Appendix 5

Environmental Assessment

(EA) Report

Prepared for

Urban Renewal Authority

Prepared by

Ramboll Hong Kong Limited

TWO DEVELOPMENT SCHEMES - MING LUN STREET/ MA TAU KOK ROAD (KC-018) AND TO KWA WAN ROAD/ MA TAU KOK ROAD (KC-019)

ENVIRONMENTAL ASSESSMENT

Date	**5 October 2022**
Prepared by	**Miko Wan** **Assistant Environmental Consultant**
Signed	
Approved by	**Calvin Chiu** **Senior Manager**
Signed	
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Ramboll Hong Kong Limited

21/F, BEA Harbour View Centre
56 Gloucester Road, Wan Chai, Hong Kong

Tel: (852) 3465 2888
Fax: (852) 3465 2899
Email: hkinfo@ramboll.com

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CHAPTERS

TABLES

FIGURES

APPENDICES

Appendix 5.4 Site Survey Records

1. INTRODUCTION

1.1 Background

1.1.1 Under a holistic planning approach, the URA has proposed two Development Schemes at Ming Lun Street / Ma Tau Kok Road (KC-018) and To Kwa Wan Road / Ma Tau Kok Road (KC-019) (the Schemes). URA's intention is to implement the 2 Schemes as 1 inclusive redevelopment. A comprehensive notional scheme is prepared considering the 2 connecting sites as one redevelopment.

1.1.2 This Environmental Assessment is prepared to support the two draft Development Scheme Plans (DSPs) submission to Town Planning Board (TPB) under Section 25 of the Urban Renewal Authority Ordinance. This Report covers and supports both Schemes as one comprehensive redevelopment.

1.1.3 Ramboll Hong Kong Limited is commissioned by the Applicant to prepare an Environmental Assessment (EA) report to support the DSP submission for KC-018 and KC-019 sites. Architectural drawings and technical information are provided by the Applicant.

1.1.4 This EA would address major issues including potential environmental noise, air quality impact during operation of the proposed development, and a review of potential land contamination issue.

1.2 The Schemes and its Environs

1.2.1 The Schemes have a total site area of 20,189m^2 (11,430m^2 for KC-018 site and 8,759m^2 for KC-019 site). It is situated in Kowloon City area and about bounded by Hong Kong Housing Society's reserved site for Dedicated Rehousing Estate (DRE) to the north, To Kwa Wan Road to the west, existing Grand Waterfront (residential use) to the south and Ma Tau Kok waterfront to the east. **Figure 1.1** shows the location of the Schemes.

1.2.2 Existing roads including Ming Lun Street, Chung Sun Street, Hing Yin Street, Hing Yan Street and Ma Tau Kok Road fall within the Schemes. In addition, the Schemes is occupied by ageing residential buildings (not less than 60 years) of 7 to 8 storeys with street shops and Newport Centre (industrial building). The street shops include restaurants, retail shop, garage, shops for auto parts, auto cleaning service, hardware store, etc. Newport Centre (Phase 1 & 2) is currently occupied for offices, storage, workshops, showrooms and retail services use.

1.2.3 "13-Street" to the northwest is currently occupied by ageing residential buildings (about 60 years) of 6 to 7 storeys with street shops. The "13-Street" area falls within a "*Proposed Redevelopment Priority Area*" under DURF. The site is currently zoned as "CDA" under the approved Ma Tau Kok OZP No. S/K10/28 gazetted on 25 March 2022. According to the OZP, the planning intention of this "CDA" zone is for comprehensive re-/development of the area for residential and/or commercial uses with the provision of open space and other supporting facilities.

1.2.4 Grand Waterfront with 5 residential towers erected on top of a retail podium building is situated to the immediate south. Ma Tau Kok Gas Work North Plant is situated on the opposite side of To Kwa Wan Road. Developments further away include Cattle Depot Art Park and Artist Village, To Kwa Wan Recreation Ground, a number of industrial/commercial buildings (e.g. Merit Industrial Centre, Kapok Industrial Building, New Lee Wah Centre) along To Kwa Wan Road, Wyler Gardens (residential uses) and a ferry pier.

1.3 Proposed Redevelopment

1.3.1 The Proposed Redevelopment at the Schemes consists of 4 residential towers with 3 lowest floors for retail/GIC/clubhouse purpose and 31 domestic storeys above. Carparking facilities will be provided in 3 basement floors. There is a maximum BH (measured at the main roof of the tower) of 120mPD. There will be a total of 2,226 flat units provided after development

1.3.2 The tentative completion dates of the proposed redevelopments at KC-018 Site and KC-019 Site are both 2033. In view of KC-018 and KC-019 redevelopment, proposed development at DRE site by HKHS, and planning applications in nearby CDA zones, may trigger redevelopment of other CDA sites, for instance, CDA ("13-Street") in the vicinity. In order to account the possible scenarios where the surrounding site would undergo similar redevelopment in future, it is assumed that the redevelopment and completion year of nearby CDA ("13-street") may take place a few years after KC-018 and KC-019 for the purpose of technical assessments.

1.3.3 The Master Layout Plan (MLP), typical floor plan and section of the Proposed Development are shown in **Appendix 1.1.**

1.4 Environmental Appraisal of the Proposed Development

Noise

1.4.1 Based on the existing conditions of the environs, the noise environment is mainly dominated by road traffic generated from To Kwa Wan Road, Ma Tau Kok Road, San Shan Road, etc. Road traffic noise impact assessment is therefore prepared (detailed in **Section 2**) to address the potential noise impact that would be generated from the traffic.

1.4.2 Regarding the concern of potential fixed noise impact, desktop survey (review of published report) as well as site surveys for both daytime & evening time and night-time periods have been carried out in 2017, May/July 2020, Jan 2021, May 2022 to identify potential fixed noise sources that could have adverse impact on the Proposed Redevelopment or update the condition.

1.4.3 As observed, there are potential fixed noise sources such as AC equipment (e.g. chiller, cooling tower at Ma Tau Kok Gas Work North Plant and other buildings further apart, as well as garages, car repairing workshop, etc in the vicinity, which has been illustrated in **Figure 3.2.** Fixed noise impact assessment is prepared (detailed in **Section 3**) to address the potential noise impact that would be generated from the fixed noise sources.

1.4.4 There is no exposed railway noise source identified in the vicinity (i.e. 300m) of the Schemes and thus, no adverse railway noise impact is anticipated on the Proposed Redevelopment.

Air Quality

1.4.5 With respect to the potential vehicular emission impact, as mentioned above, the Schemes is affected by nearby carriageways such as To Kwa Wan Road, Ma Tau Kok Road, San Shan Road, etc.

1.4.6 With regard to the potential chimney impact, site survey has been conducted in May 2020 to identify if there are active chimneys located in the proximity of the Schemes. According to onsite survey, there are presence of chimneys in the vicinity of the Schemes within 200m such as chimney stack at Ma Tau Kok Gas Work North Plant.

1.4.7 A quantitative air quality impact assessment is prepared (detailed in **Section 4**) to address the potential air quality impact that would be generated from the chimney emissions.

Land Contamination

1.4.8 The historical landuse and existing condition have been studied for the purpose to identify if there is/was any potentially land contaminating activity held onsite, and recommend actions to be taken afterwards. A land contamination appraisal is included in **Section 5**.

2. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

2.1 Scope of Work

2.1.1 The section of this study is to review the potential road noise impacts (i.e. road traffic noise impact) on the noise sensitive uses of the Proposed Redevelopment, and to recommend mitigation measures where are practicable to attenuate the impact. Among the Proposed Redevelopment, only the residential dwelling will rely on opened window for ventilation purpose and will be regarded as noise sensitive receivers for this study. Other uses in podium (retail/GIC/clubhouse) will be provided with central air conditioning system and would not rely on openable window for ventilation purpose.

2.1.2 As mentioned in paragraph 1.3.2, it is estimated that the redevelopment of "13-street" site will be completed few years after KC-018 and KC-019 redevelopment.

2.2 Assessment Criteria

2.2.1 Noise standards are recommended in Chapter 9, "Environment", of the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against possible noise impact from road traffic, railway and aircrafts. According to the guidelines, the maximum road traffic noise level, measured in terms of L_{10}(1-hr), at façades of residential development like the proposed redevelopment is 70 dB(A).

2.3 Assessment Methodology

2.3.1 The assessment concerns the prediction of the maximum hourly L_{10} traffic noise level at noise sensitive receivers (NSRs) of the proposed redevelopment due to the projected traffic flow on the adjacent major road networks within 15 years from the operation year of the proposed development. The traffic data provided by the project traffic consultant – CKM for year 2048 (which is considered as the worst case scenario within 15 years upon completion of the proposed redevelopment). Traffic forecast of year 2048 is attached in **Appendix 2.1**. Traffic data generated from potential development at nearby CDA sites (e.g. 13-Street) have been accounted in the traffic forecast as a conservative approach in technical assessments.

2.3.2 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" has been applied to predict the hourly L_{10} noise level generated from road traffic at selected representative noise sensitive receivers (NSRs) of the Proposed Development. The predicted noise levels were then compared with the HKPSG noise criterion for assessing the impact.

2.4 Noise Sensitive Receivers

2.4.1 Noise Sensitive Receivers (NSRs) representing opening of habitable room of dwelling likely to be subject to adverse traffic noise impact have been identified in this assessment. The locations of the NSRs are shown in **Figure 2.1**. The assessment points were taken at 1.2 m above the floors of the selected storeys and 1m away from the façades of openable windows/doors.

2.5 Base Case Scenario and Assessment Result

KC-018

2.5.1 10m Non-Building Areas (NBAs) need to be provided along southern side of the KC-018 site and KC-019 site. Moreover, 20m waterfront promenade along seashore must be provided for promenade on east side, the buildable area is reduced. It is also subject to building height restriction of 120mPD.

2.5.2 Nonetheless, the development is designed with due consideration of potential road traffic noise impact and site constraints as well.

2.5.3 Given the need to provide adequate unobstructed space to meet prescribed window requirement, the development needs to make use of the frontage as much as possible. Further building setback from To Kwa Wan Road (major road traffic noise source) is limited. Instead of relying on building setback, the residential towers are designed with the noise sensitive façade of the nearest tower not facing To Kwa Wan Road to the west. In particular, there is one wing on southern side of KC-018 site nearest to To Kwa Wan Road designed to provide extra shielding effect for units to the east of the wing.

2.5.4 Apart from disposition and orientation, podium is another self-protective building design adopted to attenuate adverse road traffic noise impact on the Proposed Redevelopment. Podium can serve to increase absolute distance between noise source and NSR built on top of it, and may provide shielding for dwellings at lower floors if the podium coverage is more extensive. In the Proposed Redevelopment, 3-storey podium building is designed and with the extent near To Kwa Wan Road enlarged to provide some shielding for NSRs at lower floors.

2.5.5 The base case is defined as the scheme to reflect the design but without further direct noise mitigation measures. According to the predicted noise level for the base case, road traffic noise exceedance is found at various locations at the tower near to To Kwa Wan Road in both KC-018 Site and KC-019 Site. Among the assessment result, it is suggested that AM peak traffic forecast represents a worst representative scenario with more noise exceedance.

2.5.6 There is 78 out of 1,276 flat units with noise exceedance at KC-018 Site, and 111 out of 950 flat units with noise exceedance at KC-019 Site. Altogether, there are 189 out of 2,226 flat units with exceedance, equivalent to road traffic noise compliance level of 91.5%. The maximum predicted road traffic noise level is L_{10}(1-hr) 78 dB(A) at a window location facing To Kwa Wan Road at KC-019 Site. Detailed result is presented in **Appendix 2.2**.

2.5.7 While the tentative completion year of development at KC-018 and KC-019 sites are the same, there is a possibility that the implementation of KC-019 will be delayed. As a conservative assessment approach, an additional scenario which KC-019 Site is vacant (i.e. existing building demolished but new building of proposed development not yet in place) would be represented for a worst-case scenario. Detailed result based on AM peak traffic forecast (worst representative scenario) is presented in **Appendix 2.4** and **Figure 2.3**. According to the assessment result, the noise exceedance at KC-018 Site with and without proposed development at KC-019 Site is of same number of exceedance and maximum predicted noise level. In other words, the possibly delay of KC-019 Site does not significantly affect the road traffic noise performance of proposed development at KC-018 Site.

2.6 Proposed Traffic Noise Mitigation Measures

2.6.1 In order to minimise the potential traffic noise impact, mitigation measures have been incorporated or considered when formulating the building layout. **Figure 2.2** show the location of the mitigation measures proposed for mitigating the potential adverse traffic noise impact.

2.6.2 Mitigation measures proposed in the current scheme include:

a. Fixed Glazing (with or without Maintenance Window; not for ventilation purpose) (FG)

As discussed, the tower nearest to To Kwa Wan Road is designed to avoid any opening window facing road directly. Subject to detailed design of the project, the fixed glazing (at NSRs C01-1, CH01-1) may be provided without or with a maintenance window (e.g. for cleaning) as there is already a door opening for prescribed ventilation purpose which is away from To Kwa Wan Road. Similarly, for other habitable rooms, the window location not necessary to serve for natural ventilation and would be subject to adverse road traffic noise impact would be designated as fixed glazing as well.

It is confirmed that the maintenance window, if any, of the fixed glazing is not for prescribed ventilation purpose and such information will be clearly indicated in future general building plan submission, sales brochure, DMC, etc. so that it cannot be altered and future buyer can be well informed.

b. Utility Platform with Self-Closing Door (SD)

Similarly, some bedrooms are provided with utility platform (UP) and with access door, and the door opening is solely for access purpose and not accounted for prescribed ventilation purpose. Auto-close system will be provided so that the door will remain closed except during access (i.e. self-closing door; not for ventilation purpose). Such information will be clearly indicated in future general building plan submission, sales brochure, DMC, etc. so that it cannot be altered and future buyer can be well informed.

c. Acoustic Window/Door (Baffle Type)

The Acoustic Window/Door (Baffle Type) refers to the type of window/door that has an inner sliding glass panel behind an outer window/door, both readily openable, for creating an air gap for the supply of fresh air with noise mitigation effect. It comprises two glazing:-

(i) The outer window/door system; and

(ii) The inner sliding panel.

The "designed setting" to reduce noise entry into indoor area is that the inner sliding panel is moved to the side behind the openable window/door so that noise from outside cannot pass through the opening and enter indoor area directly. Instead, noise needs to pass through the gap between the inner sliding panel and outer façade aside the openable window/door in order to enter indoor area. The design can enable natural ventilation through the gap between the outer façade and inner sliding panel on one hand (although extent of natural ventilation may be inferior to the case without the inner sliding panel behind) and prevent most noise from entering indoor environment on the other hand. According to the latest PNAP APP-130 "Lighting and Ventilation Requirements – Performance-based Approach", the proposed Acoustic Window/Door (Baffle Type) is considered complying with prescribed ventilation requirement if the net opening when the inner sliding panel is moved to another side with least obstruction to the openable window at the outer façade. The design of the proposed baffle type acoustic window/door in its "designed setting" is confirmed by the project architect to meet the relevant natural ventilation requirement under the Building (Planning) Regulations (B(P)R).

In an approved planning application (No. A/K20/128) for another residential development project in Cheung Sha Wan, sliding panel behind window and

balcony door openings is proposed. The case with sliding panel behind balcony door opening (applied to living room) is analogous to baffle type acoustic window. The sliding panel behind window opening(s) of bedroom is equipped with micro-perforated absorber (MPA) panel (1mm) which is sound absorptive. Therefore, sound propagating to indoor area will be mostly absorbed and the sound attenuation performance can be improved. According to the insitu test result, a road traffic noise sound attenuation of 6.9 dB(A) can be achieved for bedroom with baffle type acoustic window with 1 window opening. Sound attenuation of 8.8 dB(A) can be achieved for living room with baffle type acoustic door. Indicative design of baffle type acoustic window and acoustic door is shown in **Figure 2.4** and **Figure 2.5**.

The configuration of baffle type acoustic window/door for the proposed development will make reference to those in the reference project mentioned above so that the noise reduction performance will be comparable. However, the sound attenuation of such innovative noise mitigation measure does refer to the additional noise reduction indoor when compared to a corresponding case with conventional window opening (those opening size should be proportional to the room area as well). In theory, the smaller the room size designed, the less will be the sound attenuation after adjustment. The sound attenuation for individual habitable room type has been adjusted based on comparison of room size of the case in this proposed development (the minimum size among same room type adopted) and the reference case. Detailed calculation is shown in **Appendix 2.5**. For assessment purpose, it is assumed that the noise reduction at individual NSRs would be the corrected sound attenuation or the predicted residual exceedance under base case whichever is lower.

2.7 Assessment Results for Mitigated Scenario

2.7.1 The predicted road traffic noise impact on the selected representative NSRs based on the noise mitigation measures discussed above were assessed.

2.7.2 With practical noise mitigation measures considered and incorporated for implementation as described in **Figure 2.2**, all dwellings would have the predicted noise level complying with relevant standard. (i.e. L_{10}(1-hr) 70 dB(A)).

2.7.3 **Appendix 2.3** shows the assessment result table under mitigated scenario. **Appendix 2.4** show assessment result table under mitigated scenario for reference which represents scenario if KC-019 Site is vacant.

2.7.4 **Appendix 2.6** shows the schedule of noise mitigation measures.

2.8 Conclusions

2.8.1 A road traffic noise impact assessment has been carried out to evaluate the potential traffic noise impact to the Proposed Redevelopment.

2.8.2 The package of direct noise mitigation measures including fixed glazing (with or without maintenance window), utility platform with self-closing door (not for ventilation), acoustic window/door (baffle type) are recommended to address the adverse traffic noise impact upon the Proposed Redevelopment.

2.8.3 With practical noise mitigation measures considered and incorporated for implementation where appropriate, full compliance with the traffic noise standard is predicted. No adverse traffic noise impact to the future resident is anticipated.

2.8.4 In order to account the possible scenarios where the surrounding site ("13-street") may undergo similar redevelopment in future, a possible increase of about 15% in development intensity has been taken into account as a conservative approach in

technical assessments. Yet, the proposed total number of flat units should make reference to the population assumptions adopted in the endorsed the Quantitative Risk Assessments (QRA) report by the CCPHI in 2021.
The QRA report had assessed the risk levels associated with the Ma Tau Kok Gas Works (MTKGW) arising from potential residential development (including development in DRE site of HKHS, "5-Street" and "13-Street" area) within the Consultation Zone of the PHI of the MTKGW. Hence, it is anticipated that the increase in development intensity of "13-street" area will lead to an increase of average flat size instead of total number of flat units, and the traffic forecast would not be affected as advised by project traffic consultant. Therefore, it is confirmed that the increase in development intensity would not result in worsened road traffic noise impact on the proposed development.

2.8.5 It is noted that the scheme adopted for assessment purpose is notional and subject to detailed design. The scheme design will be revised taking into account factors such as marketability, constructability, cost-effectiveness, etc. Practical and effective noise mitigation measures will be devised in future to minimise potential road traffic noise impact.

2.8.6 For future NIA submission, any possible delay of implementation of KC-019 Site will be revisited. Where necessary, additional scenario to cater for uncertainty will be included in the future NIA.

3. FIXED NOISE IMPACT ASSESSMENT

3.1 Scope of Work

3.1.1 The aim of this study is to review potential noise impacts arising from the nearby fixed noise sources, including industrial buildings and activities, within 300m of the Proposed Redevelopment. Practicable noise mitigation measures would be recommended, where necessary.

3.2 Assessment Criteria

3.2.1 The Schemes is located in urban area in Kowloon City. In accordance with the *Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites* (herein referred as TM), the type of the area where the Schemes located is considered to be "Type (iii) Urban Area".

3.2.2 An urban trunk road, East Kowloon Corridor, which exceeds 30,000 traffic flows per day (regarded as Influencing Factor (IF)), is aligned around 300m to the west.

3.2.3 In this study, Area Sensitivity Rating "B" is adopted (i.e. urban area not affected by IF) as a conservative approach.

3.2.4 **Table 3.1** below shows the details of the fixed noise impact assessment criteria for this study.

Table 3.1 Fixed Noise Impact Assessment Criteria

Standard	ASRs[1]	Criteria	Acceptable Noise Level (ANL) [2]	Noise Criteria in Current Assessment Leq (30mins), dB(A)
NCO	B	Leq (30 mins) (07:00 – 23:00)	65 dB(A)	65 dB(A)
		Leq (30 mins) (23:00 – 07:00)	55 dB(A)	55 dB(A)

Notes:
[1] Acceptable Noise Level for Area Sensitivity Ratings "B" stipulated in the Technical Memorandum for the Assessment from Places other than Domestic Premises, Public Places or Construction Sites for "Urban Area" type of the area containing NSR and an ASR of "B" assigned to the NSR "Not Affected" by IF

[2] The assigned ASRs are for assessment purpose only and not to affect the Authority's discretion on the enforcement based on the temporary conditions.

3.3 Fixed Noise Sources

3.3.1 Site visits were conducted in various dates in 2017, May/July 2020, Jan 2021, May 2022 to identify the fixed noise sources or update the condition within 300m from the Schemes. It is noted that based on the verification survey in May 2022, the previously identified condition including the identified noise sources, activities held, etc. are still valid.

3.3.2 The noise environment of the Schemes is observed to be dominated by road traffic noise and no noticeable noise from fixed plant or industrial operation can be observed.

3.3.3 In a recent study for dedicated rehousing estate at LS (to the north of the Schemes, separated by KC-019 Site) and contained in the environmental assessment report titled Dedicated Rehousing Estate at Ma Tau Kok - Environmental Assessment, potential fixed noise sources were identified including the ventilation exhaust of To Kwa Wan Road Sewage Pumping Station (SPS) recently constructed, To Kwa Wan North

(Electricity) Sub-Station (ESS), ACs at Ma Tau Kok Gas Production Plant, as well as chillers and cooling towers on commercial and industrial buildings, garages and workshop for car repair and motor services among buildings bounded by Mok Cheong Street, To Kwa Wan Road and Sung Wong Toi Road to the north of 13-Street Site. In addition, ACs is found at existing Newport Centre at KC-019 Site; there are several garages in 13-Street Site and the KC-018 Site.

3.3.4 The dedicated rehousing estate has been planned to meet the rehousing demands arising from government developments and/or urban renewal projects, and will tentatively complete in 2027. On the other hand, as mentioned in para 1.3.2, it is estimated that the 13-Street Site development would be completed few years after KC-018 and KC-019 redevelopment so that all existing building in 13-Street Site will be demolished by the time when the proposed development is completed tentatively. Therefore, upon operation of the proposed development at the Schemes, the dedicated rehousing estate at LS must be in place. It will completely shield the SPS and ESS so that noise contribution, if any, from the same to the proposed development will be negligible. In fact, as observed before there is no noticeable noise from ESS. The louver of the ESS is facing To Kwa Wan Road directly and will not have any direct line of sight with the habitable room of the proposed development. Besides, noise sources identified before at 13-Street Site would no longer exist at that time.

3.3.5 It is likely that there is an interim period when the proposed development is in operation. As a conservative approach adopted in technical assessments, it is estimated that the existing buildings of 13-Street Site will be demolished so that there is no shielding against noise from buildings behind and on northern side of 13-Street Site.

3.3.6 As such, major noise sources that would affect the proposed development during its operation would include those at Ma Tau Kok Gas Production Plant and at buildings bounded by Mok Cheong Street, To Kwa Wan Road and Sung Wong Toi Road to the north of 13-Street Site. Location of identified fixed noise sources (Location ID: G1 to G4, C1 to C16) are indicated in **Figure 3.1** while the site photos and satellite images are shown in **Appendix 3.1.**

3.3.7 For the potential fixed noise impact arising from the garages and the workshops for car repair, motor services (e.g. car washing and car painting) (G1 to G4), no night-time (23:00 – 07:00) operation were observed during the site visits. It was confirmed with the workers of the garages and workshops that there is no night-time operation.

3.3.8 For chillers and cooling towers on the rooftops of the industrial and commercial buildings, night-time operation is assumed as a conservative approach.

3.3.9 While it was attempted to conduct on-site noise measurement during the site visit, not all activities were captured. Sound power levels from the previous approved planning application (MPC Paper No. A/K10/256), Noise Impact Assessment Report for "CDA(2)" at KIL 10578, 7628 and 7626 in Ma Tau Kok (hereinafter referred to as "NIA-MTK Report"), have been adopted to predict the potential fixed noise level in some garages. The source of sound power levels for each noise source is listed in **Appendix 3.3**.

3.3.10 According to the NIA-MTK Report as shown in **Appendix 3.2**, the relevant SWL of similar motor service workshop calculated based on the on-site noise measurement is 91.7 dB(A) which had already captured all of the operation activities such as Hand-held Pneumatic Tools, Vehicle lifting machine, hammering, grinding, etc. In addition, according to the site survey conducted within the existing buildings of the project site, there was no audible noise heard from the identified fixed noise sources.

3.3.11 Comparing to motor service workshops in NIA-MTK Report, motor service workshops in the vicinity of Subject Site are relatively smaller in size. According to site survey,

the major activities include car washing and car repairing. Since the identified workshops are with similar size and have similar activities of that identified in the NIA-MTK Report; therefore, it is considered that the adoption of the sound power level for larger garages involving noisier activities from NIA-MTK Report is a conservative approach.

Fixed/Industrial Noise Source within Site and Possible Interfacing Problem

3.3.12 Regarding KC-018 Site, there are several car repairing workshops, hardware stores, and small retail stores at G/F and domestic dwellings at upper floors. The car repairing workshops, by its nature, would generate noise during its operation especially when mechanical equipment is used. Regarding KC-019 Site, it is now occupied by Newport Centre Phases I and II of 4 storeys high including G/F. The buildings do not employ central air conditioning system. Split type and window type air conditioners, as well as VRVs can be observed at the façade and rooftop. Based on onsite survey, there is no breakthrough noise observed from Newport Centre Phases I and II.

3.3.13 It is planned that KC-018 site and KC-019 site will be developed and occupied at the same time. However, there is a chance that the scheme of KC-019 site will be delayed.

3.3.14 In any case there is delay of development at KC-019 site, it can be conservatively assumed that KC-018 site will be occupied while the existing Newport Centre Phases I and II is still in operation. Nevertheless, as there is no major noise source observed at Newport Centre Phases I and II (only AC system ordinary of domestic premises can be found and no break through noise or any other noisy operation/facility can be identified), interfacing problem and fixed/industrial noise impact arising from Newport Centre Phase I on future development at KC-018 Site is not considered a major issue.

3.3.15 In all circumstances, if any delay of operation of KC-019 site is determined in later stage, the potential fixed/industrial noise impact on KC-018 site will be reviewed to ensure that there is no insurmountable fixed/industrial noise impact.

3.4 Noise Sensitive Receivers

3.4.1 To summarise, identified fixed noise sources are concentrated on the western side of the Schemes. Therefore, 4 representative Noise Sensitive Receivers (NSRs) (A22-2A, A01-1, C16-2A & C01-1) nearest to the identified noise sources on southwest/ northwest sides of towers of the proposed development have been selected for the assessment. **Figure 3.2** shows the location of the representative NSRs.

3.5 Assessment Methodology

3.5.1 Standard acoustic principles were adopted for prediction of cumulative industrial noise impact. Horizontal distance separation instead of absolute distance is adopted for simplicity and conservatism. A façade correction of + 3dB was assumed.

3.5.2 As mentioned, there is no night-time operation from the garages and car repairing workshops. No tonality, impulsiveness and intermittency characteristics were identified during the on-site surveys. In addition, according to the NIA-MTK Report. No tonal, impulsiveness/ intermittency were observed. Therefore, no correction of tonality, impulsiveness and intermittency were applied in the calculations.

3.5.3 Tonal effect was observed in the cooling tower based on the on-site measurement data. Correction of tonality was applied for cooling towers.

3.6 Assessment Result

3.6.1 A summary of predicted fixed noise levels during day & evening time and night-time periods at representative NSRs is tabulated as below in **Table 3.2.** Detailed calculations are shown in **Appendix 3.4**.

Table 3.2 Predicted Fixed Noise Level

Representative NSRs	Predicted Noise Level Leq (30min) (0700-2300), dB(A)	Predicted Noise Level Leq (30min) (2300-0700), dB(A)
A22-2A	55	54
A01-1	55	54
C16-2A	54	52
C01-1	53	51
Standard	***65 dB(A)***	***55 dB(A)***

3.6.2 The assessment results indicated that the predicted noise level of the representative NSRs comply with the relevant standards.

3.7 Conclusion

3.7.1 The potential noise impact from fixed noise sources has been assessed based on the Proposed Development scheme. According to the assessment results based on a rather conservative assumption with the identified noise sources along Mok Cheong Street not shielded by adjacent buildings, the predicted noise levels of the representative NSRs would still comply with the NCO criteria.

3.7.2 The Proposed Development will inevitably contain noisy facilities such as ventilation system for podium building. The requirement under HKPSG is fully observed (i.e. ANL – 5dB(A)). In future detailed design of the project, same requirement will be imposed so that the relevant noise standard will be met by various means such as selection of quiet equipment, use of shielding device, acoustic louvers, silencers, semi/full-enclosure. With abundance of direct noise mitigation measures to control and suppressed the generated noise level, no unacceptable noise impact due to operation of potentially noisy facilities of the Proposed Development is anticipated.

4. AIR QUALITY IMPACT ASSESSMENT

4.1.1 This assessment predicts air quality pollutant concentration at the Proposed Development, informing the provision of air quality mitigation measures to ensure future residents are not exposed to unacceptable levels of poor air. The assessment considers surrounding emissions from nearby i) chimneys, ii) marine emissions due to ferry services at Kowloon City Ferry Pier and Ma Tau Kok Public Pier, iii) portal emission and iv) the traffic emissions from road networks within 500m of the site boundary. To Kwa Wan Typhoon Shelter (TKWTS) and the portal and ventilation building of Central Kowloon Route (CKR) are identified outside the 500m study area. Hence, the air quality impact generated by the emissions from them on the Proposed Development would be insignificant and would not be included in the computer model. The air pollutants assessed are Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2), Respirable Suspended Particulate (RSP) and Fine Suspended Particulate (FSP). Concentrations of these pollutants are predicted at air sensitive receivers (ASRs) within the Proposed Development through the use of quantitative computer modelling, and are compared with the relevant Air Quality Objectives (AQOs).

4.1.2 The study also considers nearby odour sources within 500m of the Schemes and identified three potential odour sources, i.e. Ma Tau Kok Gas Production Plant and To Kwa Wan Road Sewage Pumping Station. Several site surveys were conducted to assess the odour impacts at sources. Odour units are converted to value at averaging period of 5 seconds in order to compare to criteria stated in the Technical Memorandum of Environmental Impact Assessment Ordinance (EIAO-TM).

4.1.3 The assessment area of 500m from the Schemes is shown in **Appendix 4.1**.

4.1.4 Appropriate mitigation measures will be recommended if exceedances of AQOs and/or odour units are identified.

4.2 Assessment Criteria

4.2.1 The Hong Kong AQOs enacted on 1/1/2022 are listed in **Table 4.1** below.

Table 4.1 Hong Kong Air Quality Objectives

Pollutants	Average Time	Standard [i] (μg/m³)	No. of exceedances allowed
SO_2	10-min	500	3
	24-Hour	50	3
RSP (PM_{10}) [ii]	24-Hour	100	9
	Annual	50	NA
FSP ($PM_{2.5}$) [iii]	24-Hour	50	35
	Annual	25	NA
NO_2	1-Hour	200	18
	Annual	40	NA
Ozone (O_3)	8-Hour	160	9
Carbon Monoxide (CO)	1-Hour	30,000	0
	8-Hour	10,000	0
Lead (Pb)	Annual	0.5	NA

Notes:

[i] All measurements of the concentration of gaseous air pollutants, i.e. sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.

[ii] Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.

[iii] Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less.

4.2.2 Annex 4 of EIAO-TM stipulates that the odour level at air sensitive receiver should meet 5 odour units based on an averaging time of 5 seconds for odour prediction assessment.

4.3 Existing Air Quality in To Kwa Wan District

4.3.1 The tentative year of completion of the Proposed Development is 2033. Therefore, the latest year of 2025 hourly background concentrations of NO_2, SO_2, RSP and FSP has been adopted for the purpose of this assessment. The data for Year 2025 was extracted from the latest version of the PATH provided by EPD (Grid 42, 33).

4.3.2 Based on the information provided by EPD, the below adjustment of RSP levels and FSP levels should be applied in order to compare with AQOs.

- 10th highest daily RSP concentration: add 11.0 $\mu g/m^3$
- Annual RSP concentration: add 10.3 $\mu g/m^3$
- Annual FSP concentration: add 3.5 $\mu g/m^3$

4.3.3 The five most recent years of air quality monitoring data, 2017 to 2021, from the Sham Shui Po general Air Quality Monitoring Station (AQMS) are summarized in **Table 4.2** below.

Table 4.2 EPD Air Quality Monitoring Data in Sham Shui Po AQMS and Latest Version of PATH (Grid 42, 33)

Statistics of Past Ambient Air Quality

Pollutants / Averagin Periods / Statistics	% of valid data	Concentration (µg/m3) [1] Averaging Periods																
		10 min [2][3]				1 Hour				Daily 8 Hour moving average				24 Hour					1 Year	
		AQO	4th	Max	No. of Ex	AQO	19th	Max	No. of Ex	AQO	10th	Max [4]	No. of Ex	AQO	4th	10th	Max	No. of Ex	AQO	Mean [5]
Sulphur Dioxide, SO_2																				
2017	99%	**500**	76	85	0									**125**	25		32	0		8
2018	99%		98	102	0										21		26	0		6
2019	98%	Not to be exceeded more than 3 times per year	41	44	0	n.a.				n.a.				Not to be exceeded more than 3 times per year	14	n.a.	16	0	n.a.	6
2020	97%		40	48	0										12		16	0		6
2021	96%		38	40	0										12		13	0		6
5-year average =	-		59	64	-										17		21	-		6
PATH in Year 2025 (42 33)	100%		47	47	0										10		16	0		3
Respirable Suspended Particulates, RSP																				
2017	95%													**100**	-	72	85	0	**50**	33
2018	95%														-	59	99	0		33
2019	96%													Not to be exceeded more than 9 times per year	-	65	120	1		33
2020	98%	n.a.				n.a.				n.a.					-	59	73	0		28
2021	98%														-	65	106	2		28
5-year average =	-														-	64	97	-		31
PATH in Year 2025 (42 33)	100%															62	88	0		27
Fine Suspended Particulates, FSP																				
2017	95%													**75**	-	46	54	0	**35**	21
2018	95%														-	41	70	0		21
2019	95%													Not to be exceeded more than 9 times per year	-	36	80	2		18
2020	98%	n.a.				n.a.				n.a.					-	30	43	0		14
2021	98%														-	32	49	0		14
5-year average =	-														-	37	59	-		18
PATH in Year 2025 (42 33)	100%														-	45	72	0		14
Nitrogen Dioxide, NO_2																				
2017	99%		**200**	194	267	15													**40**	54
2018	98%			152	210	1														49
2019	98%		Not to be exceeded more than 18 times per year	176	227	6														48
2020	96%	n.a.		151	310	5	n.a.				n.a.				n.a.					45
2021	96%			171	259	3														47
5-year average =	-			169	255	-														49
PATH in Year 2025 (42 33)	100%			119	195	0														21
Ozone, O_3																				
2017	98%									**160**	130	256	3							39
2018	98%										147	219	5							44
2019	97%									Not to be exceeded more than 9 times per year	164	279	11							51
2020	96%	n.a.				n.a.					134	227	3	n.a.					n.a.	47
2021	96%										137	199	4							50
5-year average =	-										142	236	-							46
PATH in Year 2025 (42 33)	100%										187	260	37							85

Notes:

(1) Measured at 293 K and 101.325 kPa (one atmosphere)

(2) 10-min average SO2 levels were calculated based on stability classes in the corresponding PATH grid(s)

(3) " - " denotes no data available

(4) Max. daily 8h moving average for O_3

(5) Arithmetic mean

4.4 Operational Phase

Representative Air Sensitive Receivers

4.4.1 Representative ASRs within the Proposed Development as shown in **Figure 4.2** are selected to assess the air quality at the Proposed Development and determine the appropriate fresh air intake locations for the podium of the Proposed Development.

4.4.2 Details of these assessment points are shown in **Table 4.3** below.

Table 4.3 Details of Assessment Points for Air Quality Assessment

Label for Assessment Points	Local Ground mPD	Flagpole Height, mAG	Assessment Height, mPD
KC-018			
A1 to A11	3.6	1.5 – 116.4	3.6 – 120.0
KC-019			
A8 to A17	3.6	1.5 – 116.4	3.6 – 120.0

4.5 Air Quality Impact Assessment Methodology

Latest Version of PATH

4.5.1 Hourly meteorology data for a full year is extracted from the latest version of the PATH provided by EPD (meteorological data year 2015, Grid 42, 33). Hourly mixing heights lower than 131m or higher 1941m are corrected to 131m or 1941m respectively to align with the real meteorological data recorded by the Hong Kong Observatory (HKO) in 2015. Hourly wind speeds lower than 1 m/s (i.e. calm wind condition) are corrected to 1m/s.

4.5.2 The hourly background concentrations of NO_2, SO_2, RSP and FSP in Year 2025 are extracted from the latest version of the PATH provided by EPD (Grid 42, 33) to predict the total air quality concentrations at ASRs and adjusted appropriately as discussed in **Section 4.3.2**.

4.5.3 Within the 4km radius area of the Schemes, two major point sources, i.e. the Kai Tak Cruise Terminal with marine vessels emission and the Diamond Hill Crematorium with chimney emissions have been identified and would be included for the air modelling regarded as background emissions.

Computer Modelling for Industrial Air Quality

4.5.4 The dispersion of NO_2, SO_2, RSP and FSP were modelled using AERMOD software released by Lakes Environmental Software. The model is based on the principle of Gaussian dispersion and is widely accepted by EPD and is used in this assessment to predict both concentration and deposition of pollutants from point and area sources.

4.5.5 Landuse types surrounding the Schemes have to be identified to determine albedo, bowen ratio and surface roughness for AERMET setup. According to "AERMOD Implementation Guide" (revised in August 2015) released by USEPA, albedo and Bowen ratio is determined with the use of 10km by 10km region while surface roughness is determined by a circle in 1km radius. The circle is further divided by 12 sectors. The centroid of the region and circle are located at the Schemes and details of determination of albedo, Bowen ratio and surface roughness are shown in **Appendix 4.1.** These data together with the meteorological data (discussed in **Section 4.5.1**) were processed using Lakes Environmental' s AERMET to generate the Surface File and Profile File for use in AERMOD.

Source Description and Emission Inventory

4.5.6 As discussed in **Section 4.1.1**, emissions from chimneys, marine emissions, portal emission and open roads have been assessed. **Table 4.4** shows a summary of the sources and the associated air pollutants of concern.

Table 4.4 Summary of Emission Sources

Sources		SO_2	NO_x	RSP	FSP
(i)	Chimney	✓	✓	✓	✓
(ii)	Marine Vessels	✓	✓	✓	✓
(iii)	Portal	X	✓	✓	✓
(iv)	Open Roads	X	✓	✓	✓

4.5.7 A summary of model input in AERMOD for sources (i) is given in **Appendix 4.2**.

(i) Chimney Emissions

4.5.8 With reference to the information available in the SP License (No. L-8-004(6)) and several site survey was conducted in May 2020 to update the chimney information, there were 5 active chimneys identified and they are included in this assessment. Site records are shown in **Appendix 4.3** and the locations of five active chimneys are shown in **Figure 4.3**.

4.5.9 NO_2, SO_2, RSP and FSP from chimney emissions are assessed by AERMOD. Emission parameters such as exit temperature, exit velocity, internal diameter and emission rates are referenced to the above-mentioned SP License. Detailed derivation of emission rates of active chimneys is shown in **Appendix 4.4**.

4.5.10 For the NO_2 assessment, initial NO_2 to NO_x ratio for chimneys is 10% which is referenced from the percentage of industrial coal in table 4.5 of the Heathrow Airport EIA report.

4.5.11 The details of model inputs for chimney emissions are given in **Appendix 4.2**.

(ii) Marine Vessels Emissions

4.5.12 A desktop review with reference to the Air Quality Impact Assessment Report under the approved planning application (Application No.: A/K10/259). The identified sources are as follows:

- Ferry service between North Point and Kowloon City provided by New World First Ferry Services Limited; and
- Harbour Tour Service (round trip to and from the Ma Tau Kok Public Pier.

4.5.13 With reference to "*Study on Marine Vessels Emission Inventory – Final Report*" by HKUST in February 2012, the total emissions from vessels can be calculated using the following equations:

$$\text{Total Emission}_{(\text{pollutant})} = \Sigma\ \text{Emission}_{(\text{pollutant, activity mode, equipment})}$$

$$\text{Emission}_{(\text{pollutant, activity mode, equipment})} = P \times FL \times T \times EF$$

where P is the installed power of equipment;

FL is fractional load of equipment in a specific mode;

T is operation time-in-mode; and

EF is fractional load emission factor of equipment.

4.5.14 Emissions from ferries during sailing have been modelled as evenly distributed point sources representing the segment they travel to and from the berths within the 500m assessment area. The individual routes are shown in **Figure 4.4**. All point sources were modelled as slow cruising mode except the one nearest to the berth was modelled as maneuvering mode for the route travelling to the berth.

4.5.15 Emissions during staying at the berths are modelled as single point source using hoteling mode.

Ferry services between Kowloon City and North Point provided by New World First Ferry Services Limited and Harbour Tour service for tourists (Round trip to and from Ma Tau Kok Public Pier)

4.5.16 No information on the engine powers, engine load factors and time-in-modes are provided by the operators, therefore, the references were made to "Study on Marine Vessels Emission Inventory – Final Report" and "Port of Hong Kong Statistical Tables (2015)" issued by Marine Department, HKSAR. Details of the derivation of emission rates are presented in **Appendix 4.5**.

4.5.17 According to the current schedule of ferry services between Kowloon City and North Point on the operator's website, the visiting frequencies of different modes at each hour are studied and presented in **Appendix 4.6**. Based on the site survey findings, the daily operation hours of harbour tour would be from 5pm to 9pm and the ferry frequency of the ferry service can be up to maximum 5 trips per hour.

Kai Tak Cruise Terminal

4.5.18 As mentioned in **Section 4.5.3**, the marine vessels emission of Kai Tak Cruise would be regarded as a background emission as it is identified as a major point source. The air quality impact assessment in the Approved Environmental Impact Assessment Report for Kai Tak Development was conducted over 10 years ago. Therefore, the latest information (such as types and schedule of the cruises which will visit Kai Tak Cruise Terminal) available from the website of Kai Tak Cruise Terminal has been reviewed. According to the schedule for the Ship Calls in Year 2021, the cruise which will visit Kai Tak Cruise Terminal the most frequent will be World Dream and the cruise with largest gross tonnage will be Spectrum of the Seas. Therefore, as a worst-case scenario, it is assumed that World Dream and Spectrum of the Seas will be hotelling at Kai Tak Cruise Terminal at the same time for every hour of a day. The details of model inputs and the detailed information of the emission rates of cruise vessels are shown in **Appendix 4.7**.

(iii)Portal Emissions

4.5.19 Based on a desktop study, all portals within the study area have been identified. These include Kai Tak Tunnel West portals and other portal emission such as Road D2 landscape deck, CKR eastern tunnel portal, CKR landscape deck portals. Locations of all portals are shown in **Figure 4.5**.

4.5.20 According to the Permanent International Association of Road Congress Report (PIARC, 1991), the pollutants were assumed to eject from the portal as a portal jet such that 2/3 of the total emissions was dispersed within the first 50m of the portal and the other 1/3 of the total emission within the second 50m.

4.5.21 With reference to the approved Kai Tak Multi-purpose Sports Complex EIA, 50% of pollutant inside Kai Tak Tunnel was assumed to be emitted through the ventilation building and the remaining pollutant was assumed to be ejected through the tunnel portal.

4.5.22 The 24-hour emission factor for each tunnel in 2042 has been adopted in compiling the emission inventory of portals. The calculation of emission factors for portals and 24-hour emission factors for every quarter of different tunnel sections are given in **Appendix 4.8**.

(iv) Open Roads Emissions

4.5.23 Air pollutant concentration at the Schemes due to the emission from the nearby road networks (vehicular tailpipe emissions) was assessed. The emission rate of each road within 500m from the Schemes is calculated from with latest EMFAC-HK issued by EPD. Based on the emission rate of each road, the air pollutant concentration at the Schemes was modelled with CALINE4.

EMFAC-HK Model

4.5.24 The latest available EMFAC-HK Model version 4.3 dated 13 January 2021 (the EMFAC-HK Model) has been adopted.

Guideline and Document

4.5.25 Several guidelines and documents published by the EPD, which are available from the following EPD EMFAC-HK website (the EPD website), are referred for EMFAC-HK Model input:

- http://www.epd.gov.hk/epd/english/environmentinhk/air/guide_ref/emfac-hk.html (the EPD website)
- Guideline on Modelling Vehicle Emissions (Released in January 2021) (the EPD Guideline)
- 2018 Licensed Vehicle by Age and Technology Group Fractions (the EPD Document)

Traffic Data

4.5.26 Three sets traffic data predicted by the project traffic consultant, AECOM Asia Company Limited, includes hourly traffic flows with a composition of 18 vehicle classes according to "Guideline on Modelling Vehicle Emissions" as shown in **Table 4.5**. Traffic forecast of Year 2033, 2040 and 2048, based on the traffic count are included in **Appendix 4.9**, which shows the hourly Vehicle Kilometre Travelled (VKT), the number of trips travelled, and the hourly average speed (kph) of road carriageways respectively.

Table 4.5 EMFAC-HK Vehicle Classes

Vehicle Class Description	Fuel Type	Gross Vehicle Weight (tonnes)	Symbol 1 (in csv output file)	Symbol 2 (in bcd output file & traffic data)
Private Cars (PC)	ALL	ALL	PC	PC
Taxi	ALL	ALL	Taxi	Taxi
Light Goods Vehicles (<=2.5t)	ALL	<=2.5t	LGV<=2.5t	LGV3
Light Goods Vehicles (2.5-3.5t)	ALL	>2.5-3.5t	LGV2.5-3.5t	LGV4
Light Goods Vehicles (3.5-5.5t)	ALL	>3.5-5.5t	LGV>3.5t	LGV6
Medium & Heavy Goods Vehicles (5.5-15t)	ALL	>5.5-15t	HGV<=15t	HGV7

Vehicle Class Description	Fuel Type	Gross Vehicle Weight (tonnes)	Symbol 1 (in csv output file)	Symbol 2 (in bcd output file & traffic data)
Medium & Heavy Goods Vehicles (15-24t)	ALL	>15-24t	HGV15-24t	HGV8
Public Light Buses	ALL	ALL	PLB	PLB
Private Light Buses (<=3.5t)	ALL	<=3.5t	PrLB<=3.5t	PV4
Private Light Buses (>3.5t)	ALL	>3.5t	PrLB>3.5t	PV5
Non-franchised Buses (<6.4t)	ALL	<=6.36t	NFB<=6.4t	NFB6
Non-franchised Buses (6.4-15t)	ALL	>6.36-15t	NFB6.4-15t	NFB7
Non-franchised Buses (15-24t)	ALL	>15-24t	NFB15-24t	NFB8
Single Deck Franchised Buses	ALL	ALL	FBSD	FBSD
Double Deck Franchised Buses	ALL	ALL	FBDD	FBDD
Motor Cycles	ALL	ALL	MC	MC
Heavy Goods Vehicles (>24t)	ALL	>24t	HGV>24t	HGV9
Non-franchised Buses (>24t)	ALL	>24t	NFB>24t	NFB9

4.5.27 The estimated 18-class distribution as defined in EMFAC-HK was derived by sectoring the relevant classes in the Transport Department's Annual Traffic Census record or vehicle distribution obtained from manual traffic count surveys, in proportion to the recorded distribution in EPD document: "2018 Vehicle Licensed Number by Age and Technology Group Fractions".

4.5.28 All concerned roadways shall be characterized with speed limits. Average speeds of 24 hours were prepared for each road.

4.5.29 The roadway network within the 500m study area consists of 91 distinct roadway links. In this study, all concerned roads are characterized into four road groups for EMFAC modelling, i.e. Local Distributor (LD), District Distributor (DD) and Urban Trunk Road (UT).

4.5.30 The established road traffic data for 2033, including traffic flow, 24-hour vehicle mix and 24-hour average speed is provided by the Project Traffic Consultant. Confirmation from the Transport Department (TD) is being sought and the reply from TD will be provided in **Appendix 4.9**. In addition, the confirmation of the Traffic Consultant that the traffic forecast for the assessment has been produced strictly in accordance to the methodology of the traffic forecast is also provided in **Appendix 4.9**.

EMFAC-HK Input

Geographical Area

4.5.31 "Hong Kong" is selected as the Geographical Area.

Calendar Year

4.5.32 In order to determine the highest emission scenario and the worst assessment year, EMFAC-HK model runs have been carried out with emission factors and the predicted traffic forecast for Years 2033 (i.e. commissioning), 2040 (i.e. eight year after commissioning), 2048 (i.e. fifteen year after commissioning).

Season or Month

4.5.33 Per the EPD Guideline, "Annual" is selected in this study to evaluate the highest vehicle emission within the Model Year.

Mode and Output

4.5.34 EMFAC-HK Model is run in Emfac mode for calculating area fleet average emissions.

Temperature and Humidity

4.5.35 The information of King's Park Automatic Weather Station from the Hong Kong Observatory was used in this assessment. The hourly values over the entire year (i.e. Year 2021) were selected.

4.5.36 In accordance with a *Guideline of Use of Temperature and Relative Humidity Data for Vehicular Emission Factor* Prediction published by EPD in March 2021, the minimum quarterly temperature and quarterly relative humidity (RH) were applied for bother short-term (i.e. hourly or daily average) and long-term (i.e. annual average) air quality impact.

4.5.37 Referring to the said information, the minimum quarterly temperatures for every quarter of a year are ranging from 7°C – 24°C; and minimum quarterly RH for every quarter of a year are ranging from 13% – 53% (see **Table 1** of **Appendix 4.10**).

Speeds

4.5.38 The average speed data provided by the project traffic consultant for every hour of each road was used for the subsequent calculation. As mentioned in **Section 4.5.30**, the relevant correspondence of the endorsement by the TD will be provided in **Appendix 4.9**.

Exhaust / Evaporation Technology Fractions

4.5.39 Vehicle classes are grouped with different exhaust and evaporation technology group indexes and technology fractions. Each technology group represents a distinct emission control technologies. Default exhaust and evaporation technology fractions are adopted in this assessment.

Vehicle Kilometre Travelled (VKT)

4.5.40 VKT is the product of the number of vehicles and the road length travelled in the assessment area. The peak flows and the diurnal variations were predicted by the Project Traffic Consultant for each assessment year for the 18 vehicle classes defined in EPD's "*Guideline on Modelling Vehicle Emissions*" for road carriageways within the 500m assessment area.

Population and Accrual Rate

4.5.41 Default vehicle populations forecast and accrual rate in EMFAC-HK Model is adopted.

Trips and VKT

4.5.42 Default trips and VKT for HK total is adopted. Detailed impact rates were generated with respect to the combination of temperature, RH and speed for running exhaust emission, and combination of temperature and duration for cold start emission.

Calculation of Emission Factors by EMFAC-HK Model Output

Running Exhaust Emission Factor

4.5.43 Running exhaust fleet average emission factor (g/km) arising from all combinations of temperature and RH (see **Section 4.5.37**) with respect to each combination of speed and vehicle class have been adopted.

4.5.44 For each road, hourly composite running exhaust emission factor (NO_x/RSP/FSP) is determined by:

Hourly composite running exhaust emission factor (NO_x/RSP/FSP) (g/veh-km)

$= \sum$ [hourly running exhaust fleet average emission factor for each vehicle class (determined for the corresponding road group) x % composition of corresponding vehicle class]

Starting Emission Factor

4.5.45 Start emission is applicable to non-trunk road only, primary and district distributor roads. As the information of the durations is not available, the maximum starting emission (g/trip) among different durations (from 5min to 720min) is adopted, which is considered as a more conservative approach. Starting emissions of all 18 vehicle classes are included in the calculation.

4.5.46 The trip in EMFAC-HK Model is referred to the cold start trip. The number of trip is dependent on vehicle population. The default value of trip in the EMFAC-HK Model is the number of trips within HK given a defined vehicle population. Since there is no project-specific vehicle population data, it is proposed to estimate the number of trips within the study area with respect to the project-specific Vehicle Miles Travelled (VMT) given the assumption that the VMT is related to vehicle population.

4.5.47 It is assumed that there is no cold start on urban trunk road (UT) except Road IDs L013, L082, L083, L085, L125, L126, L158 and L159, and hence the number of trips of these roads is zero for all vehicle classes for all hour of the day. For the local and rural roads within the study area, the number of trips are estimated by scaling the number of trip for vehicle class within the entire HK using the ratio of VMT for local and rural roads within the study area to VKT for local and rural roads within the entire HK.

$$Trip\ for\ local\ and\ rural\ roads\ within\ the\ study\ area = Trip\ for\ local\ and\ rural\ roads\ within\ HKSAR * \frac{VMT\ for\ local\ and\ rural\ roads\ within\ the\ study\ area}{VMT\ for\ local\ and\ rural\ roads\ within\ HKSAR}$$

Note: For particular vehicle class and particular hour

4.5.48 The same method was also adopted in the approved Liantang EIA. The estimation of % VMT for local and rural roads within HK is shown in **Appendix 4.10**.

4.5.49 In this assessment, the estimated VMT/ VKT for local and rural roads with possible cold start emission amounts to ~12.86% of total VMT/ VKT. Trip per VKT for local and rural road for each class is determined by:

Trip/VKT (1/veh-km) for each vehicle class

= HK total number of trips for each vehicle class ÷ (HK total VKT travelled for each vehicle class x % of daily vehicle-km for local and rural roads in Hong Kong).

4.5.50 Based on the hourly VKT travelled data from the project traffic consultant, the hourly total cold start emission (gram) for each vehicle class along each road is determined by:

Hourly total cold start emission (g) for each vehicle class = starting emission rate for each vehicle class x Trip/VKT for each vehicle class x VKT travelled for each vehicle class along each road

4.5.51 The hourly total cold start emission rate for each road is the sum of hourly total cold start emission (gram) for each vehicle class along the same road. The hourly composite cold start emission factor is calculated by dividing the value using the hourly traffic flow:

Hourly total cold start emission (g) = Σ [hourly total cold start emission for each vehicle class]

Hourly composite cold start emission factor (g/veh-km) = hourly total cold start emission ÷ hourly total VKT travelled

4.5.52 In addition, cold start emissions are mainly occurred at the bus terminus and the car parking area. While the nearest bus terminus at San Ma Tau Street is about 200m away from the Schemes and there is car parking area nearby, cold start emissions from the bus terminus and the car parking area have been assumed emitting along the open roads, including the roads connected to the bus terminus and the developments with the car parking area, within the assessment area. It is considered the current assessment approach would give conservative estimate of the air quality impact of these start emissions at the Schemes.

Assessment Year

4.5.53 The air quality impact of the vehicular emissions are typically calculated based on the highest emission strength from the traffic forecast data within the first 15 years after the completion of the Proposed Development (i.e. between 2033 and 2048). The assessment year is selected to represent the highest emission scenario given the combination of vehicular emission factors and traffic flow for the same year. The worst assessment year has been determined based on the highest NO_x, RSP and FSP emission scenario using the EMFAC-HK model. Sensitivity tests have been conducted to determine the worst-case scenario given the combination of vehicular emission factors and the projected traffic flow for the following selected years within 15 years after the completion of the Proposed Development. The representative years are 2033 (completion year), 2040 and 2048 (15 years after completion year). Details of sensitivity analysis of the emission inventories of the vehicular emission from open roads is shown in **Appendix 4.18**. Bases on the results, the greatest total emission for NO_x and RSP is in Year 2033, therefore, Year 2033 has been selected as the worst-case model year for the air quality.

Surface Roughness Height

4.5.54 This parameter is closely related to the land use characteristics of a study area and associated with the roughness element height. As a first approximation, the surface

roughness can be estimated as 3 to 10 percent of the average height of physical structures. Typical values used for urban and new development areas are 370cm and 100cm, respectively. The surface roughness adopted for CALINE4 is shown in **Appendix 4.16**.

NO_x to NO_2 Conversion

4.5.55 The conversion of NO_x to NO_2 is a result of a series of complex photochemical reactions and determines the prediction of near field impact of NO_x emissions. To determine vehicular emission impacts, the emission factors of NO_2 are extracted from the results of the EMFAC-HK Model version 4.3 and the emission factors of NO are calculated from the emission factors of NO_x and NO_2 for all motor vehicle types. For the industrial emissions, initial NO_2 to NO_x ratio for chimneys is 10% which is referenced from the percentage of industrial coal in table 4.5 of the Heathrow Airport EIA report.

(v) Vehicular Emissions of Bus Terminus

4.5.56 A bus terminus is located at the south of Grand Waterfront, which may have potential air quality impact on the Schemes due to the vehicular emissions of the franchised buses within the bus terminus. However, as the Schemes would be located about 200m away from this bus terminus, it is anticipated that the air quality impact generated by this bus terminus on the Schemes would be insignificant. Moreover, the Motor Vehicle Idling (Fixed Penalty) Ordinance has been effective on 15 December 2011 in order to reduce the air pollution on the environment by prohibiting the driver of a motor vehicle from causing or permitting any internal combustion engine of a motor vehicle to operate for more than three minutes in aggregate within any continuous sixty-minute period while the vehicle is stationary ("idling prohibition"), unless an exemption applies (i.e. Franchised buses that are ready for boarding by passengers are exempted from the idling prohibition). Therefore, it is anticipated that the air quality impact generated by this bus terminus on the Schemes would be further reduced. Therefore, it is considered that it is unnecessary to include the vehicular emissions generated by this bus terminus in the air quality models.

4.6 Odour Impact Assessment Methodology

4.6.1 According to the Air Quality Impact Assessment Report under the approved planning application (Application No.: A/K10/259) and the site surveys conducted in May 2020 and July 2020, two odour sources have been identified (i.e. To Kwa Wan Road Sewage Pumping Station and Ma Tau Kok Gas Production Plant).

To Kwa Wan Road Sewage Pumping Station

4.6.2 To Kwa Wan Road Sewage Pumping Station would be located close to the Schemes at the north direction.

4.6.3 According to the Environmental Permit No.EP-344/2009 and Kai Tak Development EIA, the following mitigation measures shall be implemented to minimize the possibility of odour impact to sensitive receiver(s) during operation period:

- All odour sources of each of the sewage pumping stations (including wet wells and distribution chambers) shall be located within enclosed building structures.
- Ventilation system(s) shall be provided to divert all odourous emissions to deodorizer(s) for treatment before discharge to the environment.

4.6.4 According to the recent update from DSD, activated carbon is being used for the removal of odour. However, the odour removal efficiency is not available. Besides, site surveys have been conducted in May 2020 and July 2020 around the building of To Kwa Wan Road Sewage Pumping Station and along the site boundary near To Kwa Wan Road Sewage Pumping Station, no odour was observed during the site surveys.

Therefore, it is considered that the odour impact from To Kwa Wan Road Sewage Pumping Station is not anticipated.

Ma Tau Kok Gas Production Plant

4.6.5 Ma Tau Kok Gas Production Plant is located at the junction of To Kwa Wan Road and San Shan Road and is at about 100m to the Proposed Development at the southwest direction. Its odour impact on the proposed development has been modelled by AERMOD in this assessment. The emission rate of the odour have been made reference to the latest Specified Process License (SPL). **Figure 4.6** indicates the assigned odour sources within Gas Production Plant. Detailed derivation of emission rate and the model input of odour source is given in **Appendix 4.11**.

4.6.6 With the reference to EIAO-TM, the criteria is 5OUs on an averaging time of 5 seconds. Therefore, the modelling result of 1 hour average is converted to 5 seconds average using the below **Table 4.6** in accordance with the EPD's Guidelines on Choice of Models and Model Parameters:

Table 4.6 Conversion Factor from 1 Hour to 5 Seconds

Stability Category	1-hour to 5-sec Conversion Factor
A & B	45
C	27
D	9
E & F	8

4.7 Assessment Results

4.7.1 The predicted air quality concentrations from the surrounding vehicular and industrial emissions have been quantitatively assessed separately for SO_2, NO_2, RSP, FSP and Odour.

4.7.2 The predicted results of NO_2, RSP, FSP and SO_2 at all predetermined ASRs are summarized in **Appendix 4.12**. Contour plots at corresponding levels with the highest air quality impact (assessment height: 1.5m above ground) for NO_2, RSP, FSP and SO_2 are shown in **Appendix 4.13**.

4.7.3 The predicted results of odour at all predetermined ASRs are summarized in **Appendix 4.14** and, the contour plots at the highest odour impact (assessment height: 10.0m above ground) are shown in **Appendix 4.15**.

NO_2

4.7.4 The predicted results of the 19th highest 1-hour average and annual average NO_2 concentration at all selected ASR levels are summarized in **Appendix 4.12**. The results indicate that NO_2 concentrations at all locations of the Schemes comply with the relevant AQOs except the 1-hour average NO_2 concentration and the annual average NO_2 concentration at A6, A7 and A8 (i.e. A6 and A7 are within KC-018 and A8 is at the interception point of KC-018 and KC-019) at 1.5m above ground and the annual average NO_2 concentration at A6 at 5m above ground would exceed the criteria of

AQO. Therefore, no fresh air intake for the podium would be located within the area with exceedance.

RSP

4.7.5 The predicted results of the 10th highest 24-hour and annual average RSP concentrations at ASR levels are summarized in **Appendix 4.12**. The results indicate that RSP concentrations at the Schemes comply with the relevant AQOs.

FSP

4.7.6 The predicted results of the 36th highest 24-hour and annual average FSP concentrations at ASR levels are summarized in **Appendix 4.12**. The results indicate that FSP concentrations at the Schemes comply with the relevant AQOs.

SO_2

4.7.7 The predicted results of the 4th highest 10-minute average and 4th highest 24-hour average SO_2 concentration at ASR levels are summarized in **Appendix 4.12**. The results indicate that SO_2 concentrations at the Schemes comply with the relevant AQOs.

Odour

4.7.8 The predicted results of odour impact for all selected ASRs at all levels are summarized in **Appendix 4.14**. It reveals that odour at all locations of the Schemes comply with the criterion.

4.8 Construction Phase Impact and Mitigation

Fugitive Dust Emission and Exhaust Emission

4.8.1 The major air quality impact of concern during the construction phase will be the potential fugitive dust emission and exhaust emission. The major dust emission sources during the construction phase of the Proposed Scheme are expected to arise from construction activities during site formation stage such as:

- Demolition of existing buildings;
- Site formation resulting in exposed ground vulnerable to air erosion;
- Earth moving, loading and unloading of excavated material;
- Wind effect on material stockpiling; and
- Vehicle movements over the construction site.

4.8.2 There will be potential impacts from the criteria pollutants (e.g. nitrogen oxides (NOx), sulphur dioxide (SO_2), and carbon monoxide (CO)) from exhaust emission. Emission from diesel trucks for the haulage of materials and construction plants will contain high percentage of smoke particulate and unburned hydrocarbons in comparison with petrol driven vehicles. Ultra-low sulphur diesel (ULSD) with sulphur content not exceeding 0.005% by weight will be used as fuel to minimize SO_2 emission. Impact on the existing air quality is considered limited. In all circumstances, the contractor will be required to observe all relevant regulations and maintain all equipment in good condition to avoid any excessive emission. Under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, only approved or exempted non-road mobile machineries (including mobile generator, air compressor, excavator, crawler crane, bulldozer and etc.) with a proper label are allowed to be used in the construction site.

4.8.3 The Schemes is located at To Kwa Wan Road with east side close to seashore, where is the existing location of Newport Centre. The nearest residential developments (i.e. 112-138 To Kwa Wan Road) is to the west on the opposite side of To Kwa Wan Road

about 31m apart from the nearest site boundary. There is other residential development to the further south at about 72m apart when measured from nearest site boundary. They are considered as Air Sensitive Receivers (ASRs).

Table 4.7 Separation Distance between the Schemes and Nearby Air/Noise Sensitive Receivers

Identified ASR/NSR	Separation Distance
112-138 To Kwa Wan Road	~35m
Grand Waterfront	~72m

Mitigation Measures for Fugitive Dust Emission

4.8.4 Fugitive dust emission arising from construction activities can be effectively suppressed by incorporating proper mitigation measures into work procedures through contractual clauses, good site management, and close monitoring by the resident engineers. The contractor shall be required to follow the requirements of the Air Pollution Control (Construction Dust) Regulations. With the adoption of good practices, it is expected that emission of construction dust can be kept at an acceptable level. The recommended dust mitigation measures are described below. In addition, EPD's recommended pollution control clause for construction contracts will be incorporated and required in future tender document to ensure that all relevant environmental protection and pollution control ordinances are observed and complied with.

General Site Management

4.8.5 Appropriate working methods should be devised and arranged to minimise dust emissions and to ensure any installed control system and/or measures are operated and/or implemented in accordance with their design merits. No free falling of construction debris should be allowed, which should be let down by hoist or enclosed tunnel to the ground.

4.8.6 Frequent mist/ water spraying should be applied on dusty areas. The frequency of spraying will depend upon local conditions such as rainfall, temperature, wind speed and humidity. The amount of water spraying should be just enough to dampen the material without over-watering which could result in surface water runoff.

4.8.7 Hoarding of not less than 2.4m high from ground level along site boundary, which is next to a road or other public area should be provided.

Vehicles and Unpaved Site Roads

4.8.8 Dust emission from unpaved roads comes predominantly from travelling of vehicles. Areas within the site where there are regular vehicle movements should have an approved hard surface. Speed controls at an upper limit of 10km/hr should be imposed and their movements should be confined to designed roadways within the site. All dusty vehicle loads should have side and tail boards covered by tarpaulin extending at least 300mm over the edges of the side and tail boards. Wheel-wash troughs and hoses should be provided at exit points of the site.

Material Stockpiling and Handling

4.8.9 The amount of stockpiling should be minimised where possible. Construction material or debris should be covered and stored inside enclosed areas. Other control measures such as enclosed or semi-enclosed windboard should be used, where applicable, to

minimise dust emission. Regular watering is needed at areas such as storage piles, where there could be potential dust emission. Placing dusty material storage piles near ASRs should be prevented.

4.8.10 Moreover, as the Schemes is close to the nearby ASR, i.e. Newport Centre. The following control measures are suggested to minimise the potential construction impact to the nearby ASRs:

- Plan site layout so that machineries, dust causing activities and stockpilings are away from receptors as far as possible.
- Site hoarding higher than 2.4m should be implemented where there are receptors at close proximity to the construction site and dusty activities.
- Haul road shall be away from the project boundary as much as possible.

4.9 Conclusion

4.9.1 The predicted concentrations of assessment parameters (NO_2, RSP and FSP and SO_2) at all ASRs of the Schemes would comply with the relevant AQOs except the 1-hour average NO_2 concentration and the annual average NO_2 concentration at A6, A7 and A8 (i.e. A6 and A7 are within KC-018 and A8 is at the interception point of KC-018 and KC-019) at 1.5m above ground and the annual average NO_2 concentration at A6 at 5m above ground would exceed the criteria of AQO. Therefore, no fresh air intake for the podium would be located within the area with exceedance. Therefore, it is anticipated that the air sensitive receivers of the proposed development will not be subject to adverse air quality impact.

4.9.2 The predicted concentration of odour for all ASRs are expected to be within the odour criterion, therefore, the occupant at these uses will not be subject to adverse odour impact.

4.9.3 Proper construction phase mitigation measures will be incorporated into work procedures through contractual clauses, good site management, and close monitoring by the resident engineers. The contractor shall be required to follow the requirements of the Air Pollution Control (Construction Dust) Regulations, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and other relevant ordinance/regulatory requirements. With the adoption of good practices, it is expected that emission of construction dust and emission can be kept at an acceptable level. In addition, EPD's recommended pollution control clause for construction contracts will be incorporated and required in future tender document to ensure that all relevant environmental protection and pollution control ordinances are observed and complied with. No significant construction phase environmental air quality impact is therefore anticipated.

5. WASTE MANAGEMENT AND LAND CONTAMINATION REVIEW

5.1 Introduction

5.1.1 During the construction phase of the proposed development, there would be waste generation. Practicable environmental mitigation measures are recommenced to reduce the impact to acceptable ranges. Potential land contamination impacts at the Schemes due to previous land uses and/or the existing operations are also being assessed.

5.2 Construction Waste Disposal

Legislation and Construction Waste Impact

5.2.1 The principal legislation controlling waste materials in Hong Kong is the Waste Disposal Ordinance (WDO) (Cap. 354) and its subsidiary regulations.

5.2.2 Construction activities for the Proposed Development will generate waste materials requiring appropriate management and disposal. Likely range of waste types includes:

- Excavated C&D materials and site clearance waste;
- Wood from formwork as non-inert C&D materials;
- General refuse generated by the workforce;
- Chemical and oily wastes due to maintenance of equipment; and

5.2.3 The general waste management strategy is to avoid waste generation in the first place. If that is unavoidable, source reduction and segregation should be exercised as far as practicable and at the same time, recycling and reuse should be adopted to salvage as much as possible all the recyclable and reusable materials.

Construction Waste Disposal Measures

5.2.4 Contractor will be required to develop and implement a proper waste management plan (WMP) according to the PNAP ADV-19 to devise proper procedures to segregate, store and delivery/disposal or recyclable/non-recyclable materials.

5.2.5 Onsite sorting of construction wastes will be recommended. Onsite sorting can be achieved by avoiding the generation of "mixed waste" through good site control.

5.2.6 Waste generated by construction activities should be sorted into inert C&D materials and non-inert C&D materials. The inert C&D materials which comprise soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused in earth filling, reclamation or site formation works. The non-inert C&D materials which comprises metal, timber, paper, glass, junk and general garbage shall be reused or recycled and, as the last resort, disposal of at landfills.

5.2.7 It is estimated that about 185,000m^3 of inert C&D material and 15,700m^3 of non-inert material will be generated during the course of construction. Adequate areas for sorting and storage of segregated materials should be provided onsite. Construction wastes shall be sorted, with the inert C&D material broken up into small pieces for disposal at public fill reception facility, and the non-inert C&D material should be disposed of at landfill.

5.2.8 To estimate the general refuse generated during construction phase, an assumption of 100 workers per day with 0.65 kg per worker per day has been made. **Table 5.1** presents the estimation of waste generated during construction phase.

Table 5.1 Summary Table of Estimated Waste during Construction Phase

Waste Material	Total Quantity Generated	Handling	Disposed offsite/reused and quantity
Inert C&D Material	~185,000m^3	Sorted into inert C&D material and delivered to public fill reception facilities	~185,000m^3 to be delivered to public fill reception facility (minimal for reuse onsite)
Non-Inert C&D Material	~15,700m^3	Collected and segregated where practicable, and collected by/delivered to recycler	~800 m^3 to be collected by/delivered to recycler ~14,900 m^3 to be disposed of at designated landfill site
General Refuse	~65kg per day	Collected using adequate containers/bins and provide onsite collection point for collection	Collected by refuse collection vehicle and disposed of at designated landfill site
Chemical Waste	Anticipated to be limited (around some hundred litres at most)	Collected by licensed collectors	Chemical Waste Treatment Centre or equivalent

Note: The above estimated quantities are subject to detailed design stage.

