

Appendix C

Replacement Pages of Updated Air Quality Impact Assessment

Remarks:

- a) *In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.*
- b) *The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.*
- c) *The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources. Consult EPD when planning open space sites close to such establishments.*
- d) *Amenity areas are permitted in any situation.*

ProPECC PN2/96 - Control of Air Pollution in Car Parks

- 2.2.10 This practice notes include air quality guidelines required for the protection of public health and factors that should be considered in the design and operation of car parks in order to achieve the required air quality. The limits for air pollutants as recommended by the practice notes are summarised in **Table 2.3**.

Table 2.3 Limits of Air Pollutant Concentrations Inside Car Parks

Air Pollutant	Average Time	Maximum Concentration ($\mu\text{g}/\text{m}^3$) ^[i]	Parts Per Million (ppm)
Carbon Monoxide (CO)	5 minutes	115,000	100
Nitrogen Dioxide (NO ₂)	5 minutes	1,800	1

Notes:

[i] All limits are expressed as at reference conditions of 298K and 101.325kPa.

2.3 Existing Air Quality in Kwun Tong District

- 2.3.1 The nearest air quality monitoring station (AQMS) to the Proposed Development is the Kwun Tong AQMS. The five most recent years of air quality monitoring data, 2019 to 2023, from this station are summarized in **Table 2.4**. According to the AQMS monitoring data presented in **Table 2.4**, exceedance in annual NO₂ concentrations is recorded.

Table 2.4 Air Quality Monitoring Data at Kwun Tong AQMS

Pollutant	Averaging Time	AQO	Pollutant Concentration ($\mu\text{g}/\text{m}^3$)				
			2019	2020	2021	2022	2023
Respirable Suspended Particulates (RSP)	10th Highest 24-hour	75 (9)	73	67	72	49	57
	Annual	30	38	32	31	24	26
Fine Suspended Particulates (FSP)	19th Highest 24-hour	37.5 (18)	40	32	32	31	28
	Annual	15	21	16	17	14	15
Nitrogen Dioxide (NO ₂)	19th Highest 1-hour	200 (18)	184	153	164	145	147
	10th Highest 24-hour	120 (9)	96	81	97	83	75
	Annual	40	45	43	49	45	41
Sulphur Dioxide (SO ₂)	4th Highest 10-Min	500 (3)	41	24	24	19	29
	4th Highest 24-hour	40 (3)	11	8	7	11	10

Pollutant	Averaging Time	AQO	Data Summary	PATH v3.0 Grid in Year 2030			
				46,31	47,31	47,30	46,30
	8-Hour	10000 (0)	1st	486	480	482	484
			Exceedance	0	0	0	0
	24-Hour	4000 (0)	1st	458	447	448	457
			Exceedance	0	0	0	0
(a) Numbers in brackets is the number of exceedances allowed per year							
(b) Bolded values exceed the relevant AQO							
(c) Data extracted from EPD's Smart Air Modelling Platform (SAMP v2.1)							

2.4 Identification of Representative Air Sensitive Receivers (ASRs) during Construction Phase

- 2.4.1 There are a number of industrial buildings, residential buildings, churches, community centres, sports centres and playgrounds located within 500m of the Proposed Development. Location of representative ASRs during construction phase are shown in **Figure 2.2**. Their details are listed below:

Table 2.6 Details of Representative Air Sensitive Receivers during Construction Phase

Representative ASR ID	Description	Land Use	Assessment Height (m)	Horizontal Distance from the Application Site (m)
A01	Planned Transitional Housing	Residential	1.5 - 33.0	18
A02	Peninsula East	Residential	1.5 - 150	34
A03	Kwun Tong Wholesale Fish Market	G/IC	1.5 - 18.0	138
A04	Planned Residential Development (Application No. A/K15/122) (The Coast Line I)	Residential	1.5 - 100	37
A05	Planned Comprehensive Residential Development (Application No. A/K15/126)	Residential	1.5 - 100	203
A06	Planned Residential Development (Application No. A/K15/121)	Residential	1.5 - 75.5	222
A07	Montego Bay	Residential	1.5 - 100	351
A08	Yau Tong Industrial City Block B	Industrial	1.5 - 54.0	121
A09	Wah Lee Industrial Building	Industrial	1.5 - 53.0	177
A10	Maya by Nouvelle	Residential	1.5 - 112	224

ASR ID	NO ₂			RSP		FSP		SO ₂	
	19th Highest Hourly (µg/m ³)	10th Highest Daily (µg/m ³)	Annual Average (µg/m ³)	10th Highest Daily (µg/m ³)	Annual Average (µg/m ³)	19th Highest Daily (µg/m ³)	Annual Average (µg/m ³)	4th Highest 10-min (µg/m ³)	4th Highest Daily (µg/m ³)
D07	89.2-104.4	34.5-47.6	14.1-21	49.4-68.1	18.6-28.5	28.5-32.9	11.1-14.2	22.6-22.9	6.8-6.9
D08	89.4-145.2	34.4-58.1	14.1-25.6	49.4-58.1	18.7-24.6	28.5-30.3	11.1-13	22.6-23	6.8-6.9
D09	89.4-111.8	34.4-48.3	14.1-21.2	49.4-56.7	18.7-23.4	28.5-29.9	11.1-12.7	22.7-22.9	6.8-6.9
D10	89.4-100.1	34.5-42.8	14.1-19	49.4-54	18.7-22.2	28.5-29.6	11.1-12.3	22.7-22.8	6.8-6.9
D11	89-96.5	34.5-38.8	14.1-17.9	49.4-52.2	18.7-21.2	28.5-29	11.1-12	22.7-22.8	6.8-6.9
D12	88.1-94.5	34.6-37.1	14.1-18.3	49.4-51.1	18.7-20.8	28.5-28.8	11.1-11.8	22.7-22.8	6.8-6.9
D13	87.8-93.2	34.6-37.2	14-19	49.4-50.9	18.7-20.3	28.5-28.9	11.1-11.7	22.7-22.8	6.8-6.9
D14	86.6-91.1	34.7-37.8	14-20.4	49.4-50.3	18.7-20.1	28.5-28.8	11.1-11.6	22.7-22.8	6.8-6.9
AQO (µg/m ³)	200	120	40	75	30	37.5	15	500	40

Note:

1. Bolded values exceed the relevant AQO.

SO₂

- 2.10.2 The predicted results of the 4th highest 10-minute average and daily average SO₂ concentration at ASR levels are summarized in **Appendix 2.13**. The results indicate that SO₂ concentrations at the Proposed Development comply with the relevant AQOs.

NO₂

- 2.10.3 The predicted results of the 19th highest 1-hour average and annual average NO₂ concentration at all selected ASR levels are summarized in **Appendix 2.13**. The results indicate that NO₂ concentrations at all locations of the Proposed Development comply with the relevant AQOs.

RSP

- 2.10.4 The predicted results of the 10th highest 24-hours and annual average RSP concentrations at all ASR levels are summarized in **Appendix 2.13**. The results indicate that RSP concentrations at all locations of the Proposed Development comply with the relevant prevailing AQOs except ASR D06 of 10th highest daily average and annual average at 4/F (27.5mAG|31.9mPD) and annual average at 5/F (30.6mAG|35.0mPD) at the south portion of the proposed Development. The predicted RSP concentration at these levels exceed the prevailing AQOs which is enacted in April 2025.

FSP

- 2.10.5 The predicted results of the 36th highest 24-hours and annual average FSP concentration for all selected ASRs at all levels are summarized in **Appendix 2.13**. The results indicate that FSP concentration at all locations of the Proposed Development comply with the relevant AQOs except ASR D06 of annual average at 4/F (27.5mAG|31.9mPD) and 5/F (30.6mAG|35.0mPD) at the south portion of the proposed Development. The predicted RSP concentration at these levels exceed the prevailing AQOs which is enacted in April 2025.
- 2.10.6 The contour plots of SO₂, NO₂, RSP and FSP at their worst hit level are shown in **Appendix 2.14**. The contour plots show that there is no exceedance within the Application Site at their worst hit level of SO₂ and NO₂.
- 2.10.7 For the RSP and FSP, there are some portions of the Proposed Development at 4/F (27.5mAG|31.9mPD) and 5/F (30.6mAG|35.0mPD) of the residential tower fall within the exceedance zone. However, there is no air sensitive uses, openable windows and fresh air intakes located within the exceedance zone. From the assessment results, the rest of the residential towers would comply with the relevant AQOs. Therefore, the occupants at the residential tower would not be subject to adverse air quality impact.
- 2.10.8 The predicted air quality concentration at non-domestic portion including podium comply with the prevailing AQOs. the fresh air intake for the non-domestic use of the Proposed Development is recommended to be located at or above 1.5mAG except the exceedance zone, thus, it is anticipated that the Proposed Development will not be subject to any adverse air quality impact.

2.11 Odour Impact Assessment

Introduction

- 2.11.1 For the most recent site visit conducted on 15 March 2025 (between noon to 2pm) to verify the potential odour sources, the temperature and relative humidity 22.7°C and 91% respectively. **Figure 2.7** shows the inspection route. The odour source of the area is same as that assessed in the approved planning application of the 126 Approval Scheme, i.e. three identified odour sources are Yau Tong Sewage Pumping Station, Kwun Tong Wholesale Fish Market and Sam Ka Tsuen Typhoon Shelter as shown in **Figure 2.7**. Also, there is no change in their operation. Therefore, the odour impact assessment used in the previous assessment for A/K15/126 is adopted in this assessment.

Identified Odour Sources

a. Yau Tong Sewage Pumping Station

- 2.11.2 Yau Tong Sewage Pumping Station (YTSPS) is located at the junction of Ko Fai Road and Tung Yuen Street which is next to the Application Site. The pumping station has three sewage pumps that operate in a 2 duty and 1 standby mode with each pump having a design capacity of 0.5m³/s. Therefore, the ultimate design capacity for YTSPS is 1.0m³/s according to the approved EIA Study for Yau Tong Bay Development – Engineering Feasibility Study for the Comprehensive Development at Yau Tong Bay (AEIAR-054/2002).
- 2.11.3 Upon the visits, no identifiable odour was detected at the site boundary of the sewage pumping station and the junction of Shung Tai Wai and Tung Yuen Street. In addition, according to the reply from EPD's regional office (see **Appendix 2.18**), there is no odour complaint in the concerned area such as Yau Tong Sewage Pumping Station, concrete batching plant & Wholesale Fish Market.

2.11.4 Based on the latest information from Drainage Services Department (DSD), enhancement work would be carried out at YTSPS and the tentative completion of the enhancement project is 2032. The proposed enhancement works involves provision of deodourisation system, with target odour emission after the enhancement provision of new typical sewage pumping station subject to funding and detailed design. Correspondence with DSD is provided in **Appendix 2.21**. Furthermore, a separate odour impact assessment for YTSPS with proposed enhancement work would be prepared for relevant departments (EPD & DSD)' approval and the occupation date of the Proposed Development would not be earlier than the completion date of YTSPS enhancement works. With the consideration of the above findings, odour impact from sewage pumping station is not anticipated.

b. Kwun Tong Wholesale Fish Market

2.11.5 Kwun Tong Wholesale Fish Market, which is located at the junction of Shung Wo Path and Tung Yuen Street, is at about 100m from the Application Site. The peak operating hour of the market would be from 7:00am to 12:00 noon. The market activities include the delivery by fishing vessels and immediate collection, after transaction, by lorry of boxed fresh marine fish. The live fish are delivered in containers which are transferred to shore, alive, and are placed in aquariums inside the market or transported directly to waiting lorries which are equipped with aquariums inside. Since fish market office building and Tung Yuen Street Cooked Food Market are situated at the northern and southern sides of the fish market respectively and the fish market is covered by a roof, odour can only be emitted at the sides facing the sea and Tung Yuen Street.

2.11.6 Upon the visits, it is observed that some fish stores were not in operation and floor was dry at some area. In addition, polyfoam boxes were collected at a designated area inside the fish market and disposed of by dump trucks regularly. However, in this odour assessment, to be conservative, apart from carpark, indoor storage area and administrative building, all other area are regarded as different types of odour sources (see **Figure 2.8**). Impact from these area sources is modelled by AERMOD. Emission parameters for the Kwun Tong Wholesale Fish Market are referenced to the approved planning application A/K15/126 and are presented in **Appendix 2.15**.

c. Sam Ka Tsuen Typhoon Shelter

2.11.7 Sam Ka Tsuen Typhoon Shelter is located to the southeast of the Application Site. The proposed residential buildings are more than 400m away from the Typhoon Shelter. In the south-eastern side of the typhoon shelter, many seafood restaurants and shops exist to serve the public and tourists visiting the area.

2.11.8 The area is predominantly impacted by sewage outfalls of the seafood restaurant, shops and low-rise village houses in the vicinity. In order to resolve the odour problem arising from the sewage outfalls, in-situ bioremediation works for facilitating decomposition of organic pollutants in sediments were carried out in the typhoon shelter in 2004 ^[Ref-4]. Several studies ^[Ref-5,6,7&8] documented its successful application to treat odorous sediments at Sam Ka Tsuen Typhoon Shelter where over 95% of

Ref-4 LCQ3: Tackling odour problem of waterfront tourist attractions (2012), <http://www.info.gov.hk/gia/general/201202/01/P201202010276.htm> ^{Ref-4} LCQ3: Tackling odour problem of waterfront tourist attractions (2012), <http://www.info.gov.hk/gia/general/201202/01/P201202010276.htm>

Ref-5 United States Patent US 8,647,566 B2 (2014), Deodorant for treating sediment in-situ and the associated facilities and method (https://www.google.com/patents/US8647566?utm_source=gb-gplus-sharePatent)

Ref-6 Estes T.J. and McGrath C.J. (2014) Economical Treatment of Dredged Material to Facilitate

Ref-7 Agreement No. CE 35/2006(CE) Kai Tak Development Engineering Study cum Design and Construction of Advance Works - Investigation, Design and Construction - Annex A Report on KTAC and KTTS studies

Ref-8 Kai Tak Development Environmental Improvement to Kai Tak Approach Channel CB(1)1375/08-09(01) <https://www.legco.gov.hk/yr08-09/english/panels/dev/papers/dev0331cb1-1375-1-e.pdf>

odorous acid volatile sulphides were removed. Referring to the meeting minute of the Legislative Council on 1 February 2012 ^[Ref-4], no complaint regarding odour of Sam Ka Tsuen Typhoon Shelter was recorded in Year 2009 to 2011 (i.e. 5 to 7 years after the bioremediation works).

- 2.11.9 Moreover, Drainage Services Department (DSD) is carrying out a study "Lei Yue Mun Village Sewerage – Investigation, Design and Construction (4398DS)" to improve the water quality at Sam Ka Tsuen Typhoon Shelter and the hygiene conditions of the unsewered areas at Lei Yue Mun by providing sewerage system **which was completed in Year 2023** ^[Ref-9]. In light of this, it is expected that Sam Ka Tsuen Typhoon Shelter therefore will no longer be impacted by sewage outfalls of the unsewered areas during heavy rainfall.
- 2.11.10 Odour patrol on 28 February 2024 and 14 March 2025 were conducted at the boundary of Sam Ka Tsuen Typhoon Shelter. A slightly detectable odour was noticed at the Sam Ka Tsuen Typhoon Shelter. However, no odour was noticeable at around 20m away from the Sam Ka Tsuen Typhoon Shelter. Since the boundary Application Site is around 180m away from the Sam Ka Tsuen Typhoon Shelter, it is anticipated that the associated odour impact is not anticipated.

Odour Impact Appraisal and Assessment Result

- 2.11.11 Nevertheless, a quantitative odour assessment was conducted in an environmental study supporting a S16 town planning application of a neighbouring planned residential site under Application No. A/K15/126 (Feb 2022). The report also identified that Yau Tong Sewage Pumping Station, Kwun Tong Fish Market and Sam Ka Tsuen Typhoon Shelter as existing odour sources in the vicinity of their Application Site. Similar to the findings in this EAS, odour impact for Yau Tong Sewage Pumping Station and Sam Ka Tsuen Typhoon Shelter was not anticipated at the planned residential site. Therefore, a quantitative odour impact assessment was carried out under the environmental study of Application No. A/K15/126 for the Kwun Tong Wholesale Fish Market only, which is considered relevant and applicable for this EAS. The range of the assessment results of odour is summarized below.

