicular Emissions from Open Roads

Annex 4C - Configurations of Roads

Open roads within 500m from ASR A1 & A2 (15_44)

Road No.	Road Name	Starting Co		Width	Height	Ending Co		Road Type
		X-co	Y-co	(m)	(m)	X-co	Y-co	
1	LKT25	810005	831526	10	5.0	810053	831559	1
2	LKT25	810053	831559	11	2.7	810134	831578	1
3	LKT25	809905	831478	10	6.2	810005	831526	1
4	LKT26	810134	831578	11	2.3	810187	831586	1
5	LKT26	810187	831586	9	4.1	810233	831610	1
6	LKT26	810233	831610	9	2.6	810593	831554	1
7	LKT26	810593	831554	9	0.0	810634	831500	1
8	LKT27	810134	831578	13	5.9	810306	831258	1
9	LKT28	810634	831500	9	0.0	810639	831400	1
10	LKT28	810639	831400	9	0.0	810605	831273	1
11	LKT29	810634	831500	12	0.5	810764	831492	1
12	LKT30	810722	831289	16	1.6	810764	831492	1
13	LKT31	810764	831492	16	1.6	810811	831568	1
14	LKT31	810811	831568	16	3.9	810894	831600	1

Open roads within 500m from ASR A3 & A4 (14_42)

Road No.	Road Name	Starting Co		Width	Height	Ending Co		Road Type
		X-co	Y-co	(m)	(m)	X-co	Y-co	
1	LKT1	809634	828690	13	10.0	809566	828769	1
2	LKT2	809628	828791	14	10.0	809660	828698	1
3	LKT3	809566	828769	16	10.0	809628	828791	1
4	LKT4	809566	828769	15	8.7	809522	828867	1
5	LKT4	809522	828867	13	6.0	809497	828967	1
6	LKT4	809497	828967	15	2.3	809390	829106	1
7	LKT5	809542	829116	16	8.6	809628	828791	1
8	LKT6	809390	829106	17	2.9	809542	829116	1
9	LKT7	809542	829116	17	6.4	809586	829014	1
10	LKT8	809390	829106	19	2.9	809268	829255	1
11	LKT9	809542	829116	15	6.4	809514	829240	1
12	LKT9	809514	829240	13	10.0	809501	829389	1
13	LKT9	809501	829389	13	10.0	809521	829498	1
14	LKT9	809521	829498	13	10.0	809583	829668	1
15	LKT10	809268	829255	21	4.5	809223	829251	1
16	LKT11	809268	829255	20	4.9	809275	829288	1
17	LKT11	809275	829288	20	7.1	809360	829342	1
18	LKT12	809360	829342	19	10.0	809414	829392	1
19	LKT12	809414	829392	18	10.0	809472	829390	1
20	LKT12	809472	829390	22	10.0	809465	829452	1
21	LKT13	809223	829251	18	3.8	809153	829246	1
22	LKT13	809153	829246	15	2.1	809110	829319	1
23	LKT13	809110	829319	15	3.0	809033	829395	1
24	LKT14	809223	829251	16	4.4	809189	829290	1
25	LKT15	809360	829342	19	8.6	809336	829380	1
26	LKT15	809336	829380	21	8.2	809377	829463	1
27	LKT16	809033	829395	17	3.2	809004	829383	1
28	LKT17	809033	829395	19	5.6	809037	829426	1
29	LKT17	809037	829426	23	6.9	809071	829460	1
30	LKT18	809071	829460	23	8.5	808972	829555	1
31	LKT19	809071	829460	20	8.6	809157	829500	1
32	LKT19	809157	829500	16	10.0	809195	829529	1
33	LKT20	809195	829529	15	10.0	809200	829568	1
34	LKG21	809195	829529	21	9.8	809377	829463	1
35	LKG22	809377	829463	21	9.0	809392	829518	1
36	LKT23	809377	829463	25	9.7	809465	829452	1
37	LKT24	809465	829452	22	10.0	809451	829484	1
38	LKT24	809451	829484	18	10.0	809458	829563	1

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

0359722 TM
Result from EMFAC-HK v.3.3 (2020)

Pollutant Name: NOx

Speed	PC	LGV3	LGV4	PLB	LGV6	HGV7	HGV8	FBDD	MC	TAXI	PV4	PV5	NFB6	NFB7	NFB8	FBSD
km/hr	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
24	0.032	0.916	0.893	1.247	1.787	2.628	4.259	5.334	0.369	0.319	0.742	1.263	2.772	4.158	5.327	5.739
25	0.032	0.893	0.867	1.223	1.745	2.562	4.128	5.160	0.366	0.316	0.730	1.226	2.688	4.032	5.166	5.561
26	0.031	0.871	0.843	1.200	1.705	2.500	4.006	4.999	0.362	0.312	0.718	1.191	2.609	3.914	5.017	5.395
27	0.031	0.850	0.820	1.179	1.668	2.441	3.893	4.848	0.359	0.309	0.708	1.158	2.536	3.804	4.878	5.239
28	0.030	0.831	0.798	1.159	1.634	2.386	3.786	4.708	0.356	0.305	0.697	1.128	2.468	3.703	4.747	5.094
29	0.030	0.812	0.778	1.141	1.601	2.334	3.687	4.576	0.353	0.302	0.688	1.099	2.406	3.609	4.625	4.958
30	0.029	0.795	0.758	1.124	1.570	2.284	3.593	4.452	0.350	0.299	0.678	1.074	2.349	3.524	4.510	4.830
31	0.029	0.771	0.724	1.107	1.541	2.227	3.505	4.335	0.347	0.296	0.670	1.047	2.290	3.436	4.402	4.709
32	0.028	0.755	0.706	1.094	1.513	2.183	3.422	4.225	0.344	0.294	0.661	1.033	2.259	3.390	4.300	4.595
33	0.028	0.740	0.690	1.082	1.487	2.141	3.344	4.122	0.342	0.291	0.653	1.018	2.229	3.345	4.204	4.488
35	0.027	0.713	0.660	1.059	1.437	2.063	3.199	3.930	0.337	0.286	0.639	0.990	2.170	3.257	4.027	4.289
43	0.025	0.627	0.567	0.981	1.280	1.813	2.744	3.329	0.321	0.269	0.597	0.891	1.957	2.939	3.467	3.662
44	0.025	0.618	0.557	0.972	1.264	1.787	2.698	3.268	0.319	0.267	0.593	0.880	1.933	2.903	3.411	3.598
45	0.024	0.610	0.548	0.964	1.248	1.762	2.654	3.209	0.318	0.266	0.590	0.869	1.909	2.868	3.356	3.537
46	0.024	0.602	0.539	0.956	1.233	1.738	2.611	3.153	0.316	0.264	0.587	0.858	1.886	2.834	3.303	3.478
47	0.024	0.594	0.531	0.948	1.218	1.715	2.570	3.099	0.315	0.262	0.584	0.848	1.864	2.800	3.253	3.421
48	0.024	0.587	0.523	0.941	1.204	1.692	2.530	3.047	0.314	0.261	0.582	0.838	1.842	2.768	3.204	3.367
49	0.023	0.580	0.515	0.933	1.190	1.671	2.492	2.997	0.312	0.259	0.579	0.828	1.820	2.736	3.158	3.314

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

Average Speed

	Road Name	Ref.	Hour by Hour Speed (Km/hr)																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	LKT01	1	24	NA	24	NA	NA	NA	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	NA	NA	24
2	LKT02	2	46	46	43	NA	NA	46	47	48	48	47	48	48	47	47	48	47	48	47	47	48	47	47	43	47
3	LKT03	3	24	NA	24	NA	NA	NA	24	25	25	24	24	24	24	24	25	24	24	25	24	24	24	NA	NA	24
4	LKT04	4	24	NA	24	NA	NA	NA	25	26	26	26	26	26	26	26	26	26	26	26	26	25	24	NA	24	24
5	LKT05	5	47	48	44	NA	NA	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	43	47
6	LKT06	6	24	NA	24	NA	NA	NA	26	28	28	28	29	28	28	28	29	28	28	28	28	28	24	NA	24	24
7	LKT07	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8	LKT08	8	NA	NA	NA	NA	NA	NA	29	30	30	30	30	30	30	30	30	30	30	30	30	32	NA	NA	NA	NA
9	LKT09	9	48	48	45	NA	NA	48	49	48	48	48	48	48	48	48	48	48	48	48	48	48	49	48	44	49
10	LKT10	10	NA	NA	NA	NA	NA	NA	NA	33	32	31	32	32	32	32	31	32	31	33	35	35	NA	NA	NA	NA
11	LKT11	11	NA	NA	NA	NA	NA	NA	24	28	29	28	29	29	28	28	29	28	29	28	26	28	NA	NA	NA	NA
12	LKT12	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13	LKT13	13	NA	NA	NA	NA	NA	NA	NA	33	32	31	32	32	32	32	31	32	31	33	35	35	NA	NA	NA	NA
14	LKT14	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
15	LKT15	15	NA	NA	NA	NA	NA	NA	NA	29	30	31	31	31	31	31	31	31	31	29	29	29	NA	NA	NA	NA
16	LKT16	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
17	LKT17	17	NA	NA	NA	NA	NA	NA	NA	33	32	31	32	32	32	32	31	32	31	33	35	35	NA	NA	NA	NA
18	LKT18	18	NA	NA	NA	NA	NA	NA	NA	33	31	31	31	31	31	31	31	31	31	33	35	35	NA	NA	NA	NA
19	LKT19	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
20	LKT20	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
21	LKT21	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
22	LKT22	22	NA	NA	NA	NA	NA	NA	NA	31	30	32	29	29	29	32	29	29	32	31	NA	NA	NA	NA	NA	NA
23	LKT23	23	NA	NA	NA	NA	NA	NA	NA	29	29	32	29	29	29	32	29	29	32	29	NA	NA	NA	NA	NA	NA
24	LKT24	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
25	LKT25	25	24	24	24	NA	NA	24	25	26	26	26	26	26	26	26	26	26	26	26	26	25	24	24	24	24
26	LKT26	26	24	24	24	NA	NA	24	25	26	26	26	26	26	26	26	26	26	26	26	26	25	24	24	24	24
27	LKT27	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
28	LKT28	28	24	NA	24	NA	NA	NA	26	27	27	27	27	27	27	28	27	27	27	27	27	27	24	NA	NA	24
29	LKT29	29	24	24	24	NA	NA	24	24	25	25	25	25	25	25	25	25	25	25	25	25	25	24	24	24	24
30	LKT30	30	24	24	24	NA	NA	24	24	25	25	25	25	25	25	25	25	25	25	25	25	25	24	24	24	24
31	LKT31	31	24	24	24	NA	NA	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25	24	24	24	24

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT01
Year: 2020

Vehicle Classes	Description	Hour																						
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
2	LGV3	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
3	LGV4	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
4	PLB	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
5	LGV6	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
6	HGV7	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
7	HGV8	1	0	1	0	0	0	3	17	20	15	17	17	15	14	17	15	15	16	7	6	2	0	0	2	
8	FBDD	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
9	MC	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
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	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
12	PV5	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
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	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
15	NFB8	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
16	FBSD	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
	Total Flow (veh)	1	0	1	0	0	0	3	18	21	15	17	17	15	14	17	15	15	17	7	6	2	0	0	2	

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	#N/A	0.032	#N/A	#N/A	#N/A	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	#N/A	#N/A	0.032
LGV3	0.916	#N/A	0.916	#N/A	#N/A	#N/A	0.916	0.916	0.916	0.916	0.916	0.916	0.916	0.916	0.916	0.916	0.916	0.916	0.916	0.916	0.916	#N/A	#N/A	0.916
LGV4	0.893	#N/A	0.893	#N/A	#N/A	#N/A	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	#N/A	#N/A	0.893
PLB	1.247	#N/A	1.247	#N/A	#N/A	#N/A	1.247	1.247	1.247	1.247	1.247	1.247	1.247	1.247	1.247	1.247	1.247	1.247	1.247	1.247	1.247	#N/A	#N/A	1.247
LGV6	1.787	#N/A	1.787	#N/A	#N/A	#N/A	1.787	1.787	1.787	1.787	1.787	1.787	1.787	1.787	1.787	1.787	1.787	1.787	1.787	1.787	1.787	#N/A	#N/A	1.787
HGV7	2.628	#N/A	2.628	#N/A	#N/A	#N/A	2.628	2.628	2.628	2.628	2.628	2.628	2.628	2.628	2.628	2.628	2.628	2.628	2.628	2.628	2.628	#N/A	#N/A	2.628
HGV8	4.259	#N/A	4.259	#N/A	#N/A	#N/A	4.259	4.259	4.259	4.259	4.259	4.259	4.259	4.259	4.259	4.259	4.259	4.259	4.259	4.259	4.259	#N/A	#N/A	4.259
FBDD	5.334	#N/A	5.334	#N/A	#N/A	#N/A	5.334	5.334	5.334	5.334	5.334	5.334	5.334	5.334	5.334	5.334	5.334	5.334	5.334	5.334	5.334	#N/A	#N/A	5.334
MC	0.369	#N/A	0.369	#N/A	#N/A	#N/A	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	#N/A	#N/A	0.369
TAXI	0.319	#N/A	0.319	#N/A	#N/A	#N/A	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319	#N/A	#N/A	0.319
PV4	0.742	#N/A	0.742	#N/A	#N/A	#N/A	0.742	0.742	0.742	0.742	0.742	0.742	0.742	0.742	0.742	0.742	0.742	0.742	0.742	0.742	0.742	#N/A	#N/A	0.742
PV5	1.263	#N/A	1.263	#N/A	#N/A	#N/A	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	1.263	#N/A	#N/A	1.263
NFB6	2.772	#N/A	2.772	#N/A	#N/A	#N/A	2.772	2.772	2.772	2.772	2.772	2.772	2.772	2.772	2.772	2.772	2.772	2.772	2.772	2.772	2.772	#N/A	#N/A	2.772
NFB7	4.158	#N/A	4.158	#N/A	#N/A	#N/A	4.158	4.158	4.158	4.158	4.158	4.158	4.158	4.158	4.158	4.158	4.158	4.158	4.158	4.158	4.158	#N/A	#N/A	4.158
NFB8	5.327	#N/A	5.327	#N/A	#N/A	#N/A	5.327	5.327	5.327	5.327	5.327	5.327	5.327	5.327	5.327	5.327	5.327	5.327	5.327	5.327	5.327	#N/A	#N/A	5.327
FBSD	5.739	#N/A	5.739	#N/A	#N/A	#N/A	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	#N/A	#N/A	5.739

Total composite emission factor (g/Veh/km)	4.2589	0.0000	4.2589	0.0000	0.0000	0.0000	4.2589	4.0241	4.0576	4.2589	4.2589	4.2589	4.2589	4.2589	4.2589	4.2589	4.2589	4.0103	4.2589	4.2589	4.2589	0.0000	0.0000	4.2589
Total composite emission factor (g/Veh/mile)	6.87	0.00	6.87	0.00	0.00	0.00	6.87	6.49	6.54	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.47	6.87	6.87	6.87	0.00	0.00	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT02
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	3	1	2	0	0	1	12	77	89	66	73	75	63	56	78	63	66	71	30	24	5	2	1	4
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	1	0	1	0	0	0	4	35	43	33	37	38	33	28	39	33	33	32	12	9	2	0	1	2
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	1	9	10	6	7	7	6	6	7	6	6	9	3	2	0	0	0	0
6	HGV7	2	1	1	0	0	1	5	40	48	37	40	42	34	30	45	34	37	38	15	10	3	1	1	2
7	HGV8	6	2	5	0	0	2	20	130	154	115	127	131	115	103	132	115	114	123	53	40	11	3	4	9
8	FBDD	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	3	3	2	3	3	2	2	3	2	3	3	1	1	0	0	0	0
10	TAXI	0	0	0	0	0	0	2	12	14	10	11	13	10	10	12	11	10	11	5	4	1	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	1	4	5	3	4	4	4	4	4	4	3	4	2	1	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	2	12	14	10	11	11	10	10	12	11	10	11	5	3	1	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	12	4	9	0	0	4	47	323	380	282	313	324	277	249	332	279	282	302	126	94	23	6	7	17