5.2.9 Construction wastes shall be sorted, with the inert C&D materials broken up into small pieces for disposal at public fill reception facility, and the non-inert C&D materials should be disposed of at landfill.

5.2.10 Chemical and oily wastes generated from the construction activities, vehicle and plant maintenance and oil interceptors should be disposed of as chemical waste in strict compliance with the Waste Disposal (Chemical Waste) (General) Regulations.

5.2.11 Waste disposal from construction site is subject to control under the Waste Disposal Ordinance.

5.3 Assessment Criteria for Land Contamination Review

5.3.1 The following guidelines published by EPD have been followed:

- Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management (RBRGs), dated December 2007;
- Guidance Note for Contaminated Land Assessment and Remediation, dated 15 August 2007; and
- Practice Guide for Investigation and Remediation of Contaminated Land (EPD's Practice Guide), dated August 2011.

5.3.2 As the RBRGs and the Practice Guide are the latest guidelines promulgated for use in August 2007 and August 2011 respectively, the RBRGs criteria and the requirements stated in the Practice Guide will be adopted in this Land Contamination Review.

5.4 Review of Historical and Current Available Information

5.4.1 The Schemes (i.e. KC-018 and KC-019) are currently zoned as "Comprehensive Development Area (CDA)" and shown as 'Road' under the Kai Tak OZP (Plan No. S/K22/7).

5.4.2 The existing KC-018 Site comprises ageing residential blocks. They are of 8 storeys high. The existing KC-019 Site comprises Newport Centre Phase 1 and 2 (industrial buildings) of 4 storeys high. Part of Ma Tau Kok Road is within the schemes. The historic and current land uses are discussed below.

Historic and Current Land Uses

5.4.3 Historic aerial photos taken in year 1945, 1963, 1976, 1980, 1985, 2017 and 2021 are shown in **Appendix 5.1**. KC-018 generally consisted of compacted residentials. Gas Work was established to its immediate south and west in year 1945 and 1963 respectively. The south portion of Gas Work was demolished in year 1993 and redeveloped into a high-rise residential development (i.e. Grand Waterfront) since year 2007. The compacted residentials remain the same till now.

5.4.4 KC-019 was under reclamation in year 1945 and became an industrial area from 1963 to 1976 with shore. KC-019 was then demolished and redeveloped into the current Newport Centre by phase. Phase 1 (i.e. east portion) of Newport Centre was erected in year 1980, followed by Phase 2 (i.e. west portion) in year 1981. There is no change of landuse at KC-019 since then.

Table 5.2 Landuse Summary

Period / Year	Landuse / Description	Owner or occupier	Source(s) of Information	Off-site Property Affected?
1945	A few building structures were erected at KC-018 Site. A Gas Work was established to its immediate south. The area at KC-019 Site is under reclamation.	No information available	Aerial Photograph from Lands Department	No Based on the earliest available topographic map (i.e. year 1960), it is observed that several facilities were erected within the Gas Work (i.e. water tank, gas storage tank, brick store and vertical retort plant). The Gas Work was abandoned and demolished in year 1993. The site has been developed into residential use since 2007 (i.e. Grand Waterfront). No land contamination issue is considered for the **operation involved in the mentioned** facilities within the Gas Work.
1963	Residential buildings were erected at KC-018 Site. The buildings were constructed in a compact way. New portion of Gas Work was established to its immediate west. KC-019 Site is occupied by low-rise building. The shore area is used for loading and unloading goods from/to vessels	No information available	Aerial Photograph from Lands Department	
1976	There is no change of landuse comparing to year 1963.	No information available	Aerial Photograph from Lands Department	
1980	There is no change of landuse at KC-018 Site comparing to year 1976. KC-019 Site started to redevelop as Newport Centre with low0rise building demolished. In 1980, Newport Centre Phase 1 (i.e. east portion) was erected. Phase 2 (i.e. west portion) was under construction. Demolition of previous building was completed.	No information available	Aerial Photograph from Lands Department	
1985	There is no change of landuse at KC-018 Site comparing to year 1980. For KC-019 Site, construction of Newport Centre (both phase 1 and 2) was completed. EMSD workshop with rooftop carpark was erected to the immediate north of KC-019. Part of the workshop was within KC-019.	No information available	Aerial Photograph from Lands Department	
2017	A residential development (i.e. Grand Waterfront) was erected since 2007 to KC-018's immediate south. There is no change of landuse at KC-019 Site comparing to year 1985.	No information available	Aerial Photograph from Lands Department	
2020	There is no change of landuse at KC-018 Site comparing to year 2017. EMSD workshop has been demolished and the northwestern corner of KC-019 Site is therefore vacant.	No information available	Aerial Photograph from Lands Department	No

Site Inspection and Observation

5.4.5 Site inspection to the Schemes was conducted on 29 September 2017, 23 June 2020 and 24 April 2022. Photo records are provided in **Appendix 5.4**.

5.4.6 Based on the observation from the site inspection, the ground floor of KC-018 Site generally consists of car repairing workshops, hardware stores, and small retail stores, etc. There were no aboveground / underground oil storage tanks, chemicals and dangerous goods observed to be stored on site during the site visit.

5.4.7 The basement and ground floor of KC-019 Site consists mainly of workshops, storage, retail shops, store and office. There were no aboveground / underground oil storage tanks, chemicals and dangerous goods observed to be stored on site during the site visit.

Information from Government Departments

5.4.8 Apart from the historic aerial photos, the following Hong Kong Special Administration Region (HKSAR) Government Departments have been enquired on the latest update on the availability of land use status and records of land contamination and/or spillage of the Application Site. The summary of correspondence is tabulated in **Table 5.3** below. Copy of letters which the Consultant sent to various Government Departments and relevant replies are shown in **Appendix 5.2** for reference.

5.4.9 Building Records Access and Viewing On-line (BRAVO) of Building Departments (BD) was visited to obtain records for completed private buildings. It is observed from the building plans in year 1951 that part of the KC-018 Site at No. 93-113 Ma Tau Kok Road was designated as manufacturing industries (packaging, weaving). KC-019 Site is currently occupied by industrial building so that industrial process is deemed allowed. Building plans for other parts of the Schemes were not available. The captured screen of BRAVO is provided in **Appendix 5.3**.

5.4.10 As advised by Planning Department (PlanD), the Schemes fall within an area zoned "Comprehensive Development Area" ("CDA") and shown as "Road" on the prevailing approved Kai Tak Outline Zoning Plan (OZP) No. S/K22/6. The Consultant visited the Town Planning Board Statutory Planning Portal 2 to obtain latest records for land zoning. The website as of 05 September 2022 has confirmed the zoning remains valid under the Kai Tak Outline Zoning Plan (OZP) No. S/K22/7.

5.4.11 As advised by Fire Service Department (FSD), no Dangerous Goods Licence is issued regarding the Schemes. 3 incidents were reported regarding leakage of flammable liquid/gas and there was a No. 1 alarm fire happened at Ming Lun Street (varies from 1/F to 6/F).

5.4.12 As advised by Hong Kong Police Force (HKPF), there was no explosive incident in their database at the Schemes.

5.4.13 As advised by Environmental Protection Department (EPD), the Consultant visited the territory-wide register of chemical waste producers (CWPs) maintained at EPD's Territory Control Office. The register record as of 04 November 2021 has recorded 80 chemical waste producers near/at both KC-018 and KC-019 sites.

Table 5.3 Enquiries and Responses on Land Contamination Related Records for the Schemes

Consultant's Letter Ref.	Department	Response Letter Ref.	Date	Summary
URAKCAA2EI00_0_0007L.20	Environmental Protection Department	( ) in EP650/G1/4	17 June 2020	There is no record of chemical spillage accident and submission relating to land contamination assessment at the Schemes in the past 3 years. A visit to the Territorial Control Office for chemical waste producer registry inspection was performed. According to the register record as of 04/11/2021, 80 CWPs are found near/at KC-018 and KC-019.
URAKCAA2EI00_0_0008L.20	Fire Service Department	(148) in FSD GR 6-5/4 R Pt.27	06 July 2020	There is no Dangerous Goods Licence issued at the Schemes. There were total of 3 incidents record regarding leakage of flammable liquid/gas and 1 incident of No. 1 alarm fire at Ming Lun Street (varies from 1/F to 6/F).
URAKCAA2EI00_0_0009L.20	Hong Kong Police Force	(37) in CP OPS EOD 6-20/1 Pt. 4	10 June 2020	There was no explosive incident in EOD's database at KC-018 and KC-019.
URAKCAA2EI00_0_00010L.20	Planning Department	( ) K-22/23	23 June 2020	The Schemes fall within an area zoned "Comprehensive Development Area" ("CDA") and shown as "Road" on the prevailing approved Kai Tak Outline Zoning Plan (OZP) No. S/K22/6, which is intended for a comprehensive development/ redevelopment of the area for residential and/ or commercial uses with the provision of waterfront promenade, open space and other supporting facilities. The current "CDA" zoning for the site was first designated on the draft Kai Tak OZP No. S/K22/1 exhibited in November 2006 and has remained unchanged since then. Before that, the site had been subject to various land use zonings/ designation on statutory town plan, including: • "Residential or Light Industrial or a Mixture of Both" and 'Road' on the draft Ma Tau Kok Outline

				Development Plan No. LK/10/18/4 exhibited in April 1957; • "Industrial" and 'Road' on the draft Ma Tau Kok OZP No. LK/10/28 exhibited in November 1967; • "Residential (Group A)" and 'Road' on the draft Kai Tak (South) OZP No. S/k21/1 exhibited in September 1998; and • "CDA(1)", "Open Space" and 'Road' on the draft Kai Tak (South) OZP No. S/K21/2 exhibited in August 2001. The existing tenement buildings in the five street blocks of KC-018 site were issued with Occupation Permits by the Building Authority by phases in July 1959 to December 1960.
URAKCAA2EI00_0_00011L.20	Lands Department	(2) in DLO KW 309/KPT/KW	16 Jun 2020	DLO is not in position to advise the information on spillage accidents, illegal/ contaminating land uses or uncontrolled dumping uses and historical use information for the Schemes. Topographic Map available from Lands Department was reviewed. Topographic Map records generally tally with observations in aerial photos.

5.5 Discussions

KC-018

5.5.1 Based on the above, the desktop review of historic information indicated that the KC-018 Scheme was occupied by low-rise buildings that might have been used as manufacturing industries in year 1945. Since year 1963, the KC-018 was then developed into an urban area and the current buildings have remained since its erection from year 1963. 2 phases of Gas work were erected in year 1945 (i.e. immediate south) and year 1963 (i.e. immediate west). The south portion was demolished in year 1993 and redeveloped into a high-rise residential since year 2007. The west portion of Gas Work remains.

5.5.2 According to the site visit conducted in Apr 2022, the ground floor of the KC-018 Site is currently comprised of several car repairing workshops, hardware stores, and small retail stores, while the upper floors are of residential use. Since car repairing workshops may release oils and fuels and lubricant from vehicles during vehicle and equipment maintenance and refueling, potential land contamination issues are present at the KC-018 Site.

KC-019

5.5.3 It is observed that reclamation work was undergoing at the KC-019 Site in year 1945. Based on the topographic map and aerial photos from year 1959 to 1976, the KC-019

Site was used as foundry / factory. The KC-019 Site was then developed into industrial buildings (i.e. Newport Centre). Phase 1 (i.e. east portion) of Newport Centre was under construction since year 1978 and completed in year 1979. Phase 2 (i.e. west portion) was then followed by 1981 and remain unchanged up to present. EMSD workshop was expanded to the immediate north of KC-019 in year 1985. The extension involved a rooftop carpark. Part of the new workshop extension was within KC-019 site. The whole EMSD workshop has been demolished in year 2017. The northwest corner of KC-019 site is now vacant.

5.5.4 According to the site visit conducted in Apr 2022, the basement/ground floor of the KC-019 Site is currently comprised of workshop, storage, retail, store and office uses. Due to the nature of the buildings (i.e. Newport Centre and EMSD workshop), potential land contamination issues need to be ascertained in later stage.

5.6 Recommendations

5.6.1 Further site appraisal and soil sampling may be required to determine whether the site is contaminated, and if so, the extent of the potential contamination. Nevertheless, the consequent Contamination Assessment Plan (CAP) will be prepared to cover the Schemes (both KC-018 and KC-019 sites) to be developed. A Contamination Assessment Plan (CAP) and subsequently, Contamination Assessment Report (CAR), and Remediation Action Plan (RAP) will be prepared in later stages to identify the potential land contamination issues in the Schemes.

5.6.2 Further land contamination assessment and/or remediation works will be completed before commencement of any construction works for the development, in accordance with relevant guidelines issued by government departments.

6. OVERALL CONCLUSION

6.1 Conclusion

6.1.1 The Schemes is proposed to be redeveloped into a residential development comprising 4 towers with 2,226 flat units erected on top of a podium building with retail/GIC/clubhouse uses. The potential noise impact, air quality impact, and land contamination issues have been quantitatively addressed.

6.1.2 Road traffic noise level is found to exceed relevant criteria under base case scenario based on the notional layout plan. With the recommended noise mitigation measures in place, no exceedance is anticipated. As the scheme is subject to detailed design, the scheme design will be revised taking into account factors such as marketability, constructability, cost-effectiveness, etc. Practical and effective noise mitigation measures will be devised in future to minimise potential road traffic noise impact.

6.1.3 Fixed noise impact on the proposed development has been quantitatively assessed and no exceedance is anticipated under unmitigated scenario.

6.1.4 Cumulative air quality impact has been assessed. Based on the proposed development disposition and building height, no exceedance of relevant assessment criteria is found for residential portions while the future fresh air intake for the podium portion is recommended to be located to area further apart from To Kwa Wan Road where the impact is found to be acceptable.

6.1.5 Based on land contamination appraisal, potential risk of land contamination is present at the Schemes due to car repair workshop and potential manufacturing operations. A Contamination Assessment Plan (CAP) and subsequently, Contamination Assessment Report (CAR), and Remediation Action Plan (RAP) will be prepared in later stages to identify the potential land contamination issues in the Schemes. Further land contamination assessment and/or remediation works will be completed before commencement of any construction works for the development, in accordance with relevant guidelines issued by government departments.

6.1.6 Based on the environmental assessment results, it is concluded that the Proposed Redevelopment is environmentally acceptable with the recommended measures in place and remediation work (if required) implemented.

Figures

Figure: 1

Title: Location of Subject Site and Its Environs

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	AL
Checked by:	CC
Rev.:	1.1
Date:	Jul 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\05 SIA\Fig_SIA_20220728 KC018&KC019.dwg

Figure: 2.1a

Title: Location of Representative Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (KC-018) - Low Zone (3/F-7/F)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.1
Date:	July 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\MLP_20220829.dwg

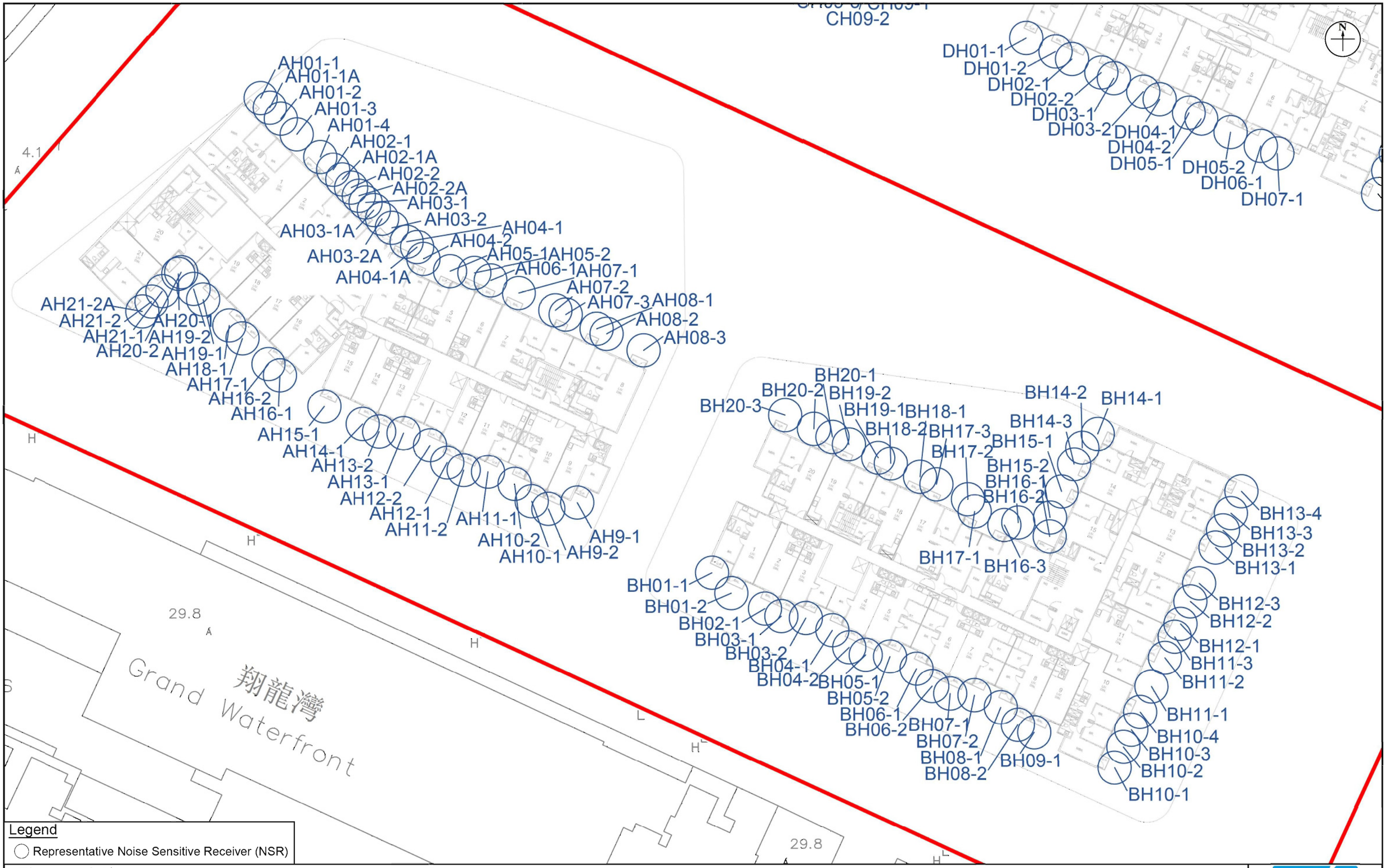
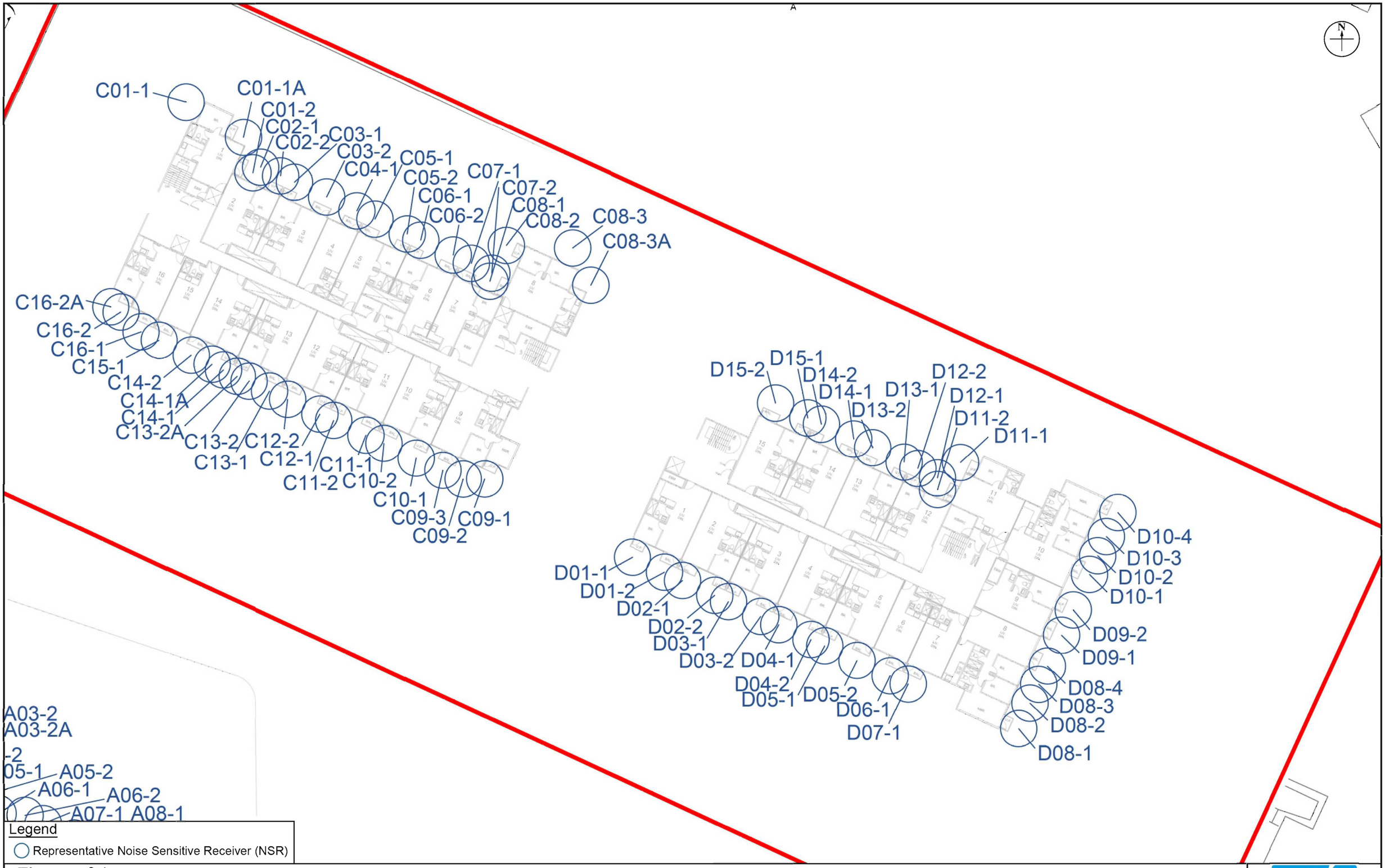


Figure: 2.1b	RAMBOLL
Title: Location of Representative Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (KC-018) - High Zone (8/F-33/F)	Drawn by: MW Checked by: CC
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.1 Date: July 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\MLP_20220829.dwg



Legend

○ Representative Noise Sensitive Receiver (NSR)

Figure: 2.1c

Title: Location of Representative Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (KC-019) - Low Zone (3/F-22/F)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.1
Date:	July 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\MLP_20220829.dwg

Figure: 2.1d

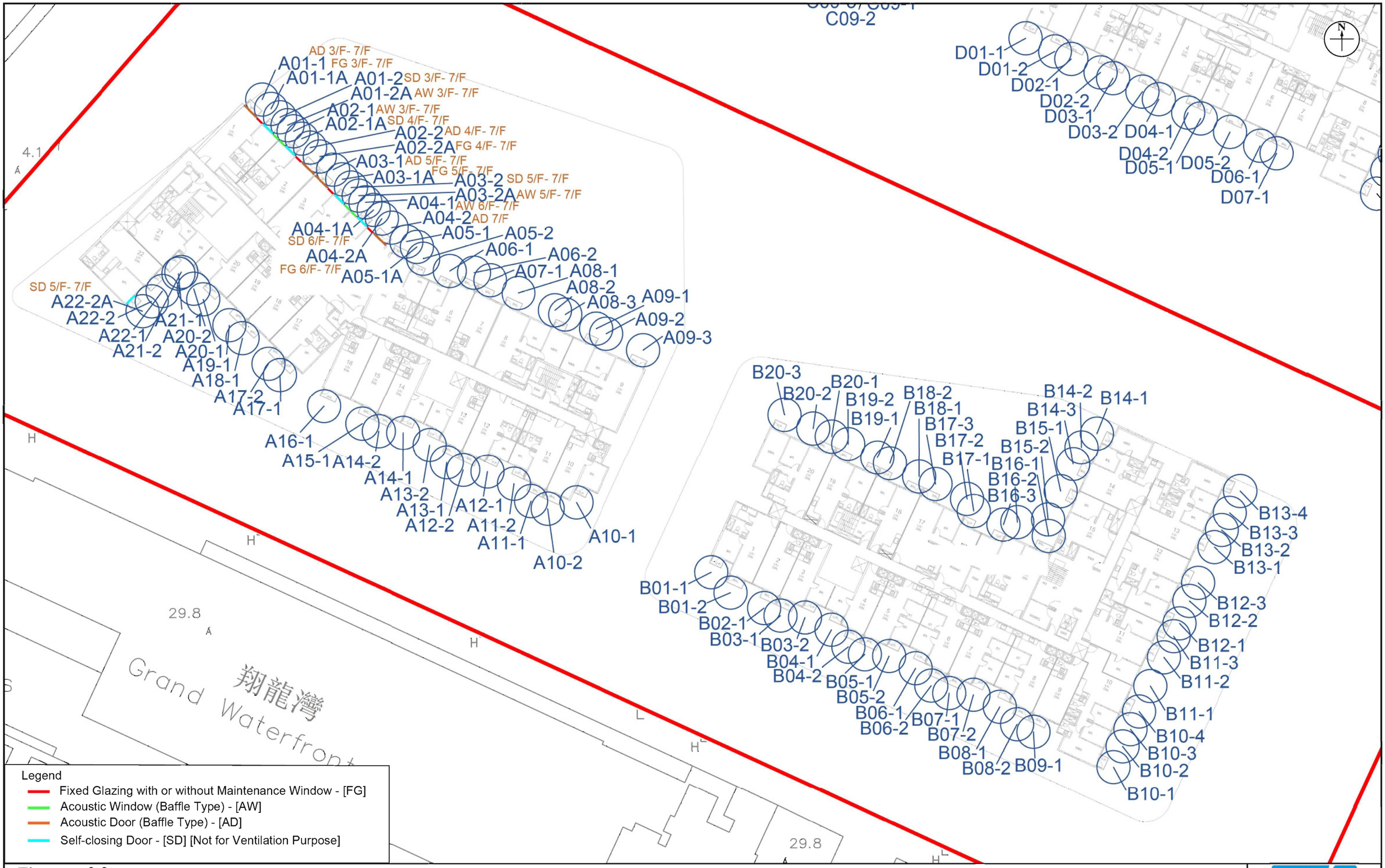
Title: Location of Representative Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (KC-019) - High Zone (23/F-33/F)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.1
Date:	July 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\MLP_20220829.dwg



Legend

- Fixed Glazing with or without Maintenance Window - [FG]
- Acoustic Window (Baffle Type) - [AW]
- Acoustic Door (Baffle Type) - [AD]
- Self-closing Door - [SD] [Not for Ventilation Purpose]

Figure: 2.2a

Title: Location of Recommended Road Traffic Noise Mitigation Measures (KC-018) - Low Zone (3/F-7/F)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.2
Date:	Sep 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\MLP_20220829.dwg

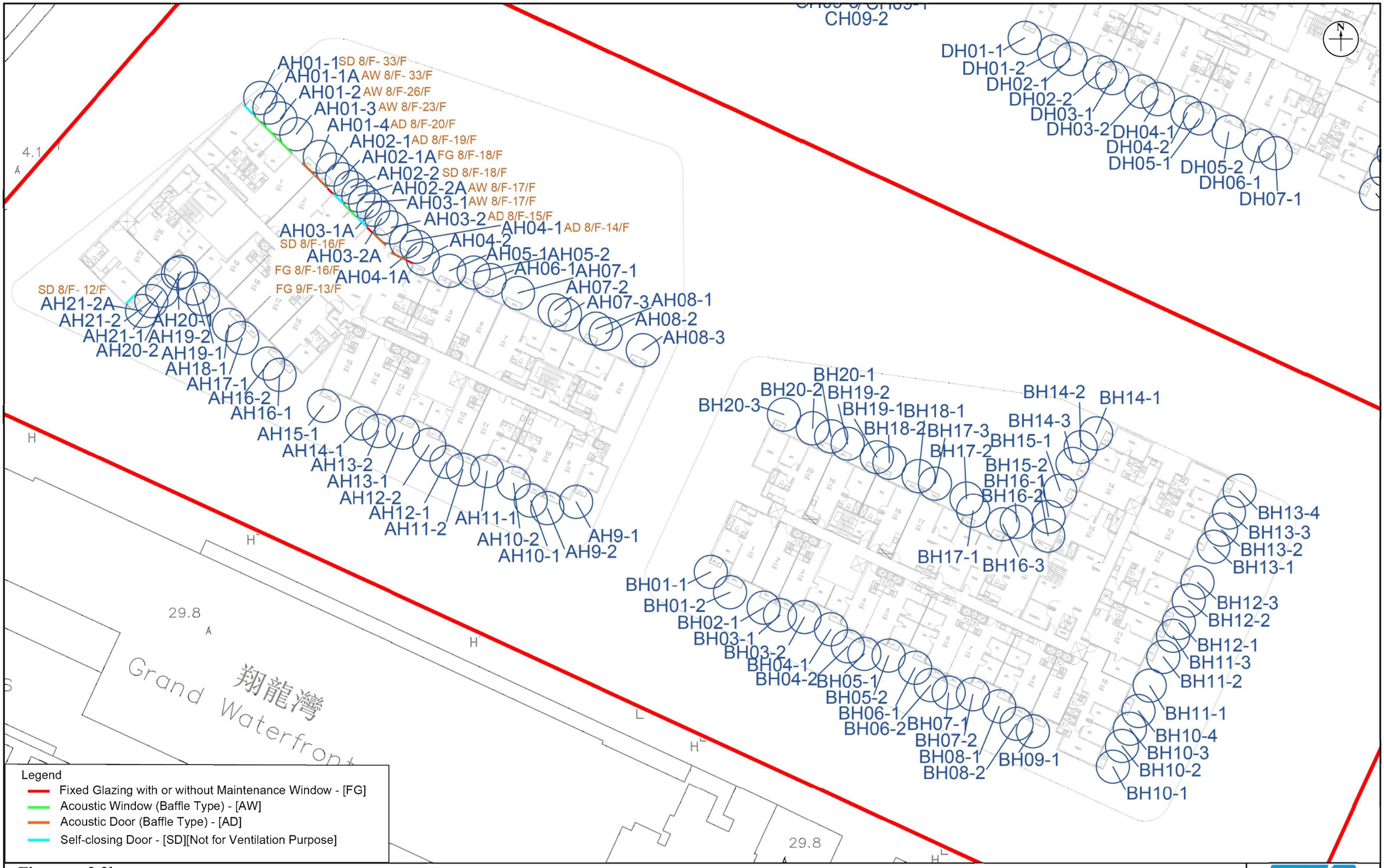


Figure: 2.2b

Title: Location of Recommended Road Traffic Noise Mitigation Measures (KC-018) - High Zone (8/F-33/F)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.2
Date:	Sep 2022

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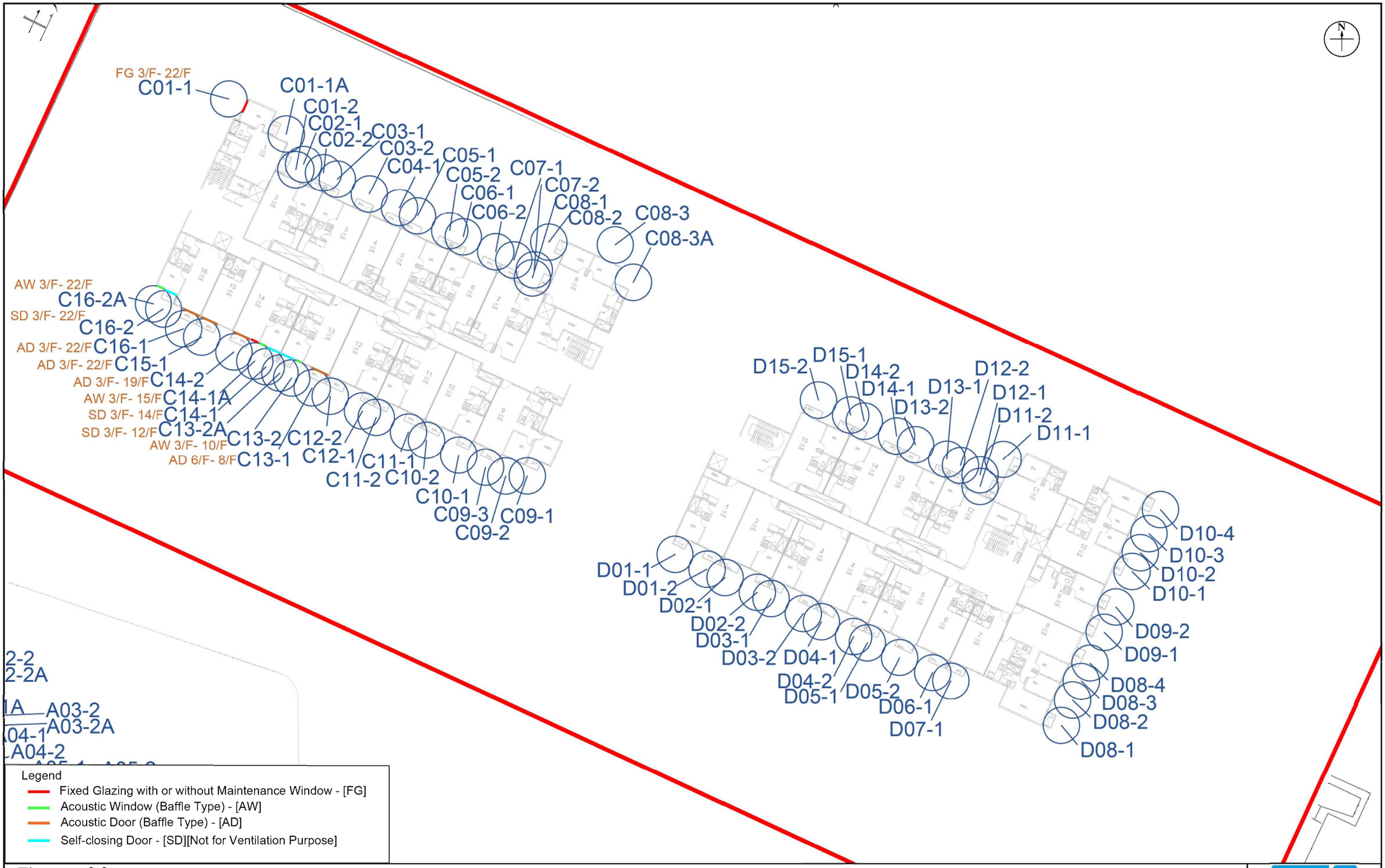

Figure: 2.2c

Title: Location of Recommended Road Traffic Noise Mitigation Measures (KC-019) - Low Zone (3/F-22/F)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.2
Date:	Sep 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\MLP_20220829.dwg

Figure: 2.2d

Title: Location of Recommended Road Traffic Noise Mitigation Measures (KC-019) - High Zone (23/F-33/F)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.2
Date:	Sep 2022

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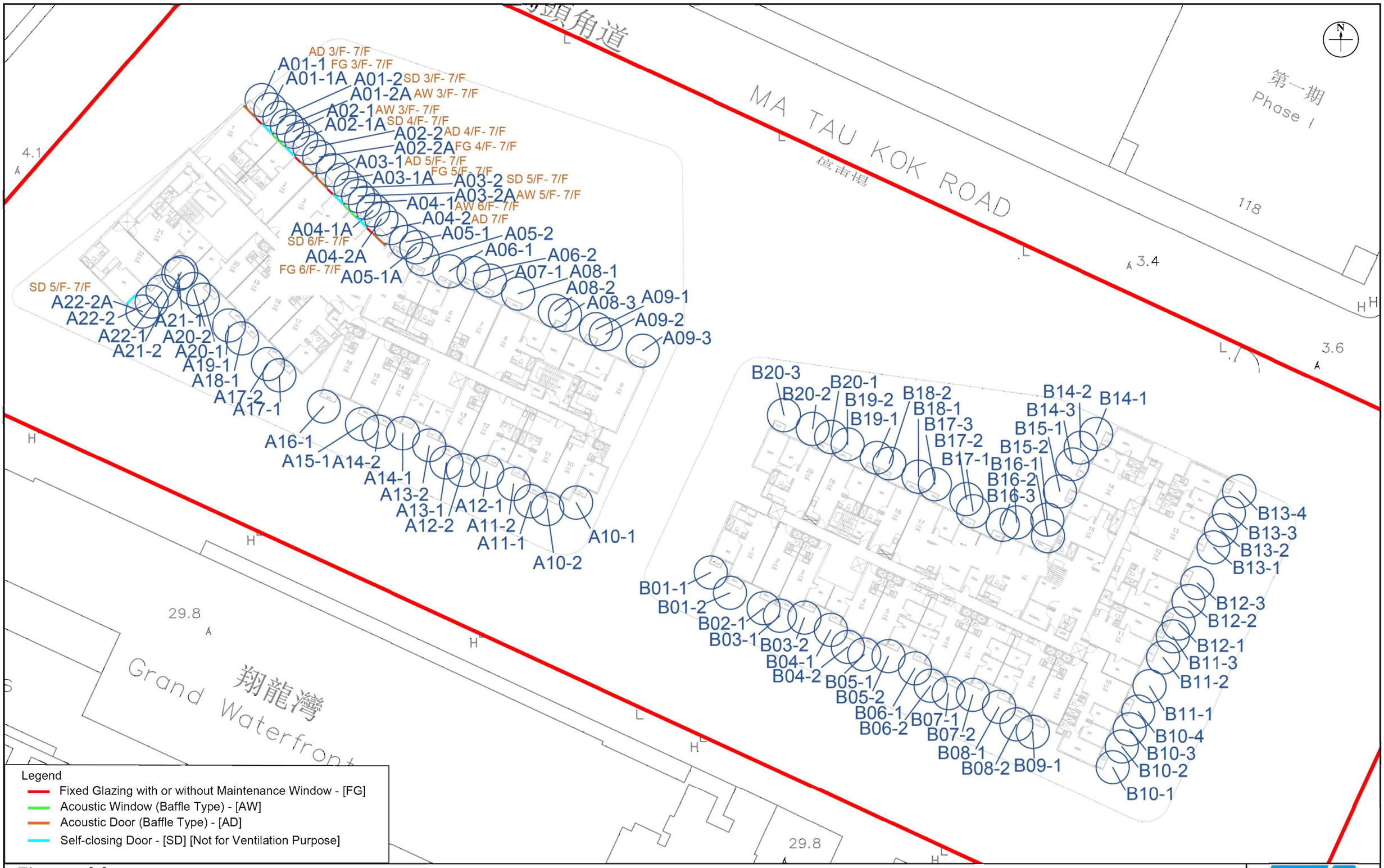

Figure: 2.3a

Title: Location of Recommended Road Traffic Noise Mitigation Measures (KC-018) - Low Zone (3/F-7/F) (Worst Case Scenario)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.2
Date:	Sep 2022

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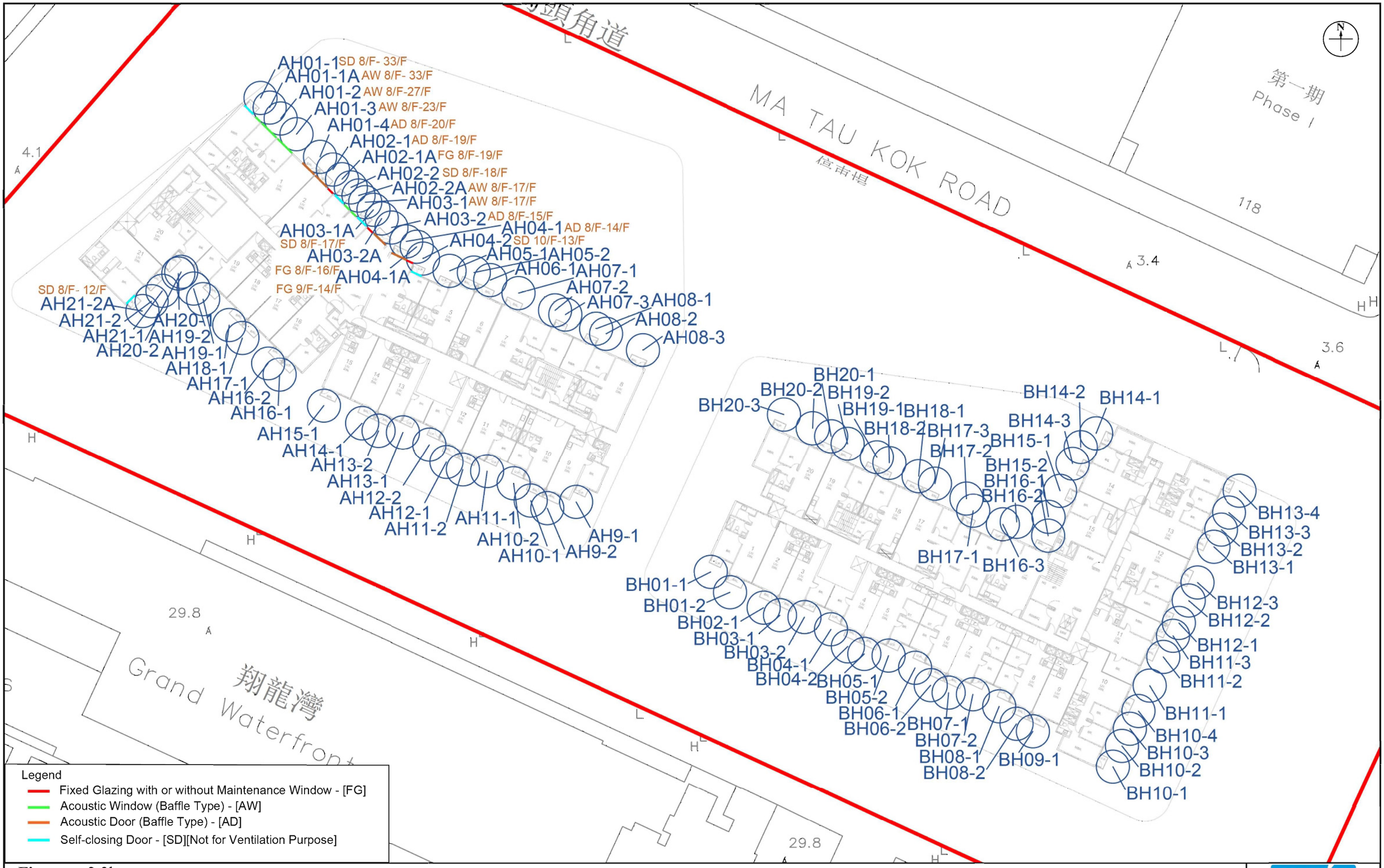


Figure: 2.3b

Title: Location of Recommended Road Traffic Noise Mitigation Measures (KC-018) - High Zone (8/F-33/F) (Worst Case Scenario)

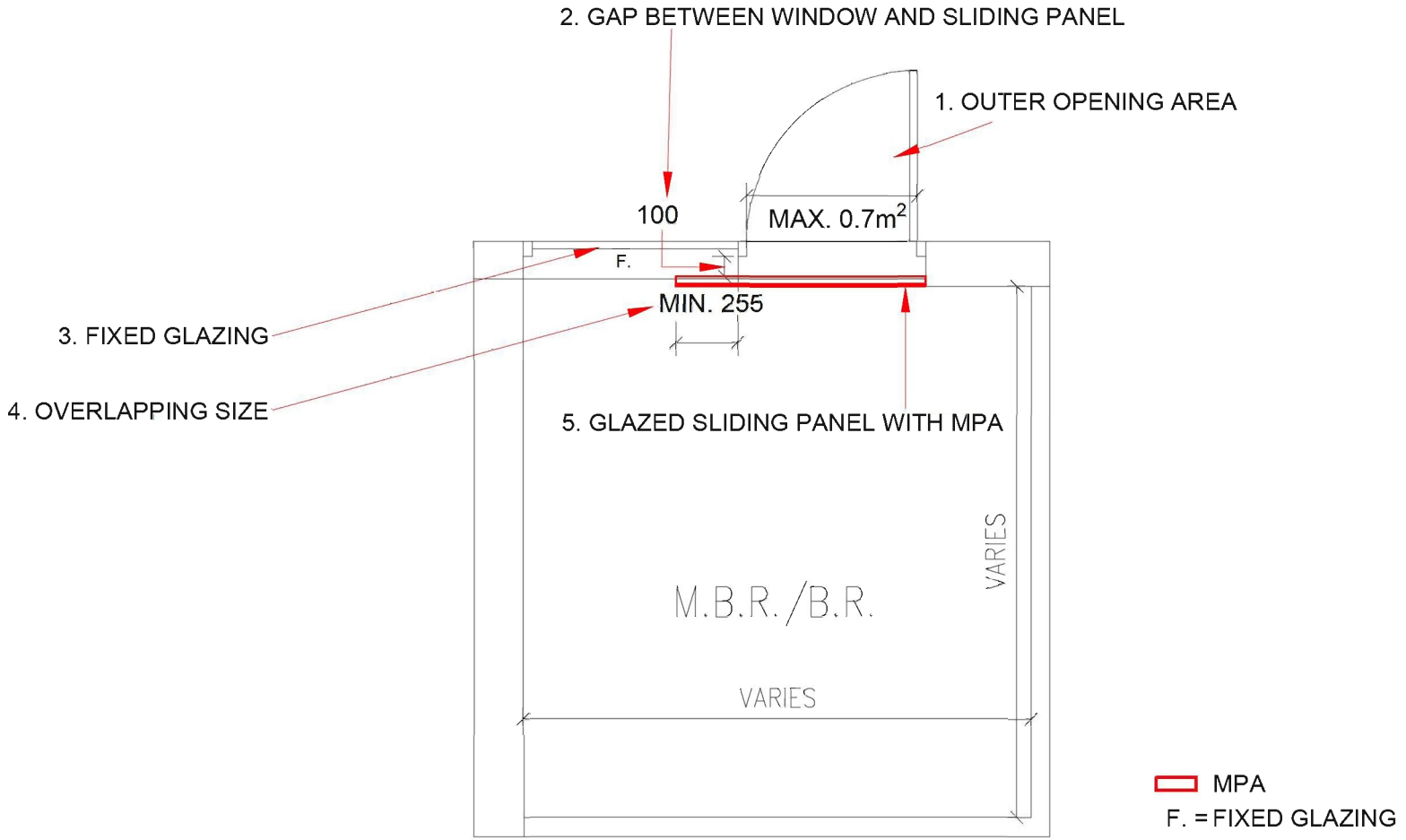
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.2
Date:	Sep 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\MLP_20220829_sc1.dwg

INDICATIVE DESIGN OF ACOUSTIC WINDOW (BAFFLE TYPE) FOR BEDROOM (REFERENCED FROM EX-NORTH POINT ESTATE REDEVELOPMENT)



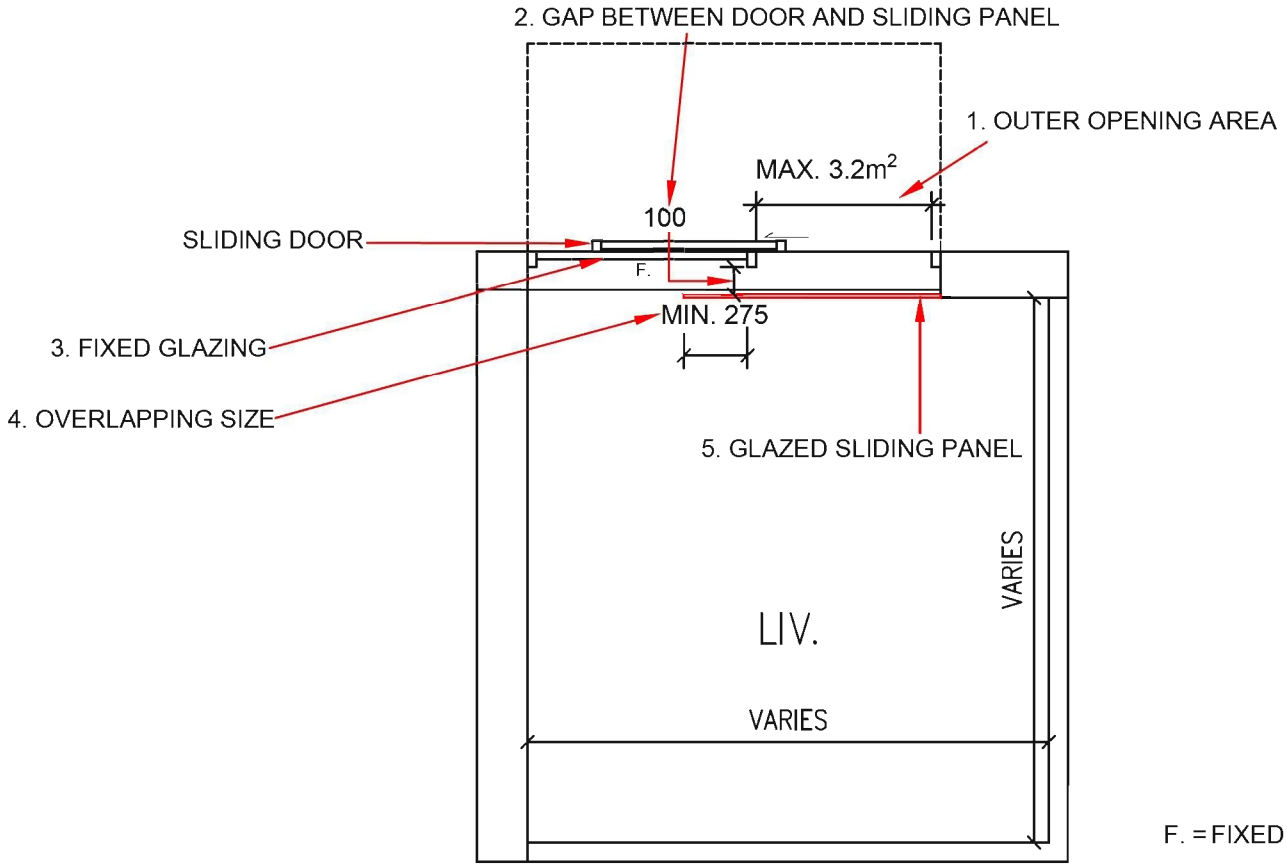
TYPICAL PLAN

Note:
The design is made reference to the reference case, it will be subject to further refinement at the detailed design stage.

Figure: 2.4	RAMBOLL
Title: Indicative Design of Acoustic Window (Baffle Type)	Drawn by: MW Checked by: CC
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.1 Date: July 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\Baffle Window & Door.dwg

INDICATIVE DESIGN OF ACOUSTIC DOOR (BAFFLE TYPE) FOR LIVING/DINING ROOM (REFERENCED FROM EX-NORTH POINT ESTATE REDEVELOPMENT)



F. = FIXED GLAZING

TYPICAL PLAN

Note:
The design is made reference to the reference case, it will be subject to further refinement at the detailed design stage.

Figure: 2.5	RAMBOLL
Title: Indicative Design of Acoustic Door (Baffle Type)	Drawn by: MW Checked by: CC
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.1 Date: July 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\02 Traffic\220829\cad\Baffle Window & Door.dwg

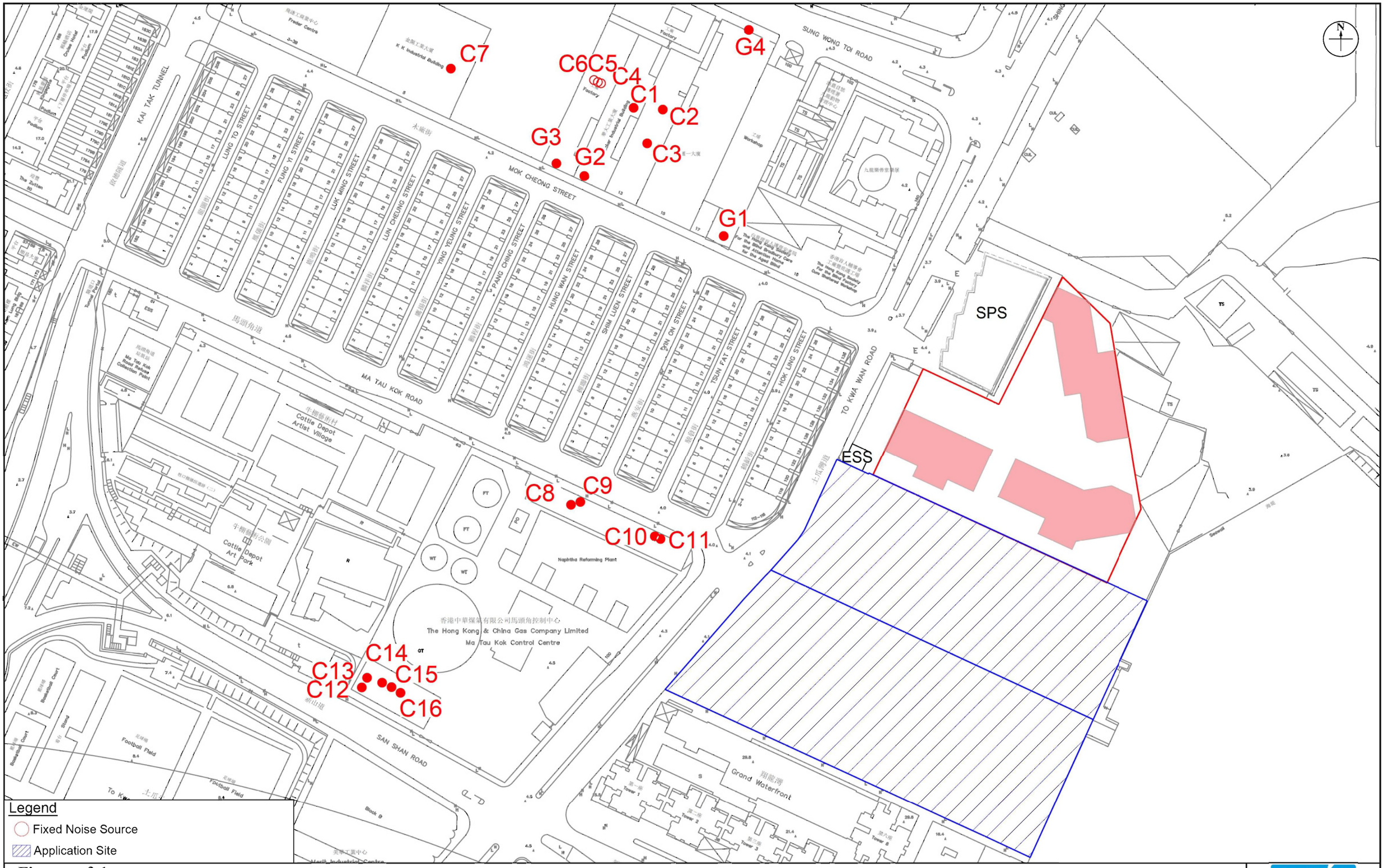


Figure: 3.1

Title: Location of Fixed Noise Source Identified in the Surrounding of the Application Site

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.1
Date:	July 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\01 Industrial\20220713\MLP_20220706.dwg

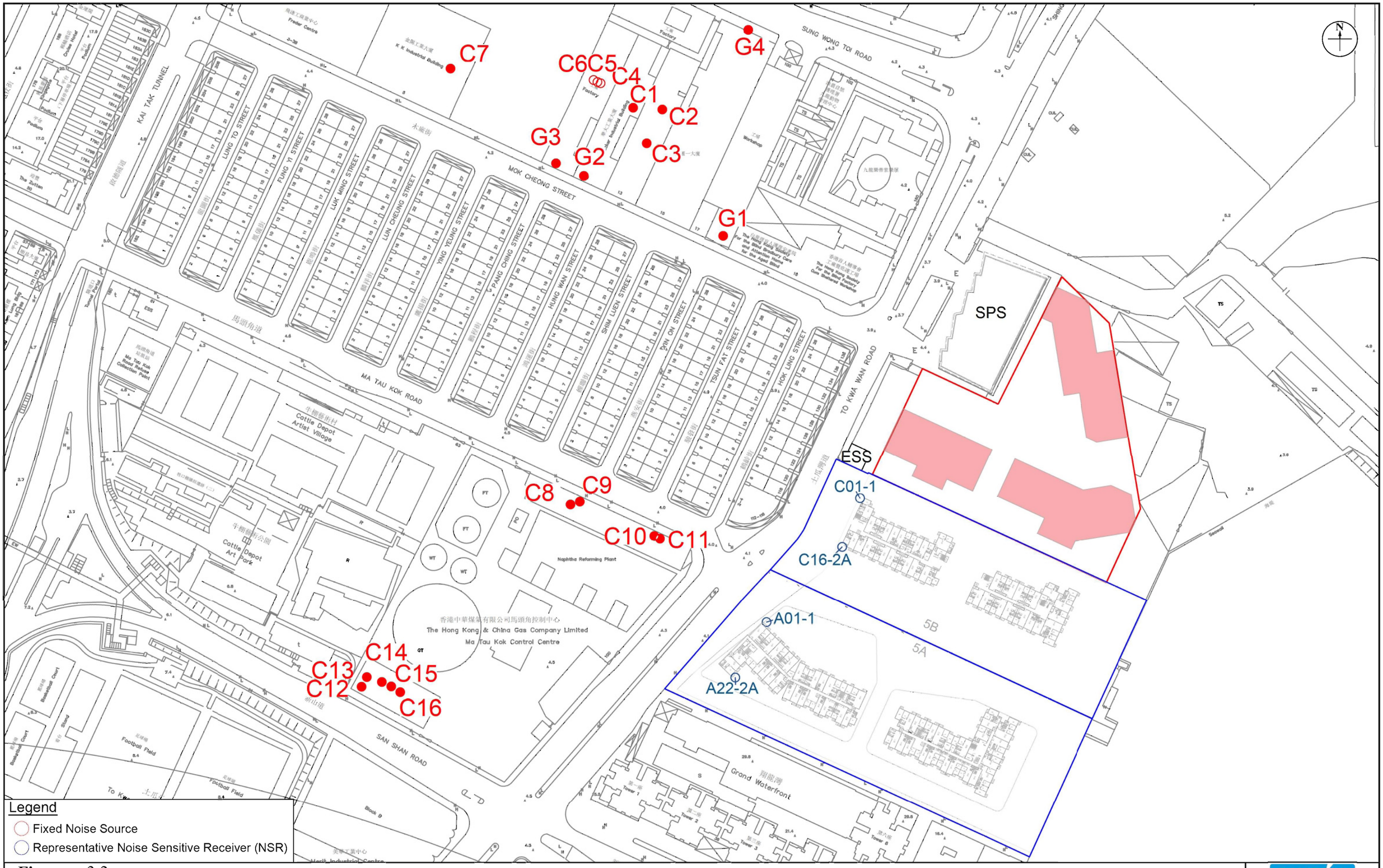


Figure: 3.2

Title: Location of Representative Noise Sensitive Receivers for Fixed Noise Impact Assessment

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	1.1
Date:	July 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\02 Noise\01 Industrial\20220713\MLP_20220706.dwg

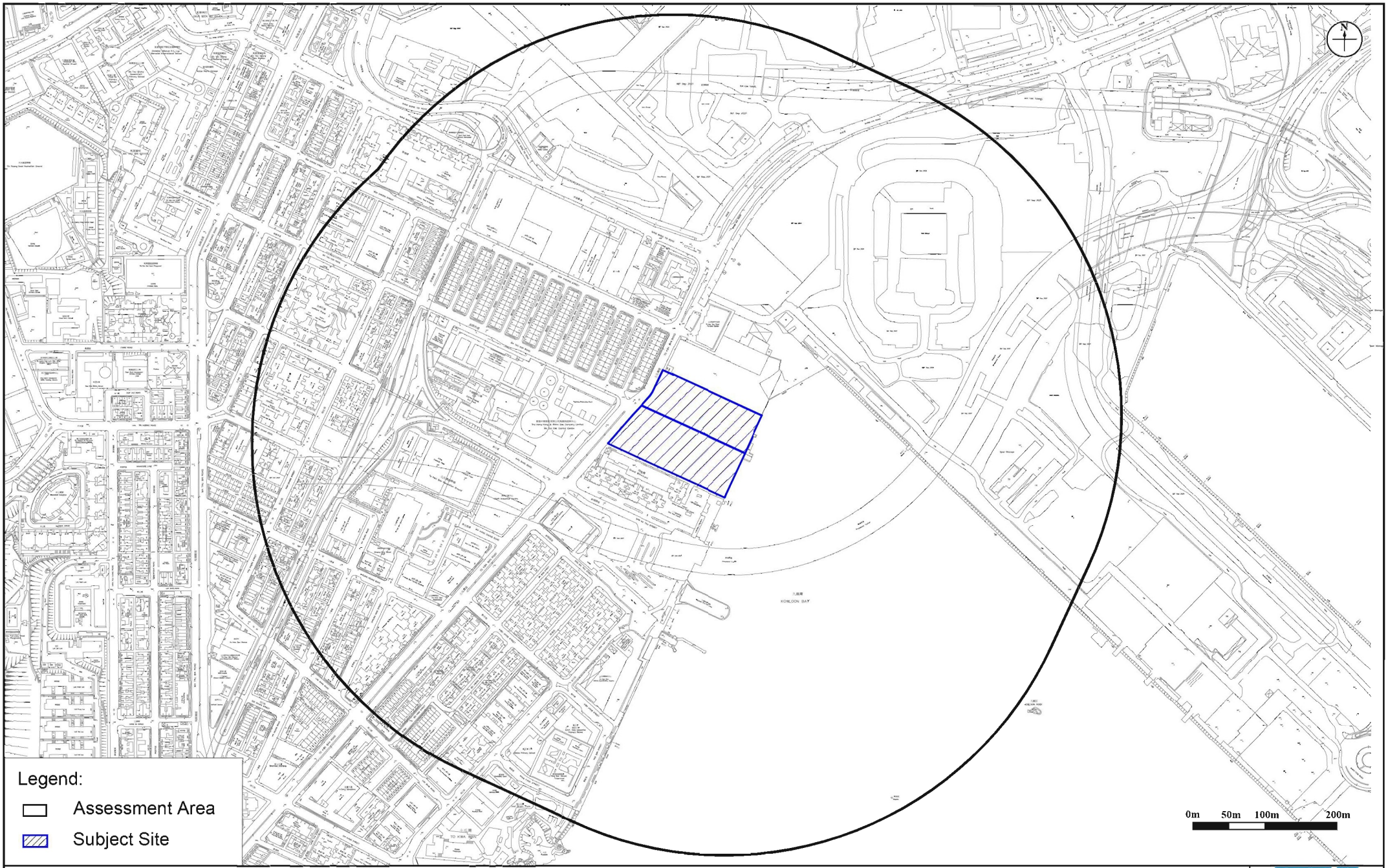


Figure: 4.1

Title: Assessment Area of 500m from the Application Site

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	LT
Checked by:	BF
Rev.:	1.0
Date:	May 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\01 Air\02 Vehicles\v1.1_2\Road_20220503r.dwg

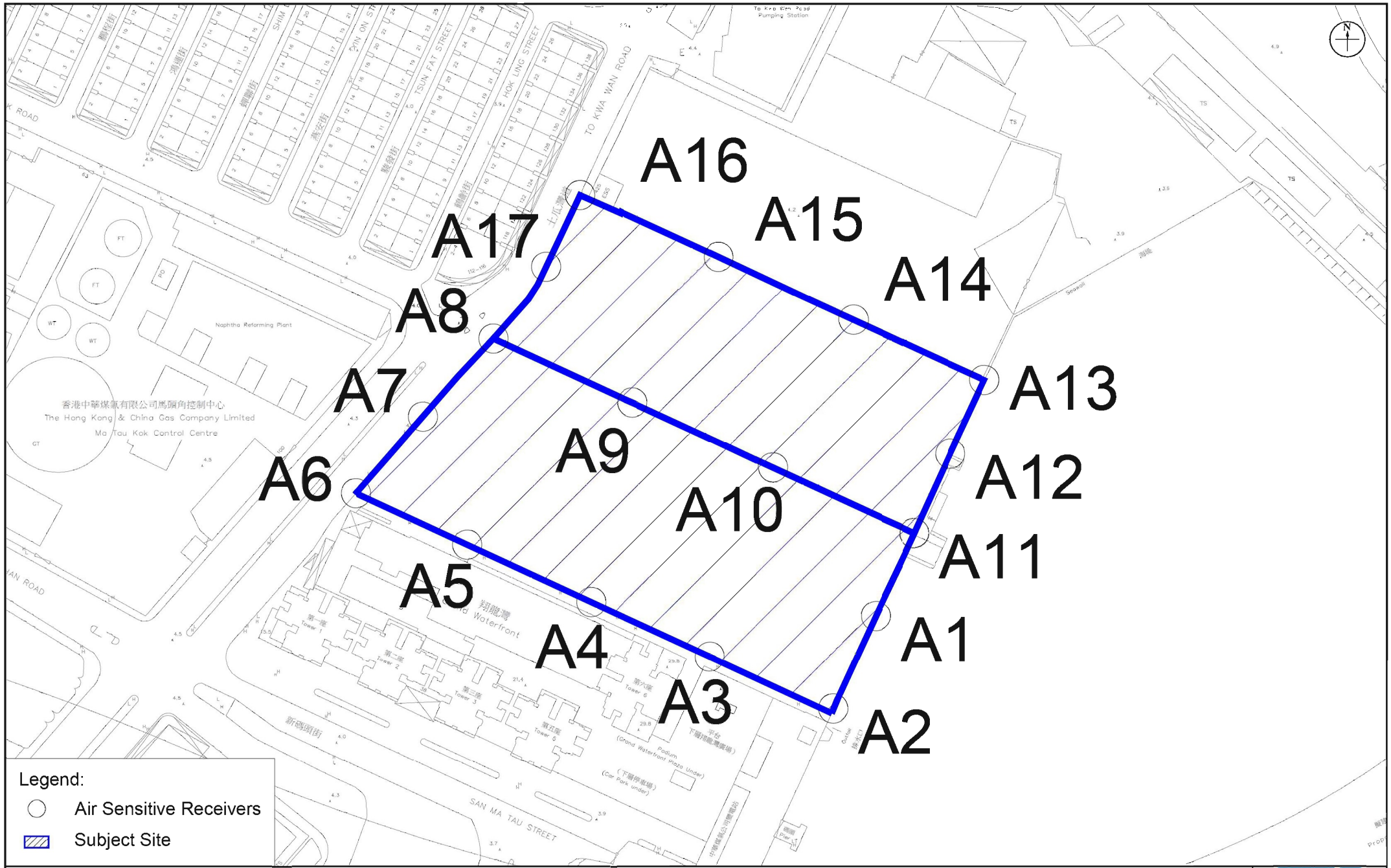


Figure: 4.2

Title: Location of Representative Air Sensitive Receivers for Operation Phase

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	LT
Checked by:	BF
Rev.:	1.0
Date:	Sep 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\01 Air\02 Vehicles\v1.1_3\Road_20220503r.dwg

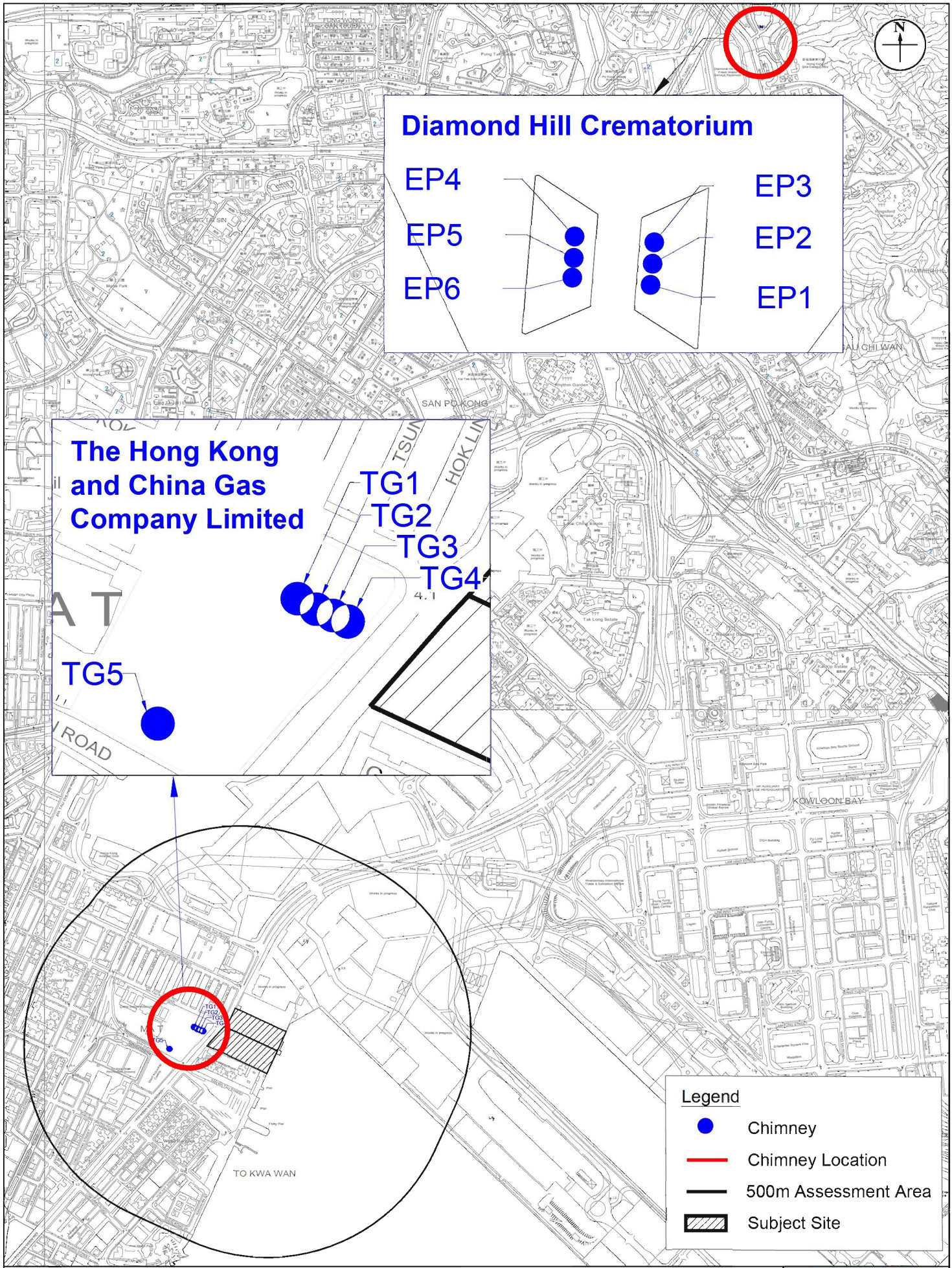


Figure:	4.3	RAMBOLL	
Title:	Location of Emissions from Active Chimneys	Drawn by:	LT
		Checked by:	BF
Project:	Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.:	1.0
		Date:	May 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\01 Air\01 Stack\v1.1_2\Fig4.3.dwg