Table 2.11 Range of Assessment Results of Odour

ASR ID	Odour
	Highest 5-s average (OU)
D01	0.016-0.305
D02	0.015-0.345
D03	0.014-0.385
D04	0.014-0.432
D05	0.017-0.438
D06	0.017-0.421
D07	0.017-0.329
D08	0.016-0.27
D09	0.015-0.242
D10	0.013-0.214
D11	0.012-0.212

Ref-9 PWP No. 4398DS Sewerage to Lei Yue Mun Village,

https://www.dsd.gov.hk/TC/Our_Projects/All_Projects/4398DS.html

3. CONCLUSION

- 3.1.1 Adequate dust suppression mitigation measures will be implemented during construction phase of the Project so that adverse air quality impact is not anticipated
- 3.1.2 Based on the air quality impact and odour assessment results, the Proposed Development will not be subject to any unacceptable air quality or odour impact provided that the air pollutant concentrations and odour at the fresh air intake locations for the Proposed Development comply with the AQOs and odour criteria.
- 3.1.3 There are some portions of the Proposed Development at 4/F (27.5mAG|31.9mPD) and 5/F (30.6mAG|35.0mPD) of the residential tower fall within the exceedance zone. However, air sensitive uses, openable windows and fresh air intakes will not be located within the exceedance zone. From the assessment results, the rest of the residential towers would comply with the relevant AQOs. Therefore, the occupants at the residential tower would not be subject to adverse air quality impact. **Appendix 2.20** indicates the exceedance zone and its concerned fresh air intake level.
- 3.1.4 The predicted air quality concentration at non-domestic portion including podium comply with the prevailing AQOs. The fresh air intake for the non-domestic use of the Proposed Development is recommended to be located at or above 1.5mAG except the exceedance zone, thus, it is anticipated that the Proposed Development will not be subject to any adverse air quality impact.
- 3.1.5 Upon the visits, no identifiable odour was detected at the site boundary of the sewage pumping station and the junction of Shung Tai Wai and Tung Yuen Street. In addition, according to the reply from EPD's regional office, there is no odour complaint in the concerned area such as Yau Tong Sewage Pumping Station, concrete batching plant & Wholesale Fish Market.
- 3.1.6 Based on the latest information from Drainage Services Department (DSD), enhancement work would be carried out at YTSPS and the tentative completion of the enhancement project is 2032. The proposed enhancement works involves provision of deodourisation system, with target odour emission after the enhancement similar to new typical sewage pumping station subject to funding and detailed design. Furthermore, a separate odour impact assessment for YTSPS with proposed enhancement work would be prepared for relevant departments (EPD & DSD)' approval and the occupation date of the Proposed Development would not be earlier than the completion date of YTSPS enhancement works. With the consideration of the above findings, odour impact from sewage pumping station is not anticipated.
- 3.1.7 Based on above conclusion, it confirms the feasibility and acceptability of the Proposed Redevelopment from an environmental perspective.

Figures

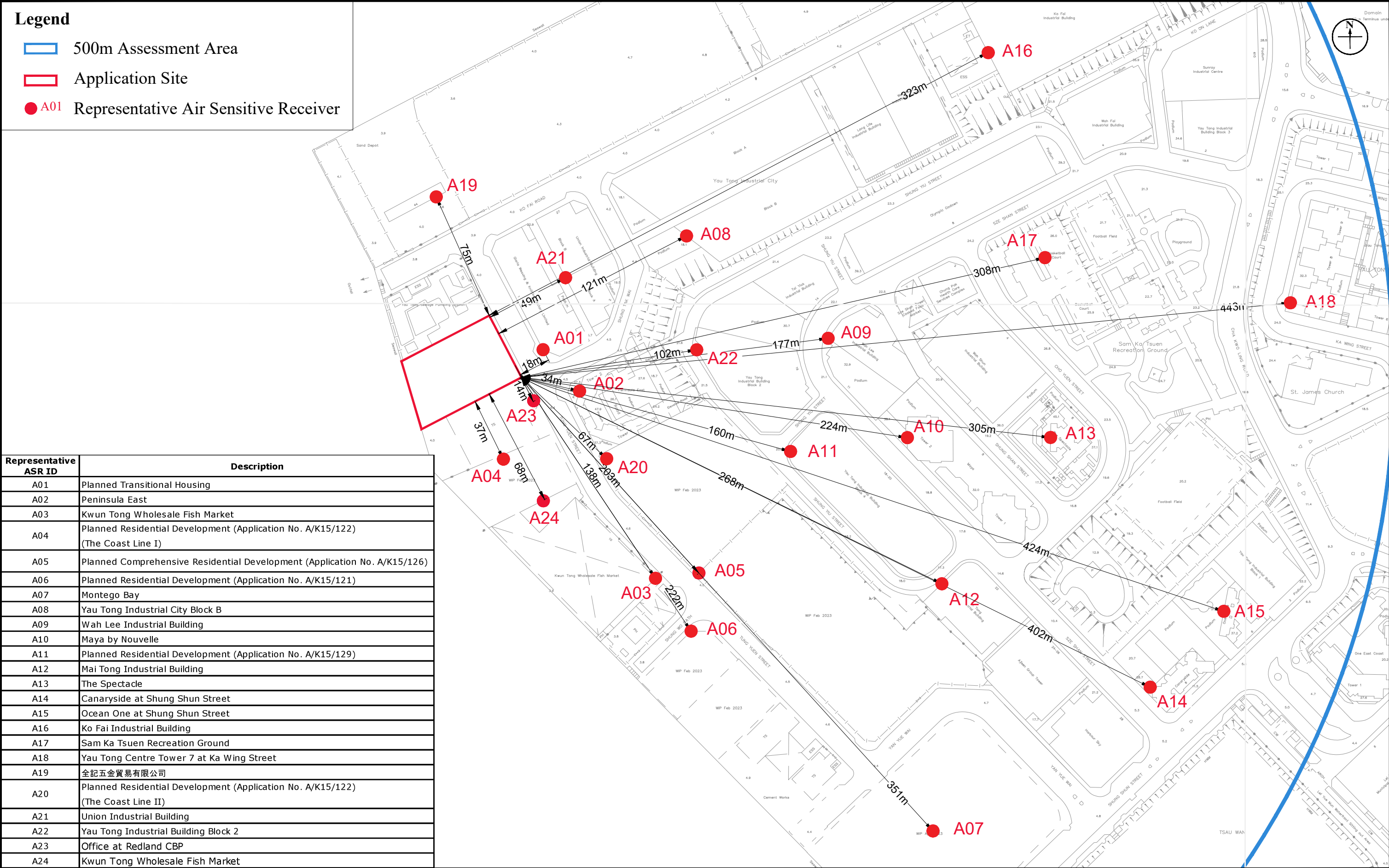
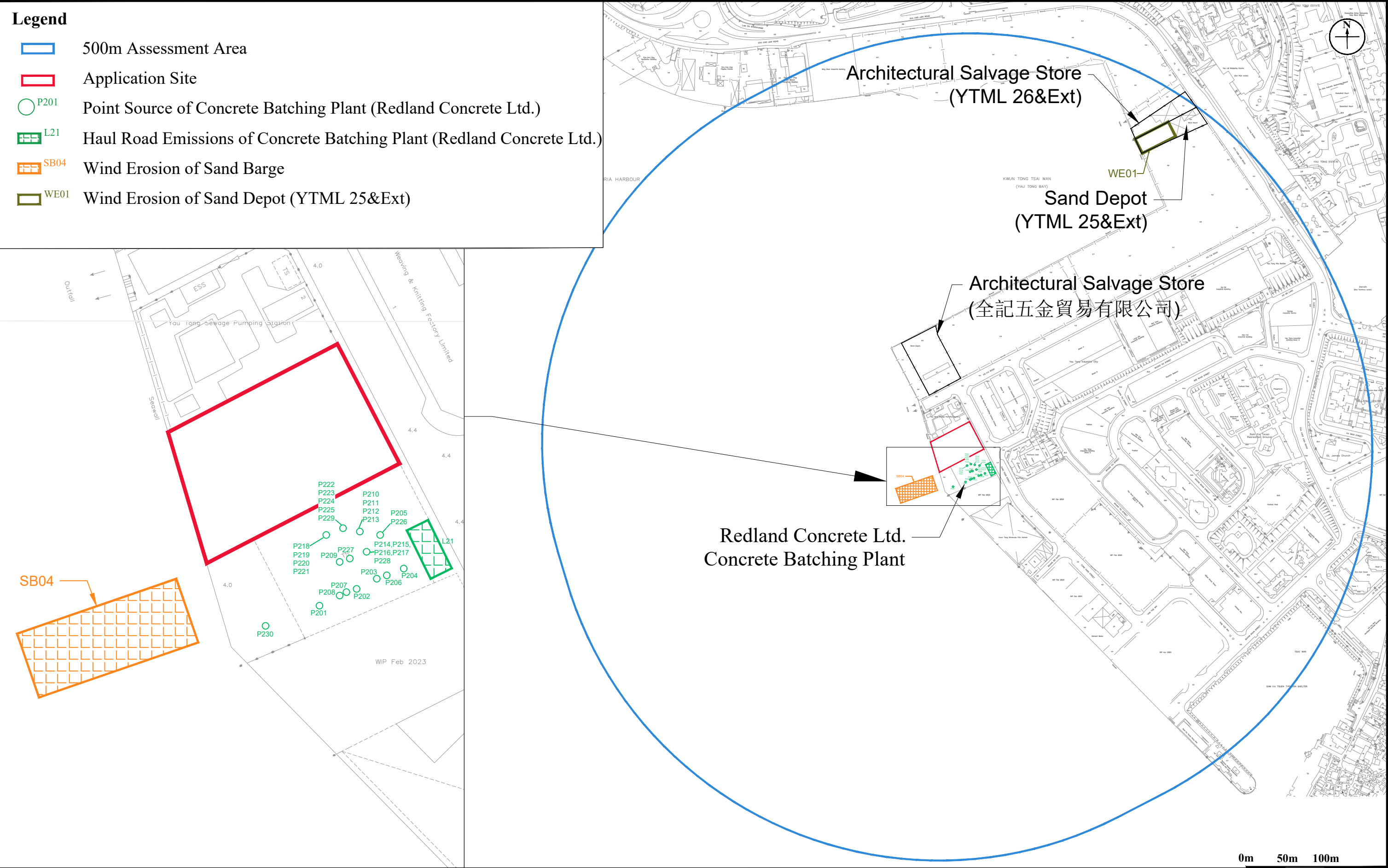
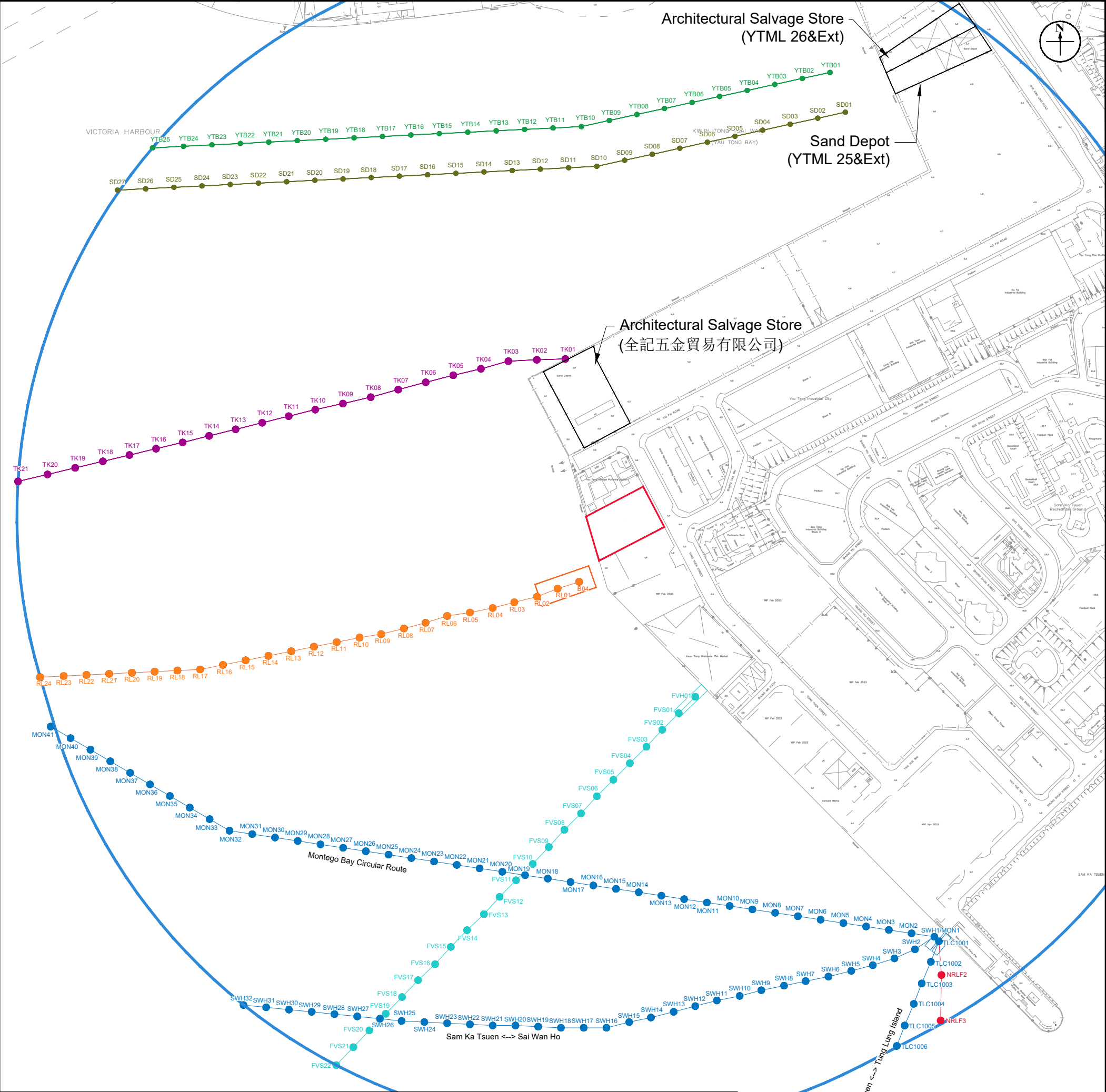


Figure: 2.2		RAMBOLL	
Title: Representative Air Sensitive Receivers during Construction Phase		Drawn by: WT	
Project: Section 16 Application for Proposed Flats, Shop and Services and Eating Place with minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon		Checked by: TC	
		Rev.: 1.1	
		Date: Jul 2025	





Legend	
	500m Assessment Area
	Application Site
	Marine Emission Sources - Barge
	Marine Emission Sources - Ferry
	Marine Emission Sources - Planned Local Vessel
	Marine Emission Sources - Fishing Vessel
	Marine Emission Sources - Sand Depot (YTML 25&Ext)
	Marine Emission Sources - Architectural Salvage Store (YTML 26&Ext)
	Marine Emission Sources - Architectural Salvage Store (全記五金貿易有限公司)

Figure: 2.5			
Title:	Location of Identified Marine Vessels Emission Sources within 500m Assessment Area	Drawn by: WT	
		Checked by: TC	
Project:	Section 16 Application for Proposed Flats, Shop and Services and Eating Place with minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at No. 4 Tung Yuen Street, Yau Tong, Kowloon	Rev.: 1.1	
		Date: Jul 2025	

Appendix 2.2 Calculation of Concrete Batching Plant Emissions

Calculations of Time-In-Mode (TIM) for Barge to/ from the Concrete Batching Plant (CBP)

Premise	Vessel Type	Length of Sailing Route (m) [1]	Design Speed (m/s)	Speed Under Various Mode (m/s)		Time-In-Mode (min)	
				Hotelling	Maneuvering [2]	Hotelling [3]	Maneuvering [4]
Redland Concrete Ltd.	Barge	483.5	NA	0	2.315	60	3.48

Notes:

[1] Length of sailing route within 500m assessment area.

[2] No information is available from the operator. The travelling speed of barge is referenced to Appendix 3.5 of approved Lei Yue Mun Waterfront Enhancement Project EIA (EIA-258/2018). (i.e. about 4.5 knots, 2.315m/s) and adopted in this assessment. According to EPD's study on marine vessel (2012), the speed in maneuvering mode ranges from 1 to 8 knots (i.e. 0.51 and 4.12m/s). Therefore, the barges are travelling under maneuvering mode within the assessment area for assessment purpose.

[3] Time-In-Mode (TIM) for hotelling - As advised by the operator, there would be one barge at one time serving each CBP and the barges would stay for around one to two days then depart. Given that the long duration of stay and infrequent sailing schedule of the barges, it is assumed that there would be one barge for each CBP hotelling continuously during the operation hours as a conservative assessment.