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.024	0.024	0.025	#N/A	#N/A	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.025	0.024
LGV3	0.602	0.602	0.627	#N/A	#N/A	0.602	0.594	0.587	0.587	0.594	0.587	0.587	0.594	0.594	0.587	0.594	0.587	0.594	0.594	0.587	0.594	0.594	0.627	0.594
LGV4	0.539	0.539	0.567	#N/A	#N/A	0.539	0.531	0.523	0.523	0.531	0.523	0.523	0.531	0.531	0.523	0.531	0.523	0.531	0.531	0.523	0.531	0.531	0.567	0.531
PLB	0.956	0.956	0.981	#N/A	#N/A	0.956	0.948	0.941	0.941	0.948	0.941	0.941	0.948	0.948	0.941	0.948	0.941	0.948	0.948	0.941	0.948	0.948	0.981	0.948
LGV6	1.233	1.233	1.280	#N/A	#N/A	1.233	1.218	1.204	1.204	1.218	1.204	1.204	1.218	1.218	1.204	1.218	1.204	1.218	1.218	1.204	1.218	1.218	1.280	1.218
HGV7	1.738	1.738	1.813	#N/A	#N/A	1.738	1.715	1.692	1.692	1.715	1.692	1.692	1.715	1.715	1.692	1.715	1.692	1.715	1.715	1.692	1.715	1.715	1.813	1.715
HGV8	2.611	2.611	2.744	#N/A	#N/A	2.611	2.570	2.530	2.530	2.570	2.530	2.530	2.570	2.570	2.530	2.570	2.530	2.570	2.570	2.530	2.570	2.570	2.744	2.570
FBDD	3.153	3.153	3.329	#N/A	#N/A	3.153	3.099	3.047	3.047	3.099	3.047	3.047	3.099	3.099	3.047	3.099	3.047	3.099	3.099	3.047	3.099	3.099	3.329	3.099
MC	0.316	0.316	0.321	#N/A	#N/A	0.316	0.315	0.314	0.314	0.315	0.314	0.314	0.315	0.315	0.314	0.315	0.314	0.315	0.315	0.314	0.315	0.315	0.321	0.315
TAXI	0.264	0.264	0.269	#N/A	#N/A	0.264	0.262	0.261	0.261	0.262	0.261	0.261	0.262	0.262	0.261	0.262	0.261	0.262	0.262	0.261	0.262	0.262	0.269	0.262
PV4	0.587	0.587	0.597	#N/A	#N/A	0.587	0.584	0.582	0.582	0.584	0.582	0.582	0.584	0.584	0.582	0.584	0.582	0.584	0.584	0.582	0.584	0.584	0.597	0.584
PV5	0.858	0.858	0.891	#N/A	#N/A	0.858	0.848	0.838	0.838	0.848	0.838	0.838	0.848	0.848	0.838	0.848	0.838	0.848	0.848	0.838	0.848	0.848	0.891	0.848
NFB6	1.886	1.886	1.957	#N/A	#N/A	1.886	1.864	1.842	1.842	1.864	1.842	1.842	1.864	1.864	1.842	1.864	1.842	1.864	1.864	1.842	1.864	1.864	1.957	1.864
NFB7	2.834	2.834	2.939	#N/A	#N/A	2.834	2.800	2.768	2.768	2.800	2.768	2.768	2.800	2.800	2.768	2.800	2.768	2.800	2.800	2.768	2.800	2.800	2.939	2.800
NFB8	3.303	3.303	3.467	#N/A	#N/A	3.303	3.253	3.204	3.204	3.253	3.204	3.204	3.253	3.253	3.204	3.253	3.204	3.253	3.253	3.204	3.253	3.253	3.467	3.253
FBSD	3.478	3.478	3.662	#N/A	#N/A	3.478	3.421	3.367	3.367	3.421	3.367	3.367	3.421	3.421	3.367	3.421	3.367	3.421	3.421	3.367	3.421	3.421	3.662	3.421

Total composite emission factor (g/Veh/km)	1.6460	1.7459	1.7944	0.0000	0.0000	1.7459	1.5423	1.4876	1.4899	1.5132	1.4855	1.4801	1.5285	1.5376	1.4780	1.5301	1.4830	1.5164	1.5418	1.4747	1.6568	1.5786	1.9115	1.6302
Total composite emission factor (g/Veh/mile)	2.65	2.82	2.89	0.00	0.00	2.82	2.49	2.40	2.40	2.44	2.40	2.39	2.47	2.48	2.38	2.47	2.39	2.45	2.49	2.38	2.67	2.55	3.08	2.63

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT03
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	2	2	1	1	1	0	0	2	0	1	2	0	0	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	1	0	1	0	0	0	4	24	28	21	24	24	21	20	24	21	21	23	10	8	2	0	0	2
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	1	0	1	0	0	0	4	27	30	22	25	25	21	20	26	21	22	25	10	8	2	0	0	2

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	#N/A	0.032	#N/A	#N/A	#N/A	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	#N/A	#N/A	0.032
LGV3	0.916	#N/A	0.916	#N/A	#N/A	#N/A	0.916	0.893	0.893	0.916	0.916	0.916	0.916	0.916	0.893	0.916	0.916	0.893	0.916	0.916	0.916	#N/A	#N/A	0.916
LGV4	0.893	#N/A	0.893	#N/A	#N/A	#N/A	0.893	0.867	0.867	0.893	0.893	0.893	0.893	0.893	0.867	0.893	0.893	0.867	0.893	0.893	0.893	#N/A	#N/A	0.893
PLB	1.247	#N/A	1.247	#N/A	#N/A	#N/A	1.247	1.223	1.223	1.247	1.247	1.247	1.247	1.247	1.223	1.247	1.247	1.223	1.247	1.247	1.247	#N/A	#N/A	1.247
LGV6	1.787	#N/A	1.787	#N/A	#N/A	#N/A	1.787	1.745	1.745	1.787	1.787	1.787	1.787	1.787	1.745	1.787	1.787	1.745	1.787	1.787	1.787	#N/A	#N/A	1.787
HGV7	2.628	#N/A	2.628	#N/A	#N/A	#N/A	2.628	2.562	2.562	2.628	2.628	2.628	2.628	2.628	2.562	2.628	2.628	2.562	2.628	2.628	2.628	#N/A	#N/A	2.628
HGV8	4.259	#N/A	4.259	#N/A	#N/A	#N/A	4.259	4.128	4.128	4.259	4.259	4.259	4.259	4.259	4.128	4.259	4.259	4.128	4.259	4.259	4.259	#N/A	#N/A	4.259
FBDD	5.334	#N/A	5.334	#N/A	#N/A	#N/A	5.334	5.160	5.160	5.334	5.334	5.334	5.334	5.334	5.160	5.334	5.334	5.160	5.334	5.334	5.334	#N/A	#N/A	5.334
MC	0.369	#N/A	0.369	#N/A	#N/A	#N/A	0.369	0.366	0.366	0.369	0.369	0.369	0.369	0.369	0.366	0.369	0.369	0.366	0.369	0.369	0.369	#N/A	#N/A	0.369
TAXI	0.319	#N/A	0.319	#N/A	#N/A	#N/A	0.319	0.316	0.316	0.319	0.319	0.319	0.319	0.319	0.316	0.319	0.319	0.316	0.319	0.319	0.319	#N/A	#N/A	0.319
PV4	0.742	#N/A	0.742	#N/A	#N/A	#N/A	0.742	0.730	0.730	0.742	0.742	0.742	0.742	0.742	0.730	0.742	0.742	0.730	0.742	0.742	0.742	#N/A	#N/A	0.742
PV5	1.263	#N/A	1.263	#N/A	#N/A	#N/A	1.263	1.226	1.226	1.263	1.263	1.263	1.263	1.263	1.226	1.263	1.263	1.226	1.263	1.263	1.263	#N/A	#N/A	1.263
NFB6	2.772	#N/A	2.772	#N/A	#N/A	#N/A	2.772	2.688	2.688	2.772	2.772	2.772	2.772	2.772	2.688	2.772	2.772	2.688	2.772	2.772	2.772	#N/A	#N/A	2.772
NFB7	4.158	#N/A	4.158	#N/A	#N/A	#N/A	4.158	4.032	4.032	4.158	4.158	4.158	4.158	4.158	4.032	4.158	4.158	4.032	4.158	4.158	4.158	#N/A	#N/A	4.158
NFB8	5.327	#N/A	5.327	#N/A	#N/A	#N/A	5.327	5.166	5.166	5.327	5.327	5.327	5.327	5.327	5.166	5.327	5.327	5.166	5.327	5.327	5.327	#N/A	#N/A	5.327
FBSD	5.739	#N/A	5.739	#N/A	#N/A	#N/A	5.739	5.561	5.561	5.739	5.739	5.739	5.739	5.739	5.561	5.739	5.739	5.561	5.739	5.739	5.739	#N/A	#N/A	5.739

Total composite emission factor (g/Veh/km)	4.2589	0.0000	4.2589	0.0000	0.0000	0.0000	4.2589	3.7037	3.8548	4.0668	4.0898	4.0898	4.2589	4.2589	3.8128	4.2589	4.0668	3.8002	4.2589	4.2589	4.2589	0.0000	0.0000	4.2589
Total composite emission factor (g/Veh/mile)	6.87	0.00	6.87	0.00	0.00	0.00	6.87	5.97	6.22	6.56	6.60	6.60	6.87	6.87	6.15	6.87	6.56	6.13	6.87	6.87	6.87	0.00	0.00	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT04
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	1	4	5	4	4	4	4	4	4	4	3	4	2	1	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	3	3	2	2	2	2	2	2	2	2	3	1	1	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0
7	HGV8	2	0	1	0	0	0	5	28	32	24	26	28	24	21	27	24	25	26	12	9	2	0	1	2
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	2	0	1	0	0	0	6	37	42	32	34	36	32	29	35	32	31	34	15	11	2	0	1	2

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	#N/A	0.032	#N/A	#N/A	#N/A	0.032	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.032	0.032	#N/A	0.032	0.032
LGV3	0.916	#N/A	0.916	#N/A	#N/A	#N/A	0.893	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.893	0.916	#N/A	0.916	0.916
LGV4	0.893	#N/A	0.893	#N/A	#N/A	#N/A	0.867	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.867	0.893	#N/A	0.893	0.893
PLB	1.247	#N/A	1.247	#N/A	#N/A	#N/A	1.223	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.223	1.247	#N/A	1.247	1.247
LGV6	1.787	#N/A	1.787	#N/A	#N/A	#N/A	1.745	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.745	1.787	#N/A	1.787	1.787
HGV7	2.628	#N/A	2.628	#N/A	#N/A	#N/A	2.562	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.562	2.628	#N/A	2.628	2.628
HGV8	4.259	#N/A	4.259	#N/A	#N/A	#N/A	4.128	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.128	4.259	#N/A	4.259	4.259
FBDD	5.334	#N/A	5.334	#N/A	#N/A	#N/A	5.160	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	5.160	5.334	#N/A	5.334	5.334
MC	0.369	#N/A	0.369	#N/A	#N/A	#N/A	0.366	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.366	0.369	#N/A	0.369	0.369
TAXI	0.319	#N/A	0.319	#N/A	#N/A	#N/A	0.316	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.316	0.319	#N/A	0.319	0.319
PV4	0.742	#N/A	0.742	#N/A	#N/A	#N/A	0.730	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.730	0.742	#N/A	0.742	0.742
PV5	1.263	#N/A	1.263	#N/A	#N/A	#N/A	1.226	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.226	1.263	#N/A	1.263	1.263
NFB6	2.772	#N/A	2.772	#N/A	#N/A	#N/A	2.688	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.688	2.772	#N/A	2.772	2.772
NFB7	4.158	#N/A	4.158	#N/A	#N/A	#N/A	4.032	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	4.032	4.158	#N/A	4.158	4.158
NFB8	5.327	#N/A	5.327	#N/A	#N/A	#N/A	5.166	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.166	5.327	#N/A	5.327	5.327
FBSD	5.739	#N/A	5.739	#N/A	#N/A	#N/A	5.561	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.561	5.739	#N/A	5.739	5.739

Total composite emission factor (g/Veh/km)	4.2589	0.0000	4.2589	0.0000	0.0000	0.0000	3.4452	3.2170	3.2352	3.2174	3.2638	3.3050	3.2174	3.1358	3.2850	3.2174	3.3688	3.2151	3.2652	3.4591	4.2589	0.0000	4.2589	4.2589
Total composite emission factor (g/Veh/mile)	6.87	0.00	6.87	0.00	0.00	0.00	5.56	5.19	5.22	5.19	5.26	5.33	5.19	5.06	5.30	5.19	5.43	5.19	5.27	5.58	6.87	0.00	6.87	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT05
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	3	1	2	0	0	1	12	75	87	65	72	74	63	56	76	63	64	69	30	23	5	2	1	4
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	1	0	1	0	0	0	4	34	42	32	35	36	32	28	37	32	32	32	12	9	2	0	1	2
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	1	9	9	6	7	7	6	6	7	6	6	8	3	2	0	0	0	0
6	HGV7	2	1	1	0	0	1	5	40	48	37	40	42	34	30	45	34	36	38	15	10	3	1	1	2
7	HGV8	5	1	4	0	0	1	17	106	125	94	103	107	94	84	107	94	94	100	43	33	8	2	4	7
8	FBDD	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	3	3	2	3	3	2	2	3	2	3	3	1	1	0	0	0	0
10	TAXI	0	0	0	0	0	0	2	12	14	10	11	13	10	10	12	11	10	11	5	4	1	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	1	4	5	3	4	4	4	4	4	4	3	4	2	1	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	2	12	14	10	11	11	10	10	12	11	10	11	5	3	1	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	11	3	8	0	0	3	44	296	347	259	286	297	255	230	303	257	258	276	116	86	20	5	7	15

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.024	0.024	0.025	#N/A	#N/A	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.025	0.024
LGV3	0.594	0.587	0.618	#N/A	#N/A	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.627	0.594
LGV4	0.531	0.523	0.557	#N/A	#N/A	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.567	0.531
PLB	0.948	0.941	0.972	#N/A	#N/A	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.981	0.948
LGV6	1.218	1.204	1.264	#N/A	#N/A	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.280	1.218
HGV7	1.715	1.692	1.787	#N/A	#N/A	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.813	1.715
HGV8	2.570	2.530	2.698	#N/A	#N/A	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.744	2.570
FBDD	3.099	3.047	3.268	#N/A	#N/A	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.329	3.099
MC	0.315	0.314	0.319	#N/A	#N/A	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.321	0.315
TAXI	0.262	0.261	0.267	#N/A	#N/A	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.269	0.262
PV4	0.584	0.582	0.593	#N/A	#N/A	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.597	0.584
PV5	0.848	0.838	0.880	#N/A	#N/A	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.891	0.848
NFB6	1.864	1.842	1.933	#N/A	#N/A	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.957	1.864
NFB7	2.800	2.768	2.903	#N/A	#N/A	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.939	2.800
NFB8	3.253	3.204	3.411	#N/A	#N/A	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.467	3.253
FBSD	3.421	3.367	3.598	#N/A	#N/A	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.662	3.421

Total composite emission factor (g/Veh/km)	1.5346	1.4153	1.6481	0.0000	0.0000	1.4153	1.4506	1.4163	1.4150	1.4160	1.4096	1.4066	1.4254	1.4310	1.4071	1.4277	1.4161	1.4194	1.4319	1.4057	1.4974	1.3600	1.9115	1.5050
Total composite emission factor (g/Veh/mile)	2.48	2.28	2.66	0.00	0.00	2.28	2.34	2.28	2.28	2.28	2.27	2.27	2.30	2.31	2.27	2.30	2.28	2.29	2.31	2.27	2.42	2.19	3.08	2.43

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT06
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	3	23	26	20	22	22	18	16	24	18	19	21	8	7	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	10	13	11	12	12	11	10	12	11	11	9	2	2	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	5	7	7	7	7	4	4	10	4	6	5	0	0	0	0	0	0
7	HGV8	2	0	1	0	0	0	6	41	48	37	40	42	37	33	41	37	37	38	16	12	2	0	1	2
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	2	0	1	0	0	0	9	81	95	75	81	83	70	63	87	70	73	74	26	21	2	0	1	2