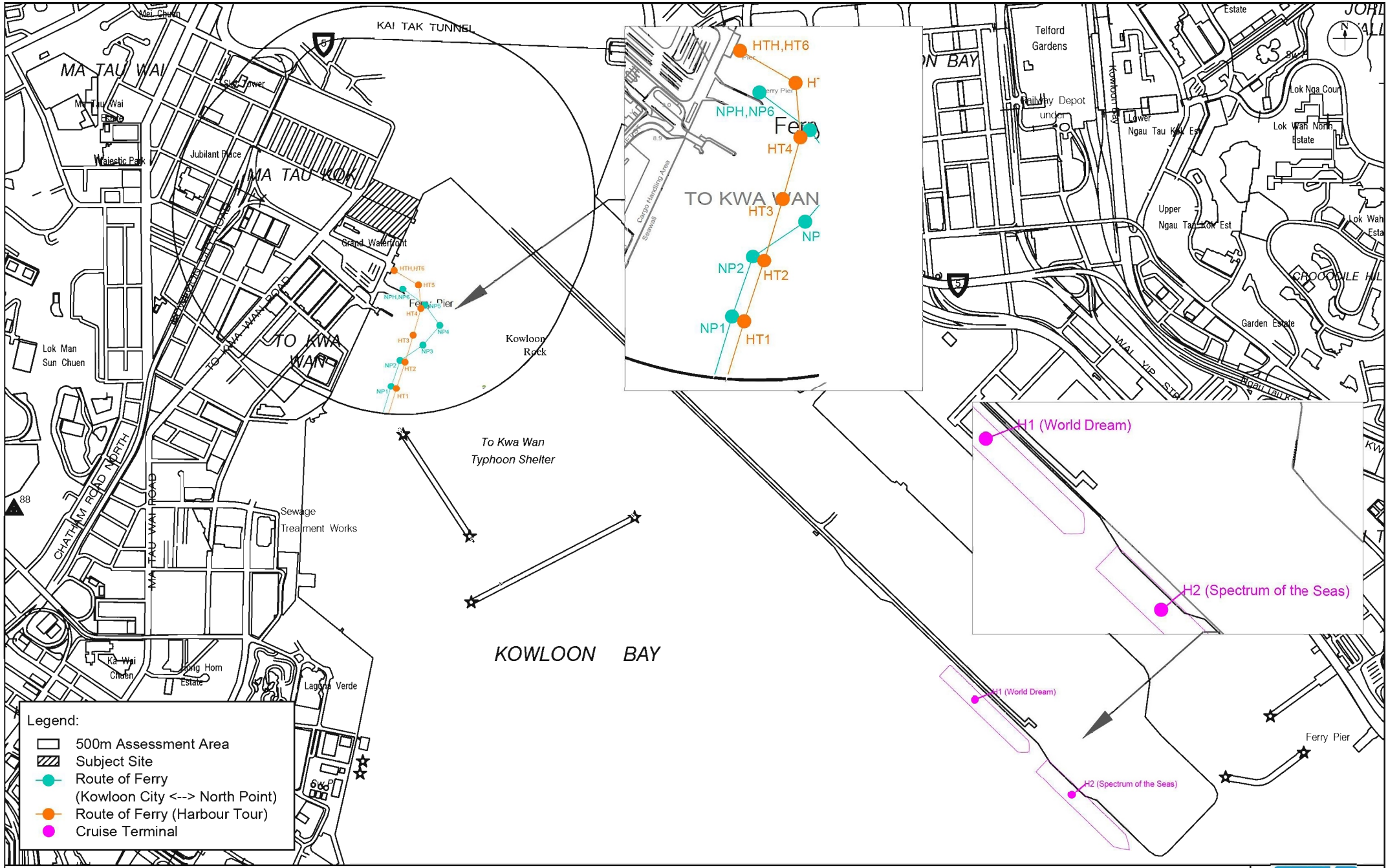


Figure: 4.4

Title: Location of Emissions from Marine Vessel

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	LT
Checked by:	BF
Rev.:	1.1
Date:	May 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\01 Air\01 Stack\v1.1_2\Fig4.4-4.7.dwg

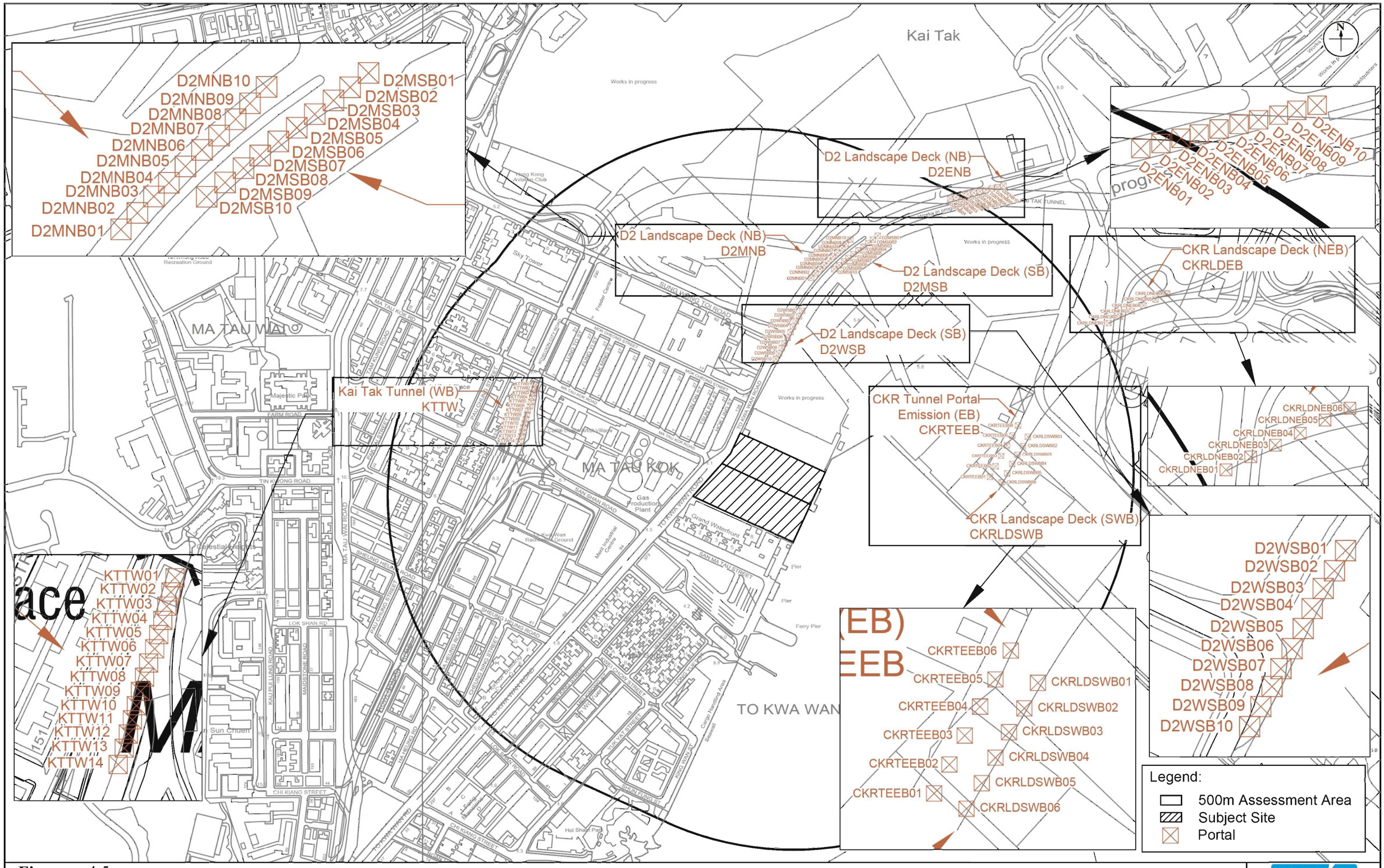


Figure: 4.5	RAMBOLL
Title: Location of Emissions from Portal	Drawn by: LT
	Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.1
	Date: May 2022

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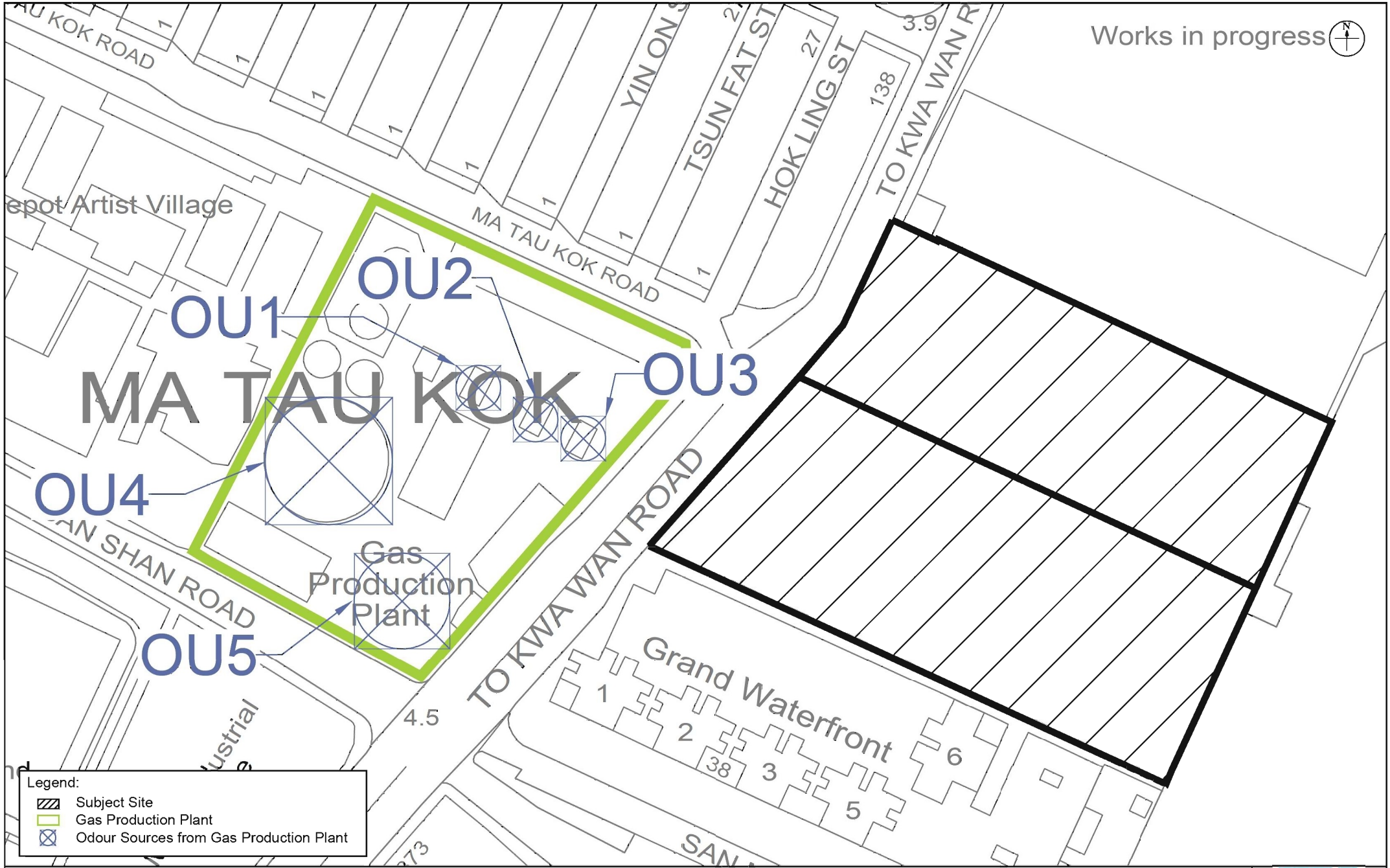

Figure: 4.6	RAMBOLL
Title: Location of Odour Sources within the Ma Tau Kok Gas Production Plant	Drawn by: LT Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: May 2022

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Appendix 1.1 Master Layout Plan of the Proposed Development

LEGEND

THE SCHEME AREA

PLANNED ROAD WIDENING WORKS IN AREA SHOWN AS "ROAD"

MOK CHEONG STREET 木廠街

MA TAU KOK ROAD 馬頭角道

TO KWA WAN ROAD 土瓜灣道

TO KWA WAN ROAD 土瓜灣道

10m-WIDE RETAIL BELT NOT EXCEEDING 2 STOREYS)
10米闊零售地帶

PODIUM 平台

RESIDENTIAL TOWER 住宅大樓

PODIUM 平台

RESIDENTIAL TOWER 住宅大樓

20m-WIDE WATERFRONT PROMENADE 20米闊海濱長廊

KC-019

about 25m

NON-BUILDING AREA 非建築用地

WATERFRONT PLAZA 海濱廣場

KC-018

PODIUM 平台

RESIDENTIAL TOWER 住宅大樓

PODIUM 平台

RESIDENTIAL TOWER 住宅大樓

20m-WIDE WATERFRONT PROMENADE 20米闊海濱長廊

NON-BUILDING AREA 非建築用地

N

(Notional layout subject to detailed design and liaison with relevant government departments upon DSP approval)

市區重建局
URBAN RENEWAL AUTHORITY

URA Ming Lun Street/ Ma Tau Kok Road (KC-018)
&
To Kwa Wan Road/ Ma Tau Kok Road (KC-019)
Development Scheme

Notional Design - Block Plan

FIGURE 1.1
NOT TO SCALE

KEY PLAN 索引圖

GRAND WATERFRONT
翔龍灣
+176mPD

KC-018

NOT MORE THAN
不高於
+120 mPD
R/F

RESIDENTIAL 33
住宅

30
25
20
15
10
5

TRANSFER PLATE
結構轉換層

NON-BUILDING AREA 非建築用地

B.L.

2/F RETAIL / GIC/ CLUBHOUSE/ E&M
零售/政府社區設施/會所/機電房

1/F COMMERCIAL/ RETAIL/ E&M
商業/ 零售/ 機電房

G/F COMMERCIAL/ RETAIL/ E&M
商業/ 零售/ 機電房

+3.6 mPD

B1 BASEMENT CARPARK/ L&UL/ E&M
地下停車場/上落貨設施/機電房

B2 BASEMENT CARPARK/ E&M 地下停車場/機電房

B3 BASEMENT CARPARK/ E&M 地下停車場/機電房

KC-019

NOT MORE THAN
不高於
+120 mPD
R/F

RESIDENTIAL 33
住宅

30
25
20
15
10
5

TRANSFER PLATE
結構轉換層

NON-BUILDING AREA 非建築用地

B.L.

2/F RETAIL / GIC/ CLUBHOUSE/ E&M
零售/政府社區設施/會所/機電房

1/F COMMERCIAL/ RETAIL/ E&M
商業/ 零售/ 機電房

G/F COMMERCIAL/ RETAIL/ E&M
商業/ 零售/ 機電房

B1 BASEMENT CARPARK/ L&UL/ E&M
地下停車場/上落貨設施/機電房

B2 BASEMENT CARPARK/ E&M 地下停車場/機電房

B3 BASEMENT CARPARK/ E&M 地下停車場/機電房

DEDICATED
REHOUSING ESTATE
專用安置屋邨項目

+100 mPD

+18.6 mPD

B.L.

2/F

1/F

G/F

B1

B2

B3

(Notional layout subject to detailed design and liaison with relevant government departments upon DSP approval)

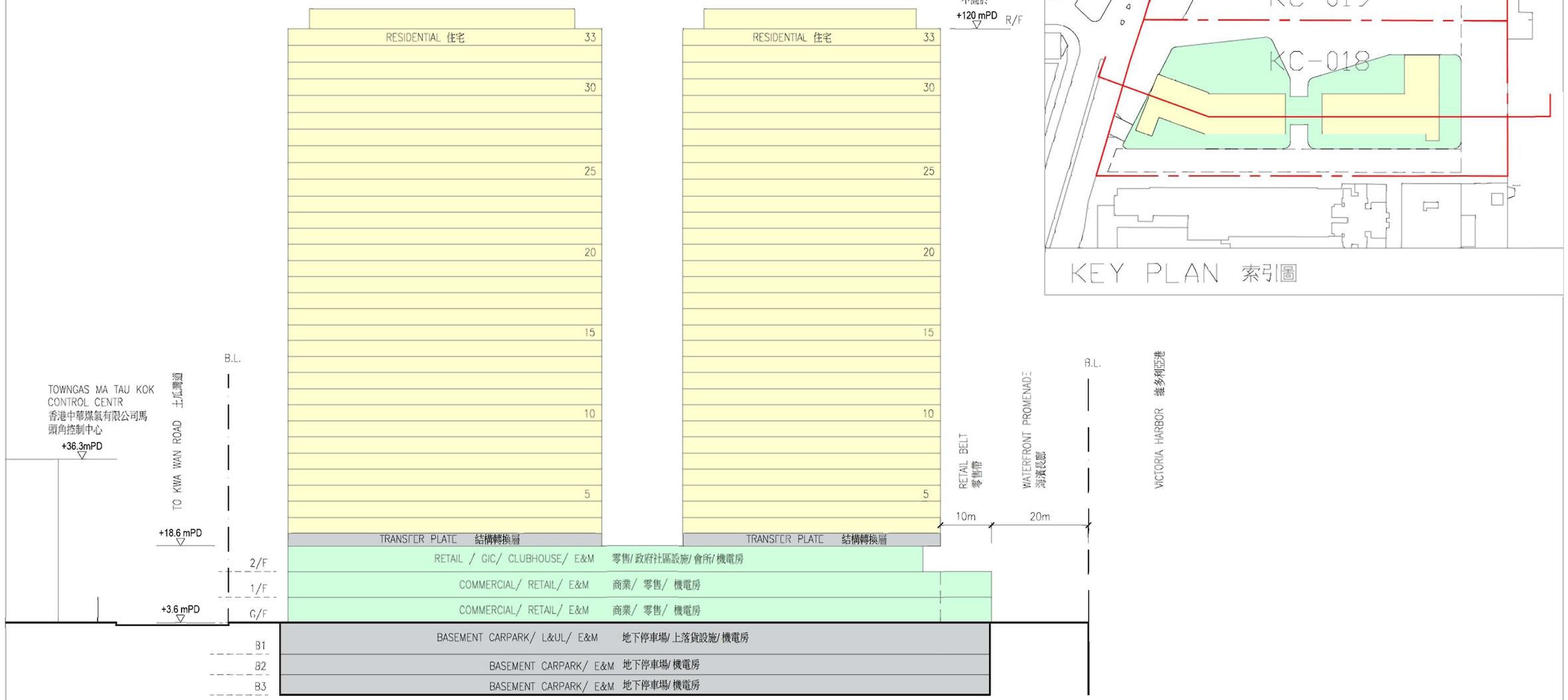
市區重建局
URBAN RENEWAL AUTHORITY

URA Ming Lun Street/ Ma Tau Kok Road (KC-018)
&
To Kwa Wan Road/ Ma Tau Kok Road (KC-019)
Development Scheme

Notional Design -
Schematic Section

FIGURE
1.2
NOT TO
SCALE

KC-018



(Notional layout subject to detailed design and liaison with relevant government departments upon DSP approval)

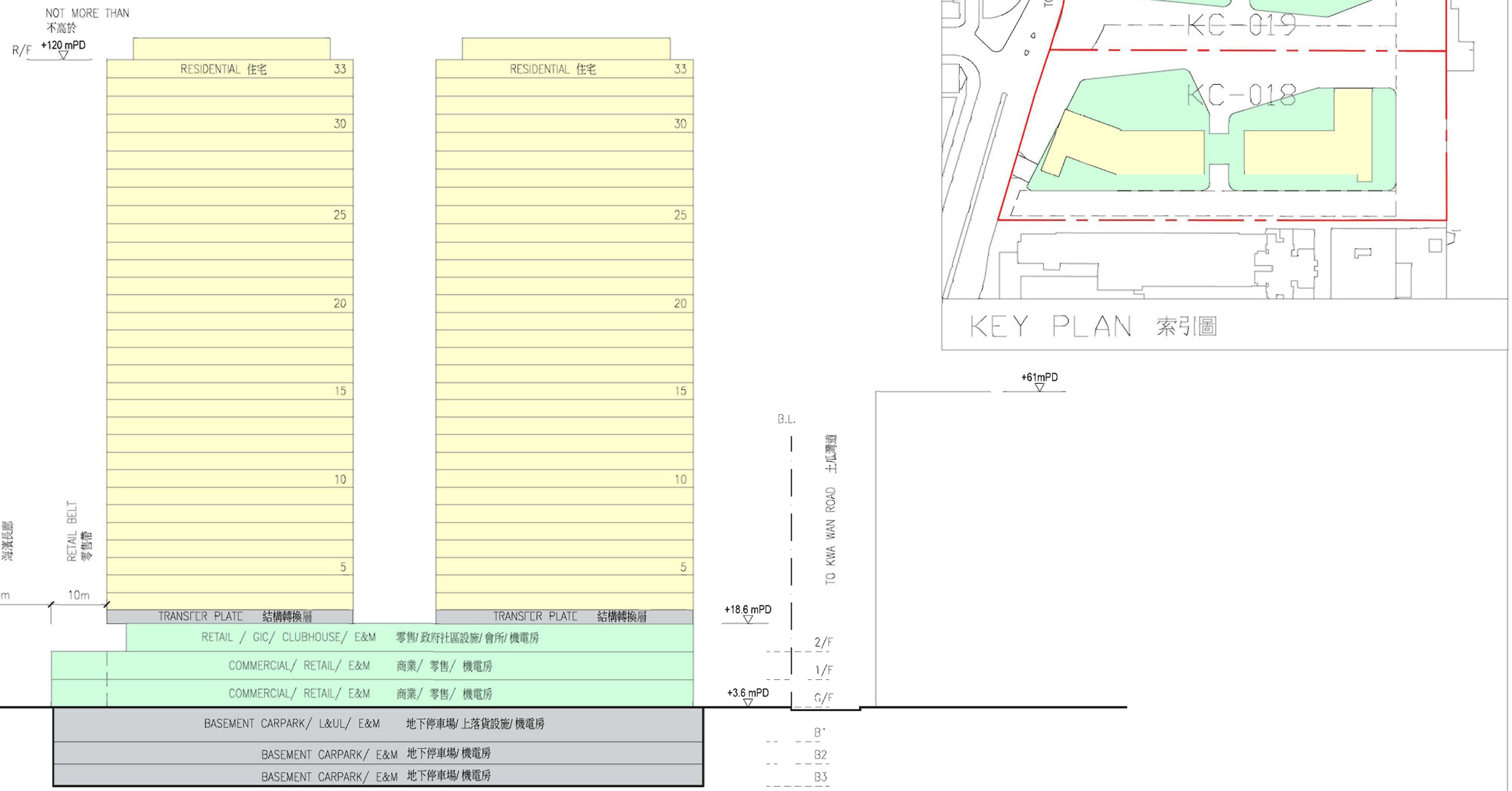
市區重建局
URBAN RENEWAL AUTHORITY

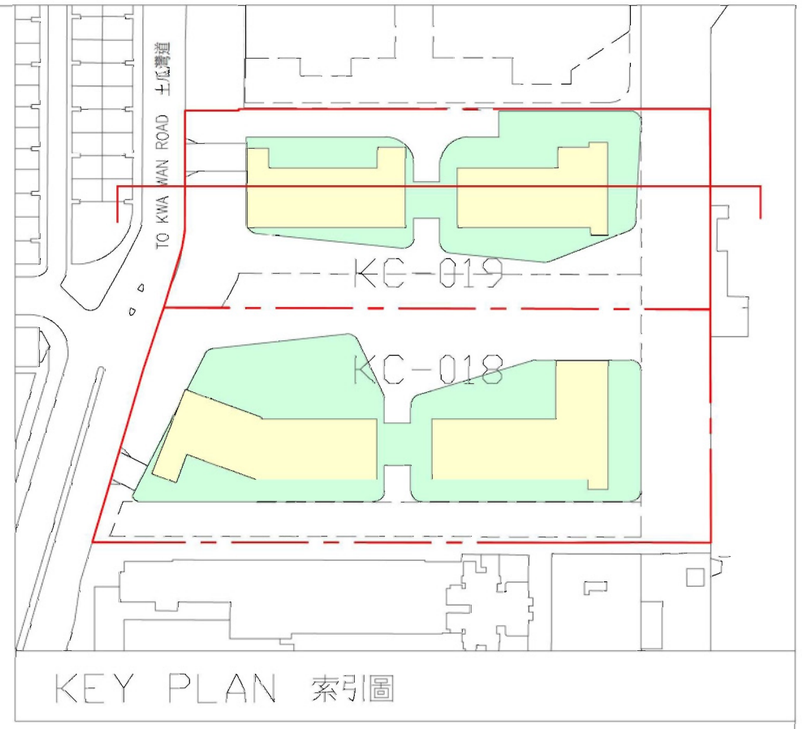
URA Ming Lun Street/ Ma Tau Kok Road (KC-018)
&
To Kwa Wan Road/ Ma Tau Kok Road (KC-019)
Development Scheme

Notional Design - Schematic Section

FIGURE 1.3
NOT TO SCALE

KC-019





(Notional layout subject to detailed design and liaison with relevant government departments upon DSP approval)

URBAN RENEWAL AUTHORITY 市區重建局

URA Ming Lun Street/ Ma Tau Kok Road (KC-018)
&
To Kwa Wan Road/ Ma Tau Kok Road (KC-019)
Development Scheme

Notional Design - Schematic Section

FIGURE 1.4
NOT TO SCALE

Appendix 2.1 Traffic Forecast for Year 2048

Project Title: URA KC-018 AND KC-019 IN MA TAU KOK	J7167	Figure No.: TNIA/5AB	Revision: B
Figure Title: LOCATION OF TRAFFIC DATA FOR TRAFFIC NOISE IMPACT ASSESSMENT		Designed by: THC / Drawn by: CCL / Checked by: KC; Scale in A3: N.T.S.; Date: 21 SEP 2022	

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

T:\JOB\J7150-J7199\J7167\Fig TNIA_5AB RevB.dwg

TABLE E – PEAK HOUR TRAFFIC FLOW AND VEHICLE COMPOSITION

YEAR 2048 TRAFFIC FORECAST

Date: 12 April 2022 Job No.: J7167

Link ID	Road Section	From Road	To Road	AM Peak Hour		
				Traffic Flows (veh/hr)	Vehicle Composition	
					LV	HV
L003	Shing Kai Road (NB)	Sung Wong Toi Road	Unnamed Road	900	77.7%	22.3%
L004	Shing Kai Road (SB)	Unnamed Road	Sung Wong Toi Road	850	76.8%	23.2%
L005	To Kwa Wan Road (NB)	Mok Cheung Street	Sung Wong Toi Road	1,150	71.4%	28.6%
L006	To Kwa Wan Road (SB)	Sung Wong Toi Road	Mok Cheong Street	650	73.2%	26.8%
L007	Sung Wong Toi Road (EB)	Kowloon City Road	Shing Kai Road	700	72.6%	27.4%
L008	Sung Wong Toi Road (WB)	To Kwa Wan Road	Kowloon City Road	1,050	69.7%	30.3%
L053	Mok Cheong Street (EB)	Kowloon City Road	To Kwa Wan Road	1,000	67.9%	32.1%
L054	To Kwa Wan Road (NB)	Ma Tau Chung Road	Mok Cheong Street	650	66.5%	33.5%
L055	To Kwa Wan Road (SB)	Mok Cheong Street	Ma Tau Chung Road	1,250	67.6%	32.4%
L056	Ma Tau Kok Road (WB)	To Kwa Wan Road	Kowloon City Road	500	61.8%	38.2%
L084	San Shan Road (EB)	Kai Tak Tunnel	To Kwa Wan Road	800	75.5%	24.5%
L085	East Kowloon Corridor (SB)	Kai Tak Tunnel	San Shan Road	1,350	67.8%	32.2%
L086	San Shan Road (WB)	To Kwa Wan Road	East Kowloon Corridor	500	61.9%	38.1%
L087	To Kwa Wan Road (NB)	San Shan Road	Ma Tau Kok Road	1,100	64.1%	35.9%
L088	To Kwa Wan Road (SB)	Ma Tau Kok Road	San Ma Tau Street	1,200	66.1%	33.9%
L089	San Ma Tau Street (EB)	To Kwa Wan Road	End of section	450	63.7%	36.3%
L090	San Ma Tau Street (WB)	End of section	To Kwa Wan Road	450	46.3%	53.7%
L091	To Kwa Wan Road (NB)	San Ma Tau Street	San Shan Road	750	58.9%	41.1%
L092	To Kwa Wan Road (SB)	San Ma Tau Street	San Ma Tau Street	1,200	65.4%	34.6%
L093	San Ma Tau Street (EB)	To Kwa Wan Road	Mei King Street	450	66.8%	33.2%
L094	San Ma Tau Street (EB)	Mei King Street	Wai King Street	500	66.2%	33.8%
L095	San Ma Tau Street (EB)	Wai King Street	Long Yuet Street	300	66.1%	33.9%
L096	Long Yuet Street (SB)	San Ma Tau Street	Shun Fung Street	300	63.1%	36.9%
L097	Wai King Street (SB)	San Ma Tau Street	Kwei Chow Street	250	65.7%	34.3%
L098	Mei King Street (NB)	Kwei Chow Street	San Ma Tau Street	100	46.1%	53.9%
L099	To Kwa Wan Road (SB)	San Ma Tau Street	Kwei Chow Street	1,000	64.2%	35.8%
L100	To Kwa Wan Road (NB)	Kwei Chow Street	San Ma Tau Street	950	59.7%	40.3%
L101	Kwei Chow Street (WB)	Mei King Street	To Kwa Wan Road	350	58.2%	41.8%
L102	Kwei Chow Street (WB)	Mei King Street	Mei Kwong Street	550	56.4%	43.6%
L158	Central Kowloon Route (EB)	Central Kowloon Route	Central Kowloon Route	2,950	68.7%	31.3%
L159	Central Kowloon Route (WB)	Central Kowloon Route	Central Kowloon Route	4,750	61.6%	38.4%

Note: "LV" includes motorcycle, private car and taxi

"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bus

TABLE E – PEAK HOUR TRAFFIC FLOW AND VEHICLE COMPOSITION

YEAR 2048 TRAFFIC FORECAST

Date: 12 April 2022 Job No.: J7167

Link ID	Road Section	From Road	To Road	PM Peak Hour		
				Traffic Flows (veh/hr)	Vehicle Composition	
					LV	HV
L003	Shing Kai Road (NB)	Sung Wong Toi Road	Unnamed Road	1,050	75.2%	24.8%
L004	Shing Kai Road (SB)	Unnamed Road	Sung Wong Toi Road	700	74.1%	25.9%
L005	To Kwa Wan Road (NB)	Mok Cheung Street	Sung Wong Toi Road	1,200	74.1%	25.9%
L006	To Kwa Wan Road (SB)	Sung Wong Toi Road	Mok Cheong Street	650	73.8%	26.2%
L007	Sung Wong Toi Road (EB)	Kowloon City Road	Shing Kai Road	800	76.7%	23.3%
L008	Sung Wong Toi Road (WB)	To Kwa Wan Road	Kowloon City Road	1,050	72.4%	27.6%
L053	Mok Cheong Street (EB)	Kowloon City Road	To Kwa Wan Road	900	68.9%	31.1%
L054	To Kwa Wan Road (NB)	Ma Tau Chung Road	Mok Cheong Street	750	73.0%	27.0%
L055	To Kwa Wan Road (SB)	Mok Cheong Street	Ma Tau Chung Road	1,050	68.3%	31.7%
L056	Ma Tau Kok Road (WB)	To Kwa Wan Road	Kowloon City Road	600	62.7%	37.3%
L084	San Shan Road (EB)	Kai Tak Tunnel	To Kwa Wan Road	700	75.4%	24.6%
L085	East Kowloon Corridor (SB)	Kai Tak Tunnel	San Shan Road	1,500	82.7%	17.3%
L086	San Shan Road (WB)	To Kwa Wan Road	East Kowloon Corridor	400	73.3%	26.7%
L087	To Kwa Wan Road (NB)	San Shan Road	Ma Tau Kok Road	1,300	69.9%	30.1%
L088	To Kwa Wan Road (SB)	Ma Tau Kok Road	San Ma Tau Street	1,000	66.6%	33.4%
L089	San Ma Tau Street (EB)	To Kwa Wan Road	End of section	400	55.2%	44.8%
L090	San Ma Tau Street (WB)	End of section	To Kwa Wan Road	450	64.1%	35.9%
L091	To Kwa Wan Road (NB)	San Ma Tau Street	San Shan Road	1,000	63.9%	36.1%
L092	To Kwa Wan Road (SB)	San Ma Tau Street	San Ma Tau Street	1,100	66.6%	33.4%
L093	San Ma Tau Street (EB)	To Kwa Wan Road	Mei King Street	400	66.8%	33.2%
L094	San Ma Tau Street (EB)	Mei King Street	Wai King Street	500	68.7%	31.3%
L095	San Ma Tau Street (EB)	Wai King Street	Long Yuet Street	250	64.2%	35.8%
L096	Long Yuet Street (SB)	San Ma Tau Street	Shun Fung Street	250	65.0%	35.0%
L097	Wai King Street (SB)	San Ma Tau Street	Kwei Chow Street	300	72.6%	27.4%
L098	Mei King Street (NB)	Kwei Chow Street	San Ma Tau Street	100	79.7%	20.3%
L099	To Kwa Wan Road (SB)	San Ma Tau Street	Kwei Chow Street	850	65.2%	34.8%
L100	To Kwa Wan Road (NB)	Kwei Chow Street	San Ma Tau Street	1,200	63.1%	36.9%
L101	Kwei Chow Street (WB)	Mei King Street	To Kwa Wan Road	400	73.8%	26.2%
L102	Kwei Chow Street (WB)	Mei King Street	Mei Kwong Street	650	71.8%	28.2%
L158	Central Kowloon Route (EB)	Central Kowloon Route	Central Kowloon Route	3,400	62.9%	37.1%
L159	Central Kowloon Route (WB)	Central Kowloon Route	Central Kowloon Route	4,300	62.4%	37.6%

Note: "LV" includes motorcycle, private car and taxi

"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bus

Appendix 2.2 Predicted Road Traffic Noise [$L10_{(1hr)}$ dB(A)] at Selected Receivers under Base Case Scenario

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

Result Summary (Detail)(Site 5A)(KC-018)- Base Case (AM)

| | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

| | | 5A-B | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

| | | 5A-A | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

| | | Z | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(PM)

Result Summary (Detail)(Site 5A)(KC-018)- Base Case (PM)

| | | LZ | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(PM)

| | | 5A-B | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(PM)

| | | 5A-A | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(PM)

| | | HZ | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

Result Summary (Detail)(Site 5B)(KC-019)- Base Case (AM)

		LZ																																							
		5B-A																																								
		1			2		3		4	5		6		7		8				9				10	11		12		13			14			15	16						
GBP Floor	mPD,m	C01-1	C01-1A	C01-2	C02-1	C02-2	C03-1	C03-2	C04-1	C05-1	C05-2	C06-1	C06-2	C07-1	C07-2	C08-1	C08-2	C08-3	C08-3A	C09-1	C09-2	C09-3	C10-1	C10-2	C11-1	C11-2	C12-1	C12-2	C13-1	C13-2	C13-2A	C14-1	C14-1A	C14-2	C15-1	C16-1	C16-2	C16-2A			
3F	22.3	78	70	67	68	68	68	67	66	65	64	64	63	63	62	62	65	66	56	65	66	66	67	67	68	69	69	70	70	71	71	71	71	72	73	75	76	77			
4F	25.4	77	70	68	70	70	70	69	68	68	67	67	66	66	65	65	67	66	57	66	67	67	68	68	69	69	69	70	70	71	71	71	72	72	74	75	76	77			
5F	28.6	77	70	68	70	70	70	70	69	69	68	68	67	67	66	66	67	66	57	67	67	68	68	68	69	69	69	70	70	71	71	72	72	73	74	74	75	76			
6F	31.8	77	70	68	70	70	70	70	69	69	68	68	67	67	67	66	67	66	57	67	67	68	68	68	69	69	69	70	71	71	71	72	72	72	74	74	75	76			
7F	34.9	77	70	68	69	70	70	70	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	70	70	71	71	71	72	72	72	73	74	75	76			
8F	38	76	70	68	69	70	70	70	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	70	70	71	71	71	71	72	72	73	74	75	76			
9F	41.2	76	69	68	69	70	70	70	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	70	70	70	71	71	71	71	72	73	74	74	76			
10F	44.4	76	69	67	69	70	70	69	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	69	70	70	71	71	71	71	72	73	73	74	75			
11F	47.5	76	69	67	69	70	70	69	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	69	70	70	70	71	71	71	72	73	73	74	75			
12F	50.6	75	69	67	69	69	69	69	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	69	70	70	70	71	71	71	71	72	73	74	75			
13F	53.8	75	69	67	69	69	69	69	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	69	70	70	70	70	71	71	71	72	73	74	75			
14F	57	75	69	67	68	69	69	69	69	68	68	68	67	67	67	67	67	66	57	67	67	68	68	68	68	69	69	70	70	70	70	71	71	71	72	73	74	75			
15F	60.1	75	68	67	68	69	69	69	69	68	68	68	67	67	67	66	67	66	57	67	67	68	68	68	68	69	69	69	70	70	70	70	71	71	72	72	73	74			
16F	63.2	75	68	67	68	69	69	69	68	68	68	68	67	67	67	66	67	66	57	67	67	67	68	68	68	69	69	69	70	70	70	70	70	71	72	72	73	74			
17F	66.4	75	68	66	68	69	69	69	68	68	68	67	67	67	66	66	67	66	57	67	67	67	68	68	68	69	69	69	70	70	70	70	70	71	72	72	73	74			
18F	69.6	74	68	66	68	69	69	69	68	68	67	67	67	67	66	66	67	66	57	67	67	67	68	68	68	69	69	69	69	70	70	70	70	71	71	72	73	74			
19F	72.7	74	68	66	68	68	69	68	68	68	67	67	67	67	66	66	67	66	57	67	67	67	68	68	68	68	69	69	69	70	70	70	70	71	71	72	73	74			
20F	75.8	74	68	66	68	68	68	68	68	68	67	67	67	66	66	66	67	66	57	67	67	67	67	68	68	68	69	69	69	69	70	70	70	70	71	72	73	74			
21F	79	74	68	66	67	68	68	68	68	68	67	67	67	66	66	66	66	66	57	67	67	67	67	68	68	68	68	69	69	69	69	70	70	70	71	72	72	73			
22F	82.2	74	67	66	67	68	68	68	68	68	67	67	66	66	66	66	66	66	57	67	67	67	67	68	68	68	68	69	69	69	69	70	70	70	71	71	72	73			
23F	85.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
24F	88.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
25F	91.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
26F	94.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
27F	97.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
28F	101	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
29F	104.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
30F	107.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
31F	110.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
32F	114.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
33F	117.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/			
Max Noise Level, dB(A)		**78**	**70**	**68**	**70**	**70**	**70**	**70**	**69**	**69**	**68**	**68**	**67**	**67**	**67**	**67**	**67**	**66**	**57**	**67**	**67**	**68**	**68**	**68**	**69**	**69**	**70**	**70**	**71**	**71**	**71**	**72**	**72**	**73**	**74**	**75**	**76**	**77**			
No. of Exceedance Per NSR		**20**	**0**	**0**	**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**	**8**	**10**	**12**	**13**	**17**	**20**	**20**	**20**	**20**			

Legend	
Exceeded Hong Kong Planning Standard Guidelines' Standard of 70 dB(A)	

/ Non-residential unit

*** The assessment point is located at 1m in front of the most exposed part of an openable window for ventilation at a habitable room (NSRs) and 1.2m above the floor level of individual floors of the residential towers of the proposed development.**

No. of Exceedance	
Total no. of units	950
Total no. of units with exceedance	111
	78
Max SPL	#
Compliance %	88%

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

		5B-B																															
		1		2		3		4		5		6	7	8				9		10				11		12		13		14		15	
GBP Floor	mPD,m	D01-1	D01-2	D02-1	D02-2	D03-1	D03-2	D04-1	D04-2	D05-1	D05-2	D06-1	D07-1	D08-1	D08-2	D08-3	D08-4	D09-1	D09-2	D10-1	D10-2	D10-3	D10-4	D11-1	D11-2	D12-1	D12-2	D13-1	D13-2	D14-1	D14-2	D15-1	D15-2
3F	22.3	63	63	63	62	62	61	61	61	60	60	60	59	58	60	57	49	50	51	55	55	56	56	58	57	58	57	58	58	59	58	59	62
4F	25.4	64	64	64	63	63	63	63	62	62	62	61	61	58	60	57	50	50	51	55	55	56	57	61	60	60	61	61	62	62	60	60	63
5F	28.6	65	64	64	64	64	63	63	63	63	62	62	62	58	60	57	50	50	51	55	56	57	57	62	62	62	62	62	63	63	61	61	64
6F	31.8	65	65	65	64	64	63	63	63	63	63	62	62	58	60	57	50	50	51	55	56	57	58	62	62	62	63	63	63	63	61	61	64
7F	34.9	65	65	65	64	64	64	64	63	63	63	63	62	59	60	58	51	51	52	55	56	58	58	63	62	62	63	63	63	63	61	62	64
8F	38	65	65	65	65	64	64	64	64	63	63	63	63	59	60	58	51	51	52	55	56	58	58	63	62	62	63	63	64	64	62	62	64
9F	41.2	66	65	65	65	65	64	64	64	64	63	63	63	60	60	58	51	51	52	55	57	58	58	63	62	63	63	63	64	64	62	62	64
10F	44.4	66	66	65	65	65	64	64	64	64	64	63	63	60	60	58	51	52	53	55	57	58	58	63	62	63	63	63	64	64	62	62	64
11F	47.5	66	66	66	65	65	64	64	64	64	64	64	63	61	61	58	52	52	53	55	57	58	58	63	63	63	63	63	64	64	62	62	64
12F	50.6	66	66	66	65	65	64	64	64	64	64	64	64	61	61	58	52	52	53	55	57	58	58	63	63	63	63	63	64	64	62	62	64
13F	53.8	66	66	66	65	65	65	64	64	64	64	64	64	60	60	58	52	53	53	56	57	58	58	63	63	63	63	63	64	65	62	62	64
14F	57	66	66	66	65	65	65	65	64	64	64	64	64	61	61	59	53	53	54	56	57	58	58	63	63	63	63	63	64	65	62	62	64
15F	60.1	66	66	66	65	65	65	65	64	64	64	64	64	61	61	59	53	53	54	56	57	58	59	63	63	63	63	64	65	65	62	62	64
16F	63.2	66	66	66	66	65	65	65	64	64	64	64	64	61	61	59	54	54	55	56	58	58	59	63	63	63	63	64	65	65	62	62	64
17F	66.4	66	66	66	66	65	65	65	65	64	64	64	64	61	61	59	54	54	55	57	58	58	59	63	63	63	63	64	65	65	62	62	64
18F	69.6	66	66	66	66	65	65	65	65	65	64	65	64	62	61	59	54	55	56	57	58	58	59	63	63	63	63	64	65	65	62	62	64
19F	72.7	66	66	66	66	65	65	65	65	65	64	65	64	62	62	60	55	55	56	57	58	59	59	63	63	63	63	64	65	65	62	62	64
20F	75.8	66	66	66	66	65	65	65	65	65	64	65	65	62	62	60	55	56	57	57	58	59	59	63	63	63	63	64	65	65	62	62	64
21F	79	66	66	66	66	65	65	65	65	65	64	65	65	62	62	60	56	56	57	58	59	59	59	63	63	63	63	64	65	65	62	62	64
22F	82.2	66	66	66	66	65	65	65	65	65	64	65	65	62	62	60	56	57	57	58	59	59	60	63	63	63	63	64	65	65	62	62	64
23F	85.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24F	88.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25F	91.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26F	94.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27F	97.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28F	101	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29F	104.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30F	107.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
31F	110.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32F	114.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33F	117.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Max Noise Level, dB(A)		**66**	**66**	**66**	**66**	**65**	**65**	**65**	**65**	**65**	**64**	**65**	**65**	**62**	**62**	**60**	**56**	**57**	**57**	**58**	**59**	**59**	**60**	**63**	**63**	**63**	**63**	**64**	**65**	**65**	**62**	**62**	**64**
No. of Exceedance Per NSR		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

		HZ																																						
		5B-A																																							
		1			2		3		4	5		6		7		8				9				10	11		12		13			14			15	16					
GBP Floor	mPD,m	CH01-1	CH01-1A	CH01-2	CH02-1	CH02-2	CH03-1	CH03-2	CH04-1	CH05-1	CH05-2	CH06-1	CH06-2	CH07-1	CH07-2	CH08-1	CH08-2	CH08-3	CH08-3A	CH09-1	CH09-2	CH09-3	CH10-1	CH10-2	CH11-1	CH11-2	CH12-1	CH12-2	CH13-1	CH13-2	CH13-2A	CH14-1	CH14-1A	CH14-2	CH15-1	CH16-1	CH16-2	CH16-2A
3F	22.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4F	25.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5F	28.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6F	31.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7F	34.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8F	38	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9F	41.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10F	44.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11F	47.5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12F	50.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13F	53.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14F	57	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15F	60.1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16F	63.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17F	66.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18F	69.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19F	72.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20F	75.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21F	79	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22F	82.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23F	85.3	74	67	66	67	68	68	68	68	67	67	67	66	66	66	66	66	66	57	67	67	67	67	67	68	68	68	69	69	69	69	69	70	70	71	71	72	73
24F	88.4	74	67	66	67	68	68	68	68	67	67	67	66	66	66	66	66	65	57	66	67	67	67	67	68	68	68	68	69	69	69	69	69	70	71	71	72	73
25F	91.6	73	67	65	67	68	68	68	68	67	67	67	66	66	66	66	66	65	57	66	67	67	67	67	67	68	68	68	69	69	69	69	69	70	70	71	72	73
26F	94.8	73	67	65	67	68	68	68	67	67	67	67	66	66	66	66	66	65	57	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	70	71	72	73
27F	97.9	73	67	65	67	68	68	68	67	67	67	66	66	66	66	66	66	65	58	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	70	71	72	73
28F	101	73	67	65	67	67	68	67	67	67	67	66	66	66	66	65	66	65	58	66	66	67	67	67	67	68	68	68	68	69	69	69	69	69	70	71	72	73
29F	104.2	73	67	65	67	67	67	67	67	67	66	66	66	66	65	65	66	65	58	66	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	71	71	73
30F	107.4	73	67	65	66	67	67	67	67	67	66	66	66	66	65	65	66	65	58	66	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	71	71	72
31F	110.7	73	66	65	66	67	67	67	67	67	66	66	66	65	65	65	66	65	58	66	66	66	67	67	67	67	67	68	68	68	68	68	69	69	70	70	71	72
32F	114.2	73	66	65	66	67	67	67	67	67	66	66	66	65	65	65	66	65	59	66	66	66	66	67	67	67	67	68	68	68	68	68	68	69	69	70	70	71	72
33F	117.7	73	66	65	66	67	67	67	67	67	66	66	66	65	65	65	66	65	60	66	66	66	66	67	67	67	67	68	68	68	68	68	68	69	69	70	70	71	72
Max Noise Level, dB(A)		**74**	**67**	**66**	**67**	**68**	**68**	**68**	**68**	**67**	**67**	**67**	**66**	**66**	**66**	**66**	**66**	**66**	**60**	**67**	**67**	**67**	**67**	**67**	**68**	**68**	**68**	**69**	**69**	**69**	**69**	**69**	**70**	**70**	**71**	**71**	**72**	**73**
No. of Exceedance Per NSR		**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	**11**	**11**

Max Noise Level, dB(A)		**74**	**67**	**66**	**67**	**68**	**68**	**68**	**68**	**67**	**67**	**67**	**66**	**66**	**66**	**66**	**66**	**66**	**60**	**67**	**67**	**67**	**67**	**67**	**68**	**68**	**68**	**69**	**69**	**69**	**69**	**69**	**70**	**70**	**71**	**71**	**72**	**73**
No. of Exceedance Per NSR		**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	**11**	**11**

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

		5B-B																															
		1		2		3		4		5		6	7	8				9		10				11		12		13		14		15	
GBP Floor	mPD,m	DH01-1	DH01-2	DH02-1	DH02-2	DH03-1	DH03-2	DH04-1	DH04-2	DH05-1	DH05-2	DH06-1	DH07-1	DH08-1	DH08-2	DH08-3	DH08-4	DH09-1	DH09-2	DH10-1	DH10-2	DH10-3	DH10-4	DH11-1	DH11-2	DH12-1	DH12-2	DH13-1	DH13-2	DH14-1	DH14-2	DH15-1	DH15-2
3F	22.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4F	25.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5F	28.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6F	31.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7F	34.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8F	38	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9F	41.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10F	44.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11F	47.5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12F	50.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13F	53.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14F	57	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15F	60.1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16F	63.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17F	66.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18F	69.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19F	72.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20F	75.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21F	79	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22F	82.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23F	85.3	66	66	66	66	65	65	65	65	65	64	65	65	62	63	60	57	57	58	58	59	59	60	63	63	63	63	64	65	65	62	62	64
24F	88.4	66	66	66	66	65	65	65	65	65	64	65	65	62	63	61	57	58	58	59	60	60	60	63	63	63	63	64	65	65	62	62	64
25F	91.6	66	66	66	66	65	65	65	65	65	64	65	65	63	63	61	58	58	59	59	60	60	60	63	63	63	63	64	65	65	62	63	64
26F	94.8	66	66	66	66	65	65	65	65	65	64	65	65	63	63	61	59	59	60	60	60	61	61	63	63	63	63	64	65	65	62	63	64
27F	97.9	66	66	66	66	65	65	65	65	65	64	65	65	63	63	62	59	60	60	60	61	61	61	63	63	63	63	64	65	65	62	63	64
28F	101	66	66	66	66	65	65	65	65	65	64	65	65	63	64	62	60	60	60	60	61	61	61	63	63	63	63	64	65	65	63	63	64
29F	104.2	66	66	66	66	65	65	65	65	65	64	65	65	64	64	62	60	60	61	61	61	61	62	63	63	63	63	64	65	65	63	63	65
30F	107.4	66	66	66	66	65	65	65	65	65	64	65	65	64	64	63	61	61	61	61	62	62	62	63	63	63	63	64	65	65	63	63	65
31F	110.7	66	66	66	66	65	65	65	65	65	64	65	65	64	64	63	62	62	62	62	62	63	63	63	63	63	63	64	65	66	63	63	65
32F	114.2	66	66	66	66	65	65	65	65	65	64	65	65	64	65	63	62	62	63	63	63	63	63	63	63	63	63	64	65	66	63	63	65
33F	117.7	66	66	66	66	65	65	65	65	65	65	65	65	65	65	64	62	63	63	63	63	63	64	63	63	63	63	64	65	66	63	64	65
Max Noise Level, dB(A)		**66**	**66**	**66**	**66**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**64**	**62**	**63**	**63**	**63**	**63**	**63**	**64**	**63**	**63**	**63**	**63**	**64**	**65**	**66**	**63**	**64**	**65**
No. of Exceedance Per NSR		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Result Summary (Detail) [Site 5B] (KC-019) - Base Case [PM)

																																							LZ		
		5B-A																																						
		1			2		3		4	5		6		7		8					9				10	11		12		13			14			15	16			
GBP Floor	mPD,m	C01-1	C01-1A	C01-2	C02-1	C02-2	C03-1	C03-2	C04-1	C05-1	C05-2	C06-1	C06-2	C07-1	C07-2	C08-1	C08-2	C08-3	C08-3A	C09-1	C09-2	C09-3	C10-1	C10-2	C11-1	C11-2	C12-1	C12-2	C13-1	C13-2	C13-2A	C14-1	C14-1A	C14-2	C15-1	C16-1	C16-2	C16-2A
3F	22.3	77	69	66	68	68	67	66	65	65	64	63	63	62	62	61	65	66	56	65	66	66	67	67	68	68	69	69	70	70	71	71	71	72	73	74	75	76
4F	25.4	77	70	68	69	69	69	68	68	67	67	66	65	65	65	64	66	66	56	66	66	67	67	68	68	69	69	70	70	71	71	71	71	72	73	74	75	76
5F	28.6	77	69	68	69	70	70	69	69	68	67	67	66	66	66	65	66	66	56	66	67	67	68	68	68	69	69	70	70	71	71	71	72	72	73	74	75	76
6F	31.8	76	69	67	69	70	70	69	69	68	68	67	67	66	66	66	66	66	56	67	67	67	68	68	68	69	69	70	70	71	71	71	72	72	73	74	75	76
7F	34.9	76	69	67	69	69	70	69	69	68	68	67	67	66	66	66	66	66	56	67	67	67	68	68	68	69	69	70	70	71	71	71	71	72	73	74	75	76
8F	38	76	69	67	69	69	69	69	69	68	68	67	67	66	66	66	66	66	57	67	67	67	68	68	68	69	69	70	70	71	71	71	71	72	73	73	74	75
9F	41.2	76	69	67	69	69	69	69	69	68	68	67	67	67	66	66	67	66	57	67	67	67	68	68	69	69	69	70	70	70	71	71	71	72	73	73	74	75
10F	44.4	75	69	67	69	69	69	69	69	68	68	67	67	67	66	66	67	66	57	67	67	67	68	68	68	69	69	70	70	70	71	71	71	71	72	73	74	75
11F	47.5	75	69	67	68	69	69	69	68	68	68	67	67	67	66	66	67	66	57	67	67	67	68	68	68	69	69	70	70	70	70	71	71	71	72	73	74	75
12F	50.6	75	68	67	68	69	69	69	68	68	68	67	67	67	66	66	67	66	57	67	67	67	68	68	68	69	69	69	70	70	70	70	71	71	72	73	73	75
13F	53.8	75	68	66	68	69	69	69	68	68	67	67	67	66	66	66	66	66	57	67	67	67	68	68	68	69	69	69	70	70	70	70	70	71	72	72	73	74
14F	57	75	68	66	68	69	69	68	68	68	67	67	67	66	66	66	66	66	57	67	67	67	68	68	68	69	69	69	70	70	70	70	70	71	72	72	73	74
15F	60.1	74	68	66	68	68	68	68	68	68	67	67	67	66	66	66	66	66	57	67	67	67	68	68	68	69	69	69	70	70	70	70	70	71	72	72	73	74
16F	63.2	74	68	66	68	68	68	68	68	68	67	67	66	66	66	66	66	66	57	67	67	67	67	68	68	68	69	69	69	70	70	70	70	71	71	72	73	74
17F	66.4	74	68	66	67	68	68	68	68	68	67	67	66	66	66	66	66	65	57	67	67	67	67	68	68	68	69	69	69	69	70	70	70	70	71	72	73	74
18F	69.6	74	67	66	67	68	68	68	68	67	67	67	66	66	66	66	66	65	57	67	67	67	67	68	68	68	68	69	69	69	69	70	70	70	71	72	72	73
19F	72.7	74	67	66	67	68	68	68	68	67	67	67	66	66	66	66	66	65	57	67	67	67	67	68	68	68	68	69	69	69	69	70	70	70	71	71	72	73
20F	75.8	74	67	66	67	68	68	68	67	67	67	67	66	66	66	66	66	65	57	66	67	67	67	67	68	68	68	69	69	69	69	69	70	70	71	71	72	73
21F	79	74	67	65	67	68	68	68	67	67	67	66	66	66	66	65	66	65	57	66	67	67	67	67	68	68	68	68	69	69	69	69	69	70	71	71	72	73
22F	82.2	73	67	65	67	68	68	68	67	67	67	66	66	66	65	65	66	65	57	66	66	67	67	67	67	68	68	68	69	69	69	69	69	70	70	71	72	73
23F	85.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24F	88.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25F	91.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26F	94.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27F	97.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28F	101	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29F	104.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30F	107.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
31F	110.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32F	114.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33F	117.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Max Noise Level, dB(A)		**77**	**70**	**68**	**69**	**70**	**70**	**69**	**69**	**68**	**68**	**67**	**67**	**67**	**66**	**66**	**67**	**66**	**57**	**67**	**67**	**67**	**68**	**68**	**69**	**69**	**69**	**70**	**70**	**71**	**71**	**71**	**72**	**72**	**73**	**74**	**75**	**76**
No. of Exceedance Per NSR		**20**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**8**	**9**	**10**	**14**	**19**	**20**	**20**	**20**

Legend	
Exceeded Hong Kong Planning Standard Guidelines' Standard of 70 dB(A)	

/ Non-residential unit

*** The assessment point is located at 1m in front of the most exposed part of an openable window for ventilation at a habitable room (NSRs) and 1.2m above the floor level of individual floors of the residential towers of the proposed development.**

No. of Exceedance	
Total no. of units	950
Total no. of units with exceedance	103
Max SPL	77
Compliance %	89%

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(PM)

		5B-B																															
		1		2		3		4		5		6	7	8				9		10				11		12		13		14		15	
GBP Floor	mPD,m	D01-1	D01-2	D02-1	D02-2	D03-1	D03-2	D04-1	D04-2	D05-1	D05-2	D06-1	D07-1	D08-1	D08-2	D08-3	D08-4	D09-1	D09-2	D10-1	D10-2	D10-3	D10-4	D11-1	D11-2	D12-1	D12-2	D13-1	D13-2	D14-1	D14-2	D15-1	D15-2
3F	22.3	63	63	62	62	62	61	61	61	60	60	59	59	57	59	56	49	49	51	54	55	56	56	58	56	57	57	57	58	58	58	58	62
4F	25.4	64	64	64	63	63	63	63	62	62	62	61	61	57	59	57	49	49	51	54	55	56	56	60	59	60	60	61	61	62	60	60	63
5F	28.6	65	64	64	64	63	63	63	63	63	62	62	62	58	59	57	50	50	51	54	55	57	57	62	61	61	62	62	62	63	60	60	63
6F	31.8	65	65	64	64	64	63	63	63	63	63	62	62	58	59	57	50	50	51	55	56	57	57	62	62	62	62	62	63	63	60	61	64
7F	34.9	65	65	65	64	64	64	63	63	63	63	62	62	58	59	57	50	50	51	54	56	57	58	62	62	62	62	62	63	63	61	61	64
8F	38	65	65	65	64	64	64	64	63	63	63	63	63	59	59	57	50	50	52	55	56	57	58	62	62	62	62	62	63	63	61	61	64
9F	41.2	65	65	65	65	64	64	64	64	63	63	63	63	59	60	57	51	51	52	55	56	57	58	62	62	62	62	63	63	64	61	61	64
10F	44.4	65	65	65	65	65	64	64	64	64	63	63	63	60	60	58	51	51	52	55	56	57	58	62	62	62	62	63	63	64	61	61	64
11F	47.5	65	66	65	65	65	64	64	64	64	63	63	63	60	60	58	51	51	52	55	56	57	58	62	62	62	63	63	64	64	61	61	64
12F	50.6	65	66	65	65	65	64	64	64	64	64	64	63	60	60	57	52	52	53	55	57	57	58	62	62	62	63	63	64	64	61	61	64
13F	53.8	66	66	66	65	65	64	64	64	64	64	64	64	60	60	58	52	52	53	55	57	57	58	63	62	62	63	63	64	64	61	61	64
14F	57	66	66	66	65	65	64	64	64	64	64	64	64	60	60	58	52	52	53	55	57	58	58	63	62	62	63	63	64	64	61	61	64
15F	60.1	66	66	66	65	65	64	64	64	64	64	64	64	61	60	58	53	53	54	56	57	58	58	63	62	63	63	63	64	64	61	61	64
16F	63.2	66	66	66	65	65	65	64	64	64	64	64	64	61	61	59	53	53	54	56	57	58	58	63	62	63	63	63	64	65	61	62	64
17F	66.4	66	66	66	65	65	65	64	64	64	64	64	64	61	61	59	53	54	55	56	57	58	58	63	62	63	63	63	64	65	61	62	64
18F	69.6	66	66	66	65	65	65	64	64	64	64	64	64	61	61	59	54	54	55	56	58	58	59	63	62	63	63	63	64	65	61	62	64
19F	72.7	66	66	66	65	65	65	64	64	64	64	64	64	61	61	59	54	55	56	57	58	58	59	63	62	63	63	63	64	65	61	62	64
20F	75.8	66	66	66	65	65	65	64	64	64	64	64	64	61	62	59	55	55	56	57	58	58	59	63	62	63	63	63	64	65	62	62	64
21F	79	66	66	66	65	65	65	64	64	64	64	64	64	62	62	60	55	56	56	57	58	58	59	63	62	63	63	63	64	65	62	62	64
22F	82.2	66	66	66	65	65	65	64	64	64	64	64	64	62	62	60	56	56	57	57	58	59	59	63	62	63	63	63	64	65	62	62	64
23F	85.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24F	88.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25F	91.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26F	94.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27F	97.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28F	101	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29F	104.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30F	107.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
31F	110.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32F	114.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33F	117.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Max Noise Level, dB(A)		**66**	**66**	**66**	**65**	**65**	**65**	**64**	**64**	**64**	**64**	**64**	**64**	**62**	**62**	**60**	**56**	**56**	**57**	**57**	**58**	**59**	**59**	**63**	**62**	**63**	**63**	**63**	**64**	**65**	**62**	**62**	**64**
No. of Exceedance Per NSR		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(PM)

		HZ																																				
		5B-A																																				
		1			2		3		4	5		6		7		8				9				10	11		12		13			14			15	16		
GBP Floor	mPD,m	CH01-1	CH01-1A	CH01-2	CH02-1	CH02-2	CH03-1	CH03-2	CH04-1	CH05-1	CH05-2	CH06-1	CH06-2	CH07-1	CH07-2	CH08-1	CH08-2	CH08-3	CH08-3A	CH09-1	CH09-2	CH09-3	CH10-1	CH10-2	CH11-1	CH11-2	CH12-1	CH12-2	CH13-1	CH13-2	CH13-2A	CH14-1	CH14-1A	CH14-2	CH15-1	CH16-1	CH16-2	CH16-2A
3F	22.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4F	25.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5F	28.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6F	31.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7F	34.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8F	38	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9F	41.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10F	44.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11F	47.5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12F	50.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13F	53.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14F	57	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15F	60.1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16F	63.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17F	66.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18F	69.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19F	72.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20F	75.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21F	79	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22F	82.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23F	85.3	73	67	65	67	67	68	67	67	67	66	66	66	66	65	65	66	65	57	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	70	71	72	73
24F	88.4	73	67	65	67	67	67	67	67	67	66	66	66	66	65	65	66	65	57	66	66	67	67	67	67	68	68	68	68	69	69	69	69	69	70	71	72	73
25F	91.6	73	67	65	66	67	67	67	67	67	66	66	66	65	65	65	65	65	57	66	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	71	72	73
26F	94.8	73	66	65	66	67	67	67	67	67	66	66	66	65	65	65	65	65	57	66	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	71	71	72
27F	97.9	73	66	65	66	67	67	67	67	67	66	66	65	65	65	65	65	65	57	66	66	66	66	67	67	67	67	68	68	68	68	69	69	69	70	70	71	72
28F	101	73	66	65	66	67	67	67	67	66	66	66	65	65	65	65	65	65	57	66	66	66	66	67	67	67	67	68	68	68	68	68	69	69	70	70	71	72
29F	104.2	73	66	65	66	67	67	67	67	66	66	66	65	65	65	65	65	65	57	66	66	66	66	67	67	67	67	68	68	68	68	68	69	69	70	70	71	72
30F	107.4	72	66	65	66	67	67	67	67	66	66	66	65	65	65	65	65	65	58	66	66	66	66	66	67	67	67	67	68	68	68	68	68	69	70	70	71	72
31F	110.7	72	66	64	66	67	67	67	66	66	66	66	65	65	65	65	65	65	58	66	66	66	66	66	67	67	67	67	68	68	68	68	68	69	69	70	71	72
32F	114.2	72	66	64	66	67	67	67	66	66	66	65	65	65	65	65	65	65	58	66	66	66	66	66	67	67	67	67	68	68	68	68	68	69	69	70	71	72
33F	117.7	72	66	64	66	67	67	67	66	66	66	66	65	65	65	65	65	65	59	65	66	66	66	66	66	67	67	67	67	68	68	68	68	69	69	70	71	72
Max Noise Level, dB(A)		**73**	**67**	**65**	**67**	**67**	**68**	**67**	**67**	**67**	**66**	**66**	**66**	**66**	**65**	**65**	**66**	**65**	**59**	**66**	**66**	**67**	**67**	**67**	**67**	**68**	**68**	**68**	**68**	**69**	**69**	**69**	**69**	**70**	**70**	**71**	**72**	**73**
No. of Exceedance Per NSR		**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**11**	**11**

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(PM)

		5B-B																															
		1		2		3		4		5		6	7	8				9		10				11		12		13		14		15	
GBP Floor	mPD,m	DH01-1	DH01-2	DH02-1	DH02-2	DH03-1	DH03-2	DH04-1	DH04-2	DH05-1	DH05-2	DH06-1	DH07-1	DH08-1	DH08-2	DH08-3	DH08-4	DH09-1	DH09-2	DH10-1	DH10-2	DH10-3	DH10-4	DH11-1	DH11-2	DH12-1	DH12-2	DH13-1	DH13-2	DH14-1	DH14-2	DH15-1	DH15-2
3F	22.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4F	25.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5F	28.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6F	31.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7F	34.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8F	38	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9F	41.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10F	44.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11F	47.5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12F	50.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13F	53.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14F	57	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15F	60.1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16F	63.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17F	66.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18F	69.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19F	72.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20F	75.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21F	79	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22F	82.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23F	85.3	66	66	66	65	65	65	65	64	64	64	64	64	62	62	60	56	57	57	58	59	59	59	63	62	63	63	63	64	65	62	62	64
24F	88.4	66	66	66	65	65	65	64	64	64	64	64	64	62	62	60	57	57	58	58	59	59	60	63	62	63	63	63	64	65	62	62	64
25F	91.6	66	66	66	65	65	65	64	64	64	64	64	64	62	63	60	57	58	58	59	59	60	60	63	62	63	63	63	64	65	62	62	64
26F	94.8	66	66	66	65	65	65	64	64	64	64	64	64	62	63	61	58	58	59	59	60	60	60	63	62	63	63	63	64	65	62	62	64
27F	97.9	66	66	66	65	65	65	65	64	64	64	64	64	63	63	61	59	59	60	60	60	60	61	63	62	63	63	63	64	65	62	62	64
28F	101	66	66	66	65	65	65	65	64	64	64	64	64	63	63	61	59	59	60	60	60	61	61	63	62	63	63	63	65	65	62	62	64
29F	104.2	66	66	66	65	65	65	65	64	64	64	64	64	63	63	62	60	60	60	60	61	61	61	63	62	63	63	63	65	65	62	62	64
30F	107.4	66	66	66	65	65	65	65	64	64	64	64	64	63	64	62	60	61	61	61	61	61	62	63	62	63	63	63	65	65	62	62	64
31F	110.7	66	66	66	65	65	65	64	64	64	64	64	64	64	64	63	61	61	61	62	62	62	62	63	62	63	63	63	65	65	63	63	64
32F	114.2	65	66	66	65	65	65	65	64	64	64	64	64	64	64	63	62	62	62	62	62	62	63	63	62	63	63	63	65	65	63	63	64
33F	117.7	65	66	66	65	65	65	65	64	64	64	64	64	64	64	63	62	62	62	62	63	63	63	63	62	63	63	63	65	65	63	63	65
Max Noise Level, dB(A)		**66**	**66**	**66**	**65**	**65**	**65**	**65**	**64**	**64**	**64**	**64**	**64**	**64**	**64**	**63**	**62**	**62**	**62**	**62**	**63**	**63**	**63**	**63**	**62**	**63**	**63**	**63**	**65**	**65**	**63**	**63**	**65**
No. of Exceedance Per NSR		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Appendix 2.3 Predicted Road Traffic Noise [$L10_{(1hr)}$ dB(A)] at Selected Receivers under Mitigated Scenario

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

Result Summary (Detail)(Site 5A)(KC-018)- Mitigated Case (AM)

| | | LZ | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

| | | 5A-B | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

| | | 5A-A | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

| | | Z | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

Result Summary (Detail)(Site 5B)(KC-019)- Mitigated Case (AM)

		LZ																																						
		5B-A																																							
		1			2		3		4	5		6		7		8				9				10	11		12		13			14			15	16					
GBP Floor	mPD,m	C01-1	C01-1A	C01-2	C02-1	C02-2	C03-1	C03-2	C04-1	C05-1	C05-2	C06-1	C06-2	C07-1	C07-2	C08-1	C08-2	C08-3	C08-3A	C09-1	C09-2	C09-3	C10-1	C10-2	C11-1	C11-2	C12-1	C12-2	C13-1	C13-2	C13-2A	C14-1	C14-1A	C14-2	C15-1	C16-1	C16-2	C16-2A		
3F	22.3	FG	70	67	68	68	68	67	66	65	64	64	63	63	62	62	65	66	56	65	66	66	67	67	68	69	69	70	70	70	SD	SD	70	70	70	70	SD	70		
4F	25.4	FG	70	68	70	70	70	69	68	68	67	67	66	66	65	65	67	66	57	66	67	67	68	68	69	69	69	70	70	70	SD	SD	70	70	70	70	SD	70		
5F	28.6	FG	70	68	70	70	70	70	69	69	68	68	67	67	66	66	67	66	57	67	67	68	68	68	69	69	69	70	70	70	SD	SD	70	70	70	70	SD	70		
6F	31.8	FG	70	68	70	70	70	70	69	69	68	68	67	67	67	66	67	66	57	67	67	68	68	68	69	69	69	70	70	70	SD	SD	70	70	70	70	SD	70		
7F	34.9	FG	70	68	69	70	70	70	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	70	70	70	70	SD	SD	70	70	70	70	SD	70		
8F	38	FG	70	68	69	70	70	70	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	70	70	70	70	SD	SD	70	70	70	70	SD	70		
9F	41.2	FG	69	68	69	70	70	70	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	70	70	70	70	SD	SD	70	70	70	70	SD	70		
10F	44.4	FG	69	67	69	70	70	69	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	69	70	70	70	SD	SD	70	70	70	70	SD	70		
11F	47.5	FG	69	67	69	70	70	69	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	69	70	70	70	SD	SD	70	70	70	70	SD	70		
12F	50.6	FG	69	67	69	69	69	69	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	69	70	70	70	SD	SD	70	70	70	70	SD	70		
13F	53.8	FG	69	67	69	69	69	69	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	69	70	70	70	70	SD	70	70	70	70	SD	70		
14F	57	FG	69	67	68	69	69	69	69	68	68	68	67	67	67	67	67	66	57	67	67	68	68	68	68	69	69	70	70	70	70	SD	70	70	70	70	SD	70		
15F	60.1	FG	68	67	68	69	69	69	69	68	68	68	67	67	67	66	67	66	57	67	67	68	68	68	68	69	69	69	70	70	70	70	70	70	70	70	SD	70		
16F	63.2	FG	68	67	68	69	69	69	68	68	68	67	67	67	67	66	67	66	57	67	67	67	68	68	68	69	69	69	70	70	70	70	70	70	70	70	SD	70		
17F	66.4	FG	68	66	68	69	69	69	68	68	68	67	67	67	66	66	67	66	57	67	67	67	68	68	68	69	69	69	70	70	70	70	70	70	70	70	SD	70		
18F	69.6	FG	68	66	68	69	69	69	68	68	67	67	67	67	66	66	67	66	57	67	67	67	68	68	68	69	69	69	69	70	70	70	70	70	70	70	SD	70		
19F	72.7	FG	68	66	68	68	69	68	68	68	67	67	67	67	66	66	67	66	57	67	67	67	68	68	68	68	69	69	69	70	70	70	70	70	70	70	SD	70		
20F	75.8	FG	68	66	68	68	68	68	68	68	67	67	67	66	66	66	67	66	57	67	67	67	67	68	68	68	69	69	69	69	70	70	70	70	70	70	SD	70		
21F	79	FG	68	66	67	68	68	68	68	68	67	67	67	66	66	66	66	66	57	67	67	67	67	68	68	68	68	69	69	69	69	70	70	70	70	70	SD	70		
22F	82.2	FG	67	66	67	68	68	68	68	68	67	67	66	66	66	66	66	66	57	67	67	67	67	68	68	68	68	69	69	69	69	70	70	70	70	70	SD	70		
23F	85.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
24F	88.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
25F	91.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
26F	94.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
27F	97.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
28F	101	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
29F	104.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
30F	107.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
31F	110.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
32F	114.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
33F	117.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
Max Noise Level, dB(A)		FG	70	68	70	70	70	70	69	69	68	68	67	67	67	67	67	66	57	67	67	68	68	68	69	69	70	70	70	70	70	70	70	70	70	70	SD	70		
No. of Exceedance Per NSR		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Legend	
Acoustic Window (Baffle Type)	AW(BT)
Self-closing Door	SD
Acoustic Door (Baffle Type)	AD(BT)
Fixed Glazing with or without Maintenance	FG

/ Non-residential unit

*** The assessment point is located at 1m in front of the most exposed part of an openable window for ventilation at a habitable room (NSRs) and 1.2m above the floor level of individual floors of the residential towers of the proposed development.**
The predicted noise levels are not the actual noise levels at the external façade after the application of innovative noise mitigation measures (acoustic window/door).
These predicted noise levels are the equivalent noise levels at 1m from the external façade after accounting the reduction in noise levels inside the room offered by the proposed noise mitigation measures.