[4] TIM for maneuvering is estimated based on the recorded averaged speed of the barges and the length of sailing route within 500m assessment area.

Emission Factor for Barge of Concrete Batching Plant (CBP)

Marine Emission

Emission Rate = Engine Power x Loading Factor x Emission Factor x Time-in -mode

Premise	Vessel Type	Engine Type	Average Engine Power (kW) [1]	Loading Factor [4]		Time-In-Mode (min) [5]		Emission Factor (g/kWh)			
				Hotelling	Maneuvering	Hotelling	Maneuvering	SO ₂ [2]	NOx [2]	RSP [2]	FSP [2]
Redland Concrete Ltd.	Barge	Main Engine	727	0.00	0.30	60	3.48	0.21	10.00	0.30	0.29
		Auxiliary Engine	116	0.43	0.43	60	3.48	0.21	10.00	0.40	0.39

Note:

[1] Engine Power for Main Engine and Auxiliary Engine - No information from operator is available. Referenced to Table 4-5 and 4-6 of the Study on Marine Vessels Emissions Inventory, February 2012, Main Engine Power and Auxiliary Engine of Barge at GRT Class >=1000 for conservative purpose.

[2] Emission Factor for Main Engine and Auxiliary Engine - No information from operator is available. Reference to EPD's Table 4-16 of the Study on Marine Vessels Emissions Inventory, February 2012, engine type of ME(Cat.1) for main engine and AE for Auxiliary Engine.

[3] The emission factor of SO₂ is corrected with the fuel sulphur content according to Section 4.2.31 of EPD's "Study on Marine Vessels Emission Inventory" using the following equation: SO₂ Emission Factor (Auxiliary Engine) = BSFC x 2 x 0.9755 x Fuel Sulphur Fraction
where

BSFC of the vessel is referenced to Section 4.2.27 of EPD's "Study on Marine Vessels Emission Inventory", i.e. 213 g/kWh.

Fuel Sulphur Fraction refers to the fuel sulphur content limit of the MLD i.e. 0.05% with effective of the Air Pollution Control (Marine Light Diesel) Regulation on 1st April, 2014.

Therefore, SO₂ Emission Factor of Auxiliary Engine = 213 x 2 x 0.9755 x (0.05/100) = 0.21 g/kWh

[4] Loading Factor for Main Engine and Auxiliary Engine - No information from operator is available. Reference to EPD's Tables 4-7 and 4-10 of the Study on Marine Vessels Emissions Inventory, February 2012, vessel type of All except tug and All RTVs respectively for conservative purpose.

[5] Time-In-Mode (TIM) Estimation - Refer to Calculations of TIM for Barge to / from the concrete batching plant.

Detailed Emission Rate

Premise	Vessel Type	Engine Type	Emission Factor (kg/hour)							
			Hotelling				Maneuvering			
			SO ₂	NOx	RSP	FSP	SO ₂	NOx	RSP	FSP
Redland Concrete Ltd.	Barge	Main Engine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.629E-03	1.265E-01	3.796E-03	3.669E-03
		Auxiliary Engine	1.04E-02	4.99E-01	2.00E-02	1.95E-02	6.013E-04	2.894E-02	1.158E-03	1.129E-03

Note:

[1] It is assumed that there would be one barge hotelling during the operation hours.

[2] Emission = Engine Power (kW) x Loading Factor x Time-in-mode (hr) x Emission Factor (g/kWh)

e.g. NOx emission factor of auxiliary engine under maneuvering at Redland Concrete Ltd. (kg/hour)

= Engine Power (kW) x Loading Factor x Emission Factor (g/kWh) x Time-in-mode (hr) / 1000

= (116 x 0.43 x 10.0 x 2.61 / 60 / 1000)

= 0.02168 kg/hour

Barge Schedule

Hour		Number of Activities per hour	
Start	End	Monday to Sunday & Public Holidays	
		Hotelling	Arrival/ Departure
0	1	0	0
1	2	0	0
2	3	0	0
3	4	0	0
4	5	0	0
5	6	0	0
6	7	0	0
7	8	1	1
8	9	1	1
9	10	1	1
10	11	1	1
11	12	1	1
12	13	1	1
13	14	1	1
14	15	1	1
15	16	1	1
16	17	1	1
17	18	1	1
18	19	1	1
19	20	1	1
20	21	0	0
21	22	0	0
22	23	0	0
23	24	0	0

Note:

[1] Based on the site visits, the barge will berth at the CBP for several days, it is assumed that there would be one arrival/ departure per hour of barge at the loading/ unloading point during operation hours for the worst-case scenario.

Calculations of Emission Factor for Wind Erosion within Concrete Batching Plant (CBP)

	Emission Factor	Unit	Reference
TSP =	0.85	Mg/hectare/yr	Table 11.9.4 of AP-42 S11.9

Therefore,

RSP =	0.40	Mg/hectare/yr	Multiplied by a conversion factor of 0.47 for TSP to RSP according to Table 2 of AP-42 S13.2.4
=	1.27E-06	g/sq.m/s	24 hour emission. No watering and covering are assumed in emission rate calculation as a conservative approach.
FSP =	0.06	Mg/hectare/yr	Multiplied by a conversion factor of 0.07 for TSP to FSP according to Table 2 of AP-42 S13.2.4
=	1.89E-07	g/sq.m/s	24 hour emission. No watering and covering are assumed in emission rate calculation as a conservative approach.

Calculations of Emission Factor for Paved Road within Concrete Batching Plant (CBP)

$$E = k (sL)^{0.91} \times (W)^{1.02}$$

where

E= Emission factor in grams per vehicle kilometer travelled (g/veh-km)

k= Particle size multiplier, k = 0.62 g/veh-km for RSP and 0.15 g/veh-km for FSP as defined according to Table 2 of AP42 S13.2.1-1

sL= Road surface silt loading (g/m²), as per AP-42 Table 13.2.1-3, mean silt loading for concrete batching plant is 12 g/m²

W= Average weight (ton) of vehicles travelling on road, 22 tons is assumed as full load condition (Reference is made to approved Section 16 Planning Application of Proposed Residential Development at 18 Tung Yuen Street, Yau Tong (A/K15/121))

RSP Emission Factor = 0.139 g/veh-m

FSP Emission Factor = 0.034 g/veh-m

Description	Source ID	Distance (m)	Road Width (m)	Road Surface Area (m ²)	Peak Hourly Flow of Mixer Trucks ⁽¹⁾	Dust Removal Efficiency (%) ⁽²⁾	Emission Rate ⁽³⁾⁽⁴⁾	
							RSP	FSP
							(g/s/m ²)	(g/s/m ²)
Redland Concrete Ltd.	L21	7	16	110	17	91.70%	3.43E-06	8.31E-07

Note:

1. Peak hourly mixer trucks count of the concrete batching plant based on site observations.
2. Calculation of Dust Removal Efficiency for Redland Concrete Ltd.

$$C = 100 - \frac{0.8pdt}{i}$$

(ref.: Eq. 3-2 in Section 3.3.3 of USEPA Control of Open Fugitive Dust Sources - Final Report)

where

C = Average control efficiency, in percent

p = Potential average hourly daytime evaporation rate, 0.23676 mm/h (p = 0.0049 x 48.3189 inch is equivalent to total evaporation of 1227.3mm obtained from Hong Kong Observatory)

d = Average hourly daytime traffic rate per hour, 22 veh/hr based on site observation

t = Time between applications in hour, once in each working hour as observed during site visit

i = Application intensity, 0.5 L/m² for haul road as minimum application intensity

Therefore,

$$C = 100 - (0.8)(0.2368)(22)(1)/0.5 = \underline{91.7\%}$$

3. Emission Rate(g/s) = Emission Factor x (1- Dust Removal Efficiency) x No. of Trucks per hour x Travelling Distance/Road Surface Area

4. According to Table 2 of AP42 S13.2.1-1, Particle size multiplier (k) of TSP, RSP and FSP for paved road is defined as 3.23 g/veh-km, 0.62 g/veh-km and 0.15 g/veh-km, respectively. The conversion ratio of TSP to RSP and FSP for paved road has thus referenced to the particle size multiplier.

Calculations of Emission Sources within Concrete Batching Plant (CBP)

Description	Fugitive Emission (Y/N)	Source ID	Source ID from SPL	Emissions/ Parameters extracted from SP License ⁽¹⁾								Concentration	Emission Rate adjusted to Emission Concentration Limit (10 mg/m ³) ⁽²⁾⁽³⁾		Exit Velocity (m/s)	Operation Hours ⁽⁴⁾
				Exhaust Gas Flowrate (m ³ /h)	Exit Temp (K)	Emission Height (mAG)	Stack Width (m)	Stack Length (m)	Stack Diameter (m)	Max Emission Rate (kg/hr)		RSP (mg/m3)	RSP (g/s)	FSP (g/s)		
Redland Concrete Ltd. ⁽¹⁾⁽²⁾	N	P201	EP2	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	0700 to 1900 (12 hours)
	N	P202	EP3	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P203	EP4	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P204	EP5	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P205	EP6	200	298.15	8	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P206	EP7	1750	298.15	10	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P207	EP8	1750	298.15	10	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P208	EP9	1750	298.15	10	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P209	EP10	200	298.15	8	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P210	EP18	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P211	EP19	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P212	EP20	200	298.15	15	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P213	EP21	1750	298.15	12	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P214	EP22	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P215	EP23	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P216	EP24	200	298.15	15	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P217	EP25	1750	298.15	12	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P218	EP26	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P219	EP27	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P220	EP28	200	298.15	15	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P221	EP29	3500	298.15	12	0.4	0.4	0.45	0.1750		26	0.00972	0.00286	6.1	
	N	P222	EP30	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P223	EP31	1750	298.15	26	-	-	0.15	0.0880		26	0.00486	0.00143	27.5	
	N	P224	EP32	200	298.15	15	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P225	EP33	3500	298.15	12	0.4	0.4	0.45	0.1750		26	0.00972	0.00286	6.1	
	N	P226	EP35	200	298.15	8	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P227	EP36	200	298.15	8	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P228	EP38	200	298.15	12	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P229	EP39	200	298.15	12	-	-	0.20	0.0100		26	0.00056	0.00016	1.8	
	N	P230	EP46	10200	298.15	3	0.5	0.5	0.56	0.1700		9	0.02408	0.00708	11.3	

Note:

1. No information is provided by the operators, reference has been made to the Specified Processes (SP) License L-3-117 (6) for Redland Concrete Ltd..

2. According to Appendix B.2, General Particle Size Distributions, page B.2-13, AP-42, 1/95 version, USEPA, RSP and FSP are 51% and 15% of TSP for general concrete batching activity.

3. According to Annex 2 of A Guidance Note on the Best Practicable Means for Specified Process - Cement Works (Concrete Batching Plant) BPM 3/2 (2025) issued in April 2025, the concentration limit of Particulate Matter (PM) would be limited to 10mg/m³ for license renewal by 1 January 2018 for all plants.

4. Operation hours of Redland Concrete Ltd. were made reference to approved EIA EIA-258/2018 - Lei Yue Mun Waterfront Enhancement Project.

Appendix 2.8 Input Parameters of Industrial and Marine Sources in AERMOD

Input Parameters of Industrial Emission Sources in AERMOD

Concrete Batching Plant - Point Source

Description ⁽¹⁾	ID	X	Y	Z	RSP	FSP	Emission Height	Exit Temp	Exit Velocity	Stack Diameter	Operation Hours
					g/s	g/s	mAG	K	m/s	m	
Redland Concrete Ltd.	P201	842116	817205	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	0700-1900
	P202	842127	817210	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P203	842133	817213	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P204	842141	817216	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P205	842134	817226	4.5	5.56E-04	1.63E-04	8	298.15	1.8	0.20	
	P206	842136	817214	4.5	4.86E-03	1.43E-03	10	298.15	27.5	0.15	
	P207	842124	817209	4.5	4.86E-03	1.43E-03	10	298.15	27.5	0.15	
	P208	842122	817208	4.5	4.86E-03	1.43E-03	10	298.15	27.5	0.15	
	P209	842122	817218	4.5	5.56E-04	1.63E-04	8	298.15	1.8	0.20	
	P210	842128	817227	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P211	842128	817227	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P212	842128	817227	4.5	5.56E-04	1.63E-04	15	298.15	1.8	0.20	
	P213	842128	817227	4.5	4.86E-03	1.43E-03	12	298.15	27.5	0.15	
	P214	842130	817221	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P215	842130	817221	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P216	842130	817221	4.5	5.56E-04	1.63E-04	15	298.15	1.8	0.20	
	P217	842130	817221	4.5	4.86E-03	1.43E-03	12	298.15	27.5	0.15	
	P218	842118	817226	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P219	842118	817226	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P220	842118	817226	4.5	5.56E-04	1.63E-04	15	298.15	1.8	0.20	
	P221	842118	817226	4.5	9.72E-03	2.86E-03	12	298.15	6.1	0.45	
	P222	842123	817228	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P223	842123	817228	4.5	4.86E-03	1.43E-03	26	298.15	27.5	0.15	
	P224	842123	817228	4.5	5.56E-04	1.63E-04	15	298.15	1.8	0.20	
	P225	842123	817228	4.5	9.72E-03	2.86E-03	12	298.15	6.1	0.45	
	P226	842134	817226	4.5	5.56E-04	1.63E-04	8	298.15	1.8	0.20	
	P227	842125	817219	4.5	5.56E-04	1.63E-04	8	298.15	1.8	0.20	
	P228	842130	817221	4.5	5.56E-04	1.63E-04	12	298.15	1.8	0.20	
	P229	842123	817228	4.5	5.56E-04	1.63E-04	12	298.15	1.8	0.20	
	P230	842100	817199	4.5	2.41E-02	7.08E-03	3	298.15	11.3	0.56	

Note:
1. Please refer to "Calculations of Emission Sources within Concrete Batching Plant (CBP)" for details.

Concrete Batching Plant - Area Source

Description ⁽¹⁾	ID	X	Y	Z	RSP	FSP	Release Height	X length	Y length	Source Angle	Plume Height	Operation Hours
					g/s-m ²	g/s-m ²	mAG	m	m	degree clockwise from N.	m	
Redland Concrete Ltd.	L21 ⁽²⁾	842149	817213	4.5	4.44E-06	1.08E-06	0.5	7	16	-26	0	0700-1900

Note:
1. Please refer to "Calculations of Emission Sources within Concrete Batching Plant (CBP)" for details.
2. Please refer to "Calculations of Emission Factor for Paved Road within Concrete Batching Plant (CBP)" for details.

Wind Erosion of Sand Barge - Area Source

Description ^{(1) (2)}	ID	X	Y	RSP	FSP	Release Height	X length	Y length	Source Angle	Plume Height	Operation Hours
				g/s-m ²	g/s-m ²	mAG	m	m	degree clockwise from N.	m	
Redland Concrete Ltd.	SB04	842026.2	817196.7	1.27E-06	1.89E-07	1.5	20	50	71	0	Full day

Notes:
1. All parameters (except emission rates) of Wind Erosion of Sand Barge of concrete batching plants are referenced to the approved S16 application for Proposed Residential Development in "Comprehensive Development Area (4)" Zone and "Road" at No. 18 Tung Yuen Street, Cha Kwo Ling Yau Tong, Kowloon (A/K15/121) (extracted in Appendix 2.22). Details calculation of source emission rates can be refer to "Calculations of Emission Factor for Wind Erosion within Concrete Batching Plant (CBP)".
2. Base elevation of vessesl was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum.
3. Details of RSP and FSP emission rates were shown in "Calculations of Emission Factor for Wind Erosion within Concrete Batching Plant (CBP)".