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	#N/A	0.032	#N/A	#N/A	#N/A	0.031	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.032	#N/A	0.032	0.032
LGV3	0.916	#N/A	0.916	#N/A	#N/A	#N/A	0.871	0.831	0.831	0.831	0.812	0.831	0.831	0.831	0.812	0.831	0.831	0.831	0.831	0.831	0.916	#N/A	0.916	0.916
LGV4	0.893	#N/A	0.893	#N/A	#N/A	#N/A	0.843	0.798	0.798	0.798	0.778	0.798	0.798	0.798	0.778	0.798	0.798	0.798	0.798	0.798	0.893	#N/A	0.893	0.893
PLB	1.247	#N/A	1.247	#N/A	#N/A	#N/A	1.200	1.159	1.159	1.159	1.141	1.159	1.159	1.159	1.141	1.159	1.159	1.159	1.159	1.159	1.247	#N/A	1.247	1.247
LGV6	1.787	#N/A	1.787	#N/A	#N/A	#N/A	1.705	1.634	1.634	1.634	1.601	1.634	1.634	1.634	1.601	1.634	1.634	1.634	1.634	1.634	1.787	#N/A	1.787	1.787
HGV7	2.628	#N/A	2.628	#N/A	#N/A	#N/A	2.500	2.386	2.386	2.386	2.334	2.386	2.386	2.386	2.334	2.386	2.386	2.386	2.386	2.386	2.628	#N/A	2.628	2.628
HGV8	4.259	#N/A	4.259	#N/A	#N/A	#N/A	4.006	3.786	3.786	3.786	3.687	3.786	3.786	3.786	3.687	3.786	3.786	3.786	3.786	3.786	4.259	#N/A	4.259	4.259
FBDD	5.334	#N/A	5.334	#N/A	#N/A	#N/A	4.999	4.708	4.708	4.708	4.576	4.708	4.708	4.708	4.576	4.708	4.708	4.708	4.708	4.708	5.334	#N/A	5.334	5.334
MC	0.369	#N/A	0.369	#N/A	#N/A	#N/A	0.362	0.356	0.356	0.356	0.353	0.356	0.356	0.356	0.353	0.356	0.356	0.356	0.356	0.356	0.369	#N/A	0.369	0.369
TAXI	0.319	#N/A	0.319	#N/A	#N/A	#N/A	0.312	0.305	0.305	0.305	0.302	0.305	0.305	0.305	0.302	0.305	0.305	0.305	0.305	0.305	0.319	#N/A	0.319	0.319
PV4	0.742	#N/A	0.742	#N/A	#N/A	#N/A	0.718	0.697	0.697	0.697	0.688	0.697	0.697	0.697	0.688	0.697	0.697	0.697	0.697	0.697	0.742	#N/A	0.742	0.742
PV5	1.263	#N/A	1.263	#N/A	#N/A	#N/A	1.191	1.128	1.128	1.128	1.099	1.128	1.128	1.128	1.099	1.128	1.128	1.128	1.128	1.128	1.263	#N/A	1.263	1.263
NFB6	2.772	#N/A	2.772	#N/A	#N/A	#N/A	2.609	2.468	2.468	2.468	2.406	2.468	2.468	2.468	2.406	2.468	2.468	2.468	2.468	2.468	2.772	#N/A	2.772	2.772
NFB7	4.158	#N/A	4.158	#N/A	#N/A	#N/A	3.914	3.703	3.703	3.703	3.609	3.703	3.703	3.703	3.609	3.703	3.703	3.703	3.703	3.703	4.158	#N/A	4.158	4.158
NFB8	5.327	#N/A	5.327	#N/A	#N/A	#N/A	5.017	4.747	4.747	4.747	4.625	4.747	4.747	4.747	4.625	4.747	4.747	4.747	4.747	4.747	5.327	#N/A	5.327	5.327
FBSD	5.739	#N/A	5.739	#N/A	#N/A	#N/A	5.395	5.094	5.094	5.094	4.958	5.094	5.094	5.094	4.958	5.094	5.094	5.094	5.094	5.094	5.739	#N/A	5.739	5.739

Total composite emission factor (g/Veh/km)	4.2589	0.0000	4.2589	0.0000	0.0000	0.0000	2.6811	2.2113	2.2236	2.2158	2.1456	2.2407	2.2709	2.2692	2.1212	2.2709	2.2434	2.2333	2.4008	2.2498	4.2589	0.0000	4.2589	4.2589
Total composite emission factor (g/Veh/mile)	6.87	0.00	6.87	0.00	0.00	0.00	4.32	3.57	3.59	3.57	3.46	3.61	3.66	3.66	3.42	3.66	3.62	3.60	3.87	3.63	6.87	0.00	6.87	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT07
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT08
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	1	14	15	11	13	13	10	8	14	10	11	12	4	4	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	3	6	6	6	6	6	6	6	6	6	3	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	3	3	3	3	3	0	0	6	0	3	3	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	1	9	12	10	10	10	10	10	10	10	9	9	3	2	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	2	29	36	30	32	32	26	24	36	26	29	27	7	6	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.030	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.028	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.812	0.795	0.795	0.795	0.795	0.795	0.795	0.795	0.795	0.795	0.795	0.795	0.795	0.755	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.778	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.706	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.141	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.094	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.601	1.570	1.570	1.570	1.570	1.570	1.570	1.570	1.570	1.570	1.570	1.570	1.570	1.513	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.334	2.284	2.284	2.284	2.284	2.284	2.284	2.284	2.284	2.284	2.284	2.284	2.284	2.183	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.687	3.593	3.593	3.593	3.593	3.593	3.593	3.593	3.593	3.593	3.593	3.593	3.593	3.422	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.576	4.452	4.452	4.452	4.452	4.452	4.452	4.452	4.452	4.452	4.452	4.452	4.452	4.225	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.353	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.344	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.302	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.294	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.688	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.678	0.661	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.099	1.074	1.074	1.074	1.074	1.074	1.074	1.074	1.074	1.074	1.074	1.074	1.074	1.033	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.406	2.349	2.349	2.349	2.349	2.349	2.349	2.349	2.349	2.349	2.349	2.349	2.349	2.259	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.609	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.524	3.390	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.625	4.510	4.510	4.510	4.510	4.510	4.510	4.510	4.510	4.510	4.510	4.510	4.510	4.300	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.958	4.830	4.830	4.830	4.830	4.830	4.830	4.830	4.830	4.830	4.830	4.830	4.830	4.595	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.8583	1.4440	1.5266	1.5885	1.4910	1.4910	1.5682	1.6964	1.5165	1.5682	1.5193	1.5488	1.5567	1.1597	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.33	2.46	2.56	2.40	2.40	2.53	2.74	2.45	2.53	2.45	2.50	2.51	1.87	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT09
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	3	1	2	0	0	1	9	52	61	45	50	52	45	40	52	45	45	48	22	16	5	2	1	4
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	1	0	1	0	0	0	4	24	29	21	23	24	21	18	25	21	21	23	10	7	2	0	1	2
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	1	7	8	6	7	7	6	6	7	6	6	7	3	2	0	0	0	0
6	HGV7	2	1	1	0	0	1	5	35	41	30	33	35	30	26	35	30	30	33	15	10	3	1	1	2
7	HGV8	3	1	3	0	0	1	11	65	77	57	63	65	57	51	66	57	57	62	27	21	6	2	3	5
8	FBDD	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	3	3	2	3	3	2	2	3	2	3	3	1	1	0	0	0	0
10	TAXI	0	0	0	0	0	0	2	12	14	10	11	13	10	10	12	11	10	11	5	4	1	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	1	4	5	3	4	4	4	4	4	4	3	4	2	1	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	2	12	14	10	11	11	10	10	12	11	10	11	5	3	1	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	9	3	7	0	0	3	35	215	252	184	205	214	185	167	216	187	185	202	90	65	18	5	6	13

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.024	0.024	0.024	#N/A	#N/A	0.024	0.023	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.023	0.024	0.025	0.023
LGV3	0.587	0.587	0.610	#N/A	#N/A	0.587	0.580	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.587	0.580	0.587	0.618	0.580
LGV4	0.523	0.523	0.548	#N/A	#N/A	0.523	0.515	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.515	0.523	0.557	0.515
PLB	0.941	0.941	0.964	#N/A	#N/A	0.941	0.933	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.933	0.941	0.972	0.933
LGV6	1.204	1.204	1.248	#N/A	#N/A	1.204	1.190	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.204	1.190	1.204	1.264	1.190
HGV7	1.692	1.692	1.762	#N/A	#N/A	1.692	1.671	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.671	1.692	1.787	1.671
HGV8	2.530	2.530	2.654	#N/A	#N/A	2.530	2.492	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.530	2.492	2.530	2.698	2.492
FBDD	3.047	3.047	3.209	#N/A	#N/A	3.047	2.997	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	3.047	2.997	3.047	3.268	2.997
MC	0.314	0.314	0.318	#N/A	#N/A	0.314	0.312	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.312	0.314	0.319	0.312
TAXI	0.261	0.261	0.266	#N/A	#N/A	0.261	0.259	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.261	0.259	0.261	0.267	0.259
PV4	0.582	0.582	0.590	#N/A	#N/A	0.582	0.579	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.579	0.582	0.593	0.579
PV5	0.838	0.838	0.869	#N/A	#N/A	0.838	0.828	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.838	0.828	0.838	0.880	0.828
NFB6	1.842	1.842	1.909	#N/A	#N/A	1.842	1.820	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.842	1.820	1.842	1.933	1.820
NFB7	2.768	2.768	2.868	#N/A	#N/A	2.768	2.736	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.768	2.736	2.768	2.903	2.736
NFB8	3.204	3.204	3.356	#N/A	#N/A	3.204	3.158	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.204	3.158	3.204	3.411	3.158
FBSD	3.367	3.367	3.537	#N/A	#N/A	3.367	3.314	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.367	3.314	3.367	3.598	3.314

Total composite emission factor (g/Veh/km)	1.2854	1.4153	1.4741	0.0000	0.0000	1.4153	1.3681	1.3899	1.3853	1.3862	1.3820	1.3684	1.3887	1.3968	1.3835	1.3923	1.3804	1.3897	1.3820	1.3741	1.3627	1.3600	1.7437	1.3020
Total composite emission factor (g/Veh/mile)	2.07	2.28	2.38	0.00	0.00	2.28	2.21	2.24	2.23	2.24	2.23	2.21	2.24	2.25	2.23	2.25	2.23	2.24	2.23	2.22	2.20	2.19	2.81	2.10