No. of Exceedance	
Total no. of units	950
Total no. of units with exceedance	N.A
Max SPL	70
Compliance %	100%

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

		5B-B																															
		1		2		3		4		5		6	7	8				9		10				11		12		13		14		15	
GBP Floor	mPD,m	D01-1	D01-2	D02-1	D02-2	D03-1	D03-2	D04-1	D04-2	D05-1	D05-2	D06-1	D07-1	D08-1	D08-2	D08-3	D08-4	D09-1	D09-2	D10-1	D10-2	D10-3	D10-4	D11-1	D11-2	D12-1	D12-2	D13-1	D13-2	D14-1	D14-2	D15-1	D15-2
3F	22.3	63	63	63	62	62	61	61	61	60	60	60	59	58	60	57	49	50	51	55	55	56	56	58	57	58	57	58	58	59	58	59	62
4F	25.4	64	64	64	63	63	63	63	62	62	62	61	61	58	60	57	50	50	51	55	55	56	57	61	60	60	61	61	62	62	60	60	63
5F	28.6	65	64	64	64	64	63	63	63	63	62	62	62	58	60	57	50	50	51	55	56	57	57	62	62	62	62	62	63	63	61	61	64
6F	31.8	65	65	65	64	64	63	63	63	63	63	62	62	58	60	57	50	50	51	55	56	57	58	62	62	62	63	63	63	63	61	61	64
7F	34.9	65	65	65	64	64	64	64	63	63	63	63	62	59	60	58	51	51	52	55	56	58	58	63	62	62	63	63	63	63	61	62	64
8F	38	65	65	65	65	64	64	64	64	63	63	63	63	59	60	58	51	51	52	55	56	58	58	63	62	62	63	63	64	64	62	62	64
9F	41.2	66	65	65	65	65	64	64	64	64	63	63	63	60	60	58	51	51	52	55	57	58	58	63	62	63	63	63	64	64	62	62	64
10F	44.4	66	66	65	65	65	64	64	64	64	64	63	63	60	60	58	51	52	53	55	57	58	58	63	62	63	63	63	64	64	62	62	64
11F	47.5	66	66	66	65	65	64	64	64	64	64	64	63	61	61	58	52	52	53	55	57	58	58	63	63	63	63	63	64	64	62	62	64
12F	50.6	66	66	66	65	65	64	64	64	64	64	64	64	61	61	58	52	52	53	55	57	58	58	63	63	63	63	63	64	64	62	62	64
13F	53.8	66	66	66	65	65	65	64	64	64	64	64	64	60	60	58	52	53	53	56	57	58	58	63	63	63	63	63	64	65	62	62	64
14F	57	66	66	66	65	65	65	65	64	64	64	64	64	61	61	59	53	53	54	56	57	58	58	63	63	63	63	63	64	65	62	62	64
15F	60.1	66	66	66	65	65	65	65	64	64	64	64	64	61	61	59	53	53	54	56	57	58	59	63	63	63	63	64	65	65	62	62	64
16F	63.2	66	66	66	66	65	65	65	64	64	64	64	64	61	61	59	54	54	55	56	58	58	59	63	63	63	63	64	65	65	62	62	64
17F	66.4	66	66	66	66	65	65	65	65	64	64	64	64	61	61	59	54	54	55	57	58	58	59	63	63	63	63	64	65	65	62	62	64
18F	69.6	66	66	66	66	65	65	65	65	65	64	65	64	62	61	59	54	55	56	57	58	58	59	63	63	63	63	64	65	65	62	62	64
19F	72.7	66	66	66	66	65	65	65	65	65	64	65	64	62	62	60	55	55	56	57	58	59	59	63	63	63	63	64	65	65	62	62	64
20F	75.8	66	66	66	66	65	65	65	65	65	64	65	65	62	62	60	55	56	57	57	58	59	59	63	63	63	63	64	65	65	62	62	64
21F	79	66	66	66	66	65	65	65	65	65	64	65	65	62	62	60	56	56	57	58	59	59	59	63	63	63	63	64	65	65	62	62	64
22F	82.2	66	66	66	66	65	65	65	65	65	64	65	65	62	62	60	56	57	57	58	59	59	60	63	63	63	63	64	65	65	62	62	64
23F	85.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24F	88.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25F	91.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26F	94.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27F	97.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28F	101	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29F	104.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30F	107.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
31F	110.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32F	114.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33F	117.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Max Noise Level, dB(A)		**66**	**66**	**66**	**66**	**65**	**65**	**65**	**65**	**65**	**64**	**65**	**65**	**62**	**62**	**60**	**56**	**57**	**57**	**58**	**59**	**59**	**60**	**63**	**63**	**63**	**63**	**64**	**65**	**65**	**62**	**62**	**64**
No. of Exceedance Per NSR		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

		HZ																																				
		5B-A																																				
		1			2		3		4	5		6		7		8				9				10	11		12		13			14			15	16			
GBP Floor	mPD,m	CH01-1	CH01-1A	CH01-2	CH02-1	CH02-2	CH03-1	CH03-2	CH04-1	CH05-1	CH05-2	CH06-1	CH06-2	CH07-1	CH07-2	CH08-1	CH08-2	CH08-3	CH08-3A	CH09-1	CH09-2	CH09-3	CH10-1	CH10-2	CH11-1	CH11-2	CH12-1	CH12-2	CH13-1	CH13-2	CH13-2A	CH14-1	CH14-1A	CH14-2	CH15-1	CH16-1	CH16-2	CH16-2A
3F	22.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4F	25.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5F	28.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6F	31.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7F	34.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8F	38	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9F	41.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10F	44.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11F	47.5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12F	50.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13F	53.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14F	57	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15F	60.1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16F	63.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17F	66.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18F	69.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19F	72.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20F	75.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21F	79	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22F	82.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23F	85.3	FG	67	66	67	68	68	68	68	67	67	67	66	66	66	66	66	66	57	67	67	67	67	67	68	68	68	69	69	69	69	69	70	70	70	70	SD	70
24F	88.4	FG	67	66	67	68	68	68	68	67	67	67	66	66	66	66	66	65	57	66	67	67	67	67	68	68	68	68	69	69	69	69	69	70	70	70	SD	70
25F	91.6	FG	67	65	67	68	68	68	68	67	67	67	66	66	66	66	66	65	57	66	67	67	67	67	67	68	68	68	69	69	69	69	69	70	70	70	SD	70
26F	94.8	FG	67	65	67	68	68	68	67	67	67	67	66	66	66	66	66	65	57	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	70	70	SD	70
27F	97.9	FG	67	65	67	68	68	68	67	67	67	66	66	66	66	66	66	65	58	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	70	70	SD	70
28F	101	FG	67	65	67	67	68	67	67	67	67	66	66	66	66	65	66	65	58	66	66	67	67	67	67	68	68	68	68	69	69	69	69	69	70	70	SD	70
29F	104.2	FG	67	65	67	67	67	67	67	67	66	66	66	66	65	65	66	65	58	66	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	70	SD	70
30F	107.4	FG	67	65	66	67	67	67	67	67	66	66	66	66	65	65	66	65	58	66	66	66	67	67	67	67	68	68	68	68	69	69	69	69	70	70	SD	70
31F	110.7	FG	66	65	66	67	67	67	67	67	66	66	66	65	65	65	66	65	58	66	66	66	67	67	67	67	67	68	68	68	68	68	69	69	70	70	SD	70
32F	114.2	FG	66	65	66	67	67	67	67	67	66	66	66	65	65	65	66	65	59	66	66	66	66	67	67	67	67	68	68	68	68	68	69	69	70	70	SD	70
33F	117.7	FG	66	65	66	67	67	67	67	67	66	66	66	65	65	65	66	65	60	66	66	66	66	67	67	67	67	68	68	68	68	68	69	69	70	70	SD	70
Max Noise Level, dB(A)		**FG**	**67**	**66**	**67**	**68**	**68**	**68**	**68**	**67**	**67**	**67**	**66**	**66**	**66**	**66**	**66**	**66**	**60**	**67**	**67**	**67**	**67**	**67**	**68**	**68**	**68**	**69**	**69**	**69**	**69**	**69**	**70**	**70**	**70**	**70**	**SD**	**70**
No. of Exceedance Per NSR		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

		5B-B																															
		1		2		3		4		5		6	7	8				9		10				11		12		13		14		15	
GBP Floor	mPD,m	DH01-1	DH01-2	DH02-1	DH02-2	DH03-1	DH03-2	DH04-1	DH04-2	DH05-1	DH05-2	DH06-1	DH07-1	DH08-1	DH08-2	DH08-3	DH08-4	DH09-1	DH09-2	DH10-1	DH10-2	DH10-3	DH10-4	DH11-1	DH11-2	DH12-1	DH12-2	DH13-1	DH13-2	DH14-1	DH14-2	DH15-1	DH15-2
3F	22.3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4F	25.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5F	28.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6F	31.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7F	34.9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8F	38	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9F	41.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10F	44.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11F	47.5	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12F	50.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13F	53.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14F	57	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15F	60.1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16F	63.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17F	66.4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18F	69.6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19F	72.7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20F	75.8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21F	79	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22F	82.2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23F	85.3	66	66	66	66	65	65	65	65	65	64	65	65	62	63	60	57	57	58	58	59	59	60	63	63	63	63	64	65	65	62	62	64
24F	88.4	66	66	66	66	65	65	65	65	65	64	65	65	62	63	61	57	58	58	59	60	60	60	63	63	63	63	64	65	65	62	62	64
25F	91.6	66	66	66	66	65	65	65	65	65	64	65	65	63	63	61	58	58	59	59	60	60	60	63	63	63	63	64	65	65	62	63	64
26F	94.8	66	66	66	66	65	65	65	65	65	64	65	65	63	63	61	59	59	60	60	60	61	61	63	63	63	63	64	65	65	62	63	64
27F	97.9	66	66	66	66	65	65	65	65	65	64	65	65	63	63	62	59	60	60	60	61	61	61	63	63	63	63	64	65	65	62	63	64
28F	101	66	66	66	66	65	65	65	65	65	64	65	65	63	64	62	60	60	60	60	61	61	61	63	63	63	63	64	65	65	63	63	64
29F	104.2	66	66	66	66	65	65	65	65	65	64	65	65	64	64	62	60	60	61	61	61	61	62	63	63	63	63	64	65	65	63	63	65
30F	107.4	66	66	66	66	65	65	65	65	65	64	65	65	64	64	63	61	61	61	61	62	62	62	63	63	63	63	64	65	65	63	63	65
31F	110.7	66	66	66	66	65	65	65	65	65	64	65	65	64	64	63	62	62	62	62	62	63	63	63	63	63	63	64	65	66	63	63	65
32F	114.2	66	66	66	66	65	65	65	65	65	64	65	65	64	65	63	62	62	63	63	63	63	63	63	63	63	63	64	65	66	63	63	65
33F	117.7	66	66	66	66	65	65	65	65	65	65	65	65	65	65	64	62	63	63	63	63	63	64	63	63	63	63	64	65	66	63	64	65
Max Noise Level, dB(A)		**66**	**66**	**66**	**66**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**65**	**64**	**62**	**63**	**63**	**63**	**63**	**63**	**64**	**63**	**63**	**63**	**63**	**64**	**65**	**66**	**63**	**64**	**65**
No. of Exceedance Per NSR		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Appendix 2.4 Predicted Road Traffic Noise [$L10_{(1hr)}$ dB(A)] at Selected Receivers under Base Case Scenario and Mitigated Scenario (Worst Case Scenario)

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

Result Summary (Detail)(Site 5A)(KC-018)- Base Case (AM)(Worst Case Scenario)

| | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

| | | 5A-B | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

| | | 5A-A | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Base Case Scenario)(Detail)(AM)

| | | Z | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

Result Summary (Detail)(Site 5A)(KC-018)- Base Case (AM)(Worst Case Scenario)

| | | LZ | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

| | | 5A-B | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

| | | 5A-A | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Results of Road Traffic Noise Impact Assessment (Mitigated Case Scenario)(Detail)(AM)

| | | Z | | |

Appendix 2.5 Noise Reduction Performance of the Baffle Type Acoustic Window/ Door

Road Traffic Noise Impact Assessment

Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type)

Table of Major Parameters and Room Size of the Subject Site and Corresponding Reference Case, and Sound Attenuation Adjustment

Subject Site					Reference Case (NPE)										Subject Site			
NSR	Unit	Room	Outer opening width, m	Outer opening height, m	Outer opening area, m^2	Inner opening width, m	Inner opening height, m	Inner opening area, m^2	Air gap, mm	Overlapping length, mm	MPA applied?	No. of Outer Opening	Room area (RAref), m^2	Ref. sound attenuation, dB(A)	Room area (RA), m^2	Adjustment based on Room area of Reference Case: 10xlog(RA / RAref) (adjust downward only), dB(A) (RAref)	Adjusted sound attenuation, dB(A)	**Final Adjusted sound attenuation, dB(A)**
A01-1	1	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	31.96	-0.8	8.0	**8.0**
A01-2A	1	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	9.43	0.0	6.9	**6.9**
A02-1	2	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	9.43	0.0	6.9	**6.9**
A02-1A	2	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	9.43	0.0	6.9	**6.9**
A02-2	2	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	31.93	-0.8	8.0	**8.0**
A03-1	3	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	31.93	-0.8	8.0	**8.0**
A03-2A	3	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	9.43	0.0	6.9	**6.9**
A04-1	4	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	9.43	0.0	6.9	**6.9**
A04-2	4	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	31.87	-0.8	8.0	**8.0**
AH01-1A	1	MER	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	15.97	-3.8	5.0	**5.0**
AH01-2	1	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	7.15	0.0	6.9	**6.9**
AH01-3	1	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	7.15	0.0	6.9	**6.9**
AH01-4	1	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	39.36	0.0	8.8	**8.8**
AH02-1	2	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	31.93	-0.8	8.0	**8.0**
AH02-2A	2	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	9.43	0.0	6.9	**6.9**
AH03-1	3	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	9.4	0.0	6.9	**6.9**
AH03-2	3	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	27.9	-1.4	7.4	**7.4**
AH04-1	4	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	30.0	-1.1	7.7	**7.7**
C013-1	13	BR	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	27.9	-1.4	7.4	**7.4**
C13-2	13	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	6.7	-0.1	6.8	**6.8**
C14-1A	14	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	6.7	-0.1	6.8	**6.8**
C14-2	14	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	32.0	-0.8	8.0	**8.0**
C15-1	15	BR	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	23.0	-2.2	6.6	**6.6**
C16-1	16	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	25.2	-1.8	7.0	**7.0**
C16-2A	16	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	6.5	-0.2	6.7	**6.7**
CH15-1	15	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	26.2	-1.7	7.1	**7.1**
CH16-1	16	LV	1.275	2.535	3.23	1.480	2.535	3.75	100	275	No	1	38.3	8.8	25.2	-1.8	7.0	**7.0**
CH16-2A	16	BR	0.600	1.165	0.70	1.397	2.400	3.35	100	253	Yes	1	6.8	6.9	6.5	-0.2	6.7	**6.7**

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Sound Attenuation for Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development

Adopted Sound Attenuation of Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development (Site 5A)(KC-018)

| | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Sound Attenuation for Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development

| | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Sound Attenuation for Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development

| | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Sound Attenuation for Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development

| | Z | | |

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Sound Attenuation for Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development

Adopted Sound Attenuation of Acoustic Window (Baffle Type) and Acoustic Door (Bafflr Type) for Residential Development (Site 5B)(KC-019)

	LZ																																			
	5B-A																																			
	1			2		3		4	5		6		7		8				9				10	11		12		13			14			15	16		
GBP Floor	C01-1	C01-1A	C01-2	C02-1	C02-2	C03-1	C03-2	C04-1	C05-1	C05-2	C06-1	C06-2	C07-1	C07-2	C08-1	C08-2	C08-3	C08-3A	C09-1	C09-2	C09-3	C10-1	C10-2	C11-1	C11-2	C12-1	C12-2	C13-1	C13-2	C13-2A	C14-1	C14-1A	C14-2	C15-1	C16-1	C16-2	C16-2A
3F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.1	SD	SD	-1.0	-1.7	-3.0	-4.1	SD	-6.5
4F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.4	SD	SD	-1.3	-2.0	-3.4	-4.2	SD	-6.3
5F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.4	SD	SD	-1.5	-2.1	-3.3	-4.0	SD	-6.0
6F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.1	-0.6	SD	SD	-1.4	-2.0	-3.1	-3.7	SD	-5.8
7F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.1	-0.5	SD	SD	-1.3	-1.9	-2.8	-3.5	SD	-5.5
8F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.1	-0.4	SD	SD	-1.2	-1.7	-2.7	-3.3	SD	-5.3
9F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.3	SD	SD	-1.0	-1.5	-2.5	-3.1	SD	-5.1
10F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.2	SD	SD	-0.8	-1.3	-2.3	-2.9	SD	-4.9
11F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	SD	SD	-0.7	-1.2	-2.1	-2.7	SD	-4.7
12F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	SD	SD	-0.5	-1.0	-1.9	-2.6	SD	-4.5
13F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	SD	-0.4	-0.9	-1.8	-2.3	SD	-4.3
14F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	SD	-0.3	-0.8	-1.6	-2.2	SD	-4.1
15F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.2	-0.6	-1.5	-2.0	SD	-4.0
16F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.5	-1.3	-1.9	SD	-3.8
17F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.4	-1.1	-1.7	SD	-3.6
18F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.2	-1.0	-1.6	SD	-3.5
19F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.1	-0.8	-1.4	SD	-3.3
20F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.7	-1.3	SD	-3.2
21F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.6	-1.1	SD	-3.0
22F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.4	-1.0	SD	-2.9
23F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
31F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Max	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.1	-0.6	-0.9	-1.2	-1.5	-2.1	-3.4	-4.2	SD	-6.5

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Sound Attenuation for Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development

	5B-B																															
	1		2		3		4		5		6	7	8				9		10				11		12		13		14		15	
GBP Floor	D01-1	D01-2	D02-1	D02-2	D03-1	D03-2	D04-1	D04-2	D05-1	D05-2	D06-1	D07-1	D08-1	D08-2	D08-3	D08-4	D09-1	D09-2	D10-1	D10-2	D10-3	D10-4	D11-1	D11-2	D12-1	D12-2	D13-1	D13-2	D14-1	D14-2	D15-1	D15-2
3F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
31F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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33F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Max	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Sound Attenuation for Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development

	HZ																																							
	5B-A																																								
	1			2		3		4	5		6		7		8				9				10	11		12		13			14			15	16						
GBP Floor	CH01-1	CH01-1A	CH01-2	CH02-1	CH02-2	CH03-1	CH03-2	CH04-1	CH05-1	CH05-2	CH06-1	CH06-2	CH07-1	CH07-2	CH08-1	CH08-2	CH08-3	CH08-3A	CH09-1	CH09-2	CH09-3	CH10-1	CH10-2	CH11-1	CH11-2	CH12-1	CH12-2	CH13-1	CH13-2	CH13-2A	CH14-1	CH14-1A	CH14-2	CH15-1	CH16-1	CH16-2	CH16-2A				
3F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/				
4F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/				
5F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/				
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23F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.3	-0.9	SD	-2.8			
24F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.2	-0.7	SD	-2.6			
25F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.6	SD	-2.5			
26F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.5	SD	-2.4			
27F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.4	SD	-2.3			
28F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.3	SD	-2.2			
29F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.2	SD	-2.1			
30F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	-0.1	SD	-1.9			
31F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	SD	-1.9			
32F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	SD	-1.7			
33F	FG	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	SD	-1.6			
Max	**FG**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**/**	**-0.3**	**-0.9**	**SD**	**-2.8**			

Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (Site 5A)(KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (Site 5B)(KC-019)
Sound Attenuation for Acoustic Window (Baffle Type) and Acoustic Door (Baffle Type) for Residential Development

	5B-B																															
	1		2		3		4		5		6	7	8				9		10				11		12		13		14		15	
GBP Floor	DH01 1	DH01 2	DH02 1	DH02 2	DH03 1	DH03 2	DH04 1	DH04 2	DH05 1	DH05 2	DH06 1	DH07 1	DH08 1	DH08 2	DH08 3	DH08 4	DH09 1	DH09 2	DH10 1	DH10 2	DH10 3	DH10 4	DH11 1	DH11 2	DH12 1	DH12 2	DH13 1	DH13 2	DH14 1	DH14 2	DH15 1	DH15 2
3F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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18F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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26F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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32F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33F	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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Appendix 2.6 Schedule of Noise Mitigation Measures

Road Traffic Noise Impact Assessment

Location of Mitigation Measures

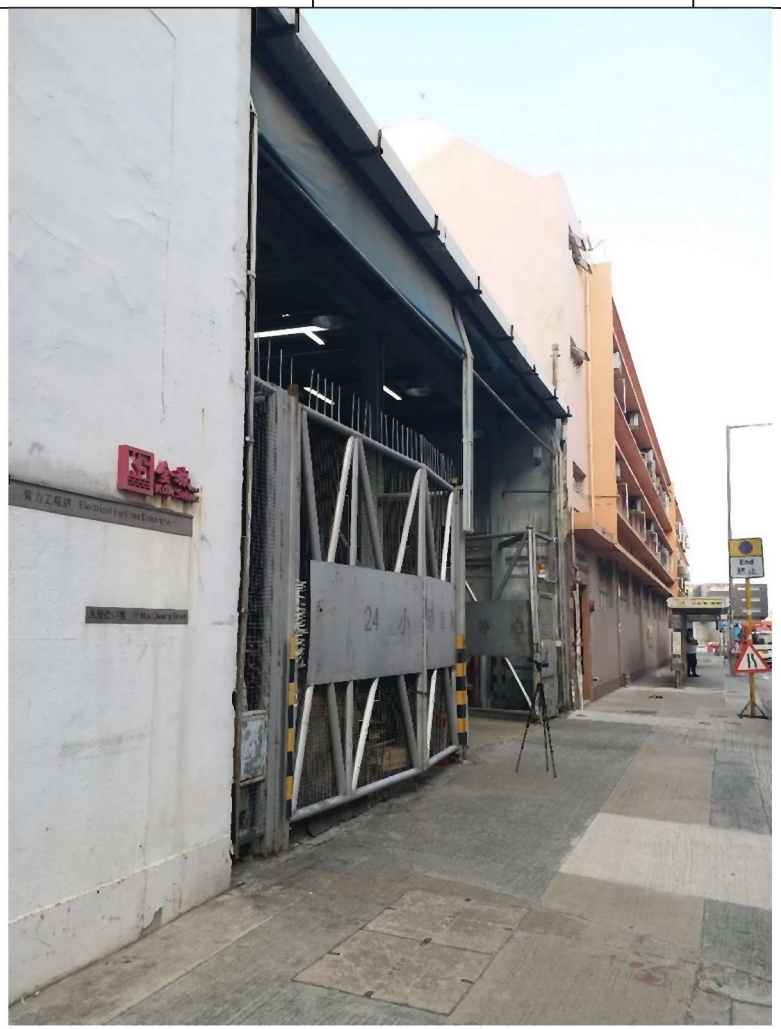
Tower	NSR	Unit	Mitigation Measures	Floor Range with Mitigation Measures
5A-A	**A01-1**	1	AD	3/F - 7/F
5A-A	**A01-1A**	1	FG	3/F - 7/F
5A-A	**A01-2**	1	SD	3/F - 7/F
5A-A	**A01-2A**	1	AW	3/F - 7/F
5A-A	**A02-1**	2	AW	3/F - 7/F
5A-A	**A02-1A**	2	FG	4/F - 7/F
5A-A	**A02-2**	2	AD	4/F - 7/F
5A-A	**A02-2A**	2	FG	4/F - 7/F
5A-A	**A03-1**	3	AD	5/F - 7/F
5A-A	**A03-1A**	3	FG	5/F - 7/F
5A-A	**A03-2**	3	SD	5/F - 7/F
5A-A	**A03-2A**	3	AW	5/F - 7/F
5A-A	**A04-1**	4	AW	6/F - 7/F
5A-A	**A04-1A**	4	SD	6/F - 7/F
5A-A	**A04-2**	4	AD	7/F
5A-A	**A04-2A**	4	FG	6/F-7/F
5A-A	**A22-2A**	22	SD	5/F - 7/F
5A-A	**AH01-1**	1	SD	8/F - 33/F
5A-A	**AH01-1A**	1	AW	8/F - 33/F
5A-A	**AH01-2**	1	AW	8/F - 26/F
5A-A	**AH01-3**	1	AW	8/F - 23/F
5A-A	**AH01-4**	1	AD	8/F - 20/F
5A-A	**AH02-1**	2	AD	8/F - 19/F
5A-A	**AH02-1A**	2	FG	8/F - 18/F
5A-A	**AH02-2**	2	SD	8/F - 18/F
5A-A	**AH02-2A**	2	AW	8/F - 17/F
5A-A	**AH03-1**	3	AW	8/F - 17/F
5A-A	**AH03-1A**	3	SD	8/F - 16/F
5A-A	**AH03-2**	3	AD	8/F - 15/F
5A-A	**AH03-2A**	3	FG	8/F - 16/F
5A-A	**AH04-1**	4	AD	8/F - 14/F
5A-A	**AH04-1A**	4	FG	9/F - 13/F
5A-A	**AH21-2A**	21	SD	8/F - 12/F
5B-A	**C01-1**	1	FG	3/F - 22/F
5A-A	**C13-1**	13	AD	6/F - 8/F
5B-A	**C13-2**	13	AW	3/F - 10/F
5B-A	**C13-2A**	13	SD	3/F - 12/F
5B-A	**C14-1**	14	SD	3/F - 14/F
5B-A	**C14-1A**	14	AW	3/F - 15/F
5B-A	**C14-2**	14	AD	3/F - 19/F
5B-A	**C15-1**	15	AD	3/F - 22/F
5B-A	**C16-1**	16	AD	3/F - 22/F
5B-A	**C16-2**	16	SD	3/F - 22/F
5B-A	**C16-2A**	16	AW	3/F - 22/F
5B-A	**CH01-1**	1	FG	23/F - 33/F
5B-A	**CH15-1**	15	AD	23/F - 24/F
5B-A	**CH16-1**	16	AD	23/F - 30/F
5B-A	**CH16-2**	16	SD	23/F - 33/F
5B-A	**CH16-2A**	16	AW	23/F - 33/F

Note:

1. AW: Acoustic Window (Baffle Type)
2. AD: Acoustic Door (Baffle Type)
3. SD: Self-Closing Access Door (not for ventilation purpose)
4. FG: Fixed Glazing

Appendix 3.1 Site Visit and Noise Sources Surveys

Source ID	Name	Date & Time	Source Description
G1	Kum Shing – Electrical Services Department	23 June 2020 & 25 Oct 2017 09:00-18:00	Operation Noise (eg. Operation of Electric drill)



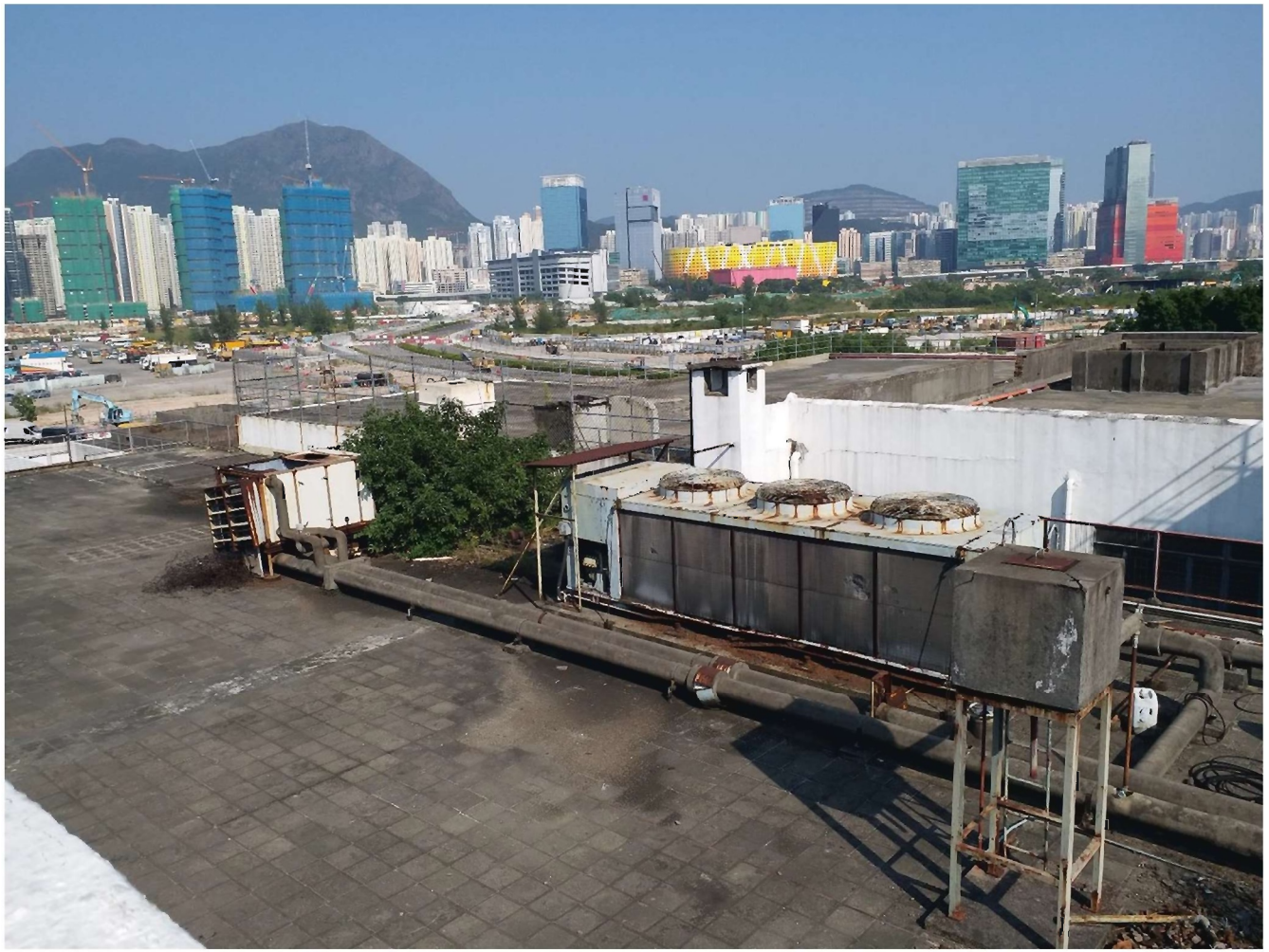
Source ID	Name	Date & Time	Source Description
G2	Joly Auto Service	23 June 2020 & 25 Oct 2017 09:00-20:00	Car Repairing

Source ID	Name	Date & Time	Source Description
G3	Gainfull Motors Services Limited	23 June 2020 & 25 Oct 2017 09:00-18:00	Car Repairing

Source ID	Name	Date & Time	Source Description
G4	ETC Hong Kong Limited	23 June 2020 & 25 Oct 2017 09:00-18:00	Operation Noise (eg. Ventilation Fan)

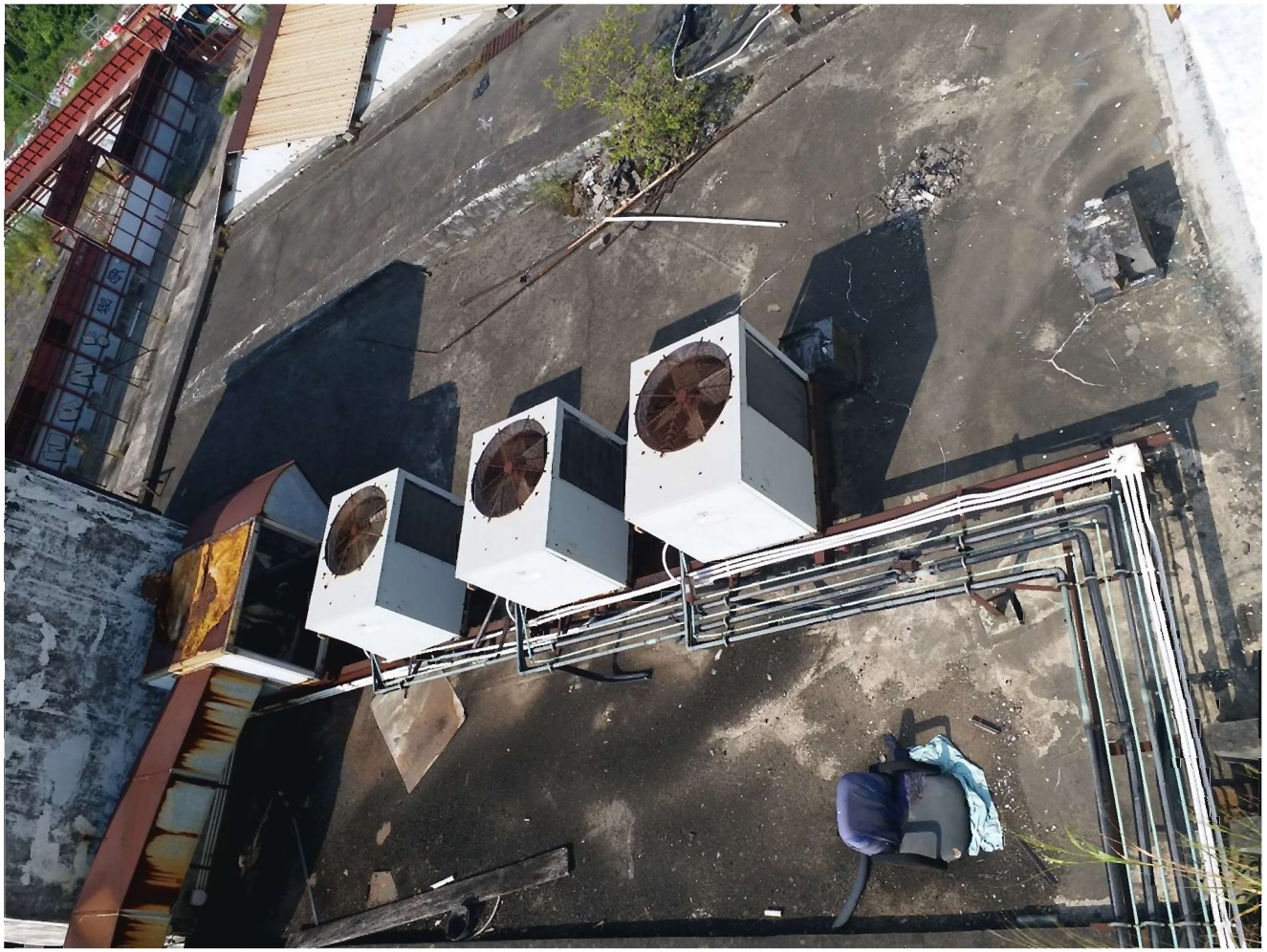
Source ID	Name	Date & Time	Source Description
C1	Roof top of Wacker Industrial Building	23 June 2020 & 25 Oct 2017 09:00-18:00	Ryoden Cooling Tower

Source ID	Name	Date & Time	Source Description
C2	D.H.L. House Rooftop	23 June 2020 & 25 Oct 2017 09:00-18:00	Idle Chillers

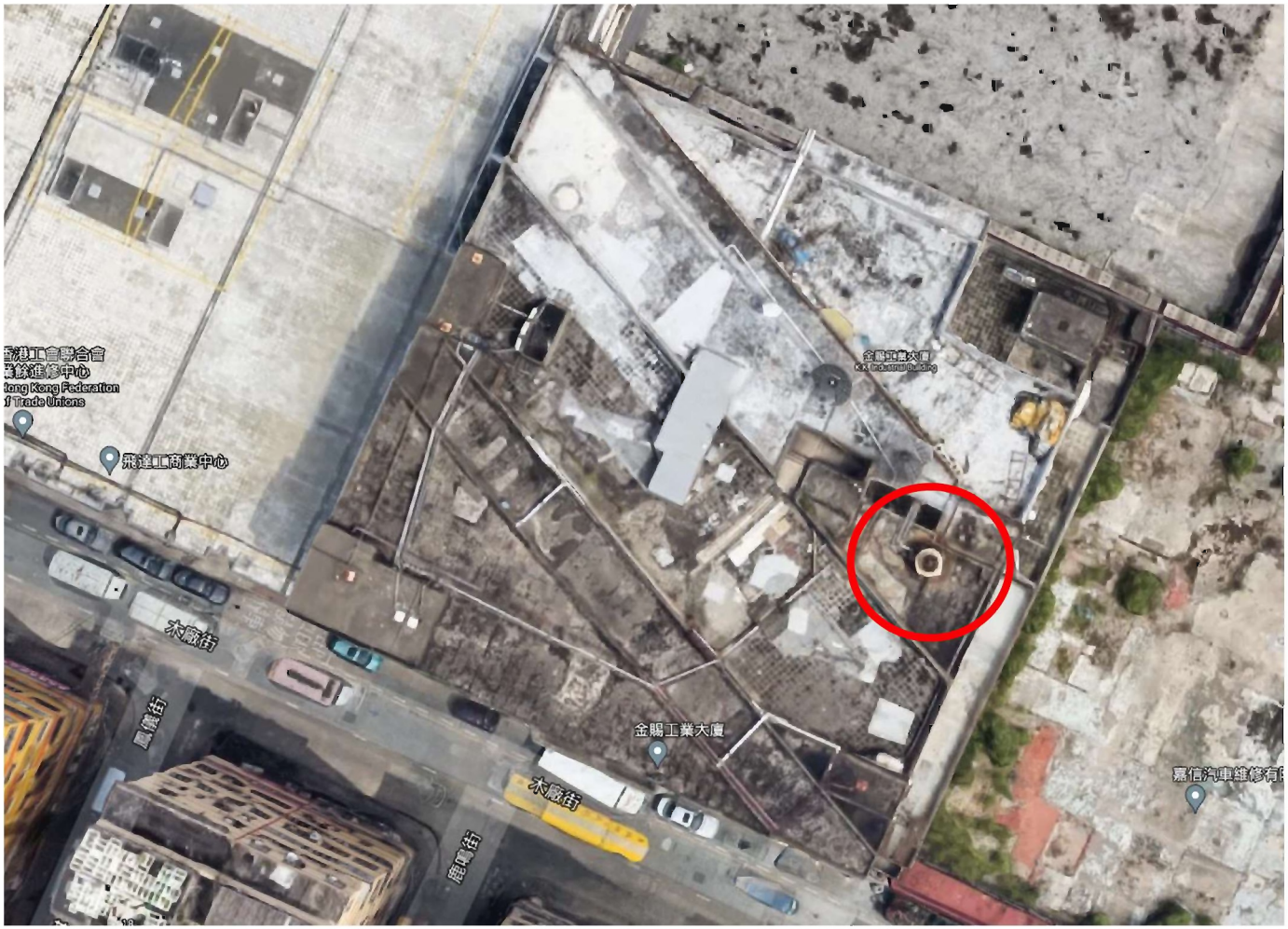


Source ID	Name	Date & Time	Source Description
C3	D.H.L. House Rooftop	23 June 2020 & 25 Oct 2017 09:00-18:00	Idle Chillers

Source ID	Name	Date & Time	Source Description
C4-C6	Rooftop of Gainfull Motors	23 June 2020 & 25 Oct 2017 09:00-18:00	Idle Chillers

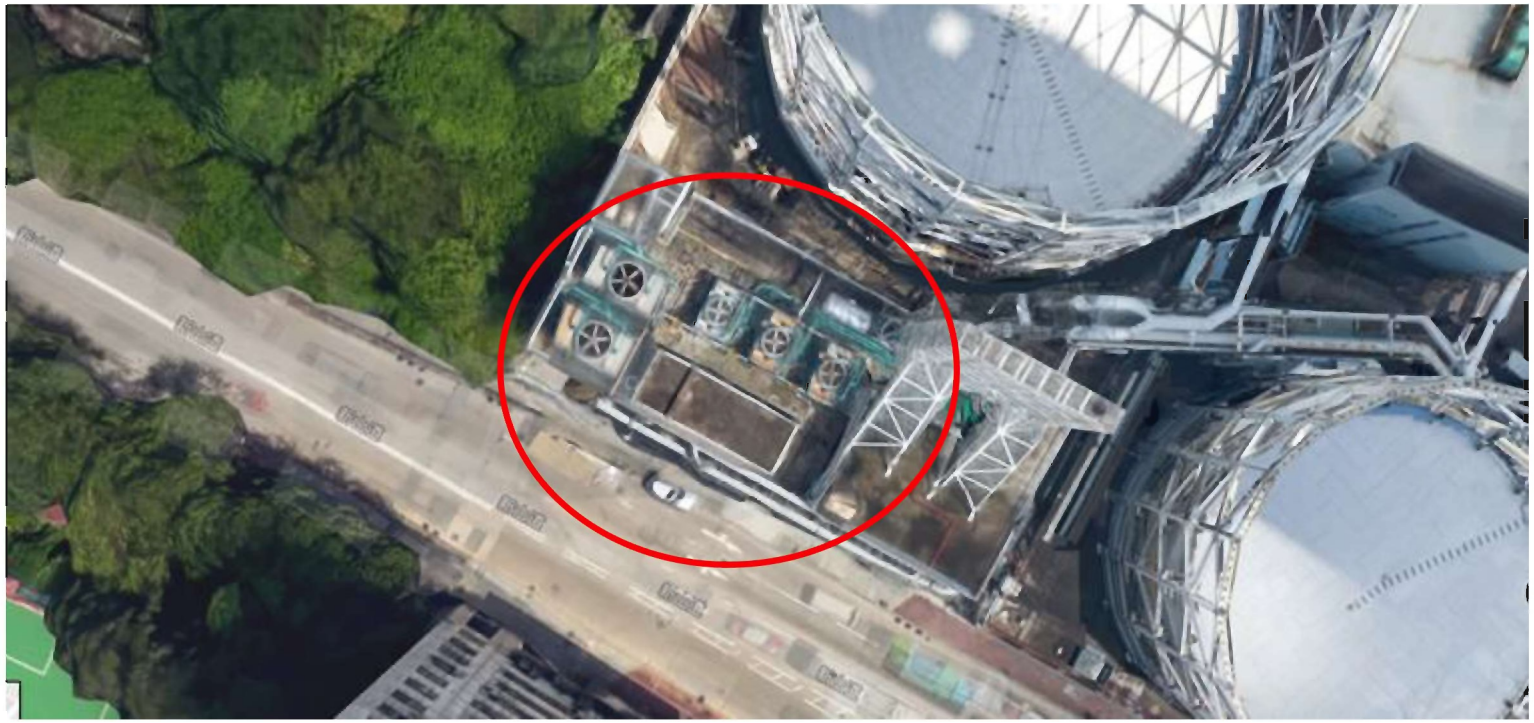


Source ID	Name	Date & Time	Source Description	
C7	KK Industrial Building Rooftop		23 June 2020 & 25 Oct 2017 09:00-18:00	Idle Chillers



Source ID	Name	Date & Time	Source Description
C8-C11	Ma Tau Kok Gas Work-north bound office	25 Oct 2017 09:00-18:00	Chillers

Source ID	Name	Date & Time	Source Description
C12-C16	Ma Tau Kok Gas Work-sound bound block	23 June 2020 & 25 Oct 2017	Chillers



Source ID	Name	Date & Time	Source Description
SR1-SR5	Rooftop of Sewage Pumping Station	23 June 2020 & 25 Oct 2017	Pumping Station

Source ID	Name	Date & Time	Source Description
SE1, SW1-SW3	Sewage Pumping Station	23 June 2020 & 25 Oct 2017	Pumping Station

Appendix 3.2 Extracted Pages from the NIA-MTK Report

1.0 DESCRIPTION

Allied Environmental Consultants Limited was commissioned to conduct the noise impact assessment for the Proposed Comprehensive Residential Development at KIL 10578, 7628 and 7626 in Ma Tau Kok. A noise measurement was conducted to obtain the noise level produced by the motor services workshops under operation, which are identified as the fixed noise sources in the vicinity, for the fixed plant noise assessment.

2.0 SITE SURVEY AND NOISE MEASUREMENT

2.1 DATE AND TIME

Several site surveys for daytime and nighttime were conducted on 21 September 2015, 26 February, 27 February, 1 March, 2 March and 17 March 2016. Noise measurement was conducted on 17 March 2016 to obtain noise data for evaluating the industrial noise impact. Photographs taken on site are given in ***Appendix J.***

2.2 SURVEY PERSONNEL

The following personnel took part in the measurements.

Mr. Ronan Chan	Consultant (AEC)
Ms. Cathy Man	Senior Consultant (AEC)

2.3 WEATHER CONDITIONS

The weather conditions on site were checked to ensure the measurements were made only during "dry" weather conditions without the presence of fog and rain. The wind speed had been checked to ensure that the wind speed did not exceed 5m/s and 10m/s in any direction for steady and gusty wind respectively.

2.4 SITE OBSERVATIONS

The area consists primarily of domestic premises and industrial/ office buildings. There are a recycling workshop, a number of motor services workshops and restaurants on ground floor. ***Figure 6*** shows the location of the identified noise sources. The inventory of fixed noise sources is given in ***Table 2-1***.

The restaurants are not considered as industrial noise sources. There are several cooling towers and chillers identified at the roof of the industrial buildings in the vicinity. These noise sources are excluded from calculation. It can be referred to Section 7.1 of the Noise Impact Assessment Report for details.

The recycling workshop (S16) is located at Mok Cheong Street opposite to the Subject Site. As observed and confirmed by the operators of the recycling workshop, only

trading of materials and materials handling are carried out in the workshop. There are no major operations (i.e. repair and maintenance works with tools/ machines) carried out. Hence it is not considered as an industrial noise source.

A number of motor services workshops are the potential noise sources that might impose impact on the proposed Development. As observed during the site inspections and confirmed by the operators, typical operations at the workshops include manual operations as well as tools/machine assisted operations (i.e. Hand-held Pneumatic Tools, Vehicle lifting machine, hammering, grinding), which are short in duration (in less than 5 minutes).

Based on our several site inspections conducted in Feb 2016 and March 2016, it is observed that most works at motor services workshops were carried out in the afternoon. It is also confirmed by the operators of the motor services workshops that afternoon, around 14:00 to 15:00 hours, are the busiest operation time. It is also observed during the night time site visits and confirmed by the operators that there is no nighttime operation at the motor services workshops.

Inventory of identified fixed noise sources is provided below.

Table 2-1 Inventory of fixed noise sources

Source ID	Source Type	Quantity	Location	Shortest Horizontal Distance to Site Boundary (m)	Remark
S1	Cooling Tower	6	Freder Centre	3	U.B.W. and excluded from assessment
S2	Cooling Tower	1	Wacker Factory	22	U.B.W. and excluded from assessment
S3	Chillers	2	DHL House	40	Abandoned
S4	Motor services workshop	1	20 Fung Yi Street	42	No night time operation
S5	Motor services workshop	1	18 Fung Yi Street (禧記)	50	
S6	Motor services workshop	1	23 Lun Cheung Street	34	
S7	Motor services workshop	1	26 Ying Yeung Street (遠東- 新興)	36	
S8	Motor services workshop	1	24 Ying Yueng Street (名城)	47	

S9	Motor services workshop	1	23 Ying Yueng Street	42
S10	Motor services workshop	1	19 Ying Yueng Street(恒進)	53
S11	Motor services workshop	1	15 Ying Yueng Street (合益)	66
S12	Motor services workshop	1	28 Pang Ching Street (龍華)	16
S13	Motor services workshop	1	24 Hung Wan Street	72
S14	Motor services workshop	1	25-27 Hung Wan Street	39
S15	Motor services workshop	1	27 Shim Luen Street	59
S16	Recycling Workshop	1	Mok Cheong Street (銘興五金)	12
S17	Motor services workshop	1	Mok Cheong Street (新張記)	50
S18	Motor services workshop	1	Mok Cheong Street (洗車達人)	29

Note:
U.B.W.: Unauthorized Building Works

2.5 NOISE MEASUREMENT

Noise measurements have been conducted on 17 March 2016 in both non traffic peak time (around 12:00 to 13:00 hours) and busiest time of operation, with all of the operation activities, i.e. Hand-held Pneumatic Tools, Vehicle lifting machine, hammering, grinding, captured during noise survey.

Noise survey was carried out at site boundary location as well as workshops simultaneously, with noise data recorded at 10s intervals. Workshop Noise Measurement points were located at 2m distance from the motor services workshops whenever possible. Noise measurements at each motor services workshop were carried out at the shop front and at the side near the activities. The location of noise monitoring points (NMP) is shown in ***Annex A and Table 2-2***. The sound level meters set up positions are indicated in ***Annex E***.

The workshops are of similar size and nature, i.e. car repairing activities including manual and tools/machine assisted operations. In this connection, the total sound power level of the activities at each workshop is similar. All the activities observed at each workshop were closer to the ground rather than the ceiling so that no measurement at the top of each shop front was conducted. As conservative approach, the highest sound pressure level recorded amongst the surveyed workshops, during the busiest operation hours were adopted for evaluation of sound power level emission with reference to ISO 3746.

Table 2-2 Location of Noise Measurement Point

NMP ID	Location
NMP 1	Site Boundary
NMP 2	20 Fung Yi Street
NMP 3	23 Lun Cheung Street
NMP 4	26 Ying Yeung Street (遠東- 新興)
NMP 5	28 Pang Ching Street (龍華)
NMP 6	24 Hung Wan Street
NMP 7	Mok Cheong Street (銘興五金)
NMP 8	27 Shim Luen Street

As observed during survey and previous visits, the noise from manual operation at source is marginally noticeable while the noise from tools/machine assisted operations is noticeable at source. The noise climate is dominated by on-road traffic noise, merely heavy vehicle, i.e. buses and lorries during noise survey and visits.

2.6 INSTRUMENTATION

All noise measurements were conducted using the equipment listed in ***Table 2-3*** below. A copy of the calibration certificates for the sound level meter and calibrator are attached in ***Annex B***.

Table 2-3 List of Instrumentation

Type & Model		Quantity	Standard Complied
Sound Level Meter	B&K 2250	1	IEC 61672-1:2002 Class 1
Sound Level Meter	Solo –Slm 01dB	1	IEC 61672-1:2002 Class 1
Sound Level Calibrator	RION NC-73	1	IEC 60942

2.7 MEASUREMENT RESULT

A summary table of recorded noise levels ("Overall" and "Background" in $L_{Aeq5min}$ and $L_{Aeq30min}$) together with site observations is shown in ***Annex C***. Detailed recorded data is given in ***Annex D***. The "Background" is the recorded overall noise level with event duration edited out.

With reference to ***Annex C***, at the Site Boundary NMP, the recorded noise level differences between "Overall" and "Background" are within 1.0dB (in terms of both $L_{Aeq5min}$ and $L_{Aeq30min}$) for all the events (i.e. manual operations and tools/machine assisted operations). No tonal, impulsiveness/ intermittency were observed at Project Site Boundary and the site boundary of the adjacent buildings along Mok Cheong Street, namely Freder Centre and Wacker Industrial Building during operation.

3.0 CALCULATION OF SOUND POWER LEVEL OF MOTOR SERVICES WORKSHOPS

This section evaluates the Sound Power Level emanated from motor services workshops. The sound power level (SWL) of the motor services workshops is calculated in accordance with ISO3746:2010.

Step 1: Measurement of Sound Pressure Level
(Details refer to Section 2.5)

Step 2: Calculation of mean time-averaged sound pressure levels-
Background noise correction is applied to recorded sound pressure level during operation activities to obtain mean time-averaged sound pressure level for the workshops. (Refer to Plate 1 below)

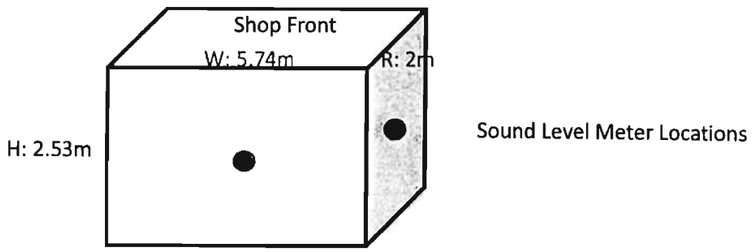
Step 3: Calculation of sound energy levels
Parallelepiped measurement surface offset from shopfront of motor services workshop, according to measurement distance, is used to determine the total area of measurement surface.
The calculation of SWL is determined by the following equation:

$$SWL = SPL + 10\log(S)dB$$

As confirmed by site survey and observations, the motor services workshops are of similar size and nature, i.e. car repairing activities including manual and tool/ machine assisted operation. In this connection, the total sound power level of the activities at each workshop is similar. For evaluation of Sound Power Level, the highest Sound Pressure Level (SPL) in $L_{Aeq(30mins)}$ obtained from the noise survey during the busiest workshop operation hour is adopted for the calculation, which is considered representative to a worst case scenario. This highest sound pressure level is recorded at NMP 6 during grinding and is adopted for evaluation. Detailed measurement data is provided in ***Annex D***.

Machine Data			
Dimension of Shop Front (Width)	W	5.74	m
Dimension of Shop Front (Height)	H	2.53	m
Measurement Distance	r	2	m
Total Measurement Surface	S	31.06	m^2
Calculation of Sound Power Level			
Sound Pressure Level ($L_{A,eq30min}$)	SPL	76.8	dB(A)
Measurement Surface	S	31.06	m^2
10log(S)		14.9	dB
Sound Power Level	SWL	91.7	dB

Plate 1: Diagram of the measurement surface and location of sound level meter



4.0 CONCLUSION

Noise measurement for obtaining SPL of motor service workshop was carried out. The calculated SWL was determined to be 91.7 dB.

Annex A
Location of Noise Monitoring Points

Appendix 3.3 Summary of SWL of Noise Sources

Noise Measurements Data for Determination of Sound Power Level

Noise Sources	Source Description	Noise Sources ID	Avg. Measured SPL, dB(A)	Measurement Distance from Source (d), m	SWL, dB(A) (SPL + 20 log (d)+8)	SWL adopted in Noise from Fixed Source Calculation, dB(A)	Remar
Kum Shing- Electrical Services Department	Drilling	G1	72.2	3.0	89.7	89.7	By on site mea
Joly Auto Service	Car repairing	G2	-	-	-	91.7	Reference is made to the "NIA-MTK Re
Gainfull Motors Services Limited	Car repairing	G3	-	-	-	91.7	
ETC Hong Kong Limited	Ventilation Fan	G4	73.0	3.0	90.6	90.6	By on site mea
Roof top of Joly Auto Motor	Cooling Tower	C1	-	-	-	86.4	By on site measurement, calculation o
D.H.L. House Roof	Idle Chiller	C2	-	-	-	87.3	
D.H.L. House Roof	Idle Chiller	C3	-	-	-	87.3	
Roof top of Gainfull Motors	Idle Chiller	C4	-	-	-	81.9	Projection by
Roof top of Gainfull Motors	Idle Chiller	C5	-	-	-	81.9	
Roof top of Gainfull Motors	Idle Chiller	C6	-	-	-	81.9	
K.K. Industrial Building	Cooling Tower	C7	50.0	16.0	82.1	82.1	
Ma Tau Kok Gas Work-north bound office	Chillers	C8	-	-	-	84.6	
Ma Tau Kok Gas Work-north bound office	Chillers	C9	-	-	-	84.6	
Ma Tau Kok Gas Work-north bound office	Chillers	C10	-	-	-	85.2	
Ma Tau Kok Gas Work-north bound office	Chillers	C11	-	-	-	85.2	
Ma Tau Kok Gas Work-south bound block	Chillers	C12	-	-	-	90.9	Projection by
Ma Tau Kok Gas Work-south bound block	Chillers	C13	-	-	-	90.9	
Ma Tau Kok Gas Work-south bound block	Chillers	C14	-	-	-	90.1	
Ma Tau Kok Gas Work-south bound block	Chillers	C15	-	-	-	90.1	
Ma Tau Kok Gas Work-south bound block	Chillers	C16	-	-	-	90.1	

*size of G2, G4, C7, is much smaller when compared ot the measurement distance so that it is assumed as point source

Projection of SWL based on ISO3746

Noise Sources ID	Avg. Measured SPL, dB(A)	Measurement Distance from Source (d), m	Dimension			Measurement Surface Area (S), m2	SWL, dB(A) (SPL + 10 log (S))
			L, m	W, m	H,m		
C2	66.0	3.8	3.0	1.0	1.2	136	87.3
C3	66.0	3.8	3.0	1.0	1.2	136	87.3
C4	64.0	2.8	0.8	0.8	1.0	61	81.9
C5	64.0	2.8	0.8	0.8	1.0	61	81.9
C6	64.0	2.8	0.8	0.8	1.0	61	81.9
C8	65.0	2.8	3.0	1.0	1.2	91	84.6
C9	65.0	2.8	3.0	1.0	1.2	91	84.6
C10	65.0	2.8	2.5	2.5	1.2	104	85.2
C11	65.0	2.8	2.5	2.5	1.2	104	85.2
C12	67.0	4.5	5.0	2.5	1.5	243	90.9
C13	67.0	4.5	5.0	2.5	1.5	243	90.9
C14	67.0	4.5	4.0	2.0	1.2	206	90.1
C15	67.0	4.5	4.0	2.0	1.2	206	90.1
C16	67.0	4.5	4.0	2.0	1.2	206	90.1

Sound Power Measurement Calculation Sheet

To: ISO3746:2010 (Survey Method)

Project No.	URAKCAA2, Action Area 2 District-based Study for Kowloon City
Measurement Date & Time:	Friday, February 2, 2018
Type of Sound Source:	Cooling Tower
Opeartion Conditions:	Stable

Overall, dB(A)			IBM_Iron Bending
Raw Data	$\overline{L'_{pA(ST)}} = 10 \lg\left[\frac{1}{N_M}\sum_{i=1}^{N_M} 10^{0,1L'_{pA\,i(ST)}}\right]$ dB	**Averaged $L'_{pA(ST)}$**	70.7
		Averaged $L_{pA(BG)}$	66.26 *

Surface Area	**No. of reflecting plane:**	1
	Measurement Distance, d (m):	1
	Surface Area of Measurement (m^2):	57.0

K_{1A} Correction	$\Delta L_{pA} = \overline{L'_{pA(ST)}} - \overline{L_{pA(B)}}$	**ΔL_{pA}=L'$_{pA(ST)}$ - $L_{pA(BG)}$**	4.5
	$\Delta L_{pA} > 10$ dB, K_{1A} is assumed equal to zero.	**ΔL_{pA}>10**	
	3 dB $\leqslant \Delta L_{pA} \leqslant$ 10 dB $K_{1A} = -10 \lg\left(1-10^{-0,1\Delta L_{pA}}\right)$ dB	**3=<ΔL_{pA}<=10**	1.9
	ΔL_{pA} < 3 dB, K_{1A} to be applied in this case is 3 dB	**ΔL_{pA}<3**	
		K_{1A}	1.9

K_{2A} Correction	$K_{2A} = 10 \lg\left[1+4\frac{S}{A}\right]$ dB	**A= αS_v**	Outdoor Env.
		K_{2A}	0

Results	$\overline{L_{pA}} = \overline{L'_{pA(ST)}} - K_{1A} - K_{2A}$	**Corrected L_{pA}**	68.8
	$L_{WA} = \overline{L_{pA}} + 10 \lg\frac{S}{S_0}$ dB	**Sound Power Level: L_{WA}**	**86.4**

Determination of Microphone Arrays on Parallelepiped Measurement Surface

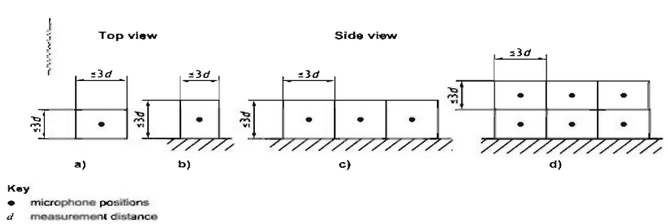
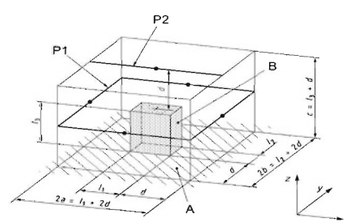


Figure C.1 — Microphone positions on a parallelepiped measurement surface

Parallelepiped Measurement Surface and Microphone Positions and Paths for a Small Machine



* Background noise measurement was limited by field condition as it is not feasible for turning off the cooling tower for background measurement. Therefore, the background noise levels were measured as far as possible from the cooling tower in order to minimise the effect generated by the cooling tower. As a result, the minimum measured background noise level has been selected for calculation.