Marine Emission - Barges

Description ^{(1) (2)}	ID	Source Type	X	Y	Base Elevation ⁽³⁾	SO ₂	NOx	RSP	FSP	Exit Temperature ⁽¹⁾	Exit Velocity ⁽¹⁾	Internal diameter ⁽¹⁾	Release Height ⁽¹⁾	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Barge - Hotelling (Redland Concrete Ltd.)	B04	POINT	842065	817199	1.3	2.88E-03	1.39E-01	5.54E-03	5.40E-03	555	25	0.8	8	0700-1900
Barge - Maneuvering (Redland Concrete Ltd.)	RL01	POINT	842046	817193	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL02	POINT	842028	817186	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL03	POINT	842008	817181	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL04	POINT	841989	817176	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL05	POINT	841969	817172	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL06	POINT	841949	817169	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL07	POINT	841930	817163	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL08	POINT	841911	817158	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL09	POINT	841891	817153	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL10	POINT	841872	817150	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL11	POINT	841852	817146	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL12	POINT	841832	817142	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL13	POINT	841812	817138	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL14	POINT	841792	817134	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL15	POINT	841772	817130	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL16	POINT	841752	817126	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL17	POINT	841732	817122	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL18	POINT	841712	817121	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL19	POINT	841692	817120	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL20	POINT	841672	817119	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL21	POINT	841652	817118	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL22	POINT	841632	817117	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL23	POINT	841612	817116	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	
	RL24	POINT	841591	817115	1.3	3.74E-05	1.80E-03	5.73E-05	5.55E-05	555	25	0.8	8	

Note:
1. Base elevation of vessesl was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum
2. No information from the operator is available. Barge information including release height, exit temperature, exit velocity and internal diameter of its chimney is referenced to another similar type of vessel presented in Appendix 3.5 of approved Lei Yue Mun Waterfront Enhancement Project EIA (EIA-258/2018) due to the similar nature and operating mode.

Marine Emission - Sand Depot (YTML 25 &Ext)

Description ⁽¹⁾	ID	Source Type	X	Y	Base Elevation ⁽¹⁾	SO ₂	NOx	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Barge - Hotelling	SD01	POINT	842298.8	817611.9	1.3	2.88E-03	1.39E-01	5.54E-03	5.40E-03	555	25	0.8	8	Please refer to Appendix 2.3 for the vessel frequency
Barge - Maneuvering	SD02	POINT	842274.6	817606.6	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD03	POINT	842250.4	817601.3	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD04	POINT	842226.1	817596.0	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD05	POINT	842201.9	817590.7	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD06	POINT	842177.7	817585.5	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD07	POINT	842153.4	817580.2	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD08	POINT	842129.2	817574.9	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD09	POINT	842105.0	817569.6	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD10	POINT	842080.5	817564.3	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD11	POINT	842055.7	817563.0	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD12	POINT	842031.0	817561.8	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD13	POINT	842006.2	817560.6	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD14	POINT	841981.4	817559.3	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD15	POINT	841956.6	817558.1	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD16	POINT	841931.9	817556.9	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD17	POINT	841907.1	817555.7	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD18	POINT	841882.3	817554.4	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD19	POINT	841857.6	817553.2	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD20	POINT	841832.8	817552.0	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD21	POINT	841808.0	817550.7	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD22	POINT	841783.3	817549.5	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD23	POINT	841758.5	817548.3	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD24	POINT	841733.7	817547.1	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD25	POINT	841709.0	817545.8	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD26	POINT	841684.2	817544.6	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	
	SD27	POINT	841659.4	817543.4	1.3	4.82E-05	2.32E-03	7.39E-05	7.16E-05	555	25	0.8	8	

- Notes:
- Base elevation of vesselsl was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum.
 - No information from the operator is available. Ferry information including release height, exit temperature, exit velocity and internal diameter of its chimney is referenced to Appendix 3.5 of approved Lei Yue Mun Waterfront Enhancement Project EIA (EIA-258/2018).

Wind Erosion at Yau Tong Bay Sand Depot - Area Source

Description ^{(1) (2)}	ID	X	Y	RSP	FSP	Release Height	X length	Y length	Source Angle	Plume Height	Operation Hours
				g/s·m ⁻²	g/s·m ⁻²	mAG	m	m	degree clockwise from N.	m	
Wind Erosion at Yau Tong Bay Sand Depot	WE01	842334.3	817646.9	1.27E-06	1.94E-07	0.5	21	48	63	0	Full day

- Note:
- Please refer to "Calculation of Emission factor for Wind Erosion at Sand Dunes [Sand Depot (YTML 25 &Ext)]" for details.

Marine Emission - Architectural Salvage Store (YTML 26 &Ext)

Description ⁽¹⁾	ID	Source Type	X	Y	Base Elevation ⁽¹⁾	SO ₂	NOx	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Barge - Hotelling	YT801	POINT	842285.3	817646.8	1.3	2.88E-03	1.39E-01	5.54E-03	5.40E-03	555	25	0.8	8	Please refer to Appendix 2.3 for the vessel frequency
Barge - Maneuvering	YT802	POINT	842261.1	817641.5	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT803	POINT	842236.9	817636.3	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT804	POINT	842212.6	817631.0	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT805	POINT	842188.4	817625.7	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT806	POINT	842164.2	817620.4	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT807	POINT	842140.0	817615.1	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT808	POINT	842115.7	817609.9	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT809	POINT	842091.5	817604.6	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT810	POINT	842067.0	817599.2	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT811	POINT	842042.0	817598.0	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT812	POINT	842017.1	817596.8	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT813	POINT	841992.1	817595.5	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT814	POINT	841967.1	817594.3	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT815	POINT	841942.2	817593.0	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT816	POINT	841917.2	817591.8	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT817	POINT	841892.2	817590.6	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT818	POINT	841867.3	817589.3	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT819	POINT	841842.3	817588.1	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT820	POINT	841817.3	817586.8	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT821	POINT	841792.3	817585.6	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT822	POINT	841767.4	817584.4	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT823	POINT	841742.4	817583.1	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT824	POINT	841717.4	817581.9	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	
	YT825	POINT	841690.2	817580.5	1.3	5.61E-05	2.70E-03	8.60E-05	8.33E-05	555	25	0.8	8	

- Notes:
- Base elevation of vesselsl was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum.
 - No information from the operator is available. Ferry information including release height, exit temperature, exit velocity and internal diameter of its chimney is referenced to Appendix 3.5 of approved Lei Yue Mun Waterfront Enhancement Project EIA (EIA-258/2018).

Marine Emission - Architectural Salvage Store (全記五金貿易有限公司)

Description ⁽¹⁾	ID	Source Type	X	Y	Base Elevation ⁽¹⁾	SO ₂	NOx	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Barge - Hotelling	TK01	POINT	842052.8	817394.9	1.3	2.88E-03	1.39E-01	5.54E-03	5.40E-03	555	25	0.8	8	Please refer to Appendix 2.3 for the vessel frequency
Barge - Maneuvering	TK02	POINT	842027.8	817394.2	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK03	POINT	842002.8	817393.0	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK04	POINT	841978.7	817386.3	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK05	POINT	841954.4	817380.6	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK06	POINT	841930.2	817374.4	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK07	POINT	841906.0	817368.0	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK08	POINT	841881.9	817361.3	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK09	POINT	841857.5	817355.7	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK10	POINT	841833.1	817350.4	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK11	POINT	841809.8	817344.6	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK12	POINT	841786.5	817338.9	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK13	POINT	841763.2	817333.1	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK14	POINT	841739.9	817327.3	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK15	POINT	841716.6	817321.6	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK16	POINT	841693.3	817316.0	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
	TK17	POINT	841669.9	817310.5	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8	
TK18	POINT	841646.6	817305.0	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8		
TK19	POINT	841622.2	817299.2	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8		
TK20	POINT	841597.9	817293.4	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8		
TK21	POINT	841572.0	817287.3	1.3	5.15E-05	2.48E-03	7.89E-05	7.65E-05	555	25	0.8	8		

Input Parameters of Marine Emission Sources in AERMOD
Marine Emission - Passenger Ferry (Sam Ka Tsuen <-> Tung Lung Island)

Description ^{(1) (2)}	ID	Source Type	X	Y	Base Elevation ⁽¹⁾	SO ₂	NOx	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Passenger Ferry - Hotelling	TLC1001	POINT	842381	816883	1.3	2.38E-04	1.14E-02	4.58E-04	4.46E-04	555	8	0.8	8	Please refer to Appendix 2.4 for the coral sea ferry frequency
Passenger Ferry - Maneuvering	TLC1002	POINT	842374	816865	1.3	2.10E-05	1.01E-03	3.22E-05	3.12E-05	555	8	0.8	8	
	TLC1003	POINT	842366	816846	1.3	2.10E-05	1.01E-03	3.22E-05	3.12E-05	555	8	0.8	8	
	TLC1004	POINT	842359	816828	1.3	2.10E-05	1.01E-03	3.22E-05	3.12E-05	555	8	0.8	8	
	TLC1005	POINT	842351	816809	1.3	2.10E-05	1.01E-03	3.22E-05	3.12E-05	555	8	0.8	8	
	TLC1006	POINT	842311	816493	1.3	2.10E-05	1.01E-03	3.22E-05	3.12E-05	555	8	0.8	8	

- Notes:
- Base elevation of vessels was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum.
 - No information from the operator is available. Ferry information including release height, exit temperature, exit velocity and internal diameter of its chimney is referenced to Appendix 3.5 of approved Lei Yue Mun Waterfront Enhancement Project EIA (EIA-258/2018).

Marine Emission - Passenger Ferry (Sam Ka Tsuen <-> Sai Wan Ho)

Description ⁽¹⁾	ID	Source Type	X	Y	Base Elevation ⁽¹⁾	SO ₂	NOx	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Passenger Ferry - Hotelling	SWH01	POINT	842377	816887	1.3	2.38E-04	1.14E-02	4.58E-04	4.46E-04	555	8	0.8	8	Please refer to Appendix 2.4 for the coral sea ferry frequency
Passenger Ferry - Maneuvering	SWH02	POINT	842360	816876	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH03	POINT	842342	816868	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH04	POINT	842323	816862	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH05	POINT	842304	816857	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH06	POINT	842284	816852	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH07	POINT	842264	816848	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH08	POINT	842245	816844	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH09	POINT	842225	816840	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH10	POINT	842206	816835	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH11	POINT	842186	816831	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH12	POINT	842167	816826	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH13	POINT	842148	816821	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH14	POINT	842128	816816	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH15	POINT	842109	816812	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH16	POINT	842089	816807	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH17	POINT	842069	816807	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH18	POINT	842049	816807	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH19	POINT	842029	816808	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH20	POINT	842009	816809	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH21	POINT	841989	816809	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH22	POINT	841969	816810	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH23	POINT	841949	816811	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH24	POINT	841929	816812	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH25	POINT	841909	816813	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH26	POINT	841890	816815	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH27	POINT	841870	816817	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH28	POINT	841850	816819	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH29	POINT	841830	816821	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH30	POINT	841810	816823	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH31	POINT	841790	816825	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	
	SWH32	POINT	841750	816829	1.3	2.26E-05	1.09E-03	3.48E-05	3.37E-05	555	8	0.8	8	

- Notes:
- Base elevation of vessels was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum.
 - No information from the operator is available. Ferry information including release height, exit temperature, exit velocity and internal diameter of its chimney is referenced to Appendix 3.5 of approved Lei Yue Mun Waterfront Enhancement Project EIA (EIA-258/2018).

Marine Emission - Passenger Ferry (Montego Bay Circular Route (Sam Ka Tsuen <- Tsim Sha Tsui No.4 Pier – Central No.10 Pier->Sam Ka Tsuen))

Description ⁽¹⁾	ID	Source Type	X	Y	Base Elevation ⁽¹⁾		SO ₂	NOx	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG		
Passenger Ferry - Hotelling	MON01	POINT	842377	816887	1.3	2.38E-04	1.14E-02	4.58E-04	4.46E-04	555		8	0.8	8	Please refer to Appendix 2.4 for the coral sea ferry frequency
Passenger Ferry - Maneuvering	MON02	POINT	842357	816890	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON03	POINT	842337	816893	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON04	POINT	842317	816896	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON05	POINT	842297	816899	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON06	POINT	842277	816902	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON07	POINT	842257	816905	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON08	POINT	842237	816908	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON09	POINT	842217	816911	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON10	POINT	842197	816914	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON11	POINT	842177	816917	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON12	POINT	842157	816920	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON13	POINT	842137	816923	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON14	POINT	842117	816926	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON15	POINT	842097	816929	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON16	POINT	842077	816932	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON17	POINT	842057	816935	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON18	POINT	842037	816938	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON19	POINT	842017	816941	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON20	POINT	841997	816944	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON21	POINT	841978	816947	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON22	POINT	841958	816950	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON23	POINT	841938	816953	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON24	POINT	841918	816956	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON25	POINT	841898	816959	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON26	POINT	841878	816962	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON27	POINT	841858	816965	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON28	POINT	841838	816968	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON29	POINT	841818	816971	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON30	POINT	841798	816974	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON31	POINT	841778	816977	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON32	POINT	841758	816980	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON33	POINT	841740	816990	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON34	POINT	841723	817001	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON35	POINT	841705	817011	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
	MON36	POINT	841688	817021	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8	
MON37	POINT	841671	817031	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8		
MON38	POINT	841653	817041	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8		
MON39	POINT	841636	817051	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8		
MON40	POINT	841618	817062	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8		
MON41	POINT	841601	817072	1.3	2.14E-05	1.03E-03	3.28E-05	3.18E-05	555		8	0.8	8		

Marine Emission - Fishing Vessels

Description ^{(1) (2)}	ID	Type	X	Y	Base Elevation ⁽¹⁾	SO ₂	NO _x	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Fishing Vessels	FVH01	POINT	842167	817098	1.3	2.85E-03	1.37E-01	5.49E-03	5.36E-03	555	8	0.3	6	Please refer to Appendix 2.5 for the fishing vessel frequency
	FVS01	POINT	842153	817084	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS02	POINT	842138	817069	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS03	POINT	842124	817054	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS04	POINT	842110	817040	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS05	POINT	842095	817025	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS06	POINT	842081	817011	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS07	POINT	842067	816995	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS08	POINT	842052	816981	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS09	POINT	842038	816966	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS10	POINT	842024	816951	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS11	POINT	842010	816937	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS12	POINT	841995	816922	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS13	POINT	841981	816907	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS14	POINT	841966	816893	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS15	POINT	841952	816878	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS16	POINT	841938	816863	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS17	POINT	841923	816849	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS18	POINT	841909	816834	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS19	POINT	841895	816819	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS20	POINT	841881	816805	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS21	POINT	841867	816790	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	
	FVS22	POINT	841852	816774	1.3	6.93E-05	3.33E-03	1.04E-04	1.01E-04	555	8	0.3	6	

- Notes:
1. Base elevation of vessels was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum.
 2. No information from the operator is available. Fishing vessels information including exit temperature, exit velocity and internal diameter of its chimney is referenced to another similar type of vessel presented in Appendix 3.5 of approved Lei Yue Mun Waterfront Enhancement Project EIA (EIA-258/2018) due to the similar nature.

Marine Emission - Planned Local Vessels

Description ^{(1) (2)}	ID	Type	X	Y	Base Elevation ⁽¹⁾	SO ₂	NO _x	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Route of SKT Ferry to/from LYM New Landing Facility	NRLF2	POINT	842383	816853	1.3	1.05E-05	6.91E-04	1.61E-05	1.48E-05	555	8	0.8	8	Please refer to Appendix 2.6 for the planned local vessel frequency
	NRLF3	POINT	842383	816813	1.3	1.05E-05	6.91E-04	1.61E-05	1.48E-05	555	8	0.8	8	

- Notes:
- 1. Base elevation of vessels was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum.
 - 2. All parameters including emission rates of planned local vessels are referenced to approved Section 16 Planning Application of Proposed Residential Development at 18 Tung Yuen Street, Yau Tong (A/K15/121).