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT10
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	7	7	5	6	6	5	4	6	5	5	6	2	2	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	2	3	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	1	1	1	0	0	2	0	1	1	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	2	3	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	12	14	10	11	11	9	8	12	9	10	11	2	2	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.028	0.028	0.029	0.028	0.028	0.028	0.028	0.029	0.028	0.029	0.028	0.027	0.027	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.740	0.755	0.771	0.755	0.755	0.755	0.755	0.771	0.755	0.771	0.740	0.713	0.713	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.690	0.706	0.724	0.706	0.706	0.706	0.706	0.724	0.706	0.724	0.690	0.660	0.660	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.082	1.094	1.107	1.094	1.094	1.094	1.094	1.107	1.094	1.107	1.082	1.059	1.059	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.487	1.513	1.541	1.513	1.513	1.513	1.513	1.541	1.513	1.541	1.487	1.437	1.437	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.141	2.183	2.227	2.183	2.183	2.183	2.183	2.227	2.183	2.227	2.141	2.063	2.063	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.344	3.422	3.505	3.422	3.422	3.422	3.422	3.505	3.422	3.505	3.344	3.199	3.199	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.122	4.225	4.335	4.225	4.225	4.225	4.225	4.335	4.225	4.335	4.122	3.930	3.930	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.342	0.344	0.347	0.344	0.344	0.344	0.344	0.347	0.344	0.347	0.342	0.337	0.337	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.291	0.294	0.296	0.294	0.294	0.294	0.294	0.296	0.294	0.296	0.291	0.286	0.286	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.653	0.661	0.670	0.661	0.661	0.661	0.661	0.670	0.661	0.670	0.653	0.639	0.639	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.018	1.033	1.047	1.033	1.033	1.033	1.033	1.047	1.033	1.047	1.018	0.990	0.990	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.229	2.259	2.290	2.259	2.259	2.259	2.259	2.290	2.259	2.290	2.229	2.170	2.170	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.345	3.390	3.436	3.390	3.390	3.390	3.390	3.436	3.390	3.436	3.345	3.257	3.257	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.204	4.300	4.402	4.300	4.300	4.300	4.300	4.402	4.300	4.402	4.204	4.027	4.027	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.488	4.595	4.709	4.595	4.595	4.595	4.595	4.709	4.595	4.709	4.488	4.289	4.289	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8670	1.0548	1.0829	0.9646	0.9646	0.9332	1.0463	1.0905	0.9332	1.0829	0.9433	0.0272	0.0272	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.70	1.75	1.56	1.56	1.51	1.69	1.76	1.51	1.75	1.52	0.04	0.04	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT11
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	5	5	3	4	4	3	2	4	3	3	4	1	1	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	1	1	1	0	0	2	0	1	1	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	1	7	8	6	6	6	6	6	6	6	5	7	3	2	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	1	14	16	12	13	13	11	10	14	11	11	13	4	3	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.032	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.031	0.030	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.916	0.831	0.812	0.831	0.812	0.812	0.831	0.831	0.812	0.831	0.812	0.831	0.871	0.831	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.893	0.798	0.778	0.798	0.778	0.778	0.798	0.798	0.778	0.798	0.778	0.798	0.843	0.798	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.247	1.159	1.141	1.159	1.141	1.141	1.159	1.159	1.141	1.159	1.141	1.159	1.200	1.159	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.787	1.634	1.601	1.634	1.601	1.601	1.634	1.634	1.601	1.634	1.601	1.634	1.705	1.634	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.628	2.386	2.334	2.386	2.334	2.334	2.386	2.386	2.334	2.386	2.334	2.386	2.500	2.386	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.259	3.786	3.687	3.786	3.687	3.687	3.786	3.786	3.687	3.786	3.687	3.786	4.006	3.786	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	5.334	4.708	4.576	4.708	4.576	4.576	4.708	4.708	4.576	4.708	4.576	4.708	4.999	4.708	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.369	0.356	0.353	0.356	0.353	0.353	0.356	0.356	0.353	0.356	0.353	0.356	0.362	0.356	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.319	0.305	0.302	0.305	0.302	0.302	0.305	0.305	0.302	0.305	0.302	0.305	0.312	0.305	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.742	0.697	0.688	0.697	0.688	0.688	0.697	0.697	0.688	0.697	0.688	0.697	0.718	0.697	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.263	1.128	1.099	1.128	1.099	1.099	1.128	1.128	1.099	1.128	1.099	1.128	1.191	1.128	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.772	2.468	2.406	2.468	2.406	2.406	2.468	2.468	2.406	2.468	2.406	2.468	2.609	2.468	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.158	3.703	3.609	3.703	3.609	3.609	3.703	3.703	3.609	3.703	3.609	3.703	3.914	3.703	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	5.327	4.747	4.625	4.747	4.625	4.625	4.747	4.747	4.625	4.747	4.625	4.747	5.017	4.747	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	5.739	5.094	4.958	5.094	4.958	4.958	5.094	5.094	4.958	5.094	4.958	5.094	5.395	5.094	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.2589	2.1314	2.0958	2.2326	2.0099	2.0099	2.2187	2.4375	2.0331	2.2187	2.0375	2.2931	3.0124	2.5343	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	6.87	3.44	3.38	3.60	3.24	3.24	3.58	3.93	3.28	3.58	3.29	3.70	4.86	4.09	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT12
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT13
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	7	6	5	6	6	5	4	6	5	5	5	2	1	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	1	1	1	0	0	2	0	1	1	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	12	11	10	11	11	9	8	12	9	10	8	2	1	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.028	0.028	0.029	0.028	0.028	0.028	0.028	0.029	0.028	0.029	0.028	0.027	0.027	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.740	0.755	0.771	0.755	0.755	0.755	0.755	0.771	0.755	0.771	0.740	0.713	0.713	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.690	0.706	0.724	0.706	0.706	0.706	0.706	0.724	0.706	0.724	0.690	0.660	0.660	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.082	1.094	1.107	1.094	1.094	1.094	1.094	1.107	1.094	1.107	1.082	1.059	1.059	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.487	1.513	1.541	1.513	1.513	1.513	1.513	1.541	1.513	1.541	1.487	1.437	1.437	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.141	2.183	2.227	2.183	2.183	2.183	2.183	2.227	2.183	2.227	2.141	2.063	2.063	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.344	3.422	3.505	3.422	3.422	3.422	3.422	3.505	3.422	3.505	3.344	3.199	3.199	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.122	4.225	4.335	4.225	4.225	4.225	4.225	4.335	4.225	4.335	4.122	3.930	3.930	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.342	0.344	0.347	0.344	0.344	0.344	0.344	0.347	0.344	0.347	0.342	0.337	0.337	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.291	0.294	0.296	0.294	0.294	0.294	0.294	0.296	0.294	0.296	0.291	0.286	0.286	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.653	0.661	0.670	0.661	0.661	0.661	0.661	0.670	0.661	0.670	0.653	0.639	0.639	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.018	1.033	1.047	1.033	1.033	1.033	1.033	1.047	1.033	1.047	1.018	0.990	0.990	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.229	2.259	2.290	2.259	2.259	2.259	2.259	2.290	2.259	2.290	2.229	2.170	2.170	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.345	3.390	3.436	3.390	3.390	3.390	3.390	3.436	3.390	3.436	3.345	3.257	3.257	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.204	4.300	4.402	4.300	4.300	4.300	4.300	4.402	4.300	4.402	4.204	4.027	4.027	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.488	4.595	4.709	4.595	4.595	4.595	4.595	4.709	4.595	4.709	4.488	4.289	4.289	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8670	0.9646	1.0829	0.9646	0.9646	0.9332	1.0463	1.0905	0.9332	1.0829	0.7893	0.0272	0.0272	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.56	1.75	1.56	1.56	1.51	1.69	1.76	1.51	1.75	1.27	0.04	0.04	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT14
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT15
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	4	4	3	4	4	3	2	4	3	3	3	1	1	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	1	1	1	0	0	2	0	1	1	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	4	4	2	2	2	2	2	2	2	2	4	1	1	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	10	11	8	9	9	7	6	10	7	8	9	2	2	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.030	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.030	0.030	0.030	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.812	0.795	0.771	0.771	0.771	0.771	0.771	0.771	0.771	0.771	0.812	0.812	0.812	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.778	0.758	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.778	0.778	0.778	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.141	1.124	1.107	1.107	1.107	1.107	1.107	1.107	1.107	1.107	1.141	1.141	1.141	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.601	1.570	1.541	1.541	1.541	1.541	1.541	1.541	1.541	1.541	1.601	1.601	1.601	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.334	2.284	2.227	2.227	2.227	2.227	2.227	2.227	2.227	2.227	2.334	2.334	2.334	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.687	3.593	3.505	3.505	3.505	3.505	3.505	3.505	3.505	3.505	3.687	3.687	3.687	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.576	4.452	4.335	4.335	4.335	4.335	4.335	4.335	4.335	4.335	4.576	4.576	4.576	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.353	0.350	0.347	0.347	0.347	0.347	0.347	0.347	0.347	0.347	0.353	0.353	0.353	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.302	0.299	0.296	0.296	0.296	0.296	0.296	0.296	0.296	0.296	0.302	0.302	0.302	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.688	0.678	0.670	0.670	0.670	0.670	0.670	0.670	0.670	0.670	0.688	0.688	0.688	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.099	1.074	1.047	1.047	1.047	1.047	1.047	1.047	1.047	1.047	1.099	1.099	1.099	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.406	2.349	2.290	2.290	2.290	2.290	2.290	2.290	2.290	2.290	2.406	2.406	2.406	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.609	3.524	3.436	3.436	3.436	3.436	3.436	3.436	3.436	3.436	3.609	3.609	3.609	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.625	4.510	4.402	4.402	4.402	4.402	4.402	4.402	4.402	4.402	4.625	4.625	4.625	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.958	4.830	4.709	4.709	4.709	4.709	4.709	4.709	4.709	4.709	4.958	4.958	4.958	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.7978	1.6627	1.3465	1.2000	1.2000	1.2206	1.4192	1.3028	1.2206	1.3465	1.9942	1.8583	1.8583	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.90	2.68	2.17	1.94	1.94	1.97	2.29	2.10	1.97	2.17	3.22	3.00	3.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT16
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT17
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	7	6	5	6	6	5	4	6	5	5	5	2	1	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	1	1	1	0	0	2	0	1	1	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	12	11	10	11	11	9	8	12	9	10	8	2	1	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.028	0.028	0.029	0.028	0.028	0.028	0.028	0.029	0.028	0.029	0.028	0.027	0.027	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.740	0.755	0.771	0.755	0.755	0.755	0.755	0.771	0.755	0.771	0.740	0.713	0.713	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.690	0.706	0.724	0.706	0.706	0.706	0.706	0.724	0.706	0.724	0.690	0.660	0.660	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.082	1.094	1.107	1.094	1.094	1.094	1.094	1.107	1.094	1.107	1.082	1.059	1.059	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.487	1.513	1.541	1.513	1.513	1.513	1.513	1.541	1.513	1.541	1.487	1.437	1.437	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.141	2.183	2.227	2.183	2.183	2.183	2.183	2.227	2.183	2.227	2.141	2.063	2.063	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.344	3.422	3.505	3.422	3.422	3.422	3.422	3.505	3.422	3.505	3.344	3.199	3.199	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.122	4.225	4.335	4.225	4.225	4.225	4.225	4.335	4.225	4.335	4.122	3.930	3.930	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.342	0.344	0.347	0.344	0.344	0.344	0.344	0.347	0.344	0.347	0.342	0.337	0.337	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.291	0.294	0.296	0.294	0.294	0.294	0.294	0.296	0.294	0.296	0.291	0.286	0.286	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.653	0.661	0.670	0.661	0.661	0.661	0.661	0.670	0.661	0.670	0.653	0.639	0.639	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.018	1.033	1.047	1.033	1.033	1.033	1.033	1.047	1.033	1.047	1.018	0.990	0.990	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.229	2.259	2.290	2.259	2.259	2.259	2.259	2.290	2.259	2.290	2.229	2.170	2.170	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.345	3.390	3.436	3.390	3.390	3.390	3.390	3.436	3.390	3.436	3.345	3.257	3.257	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.204	4.300	4.402	4.300	4.300	4.300	4.300	4.402	4.300	4.402	4.204	4.027	4.027	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.488	4.595	4.709	4.595	4.595	4.595	4.595	4.709	4.595	4.709	4.488	4.289	4.289	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8670	0.9646	1.0829	0.9646	0.9646	0.9332	1.0463	1.0905	0.9332	1.0829	0.7893	0.0272	0.0272	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.56	1.75	1.56	1.56	1.51	1.69	1.76	1.51	1.75	1.27	0.04	0.04	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT18
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	4	4	3	4	4	3	2	4	3	3	3	1	1	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	1	1	1	0	0	2	0	1	1	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	7	9	8	9	9	7	6	10	7	8	6	1	1	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.028	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.028	0.027	0.027	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.740	0.771	0.771	0.771	0.771	0.771	0.771	0.771	0.771	0.771	0.740	0.713	0.713	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.690	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.690	0.660	0.660	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.082	1.107	1.107	1.107	1.107	1.107	1.107	1.107	1.107	1.107	1.082	1.059	1.059	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.487	1.541	1.541	1.541	1.541	1.541	1.541	1.541	1.541	1.541	1.487	1.437	1.437	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.141	2.227	2.227	2.227	2.227	2.227	2.227	2.227	2.227	2.227	2.141	2.063	2.063	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.344	3.505	3.505	3.505	3.505	3.505	3.505	3.505	3.505	3.505	3.344	3.199	3.199	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.122	4.335	4.335	4.335	4.335	4.335	4.335	4.335	4.335	4.335	4.122	3.930	3.930	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.342	0.347	0.347	0.347	0.347	0.347	0.347	0.347	0.347	0.347	0.342	0.337	0.337	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.291	0.296	0.296	0.296	0.296	0.296	0.296	0.296	0.296	0.296	0.291	0.286	0.286	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.653	0.670	0.670	0.670	0.670	0.670	0.670	0.670	0.670	0.670	0.653	0.639	0.639	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.018	1.047	1.047	1.047	1.047	1.047	1.047	1.047	1.047	1.047	1.018	0.990	0.990	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.229	2.290	2.290	2.290	2.290	2.290	2.290	2.290	2.290	2.290	2.229	2.170	2.170	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.345	3.436	3.436	3.436	3.436	3.436	3.436	3.436	3.436	3.436	3.345	3.257	3.257	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.204	4.402	4.402	4.402	4.402	4.402	4.402	4.402	4.402	4.402	4.204	4.027	4.027	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.488	4.709	4.709	4.709	4.709	4.709	4.709	4.709	4.709	4.709	4.488	4.289	4.289	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8981	1.2000	1.3465	1.2000	1.2000	1.2206	1.4192	1.3028	1.2206	1.3465	1.0431	0.0272	0.0272	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45	1.94	2.17	1.94	1.94	1.97	2.29	2.10	1.97	2.17	1.68	0.04	0.04	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT19
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT20
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT21
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT22
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	1	2	1	2	2	2	1	2	2	1	1	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	3	5	3	4	4	4	3	4	4	3	3	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.029	0.029	0.028	0.030	0.030	0.030	0.028	0.030	0.030	0.028	0.029	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.771	0.795	0.755	0.812	0.812	0.812	0.755	0.812	0.812	0.755	0.771	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.724	0.758	0.706	0.778	0.778	0.778	0.706	0.778	0.778	0.706	0.724	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.107	1.124	1.094	1.141	1.141	1.141	1.094	1.141	1.141	1.094	1.107	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.541	1.570	1.513	1.601	1.601	1.601	1.513	1.601	1.601	1.513	1.541	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.227	2.284	2.183	2.334	2.334	2.334	2.183	2.334	2.334	2.183	2.227	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.505	3.593	3.422	3.687	3.687	3.687	3.422	3.687	3.687	3.422	3.505	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.335	4.452	4.225	4.576	4.576	4.576	4.225	4.576	4.576	4.225	4.335	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.347	0.350	0.344	0.353	0.353	0.353	0.344	0.353	0.353	0.344	0.347	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.296	0.299	0.294	0.302	0.302	0.302	0.294	0.302	0.302	0.294	0.296	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.670	0.678	0.661	0.688	0.688	0.688	0.661	0.688	0.688	0.661	0.670	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.047	1.074	1.033	1.099	1.099	1.099	1.033	1.099	1.099	1.033	1.047	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.290	2.349	2.259	2.406	2.406	2.406	2.259	2.406	2.406	2.259	2.290	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.436	3.524	3.390	3.609	3.609	3.609	3.390	3.609	3.609	3.390	3.436	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.402	4.510	4.300	4.625	4.625	4.625	4.300	4.625	4.625	4.300	4.402	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.709	4.830	4.595	4.958	4.958	4.958	4.595	4.958	4.958	4.595	4.709	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.4192	1.6006	1.1597	1.8583	1.8583	1.8583	1.1597	1.8583	1.8583	1.1597	1.4192	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29	2.58	1.87	3.00	3.00	3.00	1.87	3.00	3.00	1.87	2.29	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT23
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	2	3	1	2	2	2	1	2	2	1	2	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	4	6	3	4	4	4	3	4	4	3	4	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.030	0.030	0.028	0.030	0.030	0.030	0.028	0.030	0.030	0.028	0.030	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.812	0.812	0.755	0.812	0.812	0.812	0.755	0.812	0.812	0.755	0.812	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.778	0.778	0.706	0.778	0.778	0.778	0.706	0.778	0.778	0.706	0.778	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.141	1.141	1.094	1.141	1.141	1.141	1.094	1.141	1.141	1.094	1.141	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.601	1.601	1.513	1.601	1.601	1.601	1.513	1.601	1.601	1.513	1.601	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.334	2.334	2.183	2.334	2.334	2.334	2.183	2.334	2.334	2.183	2.334	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.687	3.687	3.422	3.687	3.687	3.687	3.422	3.687	3.687	3.422	3.687	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.576	4.576	4.225	4.576	4.576	4.576	4.225	4.576	4.576	4.225	4.576	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.353	0.353	0.344	0.353	0.353	0.353	0.344	0.353	0.353	0.344	0.353	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.302	0.302	0.294	0.302	0.302	0.302	0.294	0.302	0.302	0.294	0.302	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.688	0.688	0.661	0.688	0.688	0.688	0.661	0.688	0.688	0.661	0.688	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.099	1.099	1.033	1.099	1.099	1.099	1.033	1.099	1.099	1.033	1.099	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	2.406	2.406	2.259	2.406	2.406	2.406	2.259	2.406	2.406	2.259	2.406	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	3.609	3.609	3.390	3.609	3.609	3.609	3.390	3.609	3.609	3.390	3.609	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.625	4.625	4.300	4.625	4.625	4.625	4.300	4.625	4.625	4.300	4.625	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.958	4.958	4.595	4.958	4.958	4.958	4.595	4.958	4.958	4.595	4.958	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0453	1.9830	1.1597	1.8583	1.8583	1.8583	1.1597	1.8583	1.8583	1.1597	2.0453	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30	3.20	1.87	3.00	3.00	3.00	1.87	3.00	3.00	1.87	3.30	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT24
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT25
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	2	14	16	12	13	13	12	12	13	12	11	14	6	4	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	5	6	4	4	4	4	4	4	4	4	5	1	1	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
7	HGV8	6	2	4	0	0	2	17	106	124	92	101	106	91	80	106	92	92	99	45	32	10	3	2	8
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	4	3	2	2	2	2	2	2	2	2	3	1	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	3	3	2	2	2	2	2	2	2	2	3	1	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	5	5	3	4	4	3	2	4	3	3	4	1	1	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	6	2	4	0	0	2	19	140	160	115	126	131	114	102	131	115	114	131	55	38	10	3	2	8

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	0.032	0.032	#N/A	#N/A	0.032	0.032	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.032	0.032	0.032	0.032	0.032
LGV3	0.916	0.916	0.916	#N/A	#N/A	0.916	0.893	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.893	0.916	0.916	0.916	0.916
LGV4	0.893	0.893	0.893	#N/A	#N/A	0.893	0.867	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.867	0.893	0.893	0.893	0.893
PLB	1.247	1.247	1.247	#N/A	#N/A	1.247	1.223	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.223	1.247	1.247	1.247	1.247
LGV6	1.787	1.787	1.787	#N/A	#N/A	1.787	1.745	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.745	1.787	1.787	1.787	1.787
HGV7	2.628	2.628	2.628	#N/A	#N/A	2.628	2.562	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.562	2.628	2.628	2.628	2.628
HGV8	4.259	4.259	4.259	#N/A	#N/A	4.259	4.128	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.128	4.259	4.259	4.259	4.259
FBDD	5.334	5.334	5.334	#N/A	#N/A	5.334	5.160	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	5.160	5.334	5.334	5.334	5.334
MC	0.369	0.369	0.369	#N/A	#N/A	0.369	0.366	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.366	0.369	0.369	0.369	0.369
TAXI	0.319	0.319	0.319	#N/A	#N/A	0.319	0.316	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.316	0.319	0.319	0.319	0.319
PV4	0.742	0.742	0.742	#N/A	#N/A	0.742	0.730	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.730	0.742	0.742	0.742	0.742
PV5	1.263	1.263	1.263	#N/A	#N/A	1.263	1.226	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.226	1.263	1.263	1.263	1.263
NFB6	2.772	2.772	2.772	#N/A	#N/A	2.772	2.688	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.688	2.772	2.772	2.772	2.772
NFB7	4.158	4.158	4.158	#N/A	#N/A	4.158	4.032	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	4.032	4.158	4.158	4.158	4.158
NFB8	5.327	5.327	5.327	#N/A	#N/A	5.327	5.166	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.166	5.327	5.327	5.327	5.327
FBSD	5.739	5.739	5.739	#N/A	#N/A	5.739	5.561	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.561	5.739	5.739	5.739	5.739