Activity: Cooling Tower
Noise source ID: C1

ID of Measurement Points	Sound Source	Overall, dB(A)	$10^{li/10}$
839	Side	68.05	6382634.9
840		67.37	5457578.6
841		67.49	5610479.8
842		67.71	5902010.8
843		68.04	6367955.2
844		67.86	6109420.2
845		68.44	6982324
846		67.92	6194410.8
847	Top	73.80	23988329
848		73.36	21677041
850		73.65	23173946
851		73.93	24717241
$L'_{pA(ST)}$ = Average SPL		70.75	

Dimension of Cooling Tower

	H (m)	L (m)	W (m)
=	1.8	1.8	1.8

Dimension of measurement Surface

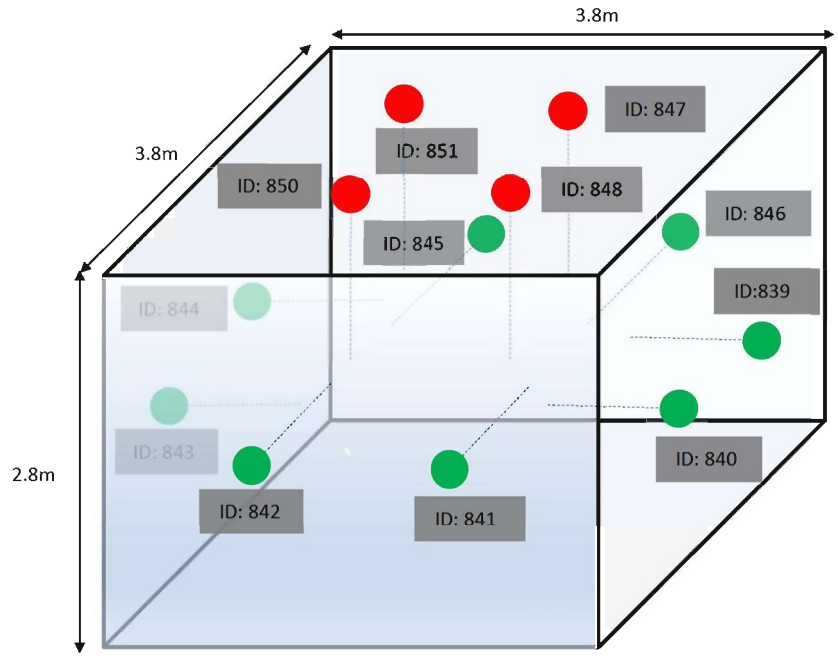
	H (m)	L (m)	W (m)
=	2.8	3.8	3.8

Total Measurement Surface

= 2.8*3.8*4+3.8*3.8

= 57 m^2

Noise Measurement for Cooling Tower
Noise source ID: C1



Representing 1m perpendicular distance from Iron Bending Machine

Measurement location over the noise source

Measurement location aside the noise source

Appendix 3.4 Detailed Calculations of Fixed Noise Impact Assessment

Detailed Calculations of Fixed Noise Impact Assessment (Daytime)

Noise Sensitive Receiver (NSR)	NSR (x)	NSR (y)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	SWL, dB(A)	No of Units	Overall SWL, dB(A)	Horizontal Distance from NSR to NS (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)
A22-2A	837970	820094	G1	Kum Shing- Electrical Services Department	837964.7	820291.4	89.7	1	89.7	197.2	-53.9	0
			G2	Joly Auto Service	837902.6	820318.1	91.7	1	91.7	233.8	-55.4	0
			G3	Gainfull Motors Services Limited	837890.2	820323.7	91.7	1	91.7	243.0	-55.7	0
			G4	ETC Hong Kong Limited	837975.8	820383.1	90.6	1	90.6	289.0	-57.2	0
			C1	Roof top of Wacker Industrial Building	837924.5	820348.4	86.4	1	86.4	258.3	-56.2	0
			C2	D.H.L. House Roof	837937.6	820347.7	87.3	1	87.3	255.6	-56.2	0
			C3	D.H.L. House Roof	837930.6	820332.6	87.3	1	87.3	241.7	-55.7	0
			C4	Roof top of Gainfull Motors	837910.0	820359.4	81.9	1	81.9	272.0	-56.7	0
			C5	Roof top of Gainfull Motors	837908.7	820359.9	81.9	1	81.9	272.9	-56.7	0
			C6	Roof top of Gainfull Motors	837906.9	820360.8	81.9	1	81.9	274.1	-56.8	0
			C7	K.K. Industrial Building	837843.2	820365.9	82.1	1	82.1	300.1	-57.5	0
			C8	Ma Tau Kok Gas Work-north bound office	837896.8	820171.5	84.6	1	84.6	107.0	-48.6	0
			C9	Ma Tau Kok Gas Work-north bound office	837900.9	820172.7	84.6	1	84.6	105.2	-48.4	0
			C10	Ma Tau Kok Gas Work-north bound office	837934.1	820157.4	85.2	1	85.2	73.6	-45.3	0
			C11	Ma Tau Kok Gas Work-north bound office	837936.6	820156.3	85.2	1	85.2	70.5	-45.0	0
			C12	Ma Tau Kok Gas Work-south bound block	837803.6	820090.2	90.9	1	90.9	166.6	-52.4	0
			C13	Ma Tau Kok Gas Work-south bound block	837805.9	820094.6	90.9	1	90.9	164.2	-52.3	0
			C14	Ma Tau Kok Gas Work-south bound block	837812.6	820092.3	90.1	1	90.1	157.5	-51.9	0
			C15	Ma Tau Kok Gas Work-south bound block	837816.8	820090.3	90.1	1	90.1	153.3	-51.7	0
			C16	Ma Tau Kok Gas Work-south bound block	837820.8	820087.8	90.1	1	90.1	149.4	-51.5	0

Detailed Calculations of Fixed Noise Impact Assessment (Daytime)

Noise Sensitive Receiver (NSR)	NSR (x)	NSR (y)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	SWL, dB(A)	No of Units	Overall SWL, dB(A)	Horizontal Distance from NSR to NS (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)
A01-1	837984	820119	G1	Kum Shing- Electrical Services Department	837964.7	820291.4	89.7	1	89.7	173.3	-52.8	0
			G2	Joly Auto Service	837902.6	820318.1	91.7	1	91.7	214.9	-54.6	0
			G3	Gainfull Motors Services Limited	837890.2	820323.7	91.7	1	91.7	225.0	-55.0	0
			G4	ETC Hong Kong Limited	837975.8	820383.1	90.6	1	90.6	264.2	-56.4	0
			C1	Roof top of Wacker Industrial Building	837924.5	820348.4	86.4	1	86.4	236.9	-55.5	0
			C2	D.H.L. House Roof	837937.6	820347.7	87.3	1	87.3	233.3	-55.4	0
			C3	D.H.L. House Roof	837930.6	820332.6	87.3	1	87.3	220.1	-54.9	0
			C4	Roof top of Gainfull Motors	837910.0	820359.4	81.9	1	81.9	251.4	-56.0	0
			C5	Roof top of Gainfull Motors	837908.7	820359.9	81.9	1	81.9	252.4	-56.0	0
			C6	Roof top of Gainfull Motors	837906.9	820360.8	81.9	1	81.9	253.8	-56.1	0
			C7	K.K. Industrial Building	837843.2	820365.9	82.1	1	82.1	284.3	-57.1	0
			C8	Ma Tau Kok Gas Work-north bound office	837896.8	820171.5	84.6	1	84.6	102.2	-48.2	0
			C9	Ma Tau Kok Gas Work-north bound office	837900.9	820172.7	84.6	1	84.6	99.3	-47.9	0
			C10	Ma Tau Kok Gas Work-north bound office	837934.1	820157.4	85.2	1	85.2	63.8	-44.1	0
			C11	Ma Tau Kok Gas Work-north bound office	837936.6	820156.3	85.2	1	85.2	60.2	-43.6	0
			C12	Ma Tau Kok Gas Work-south bound block	837803.6	820090.2	90.9	1	90.9	182.6	-53.2	0
			C13	Ma Tau Kok Gas Work-south bound block	837805.9	820094.6	90.9	1	90.9	179.7	-53.1	0
			C14	Ma Tau Kok Gas Work-south bound block	837812.6	820092.3	90.1	1	90.1	173.4	-52.8	0
			C15	Ma Tau Kok Gas Work-south bound block	837816.8	820090.3	90.1	1	90.1	169.5	-52.6	0
			C16	Ma Tau Kok Gas Work-south bound block	837820.8	820087.8	90.1	1	90.1	166.1	-52.4	0

Detailed Calculations of Fixed Noise Impact Assessment (Daytime)

Noise Sensitive Receiver (NSR)	NSR (x)	NSR (y)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	SWL, dB(A)	No of Units	Overall SWL, dB(A)	Horizontal Distance from NSR to NS (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)
C16-2A	838018	820153	G1	Kum Shing- Electrical Services Department	837964.7	820291.4	89.7	1	89.7	148.6	-51.4	0
			G2	Joly Auto Service	837902.6	820318.1	91.7	1	91.7	201.6	-54.1	0
			G3	Gainfull Motors Services Limited	837890.2	820323.7	91.7	1	91.7	213.4	-54.6	0
			G4	ETC Hong Kong Limited	837975.8	820383.1	90.6	1	90.6	234.3	-55.4	0
			C1	Roof top of Wacker Industrial Building	837924.5	820348.4	86.4	1	86.4	216.9	-54.7	0
			C2	D.H.L. House Roof	837937.6	820347.7	87.3	1	87.3	211.0	-54.5	0
			C3	D.H.L. House Roof	837930.6	820332.6	87.3	1	87.3	200.1	-54.0	0
			C4	Roof top of Gainfull Motors	837910.0	820359.4	81.9	1	81.9	233.3	-55.4	0
			C5	Roof top of Gainfull Motors	837908.7	820359.9	81.9	1	81.9	234.4	-55.4	0
			C6	Roof top of Gainfull Motors	837906.9	820360.8	81.9	1	81.9	236.0	-55.5	0
			C7	K.K. Industrial Building	837843.2	820365.9	82.1	1	82.1	275.8	-56.8	0
			C8	Ma Tau Kok Gas Work-north bound office	837896.8	820171.5	84.6	1	84.6	122.9	-49.8	0
			C9	Ma Tau Kok Gas Work-north bound office	837900.9	820172.7	84.6	1	84.6	119.0	-49.5	0
			C10	Ma Tau Kok Gas Work-north bound office	837934.1	820157.4	85.2	1	85.2	84.6	-46.5	0
			C11	Ma Tau Kok Gas Work-north bound office	837936.6	820156.3	85.2	1	85.2	81.3	-46.2	0
			C12	Ma Tau Kok Gas Work-south bound block	837803.6	820090.2	90.9	1	90.9	223.1	-55.0	0
			C13	Ma Tau Kok Gas Work-south bound block	837805.9	820094.6	90.9	1	90.9	219.7	-54.8	0
			C14	Ma Tau Kok Gas Work-south bound block	837812.6	820092.3	90.1	1	90.1	213.9	-54.6	0
			C15	Ma Tau Kok Gas Work-south bound block	837816.8	820090.3	90.1	1	90.1	210.4	-54.5	0
			C16	Ma Tau Kok Gas Work-south bound block	837820.8	820087.8	90.1	1	90.1	207.4	-54.3	0

Detailed Calculations of Fixed Noise Impact Assessment (Daytime)

Noise Sensitive Receiver (NSR)	NSR (x)	NSR (y)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	SWL, dB(A)	No of Units	Overall SWL, dB(A)	Horizontal Distance from NSR to NS (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)
C01-1	838026	820174	G1	Kum Shing- Electrical Services Department	837964.7	820291.4	89.7	1	89.7	132.1	-50.4	0
			G2	Joly Auto Service	837902.6	820318.1	91.7	1	91.7	189.3	-53.5	0
			G3	Gainfull Motors Services Limited	837890.2	820323.7	91.7	1	91.7	201.7	-54.1	0
			G4	ETC Hong Kong Limited	837975.8	820383.1	90.6	1	90.6	214.7	-54.6	0
			C1	Roof top of Wacker Industrial Building	837924.5	820348.4	86.4	1	86.4	201.5	-54.1	0
			C2	D.H.L. House Roof	837937.6	820347.7	87.3	1	87.3	194.6	-53.8	0
			C3	D.H.L. House Roof	837930.6	820332.6	87.3	1	87.3	184.8	-53.3	0
			C4	Roof top of Gainfull Motors	837910.0	820359.4	81.9	1	81.9	218.4	-54.8	0
			C5	Roof top of Gainfull Motors	837908.7	820359.9	81.9	1	81.9	219.6	-54.8	0
			C6	Roof top of Gainfull Motors	837906.9	820360.8	81.9	1	81.9	221.3	-54.9	0
			C7	K.K. Industrial Building	837843.2	820365.9	82.1	1	82.1	264.9	-56.5	0
			C8	Ma Tau Kok Gas Work-north bound office	837896.8	820171.5	84.6	1	84.6	129.5	-50.2	0
			C9	Ma Tau Kok Gas Work-north bound office	837900.9	820172.7	84.6	1	84.6	125.3	-50.0	0
			C10	Ma Tau Kok Gas Work-north bound office	837934.1	820157.4	85.2	1	85.2	93.9	-47.5	0
			C11	Ma Tau Kok Gas Work-north bound office	837936.6	820156.3	85.2	1	85.2	91.0	-47.2	0
			C12	Ma Tau Kok Gas Work-south bound block	837803.6	820090.2	90.9	1	90.9	237.6	-55.5	0
			C13	Ma Tau Kok Gas Work-south bound block	837805.9	820094.6	90.9	1	90.9	233.9	-55.4	0
			C14	Ma Tau Kok Gas Work-south bound block	837812.6	820092.3	90.1	1	90.1	228.4	-55.2	0
			C15	Ma Tau Kok Gas Work-south bound block	837816.8	820090.3	90.1	1	90.1	225.2	-55.1	0
			C16	Ma Tau Kok Gas Work-south bound block	837820.8	820087.8	90.1	1	90.1	222.5	-54.9	0

Detailed Calculations of Fixed Noise Impact Assessment (Night-time)

Noise Sensitive Receiver (NSR)	NSR (x)	NSR (y)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	SWL, dB(A)	No of Units	Overall SWL, dB(A)	Horizontal Distance from NSR to NS (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)
A22-2A	837970	820094	C8	Ma Tau Kok Gas Work-north bound office	837896.8	820171.5	84.6	1	84.6	106.5	-48.5	0
			C9	Ma Tau Kok Gas Work-north bound office	837900.9	820172.7	84.6	1	84.6	104.7	-48.4	0
			C10	Ma Tau Kok Gas Work-north bound office	837934.1	820157.4	85.2	1	85.2	72.8	-45.2	0
			C11	Ma Tau Kok Gas Work-north bound office	837936.6	820156.3	85.2	1	85.2	70.5	-45.0	0
			C12	Ma Tau Kok Gas Work-south bound block	837803.6	820090.2	90.9	1	90.9	166.6	-52.4	0
			C13	Ma Tau Kok Gas Work-south bound block	837805.9	820094.6	90.9	1	90.9	164.2	-52.3	0
			C14	Ma Tau Kok Gas Work-south bound block	837812.6	820092.3	90.1	1	90.1	157.5	-51.9	0
			C15	Ma Tau Kok Gas Work-south bound block	837816.8	820090.3	90.1	1	90.1	153.3	-51.7	0
			C16	Ma Tau Kok Gas Work-south bound block	837820.8	820087.8	90.1	1	90.1	149.4	-51.5	0

Detailed Calculations of Fixed Noise Impact Assessment (Night-time)

Noise Sensitive Receiver (NSR)	NSR (x)	NSR (y)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	SWL, dB(A)	No of Units	Overall SWL, dB(A)	Horizontal Distance from NSR to NS (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)
A01-1	837984	820119	C8	Ma Tau Kok Gas Work-north bound office	837896.8	820171.5	84.6	1	84.6	101.7	-48.1	0
			C9	Ma Tau Kok Gas Work-north bound office	837900.9	820172.7	84.6	1	84.6	98.8	-47.9	0
			C10	Ma Tau Kok Gas Work-north bound office	837934.1	820157.4	85.2	1	85.2	62.8	-44.0	0
			C11	Ma Tau Kok Gas Work-north bound office	837936.6	820156.3	85.2	1	85.2	60.2	-43.6	0
			C12	Ma Tau Kok Gas Work-south bound block	837803.6	820090.2	90.9	1	90.9	182.6	-53.2	0
			C13	Ma Tau Kok Gas Work-south bound block	837805.9	820094.6	90.9	1	90.9	179.7	-53.1	0
			C14	Ma Tau Kok Gas Work-south bound block	837812.6	820092.3	90.1	1	90.1	173.4	-52.8	0
			C15	Ma Tau Kok Gas Work-south bound block	837816.8	820090.3	90.1	1	90.1	169.5	-52.6	0
			C16	Ma Tau Kok Gas Work-south bound block	837820.8	820087.8	90.1	1	90.1	166.1	-52.4	0

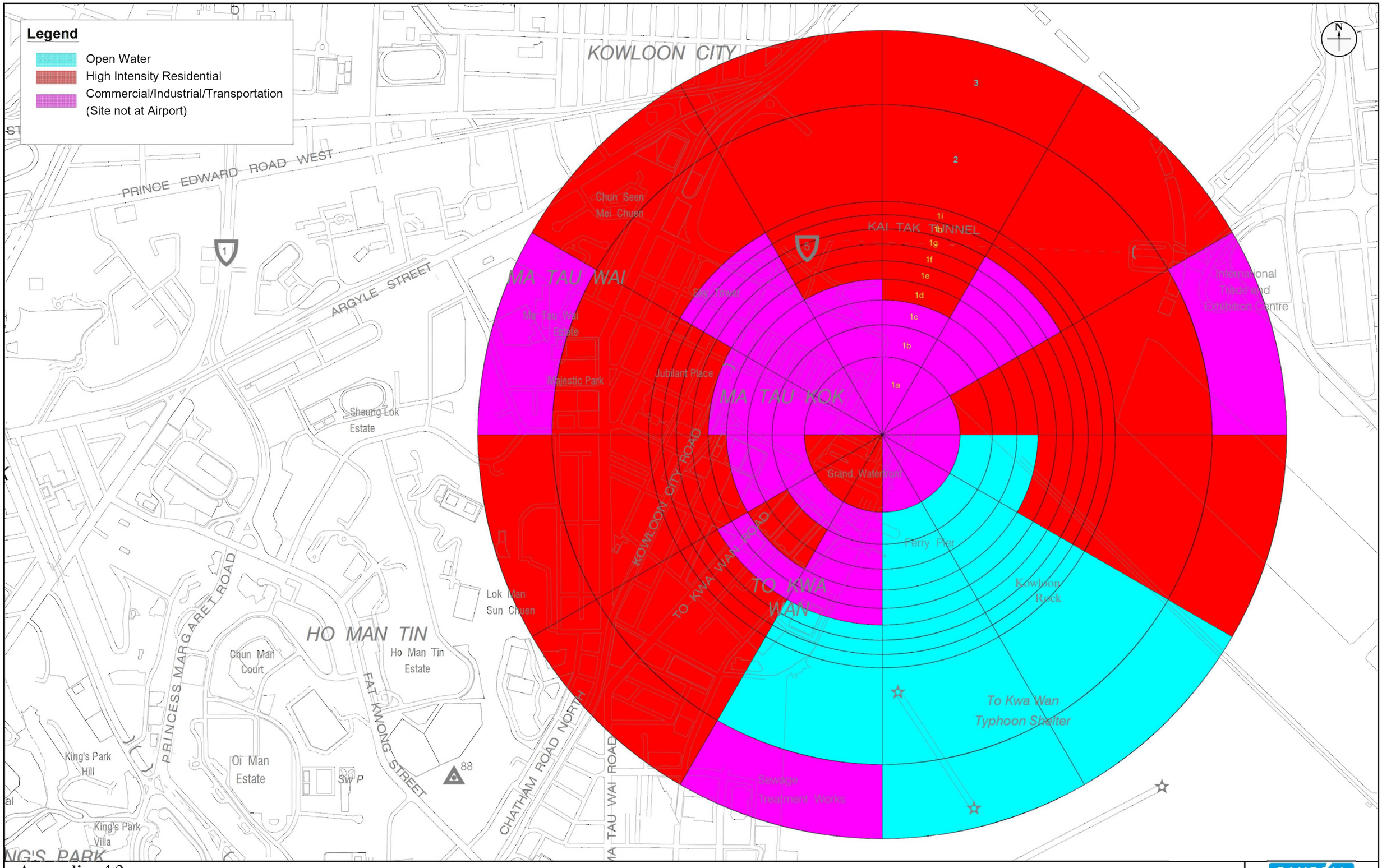
Detailed Calculations of Fixed Noise Impact Assessment (Night-time)

Noise Sensitive Receiver (NSR)	NSR (x)	NSR (y)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	SWL, dB(A)	No of Units	Overall SWL, dB(A)	Horizontal Distance from NSR to NS (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)
C16-2A	838018	820153	C8	Ma Tau Kok Gas Work-north bound office	837896.8	820171.5	84.6	1	84.6	122.5	-49.8	0
			C9	Ma Tau Kok Gas Work-north bound office	837900.9	820172.7	84.6	1	84.6	118.6	-49.5	0
			C10	Ma Tau Kok Gas Work-north bound office	837934.1	820157.4	85.2	1	85.2	83.8	-46.5	0
			C11	Ma Tau Kok Gas Work-north bound office	837936.6	820156.3	85.2	1	85.2	81.3	-46.2	0
			C12	Ma Tau Kok Gas Work-south bound block	837803.6	820090.2	90.9	1	90.9	223.1	-55.0	0
			C13	Ma Tau Kok Gas Work-south bound block	837805.9	820094.6	90.9	1	90.9	219.7	-54.8	0
			C14	Ma Tau Kok Gas Work-south bound block	837812.6	820092.3	90.1	1	90.1	213.9	-54.6	0
			C15	Ma Tau Kok Gas Work-south bound block	837816.8	820090.3	90.1	1	90.1	210.4	-54.5	0
			C16	Ma Tau Kok Gas Work-south bound block	837820.8	820087.8	90.1	1	90.1	207.4	-54.3	0

Detailed Calculations of Fixed Noise Impact Assessment (Night-time)

Noise Sensitive Receiver (NSR)	NSR (x)	NSR (y)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	SWL, dB(A)	No of Units	Overall SWL, dB(A)	Horizontal Distance from NSR to NS (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)
C01-1	838026	820174	C8	Ma Tau Kok Gas Work-north bound office	837896.8	820171.5	84.6	1	84.6	129.1	-50.2	0
			C9	Ma Tau Kok Gas Work-north bound office	837900.9	820172.7	84.6	1	84.6	124.9	-49.9	0
			C10	Ma Tau Kok Gas Work-north bound office	837934.1	820157.4	85.2	1	85.2	93.2	-47.4	0
			C11	Ma Tau Kok Gas Work-north bound office	837936.6	820156.3	85.2	1	85.2	91.0	-47.2	0
			C12	Ma Tau Kok Gas Work-south bound block	837803.6	820090.2	90.9	1	90.9	237.6	-55.5	0
			C13	Ma Tau Kok Gas Work-south bound block	837805.9	820094.6	90.9	1	90.9	233.9	-55.4	0
			C14	Ma Tau Kok Gas Work-south bound block	837812.6	820092.3	90.1	1	90.1	228.4	-55.2	0
			C15	Ma Tau Kok Gas Work-south bound block	837816.8	820090.3	90.1	1	90.1	225.2	-55.1	0
			C16	Ma Tau Kok Gas Work-south bound block	837820.8	820087.8	90.1	1	90.1	222.5	-54.9	0

Appendix 4.1 Detailed Calculation Characterizing Landuse for AEARMET



Appendix: 4.2	RAMBOLL
Title: Landuse Parameter (Surface Roughness) Derivation by a Circle of 1km in Radius	Drawn by: LT Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: May 2022

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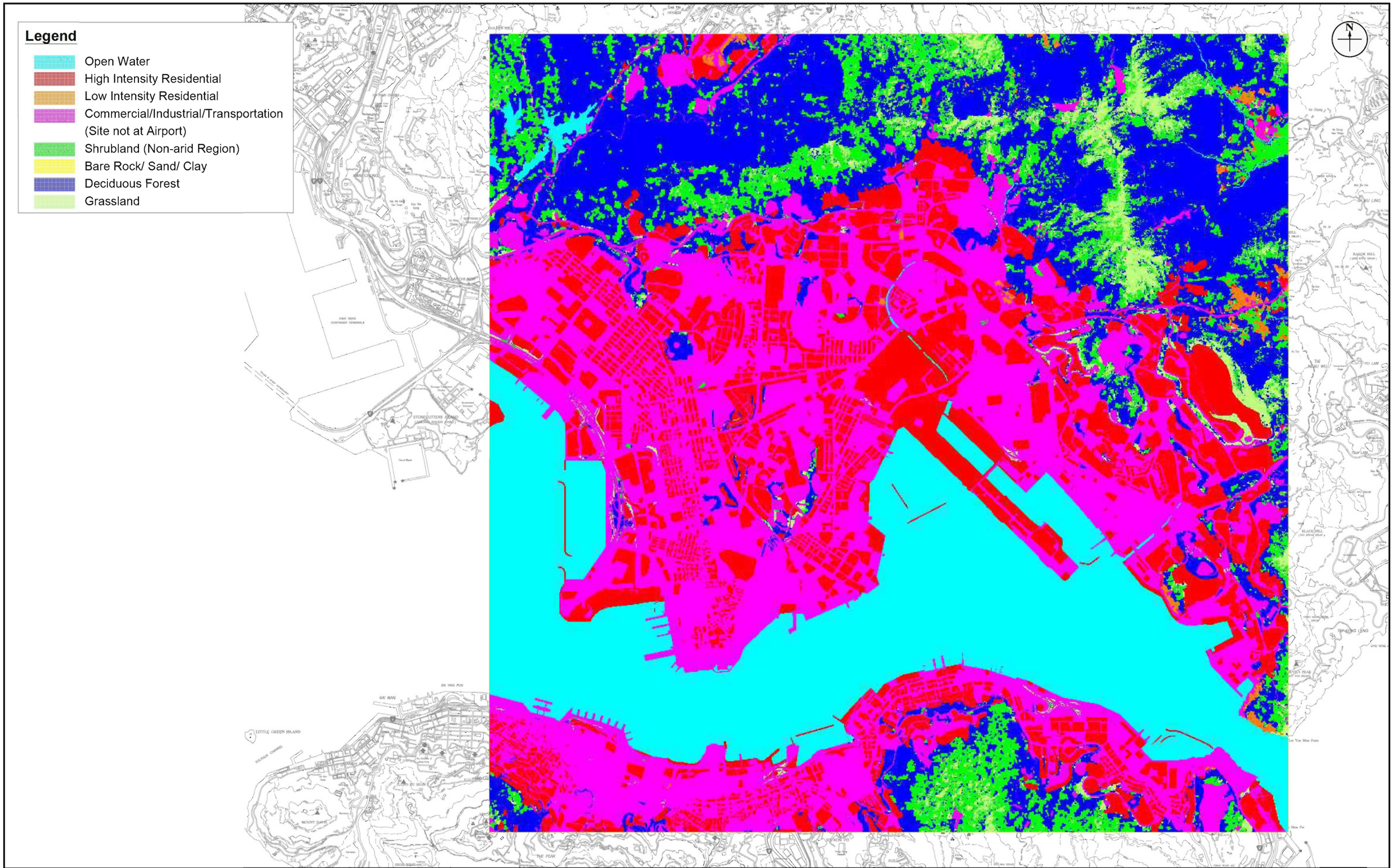

Appendix: 4.2

Title: Landuse Parameter (Albedo Value, Bowen Ratio) Derivation by 10km x 10km Region

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	LT
Checked by:	BF
Rev.:	1.0
Date:	May 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\01 Air\05 AERMOD\AERMET\Input\10km x 10km.dwg

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

Land Use Type as Extracted from LAKES = AERMOD

rows	Type	Season	Albedo Value	Bowen Ratio	Surface Roughness
1.	Open water	Winter	0.1	0.1	0.0010
		Spring	0.1	0.1	0.0010
		Summer	0.1	0.1	0.0010
		Autumn	0.1	0.1	0.0010
2.	Low Intensity Residential	Winter	0.18	1	0.3000
		Spring	0.16	0.8	0.4000
		Summer	0.16	0.8	0.4000
		Autumn	0.16	1	0.4000
3.	High Intensity Residential	Winter	0.18	1.5	1.0000
		Spring	0.18	1.5	1.0000
		Summer	0.18	1.5	1.0000
		Autumn	0.18	1.5	1.0000
4.	Woody Wetland	Winter	0.14	0.3	0.4000
		Spring	0.14	0.2	0.5000
		Summer	0.14	0.2	0.5000
		Autumn	0.14	0.2	0.5000
5.	Commercial/Industrial/Transportation (Not at Airport)	Winter	0.18	1.5	0.7000
		Spring	0.18	1.5	0.7000
		Summer	0.18	1.5	0.7000
		Autumn	0.18	1.5	0.7000
6.	Bare Rock/Sand/Clay (Non-arid region)	Winter	0.2	1.5	0.0500
		Spring	0.2	1.5	0.0500
		Summer	0.2	1.5	0.0500
		Autumn	0.2	1.5	0.0500
7.	Shrubland (Non-arid Region)	Winter	0.18	1.5	0.3000
		Spring	0.18	1	0.3000
		Summer	0.18	1	0.3000
		Autumn	0.18	1.5	0.3000
8.	Deciduous forest	Winter	0.17	1	0.6000
		Spring	0.16	0.7	1.0000
		Summer	0.16	0.3	1.3000
		Autumn	0.16	1	1.3000
9.	Grassland	Winter	0.2	1	0.0100
		Spring	0.18	0.4	0.0500
		Summer	0.18	0.8	0.1000
		Autumn	0.18	1	0.1000

Reference:

1. Tables A-1, A-2, A-3 from AERSURFACE User's Guide, USEPA, revised on 16 Jan 2013

Sector	Area of Concern	Season	Albedo Value	Bowen Ratio	Surface Roughness
1.	0° - 30° (clockwise from N)	Winter	0.1467	0.48076	0.89824
		Spring	0.1458	0.45941	0.89824
		Summer	0.1458	0.43246	0.89824
		Autumn	0.1458	0.48076	0.89824
2.	30° - 60° (clockwise from N)	Winter	0.1467	0.48076	0.84106
		Spring	0.1458	0.45941	0.84106
		Summer	0.1458	0.43246	0.84106
		Autumn	0.1458	0.48076	0.84106
3.	60° - 90° (clockwise from N)	Winter	0.1467	0.48076	0.88404
		Spring	0.1458	0.45941	0.88404
		Summer	0.1458	0.43246	0.88404
		Autumn	0.1458	0.48076	0.88404
4.	90° - 120° (clockwise from N)	Winter	0.1467	0.48076	0.23485
		Spring	0.1458	0.45941	0.23485
		Summer	0.1458	0.43246	0.23485
		Autumn	0.1458	0.48076	0.23485
5.	120° - 150° (clockwise from N)	Winter	0.1467	0.48076	0.00273
		Spring	0.1458	0.45941	0.00273
		Summer	0.1458	0.43246	0.00273
		Autumn	0.1458	0.48076	0.00273
6.	150° - 180° (clockwise from N)	Winter	0.1467	0.48076	0.00273
		Spring	0.1458	0.45941	0.00273
		Summer	0.1458	0.43246	0.00273
		Autumn	0.1458	0.48076	0.00273
7.	180° - 210° (clockwise from N)	Winter	0.1467	0.48076	0.06906
		Spring	0.1458	0.45941	0.06906
		Summer	0.1458	0.43246	0.06906
		Autumn	0.1458	0.48076	0.06906
8.	210° - 240° (clockwise from N)	Winter	0.1467	0.48076	0.93972
		Spring	0.1458	0.45941	0.93972
		Summer	0.1458	0.43246	0.93972
		Autumn	0.1458	0.48076	0.93972
9.	240° - 270° (clockwise from N)	Winter	0.1467	0.48076	0.93054
		Spring	0.1458	0.45941	0.93054
		Summer	0.1458	0.43246	0.93054
		Autumn	0.1458	0.48076	0.93054
10.	270° - 300° (clockwise from N)	Winter	0.1467	0.48076	0.80877
		Spring	0.1458	0.45941	0.80877
		Summer	0.1458	0.43246	0.80877
		Autumn	0.1458	0.48076	0.80877
11.	300° - 330° (clockwise from N)	Winter	0.1467	0.48076	0.81988
		Spring	0.1458	0.45941	0.81988
		Summer	0.1458	0.43246	0.81988
		Autumn	0.1458	0.48076	0.81988
12.	330° - 360° (clockwise from N)	Winter	0.1467	0.48076	0.88108
		Spring	0.1458	0.45941	0.88108
		Summer	0.1458	0.43246	0.88108
		Autumn	0.1458	0.48076	0.88108

Notes:

1. The determination of the surface roughness length should be based on an inverse-distance weighted geometric mean for a default upwind distance of 1 kilometer relative to the measurement site. Surface roughness length may be varied by sector to account for variations in land cover near the measurement site; however, the sector widths should be no smaller than 30 degrees.

2. The determination of the Albedo and Bowen ratio should be based on an applicable land fraction to weight each value.
3. Seasonal average of these parameters were adpoted except the parameter in winter season (4 - Winter with continuous snow on ground).

4 Option of seasonal average in AERMET is adopted to define the land surface characteristics over the year.

Determination of Albedo Value and Bowen Ratio by 10km x 10km Region

Land Type	Albedo Value (A)				Bowen Ratio (B)				Occupied Area (km^2)	Frac of Area (Frac)	A x Frac				B^Frac			
	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn			Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn
Open water	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	40.80	0.41	0.0408	0.0408	0.0408	0.0408	0.3909	0.3909	0.3909	0.3909
Low Intensity Residential	0.18	0.16	0.16	0.16	1	0.8	0.8	1	0.47	0.00	0.0008	0.0007	0.0007	0.0007	1.0000	0.9990	0.9990	1.0000
High Intensity Residential	0.18	0.18	0.18	0.18	1.5	1.5	1.5	1.5	18.21	0.18	0.0328	0.0328	0.0328	0.0328	1.0766	1.0766	1.0766	1.0766
Woody Wetland	0.14	0.14	0.14	0.14	0.3	0.2	0.2	0.2	0.00	0.00	0.0000	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000
Commercial/Industrial/Transportation (Not at Airport)	0.18	0.18	0.18	0.18	1.5	1.5	1.5	1.5	28.96	0.29	0.0521	0.0521	0.0521	0.0521	1.1246	1.1246	1.1246	1.1246
Bare Rock/Sand/Clay (Non-arid region)	0.2	0.2	0.2	0.2	1.5	1.5	1.5	1.5	0.11	0.00	0.0002	0.0002	0.0002	0.0002	1.0005	1.0005	1.0005	1.0005
Shrubland (Non-arid Region)	0.18	0.18	0.18	0.18	1.5	1	1	1.5	3.77	0.04	0.0068	0.0068	0.0068	0.0068	1.0154	1.0000	1.0000	1.0154
Deciduous forest	0.17	0.16	0.16	0.16	1	0.7	0.3	1	7.38	0.07	0.0125	0.0118	0.0118	0.0118	1.0000	0.9740	0.9150	1.0000
Grassland	0.2	0.18	0.18	0.18	1	0.4	0.8	1	0.30	0.00	0.0006	0.0005	0.0005	0.0005	1.0000	0.9972	0.9993	1.0000
								Sum	100	1								

Overall Value of Area of Concern

Season	Winter	Spring	Summer	Autumn
Albedo value	0.1467	0.1458	0.1458	0.1458
Bowen ratio	0.4808	0.4594	0.4325	0.4808

Determination of Surface Roughness in each sector

Sector 1 (0° - 30°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.1288	0.2876	0.9025	0.9025	0.9025	0.9025
1b	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.2359	0.1570	0.9455	0.9455	0.9455	0.9455
1c	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.3074	0.1205	0.9579	0.9579	0.9579	0.9579
1d	High Intensity Residential	1	1	1	1	0.01	0.0370	0.3647	0.1016	1.0000	1.0000	1.0000	1.0000
1e	High Intensity Residential	1	1	1	1	0.01	0.0370	0.4139	0.0895	1.0000	1.0000	1.0000	1.0000
1f	High Intensity Residential	1	1	1	1	0.01	0.0370	0.4579	0.0809	1.0000	1.0000	1.0000	1.0000
1g	High Intensity Residential	1	1	1	1	0.01	0.0370	0.4979	0.0744	1.0000	1.0000	1.0000	1.0000
1h	High Intensity Residential	1	1	1	1	0.01	0.0370	0.5349	0.0692	1.0000	1.0000	1.0000	1.0000
1i	High Intensity Residential	1	1	1	1	0.01	0.0370	0.5695	0.0650	1.0000	1.0000	1.0000	1.0000
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.7077	0.4710	1.0000	1.0000	1.0000	1.0000
3	High Intensity Residential	1	1	1	1	0.09	0.3333	0.9224	0.3614	1.0000	1.0000	1.0000	1.0000
	Inverse distance geometric mean =	0.8982	0.8982	0.8982	0.8982								

Sector 2 (30° - 60°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.12877	0.287621628	0.9025	0.9025	0.9025	0.9025
1b	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.23588	0.157016436	0.9455	0.9455	0.9455	0.9455
1c	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.30743	0.120473074	0.9579	0.9579	0.9579	0.9579
1d	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.36468	0.101560374	0.9644	0.9644	0.9644	0.9644
1e	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.41393	0.089476571	0.9686	0.9686	0.9686	0.9686
1f	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.45786	0.08089162	0.9716	0.9716	0.9716	0.9716
1g	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.49789	0.074387991	0.9738	0.9738	0.9738	0.9738
1h	High Intensity Residential	1	1	1	1	0.01	0.0370	0.53492	0.06923846	1.0000	1.0000	1.0000	1.0000
1i	High Intensity Residential	1	1	1	1	0.01	0.0370	0.56954	0.065029738	1.0000	1.0000	1.0000	1.0000
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.70774	0.470982753	1.0000	1.0000	1.0000	1.0000
3	High Intensity Residential	1	1	1	1	0.09	0.3333	0.92235	0.36139571	1.0000	1.0000	1.0000	1.0000
	Inverse distance geometric mean =	0.8411	0.8411	0.8411	0.8411								

Sector 3 (60° - 90°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.12877	0.287621628	0.9025	0.9025	0.9025	0.9025
1b	High Intensity Residential	1	1	1	1	0.01	0.0370	0.23588	0.157016436	1.0000	1.0000	1.0000	1.0000
1c	High Intensity Residential	1	1	1	1	0.01	0.0370	0.30743	0.120473074	1.0000	1.0000	1.0000	1.0000
1d	High Intensity Residential	1	1	1	1	0.01	0.0370	0.36468	0.101560374	1.0000	1.0000	1.0000	1.0000
1e	High Intensity Residential	1	1	1	1	0.01	0.0370	0.41393	0.089476571	1.0000	1.0000	1.0000	1.0000
1f	High Intensity Residential	1	1	1	1	0.01	0.0370	0.45786	0.08089162	1.0000	1.0000	1.0000	1.0000
1g	High Intensity Residential	1	1	1	1	0.01	0.0370	0.49789	0.074387991	1.0000	1.0000	1.0000	1.0000
1h	High Intensity Residential	1	1	1	1	0.01	0.0370	0.53492	0.06923846	1.0000	1.0000	1.0000	1.0000
1i	High Intensity Residential	1	1	1	1	0.01	0.0370	0.56954	0.065029738	1.0000	1.0000	1.0000	1.0000
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.70774	0.470982753	1.0000	1.0000	1.0000	1.0000
3	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.09	0.3333	0.92235	0.36139571	0.8791	0.8791	0.8791	0.8791
	Inverse distance geometric mean =	0.8840	0.8840	0.8840	0.8840								

Determination of Surface Roughness in each sector

Sector 4 (90° - 120°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.12877	0.287621628	0.9025	0.9025	0.9025	0.9025
1b	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.23588	0.157016436	0.3380	0.3380	0.3380	0.3380
1c	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.30743	0.120473074	0.4351	0.4351	0.4351	0.4351
1d	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.36468	0.101560374	0.4958	0.4958	0.4958	0.4958
1e	High Intensity Residential	1	1	1	1	0.01	0.0370	0.41393	0.089476571	1.0000	1.0000	1.0000	1.0000
1f	High Intensity Residential	1	1	1	1	0.01	0.0370	0.45786	0.08089162	1.0000	1.0000	1.0000	1.0000
1g	High Intensity Residential	1	1	1	1	0.01	0.0370	0.49789	0.074387991	1.0000	1.0000	1.0000	1.0000
1h	High Intensity Residential	1	1	1	1	0.01	0.0370	0.53492	0.06923846	1.0000	1.0000	1.0000	1.0000
1i	High Intensity Residential	1	1	1	1	0.01	0.0370	0.56954	0.065029738	1.0000	1.0000	1.0000	1.0000
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.70774	0.470982753	1.0000	1.0000	1.0000	1.0000
3	High Intensity Residential	1	1	1	1	0.09	0.3333	0.92235	0.36139571	1.0000	1.0000	1.0000	1.0000
	Inverse distance geometric mean =	0.2348	0.2348	0.2348	0.2348								

Sector 5 (120° - 150°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.12877	0.287621628	0.9025	0.9025	0.9025	0.9025
1b	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.23588	0.157016436	0.3380	0.3380	0.3380	0.3380
1c	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.30743	0.120473074	0.4351	0.4351	0.4351	0.4351
1d	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.36468	0.101560374	0.4958	0.4958	0.4958	0.4958
1e	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.41393	0.089476571	0.5390	0.5390	0.5390	0.5390
1f	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.45786	0.08089162	0.5719	0.5719	0.5719	0.5719
1g	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.49789	0.074387991	0.5982	0.5982	0.5982	0.5982
1h	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.53492	0.06923846	0.6198	0.6198	0.6198	0.6198
1i	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.56954	0.065029738	0.6381	0.6381	0.6381	0.6381
2	Open water	0.001	0.001	0.001	0.001	0.09	0.3333	0.70774	0.470982753	0.0386	0.0386	0.0386	0.0386
3	Open water	0.001	0.001	0.001	0.001	0.09	0.3333	0.92235	0.36139571	0.0824	0.0824	0.0824	0.0824
	Inverse distance geometric mean =	0.0027	0.0027	0.0027	0.0027								

Sector 6 (150° - 180°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.12877	0.287621628	0.9025	0.9025	0.9025	0.9025
1b	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.23588	0.157016436	0.3380	0.3380	0.3380	0.3380
1c	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.30743	0.120473074	0.4351	0.4351	0.4351	0.4351
1d	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.36468	0.101560374	0.4958	0.4958	0.4958	0.4958
1e	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.41393	0.089476571	0.5390	0.5390	0.5390	0.5390
1f	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.45786	0.08089162	0.5719	0.5719	0.5719	0.5719
1g	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.49789	0.074387991	0.5982	0.5982	0.5982	0.5982
1h	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.53492	0.06923846	0.6198	0.6198	0.6198	0.6198
1i	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.56954	0.065029738	0.6381	0.6381	0.6381	0.6381
2	Open water	0.001	0.001	0.001	0.001	0.09	0.3333	0.70774	0.470982753	0.0386	0.0386	0.0386	0.0386
3	Open water	0.001	0.001	0.001	0.001	0.09	0.3333	0.92235	0.36139571	0.0824	0.0824	0.0824	0.0824
	Inverse distance geometric mean =	0.0027	0.0027	0.0027	0.0027								

Determination of Surface Roughness in each sector

Sector 7 (180° - 210°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	High Intensity Residential	1	1	1	1	0.01	0.0370	0.12877	0.287621628	1.0000	1.0000	1.0000	1.0000
1b	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.23588	0.157016436	0.9455	0.9455	0.9455	0.9455
1c	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.30743	0.120473074	0.9579	0.9579	0.9579	0.9579
1d	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.36468	0.101560374	0.9644	0.9644	0.9644	0.9644
1e	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.41393	0.089476571	0.9686	0.9686	0.9686	0.9686
1f	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.45786	0.08089162	0.9716	0.9716	0.9716	0.9716
1g	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.49789	0.074387991	0.5982	0.5982	0.5982	0.5982
1h	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.53492	0.06923846	0.6198	0.6198	0.6198	0.6198
1i	Open water	0.001	0.001	0.001	0.001	0.01	0.0370	0.56954	0.065029738	0.6381	0.6381	0.6381	0.6381
2	Open water	0.001	0.001	0.001	0.001	0.09	0.3333	0.70774	0.470982753	0.0386	0.0386	0.0386	0.0386
3	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.09	0.3333	0.92235	0.36139571	0.8791	0.8791	0.8791	0.8791
	Inverse distance geometric mean =	0.0691	0.0691	0.0691	0.0691								

Sector 8 (210° - 240°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	High Intensity Residential	1	1	1	1	0.01	0.0370	0.12877	0.287621628	1.0000	1.0000	1.0000	1.0000
1b	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.23588	0.157016436	0.9455	0.9455	0.9455	0.9455
1c	High Intensity Residential	1	1	1	1	0.01	0.0370	0.30743	0.120473074	1.0000	1.0000	1.0000	1.0000
1d	High Intensity Residential	1	1	1	1	0.01	0.0370	0.36468	0.101560374	1.0000	1.0000	1.0000	1.0000
1e	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.41393	0.089476571	0.9686	0.9686	0.9686	0.9686
1f	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.45786	0.08089162	0.9716	0.9716	0.9716	0.9716
1g	High Intensity Residential	1	1	1	1	0.01	0.0370	0.49789	0.074387991	1.0000	1.0000	1.0000	1.0000
1h	High Intensity Residential	1	1	1	1	0.01	0.0370	0.53492	0.06923846	1.0000	1.0000	1.0000	1.0000
1i	High Intensity Residential	1	1	1	1	0.01	0.0370	0.56954	0.065029738	1.0000	1.0000	1.0000	1.0000
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.70774	0.470982753	1.0000	1.0000	1.0000	1.0000
3	High Intensity Residential	1	1	1	1	0.09	0.3333	0.92235	0.36139571	1.0000	1.0000	1.0000	1.0000
	Inverse distance geometric mean =	0.9397	0.9397	0.9397	0.9397								

Sector 9 (240° - 270°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area (km2)	Frac of Area (Frac)	Distance from centre (km) (Dist)	Weighting (Frac/Dist)	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn					Winter	Spring	Summer	Autumn
1a	High Intensity Residential	1	1	1	1	0.01	0.0370	0.12877	0.287621628	1.0000	1.0000	1.0000	1.0000
1b	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.23588	0.157016436	0.9455	0.9455	0.9455	0.9455
1c	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.30743	0.120473074	0.9579	0.9579	0.9579	0.9579
1d	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.36468	0.101560374	0.9644	0.9644	0.9644	0.9644
1e	High Intensity Residential	1	1	1	1	0.01	0.0370	0.41393	0.089476571	1.0000	1.0000	1.0000	1.0000
1f	High Intensity Residential	1	1	1	1	0.01	0.0370	0.45786	0.08089162	1.0000	1.0000	1.0000	1.0000
1g	High Intensity Residential	1	1	1	1	0.01	0.0370	0.49789	0.074387991	1.0000	1.0000	1.0000	1.0000
1h	High Intensity Residential	1	1	1	1	0.01	0.0370	0.53492	0.06923846	1.0000	1.0000	1.0000	1.0000
1i	High Intensity Residential	1	1	1	1	0.01	0.0370	0.56954	0.065029738	1.0000	1.0000	1.0000	1.0000
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.70774	0.470982753	1.0000	1.0000	1.0000	1.0000
3	High Intensity Residential	1	1	1	1	0.09	0.3333	0.92235	0.36139571	1.0000	1.0000	1.0000	1.0000
	Inverse distance geometric mean =	0.9305	0.9305	0.9305	0.9305								

Determination of Surface Roughness in each sector

Sector 10 (270° - 300°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area	Frac of Area	Distance from centre	Weighting	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn	(km2)	(Frac)	(km) (Dist)	(Frac/Dist)	Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.12877	0.287621628	0.9025	0.9025	0.9025	0.9025
1b	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.23588	0.157016436	0.9455	0.9455	0.9455	0.9455
1c	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.30743	0.120473074	0.9579	0.9579	0.9579	0.9579
1d	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.36468	0.101560374	0.9644	0.9644	0.9644	0.9644
1e	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.41393	0.089476571	0.9686	0.9686	0.9686	0.9686
1f	High Intensity Residential	1	1	1	1	0.01	0.0370	0.45786	0.08089162	1.0000	1.0000	1.0000	1.0000
1g	High Intensity Residential	1	1	1	1	0.01	0.0370	0.49789	0.074387991	1.0000	1.0000	1.0000	1.0000
1h	High Intensity Residential	1	1	1	1	0.01	0.0370	0.53492	0.06923846	1.0000	1.0000	1.0000	1.0000
1i	High Intensity Residential	1	1	1	1	0.01	0.0370	0.56954	0.065029738	1.0000	1.0000	1.0000	1.0000
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.70774	0.470982753	1.0000	1.0000	1.0000	1.0000
3	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.09	0.3333	0.92235	0.36139571	0.8791	0.8791	0.8791	0.8791
	Inverse distance geometric mean =	0.8088	0.8088	0.8088	0.8088								

Sector 11 (300° - 330°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area	Frac of Area	Distance from centre	Weighting	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn	(km2)	(Frac)	(km) (Dist)	(Frac/Dist)	Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.12877	0.287621628	0.9025	0.9025	0.9025	0.9025
1b	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.23588	0.157016436	0.9455	0.9455	0.9455	0.9455
1c	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.30743	0.120473074	0.9579	0.9579	0.9579	0.9579
1d	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.36468	0.101560374	0.9644	0.9644	0.9644	0.9644
1e	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.41393	0.089476571	0.9686	0.9686	0.9686	0.9686
1f	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.45786	0.08089162	0.9716	0.9716	0.9716	0.9716
1g	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.49789	0.074387991	0.9738	0.9738	0.9738	0.9738
1h	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.53492	0.06923846	0.9756	0.9756	0.9756	0.9756
1i	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.56954	0.065029738	0.9771	0.9771	0.9771	0.9771
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.70774	0.470982753	1.0000	1.0000	1.0000	1.0000
3	High Intensity Residential	1	1	1	1	0.09	0.3333	0.92235	0.36139571	1.0000	1.0000	1.0000	1.0000
	Inverse distance geometric mean =	0.8199	0.8199	0.8199	0.8199								

Sector 12 (330° - 360°) (clockwise from N)

Fraction Index	Land Type	Surface Roughness (Z)				Area	Frac of Area	Distance from centre	Weighting	Z^(Frac/Dist)			
		Winter	Spring	Summer	Autumn	(km2)	(Frac)	(km) (Dist)	(Frac/Dist)	Winter	Spring	Summer	Autumn
1a	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.12877	0.287621628	0.9025	0.9025	0.9025	0.9025
1b	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.23588	0.157016436	0.9455	0.9455	0.9455	0.9455
1c	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.30743	0.120473074	0.9579	0.9579	0.9579	0.9579
1d	Commercial/Industrial/Transportation (Not at Airport)	0.7	0.7	0.7	0.7	0.01	0.0370	0.36468	0.101560374	0.9644	0.9644	0.9644	0.9644
1e	High Intensity Residential	1	1	1	1	0.01	0.0370	0.41393	0.089476571	1.0000	1.0000	1.0000	1.0000
1f	High Intensity Residential	1	1	1	1	0.01	0.0370	0.45786	0.08089162	1.0000	1.0000	1.0000	1.0000
1g	High Intensity Residential	1	1	1	1	0.01	0.0370	0.49789	0.074387991	1.0000	1.0000	1.0000	1.0000
1h	High Intensity Residential	1	1	1	1	0.01	0.0370	0.53492	0.06923846	1.0000	1.0000	1.0000	1.0000
1i	High Intensity Residential	1	1	1	1	0.01	0.0370	0.56954	0.065029738	1.0000	1.0000	1.0000	1.0000
2	High Intensity Residential	1	1	1	1	0.09	0.3333	0.70774	0.470982753	1.0000	1.0000	1.0000	1.0000
3	High Intensity Residential	1	1	1	1	0.09	0.3333	0.92235	0.36139571	1.0000	1.0000	1.0000	1.0000
	Inverse distance geometric mean =	0.8811	0.8811	0.8811	0.8811								

Appendix 4.2 Input Parameters of Industrial, Marine and Portal Sources in AERMOD

Chimney - Point Source

ID	X	Y	Z	SO2	NOx	RSP	FSP	Exit Temperature [1]	Exit Velocity [1]	Internal diameter [1]	Release Height	Operation Hours [2]
				g/s	g/s	g/s	g/s	K	m/s	m	(mAG)	
TG1	837904	820141	4.3	0	0.3472	0	0	473	5.5	1.00	34.0	Full day
TG2	837913	820136	4.3	0	0.3472	0	0	473	5.5	1.00	34.0	
TG3	837921	820133	4.3	0	0.3472	0	0	473	5.5	1.00	34.0	
TG4	837928	820130	4.3	0	0.3472	0	0	473	5.5	1.00	34.0	
TG5	837837	820081	4.3	0	0.1667	0	0	450	20.4	0.50	44.5	
EP1	839439	822851	65.8	0	0.1407	0.0037	0.0018	273	10	0.24	30.2	0800 - 2200
EP2	839439	822850	65.8	0	0.1814	0.0047	0.0024	273	10	0.27	30.2	
EP3	839439	822849	65.8	0	0.1407	0.0037	0.0018	273	10	0.24	30.2	
EP4	839443	822851	65.8	0	0.1814	0.0047	0.0024	273	10	0.27	30.2	
EP5	839443	822850	65.8	0	0.1407	0.0037	0.0018	273	10	0.24	30.2	
EP6	839442	822849	65.8	0	0.1407	0.0037	0.0018	273	10	0.24	30.2	

Notes:

1. For Chimney ID TG1-5, information from the operator is not available. Exit Temperature, exit velocity and internal diameter of the chimney are referenced to Appendix 4.9 of approved EIA report "Central Kowloon Route" (AEIAR-171/2013). Emission height is verified by site observations. Operating hours are assumed to be full day for a conservative approach.
2. Emission details of Chimney ID EP1-EP6 are obtained from the latest Specified Process Licence (L-12-006(1)) and Air Pollution Control Plan of Diamond Hill Crematorium at Diamond Hill

Marine Emission - Point Source

ID	X	Y	Z [1]	SO2	NOx	RSP	FSP	Exit Temperature [2][3]	Exit Velocity	Internal diameter [2][3]	Emission Height [2][3]	Operation Hours
				g/s	g/s	g/s	g/s	K	m/s	m	mAG	
NP1	838070	819596	2.73	7.61E-05	3.65E-03	1.10E-04	1.06E-04	373	0	0.3	1	Please refer to the coral sea ferry frequency
NP2	838096	819671	2.73	7.61E-05	3.65E-03	1.10E-04	1.06E-04	373	0	0.3	1	
NP3	838161	819715	2.73	7.61E-05	3.65E-03	1.10E-04	1.06E-04	373	0	0.3	1	
NP4	838209	819771	2.73	7.61E-05	3.65E-03	1.10E-04	1.06E-04	373	0	0.3	1	
NP5	838167	819829	2.73	7.61E-05	3.65E-03	1.10E-04	1.06E-04	373	0	0.3	1	
NP6	838104	819876	2.73	7.61E-05	3.65E-03	1.10E-04	1.06E-04	373	0	0.3	1	
NPH	838104	819876	2.73	1.37E-04	6.57E-03	2.63E-04	2.56E-04	373	0	0.3	1	
HT1	838085	819590	2.73	1.01E-04	4.87E-03	1.46E-04	1.41E-04	373	0	0.3	1	
HT2	838110	819666	2.73	1.01E-04	4.87E-03	1.46E-04	1.41E-04	373	0	0.3	1	
HT3	838133	819743	2.73	1.01E-04	4.87E-03	1.46E-04	1.41E-04	373	0	0.3	1	
HT4	838155	819820	2.73	1.01E-04	4.87E-03	1.46E-04	1.41E-04	373	0	0.3	1	
HT5	838149	819888	2.73	1.01E-04	4.87E-03	1.46E-04	1.41E-04	373	0	0.3	1	
HT6	838080	819928	2.73	1.01E-04	4.87E-03	1.46E-04	1.41E-04	373	0	0.3	1	
HTH	838080	819928	2.73	2.19E-04	1.05E-02	4.20E-04	4.10E-04	373	0	0.3	1	
H1	839744	818698	3	6.02	34.85	8.42E-01	7.54E-01	537	24.6	1.9	52 [1]	Full day
H2	840021	818427	3	5.36	30.56	7.44E-01	6.65E-01	537	24.6	1.9	62 [2]	

Note:

1. Mean Sea Level is 1.5m, referenced to 2016 data of Hong Kong Observatory. Hong Kong Principal Datum is 1.23m below the Mean Sea Level, referenced to Hong Kong geographic data, Lands Department.
2. Information from the operator is not available. Exit Temperature, exit velocity, internal diameter and release height of the ferry are referenced to Appendix 3.15 of approved EIA report "Tung Chung New Town Extension" (AEIAR-196/2016). Emission height is verified by site observations.
3. Information from the operator is not available. Exit Temperature, exit velocity, internal diameter and release height of the barge are referenced to Appendix 5.3.15-6 of approved EIA report "Expansion of Hong Kong International Airport into a Three-Runway System" (AEIAR-185/2014).

Marine Emission from Cruises at Kai Tak Cruise Terminal

Cruise Vessels Emisson - Point Source

Emission Point	Source Description	Source	Coordinates of Sources			Emission Rate (g/s)				Emission Height	Exhaust	Exit Velocity	Equivalent Stack
			x	y	z	RSP	FSP	NOx	SO_2	(m)	Temperature (K)	(m/s)	Diameter (m)
H1	Hotelling of World Dream	Point	839743.7	818698.1	3	0.8423	0.7544	34.8490	6.0165	52 [1]	537	24.6	1.9
H2	Hotelling of Spectrum of the Seas	Point	840021.4	818426.8	3	0.7436	0.6649	30.5624	5.3627	62 [2]	537	24.6	1.9

Note:

[1] The emission height of the chimney of World Dream is estimated based on the observation. The estimated height is about 50m (above water surface) which is close to the height of the Panamax (52m above water surface) as stated in the Aproved EIA Report for Kai Tak Development. Therefore, the height of 52m above water surface has been adopted fro the assessment.

[2] The emission height of the chimney of Spectrum of the Seas 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 Aproved EIA Report for Kai Tak Development. Therefore, the height of 62m above water surface has been adopted fro the assessment.

Emission Inventory for Tunnel Portal - 1st Quarter

Road No.	Emission Source ID	Portal Description	Tunnel Length	Source Type	x-coordinate	y-coordinate	Release Height	Initial Lateral Dimension	Initial Vertical Dimension	Hourly Emission Rate (g/s)			
			(km)				(m)	(m)	(m)	NO2	NO	RSP	FSP
L084 & L085	KTTW01	Kai Tak Tunnel (WB)	1.230	Volume	837684	820271	2.75	3.44	2.56	1.43E-03	1.05E-02	3.35E-04	3.08E-04
	KTTW02		1.230	Volume	837682	820264	2.75	3.44	2.56	1.43E-03	1.05E-02	3.35E-04	3.08E-04
	KTTW03		1.230	Volume	837680	820257	2.75	3.44	2.56	1.43E-03	1.05E-02	3.35E-04	3.08E-04
	KTTW04		1.230	Volume	837678	820250	2.75	3.44	2.56	1.43E-03	1.05E-02	3.35E-04	3.08E-04
	KTTW05		1.230	Volume	837676	820243	2.75	3.44	2.56	1.43E-03	1.05E-02	3.35E-04	3.08E-04
	KTTW06		1.230	Volume	837674	820236	2.75	3.44	2.56	1.43E-03	1.05E-02	3.35E-04	3.08E-04
	KTTW07		1.230	Volume	837671	820229	2.75	3.44	2.56	1.43E-03	1.05E-02	3.35E-04	3.08E-04
	KTTW08		1.230	Volume	837669	820222	2.75	3.44	2.56	7.16E-04	5.23E-03	1.67E-04	1.54E-04
	KTTW09		1.230	Volume	837667	820215	2.75	3.44	2.56	7.16E-04	5.23E-03	1.67E-04	1.54E-04
	KTTW10		1.230	Volume	837665	820208	2.75	3.44	2.56	7.16E-04	5.23E-03	1.67E-04	1.54E-04
	KTTW11		1.230	Volume	837663	820201	2.75	3.44	2.56	7.16E-04	5.23E-03	1.67E-04	1.54E-04
	KTTW12		1.230	Volume	837661	820194	2.75	3.44	2.56	7.16E-04	5.23E-03	1.67E-04	1.54E-04
	KTTW13		1.230	Volume	837659	820187	2.75	3.44	2.56	7.16E-04	5.23E-03	1.67E-04	1.54E-04
	KTTW14		1.230	Volume	837656	820179	2.75	3.44	2.56	7.16E-04	5.23E-03	1.67E-04	1.54E-04
L001	D2ENB01	D2 Landscape Deck (NB)	0.125	Volume	838356	820573	4.00	12.09	3.72	3.48E-04	1.59E-03	4.24E-05	3.88E-05
	D2ENB02		0.125	Volume	838366	820575	4.00	12.09	3.72	3.48E-04	1.59E-03	4.24E-05	3.88E-05
	D2ENB03		0.125	Volume	838376	820578	4.00	12.09	3.72	3.48E-04	1.59E-03	4.24E-05	3.88E-05
	D2ENB04		0.125	Volume	838384	820580	4.00	12.09	3.72	3.48E-04	1.59E-03	4.24E-05	3.88E-05
	D2ENB05		0.125	Volume	838394	820582	4.00	12.09	3.72	3.48E-04	1.59E-03	4.24E-05	3.88E-05
	D2ENB06		0.125	Volume	838404	820584	4.00	12.09	3.72	1.74E-04	7.93E-04	2.12E-05	1.94E-05
	D2ENB07		0.125	Volume	838414	820587	4.00	12.09	3.72	1.74E-04	7.93E-04	2.12E-05	1.94E-05
	D2ENB08		0.125	Volume	838424	820589	4.00	12.09	3.72	1.74E-04	7.93E-04	2.12E-05	1.94E-05
	D2ENB09		0.125	Volume	838432	820591	4.00	12.09	3.72	1.74E-04	7.93E-04	2.12E-05	1.94E-05
	D2ENB10		0.125	Volume	838442	820594	4.00	12.09	3.72	1.74E-04	7.93E-04	2.12E-05	1.94E-05
L002	D2MSB01	D2 Landscape Deck (SB)	0.125	Volume	838239	820513	4.00	12.09	3.72	2.82E-04	1.50E-03	3.66E-05	3.36E-05
	D2MSB02		0.125	Volume	838231	820506	4.00	12.09	3.72	2.82E-04	1.50E-03	3.66E-05	3.36E-05
	D2MSB03		0.125	Volume	838224	820501	4.00	12.09	3.72	2.82E-04	1.50E-03	3.66E-05	3.36E-05
	D2MSB04		0.125	Volume	838215	820495	4.00	12.09	3.72	2.82E-04	1.50E-03	3.66E-05	3.36E-05
	D2MSB05		0.125	Volume	838208	820489	4.00	12.09	3.72	2.82E-04	1.50E-03	3.66E-05	3.36E-05
	D2MSB06		0.125	Volume	838199	820483	4.00	12.09	3.72	1.41E-04	7.51E-04	1.83E-05	1.68E-05
	D2MSB07		0.125	Volume	838192	820476	4.00	12.09	3.72	1.41E-04	7.51E-04	1.83E-05	1.68E-05
	D2MSB08		0.125	Volume	838184	820471	4.00	12.09	3.72	1.41E-04	7.51E-04	1.83E-05	1.68E-05
	D2MSB09		0.125	Volume	838176	820465	4.00	12.09	3.72	1.41E-04	7.51E-04	1.83E-05	1.68E-05
	D2MSB10		0.125	Volume	838168	820458	4.00	12.09	3.72	1.41E-04	7.51E-04	1.83E-05	1.68E-05
L003a	D2MNB01	D2 Landscape Deck (NB)	0.037	Volume	838131	820444	4.00	4.65	3.72	1.18E-04	5.06E-04	1.57E-05	1.43E-05
	D2MNB02		0.037	Volume	838138	820451	4.00	4.65	3.72	1.18E-04	5.06E-04	1.57E-05	1.43E-05
	D2MNB03		0.037	Volume	838145	820459	4.00	4.65	3.72	1.18E-04	5.06E-04	1.57E-05	1.43E-05
	D2MNB04		0.037	Volume	838152	820465	4.00	4.65	3.72	1.18E-04	5.06E-04	1.57E-05	1.43E-05
	D2MNB05		0.037	Volume	838159	820472	4.00	4.65	3.72	1.18E-04	5.06E-04	1.57E-05	1.43E-05
	D2MNB06		0.037	Volume	838166	820479	4.00	4.65	3.72	5.90E-05	2.53E-04	7.84E-06	7.17E-06
	D2MNB07		0.037	Volume	838174	820485	4.00	4.65	3.72	5.90E-05	2.53E-04	7.84E-06	7.17E-06
	D2MNB08		0.037	Volume	838181	820492	4.00	4.65	3.72	5.90E-05	2.53E-04	7.84E-06	7.17E-06
	D2MNB09		0.037	Volume	838187	820499	4.00	4.65	3.72	5.90E-05	2.53E-04	7.84E-06	7.17E-06
	D2MNB10		0.037	Volume	838194	820506	4.00	4.65	3.72	5.90E-05	2.53E-04	7.84E-06	7.17E-06
L004b	D2WSB01	D2 Landscape Deck (SB)	0.037	Volume	838115	820393	4.00	4.65	3.72	1.07E-04	4.01E-04	1.52E-05	1.38E-05
	D2WSB02		0.037	Volume	838110	820384	4.00	4.65	3.72	1.07E-04	4.01E-04	1.52E-05	1.38E-05
	D2WSB03		0.037	Volume	838105	820376	4.00	4.65	3.72	1.07E-04	4.01E-04	1.52E-05	1.38E-05
	D2WSB04		0.037	Volume	838100	820367	4.00	4.65	3.72	1.07E-04	4.01E-04	1.52E-05	1.38E-05
	D2WSB05		0.037	Volume	838096	820358	4.00	4.65	3.72	1.07E-04	4.01E-04	1.52E-05	1.38E-05
	D2WSB06		0.037	Volume	838091	820349	4.00	4.65	3.72	5.37E-05	2.01E-04	7.58E-06	6.90E-06
	D2WSB07		0.037	Volume	838086	820340	4.00	4.65	3.72	5.37E-05	2.01E-04	7.58E-06	6.90E-06
	D2WSB08		0.037	Volume	838082	820332	4.00	4.65	3.72	5.37E-05	2.01E-04	7.58E-06	6.90E-06
	D2WSB09		0.037	Volume	838077	820323	4.00	4.65	3.72	5.37E-05	2.01E-04	7.58E-06	6.90E-06
	D2WSB10		0.037	Volume	838072	820314	4.00	4.65	3.72	5.37E-05	2.01E-04	7.58E-06	6.90E-06
L158	CKRTEEB01	CKR Tunnel Portal Emission (EB)	1.750	Volume	838421	820121	3.50	8.84	3.26	5.87E-03	4.66E-02	1.57E-03	1.44E-03
	CKRTEEB02		1.750	Volume	838430	820138	3.50	8.84	3.26	5.87E-03	4.66E-02	1.57E-03	1.44E-03
	CKRTEEB03		1.750	Volume	838439	820155	3.50	8.84	3.26	5.87E-03	4.66E-02	1.57E-03	1.44E-03
	CKRTEEB04		1.750	Volume	838448	820172	3.50	8.84	3.26	2.93E-03	2.33E-02	7.83E-04	7.21E-04
	CKRTEEB05		1.750	Volume	838457	820188	3.50	8.84	3.26	2.93E-03	2.33E-02	7.83E-04	7.21E-04
	CKRTEEB06		1.750	Volume	838466	820205	3.50	8.84	3.26	2.93E-03	2.33E-02	7.83E-04	7.21E-04
L159	CKRLDSWB01	CKR Landscape Deck (SWB)	0.195	Volume	838482	820186	5.45	7.91	5.07	1.49E-03	1.05E-02	3.16E-04	2.92E-04
	CKRLDSWB02		0.195	Volume	838474	820171	5.45	7.91	5.07	1.49E-03	1.05E-02	3.16E-04	2.92E-04
	CKRLDSWB03		0.195	Volume	838465	820157	5.45	7.91	5.07	1.49E-03	1.05E-02	3.16E-04	2.92E-04
	CKRLDSWB04		0.195	Volume	838457	820142	5.45	7.91	5.07	7.46E-04	5.24E-03	1.58E-04	1.46E-04
	CKRLDSWB05		0.195	Volume	838449	820127	5.45	7.91	5.07	7.46E-04	5.24E-03	1.58E-04	1.46E-04
	CKRLDSWB06		0.195	Volume	838440	820112	5.45	7.91	5.07	7.46E-04	5.24E-03	1.58E-04	1.46E-04
L158	CKRLDNEB01	CKR Landscape Deck (NEB)	0.195	Volume	838613	820371	5.45	9.91	5.07	1.31E-03	1.04E-02	3.49E-04	3.21E-04
	CKRLDNEB02		0.195	Volume	838632	820381	5.45	9.91	5.07	1.31E-03	1.04E-02	3.49E-04	3.21E-04
	CKRLDNEB03		0.195	Volume	838651	820390	5.45	9.91	5.07	1.31E-03	1.04E-02	3.49E-04	3.21E-04
	CKRLDNEB04		0.195	Volume	838670	820399	5.45	9.91	5.07	6.54E-04	5.19E-03	1.75E-04	1.61E-04
	CKRLDNEB05		0.195	Volume	838689	820409	5.45	9.91	5.07	6.54E-04	5.19E-03	1.75E-04	1.61E-04
	CKRLDNEB06		0.195	Volume	838708	820418	5.45	9.91	5.07	6.54E-04	5.19E-03	1.75E-04	1.61E-04

Calculated AERMOD Input data:

Release Height, m = "Height of Tunnel" / 2

Initial Lateral Dimension, m = "Width of tunnel" / 2.15

Initial Vertical Dimension, m = "Height of tunnel" / 2.15

Emissions from portals were predicted assuming the emissions behave a volume sources in accordance with the recommendations in the 1991 Permanent International Association of Road Congress Report (1991 PIARC Report) as adopted in Route 3 Tai Lam Tunnel & Yuen Long Approach Northern Section - Volume 1 Detailed Environmental Impact Assessment - Final Report

Emission Inventory for Tunnel Portal - 2nd Quarter

Road No.	Emission Source ID	Portal Description	Tunnel Length	Source Type	x-coordinate	y-coordinate	Release Height	Initial Lateral Dimension	Initial Vertical Dimension	Hourly Emission Rate (g/s)			
			(km)				(m)	(m)	(m)	NO2	NO	RSP	FSP
L084 & L085	KTTW01	Kai Tak Tunnel (WB)	1.23	Volume	837684	820271	2.75	3.44	2.56	1.34E-03	9.18E-03	3.35E-04	3.08E-04
	KTTW02		1.23	Volume	837682	820264	2.75	3.44	2.56	1.34E-03	9.18E-03	3.35E-04	3.08E-04
	KTTW03		1.23	Volume	837680	820257	2.75	3.44	2.56	1.34E-03	9.18E-03	3.35E-04	3.08E-04
	KTTW04		1.23	Volume	837678	820250	2.75	3.44	2.56	1.34E-03	9.18E-03	3.35E-04	3.08E-04
	KTTW05		1.23	Volume	837676	820243	2.75	3.44	2.56	1.34E-03	9.18E-03	3.35E-04	3.08E-04
	KTTW06		1.23	Volume	837674	820236	2.75	3.44	2.56	1.34E-03	9.18E-03	3.35E-04	3.08E-04
	KTTW07		1.23	Volume	837671	820229	2.75	3.44	2.56	1.34E-03	9.18E-03	3.35E-04	3.08E-04
	KTTW08		1.23	Volume	837669	820222	2.75	3.44	2.56	6.72E-04	4.59E-03	1.67E-04	1.54E-04
	KTTW09		1.23	Volume	837667	820215	2.75	3.44	2.56	6.72E-04	4.59E-03	1.67E-04	1.54E-04
	KTTW10		1.23	Volume	837665	820208	2.75	3.44	2.56	6.72E-04	4.59E-03	1.67E-04	1.54E-04
	KTTW11		1.23	Volume	837663	820201	2.75	3.44	2.56	6.72E-04	4.59E-03	1.67E-04	1.54E-04
	KTTW12		1.23	Volume	837661	820194	2.75	3.44	2.56	6.72E-04	4.59E-03	1.67E-04	1.54E-04
	KTTW13		1.23	Volume	837659	820187	2.75	3.44	2.56	6.72E-04	4.59E-03	1.67E-04	1.54E-04
	KTTW14		1.23	Volume	837656	820179	2.75	3.44	2.56	6.72E-04	4.59E-03	1.67E-04	1.54E-04
L001	D2ENB01	D2 Landscape Deck (NB)	0.125	Volume	838356	820573	4.00	12.09	3.72	3.35E-04	1.41E-03	4.24E-05	3.88E-05
	D2ENB02		0.125	Volume	838366	820575	4.00	12.09	3.72	3.35E-04	1.41E-03	4.24E-05	3.88E-05
	D2ENB03		0.125	Volume	838376	820578	4.00	12.09	3.72	3.35E-04	1.41E-03	4.24E-05	3.88E-05
	D2ENB04		0.125	Volume	838384	820580	4.00	12.09	3.72	3.35E-04	1.41E-03	4.24E-05	3.88E-05
	D2ENB05		0.125	Volume	838394	820582	4.00	12.09	3.72	3.35E-04	1.41E-03	4.24E-05	3.88E-05
	D2ENB06		0.125	Volume	838404	820584	4.00	12.09	3.72	1.68E-04	7.06E-04	2.12E-05	1.94E-05
	D2ENB07		0.125	Volume	838414	820587	4.00	12.09	3.72	1.68E-04	7.06E-04	2.12E-05	1.94E-05
	D2ENB08		0.125	Volume	838424	820589	4.00	12.09	3.72	1.68E-04	7.06E-04	2.12E-05	1.94E-05
	D2ENB09		0.125	Volume	838432	820591	4.00	12.09	3.72	1.68E-04	7.06E-04	2.12E-05	1.94E-05
	D2ENB10		0.125	Volume	838442	820594	4.00	12.09	3.72	1.68E-04	7.06E-04	2.12E-05	1.94E-05
L002	D2MSB01	D2 Landscape Deck (SB)	0.125	Volume	838239	820513	4.00	12.09	3.72	2.72E-04	1.30E-03	3.66E-05	3.36E-05
	D2MSB02		0.125	Volume	838231	820506	4.00	12.09	3.72	2.72E-04	1.30E-03	3.66E-05	3.36E-05
	D2MSB03		0.125	Volume	838224	820501	4.00	12.09	3.72	2.72E-04	1.30E-03	3.66E-05	3.36E-05
	D2MSB04		0.125	Volume	838215	820495	4.00	12.09	3.72	2.72E-04	1.30E-03	3.66E-05	3.36E-05
	D2MSB05		0.125	Volume	838208	820489	4.00	12.09	3.72	2.72E-04	1.30E-03	3.66E-05	3.36E-05
	D2MSB06		0.125	Volume	838199	820483	4.00	12.09	3.72	1.36E-04	6.51E-04	1.83E-05	1.68E-05
	D2MSB07		0.125	Volume	838192	820476	4.00	12.09	3.72	1.36E-04	6.51E-04	1.83E-05	1.68E-05
	D2MSB08		0.125	Volume	838184	820471	4.00	12.09	3.72	1.36E-04	6.51E-04	1.83E-05	1.68E-05
	D2MSB09		0.125	Volume	838176	820465	4.00	12.09	3.72	1.36E-04	6.51E-04	1.83E-05	1.68E-05
	D2MSB10		0.125	Volume	838168	820458	4.00	12.09	3.72	1.36E-04	6.51E-04	1.83E-05	1.68E-05
L003a	D2MNB01	D2 Landscape Deck (NB)	0.0374	Volume	838131	820444	4.00	4.65	3.72	1.14E-04	4.49E-04	1.57E-05	1.43E-05
	D2MNB02		0.0374	Volume	838138	820451	4.00	4.65	3.72	1.14E-04	4.49E-04	1.57E-05	1.43E-05
	D2MNB03		0.0374	Volume	838145	820459	4.00	4.65	3.72	1.14E-04	4.49E-04	1.57E-05	1.43E-05
	D2MNB04		0.0374	Volume	838152	820465	4.00	4.65	3.72	1.14E-04	4.49E-04	1.57E-05	1.43E-05
	D2MNB05		0.0374	Volume	838159	820472	4.00	4.65	3.72	1.14E-04	4.49E-04	1.57E-05	1.43E-05
	D2MNB06		0.0374	Volume	838166	820479	4.00	4.65	3.72	5.70E-05	2.25E-04	7.84E-06	7.17E-06
	D2MNB07		0.0374	Volume	838174	820485	4.00	4.65	3.72	5.70E-05	2.25E-04	7.84E-06	7.17E-06
	D2MNB08		0.0374	Volume	838181	820492	4.00	4.65	3.72	5.70E-05	2.25E-04	7.84E-06	7.17E-06
	D2MNB09		0.0374	Volume	838187	820499	4.00	4.65	3.72	5.70E-05	2.25E-04	7.84E-06	7.17E-06
	D2MNB10		0.0374	Volume	838194	820506	4.00	4.65	3.72	5.70E-05	2.25E-04	7.84E-06	7.17E-06
L004b	D2WSB01	D2 Landscape Deck (SB)	0.0374	Volume	838115	820393	4.00	4.65	3.72	1.04E-04	3.67E-04	1.52E-05	1.38E-05
	D2WSB02		0.0374	Volume	838110	820384	4.00	4.65	3.72	1.04E-04	3.67E-04	1.52E-05	1.38E-05
	D2WSB03		0.0374	Volume	838105	820376	4.00	4.65	3.72	1.04E-04	3.67E-04	1.52E-05	1.38E-05
	D2WSB04		0.0374	Volume	838100	820367	4.00	4.65	3.72	1.04E-04	3.67E-04	1.52E-05	1.38E-05
	D2WSB05		0.0374	Volume	838096	820358	4.00	4.65	3.72	1.04E-04	3.67E-04	1.52E-05	1.38E-05
	D2WSB06		0.0374	Volume	838091	820349	4.00	4.65	3.72	5.19E-05	1.84E-04	7.58E-06	6.90E-06
	D2WSB07		0.0374	Volume	838086	820340	4.00	4.65	3.72	5.19E-05	1.84E-04	7.58E-06	6.90E-06
	D2WSB08		0.0374	Volume	838082	820332	4.00	4.65	3.72	5.19E-05	1.84E-04	7.58E-06	6.90E-06
	D2WSB09		0.0374	Volume	838077	820323	4.00	4.65	3.72	5.19E-05	1.84E-04	7.58E-06	6.90E-06
	D2WSB10		0.0374	Volume	838072	820314	4.00	4.65	3.72	5.19E-05	1.84E-04	7.58E-06	6.90E-06
L158	CKRTEEB01	CKR Tunnel Portal Emission (EB)	1.750	Volume	838421	820121	3.50	8.84	3.26	5.28E-03	3.87E-02	1.57E-03	1.44E-03
	CKRTEEB02		1.750	Volume	838430	820138	3.50	8.84	3.26	5.28E-03	3.87E-02	1.57E-03	1.44E-03
	CKRTEEB03		1.750	Volume	838439	820155	3.50	8.84	3.26	5.28E-03	3.87E-02	1.57E-03	1.44E-03
	CKRTEEB04		1.750	Volume	838448	820172	3.50	8.84	3.26	2.64E-03	1.93E-02	7.83E-04	7.21E-04
	CKRTEEB05		1.750	Volume	838457	820188	3.50	8.84	3.26	2.64E-03	1.93E-02	7.83E-04	7.21E-04
	CKRTEEB06		1.750	Volume	838466	820205	3.50	8.84	3.26	2.64E-03	1.93E-02	7.83E-04	7.21E-04
L159	CKRLDSWB01	CKR Landscape Deck (SWB)	0.195	Volume	838482	820186	5.45	7.91	5.07	1.35E-03	8.75E-03	3.16E-04	2.92E-04
	CKRLDSWB02		0.195	Volume	838474	820171	5.45	7.91	5.07	1.35E-03	8.75E-03	3.16E-04	2.92E-04
	CKRLDSWB03		0.195	Volume	838465	820157	5.45	7.91	5.07	1.35E-03	8.75E-03	3.16E-04	2.92E-04
	CKRLDSWB04		0.195	Volume	838457	820142	5.45	7.91	5.07	6.74E-04	4.38E-03	1.58E-04	1.46E-04
	CKRLDSWB05		0.195	Volume	838449	820127	5.45	7.91	5.07	6.74E-04	4.38E-03	1.58E-04	1.46E-04
	CKRLDSWB06		0.195	Volume	838440	820112	5.45	7.91	5.07	6.74E-04	4.38E-03	1.58E-04	1.46E-04
L158	CKRLDNEB01	CKR Landscape Deck (NEB)	0.195	Volume	838613	820371	5.45	9.91	5.07	1.18E-03	8.62E-03	3.49E-04	3.21E-04
	CKRLDNEB02		0.195	Volume	838632	820381	5.45	9.91	5.07	1.18E-03	8.62E-03	3.49E-04	3.21E-04
	CKRLDNEB03		0.195	Volume	838651	820390	5.45	9.91	5.07	1.18E-03	8.62E-03	3.49E-04	3.21E-04
	CKRLDNEB04		0.195	Volume	838670	820399	5.45	9.91	5.07	5.88E-04	4.31E-03	1.75E-04	1.61E-04
	CKRLDNEB05		0.195	Volume	838689	820409	5.45	9.91	5.07	5.88E-04	4.31E-03	1.75E-04	1.61E-04
	CKRLDNEB06		0.195	Volume	838708	820418	5.45	9.91	5.07	5.88E-04	4.31E-03	1.75E-04	1.61E-04