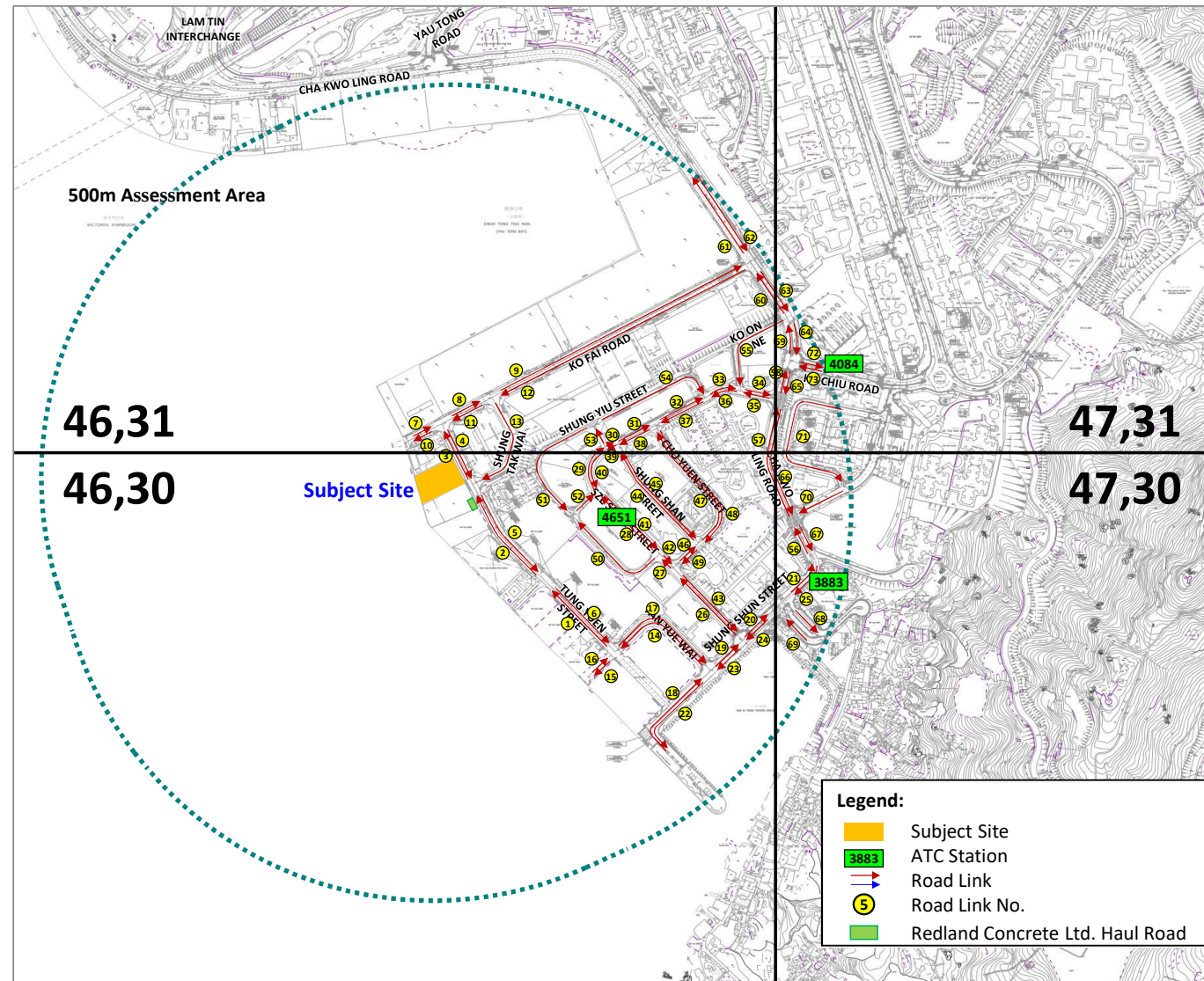
Input Parameters of Major Point Sources in AERMOD
Major Point Sources within 4km Assessment Area - Cruise Vessels at Kai Tak Cruise Terminal

Description	ID	Type	X	Y	Base Elevation ⁽¹⁾	SO ₂	NO _x	RSP	FSP	Exit Temperature	Exit Velocity	Internal diameter	Release Height	Operation Hours
					mPD	g/s	g/s	g/s	g/s	K	m/s	m	mAG	
Hotelling of Spectrum of the Seas	H1	Point	839744	818698	1.3	5.36	30.56	0.74	0.66	537	24.6	1.9	63.2 ⁽²⁾	
Hotelling of Costa Serena	H2	Point	840021	818427	1.3	5.93	34.31	0.83	0.74	537	24.6	1.9	62 ⁽³⁾	Full day

- Notes:
1. Base elevation of vessel was assumed to be mean sea level, which is 1.3 m above the Hong Kong Principle Datum.
 2. The emission height of the chimney of Spectrum of the Seas is estimated based on the website (<https://zh.wikipedia.org/wiki/%E6%B5%B7%E6%B4%88%E5%85%E8%AD%9C%E8%99%9F%E5%A4%96%E9%83%A8%E9%93%BE%E6%8E%A5>). The estimated height is about 63.2m (above water surface).
 3. The emission height of the chimney of Costa Serena is estimated based on the observation. The estimated height is about 60m (above water surface) which is close to the height of the Post-Panamax (62m above water surface) as stated in the Approved EIA Report for Kai Tak Development. Therefore, the height of 62m above water surface has been adopted for the assessment.

**Appendix 2.11 Year 2047 Traffic Forecasts for Air Quality Impact
Assessment & Summary of Emission Factors Generated by
SAMP v2.1 (Please refer to Modelling Zip File)**

Road Links and ATC Stations



					Road Name	Road ID	Road Type	Speed Limit (km/hr)	Average Speed (km/hr)	Start Intersection by Broad Brush Approach (Y/N)	Hour	Total Vehicle (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles +2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles +10t	07 - Heavy Goods Vehicles +15t	08 - Public Light Buses	09 - Private Light Bus <4t	10 - Private Light Bus >4t	11 - Non-franchise Bus<4 t	12 - Non-franchise bus 4-15t	13 - Non-franchise bus 15-24t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Franchise 18+ Seater	17 - Franchise Heavy Goods>24t	18 - Non-Franchise >24t	Total				
															GVG	LVG	LGVB	HGV	HGB	PLB	PV3.5	PV5	NFB	NFB	NFB	FBSDB	FBDDB	MC	HGV9	NFB9					
Tung Yuen Street	1	1	50	30	Y	0000-0100	5	100.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%				
Tung Yuen Street	1	1	50	30	Y	0100-0200	5	100.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%			
Tung Yuen Street	1	1	50	30	Y	0200-0300	5	100.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%			
Tung Yuen Street	1	1	50	30	Y	0300-0400	5	100.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Tung Yuen Street	1	1	50	30	Y	0400-0500	5	100.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Tung Yuen Street	1	1	50	30	Y	0500-0600	5	100.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Tung Yuen Street	1	1	50	30	Y	0600-0700	30	50.0%	0.0%	0.0%	16.7%	0.0%	16.7%	16.7%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Tung Yuen Street	1	1	50	29	Y	0700-0800	120	29.0%	4.2%	0.0%	8.3%	4.2%	8.3%	12.5%	4.2%	0.0%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	100.0%		
Tung Yuen Street	1	1	50	29	Y	0800-0900	125	34.0%	3.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	100.0%		
Tung Yuen Street	1	1	50	29	Y	0900-1000	120	29.2%	4.2%	0.0%	8.3%	4.2%	8.3%	12.5%	4.2%	0.0%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	100.0%		
Tung Yuen Street	1	1	50	29	Y	1000-1100	125	32.0%	4.0%	0.0%	8.0%	4.0%	8.0%	12.0%	4.0%	0.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	100.0%	
Tung Yuen Street	1	1	50	29	Y	1100-1200	130	33.0%	3.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	100.0%	
Tung Yuen Street	1	1	50	28	Y	1200-1300	150	30.0%	3.3%	3.3%	6.7%	3.3%	6.7%	10.0%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	100.0%	
Tung Yuen Street	1	1	50	29	Y	1300-1400	140	28.6%	3.6%	3.6%	7.1%	3.6%	3.6%	10.7%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	100.0%	
Tung Yuen Street	1	1	50	29	Y	1400-1500	135	27.4%	3.7%	3.7%	7.4%	3.7%	7.4%	10.9%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	100.0%	
Tung Yuen Street	1	1	50	29	Y	1500-1600	135	29.6%	3.7%	3.7%	7.4%	3.7%	7.4%	10.9%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	100.0%	
Tung Yuen Street	1	1	50	29	Y	1600-1700	135	29.6%	3.7%	3.7%	7.4%	3.7%	7.4%	10.9%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	100.0%	
Tung Yuen Street	1	1	50	29	Y	1700-1800	135	29.6%	3.7%	3.7%	7.4%	3.7%	7.4%	10.9%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	100.0%	
Tung Yuen Street	1	1	50	29	Y	1800-1900	135	29.6%	3.7%	3.7%	7.4%	3.7%	7.4%	10.9%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	100.0%	
Tung Yuen Street	1	1	50	29	Y	1900-2000	120	25.0%	4.2%	4.2%	4.2%	4.2%	4.2%	8.3%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	100.0%	
Tung Yuen Street	1	1	50	29	Y	2000-2100	110	22.7%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	100.0%	
Tung Yuen Street	1	1	50	29	Y	2100-2200	110	22.7%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	100.0%	
Tung Yuen Street	1	1	50	30	Y	2200-2300	85	23.3%	5.9%	0.0%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	100.0%	
Tung Yuen Street	1	1	50	30	Y	2300-0000	20	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Tung Yuen Street	2	1	50	30	Y	0000-0100	20	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Tung Yuen Street	2	1	50	30	Y	0100-0200	20	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Tung Yuen Street	2	1	50	30	Y	0200-0300	20	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Tung Yuen Street	2	1	50	30	Y	0300-0400	5	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Tung Yuen Street	2	1	50	30	Y	0400-0500	5	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Tung Yuen Street	2	1	50	30	Y	0500-0600	5	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Tung Yuen Street	2	1	50	30	Y	0600-0700	30	50.0%	0.0%	0.0%	16.7%	0.0%	16.7%	16.7%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Tung Yuen Street	2	1	50	27	Y	0700-0800	215	26.6%	2.3%	2.3%	11.6%	2.3%	11.6%	14.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	100.0%	
Tung Yuen Street	2	1	50	26	Y	0800-0900	230	26.1%	2.2%	2.2%	13.3%	2.2%	13.3%	16.0%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	100.0%	
Tung Yuen Street	2	1	50	27	Y	0900-1000	215	26.6%	2.3%	2.3%	11.6%	2.3%	11.6%	14.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	100.0%	
Tung Yuen Street	2	1	50	27	Y	1000-1100	205	28.8%	2.4%	2.4%	12.2%	2.4%	12.2%	14.9%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	100.0%	
Tung Yuen Street	2	1	50	27	Y	1100-1200	220	29.5%	2.3%	2.3%	11.4%	2.3%	11.4%	13.8%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	100.0%	
Tung Yuen Street	2	1	50	27	Y	1200-1300	215	27.9%	2.3%	2.3%	10.7%	2.3%	10.7%	13.0%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	100.0%	
Tung Yuen Street	2	1	50	28	Y	1300-1400	175	34.3%	2.9%	0.0%	11.4%	2.7%	8.6%	14.3%	2.9%	0.0%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	100.0%	
Tung Yuen Street	2	1	50	28	Y	1400-1500	160	34.4%	3.1%	0.0%	12.5%	3.3%	6.3%	12.5%	3.1%	0.0%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	100.0%	
Tung Yuen Street	2	1	50	28	Y	1500-1600	150	34.9%	3.3%	0.0%	13.3%	3.3%	6.3%	13.3%	3.3%	0.0%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	100.0%	
Tung Yuen Street	2	1	50	28	Y	1600-1700	145	37.9%	3.4%	0.0%	10.3%	3.4%	6.9%	12.8%	3.4%	0.0%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	100.0%
Tung Yuen Street	2	1	50	28	Y	1700-1800	145	37.9%	3.4%	0.0%	10.3%	3.4%	6.9%	12.8%	3.4%	0.0%	3.4%	3.4%	3.4%	3.4%	3														

[illegible]

Confidential

Confidential

Cha Kwo Lin Road	60	1	50	Y	0800-0900	465	44.1%	6.5%	1.1%	15.1%	5.4%	4.3%	7.5%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	4.3%	2.2%	1.1%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	0900-1000	440	43.2%	6.1%	1.1%	14.8%	5.7%	4.5%	6.8%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	4.5%	2.3%	1.1%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1000-1100	460	43.5%	6.5%	1.1%	16.2%	5.4%	4.3%	7.6%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	4.3%	2.2%	1.1%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1100-1200	515	44.1%	6.5%	1.1%	16.2%	5.4%	4.3%	7.6%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	4.3%	2.2%	1.1%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1200-1300	525	42.9%	7.6%	1.0%	16.2%	5.7%	3.8%	6.7%	1.9%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	4.8%	1.9%	1.0%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1300-1400	510	42.2%	7.8%	1.0%	16.7%	5.9%	3.9%	6.9%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	4.9%	1.0%	1.0%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1400-1500	475	41.4%	8.1%	1.0%	16.7%	5.9%	3.9%	6.9%	2.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	5.1%	1.0%	1.0%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1500-1600	495	41.4%	8.1%	1.0%	17.2%	7.1%	3.0%	6.1%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	5.1%	1.0%	1.0%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1600-1700	510	41.2%	8.8%	1.0%	17.6%	6.9%	2.9%	5.9%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	4.9%	1.0%	1.0%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1700-1800	475	40.1%	9.7%	1.0%	17.8%	6.9%	2.9%	5.9%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	4.9%	1.0%	1.0%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1800-1900	495	40.4%	9.1%	1.0%	17.2%	7.1%	3.0%	6.1%	2.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	5.0%	1.0%	1.0%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	1900-2000	385	40.3%	7.8%	1.3%	16.9%	6.5%	2.6%	6.5%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	5.2%	1.3%	1.3%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	2000-2100	340	39.7%	8.8%	1.5%	16.2%	5.9%	2.9%	5.9%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	4.4%	1.5%	1.5%	100.0%
Cha Kwo Lin Road	60	1	50	Y	2100-2200	340	39.7%	8.8%	1.5%	16.2%	5.9%	2.9%	5.9%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	4.4%	1.5%	1.5%	100.0%
Cha Kwo Lin Road	60	1	50	Y	2200-2300	280	39.3%	7.1%	1.8%	16.1%	5.4%	3.6%	5.4%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	3.6%	1.8%	1.8%	100.0%	
Cha Kwo Lin Road	60	1	50	Y	2300-2400	125	46.0%	8.0%	0.0%	20.0%	8.0%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	0.0%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	0000-0100	130	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	0100-0200	125	48.0%	4.0%	0.0%	16.0%	8.0%	0.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	0.0%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	0200-0300	90	50.0%	5.0%	0.0%	16.7%	5.6%	5.6%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	5.6%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	0300-0400	75	56.0%	6.0%	0.0%	16.7%	5.6%	5.6%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	5.6%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	0400-0500	95	47.4%	5.3%	0.0%	15.8%	5.3%	5.3%	5.3%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	0500-0600	130	50.0%	3.8%	0.0%	15.4%	7.7%	3.8%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	7.7%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	0600-0700	375	40.0%	6.0%	0.0%	15.0%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	0700-0800	850	44.1%	4.1%	0.6%	15.9%	5.9%	3.5%	7.6%	0.6%	0.6%	1.2%	0.6%	0.6%	0.6%	0.6%	1.2%	4.1%	7.6%	0.6%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	0800-0900	940	44.1%	4.3%	0.5%	16.0%	5.9%	3.7%	7.4%	0.5%	0.5%	1.1%	0.5%	0.5%	0.5%	0.5%	1.1%	4.3%	8.0%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	0900-1000	105	46.0%	6.0%	0.0%	15.8%	5.8%	5.8%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	0.0%	100.0%
Cha Kwo Lin Road	61	1	50	Y	1000-1100	920	45.1%	4.3%	0.5%	15.8%	6.0%	3.8%	7.1%	0.5%	0.5%	1.1%	0.5%	0.5%	0.5%	0.5%	1.1%	4.3%	7.1%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1100-1200	1030	45.6%	4.9%	0.5%	15.5%	5.8%	3.9%	7.3%	0.5%	0.5%	1.0%	0.5%	0.5%	0.5%	0.5%	1.0%	4.4%	6.8%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1200-1300	980	45.7%	5.1%	0.5%	15.7%	5.7%	3.8%	7.1%	0.5%	0.5%	1.0%	0.5%	0.5%	0.5%	0.5%	1.0%	4.4%	6.8%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1300-1400	1005	46.3%	5.0%	0.5%	15.4%	5.5%	3.5%	7.5%	0.5%	0.5%	1.0%	0.5%	0.5%	0.5%	0.5%	1.0%	5.0%	6.5%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1400-1500	940	46.3%	5.3%	0.5%	15.4%	5.9%	3.7%	6.9%	0.5%	0.5%	1.1%	0.5%	0.5%	0.5%	0.5%	1.1%	4.8%	5.9%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1500-1600	970	46.3%	5.3%	0.5%	15.4%	5.9%	3.7%	6.9%	0.5%	0.5%	1.1%	0.5%	0.5%	0.5%	0.5%	1.1%	4.8%	5.9%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1600-1700	1010	47.5%	5.4%	0.5%	15.3%	5.4%	3.5%	6.9%	0.5%	0.5%	1.0%	0.5%	0.5%	0.5%	0.5%	1.0%	5.0%	6.4%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1700-1800	990	47.5%	5.6%	0.5%	15.2%	5.6%	3.5%	7.1%	0.5%	0.5%	1.0%	0.5%	0.5%	0.5%	0.5%	1.0%	5.1%	6.1%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1800-1900	975	47.5%	5.9%	0.5%	14.9%	5.7%	3.5%	7.2%	0.5%	0.5%	1.0%	0.5%	0.5%	0.5%	0.5%	1.0%	5.2%	6.1%	0.5%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	1900-2000	735	46.9%	5.4%	0.7%	15.0%	5.4%	3.4%	6.8%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	4.6%	5.4%	0.7%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	2000-2100	655	45.8%	5.3%	0.8%	15.3%	5.3%	3.8%	6.9%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	4.6%	5.3%	0.8%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	2100-2200	660	46.2%	5.3%	0.8%	15.2%	5.3%	3.8%	6.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	4.5%	5.3%	0.8%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	2200-2300	535	45.9%	5.3%	0.8%	15.2%	5.3%	3.7%	6.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	4.5%	5.3%	0.8%	100.0%	
Cha Kwo Lin Road	61	1	50	Y	2300-2400	270	48.1%	5.6%	0.0%	16.7%	5.6%	3.7%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	5.6%	0.0%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0000-0100	95	52.6%	5.3%	0.0%	15.8%	5.3%	5.3%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%	0.0%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0100-0200	100	52.6%	5.3%	0.0%	16.7%	5.6%	5.6%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	5.6%	0.0%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0200-0300	75	46.7%	6.7%	0.0%	13.3%	6.7%	6.7%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	6.7%	0.0%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0300-0400	65	46.2%	7.7%	0.0%	15.4%	7.7%	0.0%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	7.7%	0.0%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0400-0500	65	46.2%	7.7%	0.0%	15.4%	7.7%	0.0%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	7.7%	0.0%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0500-0600	95	52.6%	5.3%	0.0%	15.8%	5.3%	5.3%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%	0.0%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0600-0700	295	47.5%	6.8%	0.0%	13.6%	5.1%	3.4%	6.8%	1.7%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	5.1%	6.8%	0.0%	100.0%
Cha Kwo Lin Road	62	1	50	Y	0700-0800	715	46.2%	6.7%	0.0%	14.1%	5.4%	3.4%	5.4%	1.4%	0.7%	1.4%	0.7%	1.3%	0.7%	1.3%	0.7%	4.7%	6.0%	0.7%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0800-0900	745	46.3%	6.7%	0.0%	14.1%	5.4%	3.4%	5.4%	1.4%	0.7%	1.4%	0.7%	1.3%	0.7%	1.3%	0.7%	4.7%	6.0%	0.7%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	0900-1000	685	46.0%	6.6%	0.7%	13.9%	5.1%	3.6%	5.8%	1.5%	0.7%	1.5%	0.7%	1.5%	0.0%	0.7%	1.5%	0.0%	4.4%	5.8%	0.7%	100.0%
Cha Kwo Lin Road	62	1	50	Y	1000-1100	715	46.2%	6.7%	0.0%	14.1%	5.4%	3.4%	5.4%	1.4%	0.7%	1.4%	0.7%	1.3%	0.7%	1.3%	0.7%	4.7%	6.0%	0.7%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	1100-1200	790	46.8%	6.3%	0.6%	13.9%	5.1%	3.8%	6.3%	1.3%	0.6%	1.3%	0.6%	0.6%	0.6%	1.3%	0.6%	4.4%	5.7%	0.6%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	1200-1300	790	46.8%	6.3%	0.6%	13.3%	5.1%	3.8%	7.0%	1.3%	0.6%	1.3%	0.6%	0.6%	0.6%	1.3%	0.6%	4.4%	5.7%	0.6%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	1300-1400	755	46.2%	6.3%	0.6%	13.3%	5.1%	3.8%	7.0%	1.3%	0.6%	1.3%	0.6%	0.6%	0.6%	1.3%	0.6%	4.4%	5.7%	0.6%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	1400-1500	690	47.1%	5.8%	0.7%	13.0%	5.1%	3.6%	7.2%	1.4%	0.7%	1.4%	0.7%	0.7%	0.7%	0.7%	0.7%	4.3%	5.8%	0.7%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	1500-1600	715	46.9%	5.6%	0.7%	13.3%	4.9%	4.2%	7.7%	1.4%	0.7%	1.4%	0.7%	0.7%	0.7%	0.7%	0.7%	4.2%	5.6%	0.7%	100.0%	
Cha Kwo Lin Road	62	1	50	Y	1600-1700	715	46.9%	5.6%																		