Total composite emission factor (g/Veh/km)	4.2589	4.2589	4.2589	0.0000	0.0000	4.2589	3.6967	3.3583	3.3929	3.4191	3.4469	3.4682	3.4140	3.3344	3.4682	3.4191	3.4489	3.3343	3.4408	3.6383	4.2589	4.2589	4.2589	4.2589
Total composite emission factor (g/Veh/mile)	6.87	6.87	6.87	0.00	0.00	6.87	5.96	5.42	5.47	5.51	5.56	5.59	5.51	5.38	5.59	5.51	5.56	5.38	5.55	5.87	6.87	6.87	6.87	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT26
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	2	14	16	12	13	13	12	12	13	12	11	14	6	4	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	5	6	4	4	4	4	4	4	4	4	5	1	1	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
7	HGV8	6	2	4	0	0	2	17	106	124	92	101	106	91	80	106	92	92	99	45	32	10	3	2	8
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	4	3	2	2	2	2	2	2	2	2	3	1	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	3	3	2	2	2	2	2	2	2	2	3	1	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	5	5	3	4	4	3	2	4	3	3	4	1	1	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	6	2	4	0	0	2	19	140	160	115	126	131	114	102	131	115	114	131	55	38	10	3	2	8

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	0.032	0.032	#N/A	#N/A	0.032	0.032	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.032	0.032	0.032	0.032	0.032
LGV3	0.916	0.916	0.916	#N/A	#N/A	0.916	0.893	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.871	0.893	0.916	0.916	0.916	0.916
LGV4	0.893	0.893	0.893	#N/A	#N/A	0.893	0.867	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.843	0.867	0.893	0.893	0.893	0.893
PLB	1.247	1.247	1.247	#N/A	#N/A	1.247	1.223	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.223	1.247	1.247	1.247	1.247
LGV6	1.787	1.787	1.787	#N/A	#N/A	1.787	1.745	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.705	1.745	1.787	1.787	1.787	1.787
HGV7	2.628	2.628	2.628	#N/A	#N/A	2.628	2.562	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.562	2.628	2.628	2.628	2.628
HGV8	4.259	4.259	4.259	#N/A	#N/A	4.259	4.128	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.006	4.128	4.259	4.259	4.259	4.259
FBDD	5.334	5.334	5.334	#N/A	#N/A	5.334	5.160	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	5.160	5.334	5.334	5.334	5.334
MC	0.369	0.369	0.369	#N/A	#N/A	0.369	0.366	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.366	0.369	0.369	0.369	0.369
TAXI	0.319	0.319	0.319	#N/A	#N/A	0.319	0.316	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.312	0.316	0.319	0.319	0.319	0.319
PV4	0.742	0.742	0.742	#N/A	#N/A	0.742	0.730	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.730	0.742	0.742	0.742	0.742
PV5	1.263	1.263	1.263	#N/A	#N/A	1.263	1.226	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.191	1.226	1.263	1.263	1.263	1.263
NFB6	2.772	2.772	2.772	#N/A	#N/A	2.772	2.688	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.609	2.688	2.772	2.772	2.772	2.772
NFB7	4.158	4.158	4.158	#N/A	#N/A	4.158	4.032	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	3.914	4.032	4.158	4.158	4.158	4.158
NFB8	5.327	5.327	5.327	#N/A	#N/A	5.327	5.166	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.017	5.166	5.327	5.327	5.327	5.327
FBSD	5.739	5.739	5.739	#N/A	#N/A	5.739	5.561	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.395	5.561	5.739	5.739	5.739	5.739

Total composite emission factor (g/Veh/km)	4.2589	4.2589	4.2589	0.0000	0.0000	4.2589	3.6967	3.3583	3.3929	3.4191	3.4469	3.4682	3.4140	3.3344	3.4682	3.4191	3.4489	3.3343	3.4408	3.6383	4.2589	4.2589	4.2589	4.2589
Total composite emission factor (g/Veh/mile)	6.87	6.87	6.87	0.00	0.00	6.87	5.96	5.42	5.47	5.51	5.56	5.59	5.51	5.38	5.59	5.51	5.56	5.38	5.55	5.87	6.87	6.87	6.87	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT27
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	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	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PLB	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
LGV6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
HGV8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBDD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
MC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
TAXI	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
PV5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NFB8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FBSD	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Total composite emission factor (g/Veh/km)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total composite emission factor (g/Veh/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT28
Year: 2020

Vehicle Classes	Description	Hour																						
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	1	7	8	6	7	7	6	6	7	6	6	7	3	2	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7	HGV8	1	0	1	0	0	0	3	19	22	17	18	19	16	14	19	17	17	18	8	6	2	0	0	2
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	3	2	2	2	2	2	2	2	2	2	2	1	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	3	3	2	2	2	2	2	2	2	2	3	1	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	4	4	3	4	4	3	2	4	3	3	3	1	1	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	1	0	1	0	0	0	4	38	42	32	35	36	31	28	36	32	32	35	14	9	2	0	0	2

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	#N/A	0.032	#N/A	#N/A	#N/A	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.030	0.031	0.031	0.031	0.031	0.031	0.031	0.032	#N/A	#N/A	0.032
LGV3	0.916	#N/A	0.916	#N/A	#N/A	#N/A	0.871	0.850	0.850	0.850	0.850	0.850	0.850	0.831	0.850	0.850	0.850	0.850	0.850	0.850	0.916	#N/A	#N/A	0.916
LGV4	0.893	#N/A	0.893	#N/A	#N/A	#N/A	0.843	0.820	0.820	0.820	0.820	0.820	0.820	0.798	0.820	0.820	0.820	0.820	0.820	0.820	0.893	#N/A	#N/A	0.893
PLB	1.247	#N/A	1.247	#N/A	#N/A	#N/A	1.200	1.179	1.179	1.179	1.179	1.179	1.179	1.159	1.179	1.179	1.179	1.179	1.179	1.179	1.247	#N/A	#N/A	1.247
LGV6	1.787	#N/A	1.787	#N/A	#N/A	#N/A	1.705	1.668	1.668	1.668	1.668	1.668	1.668	1.634	1.668	1.668	1.668	1.668	1.668	1.668	1.787	#N/A	#N/A	1.787
HGV7	2.628	#N/A	2.628	#N/A	#N/A	#N/A	2.500	2.441	2.441	2.441	2.441	2.441	2.441	2.386	2.441	2.441	2.441	2.441	2.441	2.441	2.628	#N/A	#N/A	2.628
HGV8	4.259	#N/A	4.259	#N/A	#N/A	#N/A	4.006	3.893	3.893	3.893	3.893	3.893	3.893	3.786	3.893	3.893	3.893	3.893	3.893	3.893	4.259	#N/A	#N/A	4.259
FBDD	5.334	#N/A	5.334	#N/A	#N/A	#N/A	4.999	4.848	4.848	4.848	4.848	4.848	4.848	4.708	4.848	4.848	4.848	4.848	4.848	4.848	5.334	#N/A	#N/A	5.334
MC	0.369	#N/A	0.369	#N/A	#N/A	#N/A	0.362	0.359	0.359	0.359	0.359	0.359	0.359	0.356	0.359	0.359	0.359	0.359	0.359	0.359	0.369	#N/A	#N/A	0.369
TAXI	0.319	#N/A	0.319	#N/A	#N/A	#N/A	0.312	0.309	0.309	0.309	0.309	0.309	0.309	0.305	0.309	0.309	0.309	0.309	0.309	0.309	0.319	#N/A	#N/A	0.319
PV4	0.742	#N/A	0.742	#N/A	#N/A	#N/A	0.718	0.708	0.708	0.708	0.708	0.708	0.708	0.697	0.708	0.708	0.708	0.708	0.708	0.708	0.742	#N/A	#N/A	0.742
PV5	1.263	#N/A	1.263	#N/A	#N/A	#N/A	1.191	1.158	1.158	1.158	1.158	1.158	1.158	1.128	1.158	1.158	1.158	1.158	1.158	1.158	1.263	#N/A	#N/A	1.263
NFB6	2.772	#N/A	2.772	#N/A	#N/A	#N/A	2.609	2.536	2.536	2.536	2.536	2.536	2.536	2.468	2.536	2.536	2.536	2.536	2.536	2.536	2.772	#N/A	#N/A	2.772
NFB7	4.158	#N/A	4.158	#N/A	#N/A	#N/A	3.914	3.804	3.804	3.804	3.804	3.804	3.804	3.703	3.804	3.804	3.804	3.804	3.804	3.804	4.158	#N/A	#N/A	4.158
NFB8	5.327	#N/A	5.327	#N/A	#N/A	#N/A	5.017	4.878	4.878	4.878	4.878	4.878	4.878	4.747	4.878	4.878	4.878	4.878	4.878	4.878	5.327	#N/A	#N/A	5.327
FBSD	5.739	#N/A	5.739	#N/A	#N/A	#N/A	5.395	5.239	5.239	5.239	5.239	5.239	5.239	5.094	5.239	5.239	5.239	5.239	5.239	5.239	5.739	#N/A	#N/A	5.739

Total composite emission factor (g/Veh/km)	4.2589	0.0000	4.2589	0.0000	0.0000	0.0000	3.0124	2.7758	2.8024	2.7600	2.7749	2.8060	2.7235	2.4939	2.8060	2.7600	2.7600	2.7543	2.7825	3.1438	4.2589	0.0000	0.0000	4.2589
Total composite emission factor (g/Veh/mile)	6.87	0.00	6.87	0.00	0.00	0.00	4.86	4.48	4.52	4.45	4.48	4.53	4.39	4.02	4.53	4.45	4.45	4.44	4.49	5.07	6.87	0.00	0.00	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT29
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	1	7	8	6	6	6	6	6	6	6	6	5	7	3	2	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	4	4	2	2	2	2	2	2	2	2	4	1	1	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
7	HGV8	5	2	3	0	0	2	14	87	102	75	83	87	75	66	87	75	75	81	37	26	8	3	2	6
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	5	2	3	0	0	2	15	102	118	83	91	95	83	74	95	83	82	96	41	29	8	3	2	6

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	0.032	0.032	#N/A	#N/A	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
LGV3	0.916	0.916	0.916	#N/A	#N/A	0.916	0.916	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.916	0.916	0.916	0.916
LGV4	0.893	0.893	0.893	#N/A	#N/A	0.893	0.893	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.893	0.893	0.893	0.893
PLB	1.247	1.247	1.247	#N/A	#N/A	1.247	1.247	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.247	1.247	1.247	1.247
LGV6	1.787	1.787	1.787	#N/A	#N/A	1.787	1.787	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.787	1.787	1.787	1.787
HGV7	2.628	2.628	2.628	#N/A	#N/A	2.628	2.628	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.628	2.628	2.628	2.628
HGV8	4.259	4.259	4.259	#N/A	#N/A	4.259	4.259	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.259	4.259	4.259	4.259
FBDD	5.334	5.334	5.334	#N/A	#N/A	5.334	5.334	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.334	5.334	5.334	5.334
MC	0.369	0.369	0.369	#N/A	#N/A	0.369	0.369	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.369	0.369	0.369	0.369
TAXI	0.319	0.319	0.319	#N/A	#N/A	0.319	0.319	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.319	0.319	0.319	0.319
PV4	0.742	0.742	0.742	#N/A	#N/A	0.742	0.742	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.742	0.742	0.742	0.742
PV5	1.263	1.263	1.263	#N/A	#N/A	1.263	1.263	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.263	1.263	1.263	1.263
NFB6	2.772	2.772	2.772	#N/A	#N/A	2.772	2.772	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.772	2.772	2.772	2.772
NFB7	4.158	4.158	4.158	#N/A	#N/A	4.158	4.158	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.158	4.158	4.158	4.158
NFB8	5.327	5.327	5.327	#N/A	#N/A	5.327	5.327	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.327	5.327	5.327	5.327
FBSD	5.739	5.739	5.739	#N/A	#N/A	5.739	5.739	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.739	5.739	5.739	5.739

Total composite emission factor (g/Veh/km)	4.2589	4.2589	4.2589	0.0000	0.0000	4.2589	3.9771	3.6530	3.6827	3.7532	3.7862	3.8006	3.7532	3.7077	3.8006	3.7532	3.7986	3.6233	3.7487	3.7330	4.2589	4.2589	4.2589	4.2589
Total composite emission factor (g/Veh/mile)	6.87	6.87	6.87	0.00	0.00	6.87	6.41	5.89	5.94	6.05	6.11	6.13	6.05	5.98	6.13	6.05	6.13	5.84	6.05	6.02	6.87	6.87	6.87	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT30
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	0	3	3	2	2	2	2	2	2	2	2	3	1	1	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	HGV8	2	1	1	0	0	1	5	35	41	30	33	35	30	26	35	30	30	33	15	10	3	1	1	2
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	2	1	1	0	0	1	5	39	45	32	35	37	32	28	37	32	32	37	16	11	3	1	1	2

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	0.032	0.032	#N/A	#N/A	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
LGV3	0.916	0.916	0.916	#N/A	#N/A	0.916	0.916	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.916	0.916	0.916	0.916
LGV4	0.893	0.893	0.893	#N/A	#N/A	0.893	0.893	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.893	0.893	0.893	0.893
PLB	1.247	1.247	1.247	#N/A	#N/A	1.247	1.247	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.247	1.247	1.247	1.247
LGV6	1.787	1.787	1.787	#N/A	#N/A	1.787	1.787	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.787	1.787	1.787	1.787
HGV7	2.628	2.628	2.628	#N/A	#N/A	2.628	2.628	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.628	2.628	2.628	2.628
HGV8	4.259	4.259	4.259	#N/A	#N/A	4.259	4.259	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.259	4.259	4.259	4.259
FBDD	5.334	5.334	5.334	#N/A	#N/A	5.334	5.334	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.334	5.334	5.334	5.334
MC	0.369	0.369	0.369	#N/A	#N/A	0.369	0.369	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.369	0.369	0.369	0.369
TAXI	0.319	0.319	0.319	#N/A	#N/A	0.319	0.319	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.319	0.319	0.319	0.319
PV4	0.742	0.742	0.742	#N/A	#N/A	0.742	0.742	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.742	0.742	0.742	0.742
PV5	1.263	1.263	1.263	#N/A	#N/A	1.263	1.263	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.263	1.263	1.263	1.263
NFB6	2.772	2.772	2.772	#N/A	#N/A	2.772	2.772	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.772	2.772	2.772	2.772
NFB7	4.158	4.158	4.158	#N/A	#N/A	4.158	4.158	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.158	4.158	4.158	4.158
NFB8	5.327	5.327	5.327	#N/A	#N/A	5.327	5.327	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.327	5.327	5.327	5.327
FBSD	5.739	5.739	5.739	#N/A	#N/A	5.739	5.739	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.739	5.739	5.739	5.739

Total composite emission factor (g/Veh/km)	4.2589	4.2589	4.2589	0.0000	0.0000	4.2589	4.2589	3.7292	3.7824	3.8719	3.8938	3.9065	3.8719	3.8353	3.9065	3.8719	3.8719	3.7077	3.8719	3.7555	4.2589	4.2589	4.2589	4.2589
Total composite emission factor (g/Veh/mile)	6.87	6.87	6.87	0.00	0.00	6.87	6.87	6.01	6.10	6.24	6.28	6.30	6.24	6.19	6.30	6.24	6.24	5.98	6.24	6.06	6.87	6.87	6.87	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

District: Tuen Mun
Road Section: LKT31
Year: 2020

Vehicle Classes	Description	Hour																							
		0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
1	PC	0	0	0	0	0	0	1	4	5	4	4	4	4	4	4	4	3	4	2	1	0	0	0	0
2	LGV3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV4	0	0	0	0	0	0	0	3	3	2	2	2	2	2	2	2	2	3	1	1	0	0	0	0
4	PLB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	LGV6	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6	HGV7	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7	HGV8	3	1	2	0	0	1	9	52	61	45	50	52	45	40	52	45	45	48	22	16	5	2	1	4
8	FBDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	MC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TAXI	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11	PV4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PV5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NFB6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	NFB7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	NFB8	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
16	FBSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Flow (veh)	3	1	2	0	0	1	10	63	73	51	56	58	51	46	58	51	50	59	25	18	5	2	1	4