Calculated AERMOD input data:

Release Height, m = "Height of Tunnel" / 2

Initial Lateral Dimension, m = "Width of tunnel" / 2.15

Initial Vertical Dimension, m = "Height of tunnel" / 2.15

Emissions from portals were predicted assuming the emissions behave a volume sources in accordance with the recommendations in the 1991 Permanent International Association of Road Congress Report (1991 PIARC Report) as adopted in Route 3 Tai Lam Tunnel & Yuen Long Approach Northern Section - Volume 1 Detailed Environmental Impact Assessment - Final Report

Emission Inventory for Tunnel Portal - 3rd Quarter

Road No.	Emission Source ID	Portal Description	Tunnel Length	Source Type	x-coordinate	y-coordinate	Release Height	Initial Lateral Dimension	Initial Vertical Dimension	Hourly Emission Rate (g/s)			
			(km)				(m)	(m)	(m)	NO2	NO	RSP	FSP
L084 & L085	KTTW01	Kai Tak Tunnel (WB)	1.23	Volume	837684	820271	2.75	3.44	2.56	1.28E-03	8.55E-03	3.35E-04	3.08E-04
	KTTW02		1.23	Volume	837682	820264	2.75	3.44	2.56	1.28E-03	8.55E-03	3.35E-04	3.08E-04
	KTTW03		1.23	Volume	837680	820257	2.75	3.44	2.56	1.28E-03	8.55E-03	3.35E-04	3.08E-04
	KTTW04		1.23	Volume	837678	820250	2.75	3.44	2.56	1.28E-03	8.55E-03	3.35E-04	3.08E-04
	KTTW05		1.23	Volume	837676	820243	2.75	3.44	2.56	1.28E-03	8.55E-03	3.35E-04	3.08E-04
	KTTW06		1.23	Volume	837674	820236	2.75	3.44	2.56	1.28E-03	8.55E-03	3.35E-04	3.08E-04
	KTTW07		1.23	Volume	837671	820229	2.75	3.44	2.56	1.28E-03	8.55E-03	3.35E-04	3.08E-04
	KTTW08		1.23	Volume	837669	820222	2.75	3.44	2.56	6.41E-04	4.28E-03	1.67E-04	1.54E-04
	KTTW09		1.23	Volume	837667	820215	2.75	3.44	2.56	6.41E-04	4.28E-03	1.67E-04	1.54E-04
	KTTW10		1.23	Volume	837665	820208	2.75	3.44	2.56	6.41E-04	4.28E-03	1.67E-04	1.54E-04
	KTTW11		1.23	Volume	837663	820201	2.75	3.44	2.56	6.41E-04	4.28E-03	1.67E-04	1.54E-04
	KTTW12		1.23	Volume	837661	820194	2.75	3.44	2.56	6.41E-04	4.28E-03	1.67E-04	1.54E-04
	KTTW13		1.23	Volume	837659	820187	2.75	3.44	2.56	6.41E-04	4.28E-03	1.67E-04	1.54E-04
	KTTW14		1.23	Volume	837656	820179	2.75	3.44	2.56	6.41E-04	4.28E-03	1.67E-04	1.54E-04
L001	D2ENB01	D2 Landscape Deck (NB)	0.125	Volume	838356	820573	4.00	12.09	3.72	3.27E-04	1.34E-03	4.24E-05	3.88E-05
	D2ENB02		0.125	Volume	838366	820575	4.00	12.09	3.72	3.27E-04	1.34E-03	4.24E-05	3.88E-05
	D2ENB03		0.125	Volume	838376	820578	4.00	12.09	3.72	3.27E-04	1.34E-03	4.24E-05	3.88E-05
	D2ENB04		0.125	Volume	838384	820580	4.00	12.09	3.72	3.27E-04	1.34E-03	4.24E-05	3.88E-05
	D2ENB05		0.125	Volume	838394	820582	4.00	12.09	3.72	3.27E-04	1.34E-03	4.24E-05	3.88E-05
	D2ENB06		0.125	Volume	838404	820584	4.00	12.09	3.72	1.63E-04	6.69E-04	2.12E-05	1.94E-05
	D2ENB07		0.125	Volume	838414	820587	4.00	12.09	3.72	1.63E-04	6.69E-04	2.12E-05	1.94E-05
	D2ENB08		0.125	Volume	838424	820589	4.00	12.09	3.72	1.63E-04	6.69E-04	2.12E-05	1.94E-05
	D2ENB09		0.125	Volume	838432	820591	4.00	12.09	3.72	1.63E-04	6.69E-04	2.12E-05	1.94E-05
	D2ENB10		0.125	Volume	838442	820594	4.00	12.09	3.72	1.63E-04	6.69E-04	2.12E-05	1.94E-05
L002	D2MSB01	D2 Landscape Deck (SB)	0.125	Volume	838239	820513	4.00	12.09	3.72	2.64E-04	1.22E-03	3.66E-05	3.36E-05
	D2MSB02		0.125	Volume	838231	820506	4.00	12.09	3.72	2.64E-04	1.22E-03	3.66E-05	3.36E-05
	D2MSB03		0.125	Volume	838224	820501	4.00	12.09	3.72	2.64E-04	1.22E-03	3.66E-05	3.36E-05
	D2MSB04		0.125	Volume	838215	820495	4.00	12.09	3.72	2.64E-04	1.22E-03	3.66E-05	3.36E-05
	D2MSB05		0.125	Volume	838208	820489	4.00	12.09	3.72	2.64E-04	1.22E-03	3.66E-05	3.36E-05
	D2MSB06		0.125	Volume	838199	820483	4.00	12.09	3.72	1.32E-04	6.09E-04	1.83E-05	1.68E-05
	D2MSB07		0.125	Volume	838192	820476	4.00	12.09	3.72	1.32E-04	6.09E-04	1.83E-05	1.68E-05
	D2MSB08		0.125	Volume	838184	820471	4.00	12.09	3.72	1.32E-04	6.09E-04	1.83E-05	1.68E-05
	D2MSB09		0.125	Volume	838176	820465	4.00	12.09	3.72	1.32E-04	6.09E-04	1.83E-05	1.68E-05
	D2MSB10		0.125	Volume	838168	820458	4.00	12.09	3.72	1.32E-04	6.09E-04	1.83E-05	1.68E-05
L003a	D2MNB01	D2 Landscape Deck (NB)	0.0374	Volume	838131	820444	4.00	4.65	3.72	1.11E-04	4.23E-04	1.57E-05	1.43E-05
	D2MNB02		0.0374	Volume	838138	820451	4.00	4.65	3.72	1.11E-04	4.23E-04	1.57E-05	1.43E-05
	D2MNB03		0.0374	Volume	838145	820459	4.00	4.65	3.72	1.11E-04	4.23E-04	1.57E-05	1.43E-05
	D2MNB04		0.0374	Volume	838152	820465	4.00	4.65	3.72	1.11E-04	4.23E-04	1.57E-05	1.43E-05
	D2MNB05		0.0374	Volume	838159	820472	4.00	4.65	3.72	1.11E-04	4.23E-04	1.57E-05	1.43E-05
	D2MNB06		0.0374	Volume	838166	820479	4.00	4.65	3.72	5.55E-05	2.11E-04	7.84E-06	7.17E-06
	D2MNB07		0.0374	Volume	838174	820485	4.00	4.65	3.72	5.55E-05	2.11E-04	7.84E-06	7.17E-06
	D2MNB08		0.0374	Volume	838181	820492	4.00	4.65	3.72	5.55E-05	2.11E-04	7.84E-06	7.17E-06
	D2MNB09		0.0374	Volume	838187	820499	4.00	4.65	3.72	5.55E-05	2.11E-04	7.84E-06	7.17E-06
	D2MNB10		0.0374	Volume	838194	820506	4.00	4.65	3.72	5.55E-05	2.11E-04	7.84E-06	7.17E-06
L004b	D2WSB01	D2 Landscape Deck (SB)	0.0374	Volume	838115	820393	4.00	4.65	3.72	1.01E-04	3.50E-04	1.52E-05	1.38E-05
	D2WSB02		0.0374	Volume	838110	820384	4.00	4.65	3.72	1.01E-04	3.50E-04	1.52E-05	1.38E-05
	D2WSB03		0.0374	Volume	838105	820376	4.00	4.65	3.72	1.01E-04	3.50E-04	1.52E-05	1.38E-05
	D2WSB04		0.0374	Volume	838100	820367	4.00	4.65	3.72	1.01E-04	3.50E-04	1.52E-05	1.38E-05
	D2WSB05		0.0374	Volume	838096	820358	4.00	4.65	3.72	1.01E-04	3.50E-04	1.52E-05	1.38E-05
	D2WSB06		0.0374	Volume	838091	820349	4.00	4.65	3.72	5.05E-05	1.75E-04	7.58E-06	6.90E-06
	D2WSB07		0.0374	Volume	838086	820340	4.00	4.65	3.72	5.05E-05	1.75E-04	7.58E-06	6.90E-06
	D2WSB08		0.0374	Volume	838082	820332	4.00	4.65	3.72	5.05E-05	1.75E-04	7.58E-06	6.90E-06
	D2WSB09		0.0374	Volume	838077	820323	4.00	4.65	3.72	5.05E-05	1.75E-04	7.58E-06	6.90E-06
	D2WSB10		0.0374	Volume	838072	820314	4.00	4.65	3.72	5.05E-05	1.75E-04	7.58E-06	6.90E-06
L158	CKRTEEB01	CKR Tunnel Portal Emission (EB)	1.750	Volume	838421	820121	3.50	8.84	3.26	4.86E-03	3.48E-02	1.57E-03	1.44E-03
	CKRTEEB02		1.750	Volume	838430	820138	3.50	8.84	3.26	4.86E-03	3.48E-02	1.57E-03	1.44E-03
	CKRTEEB03		1.750	Volume	838439	820155	3.50	8.84	3.26	4.86E-03	3.48E-02	1.57E-03	1.44E-03
	CKRTEEB04		1.750	Volume	838448	820172	3.50	8.84	3.26	2.43E-03	1.74E-02	7.83E-04	7.21E-04
	CKRTEEB05		1.750	Volume	838457	820188	3.50	8.84	3.26	2.43E-03	1.74E-02	7.83E-04	7.21E-04
	CKRTEEB06		1.750	Volume	838466	820205	3.50	8.84	3.26	2.43E-03	1.74E-02	7.83E-04	7.21E-04
L159	CKRLDSWB01	CKR Landscape Deck (SWB)	0.195	Volume	838482	820186	5.45	7.91	5.07	1.24E-03	7.90E-03	3.16E-04	2.92E-04
	CKRLDSWB02		0.195	Volume	838474	820171	5.45	7.91	5.07	1.24E-03	7.90E-03	3.16E-04	2.92E-04
	CKRLDSWB03		0.195	Volume	838465	820157	5.45	7.91	5.07	1.24E-03	7.90E-03	3.16E-04	2.92E-04
	CKRLDSWB04		0.195	Volume	838457	820142	5.45	7.91	5.07	6.22E-04	3.95E-03	1.58E-04	1.46E-04
	CKRLDSWB05		0.195	Volume	838449	820127	5.45	7.91	5.07	6.22E-04	3.95E-03	1.58E-04	1.46E-04
	CKRLDSWB06		0.195	Volume	838440	820112	5.45	7.91	5.07	6.22E-04	3.95E-03	1.58E-04	1.46E-04
L158	CKRLDNEB01	CKR Landscape Deck (NEB)	0.195	Volume	838613	820371	5.45	9.91	5.07	1.08E-03	7.76E-03	3.49E-04	3.21E-04
	CKRLDNEB02		0.195	Volume	838632	820381	5.45	9.91	5.07	1.08E-03	7.76E-03	3.49E-04	3.21E-04
	CKRLDNEB03		0.195	Volume	838651	820390	5.45	9.91	5.07	1.08E-03	7.76E-03	3.49E-04	3.21E-04
	CKRLDNEB04		0.195	Volume	838670	820399	5.45	9.91	5.07	5.42E-04	3.88E-03	1.75E-04	1.61E-04
	CKRLDNEB05		0.195	Volume	838689	820409	5.45	9.91	5.07	5.42E-04	3.88E-03	1.75E-04	1.61E-04
	CKRLDNEB06		0.195	Volume	838708	820418	5.45	9.91	5.07	5.42E-04	3.88E-03	1.75E-04	1.61E-04

Calculated AERMOD input data:

Release Height, m = "Height of Tunnel" / 2

Initial Lateral Dimension, m = "Width of tunnel" / 2.15

Initial Vertical Dimension, m = "Height of tunnel" / 2.15

Emissions from portals were predicted assuming the emissions behave a volume sources in accordance with the recommendations in the 1991 Permanent International Association of Road Congress Report (1991 PIARC Report) as adopted in Route 3 Tai Lam Tunnel & Yuen Long Approach Northern Section - Volume 1 Detailed Environmental Impact Assessment - Final Report

Emission Inventory for Tunnel Portal - 4th Quarter

Road No.	Emission Source ID	Portal Description	Tunnel Length	Source Type	x-coordinate	y-coordinate	Release Height	Initial Lateral Dimension	Initial Vertical Dimension	Hourly Emission Rate (g/s)			
			(km)				(m)	(m)	(m)	NO2	NO	RSP	FSP
L084 & L085	KTTW01	Kai Tak Tunnel (WB)	1.23	Volume	837684	820271	2.75	3.44	2.56	1.42E-03	1.03E-02	3.35E-04	3.08E-04
	KTTW02		1.23	Volume	837682	820264	2.75	3.44	2.56	1.42E-03	1.03E-02	3.35E-04	3.08E-04
	KTTW03		1.23	Volume	837680	820257	2.75	3.44	2.56	1.42E-03	1.03E-02	3.35E-04	3.08E-04
	KTTW04		1.23	Volume	837678	820250	2.75	3.44	2.56	1.42E-03	1.03E-02	3.35E-04	3.08E-04
	KTTW05		1.23	Volume	837676	820243	2.75	3.44	2.56	1.42E-03	1.03E-02	3.35E-04	3.08E-04
	KTTW06		1.23	Volume	837674	820236	2.75	3.44	2.56	1.42E-03	1.03E-02	3.35E-04	3.08E-04
	KTTW07		1.23	Volume	837671	820229	2.75	3.44	2.56	1.42E-03	1.03E-02	3.35E-04	3.08E-04
	KTTW08		1.23	Volume	837669	820222	2.75	3.44	2.56	7.11E-04	5.15E-03	1.67E-04	1.54E-04
	KTTW09		1.23	Volume	837667	820215	2.75	3.44	2.56	7.11E-04	5.15E-03	1.67E-04	1.54E-04
	KTTW10		1.23	Volume	837665	820208	2.75	3.44	2.56	7.11E-04	5.15E-03	1.67E-04	1.54E-04
	KTTW11		1.23	Volume	837663	820201	2.75	3.44	2.56	7.11E-04	5.15E-03	1.67E-04	1.54E-04
	KTTW12		1.23	Volume	837661	820194	2.75	3.44	2.56	7.11E-04	5.15E-03	1.67E-04	1.54E-04
	KTTW13		1.23	Volume	837659	820187	2.75	3.44	2.56	7.11E-04	5.15E-03	1.67E-04	1.54E-04
	KTTW14		1.23	Volume	837656	820179	2.75	3.44	2.56	7.11E-04	5.15E-03	1.67E-04	1.54E-04
L001	D2ENB01	D2 Landscape Deck (NB)	0.125	Volume	838356	820573	4.00	12.09	3.72	3.47E-04	1.56E-03	4.24E-05	3.88E-05
	D2ENB02		0.125	Volume	838366	820575	4.00	12.09	3.72	3.47E-04	1.56E-03	4.24E-05	3.88E-05
	D2ENB03		0.125	Volume	838376	820578	4.00	12.09	3.72	3.47E-04	1.56E-03	4.24E-05	3.88E-05
	D2ENB04		0.125	Volume	838384	820580	4.00	12.09	3.72	3.47E-04	1.56E-03	4.24E-05	3.88E-05
	D2ENB05		0.125	Volume	838394	820582	4.00	12.09	3.72	3.47E-04	1.56E-03	4.24E-05	3.88E-05
	D2ENB06		0.125	Volume	838404	820584	4.00	12.09	3.72	1.73E-04	7.81E-04	2.12E-05	1.94E-05
	D2ENB07		0.125	Volume	838414	820587	4.00	12.09	3.72	1.73E-04	7.81E-04	2.12E-05	1.94E-05
	D2ENB08		0.125	Volume	838424	820589	4.00	12.09	3.72	1.73E-04	7.81E-04	2.12E-05	1.94E-05
	D2ENB09		0.125	Volume	838432	820591	4.00	12.09	3.72	1.73E-04	7.81E-04	2.12E-05	1.94E-05
	D2ENB10		0.125	Volume	838442	820594	4.00	12.09	3.72	1.73E-04	7.81E-04	2.12E-05	1.94E-05
L002	D2MSB01	D2 Landscape Deck (SB)	0.125	Volume	838239	820513	4.00	12.09	3.72	2.81E-04	1.47E-03	3.66E-05	3.36E-05
	D2MSB02		0.125	Volume	838231	820506	4.00	12.09	3.72	2.81E-04	1.47E-03	3.66E-05	3.36E-05
	D2MSB03		0.125	Volume	838224	820501	4.00	12.09	3.72	2.81E-04	1.47E-03	3.66E-05	3.36E-05
	D2MSB04		0.125	Volume	838215	820495	4.00	12.09	3.72	2.81E-04	1.47E-03	3.66E-05	3.36E-05
	D2MSB05		0.125	Volume	838208	820489	4.00	12.09	3.72	2.81E-04	1.47E-03	3.66E-05	3.36E-05
	D2MSB06		0.125	Volume	838199	820483	4.00	12.09	3.72	1.40E-04	7.37E-04	1.83E-05	1.68E-05
	D2MSB07		0.125	Volume	838192	820476	4.00	12.09	3.72	1.40E-04	7.37E-04	1.83E-05	1.68E-05
	D2MSB08		0.125	Volume	838184	820471	4.00	12.09	3.72	1.40E-04	7.37E-04	1.83E-05	1.68E-05
	D2MSB09		0.125	Volume	838176	820465	4.00	12.09	3.72	1.40E-04	7.37E-04	1.83E-05	1.68E-05
	D2MSB10		0.125	Volume	838168	820458	4.00	12.09	3.72	1.40E-04	7.37E-04	1.83E-05	1.68E-05
L003a	D2MNB01	D2 Landscape Deck (NB)	0.0374	Volume	838131	820444	4.00	4.65	3.72	1.18E-04	4.98E-04	1.57E-05	1.43E-05
	D2MNB02		0.0374	Volume	838138	820451	4.00	4.65	3.72	1.18E-04	4.98E-04	1.57E-05	1.43E-05
	D2MNB03		0.0374	Volume	838145	820459	4.00	4.65	3.72	1.18E-04	4.98E-04	1.57E-05	1.43E-05
	D2MNB04		0.0374	Volume	838152	820465	4.00	4.65	3.72	1.18E-04	4.98E-04	1.57E-05	1.43E-05
	D2MNB05		0.0374	Volume	838159	820472	4.00	4.65	3.72	1.18E-04	4.98E-04	1.57E-05	1.43E-05
	D2MNB06		0.0374	Volume	838166	820479	4.00	4.65	3.72	5.88E-05	2.49E-04	7.84E-06	7.17E-06
	D2MNB07		0.0374	Volume	838174	820485	4.00	4.65	3.72	5.88E-05	2.49E-04	7.84E-06	7.17E-06
	D2MNB08		0.0374	Volume	838181	820492	4.00	4.65	3.72	5.88E-05	2.49E-04	7.84E-06	7.17E-06
	D2MNB09		0.0374	Volume	838187	820499	4.00	4.65	3.72	5.88E-05	2.49E-04	7.84E-06	7.17E-06
	D2MNB10		0.0374	Volume	838194	820506	4.00	4.65	3.72	5.88E-05	2.49E-04	7.84E-06	7.17E-06
L004b	D2WSB01	D2 Landscape Deck (SB)	0.0374	Volume	838115	820393	4.00	4.65	3.72	1.07E-04	3.96E-04	1.52E-05	1.38E-05
	D2WSB02		0.0374	Volume	838110	820384	4.00	4.65	3.72	1.07E-04	3.96E-04	1.52E-05	1.38E-05
	D2WSB03		0.0374	Volume	838105	820376	4.00	4.65	3.72	1.07E-04	3.96E-04	1.52E-05	1.38E-05
	D2WSB04		0.0374	Volume	838100	820367	4.00	4.65	3.72	1.07E-04	3.96E-04	1.52E-05	1.38E-05
	D2WSB05		0.0374	Volume	838096	820358	4.00	4.65	3.72	1.07E-04	3.96E-04	1.52E-05	1.38E-05
	D2WSB06		0.0374	Volume	838091	820349	4.00	4.65	3.72	5.35E-05	1.98E-04	7.58E-06	6.90E-06
	D2WSB07		0.0374	Volume	838086	820340	4.00	4.65	3.72	5.35E-05	1.98E-04	7.58E-06	6.90E-06
	D2WSB08		0.0374	Volume	838082	820332	4.00	4.65	3.72	5.35E-05	1.98E-04	7.58E-06	6.90E-06
	D2WSB09		0.0374	Volume	838077	820323	4.00	4.65	3.72	5.35E-05	1.98E-04	7.58E-06	6.90E-06
	D2WSB10		0.0374	Volume	838072	820314	4.00	4.65	3.72	5.35E-05	1.98E-04	7.58E-06	6.90E-06
L158	CKRTEEB01	CKR Tunnel Portal Emission (EB)	1.750	Volume	838421	820121	3.50	8.84	3.26	5.82E-03	4.56E-02	1.57E-03	1.44E-03
	CKRTEEB02		1.750	Volume	838430	820138	3.50	8.84	3.26	5.82E-03	4.56E-02	1.57E-03	1.44E-03
	CKRTEEB03		1.750	Volume	838439	820155	3.50	8.84	3.26	5.82E-03	4.56E-02	1.57E-03	1.44E-03
	CKRTEEB04		1.750	Volume	838448	820172	3.50	8.84	3.26	2.91E-03	2.28E-02	7.83E-04	7.21E-04
	CKRTEEB05		1.750	Volume	838457	820188	3.50	8.84	3.26	2.91E-03	2.28E-02	7.83E-04	7.21E-04
	CKRTEEB06		1.750	Volume	838466	820205	3.50	8.84	3.26	2.91E-03	2.28E-02	7.83E-04	7.21E-04
L159	CKRLDSWB01	CKR Landscape Deck (SWB)	0.195	Volume	838482	820186	5.45	7.91	5.07	1.48E-03	1.03E-02	3.16E-04	2.92E-04
	CKRLDSWB02		0.195	Volume	838474	820171	5.45	7.91	5.07	1.48E-03	1.03E-02	3.16E-04	2.92E-04
	CKRLDSWB03		0.195	Volume	838465	820157	5.45	7.91	5.07	1.48E-03	1.03E-02	3.16E-04	2.92E-04
	CKRLDSWB04		0.195	Volume	838457	820142	5.45	7.91	5.07	7.39E-04	5.13E-03	1.58E-04	1.46E-04
	CKRLDSWB05		0.195	Volume	838449	820127	5.45	7.91	5.07	7.39E-04	5.13E-03	1.58E-04	1.46E-04
	CKRLDSWB06		0.195	Volume	838440	820112	5.45	7.91	5.07	7.39E-04	5.13E-03	1.58E-04	1.46E-04
L158	CKRLDNEB01	CKR Landscape Deck (NEB)	0.195	Volume	838613	820371	5.45	9.91	5.07	1.30E-03	1.02E-02	3.49E-04	3.21E-04
	CKRLDNEB02		0.195	Volume	838632	820381	5.45	9.91	5.07	1.30E-03	1.02E-02	3.49E-04	3.21E-04
	CKRLDNEB03		0.195	Volume	838651	820390	5.45	9.91	5.07	1.30E-03	1.02E-02	3.49E-04	3.21E-04
	CKRLDNEB04		0.195	Volume	838670	820399	5.45	9.91	5.07	6.48E-04	5.08E-03	1.75E-04	1.61E-04
	CKRLDNEB05		0.195	Volume	838689	820409	5.45	9.91	5.07	6.48E-04	5.08E-03	1.75E-04	1.61E-04
	CKRLDNEB06		0.195	Volume	838708	820418	5.45	9.91	5.07	6.48E-04	5.08E-03	1.75E-04	1.61E-04

Calculated AERMOD input data:

Release Height, m = "Height of Tunnel" / 2

Initial Lateral Dimension, m = "Width of tunnel" / 2.15

Initial Vertical Dimension, m = "Height of tunnel" / 2.15

Emissions from portals were predicted assuming the emissions behave a volume sources in accordance with the recommendations in the 1991 Permanent International Association of Road Congress Report (1991 PIARC Report) as adopted in Route 3 Tai Lam Tunnel & Yuen Long Approach Northern Section - Volume 1 Detailed Environmental Impact Assessment - Final Report

Appendix 4.3 Site Records for Active Chimney Identification

Appendix: 4.3	RAMBOLL
Title: Site Records for Active Chimney Identification	Drawn by: BF
	Checked by: CC
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0
	Date: May 2020

Appendix 4.4 Derivation of Emission Rate of Active Chimneys

Calculation of Chimney Emission

Company	Source Type	Chimney ID	x-coordinate	y-coordinate	Release Height	Exit Temperature	Exit Velocity	Internal Diameter	Emission Rate				Operation Hours
									NOx	RSP	FSP	SO_2	
					(mAG)	(K)	(m/s)	(m)	(g/s)	(g/s)	(g/s)	(g/s)	
The Hong Kong and China Gas Company Limited	Point	TG1	837904	820141	34.0	473	5.5	1.00	0.3472	0	0	0	24 hours (0000-2400)
		TG2	837913	820136	34.0	473	5.5	1.00	0.3472	0	0	0	
		TG3	837921	820133	34.0	473	5.5	1.00	0.3472	0	0	0	
		TG4	837928	820130	34.0	473	5.5	1.00	0.3472	0	0	0	
		TG5	837837	820081	44.5	450	20.4	0.50	0.1667	0	0	0	
Diamon Hill Crematorium	Point	EP1	839439	822851	30.2	373	10	0.24	0.1407	0.0037	0.0018	0	0800 - 2200
		EP2	839439	822850	30.2	373	10	0.27	0.1814	0.0047	0.0024	0	
		EP3	839439	822849	30.2	373	10	0.24	0.1407	0.0037	0.0018	0	
		EP4	839443	822851	30.2	373	10	0.27	0.1814	0.0047	0.0024	0	
		EP5	839443	822850	30.2	373	10	0.24	0.1407	0.0037	0.0018	0	
		EP6	839442	822849	30.2	373	10	0.24	0.1407	0.0037	0.0018	0	

Notes:

[1] Fugitive Emission and NOx from Chimney ID TG1-TG5 are based on SP License (No. L-8-004(5)) and Appendix 3.5 of Environmental Assessment Study Report for the Section 12A Planning Application of Proposed Rezoning of the Application Site from "Other Specified Uses" annotated "Tunnel Ventilation Shaft" and "Government, Institution or Community" to "Commercial (9)" Zone to enable a Proposed Commercial/ Office Redevelopment at Nos. 3-5 San Ma Tau Street, Ma Tau Kok, Kowloon (Application No. Y/K22/3), and to be 0. By making reference to Note (7) under the table in the Appendix 3.5 in the Approved EIA Report for Kai Tak Multi-purpose Sports Complex (Register No.: AEIAR-204/2017, general load factors of 41% during day time and 23% during night time are recommended by EPD and were employed for this assessment.

[2] Emission details of Chimney ID EP1-EP6 are obtained from the latest Specified Process Licence (L-12-006(1)) and Air Pollution Control Plan of Diamond Hill Crematorium at Diamond Hill.

Appendix 4.5 Derivation of Emission Rate of Ferry

Emission Rates for Ferry Service between North Point and Kowloon City

Main Engine (for slow cruise)

Referenced to Final Report - Study of Marine Vessels Emission Inventory

Remark

E = P x LF x TIM x EF

Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.99, Feb 2012

where E = Emission Rate (g)

	Gross Registered Tonnage (GRT)			
	0-499	500-999	≥ 1000	
P = Engine Power (kW)	643			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.83, Table 4-5, Feb 2012 According to Table 25 in 2018 Port of Hong Kong Statistical Tables, Marine Department - Class I (e) Primitve Vessel, all licensed Primitive Vessels (i.e. kaito) have the registered tonnage of less than 300 tons.
	Slow Cruise			
LF = Loading Factor	0.45			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.85, Table 4-7, Feb 2012
TIM = Time-in-mode (min)	3			Total duration is assumed to be 8 mins close to 500m assessment area, as observed by site visit
Time-in-mode (hr)	0.050			

EF of SO_2 = BSFC x 2 x 0.97753 x Fuel Sulphur Fraction — Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.88, Section 4.2.31, Feb 2012

BSFC (g/kWh) = 213 — Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.88, Section 4.2.27, Feb 2012

Fuel Sulphur Fraction = 0.05% — Air Pollution Control (Marine Light Diesel) Regulation, effective in April 2014

	SO2	RSP	FSP	NOx	
EF = Emission Factor (g/kWh)	0.21	0.30	0.29	10.00	EF of RSP, FSP and NOx is extracted from Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.89, Table 4.16 (ME (Cat.1)), Feb 2012
Total Emissions (Slow Cruise) (g/hr) =	3.0	4.3	4.2	144.7	
Emission Rate (Slow Cruise) (g/s) =	**0.0001**	**0.0001**	**0.0001**	**0.0037**	Both incoming and outgoing crusing are completed within one hour. The emission rate is obtained so that the total emission in one hour is equivalent to the total emissions. 1 emission points are assumed for the whole incoming and outgoing cruising distance, so each emission point consitutes 1/11 of the total emissions.

Auxiliary Engine (for hotelling)

Referenced to Final Report - Study of Marine Vessels Emission Inventory

Remark

E = P x LF x TIM x EF

Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.99, Feb 2012

where E = Emission Rate (g)

	Gross Registered Tonnage (GRT)			
	0-499	500-999	≥ 1000	
P = Engine Power (kW)	66			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.84, Table 4-6, Feb 2012 Port of Hong Kong Statistical Tables, Marine Department - Class I (e) Primitve Vessel, Table 25, 2015
	Hotelling			
LF = Loading Factor	0.43			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.85, Table 4-10, Feb 2012
TIM = Time-in-mode (min)	5			Total duration is assumed to be 8 mins close to 500m assessment area, as observed by site visit
Time-in-mode (hr)	0.083			

EF of SO_2 = BSFC x 2 x 0.97753 x Fuel Sulphur Fraction — Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.88, Section 4.2.31, Feb 2012

BSFC (g/kWh) = 213 — Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.88, Section 4.2.27, Feb 2012

Fuel Sulphur Fraction = 0.05% — Air Pollution Control (Marine Light Diesel) Regulation, effective in April 2014

	SO2	RSP	FSP	NOx	
EF = Emission Factor (g/kWh)	0.21	0.40	0.39	10.00	EF of RSP, FSP and NOx are extracted from Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.89, Table 4.16 (AE), Feb 2012
Total Emissions (Hotelling) (g/hr) =	0.49	0.95	0.92	23.65	
Total Emissions (Hotelling) (g/s) =	**0.0001**	**0.0003**	**0.0003**	**0.0066**	The hotelling is completed within one hour. The emission rate is obtained so that the total emission in one hour is equivalent to the total emissions.

Emission Rates for Ferry Service between Harbour Tour

Main Engine (for slow cruise)

Referenced to Final Report - Study of Marine Vessels Emission Inventory

					Remark
	E = P x LF x TIM x EF				Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.99, Feb 2012
where	E = Emission Rate (g)				
		Gross Registered Tonnage (GRT)			
		0-499	500-999	≥ 1000	Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.83, Table 4-5, Feb 2012
	P = Engine Power (kW)	643			According to Table 25 in 2018 Port of Hong Kong Statistical Tables, Marine Department - Class I (e) Primitve Vessel, all licensed Primitive Vessels (i.e. kaito) have the registered tonnage of less than 300 tons.
		Slow Cruise			
	LF = Loading Factor	0.45			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.85, Table 4-7, Feb 2012
	TIM = Time-in-mode (min)	4			Total duration is assumed to be 12 mins within 500m assessment area, as observed by site visit
	Time-in-mode (hr)	0.067			
	EF of SO_2 =	BSFC x 2 x 0.97753 x Fuel Sulphur Fraction			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.88, Section 4.2.31, Feb 2012
	BSFC (g/kWh) =	213			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.88, Section 4.2.27, Feb 2012
	Fuel Sulphur Fraction =	0.05%			Air Pollution Control (Marine Light Diesel) Regulation, effective in April 2014

	SO2	**RSP**	**FSP**	**NOx**	
EF = Emission Factor (g/kWh)	0.21	0.30	0.29	10.00	EF of RSP, FSP and NOx is extracted from Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.89, Table 4.16 (ME (Cat.1)), Feb 2012
Total Emissions (Slow Cruise) (g/hr) =	4.0	5.8	5.6	192.9	
Emission Rate (Slow Cruise) (g/s) =	**0.0001**	**0.0001**	**0.0001**	**0.0049**	Both incoming and outgoing crusing are completed within one hour. The emission rate is obtained so that the total emission in one hour is equivalent to the total emissions. 1 emission points are assumed for the whole incoming and outgoing cruising distance, so each emission point consitutes 1/11 of the total emissions.

Auxiliary Engine (for hotelling)

Referenced to Final Report - Study of Marine Vessels Emission Inventory

					Remark
	E = P x LF x TIM x EF				Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.99, Feb 2012
where	E = Emission Rate (g)				
		Gross Registered Tonnage (GRT)			
		0-499	500-999	≥ 1000	Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.84, Table 4-6, Feb 2012
	P = Engine Power (kW)	66			Port of Hong Kong Statistical Tables, Marine Department - Class I (e) Primitve Vessel, Table 25, 2015
		Hotelling			
	LF = Loading Factor	0.43			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.85, Table 4-10, Feb 2012
	TIM = Time-in-mode (min)	8			Total duration is assumed to be 12 mins within 500m assessment area, as observed by site visit
	Time-in-mode (hr)	0.133			
	EF of SO_2 =	BSFC x 2 x 0.97753 x Fuel Sulphur Fraction			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.88, Section 4.2.31, Feb 2012
	BSFC (g/kWh) =	213			Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.88, Section 4.2.27, Feb 2012
	Fuel Sulphur Fraction =	0.05%			Air Pollution Control (Marine Light Diesel) Regulation, effective in April 2014

	SO2	**RSP**	**FSP**	**NOx**	
EF = Emission Factor (g/kWh)	0.21	0.40	0.39	10.00	EF of RSP, FSP and NOx are extracted from Study of Marine Vessels Emission Inventory - Final Report, HKUST, pp.89, Table 4.16 (AE), Feb 2012
Total Emissions (Hotelling) (g/hr) =	0.79	1.51	1.48	37.84	
Total Emissions (Hotelling) (g/s) =	**0.0002**	**0.0004**	**0.0004**	**0.0105**	The hotelling is completed within one hour. The emission rate is obtained so that the total emission in one hour is equivalent to the total emissions.

Appendix 4.6 Visiting Frequencies of Different Modes for Ferry Services

Ferry Frequency of Ferry Service between North Point and Kowloon City and Harbour tour

From Kowloon City to North Point (on Weekday)					
Time		No. of Service	No. of Activity Adopted in this Assessment		
From	To		Crusing (Arrival)	Hotelling	Crusing (Departure)
0700	0800	2	2	2	2
0800	0900	3	3	3	3
0900	1000	2	2	2	2
1000	1100	2	2	2	2
1100	1200	2	2	2	2
1200	1300	2	2	2	2
1300	1400	2	2	2	2
1400	1500	2	2	2	2
1500	1600	2	2	2	2
1600	1700	2	2	2	2
1700	1800	2	2	2	2
1800	1900	3	3	3	3
1900	2000	2	1	2	2

From North Point to Kowloon City (on Saturday, Sunday and Public Holiday)					
Time		No. of Service	No. of Activity Adopted in this Assessment		
From	To		Crusing (Arrival)	Hotelling	Crusing (Departure)
0700	0800	2	2	2	2
0800	0900	2	2	2	2
0900	1000	2	2	2	2
1000	1100	2	2	2	2
1100	1200	2	2	2	2
1200	1300	2	2	2	2
1300	1400	2	2	2	2
1400	1500	2	2	2	2
1500	1600	2	2	2	2
1600	1700	2	2	2	2
1700	1800	2	2	2	2
1800	1900	2	2	2	2
1900	2000	2	1	2	2

Note:

[1] Daily Schedule of the ferry service is based on operator's website (http://www.nwff.com.hk/route/get_route.php?id=6662173e-a9ee-489b-aa36-8ce56dec0a6b&route_id=6&submenu_num=3).

Harbour Tour (Round trip to and from Ma Tau Kok Public Pier)					
Time		No. of Service	No. of Activity		
From	To		Crusing (Arrival)	Hotelling	Crusing (Departure)
1700	1800	5	5	1	5
1800	1900	5	5	1	5
1900	2000	5	5	1	5
2000	2100	5	5	1	5

Note:

[1] The number of activity is assumed based on the observation and information colleacted during the site visits.

Appendix 4.7 Derivation of Emission Rate of Kai Tak Cruise Terminal

Marine Emission from Cruises at Kai Tak Cruise Terminal

Emission Factors for Cruises

Cruises	Engine Type	Engine Power kW	Loading Factor [5]	Emission Factor (g/kWh) [6]			
			Hotelling	RSP	FSP	NOx	SO_2
World Dream	Main Engine [1]	76800	0	0.31	0.29	13.2	1.98
	Auxiliary Engine [3]	21350	0.416	0.32	0.29	13.9	2.12
	Boiler [4]	1000	1	0.19	0.14	2.00	2.83
Spectrum of the Seas	Main Engine [2]	67200	0	0.31	0.29	13.2	1.98
	Auxiliary Engine [3]	18682	0.416	0.32	0.29	13.9	2.12
	Boiler [4]	1000	1	0.19	0.14	2.00	2.83

Note:

[1] Engine Power for the Main Engine of World Dream - Information is referred from website (http://www.nedcruise.info/world_dream.htm)

[2] Engine Power for the Main Engine of Spectrum of the Seas - Information is referred from website (http://www.nedcruise.info/spectrum%20of%20the%20seas.htm)

[3] Engine Power for the Auxiliary Engine - According to Table 3-20 of the Study on Marine Vessels Emissions Inventory, February 2012, the ratio of the engine power for the Auxiliary Engine is equal to 0.278 of the engine power of the Main Engine.

[4] Engine Power for the Boiler - According to Table 3-23 of the Study of Marine Vessels Emissions Inventory, February 2012, the engine power for the boiler of the Cruise with the passenger carrying capacity >= 2600 is adopted as the passenger carrying capacity of World Dream and Spectrum of the Seas are 3376 and 4246 respectively.

[5] Loading Factor for the Main Engine - Table 3-18 of the Study on Marine Vessels Emissions Inventory, February 2012 is referred.
Loading Factor for the Auxiliary Engine - Table 3-21 of the Study on Marine Vessels Emissions Inventory, February 2012 is referred.
Loading Factor for the Boiler - 100% of loading is assumed as a conservative approach.

[6] According to the Air Pollution Control (Fuel for Vessels) Regulation, starting from 1 January 2019, all vessels except for specified vessel types as set out in the Regulation, are required to use low sulphur marine fuel (i.e. with sulphur content no exceeding 0.5% by weight).

- Emission Factor for the Main Engine - According to Table 3-27 of the Study on Marine Vessels Emissions Inventory, February 2012 (assuming the engine type of Medium Speed Diesel engine and use of marine gas oil with 0.5% sulphur content).
- Emission Factor for the Auxiliary Engine - According to Table 3-28 of the Study on Marine Vessels Emissions Inventory, February 2012 (assuming the use of of marine gas oil with 0.5% sulphur content).
- Emission Factor for the Boiler - According to Table 3-29 of the Study on Marine Vessels Emissions Inventory, February 2012 (assuming the use of marine gas oil with 0.5% sulphur content).

Emission Rate (Hotelling)

Emission Rate = Engine Power x Loading Factor x Emission Factor

Cruises	Air Pollutants	Emission Rate (kg/hr)				Emission Rate for 60 mins within an hour (g/s)
		Main Engine	Auxiliary Engine	Boiler	Total	
World Dream	RSP	0.00	2.84	0.19	3.03	0.8423
	FSP	0.00	2.58	0.14	2.72	0.7544
	NOx	0.00	123.46	2	125.46	34.8490
	SO_2	0.00	18.83	2.83	21.66	6.0165
Spectrum of the Seas	RSP	0.00	2.49	0.19	2.68	0.7436
	FSP	0.00	2.25	0.14	2.39	0.6649
	NOx	0.00	108.02	2	110.02	30.5624
	SO_2	0.00	16.48	2.83	19.31	5.3627

Appendix 4.8 Derivation of Emission Rate of Portals

Calculation of Portal Emission - 1st Quarter

						NO2						NO						RSP						PSP					
						Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 emission rate	Farest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 emission rate	Farest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 of the total emission rate	Farest 50m - 1/3 of the total emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 of the total emission rate	Farest 50m - 1/3 of the total emission rate
Road No.	Portal Description	Portal ID	Tunnel Length (km)	Hour	Total Vehicle (veh/hr)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)
L054 & L085	Kai Tak Tunnel (WB)	KTTW	1.230	1	850	0.048	0.030	4.36E-03	29%	4.16E-04	2.08E-04	0.483	0.300	4.36E-02	40%	4.15E-03	2.08E-03	0.012	0.008	1.13E-03	32%	1.07E-04	5.37E-05	0.011	0.007	1.03E-03	32%	9.85E-05	4.91E-05
				2	700	0.035	0.022	2.63E-03	17%	2.50E-04	1.25E-04	0.418	0.260	3.11E-02	28%	2.96E-03	1.48E-03	0.007	0.004	5.00E-04	14%	4.76E-05	2.38E-05	0.006	0.004	4.59E-04	14%	4.37E-05	2.19E-05
				3	550	0.044	0.028	2.59E-03	17%	2.47E-04	1.23E-04	0.490	0.305	2.86E-02	26%	2.72E-03	1.36E-03	0.007	0.005	4.33E-04	12%	4.12E-05	2.06E-05	0.007	0.004	3.98E-04	12%	3.79E-05	1.89E-05
				4	500	0.047	0.029	2.48E-03	17%	2.37E-04	1.18E-04	0.494	0.307	2.62E-02	24%	2.50E-03	1.25E-03	0.008	0.005	4.03E-04	11%	3.83E-05	1.92E-05	0.007	0.004	3.76E-04	11%	3.53E-05	1.76E-05
				5	450	0.056	0.035	2.70E-03	18%	2.57E-04	1.28E-04	0.518	0.322	2.47E-02	23%	2.36E-03	1.18E-03	0.008	0.005	4.03E-04	11%	3.83E-05	1.92E-05	0.008	0.005	3.76E-04	11%	3.52E-05	1.76E-05
				6	500	0.076	0.048	4.06E-03	27%	3.86E-04	1.93E-04	0.612	0.381	3.25E-02	30%	3.10E-03	1.55E-03	0.015	0.009	7.88E-04	22%	7.51E-05	3.75E-05	0.014	0.008	7.25E-04	22%	6.90E-05	3.45E-05
				7	1000	0.090	0.056	9.55E-03	64%	9.10E-04	4.55E-04	0.536	0.333	5.69E-02	52%	5.42E-03	2.71E-03	0.016	0.010	1.75E-03	50%	1.66E-04	8.31E-05	0.015	0.009	1.61E-03	50%	1.53E-04	7.64E-05
				8	1750	0.060	0.037	1.11E-02	74%	1.06E-03	5.28E-04	0.387	0.241	7.20E-02	66%	6.85E-03	3.43E-03	0.012	0.007	2.24E-03	64%	2.13E-04	1.07E-04	0.011	0.007	2.06E-03	64%	1.96E-04	9.81E-05
				9	2150	0.066	0.041	1.50E-02	100%	1.43E-03	7.16E-04	0.481	0.299	1.10E-01	100%	1.05E-02	5.23E-03	0.015	0.010	3.52E-03	100%	3.35E-04	1.67E-04	0.014	0.009	3.24E-03	100%	3.08E-04	1.54E-04
				10	1800	0.071	0.044	1.36E-02	91%	1.30E-03	6.49E-04	0.518	0.322	9.89E-02	90%	9.42E-03	4.71E-03	0.016	0.010	3.09E-03	88%	2.94E-04	1.47E-04	0.015	0.009	2.83E-03	87%	2.69E-04	1.35E-04
				11	1600	0.071	0.044	1.20E-02	80%	1.14E-03	5.71E-04	0.454	0.282	7.72E-02	70%	7.35E-03	3.68E-03	0.014	0.009	2.39E-03	68%	2.28E-04	1.14E-04	0.013	0.008	2.26E-03	68%	2.09E-04	1.05E-04
				12	1600	0.076	0.047	1.30E-02	86%	1.24E-03	6.18E-04	0.479	0.297	8.13E-02	74%	7.74E-03	3.87E-03	0.015	0.009	2.52E-03	72%	2.40E-04	1.20E-04	0.014	0.008	2.32E-03	72%	2.21E-04	1.10E-04
				13	1350	0.081	0.050	1.16E-02	77%	1.10E-03	5.52E-04	0.489	0.304	7.01E-02	64%	6.68E-03	3.34E-03	0.016	0.010	2.23E-03	64%	2.13E-04	1.06E-04	0.014	0.009	2.05E-03	63%	1.95E-04	9.76E-05
				14	1200	0.075	0.047	9.57E-03	64%	9.12E-04	4.56E-04	0.491	0.305	6.25E-02	57%	5.96E-03	2.98E-03	0.016	0.010	1.98E-03	56%	1.89E-04	9.44E-05	0.014	0.009	1.82E-03	56%	1.73E-04	8.67E-05
				15	1450	0.069	0.043	1.07E-02	71%	1.01E-03	5.07E-04	0.466	0.290	7.18E-02	65%	6.84E-03	3.42E-03	0.014	0.009	2.17E-03	62%	2.07E-04	1.03E-04	0.013	0.008	2.00E-03	62%	1.90E-04	9.50E-05
				16	1550	0.070	0.043	1.15E-02	76%	1.09E-03	5.46E-04	0.466	0.290	7.67E-02	70%	7.31E-03	3.65E-03	0.014	0.009	2.31E-03	66%	2.20E-04	1.10E-04	0.013	0.008	2.12E-03	66%	2.02E-04	1.01E-04
				17	1450	0.066	0.041	1.01E-02	67%	9.65E-04	4.83E-04	0.474	0.295	7.30E-02	66%	6.95E-03	3.48E-03	0.015	0.009	2.24E-03	64%	2.14E-04	1.07E-04	0.013	0.008	2.06E-03	64%	1.96E-04	9.82E-05
				18	2200	0.060	0.037	1.39E-02	92%	1.32E-03	6.62E-04	0.431	0.268	1.01E-01	92%	9.59E-03	4.80E-03	0.012	0.008	2.90E-03	83%	2.76E-04	1.38E-04	0.011	0.007	2.67E-03	83%	2.54E-04	1.27E-04
				19	2200	0.053	0.033	1.24E-02	83%	1.18E-03	5.92E-04	0.412	0.256	9.61E-02	88%	9.15E-03	4.58E-03	0.012	0.007	2.73E-03	78%	2.60E-04	1.30E-04	0.011	0.007	2.51E-03	78%	2.39E-04	1.19E-04
				20	1600	0.047	0.029	7.92E-03	53%	7.54E-04	3.77E-04	0.420	0.261	7.13E-02	65%	6.79E-03	3.39E-03	0.012	0.007	2.03E-03	58%	1.94E-04	9.69E-05	0.011	0.007	1.87E-03	58%	1.78E-04	8.91E-05
				21	1600	0.049	0.030	8.24E-03	55%	7.85E-04	3.93E-04	0.405	0.252	6.88E-02	63%	6.55E-03	3.28E-03	0.012	0.008	2.07E-03	59%	1.98E-04	9.88E-05	0.011	0.007	1.91E-03	59%	1.82E-04	9.08E-05
				22	1450	0.048	0.030	7.35E-03	49%	7.00E-04	3.50E-04	0.416	0.258	6.40E-02	58%	6.10E-03	3.05E-03	0.012	0.007	1.83E-03	52%	1.74E-04	8.70E-05	0.011	0.007	1.68E-03	52%	1.60E-04	8.00E-05
				23	1350	0.050	0.031	7.12E-03	47%	6.78E-04	3.39E-04	0.445	0.277	6.38E-02	58%	6.08E-03	3.04E-03	0.013	0.008	1.83E-03	52%	1.74E-04	8.72E-05	0.012	0.007	1.68E-03	52%	1.60E-04	8.02E-05
				24	1000	0.061	0.038	6.43E-03	43%	6.12E-04	3.06E-04	0.543	0.337	5.76E-02	52%	5.49E-03	2.74E-03	0.014	0.009	1.52E-03	43%	1.45E-04	7.25E-05	0.013	0.008	1.40E-03	43%	1.33E-04	6.67E-05
L001	D2 Landscape Deck (NB)	D2LNB	0.125	1	350	0.073	0.045	5.50E-04	21%	7.34E-05	3.67E-05	0.637	0.396	4.81E-03	40%	6.42E-04	3.21E-04	0.012	0.007	8.94E-05	28%	1.19E-05	5.96E-06	0.011	0.007	8.16E-05	28%	1.09E-05	5.44E-06
				2	300	0.081	0.050	5.26E-04	20%	7.01E-05	3.50E-05	0.603	0.375	3.90E-03	33%	5.20E-04	2.60E-04	0.011	0.007	6.99E-05	22%	9.32E-06	4.66E-06	0.010	0.006	6.40E-05	22%	8.53E-06	4.26E-06
				3	300	0.062	0.038	3.99E-04	15%	5.32E-05	2.66E-05	0.561	0.348	3.63E-03	31%	4.84E-04	2.42E-04	0.010	0.006	6.56E-05	21%	8.75E-06	4.38E-06	0.009	0.006	6.01E-05	21%	8.01E-06	4.01E-06
				4	300	0.075	0.047	4.87E-04	19%	6.49E-05	3.25E-05	0.595	0.369	3.85E-03	32%	5.13E-04	2.57E-04	0.010	0.006	6.44E-05	20%	8.58E-06	4.29E-06	0.009	0.006	5.91E-05	20%	7.88E-06	3.94E-06
				5	300	0.077	0.048	5.00E-04	19%	6.67E-05	3.33E-05	0.591	0.367	3.82E-03	32%	5.10E-04	2.55E-04	0.011	0.007	6.81E-05	21%	9.07E-06	4.54E-06	0.010	0.006	6.23E-05	21%	8.31E-06	4.16E-06
				6	300	0.092	0.057	5.95E-04	23%	7.94E-05	3.97E-05	0.605	0.376	3.91E-03	33%	5.22E-04	2.61E-04	0.012	0.007	7.48E-05	24%	9.97E-06	4.99E-06	0.011	0.007	6.84E-05	23%	9.12E-06	4.56E-06
				7	400	0.129	0.080	1.11E-03	42%	1.48E-04	7.40E-05	0.805	0.500	6.94E-03	58%	9.26E-04	4.63E-04	0.015	0.009	1.29E-04	40%	1.72E-05	8.58E-06	0.014	0.008	1.17E-04	40%	1.56E-05	7.81E-06
				8	750	0.122	0.076	2.69E-03	76%	1.32E-04	1.59E-04	0.656	0.408	1.09E-02	89%	1.42E-03	7.08E-04	0.014	0.009	2.33E-04	73%	3.10E-05	1.55E-05	0.013	0.008	2.14E-04	73%	2.85E-05	1.42E-05
				9	900	0.112	0.069	2.17E-03	83%	2.89E-04	1.44E-04	0.596	0.370	1.16E-02	97%	1.54E-03	7.71E-04	0.015	0.009	2.86E-04	90%	3.81E-05	1.90E-05	0.014	0.008	2.62E-04	90%	3.50E-05	1.75E-05
				10	600	0.185	0.115	2.39E-03	92%	3.19E-04	1.59E-04	0.798	0.496	1.03E-02	87%	1.38E-03	6.89E-04	0.018	0.011	2.28E-04	72%	3.04E-05	1.52E-05	0.016	0.010	2.08E-04	72%	2.78E-05	1.39E-05
				11	550	0.207	0.129	2.46E-03	94%	3.28E-04	1.64E-04	0.866	0.538	1.03E-02	86%	1.37E-03	6.85E-04	0.018	0.011	2.18E-04	68%	2.90E-05	1.45E-05	0.017	0.010	1.99E-04	68%	2.65E-05	1.33E-05
				12	550	0.197	0.122	2.33E-03	89%	3.11E-04	1.56E-04	0.824	0.512	9.77E-03	82%	1.30E-03	6.52E-04	0.018	0.011	2.08E-04	65%	2.77E-05	1.39E-05	0.016	0.010	1.90E-04	65%	2.53E-05	1.27E-05
				13	650	0.159	0.099	2.23E-03	85%	2.97E-04	1.49E-04	0.785	0.488	1.10E-02	92%	1.47E-03	7.34E-04	0.016	0.010	2.21E-04	69%	2.95E-05	1.47E-05	0.014	0.009	2.02E-04	69%	2.69E-05	1.35E-05
				14	600	0.174	0.108	2.26E-03	86%	3.01E-04	1.50E-04	0.810	0.504	1.05E-02	88%	1.40E-03	6.99E-04	0.017	0.010	2.16E-04	68%	2.89E-05	1.44E-05	0.015	0.009	1.98E-04	68%	2.64E-05	1.32E-05
				15	650	0.186	0.116	2.61E-03	100%	3.48E-04	1.74E-04	0.829	0.515	1.18E-02	98%	1.55E-03	7.75E-04	0.017	0.011	2.45E-04	77%	3.27E-05	1.64E-05	0.016	0.010	2.24E-04	77%	2.99E-05	1.49E-05
				16	700	0.173	0.107	2.61E-03	100%	3.48E-04	1.74E-04	0.779	0.484	1.18E-02	99%	1.57E-03	7.84E-04	0.016	0.010	2.48E-04	78%	3.30E-05	1.65E-05	0.015	0.009	2.27E-04	78%	3.02E-05	1.51E-05
				17	750	0.138	0.086	2.24E-03	86%	2.98E-04	1.49E-04	0.693	0.431	1.12E-02	94%	1.50E-03	7.48E-04	0.016	0.010	2.62E-04	82%	3.49E-05	1.74E-05	0.015	0.009	2.40E-04	82%	3.19E-05	1.60E-05
				18	850	0.107	0.066	1.95E-03	75%	2.61E-04	1.30E-04	0.580	0.361	1.06E-02	89%	1.42E-03	7.10E-04	0.016	0.010	2.92E-04	92%	3.89E-05	1.94E-05	0.015	0.009	2.67E-04	92%	3.56E-05	1.78E-05
				19	900	0.124	0.077	2.41E-03	92%	3.21E-04	1.61E-04	0.613	0.381	1.19E-02	100%	1.59E-03	7.93E-04	0.016	0.010	3.18E-04	100%	4.24E-05	2.12E-05	0.015	0.009	2.91E-04	100%	3.88E-05	1.94E-05
				20	700	0.075	0.047	1.14E-03	44%	1.52E-04	7.59E-05	0.565	0.351	8.53E-03	72%	1.14E-03	5.69E-04	0.015	0.009	2.29E-04	72%	3.05E-05	1.53E-05	0.014	0.009	2.09E-04	72%	2.78E-05	1.39E-05
				21	600	0.059	0.037	7.68E-04	29%	1.02E-04	5.12E-05	0.529	0.329	6.85E-03	58%	9.13E-04	4.57E-04	0.013	0.008	1.74E-04	55%	2.33E-05	1.16E-05	0.012	0.008	1.60E-04	55%	2.13E-05	1.06E-05
				22	550	0.063	0.039	7.44E-04	28%	9.93E-05	4.96E-05	0.530	0.329	6.29E-03	53%	8.39E-04	4.19E-04	0.013	0.008	1.52E-04	48%	7.03E-05	1.02E-05	0.012	0.007	1.39E-04	48%	1.86E-05	9.29E-06
				23	550	0.066	0.041	7.86E-04	30%	1.05E-04	5.24E-05	0.550	0.342	6.52E-03	55%	8.70E-04	4.35E-04	0.013	0.008	1.58E-04	49%	2.07E-05	1.04E-05	0.012	0.007	1.42E-04	49%	1.90E-05	9.48E-06
				24	450	0.069	0.043	6.69E-04	26%	8.92E-05	4.46E-05	0.602	0.374	5.85E-03	49%	7.79E-04	3.90E-04	0.012	0.007	1.13E-04	35%	1.50E-05	7.51E-06	0.011	0.007	1.03E-04	35%	1.37E-05	6.87E-06
L002	D2 Landscape Deck (SB)	D2MSB	0.125	1	300	0.077	0.048	4.99E-04	24%	6.65E-05	3.32E-05	0.660	0.410	4.27E-03	38%	5.70E-04	2.85E-04	0.012	0.007	7.68E-05	28%	1.02E-05	5.12E-06	0.011	0.007	7.02E-05	28%	9.35E-06	4.68E-06
				2	250	0.069	0.043	3.70E-04	17%	4.93E-05	2.46E-05	0.584	0.363	3.15E-03	28%	4.20E-04	2.10E-04	0.010	0.006	5.48E-05	20%	7.30E-06	3.65E-06	0.009	0.006	5.01E-05	20%	6.68E-06	3.34E-06
				3	250	0.068	0.042	3.66E-04	17%	4.88E-05	2.44E-05	0.579	0.360	3.12E-03	28%	4.17E-04	2.08E-04	0.011	0.007	6.09E-05	22%	8.12E-06	4.06E-06	0.010	0.006	5.56E-05	22%	7.41E-06	3.71E-06
				4	250	0.077	0.048	4.17E-04	20%	5.56E-05	2.78E-05	0.602	0.374	3.25E-03	29%	4.33E-04	2.16E-04	0.010	0.006	5.36E-05	20%	7.15E-06	3.57E-06	0.009	0.006	4.92E-05	20%	6.56E-06	3.28E-06
				5	250	0.079	0.049	4.23E-04	20%	5.65E-05	2.82E-05	0.596	0.370	3.21E-03	29%	4.29E-04	2.14E-04	0.010	0.006	5.57E-05	20%	7.42E-06	3.71E-06	0.009	0.006	5.10E-05	20%	6.80E-06	3.40E-06
				6	250	0.077	0.048	4.16E-04	20%	5.54E-05	2.77E-05	0.582	0.362	3.14E-03	28%	4.19E-04	2.09E-04	0.011	0.007	6.03E-05	22%	8.04E-06	4.02E-06	0.010	0.006	5.51E-05	22%	7.35E-06	3.67E-06
				7	350	0.137	0.085	1.04E-03	49%	1.38E-04	6.92E-05	0.838	0.521	6.33E-03	56%	8.44E-04	4.22E-04	0.015	0.010	1.16E-04	42%	1.55E-05	7.75E-06	0.014	0.009	1.06E-04	42%	1.41E-05	7.06E-06
				8	650	0.128	0.079	1.79E-03	85%	2.39E-04	1.19E-04	0.696	0.432	9.76E-03	87%	1.30E-03	6.51E-04	0.015	0.009	2.09E-04	76%	2.79E-05	1.40E-05	0.014	0.009	1.92E-04	76%	2.56E-05	1.28E-05
				9	850	0.111	0.069	2.03E-03	96%	2.71E-04	1.35E-04	0.614	0.382	1.13E-02	100%	1.50E-03	7.51E-04	0.015	0.009	2.74E-04	100%	3.66E-05	1.83E-05	0.014	0.009	2.52E-04	100%	3.36E-05	1.68E-05
				10	500	0.182	0.113	1.96E-03	93%	2.62E-04	1.31E-04	0.812	0.505	8.76E-03	78%	1.17E-03	5.84E-04	0.018	0.011	1.96E-04	71%	2.61E-05	1.30E-05	0.017	0.010	1.79E-04	71%	2.39E-05	1.19E-05
				11	450	0.199	0.124	1.93E-03	91%	2.58E-04	1.29E-04	0.889	0.552	8.63E-03	77%	1.15E-03	5.75E-04	0.019	0.012	1.83E-04	67%	2.43E-05	1.22E-05	0.017	0.011	1.67E-04	66%	2.22E-05	1.11E-05
				12	400	0.184	0.114	1.59E-03	75%	2.12E-04	1.06E-04	0.825	0.513	7.12E-03	63%	9.50E-04	4.75E-04	0.018	0.011	1.55E-04	56%	2.07E-05	1.03E-05	0.016	0.010	1.42E-04	56%	1.89E-05	9.44E-06
				13	500	0.160	0.100	1.73E-03	82%	2.31E-04	1.15E-04	0.809	0.503	8.73E-03	77%	1.16E-03	5.82E-04	0.018	0.011	1.90E-04	69%	2.53E-05	1.27E-05	0.016	0.010	1.73E-04	69%	2.31E-05	1.16E-05
				14	450	0.170	0.105	1.65E-03	78%	2.20E-04	1.10E-04	0.815	0.506	7.91E-03	70%	1.05E-03	5.27E-04	0.018	0.011	1.75E-04	64%	2.33E-05	1.16E-05	0.016	0.010	1.60E-04	63%	2.13E-05	1.06E-05
				15	500	0.196	0.122	2.11E-03	100%	2.82E-04	1.41E-04	0.862	0.536	9.30E-03	83%	1.24E-03	6.20E-04	0.019	0.012	2.05E-04	75%	2.73E-05	1.37E-05	0.017	0.011	1.87E-04	74%	2.49E-05	1.25E-05
				16	550	0.176	0.109	2.09E-03	99%	2.78E-04	1.39E-04	0.804	0.499	9.54E-03	85%	1.27E-03	6.36E-04	0.018	0.011	2.12E-04	77%	2.82E-05	1.41E-05	0.016	0.010	1.94E-04	77%	2.59E-05	1.29E-05
				17	600	0.144	0.089	1.86E-03	88%	2.48E-04	1.24E-04	0.703	0.437	9.11E-03	81%	1.21E-03	6.07E-04	0.018	0.011	2.31E-04	84%	3.08E-05	1.54E-05	0.016	0.010	2.11E-04	84%	2.82E-05	1.41E-05
				18	650	0.113	0.070	1.58E-03	75%	2.11E-04	1.06E-04	0.622	0.386	8.72E-03	77%	1.16E-03	5.81E-04	0.017	0.011	2.38E-04	87%	3.17E-05	1.59E-05	0.016	0.010	2.18E-04	86%	2.90E-05	1.45E-05
				19	650	0.118	0.073	1.65E-03	78%	2.20E-04	1.10E-04	0.618	0.384	8.66E-03	77%	1.16E-03	5.78E-04	0.017	0.011	2.42E-04	88%	3.23E-05	1.61E-05	0.016	0.010	2.21E-04	88%	2.95E-05	1.48E-05
				20	550	0.075	0.046	8.86E-04	42%	1.18E-04	5.91E-05	0.573	0.356	6.80E-03	60%	9.06E-04	4.53E-04	0.016	0.010	1.91E-04	70%	2.54E-05	1.27E-05	0.015	0.009	1.74E-04	69%	2.32E-05	1.16E-05
				21	500	0.069	0.043	7.41E-04	35%	9.88E-05	4.94E-05	0.566	0.352	6.10E-03	54%	8.14E-04	4.07E-04	0.014	0.009	1.58E-04	57%	2.08E-05	1.04E-05	0.013	0.008	1.63E-04	57%	1.90E-05	9.51E-06
				22	450	0.057	0.035	5.52E-04	26%	7.35E-05	3.68E-05	0.512	0.318	4.97E-03	44%	6.63E-04	3.31E-04	0.014	0.008	1.32E-04	48%	1.76E-05	8.79E-06	0.012	0.008	1.21E-04	48%	1.61E-05	8.06E-06
				23	450	0.065	0.041	6.34E-04	30%	8.46E-05	4.23E-05	0.545	0.339	5.29E-03	47%	7.06E-04	3.53E-04	0.014	0.008	1.32E-04	48%	1.76E-05	8.81E-06	0.012	0.008	1.21E-04	48%	1.61E-05	8.06E-06
				24	350	0.074	0.046	5.57E-04	26%	7.43E-05	3.71E-05	0.601	0.373	4.54E-03	40%	6.05E-04	3.02E-04	0.013	0.008	9.79E-05	36%	1.31E-05	6.53E-06	0.012	0.007	8.95E-05	36%	1.19E-05	5.97E-06
L003a	D2 Landscape Deck (NB)	D2MNB	0.037	1	350	0.085	0.053	1.91E-04	22%	2.55E-05	1.27E-05	0.626	0.389	1.41E-03	37%	1.89E-04	9.43E-05	0.014	0.009	3.09E-05	26%	4.12E-06	2.06E-06	0.012	0.008	2.82E-05	26%	3.76E-06	1.88E-06
				2	300	0.087	0.054	1.68E-04	19%	2.24E-05	1.12E-05	0.581	0.361	1.13E-03	30%	1.50E-04	7.50E-05	0.012	0.007	2.30E-05	20%	3.06E-06	1.53E-06	0.011	0.007	2.10E-05	20%	2.81E-06	1.40E-06
				3	300	0.073	0.045	1.42E-04	16%	1.89E-05	9.44E-06	0.556	0.346	1.08E-03	28%	1.44E-04	7.18E-05	0.013	0.008	2.51E-05	21%	3.35E-06	1.68E-06	0.012	0.007	2.29E-05	21%	3.06E-06	1.53E-06
				4	300	0.086	0.054	1.67E-04	19%	2.23E-05	1.11E-05	0.581	0.361	1.13E-03	30%	1.50E-04	7.50E-05	0.011	0.007	2.20E-05	19%	2.93E-06	1.47E-06	0.010	0.006	2.02E-05	19%	2.69E-06	1.35E-06
				5	250	0.086	0.053	1.38E-04	16%	1.85E-05	9.23E-06	0.578	0.359	9.32E-04	25%	1.24E-04	6.22E-05	0.012	0.007	1.85E-05	16%	2.52E-06	1.26E-06	0.011	0.007	1.73E-05	16%	2.31E-06	1.15E-06
				6	300	0.097	0.060	1.88E-04	21%	2.51E-05	1.25E-05	0.585	0.363	1.13E-03	30%	1.51E-04	7.55E-05	0.013	0.008	2.51E-05	21%	3.34E-06	1.67E-06	0.012	0.007	2.29E-05	21%	3.05E-06	1.53E-06
				7	400	0.148	0.092	3.83E-04	43%	5.10E-05	2.55E-05	0.826	0.513	2.13E-03	56%	2.84E-04	1.42E-04	0.018	0.011	4.60E-05	39%	6.13E-06	3.07E-06	0.016	0.010	4.19E-05	39%	5.58E-06	2.79E-06
				8	800	0.137	0.085	7.08E-04	80%	9.45E-05	4.72E-05	0.656	0.408	3.39E-03	89%	4.52E-04	2.26E-04	0.017	0.010	8.56E-05	73%	1.14E-05	5.70E-06	0.015	0.009	7.85E-05	73%	1.05E-05	5.23E-06
				9	900	0.149	0.093	8.65E-04	98%	1.15E-04	5.77E-05	0.630	0.391	3.66E-03	96%	4.88E-04	2.44E-04	0.017	0.011	9.86E-05	84%	1.32E-05	6.58E-06	0.016	0.010	9.07E-05	84%	1.21E-05	6.04E-06
				10	600	0.212	0.132	8.22E-04	93%	1.10E-04	5.48E-05	0.829	0.515	3.21E-03	85%	4.28E-04	2.14E-04	0.020	0.012	7.79E-05	66%	1.04E-05	5.19E-06	0.018	0.011	7.13E-05	66%	9.51E-06	4.76E-06
				11