[illegible]

Start Profile	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4 t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
	PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC	HGV9	NFB9
Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

JIANG Kevin

From: Candy Lai Yu LAU <laiyulau@td.gov.hk>
Sent: Wednesday, April 23, 2025 5:40 PM
To: JIANG Kevin
Cc: KWOK Edmund; Wai Yan FUNG
Subject: Re: Resend: Technical Note of Traffic Data for NIA and AQIA for Development at No.4 Tung Yuen Street (A/K15/132)

Dear Kevin,

I refer to your emails dated 6 Feb and 22 Apr 2025 regarding the above subject.

Please note that I have no in-principle comment on the methodology of traffic forecast solely for Air Quality and Noise Impact Assessment from a district traffic engineering viewpoint.

Regards,
Candy Lau
EK/LT, TEK, TD
Tel: 2399 2502

From: "JIANG Kevin" <kjiang@systra.com>
To: "Candy Lai Yu LAU" <laiyulau@td.gov.hk>
Cc: "KWOK Edmund" <ekwok@systra.com>
Date: 22/04/2025 02:25 PM
Subject: Resend: Technical Note of Traffic Data for NIA and AQIA for Development at No.4 Tung Yuen Street (A/K15/132)

Dear Ms. Lau,

Further to our telephone conversation, please find the attached Technical Note on the traffic data forecast (for NIA and AQIA) for your kind review and endorsement.

Thank you very much.

Kind Regards

Kevin Jiang

Principal Traffic Engineer

Tel: [REDACTED] • Gen: +852 2529 7037 • Fax: +852 2527 8490



22nd Floor • Genesis • 33-35 Wong Chuk Hang Road • Hong Kong

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Please consider the environment before printing.

From: JIANG Kevin
Sent: Thursday, February 6, 2025 11:45 AM
To: Candy Lai Yu LAU <laiyulau@td.gov.hk>
Cc: KWOK Edmund [REDACTED]
Subject: Technical Note of Traffic Data for NIA and AQIA for Development at No.4 Tung Yuen Street (A/K15/132)

Dear Ms. Lau,

For the Section 16 Planning Application (A/K15/132) in No.4 Tung Yuen Street, Yau Tong, Kowloon, we are pleased to submit herewith the revised Technical Note on the traffic data forecast (for NIA and AQIA) for your kind review and endorsement.

Thank you for your kind attention.

Kind Regards

Kevin Jiang

Tel: [REDACTED] • Gen: +852 2529 7037 • Fax: +852 2527 8490

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Appendix 2.16 Predicted Odour Impact Assessment Results

ASR Label	Location		Local Ground, Z (mPD)	Floor	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Odour
	x	y					Highest 5-s average (5 OUs)
	Easting	Northing					
D01_GF	842121	817283	4.4	G	1.5	5.9	0.3
D01_L1	842121	817283	4.4	L1	5.50	9.90	0.3
D01_L2	842121	817283	4.4	L2	10.00	14.40	0.2
D01_1F	842121	817283	4.4	1	18.20	22.60	0.2
D01_2F	842121	817283	4.4	2	21.30	25.70	0.1
D01_3F	842121	817283	4.4	3	24.40	28.80	0.1
D01_4F	842121	817283	4.4	4	27.50	31.90	0.1
D01_5F	842121	817283	4.4	5	30.60	35.00	0.1
D01_6F	842121	817283	4.4	6	33.70	38.10	0.1
D01_7F	842121	817283	4.4	7	36.80	41.20	0.1
D01_8F	842121	817283	4.4	8	39.90	44.30	0.1
D01_9F	842121	817283	4.4	9	43.00	47.40	0.1
D01_10F	842121	817283	4.4	10	46.10	50.50	0.0
D01_11F	842121	817283	4.4	11	49.20	53.60	0.0
D01_12F	842121	817283	4.4	12	52.30	56.70	0.0
D01_13F	842121	817283	4.4	13	55.40	59.80	0.0
D01_14F	842121	817283	4.4	14	58.50	62.90	0.0
D01_15F	842121	817283	4.4	15	61.60	66.00	0.0
D01_17F	842121	817283	4.4	17	67.80	72.20	0.0
D01_19F	842121	817283	4.4	19	74.00	78.40	0.0
D01_22F	842121	817283	4.4	22	83.40	87.80	0.0
D01_25F	842121	817283	4.4	25	92.85	97.25	0.0
D02_GF	842128	817270	4.4	G	1.5	5.9	0.3
D02_L1	842128	817270	4.4	L1	5.50	9.90	0.3
D02_L2	842128	817270	4.4	L2	10.00	14.40	0.3
D02_1F	842128	817270	4.4	1	18.20	22.60	0.2
D02_2F	842128	817270	4.4	2	21.30	25.70	0.1
D02_3F	842128	817270	4.4	3	24.40	28.80	0.1
D02_4F	842128	817270	4.4	4	27.50	31.90	0.1
D02_5F	842128	817270	4.4	5	30.60	35.00	0.1
D02_6F	842128	817270	4.4	6	33.70	38.10	0.1
D02_7F	842128	817270	4.4	7	36.80	41.20	0.1
D02_8F	842128	817270	4.4	8	39.90	44.30	0.1
D02_9F	842128	817270	4.4	9	43.00	47.40	0.1
D02_10F	842128	817270	4.4	10	46.10	50.50	0.1
D02_11F	842128	817270	4.4	11	49.20	53.60	0.1
D02_12F	842128	817270	4.4	12	52.30	56.70	0.0
D02_13F	842128	817270	4.4	13	55.40	59.80	0.0
D02_14F	842128	817270	4.4	14	58.50	62.90	0.0
D02_15F	842128	817270	4.4	15	61.60	66.00	0.0
D02_17F	842128	817270	4.4	17	67.80	72.20	0.0
D02_19F	842128	817270	4.4	19	74.00	78.40	0.0
D02_22F	842128	817270	4.4	22	83.40	87.80	0.0
D02_25F	842128	817270	4.4	25	92.85	97.25	0.0

ASR Label	Location		Local Ground, Z (mPD)	Floor	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Odour
	x	y					Highest 5-s average (5 OUs)
	Easting	Northing					
D03_GF	842134	817259	4.4	G	1.5	5.9	0.4
D03_L1	842134	817259	4.4	L1	5.50	9.90	0.3
D03_L2	842134	817259	4.4	L2	10.00	14.40	0.3
D03_1F	842134	817259	4.4	1	18.20	22.60	0.2
D03_2F	842134	817259	4.4	2	21.30	25.70	0.1
D03_3F	842134	817259	4.4	3	24.40	28.80	0.1
D03_4F	842134	817259	4.4	4	27.50	31.90	0.1
D03_5F	842134	817259	4.4	5	30.60	35.00	0.1
D03_6F	842134	817259	4.4	6	33.70	38.10	0.1
D03_7F	842134	817259	4.4	7	36.80	41.20	0.1
D03_8F	842134	817259	4.4	8	39.90	44.30	0.1
D03_9F	842134	817259	4.4	9	43.00	47.40	0.1
D03_10F	842134	817259	4.4	10	46.10	50.50	0.1
D03_11F	842134	817259	4.4	11	49.20	53.60	0.1
D03_12F	842134	817259	4.4	12	52.30	56.70	0.0
D03_13F	842134	817259	4.4	13	55.40	59.80	0.0
D03_14F	842134	817259	4.4	14	58.50	62.90	0.0
D03_15F	842134	817259	4.4	15	61.60	66.00	0.0
D03_17F	842134	817259	4.4	17	67.80	72.20	0.0
D03_19F	842134	817259	4.4	19	74.00	78.40	0.0
D03_22F	842134	817259	4.4	22	83.40	87.80	0.0
D03_25F	842134	817259	4.4	25	92.85	97.25	0.0
D04_GF	842140	817247	4.4	G	1.5	5.9	0.4
D04_L1	842140	817247	4.4	L1	5.50	9.90	0.4
D04_L2	842140	817247	4.4	L2	10.00	14.40	0.3
D04_1F	842140	817247	4.4	1	18.20	22.60	0.2
D04_2F	842140	817247	4.4	2	21.30	25.70	0.1
D04_3F	842140	817247	4.4	3	24.40	28.80	0.1
D04_4F	842140	817247	4.4	4	27.50	31.90	0.1
D04_5F	842140	817247	4.4	5	30.60	35.00	0.1
D04_6F	842140	817247	4.4	6	33.70	38.10	0.1
D04_7F	842140	817247	4.4	7	36.80	41.20	0.1
D04_8F	842140	817247	4.4	8	39.90	44.30	0.1
D04_9F	842140	817247	4.4	9	43.00	47.40	0.1
D04_10F	842140	817247	4.4	10	46.10	50.50	0.1
D04_11F	842140	817247	4.4	11	49.20	53.60	0.1
D04_12F	842140	817247	4.4	12	52.30	56.70	0.0
D04_13F	842140	817247	4.4	13	55.40	59.80	0.0
D04_14F	842140	817247	4.4	14	58.50	62.90	0.0
D04_15F	842140	817247	4.4	15	61.60	66.00	0.0
D04_17F	842140	817247	4.4	17	67.80	72.20	0.0
D04_19F	842140	817247	4.4	19	74.00	78.40	0.0
D04_22F	842140	817247	4.4	22	83.40	87.80	0.0
D04_25F	842140	817247	4.4	25	92.85	97.25	0.0

ASR Label	Location		Local Ground, Z (mPD)	Floor	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Odour
	x	y					Highest 5-s average (5 OUs)
	Easting	Northing					
D05_GF	842125	817239	4.4	G	1.5	5.9	0.4
D05_L1	842125	817239	4.4	L1	5.50	9.90	0.4
D05_L2	842125	817239	4.4	L2	10.00	14.40	0.3
D05_1F	842125	817239	4.4	1	18.20	22.60	0.2
D05_2F	842125	817239	4.4	2	21.30	25.70	0.1
D05_3F	842125	817239	4.4	3	24.40	28.80	0.1
D05_4F	842125	817239	4.4	4	27.50	31.90	0.1
D05_5F	842125	817239	4.4	5	30.60	35.00	0.1
D05_6F	842125	817239	4.4	6	33.70	38.10	0.1
D05_7F	842125	817239	4.4	7	36.80	41.20	0.1
D05_8F	842125	817239	4.4	8	39.90	44.30	0.1
D05_9F	842125	817239	4.4	9	43.00	47.40	0.1
D05_10F	842125	817239	4.4	10	46.10	50.50	0.0
D05_11F	842125	817239	4.4	11	49.20	53.60	0.0
D05_12F	842125	817239	4.4	12	52.30	56.70	0.0
D05_13F	842125	817239	4.4	13	55.40	59.80	0.0
D05_14F	842125	817239	4.4	14	58.50	62.90	0.0
D05_15F	842125	817239	4.4	15	61.60	66.00	0.0
D05_17F	842125	817239	4.4	17	67.80	72.20	0.0
D05_19F	842125	817239	4.4	19	74.00	78.40	0.0
D05_22F	842125	817239	4.4	22	83.40	87.80	0.0
D05_25F	842125	817239	4.4	25	92.85	97.25	0.0
D06_GF	842111	817232	4.4	G	1.5	5.9	0.4
D06_L1	842111	817232	4.4	L1	5.50	9.90	0.4
D06_L2	842111	817232	4.4	L2	10.00	14.40	0.3
D06_1F	842111	817232	4.4	1	18.20	22.60	0.1
D06_2F	842111	817232	4.4	2	21.30	25.70	0.1
D06_3F	842111	817232	4.4	3	24.40	28.80	0.1
D06_4F	842111	817232	4.4	4	27.50	31.90	0.1
D06_5F	842111	817232	4.4	5	30.60	35.00	0.1
D06_6F	842111	817232	4.4	6	33.70	38.10	0.1
D06_7F	842111	817232	4.4	7	36.80	41.20	0.0
D06_8F	842111	817232	4.4	8	39.90	44.30	0.0
D06_9F	842111	817232	4.4	9	43.00	47.40	0.0
D06_10F	842111	817232	4.4	10	46.10	50.50	0.0
D06_11F	842111	817232	4.4	11	49.20	53.60	0.0
D06_12F	842111	817232	4.4	12	52.30	56.70	0.0
D06_13F	842111	817232	4.4	13	55.40	59.80	0.0
D06_14F	842111	817232	4.4	14	58.50	62.90	0.0
D06_15F	842111	817232	4.4	15	61.60	66.00	0.0
D06_17F	842111	817232	4.4	17	67.80	72.20	0.0
D06_19F	842111	817232	4.4	19	74.00	78.40	0.0
D06_22F	842111	817232	4.4	22	83.40	87.80	0.0
D06_25F	842111	817232	4.4	25	92.85	97.25	0.0