NOx emission factor (g/Veh/km, EMFAC Veh categories)

Description	0:00 | 1:00	1:00 | 2:00	2:00 | 3:00	3:00 | 4:00	4:00 | 5:00	5:00 | 6:00	6:00 | 7:00	7:00 | 8:00	8:00 | 9:00	9:00 | 10:00	10:00 | 11:00	11:00 | 12:00	12:00 | 13:00	13:00 | 14:00	14:00 | 15:00	15:00 | 16:00	16:00 | 17:00	17:00 | 18:00	18:00 | 19:00	19:00 | 20:00	20:00 | 21:00	21:00 | 22:00	22:00 | 23:00	23:00 | 0:00
PC	0.032	0.032	0.032	#N/A	#N/A	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
LGV3	0.916	0.916	0.916	#N/A	#N/A	0.916	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.893	0.916	0.916	0.916	0.916
LGV4	0.893	0.893	0.893	#N/A	#N/A	0.893	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.867	0.893	0.893	0.893	0.893
PLB	1.247	1.247	1.247	#N/A	#N/A	1.247	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.223	1.247	1.247	1.247	1.247
LGV6	1.787	1.787	1.787	#N/A	#N/A	1.787	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.745	1.787	1.787	1.787	1.787
HGV7	2.628	2.628	2.628	#N/A	#N/A	2.628	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.562	2.628	2.628	2.628	2.628
HGV8	4.259	4.259	4.259	#N/A	#N/A	4.259	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.128	4.259	4.259	4.259	4.259
FBDD	5.334	5.334	5.334	#N/A	#N/A	5.334	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.160	5.334	5.334	5.334	5.334
MC	0.369	0.369	0.369	#N/A	#N/A	0.369	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.366	0.369	0.369	0.369	0.369
TAXI	0.319	0.319	0.319	#N/A	#N/A	0.319	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.316	0.319	0.319	0.319	0.319
PV4	0.742	0.742	0.742	#N/A	#N/A	0.742	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.730	0.742	0.742	0.742	0.742
PV5	1.263	1.263	1.263	#N/A	#N/A	1.263	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.263	1.263	1.263	1.263
NFB6	2.772	2.772	2.772	#N/A	#N/A	2.772	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.688	2.772	2.772	2.772	2.772
NFB7	4.158	4.158	4.158	#N/A	#N/A	4.158	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.032	4.158	4.158	4.158	4.158
NFB8	5.327	5.327	5.327	#N/A	#N/A	5.327	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.166	5.327	5.327	5.327	5.327
FBSD	5.739	5.739	5.739	#N/A	#N/A	5.739	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.561	5.739	5.739	5.739	5.739

Total composite emission factor (g/Veh/km)	4.2589	4.2589	4.2589	0.0000	0.0000	4.2589	3.7183	3.6058	3.6212	3.6788	3.7189	3.7330	3.6788	3.6299	3.7330	3.6788	3.7517	3.5705	3.6698	3.7192	4.2589	4.2589	4.2589	4.2589
Total composite emission factor (g/Veh/mile)	6.87	6.87	6.87	0.00	0.00	6.87	6.00	5.82	5.84	5.93	6.00	6.02	5.93	5.85	6.02	5.93	6.05	5.76	5.92	6.00	6.87	6.87	6.87	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

Ref.	Road Name	00:00 - 01:00		01:00 - 02:00		02:00 - 03:00		03:00 - 04:00		04:00 - 05:00		05:00 - 06:00	
		Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)
1	LKT01	1	6.87	0	0.00	1	6.87	0	0.00	0	0.00	0	0.00
2	LKT02	12	2.65	4	2.82	9	2.89	0	0.00	0	0.00	4	2.82
3	LKT03	1	6.87	0	0.00	1	6.87	0	0.00	0	0.00	0	0.00
4	LKT04	2	6.87	0	0.00	1	6.87	0	0.00	0	0.00	0	0.00
5	LKT05	11	2.48	3	2.28	8	2.66	0	0.00	0	0.00	3	2.28
6	LKT06	2	6.87	0	0.00	1	6.87	0	0.00	0	0.00	0	0.00
7	LKT07	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
8	LKT08	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
9	LKT09	9	2.07	3	2.28	7	2.38	0	0.00	0	0.00	3	2.28
10	LKT10	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
11	LKT11	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
12	LKT12	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
13	LKT13	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
14	LKT14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
15	LKT15	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
16	LKT16	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
17	LKT17	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
18	LKT18	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
19	LKT19	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
20	LKT20	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
21	LKT21	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
22	LKT22	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
23	LKT23	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
24	LKT24	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
25	LKT25	6	6.87	2	6.87	4	6.87	0	0.00	0	0.00	2	6.87
26	LKT26	6	6.87	2	6.87	4	6.87	0	0.00	0	0.00	2	6.87
27	LKT27	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
28	LKT28	1	6.87	0	0.00	1	6.87	0	0.00	0	0.00	0	0.00
29	LKT29	5	6.87	2	6.87	3	6.87	0	0.00	0	0.00	2	6.87
30	LKT30	2	6.87	1	6.87	1	6.87	0	0.00	0	0.00	1	6.87
31	LKT31	3	6.87	1	6.87	2	6.87	0	0.00	0	0.00	1	6.87

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

Ref.	Road Name	06:00 - 07:00		07:00 - 08:00		08:00 - 09:00		09:00 - 10:00		10:00 - 11:00		11:00 - 12:00	
		Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)
1	LKT01	3	6.87	18	6.49	21	6.54	15	6.87	17	6.87	17	6.87
2	LKT02	47	2.49	323	2.40	380	2.40	282	2.44	313	2.40	324	2.39
3	LKT03	4	6.87	27	5.97	30	6.22	22	6.56	25	6.60	25	6.60
4	LKT04	6	5.56	37	5.19	42	5.22	32	5.19	34	5.26	36	5.33
5	LKT05	44	2.34	296	2.28	347	2.28	259	2.28	286	2.27	297	2.27
6	LKT06	9	4.32	81	3.57	95	3.59	75	3.57	81	3.46	83	3.61
7	LKT07	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
8	LKT08	2	3.00	29	2.33	36	2.46	30	2.56	32	2.40	32	2.40
9	LKT09	35	2.21	215	2.24	252	2.23	184	2.24	205	2.23	214	2.21
10	LKT10	0	0.00	12	1.40	14	1.70	10	1.75	11	1.56	11	1.56
11	LKT11	1	6.87	14	3.44	16	3.38	12	3.60	13	3.24	13	3.24
12	LKT12	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
13	LKT13	0	0.00	12	1.40	11	1.56	10	1.75	11	1.56	11	1.56
14	LKT14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
15	LKT15	0	0.00	10	2.90	11	2.68	8	2.17	9	1.94	9	1.94
16	LKT16	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
17	LKT17	0	0.00	12	1.40	11	1.56	10	1.75	11	1.56	11	1.56
18	LKT18	0	0.00	7	1.45	9	1.94	8	2.17	9	1.94	9	1.94
19	LKT19	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
20	LKT20	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
21	LKT21	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
22	LKT22	0	0.00	3	2.29	5	2.58	3	1.87	4	3.00	4	3.00
23	LKT23	0	0.00	4	3.30	6	3.20	3	1.87	4	3.00	4	3.00
24	LKT24	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
25	LKT25	19	5.96	140	5.42	160	5.47	115	5.51	126	5.56	131	5.59
26	LKT26	19	5.96	140	5.42	160	5.47	115	5.51	126	5.56	131	5.59
27	LKT27	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
28	LKT28	4	4.86	38	4.48	42	4.52	32	4.45	35	4.48	36	4.53
29	LKT29	15	6.41	102	5.89	118	5.94	83	6.05	91	6.11	95	6.13
30	LKT30	5	6.87	39	6.01	45	6.10	32	6.24	35	6.28	37	6.30
31	LKT31	10	6.00	63	5.82	73	5.84	51	5.93	56	6.00	58	6.02

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

Ref.	Road Name	12:00 - 013:00		13:00 - 14:00		14:00 - 15:00		15:00 - 16:00		16:00 - 17:00		17:00 - 18:00	
		Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)
1	LKT01	15	6.87	14	6.87	17	6.87	15	6.87	15	6.87	17	6.47
2	LKT02	277	2.47	249	2.48	332	2.38	279	2.47	282	2.39	302	2.45
3	LKT03	21	6.87	20	6.87	26	6.15	21	6.87	22	6.56	25	6.13
4	LKT04	32	5.19	29	5.06	35	5.30	32	5.19	31	5.43	34	5.19
5	LKT05	255	2.30	230	2.31	303	2.27	257	2.30	258	2.28	276	2.29
6	LKT06	70	3.66	63	3.66	87	3.42	70	3.66	73	3.62	74	3.60
7	LKT07	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
8	LKT08	26	2.53	24	2.74	36	2.45	26	2.53	29	2.45	27	2.50
9	LKT09	185	2.24	167	2.25	216	2.23	187	2.25	185	2.23	202	2.24
10	LKT10	9	1.51	8	1.69	12	1.76	9	1.51	10	1.75	11	1.52
11	LKT11	11	3.58	10	3.93	14	3.28	11	3.58	11	3.29	13	3.70
12	LKT12	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
13	LKT13	9	1.51	8	1.69	12	1.76	9	1.51	10	1.75	8	1.27
14	LKT14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
15	LKT15	7	1.97	6	2.29	10	2.10	7	1.97	8	2.17	9	3.22
16	LKT16	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
17	LKT17	9	1.51	8	1.69	12	1.76	9	1.51	10	1.75	8	1.27
18	LKT18	7	1.97	6	2.29	10	2.10	7	1.97	8	2.17	6	1.68
19	LKT19	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
20	LKT20	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
21	LKT21	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
22	LKT22	4	3.00	3	1.87	4	3.00	4	3.00	3	1.87	3	2.29
23	LKT23	4	3.00	3	1.87	4	3.00	4	3.00	3	1.87	4	3.30
24	LKT24	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
25	LKT25	114	5.51	102	5.38	131	5.59	115	5.51	114	5.56	131	5.38
26	LKT26	114	5.51	102	5.38	131	5.59	115	5.51	114	5.56	131	5.38
27	LKT27	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
28	LKT28	31	4.39	28	4.02	36	4.53	32	4.45	32	4.45	35	4.44
29	LKT29	83	6.05	74	5.98	95	6.13	83	6.05	82	6.13	96	5.84
30	LKT30	32	6.24	28	6.19	37	6.30	32	6.24	32	6.24	37	5.98
31	LKT31	51	5.93	46	5.85	58	6.02	51	5.93	50	6.05	59	5.76

Annex 4C - Vehicular Emission Factors, Traffic Information and Calculations of Composite Vehicular Emission Factors

Ref.	Road Name	18:00 - 19:00		19:00 - 20:00		20:00 - 21:00		21:00 - 22:00		22:00 - 23:00		23:00 - 24:00	
		Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)	Traffic flow (Veh/hr)	NOx Total composite emission factor (g/Veh/mile)
1	LKT01	7	6.87	6	6.87	2	6.87	0	0.00	0	0.00	2	6.87
2	LKT02	126	2.49	94	2.38	23	2.67	6	2.55	7	3.08	17	2.63
3	LKT03	10	6.87	8	6.87	2	6.87	0	0.00	0	0.00	2	6.87
4	LKT04	15	5.27	11	5.58	2	6.87	0	0.00	1	6.87	2	6.87
5	LKT05	116	2.31	86	2.27	20	2.42	5	2.19	7	3.08	15	2.43
6	LKT06	26	3.87	21	3.63	2	6.87	0	0.00	1	6.87	2	6.87
7	LKT07	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
8	LKT08	7	2.51	6	1.87	0	0.00	0	0.00	0	0.00	0	0.00
9	LKT09	90	2.23	65	2.22	18	2.20	5	2.19	6	2.81	13	2.10
10	LKT10	2	0.04	2	0.04	0	0.00	0	0.00	0	0.00	0	0.00
11	LKT11	4	4.86	3	4.09	0	0.00	0	0.00	0	0.00	0	0.00
12	LKT12	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
13	LKT13	2	0.04	1	0.04	0	0.00	0	0.00	0	0.00	0	0.00
14	LKT14	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
15	LKT15	2	3.00	2	3.00	0	0.00	0	0.00	0	0.00	0	0.00
16	LKT16	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
17	LKT17	2	0.04	1	0.04	0	0.00	0	0.00	0	0.00	0	0.00
18	LKT18	1	0.04	1	0.04	0	0.00	0	0.00	0	0.00	0	0.00
19	LKT19	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
20	LKT20	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
21	LKT21	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
22	LKT22	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
23	LKT23	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
24	LKT24	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
25	LKT25	55	5.55	38	5.87	10	6.87	3	6.87	2	6.87	8	6.87
26	LKT26	55	5.55	38	5.87	10	6.87	3	6.87	2	6.87	8	6.87
27	LKT27	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
28	LKT28	14	4.49	9	5.07	2	6.87	0	0.00	0	0.00	2	6.87
29	LKT29	41	6.05	29	6.02	8	6.87	3	6.87	2	6.87	6	6.87
30	LKT30	16	6.24	11	6.06	3	6.87	1	6.87	1	6.87	2	6.87
31	LKT31	25	5.92	18	6.00	5	6.87	2	6.87	1	6.87	4	6.87

Annex 4D

PATH - Land Use

Annex 4D - Detailed Calculations of Land Use Parameters

1. BPPS Study Area

Land Cover	Area (km2)	Fraction of Total Area	Bowen Ratio (Bo)	Albedo (r)
Tree	29.1	0.29	0.6	0.12
Urban	1.5	0.02	1.7	0.16
Water	67.7	0.68	0.1	0.12
Landfill	1.1	0.01	1.5	0.20
Bare Land	0.6	0.01	1.5	0.20
		Average:	**0.18**	**0.12**

2. LPS Study Area

Land Cover	Area (km2)	Fraction of Total Area	Bowen Ratio (Bo)	Albedo (r)
Tree	14.1	0.14	0.6	0.12
Urban	2.1	0.02	1.7	0.16
Water	83.8	0.84	0.1	0.12
		Average:	**0.14**	**0.12**

Notes:

(a) Bowen ratio was calculated based on the area-weighted geometric mean within 10km x 10km area from the Project Site. Considering the climate in Hong Kong covers dry and wet season throughout the year, bowen ratios for average moisture conditions have been adopted. With reference to Table 4-5 of the User's Guide for the AERMOD Meteorological Preprocessor (AERMET) (AERMET User Guide), the bowen ratio for tree, urban and water areas were assumed to be 0.6, 1.7 and 0.1, respectively. Landfill and bare land areas are regarded as Class 31-Bare Rock/Sand/Clay and bowen ratio for landfill and bare land areas was assumed to be 1.5 with reference to Table A-2 of the AERSURFACE User's Guide.

(b) Albedo was calculated based on the area-weighted arithmetic mean within 10km x 10km area from the Project Site. With reference to Table 4-2 of the AERMET User Guide, the albedo for tree, urban and water areas were assumed to be 0.12, 0.16 and 0.12, respectively. Landfill and bare land areas are regarded as Class 31-Bare Rock/Sand/Clay and albedo for landfill and bare land areas was assumed to be 0.2 with reference to Table A-1 of the AERSURFACE User's Guide.

(c) The average of the albedo and bowen ratio values in spring, summer and autumn for each land use was used.