L004b	DZ Landscape Deck (WSB)	DZWSB	0.037	1	250	0.110	0.068	1.77E-04	27%	2.36E-05	1.18E-05	0.622	0.386	1.00E-03	33%	1.34E-04	6.69E-05	0.019	0.012	3.01E-05	26%	4.01E-06	2.01E-06	0.017	0.011	2.74E-05	27%	3.66E-06	1.83E-06
				2	200	0.105	0.065	1.35E-04	17%	1.80E-05	9.01E-06	0.535	0.333	6.91E-04	23%	9.22E-05	4.61E-05	0.016	0.010	2.05E-05	18%	2.73E-06	1.37E-06	0.015	0.009	1.87E-05	18%	2.50E-06	1.25E-06
				3	200	0.098	0.061	1.26E-04	16%	1.68E-05	8.40E-06	0.526	0.327	6.79E-04	23%	9.06E-05	4.53E-05	0.018	0.011	2.29E-05	20%	3.05E-06	1.52E-06	0.016	0.010	2.08E-05	20%	2.78E-06	1.39E-06
				4	200	0.123	0.076	1.59E-04	20%	2.12E-05	1.06E-05	0.586	0.352	7.30E-04	24%	9.74E-05	4.87E-05	0.015	0.010	2.00E-05	18%	2.66E-06	1.33E-06	0.014	0.009	1.83E-05	18%	2.44E-06	1.22E-06
				5	200	0.119	0.074	1.54E-04	19%	2.05E-05	1.03E-05	0.562	0.349	7.26E-04	24%	9.68E-05	4.84E-05	0.016	0.010	2.02E-05	18%	2.69E-06	1.34E-06	0.014	0.009	1.85E-05	18%	2.46E-06	1.23E-06
				6	250	0.132	0.082	2.13E-04	26%	2.84E-05	1.42E-05	0.587	0.365	9.48E-04	32%	1.26E-04	6.32E-05	0.018	0.011	2.92E-05	26%	3.89E-06	1.94E-06	0.017	0.010	2.66E-05	26%	3.55E-06	1.78E-06
				7	300	0.211	0.131	4.09E-04	51%	5.45E-05	2.72E-05	0.870	0.541	1.69E-03	56%	2.25E-04	1.12E-04	0.026	0.016	4.97E-05	44%	6.63E-06	3.31E-06	0.023	0.014	4.52E-05	44%	6.02E-06	3.01E-06
				8	650	0.182	0.113	7.62E-04	95%	1.02E-04	5.08E-05	0.700	0.435	2.94E-03	98%	3.92E-04	1.96E-04	0.022	0.014	9.13E-05	80%	1.22E-05	6.09E-06	0.020	0.012	8.37E-05	81%	1.12E-05	5.58E-06
				9	850	0.133	0.083	7.31E-04	91%	9.75E-05	4.87E-05	0.548	0.341	3.01E-03	100%	4.01E-04	2.01E-04	0.019	0.012	1.03E-04	91%	1.38E-05	6.89E-06	0.017	0.011	9.50E-05	92%	1.27E-05	6.33E-06
				10	500	0.247	0.154	7.98E-04	99%	1.06E-04	5.32E-05	0.842	0.523	2.72E-03	90%	3.62E-04	1.81E-04	0.026	0.016	8.25E-05	73%	1.10E-05	5.52E-06	0.023	0.015	7.57E-05	73%	1.01E-05	5.05E-06
				11	450	0.248	0.154	7.21E-04	89%	9.61E-05	4.80E-05	0.898	0.558	2.61E-03	87%	3.48E-04	1.74E-04	0.028	0.018	8.25E-05	72%	1.09E-05	5.47E-06	0.026	0.016	7.45E-05	72%	9.94E-06	4.97E-06
				12	450	0.242	0.150	7.03E-04	87%	9.37E-05	4.68E-05	0.856	0.532	2.49E-03	83%	3.31E-04	1.66E-04	0.025	0.016	7.31E-05	64%	9.75E-06	4.88E-06	0.023	0.014	6.67E-05	64%	8.90E-06	4.45E-06
				13	500	0.200	0.124	6.45E-04	80%	8.60E-05	4.30E-05	0.792	0.492	2.56E-03	85%	3.41E-04	1.70E-04	0.025	0.015	7.05E-05	70%	1.06E-05	5.30E-06	0.022	0.014	7.24E-05	70%	9.66E-06	4.83E-06
				14	450	0.230	0.143	6.68E-04	83%	8.90E-05	4.45E-05	0.839	0.521	2.44E-03	81%	3.25E-04	1.62E-04	0.025	0.016	7.32E-05	64%	9.78E-06	4.86E-06	0.023	0.014	6.68E-05	65%	8.91E-06	4.45E-06
				15	500	0.250	0.155	8.05E-04	100%	1.07E-04	5.37E-05	0.869	0.540	2.80E-03	93%	3.74E-04	1.87E-04	0.029	0.018	8.67E-05	75%	1.13E-05	5.65E-06	0.024	0.015	7.73E-05	75%	1.03E-05	5.15E-06
				16	550	0.224	0.139	7.97E-04	99%	1.06E-04	5.31E-05	0.816	0.507	2.90E-03	96%	3.86E-04	1.93E-04	0.024	0.015	8.69E-05	77%	1.16E-05	5.82E-06	0.022	0.014	7.94E-05	77%	1.06E-05	5.30E-06
				17	650	0.182	0.113	7.64E-04	95%	1.02E-04	5.09E-05	0.716	0.445	3.00E-03	100%	4.00E-04	2.00E-04	0.024	0.015	9.55E-05	88%	1.33E-05	6.63E-06	0.022	0.013	9.08E-05	88%	1.21E-05	6.05E-06
				18	700	0.134	0.083	6.03E-04	75%	8.05E-05	4.02E-05	0.590	0.366	2.66E-03	89%	3.55E-04	1.78E-04	0.022	0.014	9.82E-05	86%	1.31E-05	6.55E-06	0.020	0.012	8.95E-05	87%	1.19E-05	5.97E-06
				19	700	0.164	0.102	7.39E-04	92%	9.86E-05	4.93E-05	0.644	0.400	2.91E-03	97%	3.88E-04	1.94E-04	0.025	0.016	1.14E-04	100%	1.52E-05	7.58E-06	0.023	0.014	1.03E-04	100%	1.38E-05	6.90E-06
				20	600	0.083	0.051	3.20E-04	40%	4.27E-05	2.13E-05	0.545	0.338	2.11E-03	70%	2.81E-04	1.41E-04	0.022	0.013	8.34E-05	73%	1.11E-05	5.56E-06	0.020	0.012	7.57E-05	73%	1.01E-05	5.04E-06
				21	550	0.073	0.045	2.58E-04	32%	3.45E-05	1.72E-05	0.502	0.312	1.78E-03	59%	2.37E-04	1.19E-04	0.018	0.011	6.48E-05	57%	8.62E-06	4.31E-06	0.017	0.010	5.90E-05	57%	7.86E-06	3.93E-06
				22	450	0.069	0.043	2.05E-04	25%	2.67E-05	1.33E-05	0.474	0.295	1.38E-03	46%	1.84E-04	9.19E-05	0.018	0.011	5.09E-05	45%	6.78E-06	3.39E-06	0.016	0.010	4.64E-05	45%	6.19E-06	3.09E-06
				23	450	0.075	0.047	2.17E-04	27%	2.90E-05	1.45E-05	0.498	0.310	1.45E-03	48%	1.93E-04	9.65E-05	0.018	0.011	5.22E-05	46%	6.95E-06	3.48E-06	0.016	0.010	4.76E-05	46%	6.34E-06	3.17E-06
				24	350	0.091	0.056	2.05E-04	25%	2.74E-05	1.37E-05	0.553	0.343	1.25E-03	41%	1.66E-04	8.32E-05	0.018	0.011	3.99E-05	35%	5.32E-06	2.66E-06	0.016	0.010	3.64E-05	35%	4.85E-06	2.43E-06
L158	CKR Tunnel Portal Emission (EB)	CKRTEEB	1.750	1	900	0.046	0.029	6.29E-03	24%	1.40E-03	6.99E-04	0.372	0.231	5.05E-02	24%	1.12E-02	5.61E-03	0.013	0.008	1.76E-03	25%	3.91E-04	1.96E-04	0.013	0.008	1.71E-03	26%	3.81E-04	1.91E-04
				2	950	0.046	0.029	6.67E-03	25%	1.48E-03	7.41E-04	0.375	0.233	5.37E-02	26%	1.19E-02	5.97E-03	0.013	0.008	1.88E-03	27%	4.18E-04	2.09E-04	0.011	0.007	1.59E-03	25%	3.54E-04	1.77E-04
				3	500	0.046	0.028	3.44E-03	13%	7.65E-04	3.83E-04	0.378	0.235	2.85E-02	14%	6.34E-03	3.17E-03	0.013	0.008	9.75E-04	14%	2.17E-04	1.08E-04	0.011	0.007	8.77E-04	13%	1.84E-04	9.19E-05
				4	500	0.045	0.028	3.40E-03	13%	7.57E-04	3.78E-04	0.376	0.233	2.84E-02	14%	6.31E-03	3.15E-03	0.013	0.008	9.72E-04	14%	2.16E-04	1.08E-04	0.011	0.007	8.74E-04	13%	1.83E-04	9.16E-05
				5	500	0.045	0.028	3.38E-03	13%	7.52E-04	3.76E-04	0.380	0.236	2.87E-02	14%	6.37E-03	3.19E-03	0.013	0.008	9.71E-04	14%	2.16E-04	1.08E-04	0.011	0.007	8.73E-04	13%	1.83E-04	9.14E-05
				6	950	0.047	0.029	6.70E-03	25%	1.49E-03	7.44E-04	0.382	0.237	5.48E-02	26%	1.22E-02	6.09E-03	0.013	0.008	1.88E-03	27%	4.19E-04	2.09E-04	0.011	0.007	1.60E-03	25%	3.55E-04	1.77E-04
				7	1400	0.046	0.029	9.82E-03	37%	2.18E-03	1.09E-03	0.383	0.238	8.10E-02	39%	1.80E-02	9.00E-03	0.012	0.008	2.58E-03	37%	5.74E-04	2.87E-04	0.011	0.007	2.37E-03	37%	5.28E-04	2.64E-04
				8	2350	0.046	0.029	1.65E-02	62%	3.66E-03	1.83E-03	0.387	0.240	1.37E-01	65%	3.05E-02	1.52E-02	0.013	0.008	4.51E-03	64%	1.00E-03	5.01E-04	0.011	0.007	4.01E-03	62%	8.92E-04	4.46E-04
				9	2950	0.048	0.030	2.14E-02	81%	4.75E-03	2.37E-03	0.407	0.253	1.81E-01	86%	4.03E-02	2.01E-02	0.012	0.008	5.55E-03	79%	1.23E-03	6.17E-04	0.011	0.007	5.01E-03	77%	1.11E-03	5.57E-04
				10	2800	0.049	0.030	2.07E-02	78%	4.60E-03	2.30E-03	0.399	0.248	1.69E-01	80%	3.75E-02	1.87E-02	0.013	0.008	5.54E-03	79%	1.23E-03	6.15E-04	0.012	0.008	5.12E-03	79%	1.14E-03	5.69E-04
				11	2350	0.046	0.029	1.64E-02	62%	3.65E-03	1.82E-03	0.383	0.238	1.36E-01	65%	3.02E-02	1.51E-02	0.013	0.008	4.46E-03	63%	9.92E-04	4.96E-04	0.012	0.007	4.20E-03	65%	9.33E-04	4.66E-04
				12	2300	0.046	0.029	1.61E-02	61%	3.58E-03	1.79E-03	0.381	0.236	1.32E-01	63%	2.94E-02	1.47E-02	0.013	0.008	4.40E-03	62%	9.78E-04	4.89E-04	0.012	0.007	4.15E-03	64%	9.22E-04	4.61E-04
				13	2300	0.046	0.029	1.61E-02	61%	3.57E-03	1.78E-03	0.379	0.236	1.32E-01	63%	2.93E-02	1.46E-02	0.013	0.008	4.37E-03	62%	9.71E-04	4.85E-04	0.012	0.007	4.12E-03	63%	9.15E-04	4.57E-04
				14	2300	0.046	0.029	1.61E-02	61%	3.58E-03	1.79E-03	0.380	0.236	1.32E-01	63%	2.93E-02	1.47E-02	0.013	0.008	4.35E-03	62%	9.67E-04	4.83E-04	0.012	0.007	4.09E-03	62%	9.10E-04	4.55E-04
				15	2700	0.048	0.030	1.95E-02	74%	4.34E-03	2.17E-03	0.383	0.238	1.56E-01	74%	3.47E-02	1.73E-02	0.013	0.008	5.40E-03	77%	1.20E-03	6.00E-04	0.012	0.008	5.00E-03	77%	1.11E-03	5.55E-04
				16	2700	0.047	0.029	1.93E-02	73%	4.30E-03	2.15E-03	0.381	0.237	1.55E-01	74%	3.45E-02	1.73E-02	0.013	0.008	5.34E-03	76%	1.19E-03	5.94E-04	0.012	0.008	4.95E-03	76%	1.10E-03	5.50E-04
				17	2650	0.046	0.029	1.85E-02	70%	4.11E-03	2.05E-03	0.378	0.235	1.51E-01	72%	3.36E-02	1.68E-02	0.013	0.008	5.09E-03	72%	1.13E-03	5.65E-04	0.012	0.007	4.70E-03	72%	1.05E-03	5.23E-04
				18	2650	0.047	0.029	1.86E-02	71%	4.14E-03	2.07E-03	0.380	0.236	1.52E-01	73%	3.38E-02	1.69E-02	0.013	0.008	5.08E-03	72%	1.13E-03	5.65E-04	0.012	0.007	4.71E-03	73%	1.05E-03	5.23E-04
				19	3400	0.051	0.032	2.64E-02	100%	5.87E-03	2.93E-03	0.408	0.254	2.10E-01	100%	4.66E-02	2.31E-02	0.014	0.009	7.05E-03	100%	1.57E-03	7.81E-04	0.013	0.008	6.49E-03	100%	1.44E-03	7.21E-04
				20	2200	0.045	0.028	1.51E-02	57%	3.35E-03	1.68E-03	0.366	0.228	1.22E-01	58%	2.70E-02	1.35E-02	0.013	0.008	4.27E-03	61%	9.49E-04	4.75E-04	0.012	0.008	4.05E-03	62%	8.99E-04	4.50E-04
				21	1800	0.046	0.029	1.25E-02	47%	2.78E-03	1.39E-03	0.367	0.228	9.99E-02	48%	2.22E-02	1.11E-02	0.013	0.008	3.69E-03	49%	7.75E-04	3.87E-04	0.012	0.007	3.35E-03	49%	7.01E-04	3.50E-04
				22	1800	0.046	0.029	1.26E-02	48%	2.79E-03	1.40E-03	0.369	0.229	1.00E-01	48%	2.23E-02	1.12E-02	0.013	0.008	3.52E-03	50%	7.83E-04	3.92E-04	0.012	0.007	3.19E-03	49%	7.09E-04	3.55E-04
				23	1350	0.046	0.029	9.35E-03	35%	2.08E-03	1.04E-03	0.370	0.230	7.55E-02	36%	1.68E-02	8.39E-03	0.013	0.008	2.62E-03	37%	5.83E-04	2.91E-04	0.012	0.007	2.42E-03	37%	5.40E-04	2.70E-04
				24	1350	0.045	0.028	9.25E-03	35%	2.05E-03	1.03E-03	0.369	0.229	7.52E-02	36%	1.67E-02	8.36E-03	0.013	0.008	2.62E-03	37%	5.81E-04	2.91E-04	0.012	0.007	2.42E-03	37%	5.37E-04	2.68E-04
L159	CKR Landscape Deck (SWB)	CKRLOSWB	0.195	1	1300	0.028	0.017	1.21E-03	18%	2.70E-04	1.35E-04	0.211	0.131	9.25E-03	20%	2.06E-03	1.03E-03	0.008	0.005	3.38E-04	24%	7.50E-05	3.75E-05	0.007	0.004	3.12E-04	24%	6.92E-05	3.46E-05
				2	1300	0.028	0.017	1.21E-03	18%	2.69E-04	1.35E-04	0.212	0.132	9.28E-03	20%	2.06E-03	1.03E-03	0.008	0.005	3.38E-04	24%	7.47E-05	3.73E-05	0.007	0.004	3.10E-04	24%	6.89E-05	3.45E-05
				3	700	0.028	0.018	6.64E-04	10%	1.47E-04	7.37E-05	0.216	0.134	5.09E-03	11%	1.13E-03	5.65E-04	0.008	0.005	1.84E-04	13%	4.08E-05	2.04E-05	0.007	0.004	1.69E-04	13%	3.76E-05	1.88E-05
				4	700	0.028	0.018	6.64E-04	10%	1.48E-04	7.38E-05	0.217	0.135	5.11E-03	11%	1.13E-03	5.67E-04	0.008	0.005	1.83E-04	13%	4.08E-05	2.04E-05	0.007	0.004	1.69E-04	13%	3.76E-05	1.88E-05
				5	700	0.028	0.017	6.48E-04	10%	1.44E-04	7.20E-05	0.216	0.134	5.10E-03	11%	1.13E-03	5.66E-04	0.008	0.005	1.79E-04	13%	3.97E-05	1.98E-05	0.007	0.004	1.65E-04	13%	3.66E-05	1.83E-05
				6	1350	0.028	0.017	1.26E-03	19%	2.81E-04	1.41E-04	0.216	0.134	9.82E-03	21%	2.18E-03	1.09E-03	0.008	0.005	3.46E-04	24%	7.69E-05	3.84E-05	0.007	0.004	3.19E-04	24%	7.09E-05	3.55E-05
				7	2000	0.028	0.017	1.89E-03	28%	4.19E-04	2.09E-04	0.217	0.135	1.46E-02	31%	3.25E-03	1.62E-03	0.008	0.005	5.15E-04	36%	1.15E-04	5.73E-05	0.007	0.004	4.75E-04	36%	1.06E-04	5.28E-05
				8	3350	0.030	0.019	3.38E-03	50%	7.52E-04	3.76E-04	0.235	0.146	2.65E-02	56%	5.89E-03	2.94E-03	0.008	0.005	8.77E-04	62%	1.95E-04	9.75E-05	0.007	0.004	8.08E-04	61%	1.79E-04	8.97E-05
				9	4700	0.042	0.026	6.71E-03	100%	1.49E-03	7.46E-04	0.298	0.185	4.72E-02	100%	1.05E-02	5.24E-03	0.009	0.006	1.42E-03	100%	3.16E-04	1.58E-04	0.008	0.005	1.31E-03	100%	2.92E-04	1.46E-04
				10	3950	0.034	0.021	4.52E-03	67%	1.00E-03	5.02E-04	0.253	0.157	3.37E-02	71%	7.49E-03	3.74E-03	0.008	0.005	1.09E-03	76%	2.41E-04	1.21E-04	0.008	0.005	1.00E-03	76%	2.23E-04	1.11E-04
				11	3300	0.030	0.019	3.34E-03	50%	7.43E-04	3.72E-04	0.234	0.145	2.60E-02	55%	5.77E-03	2.88E-03	0.008	0.005	8.71E-04	61%	1.93E-04	9.67E-05	0.007	0.004	8.01E-04	61%	1.78E-04	8.90E-05
				12	3300	0.030	0.019	3.31E-03	49%	7.36E-04	3.68E-04	0.232	0.144	2.58E-02	55%	5.74E-03	2.87E-03	0.008	0.005	8.66E-04	61%	1.92E-04	9.62E-05	0.007	0.004	7.97E-04	61%	1.77E-04	8.85E-05
				13	3250	0.029	0.018	3.22E-03	48%	7.15E-04	3.57E-04	0.229	0.142	2.50E-02	53%	5.56E-03	2.78E-03	0.008	0.005	8.48E-04	60%	1.88E-04	9.42E-05	0.007	0.004	7.83E-04	60%	1.74E-04	8.70E-05
				14	3250	0.029	0.018	3.22E-03	48%	7.16E-04	3.58E-04	0.230	0.143	2.51E-02	53%	5.58E-03	2.79E-03	0.008	0.005	8.49E-04	60%	1.89E-04	9.44E-05	0.007	0.004	7.85E-04	60%	1.74E-04	8.72E-05
				15	3850	0.033	0.020	4.26E-03	64%	9.48E-04	4.74E-04	0.243	0.151	3.15E-02	67%	7.01E-03	3.51E-03	0.008	0.005	1.06E-03	74%	2.35E-04	1.17E-04	0.008	0.005	9.73E-04	74%	2.16E-04	1.08E-04
				16	3800	0.033	0.020	4.18E-03	62%	9.29E-04	4.64E-04	0.243	0.151	3.11E-02	66%	6.90E-03	3.45E-03	0.008	0.005	1.04E-03	73%	2.31E-04	1.15E-04	0.007	0.005	9.57E-04	73%	2.13E-04	1.06E-04
				17	3800	0.032	0.020	4.14E-03	62%	9.19E-04	4.60E-04	0.243	0.151	3.10E-02	66%	6.89E-03	3.45E-03	0.008	0.005	1.03E-03	72%	2.29E-04	1.15E-04	0.007	0.005	9.49E-04	72%	2.11E-04	1.05E-04
				18	3800	0.032	0.020	4.13E-03	62%	9.18E-04	4.59E-04	0.242	0.151	3.10E-02	66%	6.89E-03	3.44E-03	0.008	0.005	1.03E-03	72%	2.29E-04	1.14E-04	0.007	0.005	9.49E-04	72%	2.11E-04	1.05E-04
				19	4300	0.035	0.021	5.06E-03	75%	1.11E-03	5.56E-04	0.259	0.161	3.75E-02	79%	8.32E-03	4.16E-03	0.008	0.005	1.17E-03	82%	2.61E-04	1.30E-04	0.007	0.005	1.07E-03	82%	2.38E-04	1.19E-04
				20	3150	0.029	0.018	3.05E-03	45%	6.78E-04	3.39E-04	0.271	0.138	2.35E-02	50%	5.22E-03	2.61E-03	0.008	0.005	8.26E-04	58%	1.84E-04	9.18E-05	0.007	0.004	7.59E-04	58%	1.69E-04	8.43E-05
				21	2550	0.028	0.018	2.42E-03	36%	5.38E-04	2.69E-04	0.213	0.132	1.83E-02	39%	4.06E-03	2.03E-03	0.008	0.005	6.68E-04	47%	1.49E-04	7.43E-05	0.007	0.004	6.15E-04	47%	1.37E-04	6.84E-05
				22	2550	0.028	0.017	2.40E-03	36%	5.33E-04	2.67E-04	0.213	0.132	1.83E-02	39%	4.06E-03	2.03E-03	0.008	0.005	6.62E-04	46%	1.47E-04	7.35E-05	0.007	0.004	6.09E-04	46%	1.35E-04	6.77E-05
				23	1950	0.027	0.017	1.78E-03	26%	3.95E-04	1.98E-04	0.209	0.130	1.37E-02	29%	3.05E-03	1.53E-03	0.008	0.005	4.98E-04	35%	1.11E-04	5.53E-05	0.007	0.004	4.60E-04	35%	1.02E-04	5.11E-05
				24	1950	0.027	0.017	1.80E-03	27%	3.99E-04	2.00E-04	0.210	0.131	1.38E-02	29%	3.07E-03	1.53E-03	0.008	0.005	5.02E-04	35%	1.12E-04	5.58E-05	0.007	0.004	4.63E-04	35%	1.03E-04	5.15E-05
L158	CKR Landscape Deck (NEB)	CKRLDNEB	0.195	1	900	0.046	0.029	1.40E-03	24%	3.11E-04	1.56E-04	0.372	0.231	1.13E-02	24%	2.50E-03	1.25E-03	0.013	0.008	3.92E-04	25%	8.72E-05	4.36E-05	0.013	0.008	3.82E-04	26%	8.49E-05	4.25E-05
				2	950	0.046	0.029	1.49E-03	25%	3.30E-04	1.65E-04	0.375	0.233	1.20E-02	26%	2.66E-03	1.33E-03	0.013	0.008	4.20E-04	27%	9.32E-05	4.66E-05	0.011	0.007	3.55E-04	25%	7.90E-05	3.95E-05
				3	500	0.046	0.028	7.68E-04	13%	1.71E-04	8.53E-05	0.378	0.235	6.36E-03	14%	1.41E-03	7.06E-04	0.013	0.008	2.17E-04	14%	4.83E-05	2.41E-05	0.011	0.007	1.84E-04	13%	4.10E-05	2.05E-05
				4	500	0.045	0.028	7.59E-04	13%	1.69E-04	8.43E-05	0.376	0.233	6.32E-03	14%	1.41E-03	7.03E-04	0.013	0.008	2.17E-04	14%	4.81E-05	2.41E-05	0.011	0.007	1.84E-04	13%	4.08E-05	2.04E-05
				5	500	0.045	0.028	7.54E-04	13%	1.68E-04	8.38E-05	0.380	0.236	6.35E-03	14%	1.42E-03	7.10E-04	0.013	0.008	2.16E-04	14%	4.81E-05	2.40E-05	0.011	0.007	1.83E-04	13%	4.07E-05	2.04E-05
				6	950	0.047	0.029	1.49E-03	25%	3.32E-04	1.66E-04	0.382	0.237	1.22E-02	26%	2.71E-03	1.36E-03	0.013	0.008	4.20E-04	27%	9.33E-05	4.66E-05	0.011	0.007	3.56E-04	25%	7.91E-05	3.95E-05
				7	1400	0.046	0.029	2.19E-03	37%	4.87E-04	2.43E-04	0.383	0.238	1.80E-02	39%	4.01E-03	2.01E-03	0.012	0.008	5.78E-04	37%	1.28E-04	6.39E-05	0.011	0.007	5.29E-04	37%	1.18E-04	5.88E-05
				8	2350	0.046	0.029	3.67E-03	62%	8.16E-04	4.08E-04	0.387	0.240	3.06E-02	65%	6.79E-03	3.40E-03	0.013	0.008	1.01E-03	64%	2.23E-04	1.12E-04	0.011	0.007	8.94E-04	62%	1.99E-04	9.93E-05
				9	2950	0.048	0.030	4.76E-03	81%	1.06E-03	5.29E-04	0.407	0.253	4.04E-02	86%	8.98E-03	4.49E-03	0.012	0.008	1.24E-03	79%	2.75E-04	1.37E-04	0.011	0.007	1.12E-03	77%	2.48E-04	1.24E-04
				10	2800	0.049	0.030	4.62E-03	78%	1.03E-03	5.13E-04	0.399	0.248	3.76E-02	80%	8.35E-03	4.18E-03	0.013	0.008	1.23E-03	79%	2.74E-04	1.37E-04	0.012	0.008	1.14E-03	79%	2.53E-04	1.27E-04
				11	2350	0.046	0.029	3.66E-03	62%	8.12E-04	4.06E-04	0.383	0.238	3.03E-02	65%	6.74E-03	3.37E-03	0.013	0.008	9.95E-04	63%	2.21E-04	1.11E-04	0.012	0.007	9.36E-04	65%	2.08E-04	1.04E-04
				12	2300	0.046	0.029	3.59E-03	61%	7.98E-04	3.99E-04	0.381	0.236	2.95E-02	63%	6.55E-03	3.27E-03	0.013	0.008	9.81E-04	62%	2.18E-04	1.09E-04	0.012	0.007	9.24E-04	64%	2.05E-04	1.03E-04
				13	2300	0.046	0.029	3.58E-03	61%	7.95E-04	3.98E-04	0.379	0.236	2.94E-02	63%	6.52E-03

Calculation of Portal Emission - 2nd Quarter

						NO2						NO						RSP						FSP					
						Emission Rate			% of the maximum emission rate	Nearest 50m - 2/3 emission rate	Farest 50m - 1/3 emission rate	Emission Rate			% of the maximum emission rate	Nearest 50m - 2/3 emission rate	Farest 50m - 1/3 emission rate	Emission Rate			% of the maximum emission rate	Nearest 50m - 2/3 of the total emission rate	Farest 50m - 1/3 of the total emission rate	Emission Rate			% of the maximum emission rate	Nearest 50m - 2/3 of the total emission rate	Farest 50m - 1/3 of the total emission rate
Road No.	Portal Description	Portal ID	Tunnel Length (km)	Hour	Total Vehicle (veh/hr)	(g/veh/mile)	(g/veh/km)	Total Emission (g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	Total Emission (g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	Total Emission (g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	Total Emission (g/s)	(%)	(g/s)	(g/s)
L084 & L085	Kai Tak Tunnel (WB)	KTTW	1.230	1	850	0.045	0.028	4.06E-03	29%	3.86E-04	1.93E-04	0.4138	0.25712	3.72E-02	39%	3.56E-03	1.78E-03	0.0125	0.0078	1.13E-03	32%	1.07E-04	5.37E-05	0.0115	0.0071	1.03E-03	32%	9.85E-05	4.93E-05
				2	700	0.032	0.020	2.37E-03	17%	2.26E-04	1.13E-04	0.3333	0.20710	2.48E-02	26%	2.36E-03	1.18E-03	0.0067	0.0042	5.00E-04	14%	4.76E-05	2.38E-05	0.0062	0.0038	4.59E-04	14%	4.37E-05	2.19E-05
				3	550	0.040	0.025	2.36E-03	17%	2.24E-04	1.12E-04	0.3932	0.24432	2.30E-02	24%	2.19E-03	1.09E-03	0.0074	0.0046	4.33E-04	12%	4.12E-05	2.06E-05	0.0068	0.0042	3.98E-04	12%	3.79E-05	1.89E-05
				4	500	0.043	0.026	2.26E-03	16%	2.15E-04	1.08E-04	0.3961	0.24612	2.10E-02	22%	2.00E-03	1.00E-03	0.0076	0.0047	4.03E-04	11%	3.83E-05	1.92E-05	0.0070	0.0043	3.70E-04	11%	3.53E-05	1.76E-05
				5	450	0.052	0.032	2.48E-03	18%	2.37E-04	1.18E-04	0.4229	0.26275	2.02E-02	21%	1.92E-03	9.62E-04	0.0084	0.0052	4.03E-04	11%	3.83E-05	1.92E-05	0.0077	0.0048	3.70E-04	11%	3.52E-05	1.76E-05
				6	500	0.072	0.044	3.80E-03	27%	3.62E-04	1.81E-04	0.5263	0.32700	2.79E-02	29%	2.66E-03	1.33E-03	0.0149	0.0092	7.88E-04	22%	7.51E-05	3.75E-05	0.0137	0.0085	7.25E-04	22%	6.90E-05	3.45E-05
				7	1000	0.085	0.053	9.06E-03	64%	8.62E-04	4.31E-04	0.4761	0.29584	5.05E-02	52%	4.81E-03	2.41E-03	0.0164	0.0102	1.75E-03	50%	1.66E-04	8.31E-05	0.0151	0.0094	1.61E-03	50%	1.53E-04	7.64E-05
				8	1750	0.056	0.035	1.04E-02	74%	9.90E-04	4.95E-04	0.3335	0.20723	6.20E-02	64%	5.90E-03	2.95E-03	0.0121	0.0075	2.24E-03	64%	2.13E-04	1.07E-04	0.0111	0.0069	2.06E-03	64%	1.96E-04	9.81E-05
				9	2150	0.062	0.038	1.41E-02	100%	1.34E-03	6.72E-04	0.4226	0.26258	9.68E-02	100%	9.18E-03	4.59E-03	0.0154	0.0096	3.52E-03	100%	3.35E-04	1.67E-04	0.0142	0.0088	3.24E-03	100%	3.08E-04	1.54E-04
				10	1800	0.067	0.042	1.29E-02	91%	1.23E-03	6.13E-04	0.4610	0.28643	8.81E-02	91%	8.39E-03	4.19E-03	0.0162	0.0100	3.09E-03	88%	2.94E-04	1.47E-04	0.0148	0.0092	2.83E-03	87%	2.69E-04	1.35E-04
				11	1600	0.067	0.041	1.13E-02	80%	1.08E-03	5.39E-04	0.3989	0.24786	6.77E-02	70%	6.45E-03	3.23E-03	0.0141	0.0087	2.39E-03	68%	2.28E-04	1.14E-04	0.0129	0.0080	2.20E-03	68%	2.09E-04	1.05E-04
				12	1600	0.072	0.045	1.23E-02	87%	1.17E-03	5.84E-04	0.4217	0.26202	7.16E-02	74%	6.82E-03	3.41E-03	0.0149	0.0092	2.52E-03	72%	2.40E-04	1.20E-04	0.0136	0.0085	2.32E-03	72%	2.21E-04	1.10E-04
				13	1350	0.077	0.048	1.10E-02	78%	1.05E-03	5.23E-04	0.4329	0.26898	6.20E-02	64%	5.91E-03	2.95E-03	0.0156	0.0097	2.23E-03	64%	2.13E-04	1.06E-04	0.0143	0.0089	2.05E-03	63%	1.95E-04	9.76E-05
				14	1200	0.071	0.044	9.03E-03	64%	8.60E-04	4.30E-04	0.4313	0.26802	5.49E-02	57%	5.23E-03	2.62E-03	0.0156	0.0097	1.98E-03	56%	1.89E-04	9.44E-05	0.0143	0.0089	1.82E-03	56%	1.73E-04	8.67E-05
				15	1450	0.065	0.041	1.01E-02	71%	9.57E-04	4.79E-04	0.4090	0.25413	6.30E-02	65%	6.00E-03	3.00E-03	0.0141	0.0088	2.17E-03	62%	2.07E-04	1.03E-04	0.0130	0.0081	2.00E-03	62%	1.90E-04	9.50E-05
				16	1550	0.066	0.041	1.08E-02	77%	1.03E-03	5.15E-04	0.4080	0.25352	6.71E-02	70%	6.39E-03	3.20E-03	0.0140	0.0087	2.31E-03	66%	2.20E-04	1.10E-04	0.0129	0.0080	2.12E-03	66%	2.02E-04	1.01E-04
				17	1450	0.062	0.038	9.54E-03	68%	9.08E-04	4.54E-04	0.4154	0.25810	6.35E-02	66%	6.05E-03	3.04E-03	0.0146	0.0091	2.24E-03	64%	2.14E-04	1.07E-04	0.0134	0.0083	2.06E-03	64%	1.96E-04	9.82E-05
				18	2200	0.056	0.035	1.31E-02	93%	1.24E-03	6.22E-04	0.3747	0.23281	8.75E-02	91%	8.33E-03	4.17E-03	0.0124	0.0077	2.90E-03	83%	2.76E-04	1.38E-04	0.0114	0.0071	2.67E-03	83%	2.54E-04	1.27E-04
				19	2200	0.050	0.031	1.17E-02	83%	1.11E-03	5.57E-04	0.3564	0.22145	8.32E-02	86%	7.93E-03	3.96E-03	0.0117	0.0073	2.73E-03	78%	2.60E-04	1.30E-04	0.0107	0.0067	2.51E-03	78%	2.39E-04	1.19E-04
				20	1600	0.043	0.027	7.37E-03	52%	7.02E-04	3.51E-04	0.3599	0.22362	6.11E-02	63%	5.82E-03	2.91E-03	0.0120	0.0074	2.03E-03	58%	1.94E-04	9.69E-05	0.0110	0.0068	1.87E-03	58%	1.78E-04	8.91E-05
				21	1600	0.045	0.028	7.68E-03	54%	7.31E-04	3.66E-04	0.3472	0.21575	5.90E-02	61%	5.62E-03	2.81E-03	0.0122	0.0076	2.07E-03	59%	1.98E-04	9.88E-05	0.0112	0.0070	1.91E-03	59%	1.82E-04	9.08E-05
				22	1450	0.045	0.028	6.86E-03	49%	6.53E-04	3.26E-04	0.3575	0.22212	5.50E-02	57%	5.24E-03	2.62E-03	0.0119	0.0074	1.83E-03	52%	1.74E-04	8.70E-05	0.0109	0.0068	1.68E-03	52%	1.60E-04	8.00E-05
				23	1350	0.046	0.029	6.64E-03	47%	6.32E-04	3.16E-04	0.3835	0.23827	5.50E-02	57%	5.23E-03	2.62E-03	0.0128	0.0079	1.83E-03	52%	1.74E-04	8.72E-05	0.0118	0.0073	1.68E-03	52%	1.60E-04	8.02E-05
				24	1200	0.057	0.035	6.04E-03	43%	5.75E-04	2.88E-04	0.4733	0.29410	5.02E-02	52%	4.78E-03	2.39E-03	0.0043	0.0089	1.52E-03	43%	1.45E-04	7.25E-05	0.0132	0.0082	1.40E-03	43%	1.33E-04	6.67E-05
L001	D2 Landscape Deck (NB)	D2LNB	0.125	1	350	0.068	0.043	5.17E-04	21%	6.89E-05	3.45E-05	0.5430	0.3374	4.10E-03	39%	5.47E-04	2.73E-04	0.0118	0.0074	8.94E-05	28%	1.19E-05	5.96E-06	0.011	0.007	8.15E-05	28%	1.09E-05	5.44E-06
				2	300	0.077	0.048	4.90E-04	20%	6.62E-05	3.31E-05	0.5149	0.3199	3.93E-03	31%	4.44E-04	2.22E-04	0.0108	0.0067	6.90E-05	22%	9.32E-06	4.66E-06	0.010	0.006	6.40E-05	22%	8.63E-06	4.26E-06
				3	300	0.057	0.036	3.72E-04	15%	4.96E-05	2.48E-05	0.4734	0.2941	3.06E-03	29%	4.09E-04	2.04E-04	0.0101	0.0063	6.56E-05	21%	8.75E-06	4.38E-06	0.009	0.006	6.01E-05	21%	8.01E-06	4.01E-06
				4	300	0.071	0.044	4.58E-04	18%	6.11E-05	3.05E-05	0.5076	0.3154	3.29E-03	31%	4.38E-04	2.19E-04	0.0099	0.0062	6.44E-05	20%	8.58E-06	4.29E-06	0.009	0.006	5.91E-05	20%	7.88E-06	3.94E-06
				5	300	0.073	0.045	4.71E-04	19%	6.28E-05	3.14E-05	0.5072	0.3152	3.28E-03	31%	4.38E-04	2.19E-04	0.0103	0.0065	6.81E-05	21%	9.07E-06	4.54E-06	0.010	0.006	6.23E-05	21%	8.31E-06	4.16E-06
				6	300	0.087	0.054	5.66E-04	22%	7.54E-05	3.77E-05	0.5250	0.3262	3.40E-03	32%	4.53E-04	2.27E-04	0.0116	0.0072	7.48E-05	24%	9.97E-06	4.99E-06	0.011	0.007	6.84E-05	23%	9.12E-06	4.56E-06
				7	400	0.123	0.076	1.06E-03	42%	1.41E-04	7.05E-05	0.7002	0.4351	6.04E-03	57%	8.06E-04	4.03E-04	0.0149	0.0093	1.29E-04	40%	1.72E-05	8.58E-06	0.014	0.008	1.17E-04	40%	1.56E-05	7.81E-06
				8	750	0.117	0.073	2.89E-03	75%	2.32E-04	1.26E-04	0.5750	0.3573	9.30E-03	88%	1.24E-03	6.20E-04	0.0144	0.0089	2.33E-04	72%	3.10E-05	1.55E-05	0.013	0.008	2.14E-04	73%	2.85E-05	1.42E-05
				9	900	0.107	0.066	2.07E-03	82%	2.70E-04	1.38E-04	0.5224	0.3246	1.01E-02	96%	1.35E-03	6.76E-04	0.0147	0.0091	2.86E-04	90%	3.81E-05	1.90E-05	0.014	0.008	2.62E-04	90%	3.50E-05	1.75E-05
				10	600	0.178	0.111	2.30E-03	92%	3.07E-04	1.54E-04	0.7237	0.4497	9.37E-03	88%	1.25E-03	6.25E-04	0.0176	0.0109	2.28E-04	72%	3.04E-05	1.52E-05	0.016	0.010	2.08E-04	72%	2.78E-05	1.39E-05
				11	550	0.200	0.125	2.38E-03	95%	3.17E-04	1.59E-04	0.7907	0.4913	9.38E-03	89%	1.25E-03	6.25E-04	0.0183	0.0114	2.18E-04	68%	2.90E-05	1.45E-05	0.017	0.010	1.99E-04	68%	2.65E-05	1.33E-05
				12	550	0.190	0.118	2.25E-03	90%	3.01E-04	1.50E-04	0.7515	0.4669	8.92E-03	84%	1.19E-03	5.94E-04	0.0175	0.0109	2.08E-04	65%	2.77E-05	1.39E-05	0.016	0.010	1.90E-04	65%	2.53E-05	1.27E-05
				13	650	0.153	0.095	2.14E-03	85%	2.86E-04	1.43E-04	0.7054	0.4383	9.85E-03	93%	1.32E-03	6.59E-04	0.0158	0.0098	2.21E-04	69%	2.95E-05	1.47E-05	0.014	0.009	2.02E-04	69%	2.69E-05	1.35E-05
				14	600	0.168	0.104	2.17E-03	86%	2.90E-04	1.45E-04	0.7734	0.4532	9.44E-03	89%	1.26E-03	6.29E-04	0.0167	0.0104	2.16E-04	68%	2.89E-05	1.44E-05	0.015	0.009	1.98E-04	68%	2.64E-05	1.32E-05
				15	650	0.179	0.111	2.52E-03	100%	3.35E-04	1.68E-04	0.7569	0.4666	1.03E-02	99%	1.40E-03	7.02E-04	0.0175	0.0109	2.45E-04	77%	3.27E-05	1.64E-05	0.016	0.010	2.24E-04	77%	2.99E-05	1.49E-05
				16	700	0.167	0.103	2.51E-03	100%	3.35E-04	1.68E-04	0.7016	0.4360	1.06E-02	100%	1.41E-03	7.06E-04	0.0164	0.0102	2.48E-04	78%	3.30E-05	1.65E-05	0.015	0.009	2.27E-04	78%	3.02E-05	1.51E-05
				17	750	0.133	0.082	2.15E-03	85%	2.86E-04	1.43E-04	0.6171	0.3835	9.99E-03	94%	1.33E-03	6.66E-04	0.0162	0.0100	2.62E-04	82%	3.49E-05	1.74E-05	0.015	0.009	2.40E-04	82%	3.19E-05	1.60E-05
				18	850	0.102	0.063	1.87E-03	74%	2.49E-04	1.25E-04	0.5100	0.3169	9.35E-03	88%	1.25E-03	6.24E-04	0.0159	0.0099	2.92E-04	92%	3.89E-05	1.94E-05	0.015	0.009	2.67E-04	92%	3.56E-05	1.78E-05
				19	900	0.119	0.074	2.31E-03	92%	3.08E-04	1.54E-04	0.5439	0.3379	1.06E-02	100%	1.41E-03	7.04E-04	0.0164	0.0102	3.18E-04	100%	4.24E-05	2.12E-05	0.015	0.009	2.91E-04	100%	3.88E-05	1.94E-05
				20	700	0.071	0.044	1.08E-03	43%	1.43E-04	7.17E-05	0.4855	0.3017	7.23E-03	69%	9.78E-04	4.89E-04	0.0152	0.0094	2.29E-04	72%	3.05E-05	1.53E-05	0.014	0.009	2.09E-04	72%	2.78E-05	1.39E-05
				21	600	0.056	0.034	7.18E-04	29%	9.58E-05	4.79E-05	0.4304	0.2798	5.83E-03	55%	7.77E-04	3.89E-04	0.0135	0.0084	1.74E-04	55%	2.33E-05	1.16E-05	0.012	0.008	1.66E-04	55%	2.13E-05	1.06E-05
				22	550	0.059	0.037	6.98E-04	28%	9.31E-05	4.65E-05	0.4497	0.2794	5.34E-03	50%	7.12E-04	3.56E-04	0.0128	0.0080	1.52E-04	48%	7.03E-05	1.02E-05	0.012	0.007	1.39E-04	48%	1.86E-05	9.29E-06
				23	550	0.062	0.039	7.37E-04	29%	9.82E-05	4.91E-05	0.4682	0.2909	5.56E-03	52%	7.41E-04	3.70E-04	0.0131	0.0081	1.56E-04	49%	2.07E-05	1.04E-05	0.012	0.007	1.42E-04	49%	1.90E-05	9.48E-06
				24	450	0.064	0.040	6.26E-04	25%	8.35E-05	4.17E-05	0.5099	0.3169	4.95E-03	47%	6.60E-04	3.30E-04	0.0116	0.0072	1.13E-04	35%	1.50E-05	7.51E-06	0.011	0.007	1.03E-04	35%	1.37E-05	6.87E-06
L002	D2 Landscape Deck (SB)	D2MSB	0.125	1	300	0.072	0.045	4.68E-04	23%	6.24E-05	3.12E-05	0.5589	0.3473	3.62E-03	37%	4.82E-04	2.41E-04	0.0119	0.0074	7.68E-05	28%	1.02E-05	5.12E-06	0.011	0.007	7.02E-05	28%	9.35E-06	4.68E-06
				2	250	0.064	0.040	3.45E-04	17%	4.61E-05	2.30E-05	0.4890	0.3038	2.64E-03	27%	3.52E-04	1.76E-04	0.0102	0.0063	5.48E-05	20%	7.30E-06	3.65E-06	0.009	0.006	5.01E-05	20%	6.68E-06	3.34E-06
				3	250	0.063	0.039	3.41E-04	17%	4.55E-05	2.28E-05	0.4854	0.3016	2.62E-03	27%	3.49E-04	1.75E-04	0.0113	0.0070	6.09E-05	22%	8.12E-06	4.06E-06	0.010	0.006	5.56E-05	22%	7.41E-06	3.71E-06
				4	250	0.073	0.045	3.92E-04	19%	5.22E-05	2.61E-05	0.5081	0.3157	2.74E-03	28%	3.65E-04	1.83E-04	0.0099	0.0062	5.36E-05	20%	7.15E-06	3.57E-06	0.009	0.006	4.92E-05	20%	6.56E-06	3.28E-06
				5	250	0.074	0.046	3.98E-04	20%	5.31E-05	2.65E-05	0.5055	0.3141	2.73E-03	28%	3.64E-04	1.82E-04	0.0103	0.0064	5.57E-05	20%	7.42E-06	3.71E-06	0.009	0.006	5.12E-05	20%	6.80E-06	3.40E-06
				6	250	0.073	0.045	3.92E-04	19%	5.22E-05	2.61E-05	0.4957	0.3080	2.67E-03	27%	3.57E-04	1.78E-04	0.0112	0.0069	6.03E-05	22%	8.04E-06	4.02E-06	0.010	0.006	5.51E-05	22%	7.35E-06	3.67E-06
				7	350	0.131	0.081	9.89E-04	49%	1.32E-04	6.60E-05	0.7268	0.4516	5.49E-03	56%	7.32E-04	3.66E-04	0.0154	0.0096	1.16E-04	42%	1.55E-05	7.75E-06	0.014	0.009	1.06E-04	42%	1.41E-05	7.06E-06
				8	650	0.122	0.076	1.71E-03	84%	2.28E-04	1.14E-04	0.6089	0.3784	8.54E-03	87%	1.14E-03	5.69E-04	0.0149	0.0093	2.09E-04	76%	2.79E-05	1.40E-05	0.014	0.009	1.92E-04	76%	2.56E-05	1.28E-05
				9	850	0.106	0.066	1.94E-03	95%	2.58E-04	1.29E-04	0.5326	0.3309	9.77E-03	100%	1.30E-03	6.51E-04	0.0150	0.0093	2.74E-04	100%	3.66E-05	1.83E-05	0.014	0.009	2.52E-04	100%	3.36E-05	1.68E-05
				10	500	0.175	0.109	1.89E-03	93%	2.52E-04	1.26E-04	0.7318	0.4547	7.89E-03	81%	1.05E-03	5.26E-04	0.0181	0.0113	1.96E-04	71%	2.61E-05	1.30E-05	0.017	0.010	1.79E-04	71%	2.39E-05	1.19E-05
				11	450	0.192	0.119	1.86E-03	91%	2.48E-04	1.24E-04	0.8067	0.5013	7.83E-03	80%	1.04E-03	5.22E-04	0.0188	0.0117	1.83E-04	67%	2.43E-05	1.22E-05	0.017	0.011	1.67E-04	66%	2.22E-05	1.11E-05
				12	400	0.177	0.110	1.53E-03	75%	2.04E-04	1.02E-04	0.7462	0.4637	6.44E-03	66%	8.59E-04	4.29E-04	0.0180	0.0112	1.55E-04	56%	2.07E-05	1.03E-05	0.016	0.010	1.42E-04	56%	1.89E-05	9.44E-06
				13	500	0.154	0.096	1.66E-03	82%	2.22E-04	1.11E-04	0.7268	0.4516	7.84E-03	80%	1.05E-03	5.23E-04	0.0176	0.0109	1.90E-04	69%	2.53E-05	1.27E-05	0.016	0.010	1.73E-04	69%	2.31E-05	1.16E-05
				14	450	0.163	0.101	1.58E-03	78%	2.11E-04	1.06E-04	0.7320	0.4548	7.11E-03	73%	9.48E-04	4.74E-04	0.0180	0.0112	1.75E-04	64%	2.33E-05	1.16E-05	0.016	0.010	1.60E-04	63%	2.13E-05	1.06E-05
				15	500	0.189	0.117	2.04E-03	100%	2.72E-04	1.36E-04	0.7827	0.4863	8.44E-03	86%	1.13E-03	5.63E-04	0.0190	0.0118	2.05E-04	75%	2.73E-05	1.37E-05	0.017	0.011	1.87E-04	74%	2.49E-05	1.25E-05
				16	550	0.169	0.105	2.01E-03	98%	2.67E-04	1.34E-04	0.7233	0.4495	8.58E-03	88%	1.14E-03	5.72E-04	0.0179	0.0111	2.12E-04	77%	2.82E-05	1.41E-05	0.016	0.010	1.94E-04	77%	2.59E-05	1.29E-05
				17	600	0.138	0.085	1.78E-03	87%	2.37E-04	1.19E-04	0.6286	0.3906	8.14E-03	83%	1.09E-03	5.43E-04	0.0178	0.0111	2.31E-04	84%	3.08E-05	1.54E-05	0.016	0.010	2.11E-04	84%	2.82E-05	1.41E-05
				18	650	0.108	0.067	1.52E-03	74%	2.02E-04	1.01E-04	0.5495	0.3414	7.71E-03	79%	1.03E-03	5.14E-04	0.0170	0.0106	2.38E-04	87%	3.17E-05	1.59E-05	0.016	0.010	2.18E-04	88%	2.90E-05	1.45E-05
				19	650	0.112	0.070	1.58E-03	77%	2.10E-04	1.05E-04	0.5452	0.3388	7.65E-03	78%	1.02E-03	5.10E-04	0.0173	0.0107	2.42E-04	88%	3.23E-05	1.61E-05	0.016	0.010	2.21E-04	88%	2.95E-05	1.48E-05
				20	550	0.070	0.044	8.35E-04	41%	1.11E-04	5.57E-05	0.4930	0.3064	5.85E-03	60%	7.80E-04	3.90E-04	0.0161	0.0100	1.91E-04	70%	2.54E-05	1.27E-05	0.015	0.009	1.74E-04	69%	2.32E-05	1.16E-05
				21	500	0.065	0.040	6.98E-04	34%	9.30E-05	4.65E-05	0.4867	0.3024	5.25E-03	54%	7.00E-04	3.50E-04	0.0145	0.0090	1.58E-04	57%	2.08E-05	1.04E-05	0.013	0.008	1.63E-04	57%	1.90E-05	9.51E-06
				22	450	0.053	0.033	5.15E-04	25%	6.87E-05	3.43E-05	0.4351	0.2703	4.22E-03	43%	5.63E-04	2.82E-04	0.0136	0.0084	1.32E-04	48%	1.76E-05	8.79E-06	0.012	0.008	1.21E-04	48%	1.61E-05	8.04E-06
				23	450	0.061	0.038	5.95E-04	29%	7.93E-05	3.96E-05	0.4649	0.2889	4.51E-03	46%	6.02E-04	3.01E-04	0.0136	0.0085	1.32E-04	48%	1.76E-05	8.81E-06	0.012	0.008	1.21E-04	48%	1.61E-05	8.06E-06
				24	350	0.069	0.043	5.24E-04	26%	6.98E-05	3.49E-05	0.5142	0.3195	3.88E-03	40%	5.18E-04	2.59E-04	0.0130	0.0081	9.79E-05	36%	1.31E-05	6.53E-06	0.012	0.007	8.95E-05	36%	1.19E-05	5.97E-06
L003a	D2 Landscape Deck (NB)	D2MNB	0.037	1	350	0.080	0.050	1.81E-04	21%	2.41E-05	1.21E-05	0.5383	0.3345	1.22E-03	36%	1.62E-04	8.11E-05	0.0137	0.0085	3.09E-05	26%	4.12E-06	2.06E-06	0.012	0.008	2.82E-05	26%	3.76E-06	1.88E-06
				2	300	0.082	0.051	1.59E-04	19%	2.12E-05	1.06E-05	0.4987	0.3098	9.66E-04	29%	1.29E-04	6.44E-05	0.0119	0.0074	2.30E-05	20%	3.06E-06	1.53E-06	0.011	0.007	2.10E-05	20%	2.81E-06	1.40E-06
				3	300	0.069	0.043	1.33E-04	16%	1.78E-05	8.88E-06	0.4744	0.2948	9.19E-04	27%	1.22E-04	6.12E-05	0.0130	0.0081	2.51E-05	21%	3.35E-06	1.68E-06	0.012	0.007	2.29E-05	21%	3.06E-06	1.53E-06
				4	300	0.082	0.051	1.58E-04	19%	2.11E-05	1.06E-05	0.5002	0.3108	9.89E-04	29%	1.29E-04	6.46E-05	0.0114	0.0071	2.20E-05	19%	2.93E-06	1.47E-06	0.010	0.006	2.02E-05	19%	2.69E-06	1.35E-06
				5	250	0.081	0.051	1.31E-04	15%	1.75E-05	8.75E-06	0.4991	0.3101	8.05E-04	24%	1.07E-04	5.37E-05	0.0117	0.0073	1.85E-05	16%	2.52E-06	1.26E-06	0.011	0.007	1.73E-05	16%	2.31E-06	1.15E-06
				6	300	0.093	0.058	1.79E-04	21%	2.39E-05	1.20E-05	0.5104	0.3171	9.88E-04	29%	1.32E-04	6.59E-05	0.0129	0.0080	2.51E-05	21%	3.34E-06	1.67E-06	0.012	0.007	2.29E-05	21%	3.05E-06	1.53E-06
				7	400	0.142	0.088	3.66E-04	43%	4.88E-05	2.44E-05	0.7252	0.4506	1.87E-03	56%	2.50E-04	1.25E-04	0.0178	0.0111	4.60E-05	39%	6.13E-06	3.07E-06	0.016	0.010	4.19E-05	39%	5.58E-06	2.79E-06
				8	800	0.132	0.082	6.80E-04	80%	9.06E-05	4.53E-05	0.5798	0.3603	2.99E-03	89%	3.99E-04	2.00E-04	0.0166	0.0103	8.56E-05	73%	1.14E-05	5.70E-06	0.015	0.009	7.85E-05	73%	1.05E-05	5.23E-06
				9

L004b	DZ Landscape Deck (WSB)	DZWSB	0.037	1	250	0.105	0.065	1.69E-04	22%	2.26E-05	1.13E-05	0.5533	0.3438	8.93E-04	32%	1.19E-04	5.95E-05	0.0186	0.0116	3.01E-05	26%	4.01E-06	2.01E-06	0.017	0.011	2.74E-05	27%	3.66E-06	1.83E-06
				2	200	0.100	0.062	1.29E-04	17%	1.72E-05	8.61E-06	0.4728	0.2938	6.10E-04	22%	8.14E-05	4.07E-05	0.0159	0.0099	2.05E-05	18%	2.73E-06	1.37E-06	0.015	0.009	1.87E-05	18%	2.50E-06	1.25E-06
				3	200	0.093	0.058	1.20E-04	15%	1.60E-05	7.99E-06	0.4630	0.2877	5.98E-04	22%	7.97E-05	3.99E-05	0.0177	0.0110	2.29E-05	20%	3.05E-06	1.52E-06	0.016	0.010	2.08E-05	20%	2.78E-06	1.39E-06
				4	200	0.118	0.073	1.52E-04	20%	2.03E-05	1.01E-05	0.5053	0.3140	6.52E-04	24%	8.70E-05	4.35E-05	0.0155	0.0096	2.00E-05	18%	2.66E-06	1.33E-06	0.014	0.009	1.83E-05	18%	2.44E-06	1.22E-06
				5	200	0.114	0.071	1.47E-04	19%	1.97E-05	9.83E-06	0.5023	0.3121	6.49E-04	24%	8.65E-05	4.32E-05	0.0156	0.0097	2.02E-05	18%	2.69E-06	1.34E-06	0.014	0.009	1.85E-05	18%	2.46E-06	1.23E-06
				6	250	0.127	0.079	2.05E-04	26%	2.73E-05	1.37E-05	0.5288	0.3286	8.53E-04	31%	1.14E-04	5.69E-05	0.0181	0.0112	2.92E-05	26%	3.89E-06	1.94E-06	0.017	0.010	2.66E-05	26%	3.55E-06	1.78E-06
				7	300	0.203	0.126	3.93E-04	51%	5.24E-05	2.62E-05	0.7904	0.4911	1.53E-03	56%	2.04E-04	1.02E-04	0.0257	0.0159	4.97E-05	44%	6.63E-06	3.31E-06	0.023	0.014	4.52E-05	44%	6.02E-06	3.01E-06
				8	650	0.175	0.109	7.35E-04	94%	9.80E-05	4.90E-05	0.6409	0.3982	2.69E-03	98%	3.59E-04	1.79E-04	0.0218	0.0135	9.13E-05	80%	1.22E-05	6.09E-06	0.020	0.012	8.37E-05	81%	1.12E-05	5.58E-06
				9	850	0.128	0.080	7.02E-04	90%	9.36E-05	4.68E-05	0.4932	0.3065	2.71E-03	98%	3.61E-04	1.80E-04	0.0188	0.0117	1.03E-04	91%	1.38E-05	6.89E-06	0.017	0.011	9.50E-05	92%	1.27E-05	6.33E-06
				10	500	0.239	0.149	7.71E-04	99%	1.03E-04	5.14E-05	0.7826	0.4863	2.53E-03	92%	3.37E-04	1.68E-04	0.0297	0.0160	8.25E-05	73%	1.10E-05	5.52E-06	0.023	0.015	7.57E-05	73%	1.01E-05	5.05E-06
				11	450	0.240	0.149	6.96E-04	89%	9.29E-05	4.64E-05	0.8321	0.5171	2.42E-03	88%	3.22E-04	1.61E-04	0.0282	0.0175	8.25E-05	72%	1.09E-05	5.47E-06	0.026	0.016	7.45E-05	72%	9.94E-06	4.97E-06
				12	450	0.234	0.145	6.79E-04	87%	9.08E-05	4.53E-05	0.7958	0.4943	2.31E-03	84%	3.08E-04	1.54E-04	0.0252	0.0156	7.31E-05	64%	9.75E-06	4.88E-06	0.023	0.014	6.67E-05	64%	8.90E-06	4.45E-06
				13	500	0.192	0.120	6.21E-04	80%	8.28E-05	4.14E-05	0.7774	0.4520	2.35E-03	85%	3.13E-04	1.57E-04	0.0246	0.0153	7.95E-05	70%	1.06E-05	5.30E-06	0.022	0.014	7.24E-05	70%	9.66E-06	4.83E-06
				14	450	0.222	0.138	6.45E-04	83%	8.59E-05	4.30E-05	0.7756	0.4819	2.25E-03	82%	3.00E-04	1.50E-04	0.0252	0.0157	7.32E-05	64%	9.76E-06	4.88E-06	0.023	0.014	6.68E-05	65%	8.91E-06	4.45E-06
				15	500	0.241	0.150	7.78E-04	100%	1.04E-04	5.19E-05	0.8065	0.5011	2.60E-03	95%	3.47E-04	1.74E-04	0.0283	0.0163	8.67E-05	75%	1.13E-05	5.65E-06	0.024	0.015	7.73E-05	75%	1.03E-05	5.15E-06
				16	550	0.217	0.135	7.69E-04	99%	1.03E-04	5.13E-05	0.7536	0.4683	2.68E-03	97%	3.57E-04	1.78E-04	0.0245	0.0152	8.69E-05	77%	1.16E-05	5.82E-06	0.022	0.014	7.94E-05	77%	1.06E-05	5.30E-06
				17	650	0.175	0.109	7.35E-04	94%	9.80E-05	4.90E-05	0.6560	0.4076	2.75E-03	100%	3.67E-04	1.84E-04	0.0237	0.0147	9.55E-05	88%	1.33E-05	6.63E-06	0.022	0.013	9.08E-05	88%	1.21E-05	6.05E-06
				18	700	0.128	0.080	5.79E-04	74%	7.72E-05	3.86E-05	0.5302	0.3295	2.40E-03	87%	3.19E-04	1.60E-04	0.0217	0.0135	9.82E-05	89%	1.31E-05	6.55E-06	0.020	0.012	8.95E-05	87%	1.19E-05	5.97E-06
				19	700	0.157	0.098	7.12E-04	91%	9.49E-05	4.74E-05	0.5904	0.3668	2.67E-03	97%	3.56E-04	1.78E-04	0.0251	0.0156	1.14E-04	100%	1.52E-05	7.58E-06	0.023	0.014	1.03E-04	100%	1.38E-05	6.90E-06
				20	800	0.078	0.049	3.03E-04	39%	4.04E-05	2.02E-05	0.4763	0.2960	1.84E-03	67%	2.46E-04	1.23E-04	0.0215	0.0134	8.34E-05	73%	1.11E-05	5.56E-06	0.020	0.012	7.57E-05	73%	1.01E-05	5.04E-06
				21	550	0.069	0.043	2.44E-04	31%	3.26E-05	1.63E-05	0.4365	0.2713	1.55E-03	56%	2.07E-04	1.04E-04	0.0182	0.0113	6.48E-05	57%	8.67E-06	4.33E-06	0.017	0.010	5.90E-05	57%	7.86E-06	3.93E-06
				22	450	0.065	0.040	1.89E-04	24%	2.52E-05	1.26E-05	0.4130	0.2566	1.20E-03	44%	1.60E-04	8.00E-05	0.0175	0.0109	5.09E-05	45%	6.78E-06	3.39E-06	0.016	0.010	4.64E-05	45%	6.19E-06	3.09E-06
				23	450	0.071	0.044	2.09E-04	26%	2.74E-05	1.37E-05	0.4352	0.2704	1.26E-03	46%	1.68E-04	8.43E-05	0.0180	0.0112	5.22E-05	46%	6.95E-06	3.48E-06	0.016	0.010	4.76E-05	46%	6.34E-06	3.17E-06
				24	350	0.087	0.054	1.96E-04	25%	2.61E-05	1.30E-05	0.4879	0.3032	1.10E-03	40%	1.47E-04	7.35E-05	0.0177	0.0110	3.95E-05	35%	5.32E-06	2.66E-06	0.016	0.010	3.64E-05	35%	4.85E-06	2.43E-06
L158	CKR Tunnel Portal Emission (EB)	CKRTEEB	1.750	1	900	0.041	0.026	5.63E-03	24%	1.25E-03	6.26E-04	0.3045	0.1892	4.14E-02	24%	9.20E-03	4.60E-03	0.0130	0.0080	1.76E-03	25%	3.91E-04	1.96E-04	0.0126	0.008	1.71E-03	26%	3.81E-04	1.91E-04
				2	950	0.042	0.026	5.97E-03	25%	1.33E-03	6.64E-04	0.3063	0.1903	4.39E-02	25%	9.77E-03	4.88E-03	0.0131	0.0082	1.88E-03	27%	4.18E-04	2.09E-04	0.0111	0.007	1.59E-03	25%	3.54E-04	1.77E-04
				3	500	0.041	0.025	3.03E-03	13%	6.84E-04	3.42E-04	0.3088	0.1919	2.33E-02	13%	5.18E-03	2.59E-03	0.0129	0.0080	9.75E-04	14%	2.17E-04	1.08E-04	0.0110	0.007	8.77E-04	13%	1.84E-04	9.19E-05
				4	500	0.040	0.025	3.04E-03	13%	6.76E-04	3.38E-04	0.3069	0.1907	2.32E-02	13%	5.15E-03	2.57E-03	0.0129	0.0080	9.72E-04	14%	2.16E-04	1.08E-04	0.0109	0.007	8.74E-04	13%	1.83E-04	9.16E-05
				5	500	0.040	0.025	3.02E-03	13%	6.71E-04	3.36E-04	0.3095	0.1923	2.34E-02	13%	5.19E-03	2.60E-03	0.0129	0.0080	9.71E-04	14%	2.16E-04	1.08E-04	0.0109	0.007	8.73E-04	13%	1.83E-04	9.14E-05
				6	950	0.042	0.026	5.99E-03	25%	1.33E-03	6.65E-04	0.3112	0.1934	4.47E-02	26%	9.92E-03	4.96E-03	0.0131	0.0082	1.88E-03	27%	4.19E-04	2.09E-04	0.0111	0.007	1.60E-03	25%	3.55E-04	1.77E-04
				7	1400	0.042	0.026	8.78E-03	37%	1.95E-03	9.76E-04	0.3116	0.1936	6.59E-02	38%	1.46E-02	7.32E-03	0.0122	0.0076	2.58E-03	37%	5.74E-04	2.87E-04	0.0112	0.007	2.37E-03	37%	5.28E-04	2.64E-04
				8	2350	0.042	0.026	1.48E-02	62%	3.28E-03	1.64E-03	0.3140	0.1951	1.11E-01	64%	2.48E-02	1.24E-02	0.0127	0.0079	4.51E-03	64%	1.00E-03	5.01E-04	0.0113	0.007	4.01E-03	62%	8.92E-04	4.46E-04
				9	2950	0.043	0.027	1.91E-02	80%	4.24E-03	2.12E-03	0.3292	0.2046	1.47E-01	84%	3.26E-02	1.63E-02	0.0125	0.0077	5.55E-03	79%	1.23E-03	6.17E-04	0.0113	0.007	5.01E-03	77%	1.11E-03	5.57E-04
				10	2800	0.044	0.027	1.86E-02	78%	4.13E-03	2.06E-03	0.3252	0.2021	1.38E-01	79%	3.06E-02	1.53E-02	0.0131	0.0081	5.54E-03	79%	1.23E-03	6.15E-04	0.0121	0.008	5.12E-03	79%	1.14E-03	5.69E-04
				11	2350	0.041	0.026	1.47E-02	62%	3.27E-03	1.63E-03	0.3117	0.1937	1.11E-01	64%	2.46E-02	1.23E-02	0.0126	0.0078	4.46E-03	63%	9.92E-04	4.96E-04	0.0118	0.007	4.20E-03	65%	9.33E-04	4.66E-04
				12	2300	0.041	0.026	1.44E-02	61%	3.20E-03	1.60E-03	0.3101	0.1927	1.08E-01	62%	2.39E-02	1.20E-02	0.0127	0.0079	4.40E-03	62%	9.78E-04	4.89E-04	0.0119	0.007	4.15E-03	64%	9.22E-04	4.61E-04
				13	2300	0.041	0.026	1.44E-02	60%	3.19E-03	1.60E-03	0.3094	0.1923	1.07E-01	62%	2.39E-02	1.19E-02	0.0126	0.0078	4.37E-03	62%	9.71E-04	4.85E-04	0.0118	0.007	4.12E-03	63%	9.15E-04	4.57E-04
				14	2300	0.042	0.026	1.44E-02	61%	3.21E-03	1.60E-03	0.3103	0.1928	1.08E-01	62%	2.39E-02	1.20E-02	0.0125	0.0078	4.35E-03	62%	9.67E-04	4.83E-04	0.0118	0.007	4.09E-03	62%	9.10E-04	4.55E-04
				15	2700	0.043	0.027	1.75E-02	74%	3.90E-03	1.95E-03	0.3147	0.1955	1.28E-01	74%	2.85E-02	1.43E-02	0.0132	0.0082	5.40E-03	77%	1.20E-03	6.00E-04	0.0123	0.008	5.00E-03	77%	1.11E-03	5.55E-04
				16	2700	0.043	0.026	1.74E-02	73%	3.86E-03	1.93E-03	0.3134	0.1948	1.28E-01	73%	2.84E-02	1.42E-02	0.0131	0.0081	5.34E-03	76%	1.19E-03	5.94E-04	0.0121	0.008	4.95E-03	76%	1.10E-03	5.50E-04
				17	2650	0.041	0.026	1.66E-02	70%	3.68E-03	1.84E-03	0.3106	0.1930	1.24E-01	71%	2.76E-02	1.38E-02	0.0127	0.0079	5.09E-03	72%	1.13E-03	5.65E-04	0.0118	0.007	4.70E-03	72%	1.05E-03	5.23E-04
				18	2650	0.042	0.026	1.67E-02	70%	3.72E-03	1.86E-03	0.3127	0.1943	1.25E-01	72%	2.78E-02	1.39E-02	0.0127	0.0079	5.08E-03	72%	1.13E-03	5.65E-04	0.0118	0.007	4.71E-03	73%	1.05E-03	5.23E-04
				19	3400	0.046	0.029	2.38E-02	100%	5.28E-03	2.64E-03	0.3390	0.2106	1.74E-01	100%	3.87E-02	1.93E-02	0.0137	0.0085	7.05E-03	100%	1.57E-03	7.83E-04	0.0126	0.008	6.49E-03	100%	1.44E-03	7.21E-04
				20	2200	0.041	0.025	1.35E-02	57%	3.01E-03	1.50E-03	0.3013	0.1873	1.00E-01	58%	2.23E-02	1.11E-02	0.0129	0.0080	4.27E-03	61%	9.49E-04	4.75E-04	0.0122	0.008	4.05E-03	62%	8.99E-04	4.50E-04
				21	1800	0.041	0.026	1.12E-02	47%	2.50E-03	1.25E-03	0.3023	0.1879	8.22E-02	47%	1.83E-02	9.13E-03	0.0128	0.0080	3.49E-03	49%	7.75E-04	3.87E-04	0.0116	0.007	3.15E-03	49%	7.01E-04	3.50E-04
				22	1800	0.041	0.026	1.13E-02	47%	2.50E-03	1.25E-03	0.3035	0.1886	8.25E-02	47%	1.83E-02	9.17E-03	0.0130	0.0081	3.52E-03	50%	7.83E-04	3.92E-04	0.0117	0.007	3.19E-03	49%	7.09E-04	3.55E-04
				23	1350	0.041	0.026	8.38E-03	35%	1.86E-03	9.31E-04	0.3039	0.1888	6.20E-02	36%	1.38E-02	6.88E-03	0.0129	0.0080	2.62E-03	37%	5.83E-04	2.91E-04	0.0119	0.007	2.42E-03	37%	5.40E-04	2.70E-04
				24	1350	0.041	0.025	8.28E-03	35%	1.84E-03	9.20E-04	0.3023	0.1878	6.16E-02	35%	1.37E-02	6.85E-03	0.0128	0.0080	2.62E-03	37%	5.81E-04	2.91E-04	0.0118	0.007	2.42E-03	37%	5.37E-04	2.68E-04
L159	CKR Landscape Deck (SWB)	CKRLOSWB	0.195	1	1300	0.025	0.016	1.09E-03	18%	2.43E-04	1.21E-04	0.1748	0.1086	7.65E-03	19%	1.70E-03	8.50E-04	0.0077	0.0048	3.38E-04	24%	7.50E-05	3.75E-05	0.007	0.004	3.12E-04	24%	6.92E-05	3.46E-05
				2	1300	0.025	0.015	1.09E-03	18%	2.42E-04	1.21E-04	0.1750	0.1087	7.66E-03	19%	1.70E-03	8.51E-04	0.0077	0.0048	3.38E-04	24%	7.47E-05	3.73E-05	0.007	0.004	3.10E-04	24%	6.89E-05	3.45E-05
				3	700	0.025	0.016	5.96E-04	10%	1.32E-04	6.62E-05	0.1783	0.1108	4.20E-03	11%	9.33E-04	4.67E-04	0.0078	0.0048	1.84E-04	13%	4.08E-05	2.04E-05	0.007	0.004	1.69E-04	13%	3.76E-05	1.88E-05
				4	700	0.025	0.016	5.96E-04	10%	1.33E-04	6.63E-05	0.1788	0.1111	4.21E-03	11%	9.36E-04	4.68E-04	0.0078	0.0048	1.83E-04	13%	4.08E-05	2.04E-05	0.007	0.004	1.69E-04	13%	3.76E-05	1.88E-05
				5	700	0.025	0.015	5.81E-04	10%	1.29E-04	6.46E-05	0.1780	0.1106	4.19E-03	11%	9.32E-04	4.66E-04	0.0076	0.0047	1.79E-04	13%	3.97E-05	1.98E-05	0.007	0.004	1.65E-04	13%	3.66E-05	1.83E-05
				6	1350	0.025	0.016	1.13E-03	19%	2.52E-04	1.26E-04	0.1775	0.1103	8.06E-03	20%	1.79E-03	8.96E-04	0.0076	0.0047	3.46E-04	24%	7.69E-05	3.84E-05	0.007	0.004	3.19E-04	24%	7.09E-05	3.55E-05
				7	2000	0.025	0.016	1.69E-03	28%	3.76E-04	1.88E-04	0.1782	0.1107	1.20E-02	30%	2.67E-03	1.33E-03	0.0077	0.0048	5.15E-04	36%	1.15E-04	5.73E-05	0.007	0.004	4.75E-04	36%	1.06E-04	5.28E-05
				8	3350	0.027	0.017	3.04E-03	50%	6.76E-04	3.38E-04	0.1938	0.1204	2.18E-02	55%	4.86E-03	2.43E-03	0.0078	0.0048	8.77E-04	62%	1.95E-04	9.75E-05	0.007	0.004	8.08E-04	61%	1.79E-04	8.97E-05
				9	4700	0.038	0.024	6.06E-03	100%	1.35E-03	6.74E-04	0.2489	0.1547	3.94E-02	100%	8.75E-03	4.38E-03	0.0090	0.0056	1.42E-03	100%	3.16E-04	1.58E-04	0.008	0.005	1.31E-03	100%	2.92E-04	1.46E-04
				10	3950	0.031	0.019	4.07E-03	67%	9.05E-04	4.52E-04	0.2101	0.1306	2.79E-02	71%	6.21E-03	3.10E-03	0.0082	0.0051	1.02E-03	78%	2.41E-04	1.21E-04	0.008	0.005	1.06E-03	76%	2.23E-04	1.11E-04
				11	3300	0.027	0.017	3.01E-03	50%	6.69E-04	3.34E-04	0.1930	0.1200	2.14E-02	54%	4.76E-03	2.38E-03	0.0078	0.0049	8.71E-04	61%	1.93E-04	9.67E-05	0.007	0.004	8.01E-04	61%	1.78E-04	8.90E-05
				12	3300	0.027	0.017	2.98E-03	49%	6.63E-04	3.31E-04	0.1921	0.1194	2.13E-02	54%	4.74E-03	2.37E-03	0.0078	0.0048	8.66E-04	61%	1.92E-04	9.62E-05	0.007	0.004	7.97E-04	61%	1.77E-04	8.85E-05
				13	3250	0.026	0.016	2.89E-03	48%	6.43E-04	3.21E-04	0.1893	0.1176	2.07E-02	53%	4.60E-03	2.30E-03	0.0077	0.0048	8.48E-04	60%	1.88E-04	9.42E-05	0.007	0.004	7.83E-04	60%	1.74E-04	8.70E-05
				14	3250	0.027	0.016	2.90E-03	48%	6.44E-04	3.22E-04	0.1901	0.1181	2.08E-02	53%	4.62E-03	2.31E-03	0.0078	0.0048	8.49E-04	60%	1.89E-04	9.44E-05	0.007	0.004	7.85E-04	60%	1.74E-04	8.72E-05
				15	3850	0.030	0.018	3.86E-03	64%	8.57E-04	4.28E-04	0.2034	0.1264	2.64E-02	67%	5.86E-03	2.93E-03	0.0082	0.0051	1.06E-03	74%	2.35E-04	1.17E-04	0.008	0.005	9.73E-04	74%	2.16E-04	1.08E-04
				16	3800	0.030	0.018	3.78E-03	62%	8.40E-04	4.20E-04	0.2030	0.1261	2.60E-02	66%	5.77E-03	2.88E-03	0.0081	0.0050	1.04E-03	73%	2.31E-04	1.15E-04	0.007	0.005	9.57E-04	73%	2.13E-04	1.06E-04
				17	3800	0.029	0.018	3.74E-03	62%	8.31E-04	4.16E-04	0.2028	0.1260	2.59E-02	66%	5.77E-03	2.88E-03	0.0081	0.0050	1.03E-03	72%	2.29E-04	1.15E-04	0.007	0.005	9.49E-04	72%	2.11E-04	1.05E-04
				18	3800	0.029	0.018	3.73E-03	62%	8.30E-04	4.15E-04	0.2028	0.1260	2.59E-02	66%	5.76E-03	2.88E-03	0.0081	0.0050	1.03E-03	72%	2.29E-04	1.14E-04	0.007	0.005	9.49E-04	72%	2.11E-04	1.05E-04
				19	4300	0.031	0.019	4.52E-03	75%	1.00E-03	5.02E-04	0.2164	0.1345	3.13E-02	80%	6.96E-03	3.48E-03	0.0081	0.0050	1.17E-03	82%	2.61E-04	1.30E-04	0.007	0.005	1.07E-03	82%	2.38E-04	1.19E-04
				20	3150	0.026	0.016	2.75E-03	45%	6.12E-04	3.06E-04	0.1846	0.1147	1.96E-02	50%	4.35E-03	2.18E-03	0.0078	0.0048	8.26E-04	58%	1.84E-04	9.18E-05	0.007	0.004	7.59E-04	58%	1.69E-04	8.43E-05
				21	2550	0.025	0.016	2.18E-03	36%	4.85E-04	2.43E-04	0.1770	0.1100	1.52E-02	39%	3.38E-03	1.69E-03	0.0078	0.0048	6.68E-04	47%	1.49E-04	7.43E-05	0.007	0.004	6.15E-04	47%	1.37E-04	6.84E-05
				22	2550	0.025	0.016	2.16E-03	36%	4.80E-04	2.40E-04	0.1768	0.1098	1.52E-02	39%	3.37E-03	1.69E-03	0.0077	0.0048	6.62E-04	46%	1.47E-04	7.35E-05	0.007	0.004	6.09E-04	46%	1.35E-04	6.77E-05
				23	1950	0.024	0.015	1.60E-03	26%	3.55E-04	1.78E-04	0.1730	0.1075	1.14E-02	29%	2.52E-03	1.26E-03	0.0076	0.0047	4.98E-04	35%	1.11E-04	5.53E-05	0.007	0.004	4.60E-04	35%	1.02E-04	5.11E-05
				24	1950	0.025	0.015	1.61E-03	27%	3.59E-04	1.79E-04	0.1738	0.1080	1.14E-02	29%	2.54E-03	1.27E-03	0.0077	0.0048	5.02E-04	35%	1.12E-04	5.58E-05	0.007	0.004	4.63E-04	35%	1.03E-04	5.15E-05
L158	CKR Landscape Deck (NEB)	CKRLDNEB	0.195	1	900	0.041	0.026	1.26E-03	24%	2.79E-04	1.40E-04	0.304	0.189	9.22E-03	24%	2.05E-03	1.02E-03	0.013	0.008	3.92E-04	25%	8.72E-05	4.36E-05	0.013	0.008	3.82E-04	26%	8.49E-05	4.25E-05
				2	950	0.042	0.026	1.33E-03	25%	2.96E-04	1.48E-04	0.306	0.190	9.79E-03	25%	2.18E-03	1.09E-03	0.013	0.008	4.20E-04	27%	9.32E-05	4.66E-05	0.011	0.007	3.55E-04	25%	7.90E-05	3.95E-05
				3	500	0.041	0.025	6.86E-04	13%	1.53E-04	7.63E-05	0.309	0.192	5.20E-03	13%	1.15E-03	5.77E-04	0.013	0.008	2.17E-04	14%	4.83E-05	2.41E-05	0.011	0.007	1.84E-04	13%	4.10E-05	2.05E-05
				4	500	0.040	0.025	6.78E-04	13%	1.51E-04	7.54E-05	0.307	0.191	5.16E-03	13%	1.15E-03	5.74E-04	0.013	0.008	2.17E-04	14%	4.81E-05	2.41E-05	0.011	0.007	1.84E-04	13%	4.08E-05	2.04E-05
				5	500	0.040	0.025	6.73E-04	13%	1.50E-04	7.48E-05	0.309	0.192	5.21E-03	13%	1.16E-03	5.79E-04	0.013	0.008	2.16E-04	14%	4.81E-05	2.40E-05	0.011	0.007	1.83E-04	13%	4.07E-05	2.04E-05
				6	950	0.042	0.026	1.33E-03	25%	2.96E-04	1.48E-04	0.311	0.193	9.95E-03	26%	2.21E-03	1.11E-03	0.013	0.008	4.20E-04	27%	9.33E-05	4.66E-05	0.011	0.007	3.56E-04	25%	7.91E-05	3.95E-05
				7	1400	0.042	0.026	1.96E-03	37%	4.35E-04	2.17E-04	0.312	0.194	1.47E-02	38%	3.26E-03	1.63E-03	0.012	0.008	5.78E-04	37%	1.28E-04	6.39E-05	0.011	0.007	5.29E-04	37%	1.18E-04	5.88E-05
				8	2350	0.042	0.026	3.29E-03	62%	7.31E-04	3.66E-04	0.314	0.195	2.48E-02	64%	5.52E-03	2.76E-03	0.013	0.008	1.01E-03	64%	2.23E-04	1.12E-04	0.011	0.007	8.94E-04	62%	1.99E-04	9.93E-05
				9	2950	0.043	0.027	4.25E-03	80%	9.45E-04	4.73E-04	0.329	0.205	3.27E-02	84%	7.26E-03	3.63E-03	0.012	0.008	1.24E-03	79%	2.75E-04	1.37E-04	0.011	0.007	1.12E-03	77%	2.48E-04	1.24E-04
				10	2800	0.044	0.027	4.14E-03	78%	9.20E-04	4.60E-04	0.325	0.202	3.06E-02	79%	6.81E-03	3.40E-03	0.013	0.008	1.23E-03	79%	2.74E-04	1.37E-04	0.012	0.008	1.14E-03	79%	2.53E-04	1.27E-04
				11	2350	0.041	0.026	3.28E-03	62%	7.29E-04	3.64E-04	0.312	0.194	2.47E-02	64%	5.48E-03	2.74E-03	0.013	0.008	9.95E-04	63%	2.21E-04	1.11E-04	0.012	0.007	9.