ASR Label	Location		Local Ground, Z (mPD)	Floor	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Odour
	x	y					Highest 5-s average (5 OUs)
	Easting	Northing					
D07_GF	842097	817225	4.4	G	1.5	5.9	0.3
D07_L1	842097	817225	4.4	L1	5.50	9.90	0.3
D07_L2	842097	817225	4.4	L2	10.00	14.40	0.3
D07_1F	842097	817225	4.4	1	18.20	22.60	0.2
D07_2F	842097	817225	4.4	2	21.30	25.70	0.1
D07_3F	842097	817225	4.4	3	24.40	28.80	0.1
D07_4F	842097	817225	4.4	4	27.50	31.90	0.1
D07_5F	842097	817225	4.4	5	30.60	35.00	0.0
D07_6F	842097	817225	4.4	6	33.70	38.10	0.0
D07_7F	842097	817225	4.4	7	36.80	41.20	0.0
D07_8F	842097	817225	4.4	8	39.90	44.30	0.0
D07_9F	842097	817225	4.4	9	43.00	47.40	0.0
D07_10F	842097	817225	4.4	10	46.10	50.50	0.0
D07_11F	842097	817225	4.4	11	49.20	53.60	0.0
D07_12F	842097	817225	4.4	12	52.30	56.70	0.0
D07_13F	842097	817225	4.4	13	55.40	59.80	0.0
D07_14F	842097	817225	4.4	14	58.50	62.90	0.0
D07_15F	842097	817225	4.4	15	61.60	66.00	0.0
D07_17F	842097	817225	4.4	17	67.80	72.20	0.0
D07_19F	842097	817225	4.4	19	74.00	78.40	0.0
D07_22F	842097	817225	4.4	22	83.40	87.80	0.0
D07_25F	842097	817225	4.4	25	92.85	97.25	0.0
D08_GF	842083	817218	4.4	G	1.5	5.9	0.3
D08_L1	842083	817218	4.4	L1	5.50	9.90	0.3
D08_L2	842083	817218	4.4	L2	10.00	14.40	0.2
D08_1F	842083	817218	4.4	1	18.20	22.60	0.2
D08_2F	842083	817218	4.4	2	21.30	25.70	0.1
D08_3F	842083	817218	4.4	3	24.40	28.80	0.1
D08_4F	842083	817218	4.4	4	27.50	31.90	0.1
D08_5F	842083	817218	4.4	5	30.60	35.00	0.0
D08_6F	842083	817218	4.4	6	33.70	38.10	0.0
D08_7F	842083	817218	4.4	7	36.80	41.20	0.0
D08_8F	842083	817218	4.4	8	39.90	44.30	0.0
D08_9F	842083	817218	4.4	9	43.00	47.40	0.0
D08_10F	842083	817218	4.4	10	46.10	50.50	0.0
D08_11F	842083	817218	4.4	11	49.20	53.60	0.0
D08_12F	842083	817218	4.4	12	52.30	56.70	0.0
D08_13F	842083	817218	4.4	13	55.40	59.80	0.0
D08_14F	842083	817218	4.4	14	58.50	62.90	0.0
D08_15F	842083	817218	4.4	15	61.60	66.00	0.0
D08_17F	842083	817218	4.4	17	67.80	72.20	0.0
D08_19F	842083	817218	4.4	19	74.00	78.40	0.0
D08_22F	842083	817218	4.4	22	83.40	87.80	0.0
D08_25F	842083	817218	4.4	25	92.85	97.25	0.0

ASR Label	Location		Local Ground, Z (mPD)	Floor	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Odour
	x	y					Highest 5-s average (5 OUs)
	Easting	Northing					
D09_GF	842079	817230	4.4	G	1.5	5.9	0.2
D09_L1	842079	817230	4.4	L1	5.50	9.90	0.2
D09_L2	842079	817230	4.4	L2	10.00	14.40	0.2
D09_1F	842079	817230	4.4	1	18.20	22.60	0.2
D09_2F	842079	817230	4.4	2	21.30	25.70	0.1
D09_3F	842079	817230	4.4	3	24.40	28.80	0.1
D09_4F	842079	817230	4.4	4	27.50	31.90	0.0
D09_5F	842079	817230	4.4	5	30.60	35.00	0.0
D09_6F	842079	817230	4.4	6	33.70	38.10	0.0
D09_7F	842079	817230	4.4	7	36.80	41.20	0.0
D09_8F	842079	817230	4.4	8	39.90	44.30	0.0
D09_9F	842079	817230	4.4	9	43.00	47.40	0.0
D09_10F	842079	817230	4.4	10	46.10	50.50	0.0
D09_11F	842079	817230	4.4	11	49.20	53.60	0.0
D09_12F	842079	817230	4.4	12	52.30	56.70	0.0
D09_13F	842079	817230	4.4	13	55.40	59.80	0.0
D09_14F	842079	817230	4.4	14	58.50	62.90	0.0
D09_15F	842079	817230	4.4	15	61.60	66.00	0.0
D09_17F	842079	817230	4.4	17	67.80	72.20	0.0
D09_19F	842079	817230	4.4	19	74.00	78.40	0.0
D09_22F	842079	817230	4.4	22	83.40	87.80	0.0
D09_25F	842079	817230	4.4	25	92.85	97.25	0.0
D10_GF	842075	817244	4.4	G	1.5	5.9	0.2
D10_L1	842075	817244	4.4	L1	5.50	9.90	0.2
D10_L2	842075	817244	4.4	L2	10.00	14.40	0.2
D10_1F	842075	817244	4.4	1	18.20	22.60	0.1
D10_2F	842075	817244	4.4	2	21.30	25.70	0.1
D10_3F	842075	817244	4.4	3	24.40	28.80	0.1
D10_4F	842075	817244	4.4	4	27.50	31.90	0.1
D10_5F	842075	817244	4.4	5	30.60	35.00	0.0
D10_6F	842075	817244	4.4	6	33.70	38.10	0.0
D10_7F	842075	817244	4.4	7	36.80	41.20	0.0
D10_8F	842075	817244	4.4	8	39.90	44.30	0.0
D10_9F	842075	817244	4.4	9	43.00	47.40	0.0
D10_10F	842075	817244	4.4	10	46.10	50.50	0.0
D10_11F	842075	817244	4.4	11	49.20	53.60	0.0
D10_12F	842075	817244	4.4	12	52.30	56.70	0.0
D10_13F	842075	817244	4.4	13	55.40	59.80	0.0
D10_14F	842075	817244	4.4	14	58.50	62.90	0.0
D10_15F	842075	817244	4.4	15	61.60	66.00	0.0
D10_17F	842075	817244	4.4	17	67.80	72.20	0.0
D10_19F	842075	817244	4.4	19	74.00	78.40	0.0
D10_22F	842075	817244	4.4	22	83.40	87.80	0.0
D10_25F	842075	817244	4.4	25	92.85	97.25	0.0

ASR Label	Location		Local Ground, Z (mPD)	Floor	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Odour
	x	y					Highest 5-s average (5 OUs)
	Easting	Northing					
D11_GF	842071	817257	4.4	G	1.5	5.9	0.2
D11_L1	842071	817257	4.4	L1	5.50	9.90	0.2
D11_L2	842071	817257	4.4	L2	10.00	14.40	0.2
D11_1F	842071	817257	4.4	1	18.20	22.60	0.1
D11_2F	842071	817257	4.4	2	21.30	25.70	0.1
D11_3F	842071	817257	4.4	3	24.40	28.80	0.1
D11_4F	842071	817257	4.4	4	27.50	31.90	0.1
D11_5F	842071	817257	4.4	5	30.60	35.00	0.0
D11_6F	842071	817257	4.4	6	33.70	38.10	0.0
D11_7F	842071	817257	4.4	7	36.80	41.20	0.0
D11_8F	842071	817257	4.4	8	39.90	44.30	0.0
D11_9F	842071	817257	4.4	9	43.00	47.40	0.0
D11_10F	842071	817257	4.4	10	46.10	50.50	0.0
D11_11F	842071	817257	4.4	11	49.20	53.60	0.0
D11_12F	842071	817257	4.4	12	52.30	56.70	0.0
D11_13F	842071	817257	4.4	13	55.40	59.80	0.0
D11_14F	842071	817257	4.4	14	58.50	62.90	0.0
D11_15F	842071	817257	4.4	15	61.60	66.00	0.0
D11_17F	842071	817257	4.4	17	67.80	72.20	0.0
D11_19F	842071	817257	4.4	19	74.00	78.40	0.0
D11_22F	842071	817257	4.4	22	83.40	87.80	0.0
D11_25F	842071	817257	4.4	25	92.85	97.25	0.0
D12_GF	842084	817263	4.4	G	1.5	5.9	0.3
D12_L1	842084	817263	4.4	L1	5.50	9.90	0.3
D12_L2	842084	817263	4.4	L2	10.00	14.40	0.2
D12_1F	842084	817263	4.4	1	18.20	22.60	0.1
D12_2F	842084	817263	4.4	2	21.30	25.70	0.1
D12_3F	842084	817263	4.4	3	24.40	28.80	0.1
D12_4F	842084	817263	4.4	4	27.50	31.90	0.0
D12_5F	842084	817263	4.4	5	30.60	35.00	0.0
D12_6F	842084	817263	4.4	6	33.70	38.10	0.0
D12_7F	842084	817263	4.4	7	36.80	41.20	0.0
D12_8F	842084	817263	4.4	8	39.90	44.30	0.0
D12_9F	842084	817263	4.4	9	43.00	47.40	0.0
D12_10F	842084	817263	4.4	10	46.10	50.50	0.0
D12_11F	842084	817263	4.4	11	49.20	53.60	0.0
D12_12F	842084	817263	4.4	12	52.30	56.70	0.0
D12_13F	842084	817263	4.4	13	55.40	59.80	0.0
D12_14F	842084	817263	4.4	14	58.50	62.90	0.0
D12_15F	842084	817263	4.4	15	61.60	66.00	0.0
D12_17F	842084	817263	4.4	17	67.80	72.20	0.0
D12_19F	842084	817263	4.4	19	74.00	78.40	0.0
D12_22F	842084	817263	4.4	22	83.40	87.80	0.0
D12_25F	842084	817263	4.4	25	92.85	97.25	0.0

ASR Label	Location		Local Ground, Z (mPD)	Floor	Flag Pole Receiver Height, mAG	Flag Pole Receiver Height, mPD	Odour
	x	y					Highest 5-s average (5 OUs)
	Easting	Northing					
D13_GF	842096	817270	4.4	G	1.5	5.9	0.3
D13_L1	842096	817270	4.4	L1	5.50	9.90	0.3
D13_L2	842096	817270	4.4	L2	10.00	14.40	0.2
D13_1F	842096	817270	4.4	1	18.20	22.60	0.1
D13_2F	842096	817270	4.4	2	21.30	25.70	0.1
D13_3F	842096	817270	4.4	3	24.40	28.80	0.1
D13_4F	842096	817270	4.4	4	27.50	31.90	0.0
D13_5F	842096	817270	4.4	5	30.60	35.00	0.0
D13_6F	842096	817270	4.4	6	33.70	38.10	0.0
D13_7F	842096	817270	4.4	7	36.80	41.20	0.0
D13_8F	842096	817270	4.4	8	39.90	44.30	0.0
D13_9F	842096	817270	4.4	9	43.00	47.40	0.0
D13_10F	842096	817270	4.4	10	46.10	50.50	0.0
D13_11F	842096	817270	4.4	11	49.20	53.60	0.0
D13_12F	842096	817270	4.4	12	52.30	56.70	0.0
D13_13F	842096	817270	4.4	13	55.40	59.80	0.0
D13_14F	842096	817270	4.4	14	58.50	62.90	0.0
D13_15F	842096	817270	4.4	15	61.60	66.00	0.0
D13_17F	842096	817270	4.4	17	67.80	72.20	0.0
D13_19F	842096	817270	4.4	19	74.00	78.40	0.0
D13_22F	842096	817270	4.4	22	83.40	87.80	0.0
D13_25F	842096	817270	4.4	25	92.85	97.25	0.0
D14_GF	842108	817276	4.4	G	1.5	5.9	0.3
D14_L1	842108	817276	4.4	L1	5.50	9.90	0.3
D14_L2	842108	817276	4.4	L2	10.00	14.40	0.2
D14_1F	842108	817276	4.4	1	18.20	22.60	0.1
D14_2F	842108	817276	4.4	2	21.30	25.70	0.1
D14_3F	842108	817276	4.4	3	24.40	28.80	0.1
D14_4F	842108	817276	4.4	4	27.50	31.90	0.1
D14_5F	842108	817276	4.4	5	30.60	35.00	0.1
D14_6F	842108	817276	4.4	6	33.70	38.10	0.1
D14_7F	842108	817276	4.4	7	36.80	41.20	0.1
D14_8F	842108	817276	4.4	8	39.90	44.30	0.0
D14_9F	842108	817276	4.4	9	43.00	47.40	0.0
D14_10F	842108	817276	4.4	10	46.10	50.50	0.0
D14_11F	842108	817276	4.4	11	49.20	53.60	0.0
D14_12F	842108	817276	4.4	12	52.30	56.70	0.0
D14_13F	842108	817276	4.4	13	55.40	59.80	0.0
D14_14F	842108	817276	4.4	14	58.50	62.90	0.0
D14_15F	842108	817276	4.4	15	61.60	66.00	0.0
D14_17F	842108	817276	4.4	17	67.80	72.20	0.0
D14_19F	842108	817276	4.4	19	74.00	78.40	0.0
D14_22F	842108	817276	4.4	22	83.40	87.80	0.0
D14_25F	842108	817276	4.4	25	92.85	97.25	0.0
Max.							0.4

Note:

1. Bolded cell denotes the largest value.

Appendix 2.20 Location of Exceedance Zone



Appendix: 2.20

Title: Location of Exceedance Zone [4/F-5/F | 27.5mAG-30.6mAG | 31.9mPD-35.0mPD]

Project: Section 16 Application for Proposed Flats, Shop and Services and Eating Place with minor Relaxation of Plot Ratio and Building Height Restrictions in "Residential (Group E)" Zone at Nos. 4 Tung Yuen Street, Yau Tong, Kowloon

RAMBOLL

Drawn by: TL

Checked by: TC

Rev.: 1.1

Date: Jul 2025

**Appendix 2.21 Correspondence with DSD regarding Proposed Enhancement
Work at YTSPS**

Tony Ling

From: Andy Ho Cheung LAW <andyhclaw@dsd.gov.hk>
Sent: Friday, June 13, 2025 2:34 PM
To: Tony Ling
Cc: Peter Ka Man CHAN; Jolitta LM CHAN/EPD; Kenneth Pak Cheong WONG/PLAND; Tony Cheng; Wendy Tin
Subject: Re: [Internet]RE: S.16 Application at No. 4 Tung Yuen Street, Yau Tong (A/K15/132) - Enquiry for Enhancement Work of Yau Tong Sewage Pumping Station

Dear Tony,

We spoke.

Regarding DSD's proposed project on enhancement works at YTSPS, please find the below information for your reference: -

1. The tentative completion of enhancement works at YTSPS is 2032 subject to funding availability.
2. The proposed enhancement works involves provision of deodourisation system, with target odour emission after the enhancement similar to new typical SPS subject to funding and detailed design.

You are reminded that DSD's enhancement works is to serve the Yau Tong region. The applicant shall employ any required mitigation measures due to applicant's planning application and subsequent development.

For your information, the E&M advisor/Project Engineer of the proposed works is Mr. Peter CHAN. If you have further enquiries regarding the proposed works, you may contact Mr. Peter CHAN at 2594 7211, or me. Thanks.