Annex 4D - Detailed Calculations of Land Use Parameters

1. BPPS Study Area

PATH Grid 15, 44

Sector (degree)	Land Cover	Area (km2)	Fraction of Total Area	Distance (km)	Weighting	Zo (m)	Resultant Zo (m) for each sector
60 - 145	Landfill	0.74				0.05	0.05
145 - 240	Tree	0.83				0.6	0.60
240 - 275	Bare land	0.31				0.05	0.05
275 - 310	Bare land	0.11	0.35	0.39	0.88	0.05	0.0025
	Water	0.20	0.65	0.79	0.83	0.0001	
310 - 60	Urban	0.07	0.07	0.13	0.52	1	0.0012
	Water	0.89	0.93	0.66	1.42	0.0001	

PATH Grid 14, 42

Sector (degree)	Land Cover	Area (km2)	Fraction of Total Area	Distance (km)	Weighting	Zo (m)	Resultant Zo (m) for each sector
20 - 130	Urban	0.20	0.21	0.20	1.07	1	0.76
	Tree	0.76	0.79	0.66	1.20	0.6	
130 - 175	Tree	0.39				0.6	0.60
175 - 305	Water	1.13				0.0001	0.0001
305 - 20	Urban	0.15	0.22	0.13	1.70	1	0.81
	Tree	0.51	0.78	0.66	1.18	0.6	

2. LPS Study Area

PATH Grid 34, 23

Sector (degree)	Land Cover	Area (km2)	Fraction of Total Area	Distance (km)	Weighting	Zo (m)	Resultant Zo (m) for each sector
25 - 120	Urban	0.09	0.11	0.20	0.53	1	0.70
	Tree	0.74	0.89	0.72	1.24	0.6	
120 - 175	Tree	0.04	0.07	0.13	0.57	0.6	0.001
	Water	0.44	0.93	0.66	1.41	0.0001	
175 - 265	Urban	0.79				1	1.00
265 - 295	Tree	0.10	0.40	0.39	1.00	0.6	0.014
	Water	0.16	0.60	0.79	0.76	0.0001	
295 - 335	Urban	0.06	0.19	0.26	0.71	1	0.003
	Water	0.28	0.81	0.72	1.13	0.0001	
335 - 25	Urban	0.44				1	1.00

PATH Grid 35, 22

Sector (degree)	Land Cover	Area (km2)	Fraction of Total Area	Distance (km)	Weighting	Zo (m)	Resultant Zo (m) for each sector
45 - 90	Tree	0.26	0.65	0.53	1.24	0.6	0.07
	Water	0.14	0.35	0.86	0.41	0.0001	
90 - 165	Tree	0.65				0.6	0.60
165 - 230	Water	0.57				0.0001	0.0001
230 - 290	Water	0.22	0.42	0.39	1.05	0.0001	0.004
	Urban	0.31	0.58	0.79	0.74	1	
290 - 330	Tree	0.09	0.27	0.33	0.83	0.6	0.79
	Urban	0.25	0.73	0.79	0.92	1	
330 - 45	Tree	0.65				0.6	0.60

PATH Grid 34, 22

Sector (degree)	Land Cover	Area (km2)	Fraction of Total Area	Distance (km)	Weighting	Zo (m)	Resultant Zo (m) for each sector
20 - 75	Water	0.12	0.25	0.33	0.76	0.0001	0.01
	Tree	0.36	0.75	0.72	1.03	0.6	
75 - 120	Water	0.20	0.51	0.46	1.11	0.0001	0.002
	Tree	0.19	0.49	0.79	0.62	0.6	
120 - 230	Water	0.96				0.0001	0.0001
230 - 265	Water	0.18	0.59	0.46	1.28	0.0001	0.001
	Urban	0.12	0.41	0.86	0.48	1	
265 - 315	Urban	0.44				1	1.00
315 - 345	Urban	0.10	0.40	0.39	1.01	1	0.80
	Tree	0.16	0.60	0.79	0.76	0.6	
345 - 20	Water	0.05	0.16	0.20	0.79	0.0001	0.03
	Tree	0.10	0.34	0.53	0.65	0.6	
	Urban	0.15	0.50	0.79	0.64	1	

Annex 4D - Detailed Calculations of Land Use Parameters

PATH Grid	Sector	Land Use Type	Albedo (r) (a)	Bowen Ratio (Bo) (a)	Surface Roughness (Zo) (b)	Remark/Justifications
15, 44	60 - 145	Landfill	0.12	0.18	0.05	This sector is comprised of landfill area.
	145 - 240	Tree	0.12	0.18	0.60	This sector is comprised of tree area.
	240 - 275	Bare Land	0.12	0.18	0.05	This sector is comprised of bare land area.
	275 - 310	Bare Land / Water	0.12	0.18	0.0025	This sector is comprised of both bare land and water areas. Bare land area covers 35% and the distance from the centre is about 0.39km. Water area covers 65% and the distance from the centre is about
	310 - 60	Urban / Water	0.12	0.18	0.0012	This sector is comprised of both urban and water areas. Urban area covers 7% and the distance from the centre is about 0.13km. Water area covers 93% and the distance from the centre is about 0.66km.
14, 42	20 - 130	Urban / Tree	0.12	0.18	0.76	This sector is comprised of both urban and tree areas. Urban area covers 21% and the distance from the centre is about 0.20km. Tree area covers 79% and the distance from the centre is about 0.66km.
	130 - 175	Tree	0.12	0.18	0.60	This sector is comprised of tree area.
	175 - 305	Water	0.12	0.18	0.0001	This sector is comprised of water area.
	305 - 20	Urban / Tree	0.12	0.18	0.81	This sector is comprised of both urban and tree areas. Urban area covers 22% and the distance from the centre is about 0.13km. Tree area covers 78% and the distance from the centre is about 0.66km.
34, 23	25 - 120	Urban / Tree	0.12	0.14	0.70	This sector is comprised of both urban and tree areas. Urban area covers 11% and the distance from the centre is about 0.20km. Tree area covers 89% and the distance from the centre is about 0.72km.
	120 - 175	Tree / Water	0.12	0.14	0.0012	This sector is comprised of both tree and water areas. Tree area covers 7% and the distance from the centre is about 0.13km. Water area covers 93% and the distance from the centre is about 0.66km.
	175 - 265	Urban	0.12	0.14	1.00	This sector is comprised of urban area.
	265 - 295	Tree / Water	0.12	0.14	0.014	This sector is comprised of both tree and water areas. Tree area covers 40% and the distance from the centre is about 0.39km. Water area covers 60% and the distance from the centre is about 0.79km.
	295 - 335	Urban / Water	0.12	0.14	0.003	This sector is comprised of both urban and water areas. Urban area covers 19% and the distance from the centre is about 0.26km. Water area covers 81% and the distance from the centre is about 0.72km.
	335 - 25	Urban	0.12	0.14	1.00	This sector is comprised of urban area.
35, 22	45 - 90	Tree / Water	0.12	0.14	0.07	This sector is comprised of both tree and water areas. Tree area covers 65% and the distance from the centre is about 0.53km. Water area covers 35% and the distance from the centre is about 0.86km.
	90 - 165	Tree	0.12	0.14	0.60	This sector is comprised of tree area.
	165 - 230	Water	0.12	0.14	0.0001	This sector is comprised of water area.
	230 - 290	Water / Urban	0.12	0.14	0.004	This sector is comprised of both water and urban areas. Water area covers 42% and the distance from the centre is about 0.39km. Urban area covers 58% and the distance from the centre is about 0.79km.
	290 - 330	Tree / Urban	0.12	0.14	0.79	This sector is comprised of both tree and urban areas. Tree area covers 27% and the distance from the centre is about 0.33km. Urban area covers 73% and the distance from the centre is about 0.79km.
	330 - 45	Tree	0.12	0.14	0.60	This sector is comprised of tree area.
34, 22	20 - 75	Water / Tree	0.12	0.14	0.01	This sector is comprised of both water and tree areas. Water area covers 25% and the distance from the centre is about 0.33km. Tree area covers 75% and the distance from the centre is about 0.72km.
	75 - 120	Water / Tree	0.12	0.14	0.002	This sector is comprised of both water and tree areas. Water area covers 51% and the distance from the centre is about 0.46km. Tree area covers 49% and the distance from the centre is about 0.79km.
	120 - 230	Water	0.12	0.14	0.0001	This sector is comprised of water area.
	230 - 265	Water / Urban	0.12	0.14	0.001	This sector is comprised of both water and urban areas. Water area covers 59% and the distance from the centre is about 0.46km. Urban area covers 41% and the distance from the centre is about 0.86km.
	265 - 315	Urban	0.12	0.14	1.00	This sector is comprised of urban area.
	315 - 345	Urban / Tree	0.12	0.14	0.80	This sector is comprised of both urban and tree areas. Urban area covers 40% and the distance from the centre is about 0.39km. Tree area covers 60% and the distance from the centre is about 0.79km.
	345 - 20	Water / Tree / Urban	0.12	0.14	0.03	This sector is comprised of water, tree and urban areas. Water area covers 16% and the distance from the centre is about 0.20km. Tree area covers 34% and the distance from the centre is about 0.53km. Urban area covers 50% and the distance from the centre is about 0.79km.

Notes:

(a) With reference to Table 4-6 of the AERMET User's Guide, the surface roughness value for urban area and water area is assumed to be 1m and 0.0001m, respectively. With reference to Table A-3 of the AERSURFACE User's Guide, the surface roughness value for landfill area and bare land area is assumed to be 0.05m. The height of trees within 1 km from the identified ASRs near BPPS and LPS is about 6m on average. The surface roughness can be estimated as about 10% of the average height of physical structures. Therefore, the surface roughness of 0.6m has been adopted for trees. For sector consisting of 2 or more different land use types, the surface roughness length for the sector is calculated based on the inverse-distance weighted geometric mean.

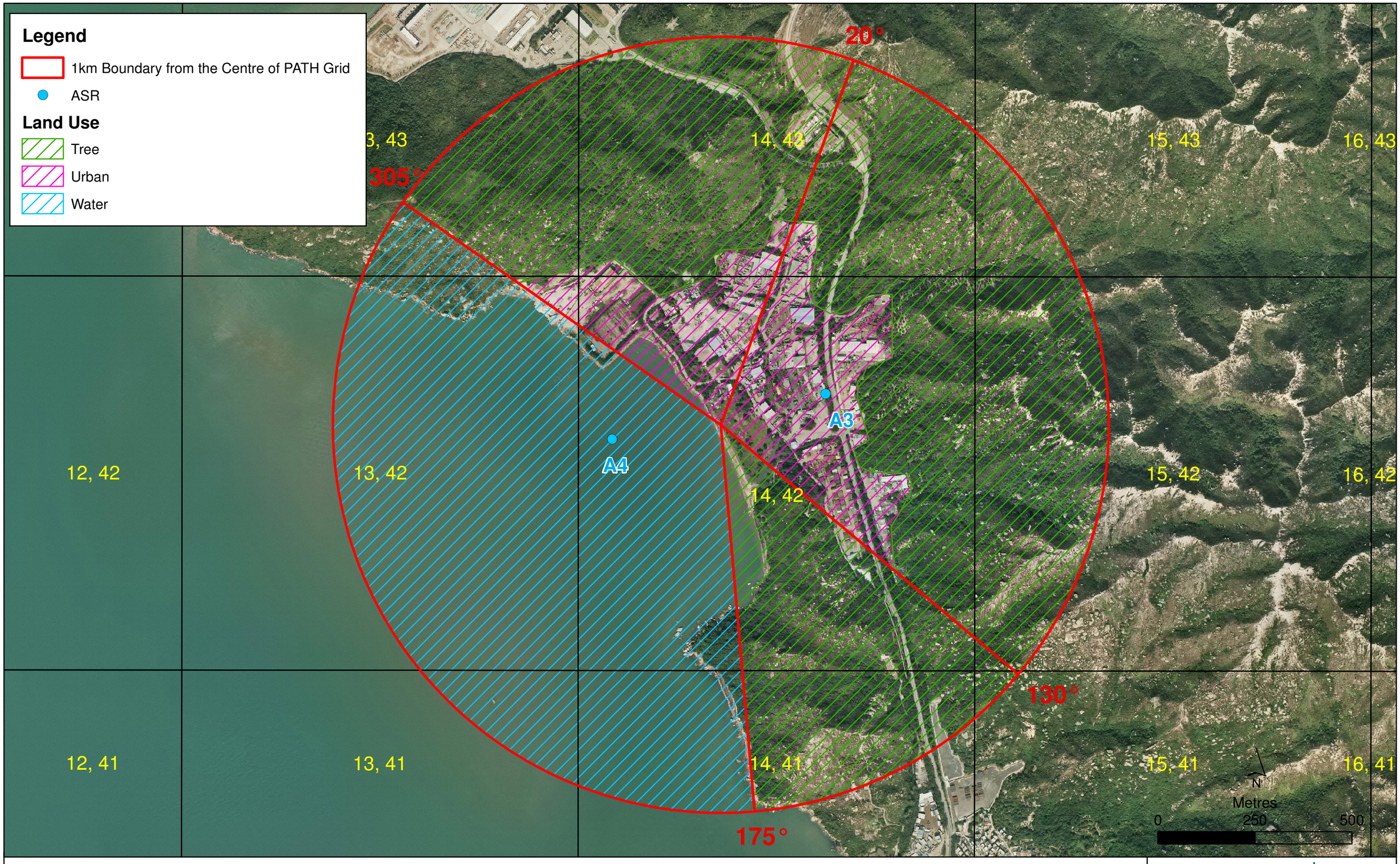


Figure 4D.1

Sectors of Land Use for PATH Grid 14,42

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_PATH_1442.mxd
Date: 6/12/2017

Environmental Resources Management

ERM

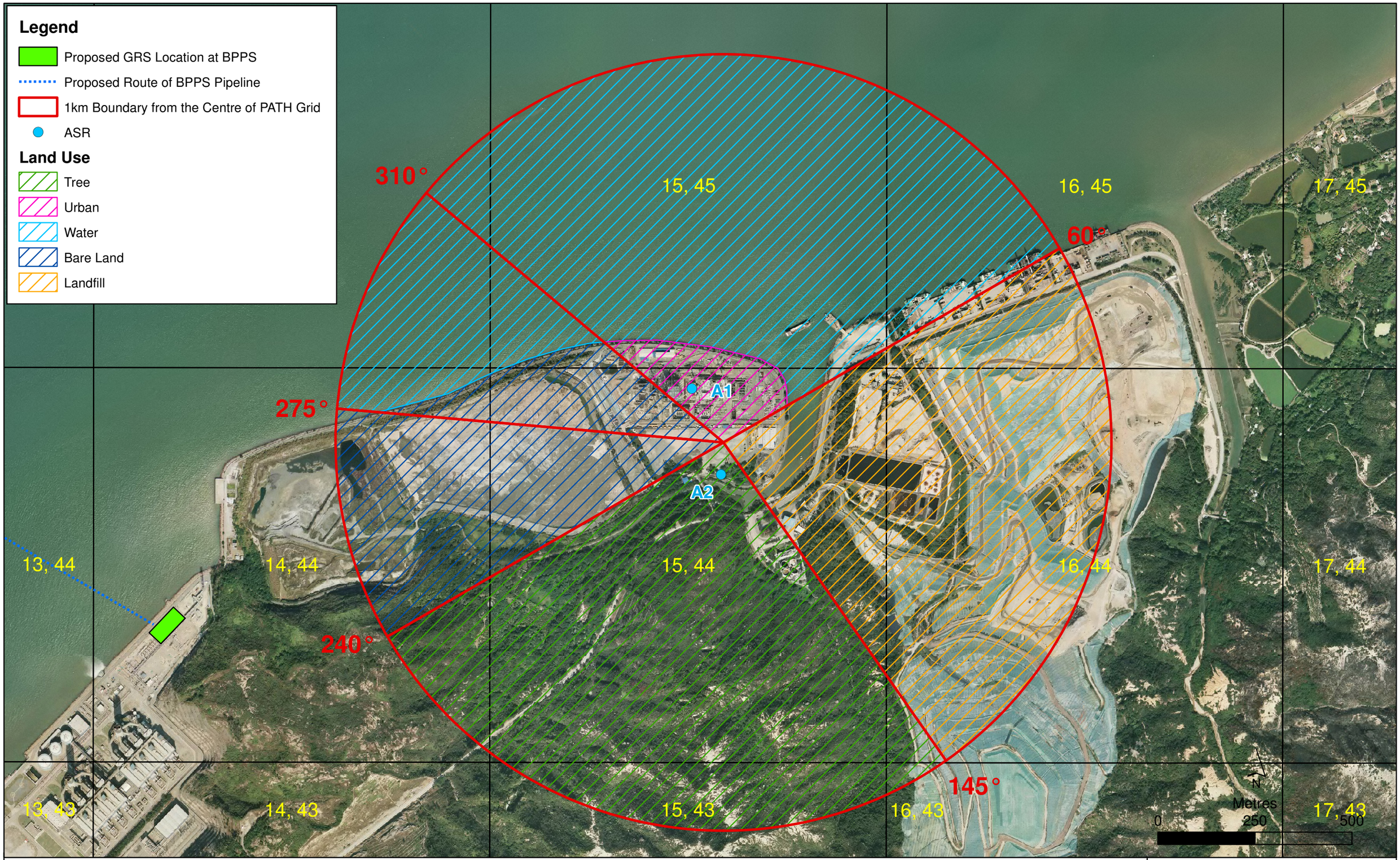


Figure 4D.2

Sectors of Land Use for PATH Grid 15,44

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_PATH_1544.mxd
Date: 6/12/2017

Environmental Resources Management

ERM

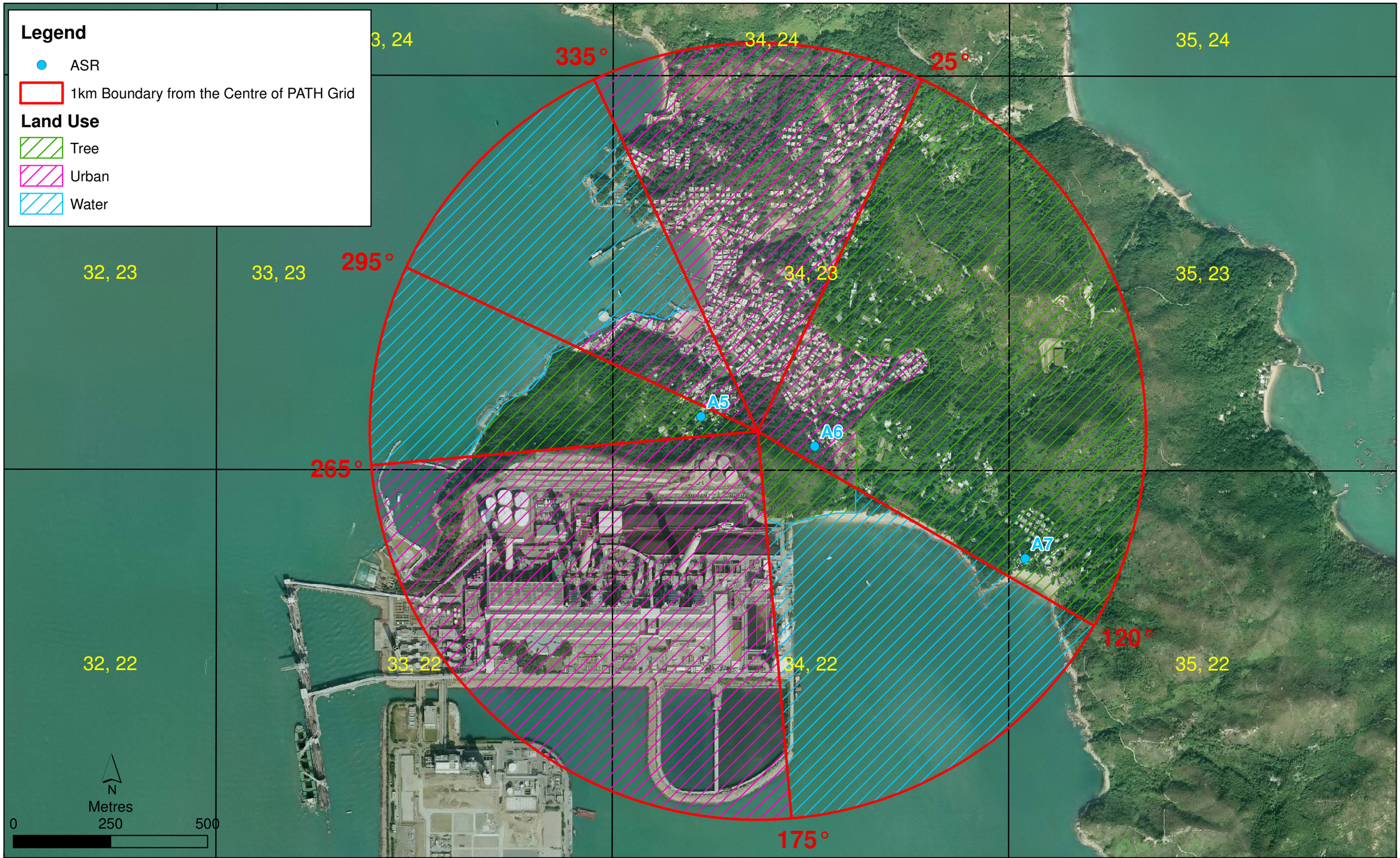


Figure 4D.3

Sectors of Land Use for PATH Grid 34, 23

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_PATH_3423.mxd
Date: 6/12/2017

Environmental Resources Management

ERM

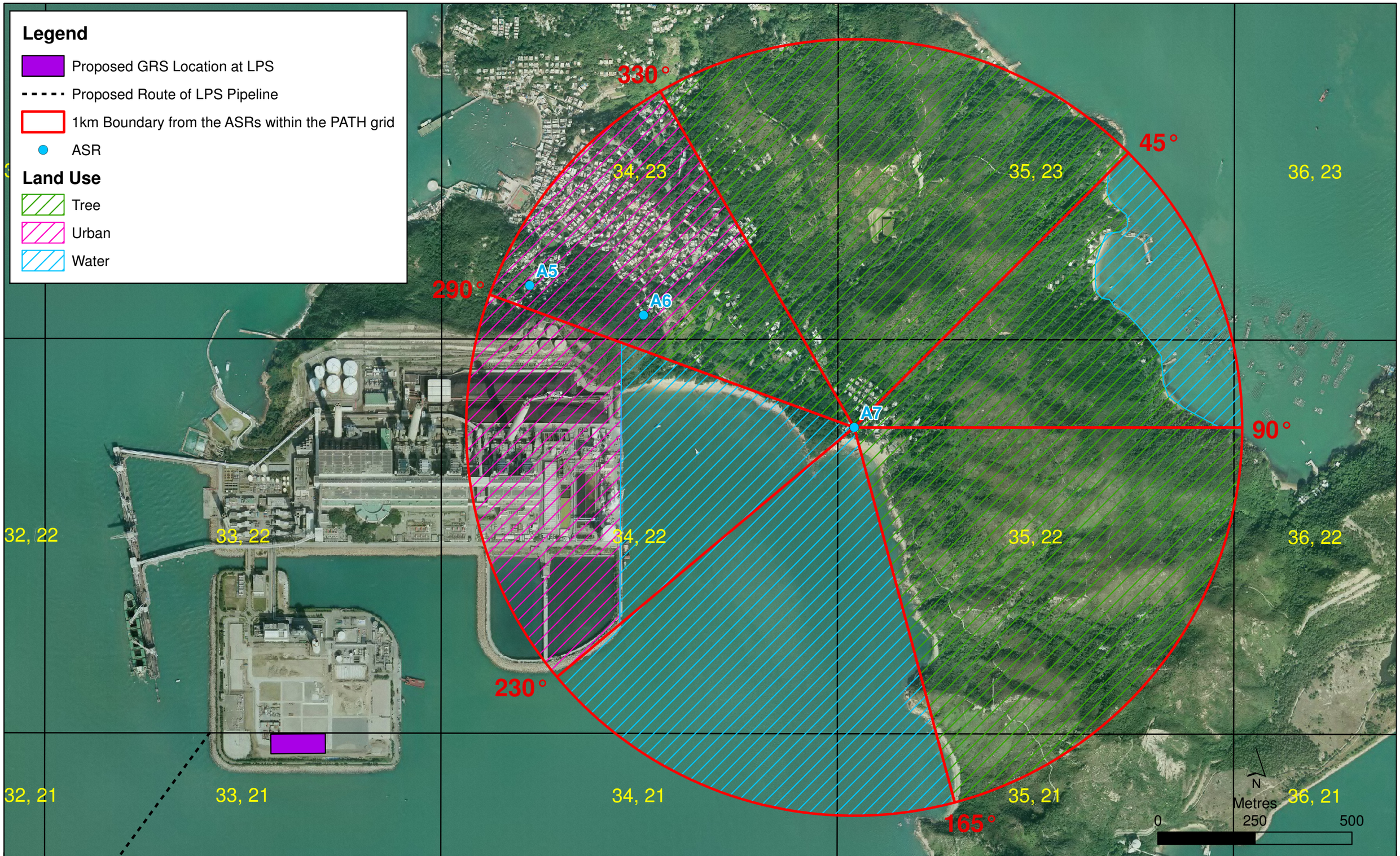


Figure 4D.4

Sectors of Land Use for PATH Grid 35, 22

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_PATH_3522.mxd
Date: 16/4/2018

Environmental Resources Management

ERM

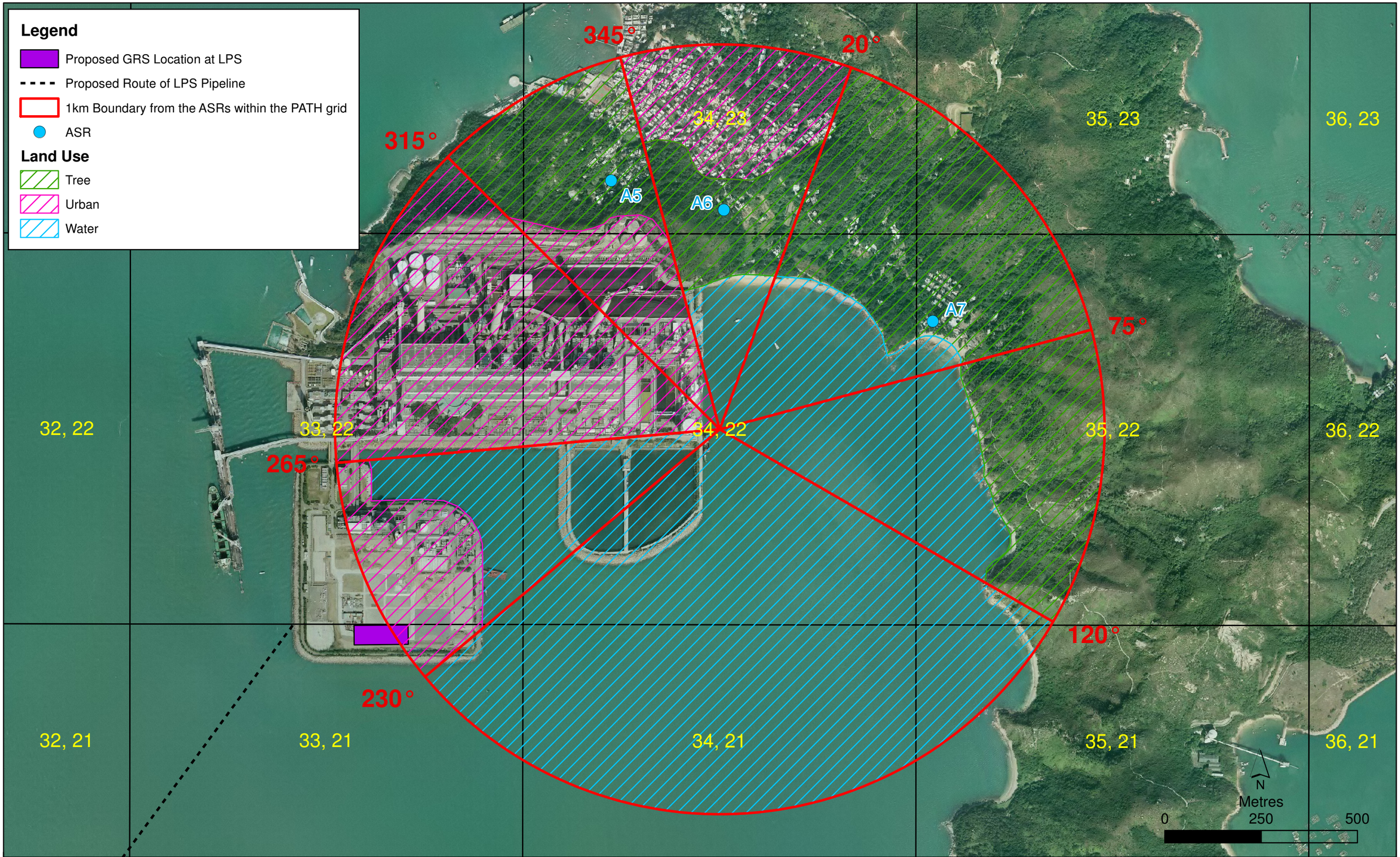


Figure 4D.5

Sectors of Land Use for PATH Grid 34, 22

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_PATH_3422.mxd
Date: 16/4/2018

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Figure 4D.6

10km x 10km area from Proposed Gas Heater at Black Point Power Station

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_10km_BPPS.mxd
Date: 6/12/2017

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Figure 4D.7

10km x 10km area from Proposed Gas Heater at Lamma Power Station

File: T:\GIS\CONTRACT\0359722\Mxd\0359722_10km_LPS.mxd
Date: 16/4/2018

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Annex 4E

Predicted Cumulative Pollutant Concentrations at ASRs

Annex 4E - Predicted Cumulative Pollutant Concentrations at ASRs

				Cumulative 19th Highest Hourly Average NO_2 (μgm^{-3})								Maximum Hourly Average NO_2 (Project Only) (μgm^{-3}) [(a)]							
				Receptor height (meters above ground)								Receptor height (meters above ground)							
ASR	**ASR Description**	**x**	**y**	**1.5**	**5**	**10**	**20**	**30**	**40**	**50**	**60**	**1.5**	**5**	**10**	**20**	**30**	**40**	**50**	**60**
A1	Sludge Treatment Facilities (STF) Office	810405	831497	127.80	127.82	128.70	128.29	132.28	137.16			9.22	9.00	9.06	12.84	42.06	65.52		
A2	WENT Extension Site Office	810480	831276	128.32	128.31	128.84						8.25	8.23	8.24					
A3	Lung Kwu Sheung Tan	809498	829217	153.69	151.93	150.42						7.36	7.22	7.09					
A4	Planned Development at Lung Kwu Tan	808948	829100	137.34	137.42	137.58	137.15	139.16	145.14	145.21	146.71	7.61	7.24	7.19	11.66	22.48	34.23	27.89	11.65
A5	Village House at Tai Shan Central	829494	809322	131.81	132.58	133.40						18.87	19.44	19.47					
A6	Village House at Wang Long	829787	809245	124.72	124.71	124.71						14.61	16.84	20.49					
A7	Concerto Inn	830329	808956	118.39	118.37	118.59						18.11	17.85	19.38					
			AQO Criterion	**200**	**200**	**200**	**200**	**200**	**200**	**200**	**200**	-	-	-	-	-	-	-	-

Note:

(a) The maximum hourly average project contribution does not correspond to the same hour as the cumulative 19th highest hourly average concentration.

				Cumulative Annual Average NO_2 (μgm^{-3})								Annual Average NO_2 (Project Only) (μgm^{-3})							
				Receptor height (meters above ground)								Receptor height (meters above ground)							
ASR	**ASR Description**	**x**	**y**	**1.5**	**5**	**10**	**20**	**30**	**40**	**50**	**60**	**1.5**	**5**	**10**	**20**	**30**	**40**	**50**	**60**
A1	Sludge Treatment Facilities (STF) Office	810405	831497	29.83	30.01	30.80	31.67	32.22	36.17			0.06	0.06	0.06	0.07	0.14	0.18		
A2	WENT Extension Site Office	810480	831276	29.52	29.92	30.95						0.05	0.05	0.05					
A3	Lung Kwu Sheung Tan	809498	829217	35.47	34.92	34.34						0.05	0.05	0.05					
A4	Planned Development at Lung Kwu Tan	808948	829100	36.95	36.84	36.74	36.76	37.07	37.51	37.70	37.57	0.07	0.07	0.07	0.09	0.11	0.13	0.11	0.07
A5	Village House at Tai Shan Central	829494	809322	24.79	24.86	24.94						0.10	0.10	0.09					
A6	Village House at Wang Long	829787	809245	22.71	22.72	22.76						0.08	0.08	0.08					
A7	Concerto Inn	830329	808956	18.16	18.15	18.17						0.09	0.08	0.09					
			AQO Criterion	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	-	-	-	-	-	-	-	-