Regards,
Andy H.C. LAW
EME/ST2/1/3, DSD
Tel: 2195 3459



From: "Tony Ling" [REDACTED]
To: "andyhclaw@dsd.gov.hk" <andyhclaw@dsd.gov.hk>
Cc: "Tony Cheng" [REDACTED], "Wendy Tin" [REDACTED]
Date: 06/06/2025 15:37
Subject: [Internet]RE: S.16 Application at No. 4 Tung Yuen Street, Yau Tong (A/K15/132) - Enquiry for Enhancement Work of Yau Tong Sewage Pumping Station
Serial No.:

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**Appendix 2.22 Extracts from Approved Planning Application A/K15/121 –
Input Parameters of Concrete Batching Plant**



LEGEND

- PROJECT BOUNDARY
- AREA SOURCE OF CONCRETE BATCHING PLANTS
- POINT SOURCE OF CHIMNEY EMISSIONS
- POINT SOURCE OF CONCRETE BATCHING PLANTS

C	THIRD ISSUE	SF	04/20
B	SECOND ISSUE	GL	12/19
A	FIRST ISSUE	GL	10/19
Rev	Description	By	Date

Consultant

ARUP

Contract No. and Title

Environmental Review for
Proposed Residential Development at
18 Tung Yuen Street, Cha Kwo Ling,
Yau Tong, Lei Yue Mun, Kowloon

Drawing Title

**LOCATION OF EMISSION
SOURCES - CONCRETE BATCHING
PLANTS AND CHIMNEYS
DURING ULTIMATE SCENARIO**

Drawing no. APPENDIX 3.5		Rev. C	
Drawn SF	Date 04/20	Checked RC	Approved FC
Scale AS SHOWN		Status PRELIMINARY	

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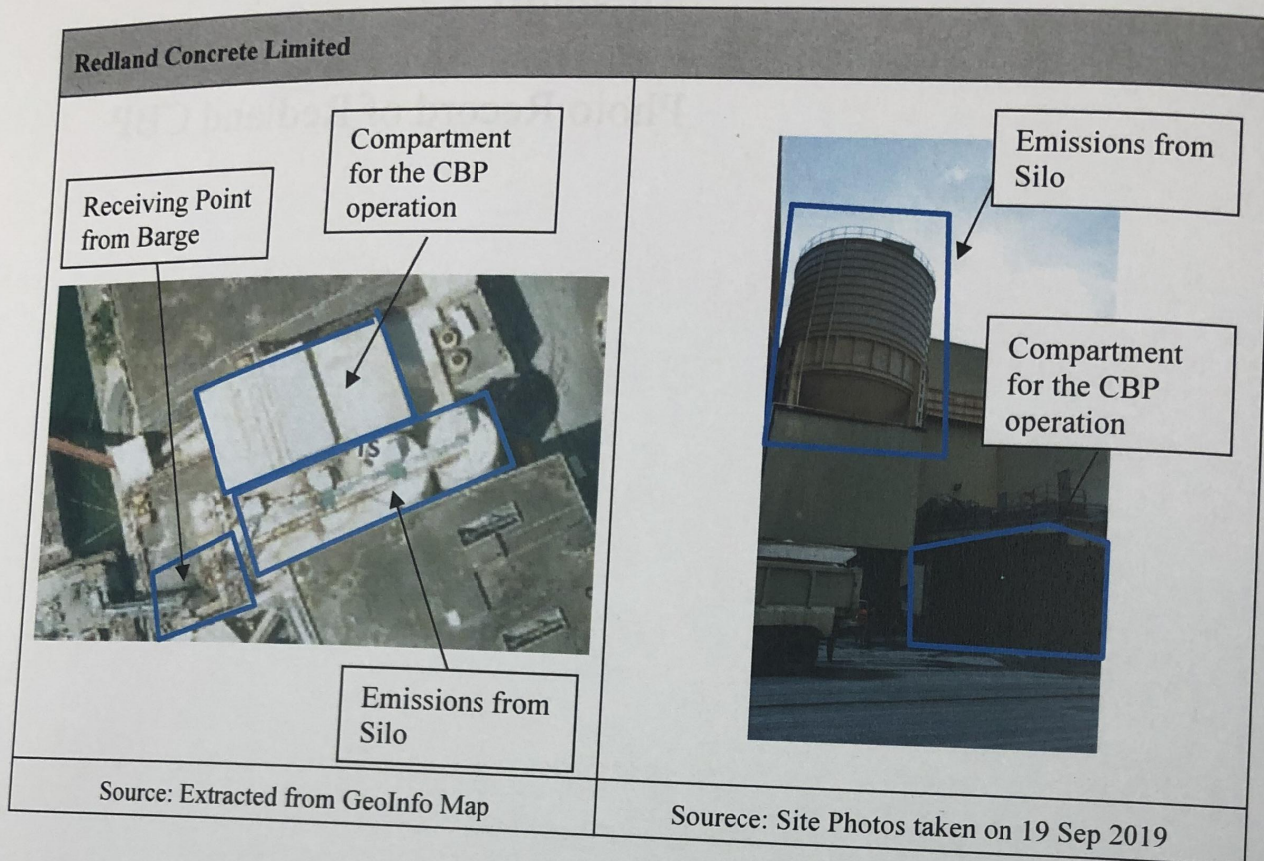


Table 4: Calculation of RSP Emission factor for Paved Road within Concrete Batching Plants

$$E = k (sL)^{0.91} \times (W)^{1.02}$$

(ref: Section 13.2.1.3 of USEPA AP-42)

Where

E = Emission Factor in grams per vehicle kilometer traveled (g/veh-km) (Ref. AP42 S13.2.1.3)
 k = Particle size multiplier, k = 0.62 g/veh-km for RSP and 0.15 g/veh-km for FSP as defined according to Table 2 of S13.2.1-1
 sL = road surface silt loading (grams per square meter) (g/m²) (i.e. 12g/m² as per AP-42 Table 13.2.1-3 mean silt loading for concrete batching)
 W = average weight (tons) of the vehicles traveling the road (22 tons is assumed in the equation)

Therefore

RSP emission factor = $0.62 \times 12^{0.91} \times 22^{1.02}$
 139.2252 g/veh-km
 FSP emission factor = $0.15 \times 12^{0.91} \times 22^{1.02}$
 33.6835 g/veh-km

Detailed calculation of RSP and FSP emission rate by each segment

Company	Source / Segment ID	Distance	Road Width	Road Surface Area	Peak hourly no. of mixer trucks	Dust removal efficiency [2]	RSP Emission Rate [3]		FSP Emission Rate [3]	
		(m)	(m)	(m ²)	(veh/hr)	(%)	(g/s)	(g/s/m ²)	(g/s)	(g/s/m ²)
China Concrete Co. Ltd. [4] [5] [6]	L11	17	6	102	NA	NA	1.15E-02	3.10E-05	2.77E-03	7.49E-06
	L12	6	45	268	NA	NA	1.15E-02	3.10E-05	2.77E-03	7.49E-06
HK Concrete Co. Ltd.	L31	3	18	53	22	91.7	2.13E-04	4.01E-06	5.15E-05	9.70E-07
	L32	37	3	113	22	91.7	2.66E-03	2.35E-05	6.43E-04	5.69E-06
Redland Concrete Ltd.	L21	7	16	110	22	91.7	4.91E-04	4.44E-06	1.19E-04	1.08E-06

Notes:

- [1] Peak hourly traffic count of each concrete batching plants based on site observations
 [2] Refer to "Calculation of Dust Removal Efficiency by Watering for Paved Road within Concrete Batching Plants"
 [3] Emission Rate (g/s) = Emission Factor x (1 - Dust Removal Efficiency) x No. of Trucks per hour x Travelling Distance
 Emission Rate (g/s/m²) = Emission Factor x (1 - Dust Removal Efficiency) x No. of Trucks per hour x Travelling Distance / Road Surface Area
 [4] According to SP License for China Concrete (L3-194(4)), dust emission rate from paved roads is 0.215kg/hr.
 [5] According to Table 13.2.1-1, particle size multiplier (k) of TSP, RSP and FSP for paved road is defined as 3.23g/veh-km, 0.62 g/veh-km and 0.15 g/veh-km respectively. The conversion ratio of TSP to RSP and FSP for paved road has thus referenced to the particle size multiplier. As such, TSP = 3.23 / 0.62; RSP = 3.23 / 0.15 FSP
 [6] Emission sources at China Concrete Co. Ltd. and HK Concrete Co. Ltd. (L11-L12, L31-L32) would only be operational during interim phase.

Section 16 Planning Application for Proposed Residential Development at 18 Tung Yuen Street, Cha Kwo Ling, Yau Tong, Lei Yue Mun, Kowloon

Table 1 : Emission Inventory for Chimney (In-use only)

Company	Source ID	Type	X	Y	Release Height	Exit Temperature	Exit velocity	Internal diameter	Length of X side	Length of Y side	Angle (deg. Clockwise from N)	Emission Rate (g/s) or (g/m ³ -s)					Operation hours [1]
			(m)	(m)	(mAG)	(K)	(m/s)	(m)	(m)	(m)	(°)	NOx	SO ₂	CO	RSP [7]	FSP [7]	
China Concrete Co. Ltd. [1] [4] [5] [6]	P101	Point	842301	817005	31	Ambient	15.6	0.20							4.86E-03	1.43E-03	14 hours a day (0700 to 2100)
	P102	Point	842298	817002	31	Ambient	15.6	0.20							4.86E-03	1.43E-03	
	P103	Point	842300	817009	8	Ambient	15.6	0.20							4.86E-03	1.43E-03	
	P104	Point	842294	817003	8	Ambient	15.6	0.20							4.86E-03	1.43E-03	
	P105	Area	842282	817004	6			0.20	4	4	136				4.86E-03	1.43E-03	
	P106	Point	842307	817023	30	Ambient	15.6	0.20							4.86E-03	1.43E-03	
	P107	Point	842309	817025	30	Ambient	15.6	0.20							4.86E-03	1.43E-03	
	P108	Point	842314	817030	30	Ambient	15.6	0.20							4.86E-03	1.43E-03	
	P109	Point	842312	817028	30	Ambient	15.6	0.20							4.86E-03	1.43E-03	
	P110	Point	842313	817029	12	Ambient	15.6	0.28							4.86E-03	1.43E-03	
	P111	Point	842308	817024	12	Ambient	15.6	0.28							4.86E-03	1.43E-03	
HK Concrete Co. Ltd. [1] [4] [5] [6]	L11	Area	842311	817033	0.5				17	6	45				4.86E-03	1.43E-03	12 hours a day (0700 to 1900)
	L12	Area	842293	816992	0.5				6	45	45				9.72E-03	2.86E-03	
	P301	Point	842273	817039	33	Ambient	13.8	0.20							9.72E-03	2.86E-03	
	P302	Point	842271	817036	33	Ambient	13.8	0.20							3.08E-05	7.45E-06	
	P303	Point	842276	817036	33	Ambient	13.8	0.20							3.08E-05	7.45E-06	
	P304	Point	842278	817034	33	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P305	Point	842276	817032	33	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P306	Point	842282	817029	33	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P307	Point	842280	817027	33	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P308	Point	842289	817024	28	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P309	Point	842295	817030	33	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P310	Point	842279	817042	13	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P311	Point	842282	817039	13	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P312	Point	842286	817035	13	Ambient	13.8	0.20							4.31E-03	1.27E-03	
	P313	Area	842266	817019	9				3	5	135				4.31E-03	1.27E-03	
	L31	Area	842300	817044	0.5				3	18	43				4.31E-03	1.27E-03	
	L32	Area	842273	817018	0.5				37	3	44				8.78E-03	2.58E-03	
Redland Concrete Ltd. [1] [4] [5] [6]	P201	Point	842116	817205	26	Ambient	27.5	0.15							4.01E-06	9.70E-07	12 hours a day (0700 to 1900)
	P202	Point	842127	817210	26	Ambient	27.5	0.15							2.35E-05	5.69E-06	
	P203	Point	842133	817213	26	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P204	Point	842141	817216	26	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P205	Point	842134	817226	8	Ambient	1.8	0.20							4.86E-03	1.43E-03	
	P206	Point	842136	817214	10	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P207	Point	842124	817209	10	Ambient	27.5	0.15							5.56E-04	1.63E-04	
	P208	Point	842122	817208	10	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P209	Point	842122	817218	8	Ambient	1.8	0.20							4.86E-03	1.43E-03	
	P210	Point	842128	817227	26	Ambient	27.5	0.15							5.56E-04	1.63E-04	
	P211	Point	842128	817227	26	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P212	Point	842128	817227	15	Ambient	1.8	0.20							4.86E-03	1.43E-03	
	P213	Point	842128	817227	12	Ambient	27.5	0.15							5.56E-04	1.63E-04	
	P214	Point	842130	817221	26	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P215	Point	842130	817221	26	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P216	Point	842130	817221	15	Ambient	1.8	0.20							4.86E-03	1.43E-03	
	P217	Point	842130	817221	12	Ambient	27.5	0.15							5.56E-04	1.63E-04	
	P218	Point	842118	817226	26	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P219	Point	842118	817226	26	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P220	Point	842118	817226	15	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P221	Point	842118	817226	12	Ambient	1.8	0.20							5.56E-04	1.63E-04	
	P222	Point	842123	817228	26	Ambient	7.7	0.40							9.72E-03	2.86E-03	
	P223	Point	842123	817228	26	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P224	Point	842123	817228	15	Ambient	27.5	0.15							4.86E-03	1.43E-03	
	P225	Point	842123	817228	12	Ambient	1.8	0.20							5.56E-04	1.63E-04	
	P226	Point	842134	817226	8	Ambient	7.7	0.40							9.72E-03	2.86E-03	
	P227	Point	842125	817219	8	Ambient	1.8	0.20							5.56E-04	1.63E-04	
	P228	Point	842130	817221	12	Ambient	1.8	0.20							5.56E-04	1.63E-04	
	P229	Point	842123	817228	12	Ambient	1.8	0.20							5.56E-04	1.63E-04	
	P230	Point	842100	817199	3	Ambient	1.8	0.20							5.56E-04	1.63E-04	
	L21	Area	842149	817213	0.5	Ambient	14.4	0.50							2.41E-02	7.08E-03	
Lei Yue Mun Seafood Restaurant [2] [3]	C01	Point	842646	816885	16	373	6.0	0.2				1.63E-02	2.35E-04		1.20E-04	1.20E-04	24 hours a day
	C02	Point	842572	816798	8	373	6.0	0.2				1.58E-03	9.48E-06		2.50E-04	1.92E-04	24 hours a day
	C03	Point	842622	816846	8	373	6.0	0.2				1.27E-02	1.81E-04		2.40E-05	2.40E-05	24 hours a day
	C04	Point/Cap	842670	816949	6	373	6.0	0.2				3.16E-04	1.90E-06		1.20E-04	1.20E-04	24 hours a day
	C05	Point	842579	816815	8	373	6.0	0.2				1.58E-03	9.48E-06		1.20E-04	1.20E-04	24 hours a day

Section 10: Emission Rate From Wind Erosion of Sand Barge

Pollutant: RSP

Source ID	Source Type	Coordinates		Dimension (m)		Height	Angle / Width	Emission Rate (g/s/sq.m)	
		X1	Y1	X2	Y2			Wind Erosion	
		(m)	(m)	(m)	(m)			Daytime	Non-working Hours
SB01 [4]	Area	842232.7	816960.7	20	50	1.5	46	1.2748E-06	1.2748E-06
SB02 [4]	Area	842214.2	816979.4	20	50	1.5	46	1.2748E-06	1.2748E-06
SB04	Area	842026.2	817196.7	20	50	1.5	71	1.2748E-06	1.2748E-06

Pollutant: FSP

Source ID	Source Type	Coordinates		Dimension (m)		Height	Angle / Width	Emission Rate (g/s/sq.m)	
		X1	Y1	X2	Y2			Wind Erosion	
		(m)	(m)	(m)	(m)			Daytime	Non-working Hours
SB01 [4]	Area	842232.7	816960.7	20	50	1.5	46	1.9304E-07	1.9304E-07
SB02 [4]	Area	842214.2	816979.4	20	50	1.5	46	1.9304E-07	1.9304E-07
SB04	Area	842026.2	817196.7	20	50	1.5	71	1.9304E-07	1.9304E-07

Remarks:

As a conservative approach, the following assumptions have been made:

[1] The size of the sand storage area is assumed to be the same as the size of the sand barge. The size of the sand barge is measured by aerial photos.

[2] All the sand storage area of the sand barges are assumed to be non-enclosed.

[3] Water spraying and covering of sand are observed at some sand barges. Nevertheless, no watering and covering are assumed in emission rate calculation as a conservative approach.

[4] Emission sources at China Concrete Co. Ltd. and HK Concrete Co. Ltd. (SB01, SB02) would only be operational during interim phase.