Calculation of Portal Emission - 3rd Quarter

						NO2						NO						RSP						FSP					
						Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 emission rate	Farest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 emission rate	Farest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 of the total emission rate	Farest 50m - 1/3 of the total emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 of the total emission rate	Farest 50m - 1/3 of the total emission rate
Road No.	Portal Description	Portal ID	Tunnel Length (km)	Hour	Total Vehicle (veh/hr)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)
1084 & 1085	Kai Tak Tunnel (WB)	KTTW	1.230	1	850	0.0429	0.02668	3.87E-03	29%	3.69E-04	1.84E-04	0.3827	0.23780	3.45E-02	32%	3.29E-03	1.64E-03	0.0125	0.0078	1.13E-03	32%	1.07E-04	5.37E-05	0.0115	0.0071	1.03E-03	32%	9.85E-05	4.91E-05
				2	700	0.0301	0.01869	2.24E-03	17%	2.13E-04	1.06E-04	0.3001	0.18649	2.23E-02	25%	2.12E-03	1.06E-03	0.0087	0.0042	5.00E-04	14%	4.76E-05	2.38E-05	0.0062	0.0038	4.59E-04	14%	4.37E-05	2.19E-05
				3	550	0.0382	0.02371	2.23E-03	17%	2.12E-04	1.06E-04	0.3549	0.22054	2.07E-02	23%	1.97E-03	9.87E-04	0.0074	0.0046	4.33E-04	12%	4.12E-05	2.06E-05	0.0068	0.0042	3.98E-04	12%	3.79E-05	1.89E-05
				4	500	0.0402	0.02499	2.13E-03	16%	2.03E-04	1.02E-04	0.3572	0.22196	1.90E-02	21%	1.81E-03	9.03E-04	0.0076	0.0047	4.03E-04	11%	3.83E-05	1.92E-05	0.0070	0.0043	3.70E-04	11%	3.53E-05	1.76E-05
				5	450	0.0494	0.03071	2.36E-03	18%	2.25E-04	1.12E-04	0.3839	0.23857	1.83E-02	20%	1.75E-03	8.73E-04	0.0084	0.0052	4.03E-04	11%	3.83E-05	1.92E-05	0.0077	0.0048	3.70E-04	11%	3.52E-05	1.76E-05
				6	500	0.0683	0.04243	3.62E-03	27%	3.45E-04	1.73E-04	0.4864	0.30221	2.58E-02	29%	2.46E-03	1.23E-03	0.0149	0.0092	7.88E-04	22%	7.51E-05	3.75E-05	0.0137	0.0085	7.25E-04	22%	6.90E-05	3.45E-05
				7	1000	0.0819	0.05092	8.70E-03	65%	8.28E-04	4.14E-04	0.4461	0.27720	4.74E-02	53%	4.51E-03	2.25E-03	0.0164	0.0102	1.75E-03	50%	1.66E-04	8.31E-05	0.0151	0.0094	1.61E-03	50%	1.53E-04	7.64E-05
				8	1750	0.0535	0.03322	9.93E-03	74%	9.46E-04	4.73E-04	0.3085	0.19171	5.73E-02	64%	5.46E-03	2.73E-03	0.0121	0.0075	2.24E-03	64%	2.13E-04	1.07E-04	0.0111	0.0069	2.06E-03	64%	1.96E-04	9.81E-05
				9	2150	0.0590	0.03667	1.35E-02	100%	1.28E-03	6.41E-04	0.3935	0.24451	8.98E-02	100%	8.55E-03	4.28E-03	0.0154	0.0096	3.52E-03	100%	3.35E-04	1.67E-04	0.0142	0.0088	3.24E-03	100%	3.08E-04	1.54E-04
				10	1800	0.0645	0.04010	1.23E-02	92%	1.17E-03	5.87E-04	0.4313	0.26801	8.24E-02	92%	7.85E-03	3.92E-03	0.0162	0.0100	3.09E-03	88%	2.94E-04	1.47E-04	0.0148	0.0092	2.83E-03	87%	2.69E-04	1.35E-04
				11	1600	0.0638	0.03964	1.08E-02	80%	1.03E-03	5.16E-04	0.3714	0.23076	6.31E-02	70%	6.01E-03	3.00E-03	0.0141	0.0087	2.39E-03	68%	2.28E-04	1.14E-04	0.0129	0.0080	2.20E-03	68%	2.09E-04	1.05E-04
				12	1600	0.0692	0.04303	1.18E-02	87%	1.12E-03	5.60E-04	0.3932	0.24432	6.68E-02	74%	6.36E-03	3.18E-03	0.0149	0.0092	2.52E-03	72%	2.40E-04	1.20E-04	0.0136	0.0085	2.32E-03	72%	2.21E-04	1.10E-04
				13	1350	0.0735	0.04568	1.05E-02	78%	1.00E-03	5.02E-04	0.4046	0.25140	5.80E-02	65%	5.52E-03	2.76E-03	0.0156	0.0097	2.23E-03	64%	2.13E-04	1.06E-04	0.0143	0.0089	2.05E-03	63%	1.95E-04	9.76E-05
				14	1200	0.0680	0.04224	8.66E-03	64%	8.25E-04	4.12E-04	0.4023	0.24999	5.12E-02	57%	4.88E-03	2.44E-03	0.0156	0.0097	1.98E-03	56%	1.89E-04	9.44E-05	0.0143	0.0089	1.82E-03	56%	1.73E-04	8.67E-05
				15	1450	0.0626	0.03891	9.64E-03	72%	9.18E-04	4.59E-04	0.3813	0.23695	5.87E-02	65%	5.59E-03	2.79E-03	0.0141	0.0088	2.17E-03	62%	2.07E-04	1.03E-04	0.0130	0.0081	2.00E-03	62%	1.90E-04	9.50E-05
				16	1550	0.0631	0.03921	1.04E-02	77%	9.89E-04	4.94E-04	0.3801	0.23621	6.25E-02	70%	5.96E-03	2.98E-03	0.0140	0.0087	2.31E-03	66%	2.20E-04	1.10E-04	0.0129	0.0080	2.12E-03	66%	2.02E-04	1.01E-04
				17	1450	0.0593	0.03686	9.13E-03	68%	8.70E-04	4.35E-04	0.3869	0.24042	5.96E-02	66%	5.67E-03	2.84E-03	0.0146	0.0091	2.24E-03	64%	2.14E-04	1.07E-04	0.0134	0.0083	2.06E-03	64%	1.96E-04	9.82E-05
				18	2200	0.0536	0.03330	1.25E-02	93%	1.19E-03	5.96E-04	0.3480	0.21621	8.13E-02	90%	7.74E-03	3.87E-03	0.0124	0.0077	2.90E-03	83%	2.76E-04	1.38E-04	0.0114	0.0071	2.67E-03	83%	2.54E-04	1.27E-04
				19	2200	0.0480	0.02983	1.12E-02	83%	1.07E-03	5.34E-04	0.3307	0.20552	7.72E-02	86%	7.36E-03	3.68E-03	0.0117	0.0073	2.73E-03	78%	2.60E-04	1.30E-04	0.0107	0.0067	2.51E-03	78%	2.39E-04	1.19E-04
				20	1600	0.0413	0.02569	7.02E-03	52%	6.69E-04	3.34E-04	0.3328	0.20676	5.65E-02	63%	5.38E-03	2.69E-03	0.0120	0.0074	2.03E-03	58%	1.94E-04	9.69E-05	0.0110	0.0068	1.87E-03	58%	1.78E-04	8.91E-05
				21	1600	0.0430	0.02675	7.31E-03	54%	6.96E-04	3.48E-04	0.3207	0.19930	5.45E-02	61%	5.19E-03	2.59E-03	0.0122	0.0076	2.07E-03	59%	1.98E-04	9.88E-05	0.0112	0.0070	1.91E-03	59%	1.82E-04	9.08E-05
				22	1450	0.0425	0.02642	6.54E-03	49%	6.23E-04	3.12E-04	0.3309	0.20564	5.09E-02	57%	4.85E-03	2.43E-03	0.0119	0.0074	1.83E-03	52%	1.74E-04	8.70E-05	0.0109	0.0068	1.68E-03	52%	1.60E-04	8.00E-05
				23	1350	0.0442	0.02747	6.34E-03	47%	6.03E-04	3.02E-04	0.3353	0.20275	5.09E-02	57%	4.85E-03	2.42E-03	0.0128	0.0079	1.83E-03	52%	1.74E-04	8.72E-05	0.0118	0.0073	1.68E-03	52%	1.60E-04	8.02E-05
				24	1200	0.0546	0.03394	5.85E-03	43%	5.57E-04	2.78E-04	0.4413	0.27424	4.68E-02	52%	4.46E-03	2.23E-03	0.0143	0.0089	1.52E-03	43%	1.45E-04	7.25E-05	0.0132	0.0082	1.40E-03	43%	1.33E-04	6.67E-05
1001	D2 Landscape Deck (NB)	D2LNB	0.125	1	350	0.0659	0.0409	4.97E-04	20%	6.63E-05	3.32E-05	0.5030	0.3125	3.80E-03	38%	5.06E-04	2.53E-04	0.0118	0.0074	8.94E-05	28%	1.19E-05	5.96E-06	0.011	0.007	8.16E-05	28%	1.09E-05	5.44E-06
				2	300	0.0739	0.0459	4.78E-04	20%	6.38E-05	3.19E-05	0.4700	0.2957	3.08E-03	31%	4.11E-04	2.05E-04	0.0108	0.0067	6.99E-05	22%	9.32E-06	4.66E-06	0.010	0.006	6.40E-05	22%	8.53E-06	4.26E-06
				3	300	0.0950	0.0342	3.56E-04	15%	4.75E-05	2.37E-05	0.4351	0.2704	2.82E-03	28%	3.75E-04	1.88E-04	0.0101	0.0063	6.56E-05	21%	8.75E-06	4.38E-06	0.009	0.006	6.01E-05	21%	8.01E-06	4.01E-06
				4	300	0.0680	0.0422	4.40E-04	18%	5.87E-05	2.93E-05	0.4685	0.2911	3.03E-03	30%	4.04E-04	2.02E-04	0.0099	0.0062	6.44E-05	20%	8.58E-06	4.29E-06	0.009	0.006	5.91E-05	20%	7.88E-06	3.94E-06
				5	300	0.0699	0.0434	4.52E-04	18%	6.03E-05	3.01E-05	0.4689	0.2914	3.04E-03	30%	4.05E-04	2.02E-04	0.0103	0.0065	6.81E-05	21%	9.07E-06	4.54E-06	0.010	0.006	6.23E-05	21%	8.31E-06	4.16E-06
				6	300	0.0845	0.0525	5.47E-04	22%	7.29E-05	3.64E-05	0.4885	0.3035	3.16E-03	32%	4.22E-04	2.11E-04	0.0116	0.0072	7.48E-05	24%	9.97E-06	4.99E-06	0.011	0.007	6.84E-05	23%	9.12E-06	4.56E-06
				7	400	0.1187	0.0737	1.02E-03	42%	1.37E-04	6.83E-05	0.6549	0.4069	5.65E-03	56%	7.54E-04	3.77E-04	0.0149	0.0093	1.29E-04	40%	1.72E-05	8.58E-06	0.014	0.008	1.17E-04	40%	1.56E-05	7.81E-06
				8	750	0.1131	0.0704	1.83E-03	75%	2.45E-04	1.22E-04	0.5399	0.3353	8.73E-03	87%	1.16E-03	5.82E-04	0.0144	0.0089	2.33E-04	73%	3.10E-05	1.55E-05	0.013	0.008	2.14E-04	73%	2.85E-05	1.42E-05
				9	900	0.1037	0.0645	2.01E-03	82%	2.69E-04	1.34E-04	0.4910	0.3051	9.53E-03	95%	1.27E-03	6.36E-04	0.0147	0.0091	2.86E-04	90%	3.81E-05	1.90E-05	0.014	0.008	2.62E-04	90%	3.50E-05	1.75E-05
				10	600	0.1732	0.1076	2.24E-03	92%	2.99E-04	1.49E-04	0.6867	0.4267	8.89E-03	89%	1.19E-03	5.93E-04	0.0176	0.0109	2.28E-04	72%	3.04E-05	1.52E-05	0.016	0.010	2.08E-04	72%	2.78E-05	1.39E-05
				11	550	0.1954	0.1214	2.32E-03	95%	3.09E-04	1.55E-04	0.7926	0.4677	8.93E-03	89%	1.19E-03	5.95E-04	0.0183	0.0114	2.18E-04	68%	2.90E-05	1.45E-05	0.017	0.010	1.99E-04	68%	2.65E-05	1.33E-05
				12	550	0.1852	0.1151	2.20E-03	90%	2.93E-04	1.47E-04	0.7146	0.4441	8.48E-03	85%	1.13E-03	5.65E-04	0.0175	0.0109	2.08E-04	65%	2.77E-05	1.39E-05	0.016	0.010	1.90E-04	65%	2.53E-05	1.27E-05
				13	650	0.1484	0.0922	2.68E-03	89%	2.78E-04	1.39E-04	0.6670	0.4144	9.35E-03	93%	1.25E-03	6.24E-04	0.0158	0.0098	2.21E-04	69%	2.95E-05	1.47E-05	0.014	0.009	2.02E-04	69%	2.69E-05	1.35E-05
				14	600	0.1635	0.1016	2.12E-03	86%	2.82E-04	1.41E-04	0.6905	0.4291	8.94E-03	89%	1.19E-03	5.96E-04	0.0167	0.0104	2.16E-04	68%	2.89E-05	1.44E-05	0.015	0.009	1.98E-04	68%	2.64E-05	1.32E-05
				15	650	0.1747	0.1086	2.45E-03	100%	3.27E-04	1.63E-04	0.7117	0.4429	1.03E-02	100%	1.33E-03	6.66E-04	0.0175	0.0109	2.45E-04	77%	3.27E-05	1.64E-05	0.016	0.010	2.24E-04	77%	2.99E-05	1.49E-05
				16	700	0.1620	0.1007	2.45E-03	100%	3.26E-04	1.63E-04	0.6644	0.4128	1.00E-02	100%	1.34E-03	6.69E-04	0.0164	0.0102	2.48E-04	78%	3.30E-05	1.65E-05	0.015	0.009	2.27E-04	78%	3.02E-05	1.51E-05
				17	750	0.1288	0.0800	2.08E-03	85%	2.78E-04	1.39E-04	0.5818	0.3615	9.41E-03	94%	1.26E-03	6.28E-04	0.0162	0.0100	2.62E-04	82%	3.49E-05	1.74E-05	0.015	0.009	2.40E-04	82%	3.19E-05	1.60E-05
				18	850	0.0989	0.0615	1.81E-03	74%	2.42E-04	1.21E-04	0.4792	0.2978	8.79E-03	88%	1.17E-03	5.86E-04	0.0159	0.0099	2.92E-04	92%	3.89E-05	1.94E-05	0.015	0.009	2.67E-04	92%	3.56E-05	1.78E-05
				19	900	0.1158	0.0720	2.25E-03	92%	3.00E-04	1.50E-04	0.5129	0.3187	9.96E-03	99%	1.33E-03	6.64E-04	0.0164	0.0102	3.18E-04	100%	4.24E-05	2.12E-05	0.015	0.009	2.91E-04	100%	3.88E-05	1.94E-05
				20	700	0.0688	0.0428	1.04E-03	42%	1.39E-04	6.93E-05	0.4523	0.2810	6.83E-03	68%	9.11E-04	4.55E-04	0.0152	0.0094	2.29E-04	77%	3.05E-05	1.53E-05	0.014	0.009	2.09E-04	77%	2.78E-05	1.39E-05
				21	600	0.0534	0.0332	6.92E-04	28%	9.22E-05	4.61E-05	0.4178	0.2596	5.41E-03	54%	7.21E-04	3.61E-04	0.0135	0.0084	1.74E-04	55%	2.33E-05	1.16E-05	0.012	0.008	1.66E-04	55%	2.13E-05	1.06E-05
				22	550	0.0567	0.0353	6.73E-04	27%	8.98E-05	4.49E-05	0.4168	0.2590	4.95E-03	49%	6.60E-04	3.30E-04	0.0128	0.0080	1.52E-04	48%	7.03E-05	1.02E-05	0.012	0.007	1.39E-04	48%	1.86E-05	9.29E-06
				23	550	0.0598	0.0371	7.09E-04	29%	9.46E-05	4.73E-05	0.4342	0.2698	5.15E-03	51%	6.87E-04	3.43E-04	0.0131	0.0081	1.56E-04	49%	2.07E-05	1.04E-05	0.012	0.007	1.42E-04	49%	1.90E-05	9.48E-06
				24	450	0.0620	0.0385	6.02E-04	25%	8.02E-05	4.01E-05	0.4721	0.2934	4.58E-03	46%	6.11E-04	3.06E-04	0.0116	0.0072	1.13E-04	35%	1.50E-05	7.51E-06	0.011	0.007	1.03E-04	35%	1.37E-05	6.87E-06
1002	D2 Landscape Deck (SB)	D2MSB	0.125	1	300	0.0697	0.0433	4.51E-04	23%	6.01E-05	3.01E-05	0.5174	0.3215	3.35E-03	37%	4.47E-04	2.23E-04	0.0119	0.0074	7.68E-05	28%	1.02E-05	5.12E-06	0.011	0.007	7.02E-05	28%	9.35E-06	4.68E-06
				2	250	0.0614	0.0382	3.31E-04	17%	4.42E-05	2.21E-05	0.4491	0.2791	2.42E-03	27%	3.23E-04	1.62E-04	0.0102	0.0063	5.48E-05	20%	7.30E-06	3.65E-06	0.009	0.006	5.01E-05	20%	6.68E-06	3.34E-06
				3	250	0.0606	0.0377	3.27E-04	16%	4.36E-05	2.18E-05	0.4460	0.2771	2.41E-03	26%	3.21E-04	1.60E-04	0.0113	0.0070	6.09E-05	22%	8.12E-06	4.06E-06	0.010	0.006	5.56E-05	22%	7.41E-06	3.71E-06
				4	250	0.0698	0.0434	3.76E-04	19%	5.02E-05	2.51E-05	0.4679	0.2907	2.52E-03	28%	3.37E-04	1.68E-04	0.0099	0.0062	5.36E-05	20%	7.15E-06	3.57E-06	0.009	0.006	4.92E-05	20%	6.56E-06	3.28E-06
				5	250	0.0709	0.0441	3.82E-04	19%	5.10E-05	2.55E-05	0.4662	0.2897	2.51E-03	28%	3.35E-04	1.68E-04	0.0103	0.0064	5.57E-05	20%	7.42E-06	3.71E-06	0.009	0.006	5.10E-05	20%	6.80E-06	3.40E-06
				6	250	0.0699	0.0434	3.77E-04	19%	5.03E-05	2.51E-05	0.4584	0.2848	2.47E-03	27%	3.30E-04	1.65E-04	0.0112	0.0069	6.03E-05	22%	8.04E-06	4.02E-06	0.010	0.006	5.51E-05	22%	7.35E-06	3.67E-06
				7	350	0.1269	0.0789	9.58E-04	48%	1.28E-04	6.39E-05	0.6800	0.4226	5.14E-03	56%	6.85E-04	3.42E-04	0.0154	0.0096	1.16E-04	42%	1.55E-05	7.75E-06	0.014	0.009	1.06E-04	42%	1.41E-05	7.06E-06
				8	650	0.1183	0.0735	1.66E-03	84%	2.21E-04	1.11E-04	0.5718	0.3553	8.02E-03	88%	1.07E-03	5.35E-04	0.0149	0.0093	2.09E-04	76%	2.79E-05	1.40E-05	0.014	0.009	1.92E-04	76%	2.56E-05	1.28E-05
				9	850	0.1023	0.0636	1.88E-03	95%	2.50E-04	1.25E-04	0.4984	0.3097	9.14E-03	100%	1.22E-03	6.09E-04	0.0150	0.0093	2.74E-04	100%	3.66E-05	1.83E-05	0.014	0.009	2.52E-04	100%	3.36E-05	1.68E-05
				10	500	0.1703	0.1058	1.84E-03	93%	2.45E-04	1.22E-04	0.6936	0.4310	7.48E-03	82%	9.98E-04	4.99E-04	0.0181	0.0113	1.96E-04	71%	2.61E-05	1.30E-05	0.017	0.010	1.79E-04	71%	2.39E-05	1.19E-05
				11	450	0.1869	0.1161	1.81E-03	91%	2.42E-04	1.21E-04	0.7670	0.4766	7.45E-03	81%	9.93E-04	4.96E-04	0.0188	0.0117	1.83E-04	67%	2.43E-05	1.22E-05	0.017	0.011	1.67E-04	66%	2.22E-05	1.11E-05
				12	400	0.1723	0.1071	1.49E-03	75%	1.98E-04	9.92E-05	0.7078	0.4398	6.11E-03	67%	8.14E-04	4.07E-04	0.0180	0.0112	1.55E-04	56%	2.07E-05	1.03E-05	0.016	0.010	1.42E-04	56%	1.89E-05	9.44E-06
				13	500	0.1496	0.0930	1.61E-03	81%	2.15E-04	1.08E-04	0.6877	0.4273	7.42E-03	81%	9.89E-04	4.95E-04	0.0176	0.0109	1.96E-04	69%	2.53E-05	1.27E-05	0.016	0.010	1.73E-04	69%	2.31E-05	1.16E-05
				14	450	0.1586	0.0986	1.54E-03	78%	2.05E-04	1.03E-04	0.6928	0.4305	6.73E-03	74%	8.97E-04	4.48E-04	0.0180	0.0112	1.75E-04	64%	2.33E-05	1.16E-05	0.016	0.010	1.60E-04	63%	2.13E-05	1.06E-05
				15	500	0.1839	0.1143	1.98E-03	100%	2.64E-04	1.32E-04	0.7441	0.4623	8.03E-03	88%	1.07E-03	5.35E-04	0.0190	0.0118	2.05E-04	75%	2.73E-05	1.37E-05	0.017	0.011	1.87E-04	74%	2.49E-05	1.25E-05
				16	550	0.1641	0.1020	1.95E-03	98%	2.60E-04	1.30E-04	0.6848	0.4255	8.13E-03	89%	1.08E-03	5.42E-04	0.0179	0.0111	2.12E-04	77%	2.82E-05	1.41E-05	0.016	0.010	1.94E-04	77%	2.59E-05	1.29E-05
				17	600	0.1335	0.0829	1.73E-03	87%	2.30E-04	1.15E-04	0.5938	0.3689	7.69E-03	84%	1.02E-03	5.12E-04	0.0178	0.0111	2.31E-04	84%	3.08E-05	1.54E-05	0.016	0.010	2.11E-04	84%	2.82E-05	1.41E-05
				18	650	0.1050	0.0653	1.47E-03	74%	1.96E-04	9.82E-05	0.5178	0.3218	7.26E-03	79%	9.68E-04	4.84E-04	0.0170	0.0106	2.38E-04	87%	3.17E-05	1.59E-05	0.016	0.010	2.18E-04	88%	2.96E-05	1.45E-05
				19	650	0.1092	0.0678	1.53E-03	77%	2.04E-04	1.02E-04	0.5134	0.3190	7.20E-03	79%	9.60E-04	4.80E-04	0.0173	0.0107	2.42E-04	88%	3.23E-05	1.61E-05	0.016	0.010	2.21E-04	88%	2.95E-05	1.48E-05
				20	550	0.0679	0.0422	8.06E-04	41%	1.07E-04	5.37E-05	0.4596	0.2856	5.45E-03	60%	7.27E-04	3.64E-04	0.0161	0.0100	1.91E-04	70%	2.54E-05	1.27E-05	0.015	0.009	1.74E-04	69%	2.32E-05	1.16E-05
				21	500	0.0623	0.0388	6.74E-04	34%	8.99E-05	4.49E-05	0.4542	0.2822	4.90E-03	54%	6.53E-04	3.27E-04	0.0145	0.0090	1.58E-04	57%	2.08E-05	1.04E-05	0.013	0.008	1.43E-04	57%	1.90E-05	9.51E-06
				22	450	0.0511	0.0318	4.96E-04	25%	6.61E-05	3.31E-05	0.4036	0.2508	3.92E-03	43%	5.22E-04	2.61E-04	0.0136	0.0084	1.32E-04	48%	1.76E-05	8.79E-06	0.012	0.008	1.21E-04	48%	1.61E-05	8.04E-06
				23	450	0.0590	0.0367	5.73E-04	29%	7.64E-05	3.82E-05	0.4317	0.2682	4.19E-03	46%	5.59E-04	2.79E-04	0.0136	0.0085	1.32E-04	48%	1.76E-05	8.81E-06	0.012	0.008	1.21E-04	48%	1.61E-05	8.06E-06
				24	350	0.0667	0.0415	5.04E-04	25%	6.72E-05	3.36E-05	0.4782	0.2972	3.61E-03	40%	4.82E-04	2.41E-04	0.0130	0.0081	9.79E-05	30%	1.31E-05	6.53E-06	0.012	0.007	8.95E-05	30%	1.19E-05	5.97E-06
1003a	D2 Landscape Deck (NB)	D2MNB	0.037	1	350	0.0774	0.0481	1.75E-04	21%	2.33E-05	1.17E-05	0.5009	0.3113	1.13E-03	36%	1.51E-04	7.55E-05	0.0137	0.0085	3.09E-05	26%	4.12E-06	2.06E-06	0.012	0.008	2.82E-05	26%	3.76E-06	1.88E-06
				2	300	0.0795	0.0494	1.54E-04	18%	2.05E-05	1.03E-05	0.4622	0.2872	8.95E-04	28%	1.19E-04	5.97E-05	0.0119	0.0074	2.30E-05	20%	3.06E-06	1.53E-06	0.011	0.007	2.10E-05	20%	2.81E-06	1.40E-06
				3	300	0.0661	0.0411	1.28E-04	15%	1.71E-05	8.54E-06	0.4383	0.2723	8.49E-04	27%	1.13E-04	5.66E-05	0.0130	0.0081	2.51E-05	21%	3.35E-06	1.68E-06	0.012	0.007	2.29E-05	21%	3.06E-06	1.53E-06
				4	300	0.0789	0.0490	1.53E-04	18%	2.04E-05	1.02E-05	0.4637	0.2882	8.98E-04	28%	1.20E-04	5.99E-05	0.0114	0.0071	2.20E-05	19%	2.93E-06	1.47E-06	0.010	0.006	2.02E-05	19%	2.69E-06	1.35E-06
				5	250	0.0785	0.0488	1.27E-04	15%	1.69E-05	8.45E-06	0.4633	0.2879	7.48E-04	24%	9.97E-05	4.98E-05	0.0117	0.0073	1.85E-05	16%	2.52E-06	1.26E-06	0.011	0.007	1.73E-05	16%	2.31E-06	1.15E-06
				6	300	0.0897	0.0557	1.74E-04	21%	2.32E-05	1.16E-05	0.4763	0.2959	9.22E-04	29%	1.23E-04	6.15E-05	0.0129	0.0080	2.51E-05	21%	3.34E-06	1.67E-06	0.012	0.007	2.29E-05	21%	3.05E-06	1.53E-06
				7	400	0.1374	0.0854	3.55E-04	43%	4.73E-05	2.37E-05	0.6808	0.4230	1.76E-03	55%	2.34E-04	1.17E-04	0.0178	0.0111	4.60E-05	39%	6.13E-06	3.07E-06	0.016	0.010	4.19E-05	39%	5.58E-06	2.79E-06
				8	800	0.1278	0.0794	6.60E-04

L004b	DZ Landscape Deck (WSB)	DZWSB	0.037	1	250	0.1017	0.0632	1.64E-04	22%	2.19E-05	1.09E-05	0.5216	0.3241	8.42E-04	32%	1.12E-04	5.61E-05	0.0186	0.0116	3.01E-05	26%	4.01E-06	2.01E-06	0.017	0.011	2.74E-05	27%	3.66E-06	1.83E-06
				2	200	0.0967	0.0601	1.25E-04	16%	1.67E-05	8.33E-06	0.4428	0.2752	5.72E-04	22%	7.62E-05	3.81E-05	0.0159	0.0099	2.05E-05	18%	2.73E-06	1.37E-06	0.015	0.009	1.87E-05	18%	2.50E-06	1.25E-06
				3	200	0.0895	0.0556	1.16E-04	15%	1.54E-05	7.70E-06	0.4329	0.2690	5.59E-04	21%	7.45E-05	3.73E-05	0.0177	0.0110	2.29E-05	20%	3.05E-06	1.52E-06	0.016	0.010	2.08E-05	20%	2.78E-06	1.39E-06
				4	200	0.1139	0.0708	1.47E-04	19%	1.96E-05	9.81E-06	0.4751	0.2952	6.13E-04	23%	8.18E-05	4.09E-05	0.0155	0.0096	2.00E-05	18%	2.66E-06	1.33E-06	0.014	0.009	1.83E-05	18%	2.44E-06	1.22E-06
				5	200	0.1105	0.0687	1.43E-04	19%	1.90E-05	9.51E-06	0.4724	0.2935	6.10E-04	23%	8.13E-05	4.07E-05	0.0156	0.0097	2.02E-05	18%	2.69E-06	1.34E-06	0.014	0.009	1.85E-05	18%	2.46E-06	1.23E-06
				6	250	0.1230	0.0764	1.98E-04	26%	2.65E-05	1.32E-05	0.4992	0.3102	8.06E-04	31%	1.07E-04	5.37E-05	0.0181	0.0112	2.92E-05	26%	3.89E-06	1.94E-06	0.017	0.010	2.66E-05	26%	3.55E-06	1.78E-06
				7	300	0.1373	0.1276	3.82E-04	50%	5.09E-05	2.55E-05	0.7511	0.4667	1.45E-03	55%	1.94E-04	9.70E-05	0.0257	0.0159	4.97E-05	44%	6.63E-06	3.31E-06	0.023	0.014	4.52E-05	44%	6.02E-06	3.01E-06
				8	650	0.1703	0.1058	7.14E-04	94%	9.53E-05	4.76E-05	0.6115	0.3800	2.57E-03	98%	3.42E-04	1.71E-04	0.0218	0.0135	9.13E-05	80%	1.22E-05	6.09E-06	0.020	0.012	8.37E-05	81%	1.12E-05	5.58E-06
				9	850	0.1242	0.0772	6.82E-04	90%	9.09E-05	4.54E-05	0.4674	0.2904	2.56E-03	98%	3.42E-04	1.71E-04	0.0188	0.0117	1.03E-04	91%	1.38E-05	6.89E-06	0.017	0.011	9.50E-05	92%	1.27E-05	6.33E-06
				10	500	0.2327	0.1446	7.51E-04	99%	1.00E-04	5.01E-05	0.7497	0.4659	2.42E-03	92%	3.23E-04	1.61E-04	0.0297	0.0160	8.29E-05	73%	1.10E-05	5.52E-06	0.023	0.015	7.57E-05	73%	1.01E-05	5.05E-06
				11	450	0.2335	0.1451	6.78E-04	90%	9.04E-05	4.52E-05	0.7962	0.4947	2.31E-03	88%	3.08E-04	1.54E-04	0.0282	0.0175	8.25E-05	72%	1.09E-05	5.47E-06	0.026	0.016	7.45E-05	72%	9.94E-06	4.97E-06
				12	450	0.2278	0.1415	6.62E-04	87%	8.82E-05	4.41E-05	0.7624	0.4737	2.21E-03	84%	2.95E-04	1.48E-04	0.0252	0.0156	7.31E-05	64%	9.75E-06	4.88E-06	0.023	0.014	6.67E-05	64%	8.90E-06	4.45E-06
				13	500	0.1870	0.1162	6.04E-04	80%	8.05E-05	4.02E-05	0.6932	0.4308	2.24E-03	85%	2.98E-04	1.49E-04	0.0246	0.0153	7.95E-05	70%	1.06E-05	5.30E-06	0.022	0.014	7.24E-05	70%	9.66E-06	4.83E-06
				14	450	0.2159	0.1341	6.27E-04	83%	8.36E-05	4.18E-05	0.7413	0.4606	2.15E-03	82%	2.87E-04	1.44E-04	0.0252	0.0157	7.32E-05	64%	9.76E-06	4.86E-06	0.023	0.014	6.68E-05	65%	8.91E-06	4.45E-06
				15	500	0.2347	0.1458	7.58E-04	100%	1.01E-04	5.05E-05	0.7722	0.4796	2.49E-03	95%	3.32E-04	1.66E-04	0.0293	0.0163	8.67E-05	75%	1.13E-05	5.65E-06	0.024	0.015	7.73E-05	75%	1.03E-05	5.15E-06
				16	550	0.2106	0.1309	7.48E-04	99%	9.97E-05	4.98E-05	0.7200	0.4474	2.56E-03	97%	3.41E-04	1.70E-04	0.0245	0.0152	8.69E-05	77%	1.16E-05	5.82E-06	0.022	0.014	7.94E-05	77%	1.06E-05	5.30E-06
				17	650	0.1702	0.1058	7.14E-04	94%	9.52E-05	4.76E-05	0.6252	0.3885	2.62E-03	100%	3.50E-04	1.75E-04	0.0237	0.0147	9.95E-05	88%	1.33E-05	6.63E-06	0.022	0.013	9.08E-05	88%	1.21E-05	6.05E-06
				18	700	0.1246	0.0773	5.62E-04	74%	7.50E-05	3.75E-05	0.5023	0.3121	2.27E-03	87%	3.03E-04	1.51E-04	0.0217	0.0135	9.82E-05	89%	1.31E-05	6.55E-06	0.020	0.012	8.95E-05	87%	1.19E-05	5.97E-06
				19	700	0.1530	0.0951	6.91E-04	91%	9.22E-05	4.61E-05	0.5630	0.3498	2.54E-03	97%	3.39E-04	1.70E-04	0.0251	0.0156	1.14E-04	100%	1.52E-05	7.58E-06	0.023	0.014	1.03E-04	100%	1.38E-05	6.90E-06
				20	800	0.0755	0.0469	2.92E-04	39%	3.90E-05	1.95E-05	0.4486	0.2775	1.73E-03	66%	2.31E-04	1.15E-04	0.0215	0.0134	8.34E-05	73%	1.11E-05	5.56E-06	0.020	0.012	7.57E-05	73%	1.01E-05	5.04E-06
				21	550	0.0994	0.0413	2.36E-04	31%	3.15E-05	1.57E-05	0.4089	0.2541	1.45E-03	55%	1.94E-04	9.68E-05	0.0182	0.0113	6.88E-05	57%	8.82E-06	4.31E-06	0.017	0.010	5.90E-05	57%	7.86E-06	3.93E-06
				22	450	0.0631	0.0392	1.83E-04	24%	2.44E-05	1.22E-05	0.3869	0.2404	1.12E-03	43%	1.50E-04	7.49E-05	0.0175	0.0109	5.09E-05	45%	6.78E-06	3.39E-06	0.016	0.010	4.64E-05	45%	6.19E-06	3.09E-06
				23	450	0.0684	0.0425	1.99E-04	26%	2.65E-05	1.33E-05	0.4078	0.2534	1.18E-03	45%	1.58E-04	7.90E-05	0.0180	0.0112	5.22E-05	46%	6.95E-06	3.48E-06	0.016	0.010	4.76E-05	46%	6.34E-06	3.17E-06
				24	350	0.0838	0.0521	1.89E-04	25%	2.52E-05	1.26E-05	0.4593	0.2854	1.04E-03	40%	1.38E-04	6.92E-05	0.0177	0.0110	3.99E-05	35%	5.32E-06	2.66E-06	0.016	0.010	3.64E-05	35%	4.85E-06	2.43E-06
L158	CKR Tunnel Portal Emission (EB)	CKRTEEB	1.750	1	900	0.0383	0.0238	5.21E-03	24%	1.16E-03	5.79E-04	0.2729	0.1696	3.71E-02	24%	8.24E-03	4.12E-03	0.0130	0.0080	1.76E-03	25%	3.91E-04	1.96E-04	0.0126	0.008	1.71E-03	26%	3.81E-04	1.91E-04
				2	950	0.0385	0.0239	5.52E-03	25%	1.23E-03	6.13E-04	0.2745	0.1706	3.94E-02	25%	8.75E-03	4.38E-03	0.0131	0.0082	1.88E-03	27%	4.18E-04	2.09E-04	0.0111	0.007	1.59E-03	25%	3.54E-04	1.77E-04
				3	500	0.0377	0.0234	2.85E-03	13%	6.32E-04	3.16E-04	0.2765	0.1718	2.09E-02	13%	4.64E-03	2.32E-03	0.0129	0.0080	9.75E-04	14%	2.17E-04	1.08E-04	0.0110	0.007	8.77E-04	13%	1.84E-04	9.19E-05
				4	500	0.0372	0.0231	2.81E-03	13%	6.25E-04	3.12E-04	0.2747	0.1707	2.07E-02	13%	4.61E-03	2.30E-03	0.0129	0.0080	9.72E-04	14%	2.16E-04	1.08E-04	0.0109	0.007	8.74E-04	13%	1.83E-04	9.16E-05
				5	500	0.0369	0.0229	2.79E-03	13%	6.20E-04	3.10E-04	0.2766	0.1718	2.09E-02	13%	4.64E-03	2.32E-03	0.0129	0.0080	9.71E-04	14%	2.16E-04	1.08E-04	0.0109	0.007	8.73E-04	13%	1.83E-04	9.14E-05
				6	950	0.0385	0.0239	5.53E-03	25%	1.23E-03	6.14E-04	0.2784	0.1730	3.95E-02	25%	8.88E-03	4.44E-03	0.0131	0.0082	1.88E-03	27%	4.19E-04	2.09E-04	0.0111	0.007	1.60E-03	25%	3.55E-04	1.77E-04
				7	1400	0.0384	0.0238	8.11E-03	37%	1.80E-03	9.01E-04	0.2787	0.1732	5.89E-02	38%	1.31E-02	6.55E-03	0.0122	0.0076	2.58E-03	37%	5.74E-04	2.87E-04	0.0112	0.007	2.37E-03	37%	5.28E-04	2.64E-04
				8	2350	0.0383	0.0238	1.36E-02	62%	3.02E-03	1.51E-03	0.2810	0.1746	9.97E-02	64%	2.22E-02	1.11E-02	0.0127	0.0079	4.51E-03	64%	1.00E-03	5.01E-04	0.0113	0.007	4.01E-03	62%	8.92E-04	4.46E-04
				9	2950	0.0394	0.0245	1.75E-02	80%	3.90E-03	1.95E-03	0.2945	0.1830	1.31E-01	84%	2.92E-02	1.46E-02	0.0125	0.0077	5.55E-03	79%	1.23E-03	6.17E-04	0.0113	0.007	5.01E-03	77%	1.11E-03	5.57E-04
				10	2800	0.0404	0.0251	1.71E-02	78%	3.79E-03	1.90E-03	0.2917	0.1813	1.23E-01	79%	2.74E-02	1.37E-02	0.0131	0.0081	5.54E-03	79%	1.23E-03	6.15E-04	0.0121	0.008	5.12E-03	79%	1.14E-03	5.69E-04
				11	2350	0.0382	0.0237	1.35E-02	62%	3.01E-03	1.50E-03	0.2791	0.1734	9.91E-02	63%	2.20E-02	1.10E-02	0.0126	0.0078	4.46E-03	63%	9.92E-04	4.96E-04	0.0118	0.007	4.20E-03	65%	9.33E-04	4.66E-04
				12	2300	0.0383	0.0238	1.33E-02	61%	2.96E-03	1.48E-03	0.2777	0.1725	9.64E-02	62%	2.14E-02	1.07E-02	0.0127	0.0079	4.40E-03	62%	9.78E-04	4.89E-04	0.0119	0.007	4.15E-03	64%	9.22E-04	4.61E-04
				13	2300	0.0382	0.0238	1.33E-02	61%	2.95E-03	1.48E-03	0.2771	0.1722	9.63E-02	61%	2.14E-02	1.07E-02	0.0126	0.0078	4.37E-03	62%	9.71E-04	4.85E-04	0.0118	0.007	4.12E-03	63%	9.15E-04	4.57E-04
				14	2300	0.0384	0.0239	1.33E-02	61%	2.96E-03	1.48E-03	0.2779	0.1727	9.65E-02	62%	2.13E-02	1.07E-02	0.0128	0.0078	4.35E-03	62%	9.67E-04	4.83E-04	0.0119	0.007	4.09E-03	62%	9.10E-04	4.55E-04
				15	2700	0.0396	0.0246	1.62E-02	74%	3.59E-03	1.80E-03	0.2825	0.1755	1.15E-01	74%	2.56E-02	1.28E-02	0.0132	0.0082	5.40E-03	77%	1.20E-03	6.00E-04	0.0123	0.008	5.00E-03	77%	1.11E-03	5.55E-04
				16	2700	0.0392	0.0244	1.60E-02	73%	3.55E-03	1.78E-03	0.2814	0.1748	1.15E-01	73%	2.55E-02	1.27E-02	0.0131	0.0081	5.34E-03	76%	1.19E-03	5.94E-04	0.0121	0.008	4.95E-03	76%	1.10E-03	5.50E-04
				17	2650	0.0381	0.0237	1.53E-02	70%	3.39E-03	1.70E-03	0.2788	0.1732	1.12E-01	71%	2.48E-02	1.24E-02	0.0127	0.0079	5.09E-03	72%	1.13E-03	5.65E-04	0.0118	0.007	4.70E-03	72%	1.05E-03	5.23E-04
				18	2650	0.0385	0.0239	1.54E-02	70%	3.42E-03	1.71E-03	0.2808	0.1745	1.12E-01	72%	2.50E-02	1.25E-02	0.0127	0.0079	3.08E-03	72%	1.13E-03	5.65E-04	0.0118	0.007	4.71E-03	73%	1.05E-03	5.23E-04
				19	3400	0.0426	0.0265	2.19E-02	100%	4.86E-03	2.43E-03	0.3051	0.1896	1.57E-01	100%	3.48E-02	1.74E-02	0.0137	0.0085	7.05E-03	100%	1.57E-03	7.83E-04	0.0126	0.008	6.49E-03	100%	1.44E-03	7.21E-04
				20	2200	0.0376	0.0234	1.25E-02	57%	2.78E-03	1.39E-03	0.2704	0.1680	8.98E-02	57%	2.00E-02	9.98E-03	0.0129	0.0080	4.27E-03	61%	9.49E-04	4.75E-04	0.0122	0.008	4.05E-03	62%	8.99E-04	4.50E-04
				21	1800	0.0382	0.0238	1.04E-02	47%	2.31E-03	1.15E-03	0.2713	0.1686	7.37E-02	47%	1.64E-02	8.19E-03	0.0128	0.0080	3.69E-03	49%	7.75E-04	3.87E-04	0.0116	0.007	3.15E-03	49%	7.01E-04	3.50E-04
				22	1800	0.0383	0.0238	1.04E-02	48%	2.31E-03	1.16E-03	0.2722	0.1691	7.40E-02	47%	1.64E-02	8.22E-03	0.0130	0.0081	3.52E-03	50%	7.83E-04	3.92E-04	0.0117	0.007	3.19E-03	49%	7.09E-04	3.55E-04
				23	1350	0.0380	0.0236	7.75E-03	35%	1.72E-03	8.61E-04	0.2725	0.1693	5.56E-02	35%	1.23E-02	6.17E-03	0.0129	0.0080	2.62E-03	37%	5.83E-04	2.91E-04	0.0119	0.007	2.42E-03	37%	5.40E-04	2.70E-04
				24	1350	0.0375	0.0233	7.65E-03	35%	1.70E-03	8.50E-04	0.2709	0.1684	5.52E-02	35%	1.23E-02	6.14E-03	0.0128	0.0080	2.62E-03	37%	5.81E-04	2.91E-04	0.0118	0.007	2.42E-03	37%	5.37E-04	2.68E-04
L159	CKR Landscape Deck (SWB)	CKRLOSWB	0.195	1	1300	0.0231	0.0143	1.01E-03	18%	2.25E-04	1.12E-04	0.1571	0.0976	6.88E-03	19%	1.53E-03	7.64E-04	0.0077	0.0048	3.38E-04	24%	7.50E-05	3.75E-05	0.0071	0.004	3.12E-04	24%	6.92E-05	3.46E-05
				2	1300	0.0230	0.0143	1.01E-03	18%	2.24E-04	1.12E-04	0.1572	0.0977	6.88E-03	19%	1.53E-03	7.64E-04	0.0077	0.0048	3.38E-04	24%	7.47E-05	3.73E-05	0.0071	0.004	3.10E-04	24%	6.89E-05	3.45E-05
				3	700	0.0234	0.0145	5.51E-04	10%	1.23E-04	6.13E-05	0.1601	0.0995	3.77E-03	11%	8.38E-04	4.19E-04	0.0078	0.0048	1.84E-04	13%	4.08E-05	2.04E-05	0.0072	0.004	1.69E-04	13%	3.76E-05	1.88E-05
				4	700	0.0234	0.0145	5.51E-04	10%	1.23E-04	6.13E-05	0.1606	0.0998	3.78E-03	11%	8.41E-04	4.20E-04	0.0078	0.0048	1.83E-04	13%	4.08E-05	2.04E-05	0.0072	0.004	1.69E-04	13%	3.76E-05	1.88E-05
				5	700	0.0228	0.0142	5.37E-04	10%	1.19E-04	5.97E-05	0.1595	0.0991	3.76E-03	11%	8.35E-04	4.18E-04	0.0076	0.0047	1.79E-04	13%	3.97E-05	1.98E-05	0.0070	0.004	1.65E-04	13%	3.66E-05	1.83E-05
				6	1350	0.0231	0.0143	1.05E-03	19%	2.33E-04	1.17E-04	0.1592	0.0989	7.23E-03	20%	1.61E-03	8.04E-04	0.0076	0.0047	3.46E-04	24%	7.69E-05	3.84E-05	0.0070	0.004	3.19E-04	24%	7.09E-05	3.55E-05
				7	2000	0.0232	0.0144	1.56E-03	28%	3.48E-04	1.74E-04	0.1599	0.0993	1.08E-02	30%	2.39E-03	1.20E-03	0.0077	0.0048	5.15E-04	36%	1.15E-04	5.73E-05	0.0071	0.004	4.75E-04	36%	1.06E-04	5.28E-05
				8	3350	0.0248	0.0154	2.80E-03	50%	6.22E-04	3.11E-04	0.1743	0.1083	1.97E-02	55%	4.37E-03	2.18E-03	0.0078	0.0048	8.77E-04	62%	1.95E-04	9.75E-05	0.0072	0.004	8.08E-04	61%	1.79E-04	8.97E-05
				9	4700	0.0354	0.0220	5.59E-03	100%	1.24E-03	6.22E-04	0.2247	0.1396	3.55E-02	100%	7.90E-03	3.95E-03	0.0090	0.0056	1.42E-03	100%	3.16E-04	1.58E-04	0.0083	0.005	1.31E-03	100%	2.92E-04	1.46E-04
				10	3950	0.0282	0.0175	3.75E-03	67%	8.34E-04	4.17E-04	0.1893	0.1176	2.52E-02	71%	5.59E-03	2.80E-03	0.0082	0.0051	1.02E-03	78%	2.41E-04	1.21E-04	0.0075	0.005	1.06E-03	76%	2.23E-04	1.11E-04
				11	3300	0.0249	0.0155	2.77E-03	50%	6.16E-04	3.08E-04	0.1737	0.1080	1.93E-02	54%	4.29E-03	2.14E-03	0.0078	0.0049	8.71E-04	61%	1.93E-04	9.67E-05	0.0072	0.004	8.01E-04	61%	1.78E-04	8.90E-05
				12	3300	0.0247	0.0154	2.75E-03	49%	6.10E-04	3.05E-04	0.1730	0.1075	1.92E-02	54%	4.27E-03	2.13E-03	0.0078	0.0048	8.66E-04	61%	1.92E-04	9.62E-05	0.0072	0.004	7.97E-04	61%	1.77E-04	8.85E-05
				13	3250	0.0244	0.0152	2.67E-03	48%	5.93E-04	2.97E-04	0.1705	0.1059	1.86E-02	52%	4.14E-03	2.07E-03	0.0077	0.0048	8.48E-04	60%	1.88E-04	9.42E-05	0.0072	0.004	7.83E-04	60%	1.74E-04	8.70E-05
				14	3250	0.0243	0.0152	2.68E-03	48%	5.95E-04	2.97E-04	0.1712	0.1064	1.87E-02	53%	4.16E-03	2.08E-03	0.0078	0.0048	8.49E-04	60%	1.89E-04	9.44E-05	0.0072	0.004	7.85E-04	60%	1.74E-04	8.72E-05
				15	3850	0.0274	0.0170	3.55E-03	64%	7.90E-04	3.95E-04	0.1836	0.1141	2.38E-02	67%	5.29E-03	2.64E-03	0.0082	0.0051	1.06E-03	74%	2.35E-04	1.17E-04	0.0075	0.005	9.73E-04	74%	2.16E-04	1.08E-04
				16	3800	0.0272	0.0169	3.48E-03	62%	7.74E-04	3.87E-04	0.1832	0.1139	2.34E-02	66%	5.21E-03	2.60E-03	0.0081	0.0050	1.04E-03	73%	2.31E-04	1.15E-04	0.0075	0.005	9.57E-04	73%	2.13E-04	1.06E-04
				17	3800	0.0270	0.0167	3.45E-03	62%	7.66E-04	3.83E-04	0.1831	0.1138	2.34E-02	66%	5.21E-03	2.60E-03	0.0081	0.0050	1.03E-03	72%	2.29E-04	1.15E-04	0.0074	0.005	9.49E-04	72%	2.11E-04	1.05E-04
				18	3800	0.0269	0.0167	3.44E-03	62%	7.65E-04	3.82E-04	0.1831	0.1138	2.34E-02	66%	5.20E-03	2.60E-03	0.0081	0.0050	1.03E-03	72%	2.29E-04	1.14E-04	0.0074	0.005	9.49E-04	72%	2.11E-04	1.05E-04
				19	4300	0.0288	0.0179	4.17E-03	75%	9.27E-04	4.63E-04	0.1953	0.1213	2.83E-02	80%	6.28E-03	3.14E-03	0.0081	0.0050	1.17E-03	82%	2.61E-04	1.30E-04	0.0074	0.005	1.07E-03	82%	2.38E-04	1.19E-04
				20	3150	0.0239	0.0149	2.54E-03	45%	5.64E-04	2.82E-04	0.1664	0.1034	1.76E-02	50%	3.92E-03	1.96E-03	0.0078	0.0048	8.26E-04	58%	1.84E-04	9.18E-05	0.0072	0.004	7.59E-04	58%	1.69E-04	8.43E-05
				21	2950	0.0235	0.0146	2.01E-03	36%	4.48E-04	2.24E-04	0.1594	0.0991	1.37E-02	38%	3.04E-03	1.52E-03	0.0078	0.0048	6.68E-04	47%	1.49E-04	7.43E-05	0.0072	0.004	6.15E-04	47%	1.37E-04	6.84E-05
				22	2950	0.0232	0.0144	1.99E-03	36%	4.43E-04	2.22E-04	0.1591	0.0988	1.37E-02	38%	3.03E-03	1.52E-03	0.0077	0.0048	6.62E-04	46%	1.47E-04	7.35E-05	0.0071	0.004	6.09E-04	46%	1.35E-04	6.77E-05
				23	1950	0.0225	0.0140	1.48E-03	26%	3.29E-04	1.64E-04	0.1555	0.0966	1.02E-02	29%	2.27E-03	1.13E-03	0.0076	0.0047	4.98E-04	35%	1.11E-04	5.53E-05	0.0070	0.004	4.60E-04	35%	1.02E-04	5.11E-05
				24	1950	0.0228	0.0141	1.49E-03	27%	3.32E-04	1.66E-04	0.1562	0.0971	1.03E-02	29%	2.28E-03	1.14E-03	0.0077	0.0048	5.02E-04	35%	1.12E-04	5.58E-05	0.0071	0.004	4.63E-04	35%	1.03E-04	5.15E-05
L158	CKR Landscape Deck (NEB)	CKRLDNEB	0.195	1	900	0.038	0.024	1.16E-03	24%	2.58E-04	1.29E-04	0.273	0.170	8.27E-03	24%	1.84E-03	9.19E-04	0.013	0.008	3.92E-04	25%	8.72E-05	4.36E-05	0.013	0.008	3.82E-04	26%	8.49E-05	4.25E-05
				2	950	0.038	0.024	1.23E-03	25%	2.73E-04	1.37E-04	0.274	0.171	8.78E-03	25%	1.95E-03	9.75E-04	0.013	0.008	4.20E-04	27%	9.32E-05	4.66E-05	0.011	0.007	3.55E-04	25%	7.90E-05	3.95E-05
				3	500	0.038	0.023	6.34E-04	13%	1.41E-04	7.04E-05	0.276	0.172	4.65E-03	13%	1.03E-03	5.17E-04	0.013	0.008	2.17E-04	14%	4.83E-05	2.41E-05	0.011	0.007	1.84E-04	13%	4.10E-05	2.05E-05
				4	500	0.037	0.023	6.27E-04	13%	1.39E-04	6.96E-05	0.275	0.171	4.62E-03	13%	1.03E-03	5.14E-04	0.013	0.008	2.17E-04	14%	4.81E-05	2.41E-05	0.011	0.007	1.84E-04	13%	4.08E-05	2.04E-05
				5	500	0.037	0.023	6.21E-04	13%	1.38E-04	6.90E-05	0.277	0.172	4.65E-03	13%	1.03E-03	5.17E-04	0.013	0.008	2.16E-04	14%	4.81E-05	2.40E-05	0.011	0.007	1.83E-04	13%	4.07E-05	2.04E-05
				6	950	0.039	0.024	1.23E-03	25%	2.74E-04	1.37E-04	0.278	0.173	8.90E-03	25%	1.98E-03	9.89E-04	0.013	0.008	4.20E-04	27%	9.33E-05	4.66E-05	0.011	0.007	3.56E-04	25%	7.91E-05	3.95E-05
				7	1400	0.038	0.024	1.81E-03	37%	4.02E-04	2.01E-04	0.279	0.173	1.31E-02	38%	2.92E-03	1.46E-03	0.012	0.008	5.78E-04	37%	1.28E-04	6.39E-05	0.011	0.007	5.29E-04	37%	1.18E-04	5.88E-05
				8	2350	0.038	0.024	3.03E-03	62%	6.73E-04	3.37E-04	0.281	0.175	2.22E-02	64%	4.94E-03	2.47E-03	0.013	0.008	1.01E-03	64%	2.23E-04	1.12E-04	0.011	0.007	8.94E-04	62%	1.99E-04	9.93E-05
				9	2950	0.039	0.024	3.91E-03	80%	8.69E-04	4.34E-04	0.294	0.183	2.92E-02	84%	6.50E-03	3.25E-03	0.012	0.008	1.24E-03	79%	2.75E-04	1.37E-04	0.011	0.007	1.12E-03	77%	2.48E-04	1.24E-04
				10	2800	0.040	0.025	3.81E-03	78%	8.46E-04	4.23E-04	0.292	0.181	2.75E-02	79%	6.11E-03	3.05E-03	0.013	0.008	1.23E-03	79%	2.74E-04	1.37E-04	0.012	0.008	1.14E-03	79%	2.53E-04

Calculation of Portal Emission - 4th Quarter

						NO2						NO						RSP						PSP					
						Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 emission rate	Farest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 emission rate	Farest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 of the total emission rate	Farest 50m - 1/3 of the total emission rate	Emission Rate		Total Emission	% of the maximum emission rate	Nearest 50m - 2/3 of the total emission rate	Farest 50m - 1/3 of the total emission rate
Road No.	Portal Description	Portal ID	Tunnel Length (km)	Hour	Total Vehicle (veh/hr)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(%)	(g/s)	(g/s)
L084 & L085	Kai Tak Tunnel (WB)	KTTW	1.230	1	850	0.0479	0.02977	4.32E-03	29%	4.12E-04	2.06E-04	0.4760	0.29450	4.28E-02	40%	4.07E-03	2.04E-03	0.0125	0.0078	1.13E-03	32%	1.07E-04	5.37E-05	0.0115	0.0071	1.03E-03	32%	9.85E-05	4.93E-05
				2	700	0.0349	0.02166	2.59E-03	17%	2.47E-04	1.23E-04	0.4064	0.25254	3.02E-02	28%	2.88E-03	1.44E-03	0.0067	0.0042	5.00E-04	14%	4.76E-05	2.38E-05	0.0062	0.0038	4.59E-04	14%	4.37E-05	2.19E-05
				3	550	0.0439	0.02727	2.56E-03	17%	2.44E-04	1.22E-04	0.4765	0.29610	2.78E-02	26%	2.65E-03	1.32E-03	0.0074	0.0046	4.33E-04	12%	4.12E-05	2.06E-05	0.0068	0.0042	3.98E-04	12%	3.79E-05	1.89E-05
				4	500	0.0463	0.02874	2.46E-03	16%	2.34E-04	1.17E-04	0.4803	0.29846	2.55E-02	24%	2.43E-03	1.21E-03	0.0076	0.0047	4.03E-04	11%	3.83E-05	1.92E-05	0.0070	0.0043	3.70E-04	11%	3.53E-05	1.76E-05
				5	450	0.0559	0.03471	2.67E-03	18%	2.54E-04	1.27E-04	0.5048	0.31366	2.41E-02	22%	2.30E-03	1.15E-03	0.0084	0.0052	4.03E-04	11%	3.83E-05	1.92E-05	0.0077	0.0048	3.70E-04	11%	3.52E-05	1.76E-05
				6	500	0.0759	0.04715	4.03E-03	27%	3.84E-04	1.92E-04	0.6010	0.37343	3.19E-02	30%	3.04E-03	1.52E-03	0.0149	0.0092	7.88E-04	22%	7.51E-05	3.75E-05	0.0137	0.0085	7.25E-04	22%	6.90E-05	3.45E-05
				7	1000	0.0895	0.05560	9.50E-03	64%	9.05E-04	4.52E-04	0.5280	0.32809	5.60E-02	52%	5.34E-03	2.67E-03	0.0164	0.0102	1.75E-03	50%	1.66E-04	8.31E-05	0.0151	0.0094	1.61E-03	50%	1.53E-04	7.64E-05
				8	1750	0.0593	0.03684	1.10E-02	74%	1.05E-03	5.24E-04	0.3802	0.23623	7.06E-02	66%	6.73E-03	3.36E-03	0.0121	0.0075	2.24E-03	64%	2.13E-04	1.07E-04	0.0111	0.0069	2.06E-03	64%	1.96E-04	9.81E-05
				9	2150	0.0655	0.04067	1.49E-02	100%	1.42E-03	7.11E-04	0.4736	0.29429	1.08E-01	100%	1.03E-02	5.15E-03	0.0154	0.0096	3.52E-03	100%	3.35E-04	1.67E-04	0.0142	0.0088	3.24E-03	100%	3.08E-04	1.54E-04
				10	1800	0.0709	0.04408	1.36E-02	91%	1.29E-03	6.45E-04	0.5104	0.31715	9.75E-02	90%	9.29E-03	4.64E-03	0.0162	0.0100	3.09E-03	88%	2.94E-04	1.47E-04	0.0148	0.0092	2.83E-03	87%	2.69E-04	1.35E-04
				11	1600	0.0702	0.04361	1.19E-02	80%	1.14E-03	5.68E-04	0.4472	0.27786	7.59E-02	70%	7.23E-03	3.62E-03	0.0141	0.0087	2.39E-03	68%	2.28E-04	1.14E-04	0.0129	0.0080	2.20E-03	68%	2.09E-04	1.05E-04
				12	1600	0.0760	0.04721	1.29E-02	86%	1.23E-03	6.14E-04	0.4712	0.29278	8.00E-02	74%	7.62E-03	3.81E-03	0.0149	0.0092	2.52E-03	72%	2.40E-04	1.20E-04	0.0136	0.0085	2.32E-03	72%	2.21E-04	1.10E-04
				13	1350	0.0805	0.05002	1.15E-02	77%	1.10E-03	5.49E-04	0.4821	0.29955	6.91E-02	64%	6.58E-03	3.29E-03	0.0156	0.0097	2.23E-03	64%	2.13E-04	1.06E-04	0.0143	0.0089	2.05E-03	63%	1.95E-04	9.76E-05
				14	1200	0.0747	0.04642	9.52E-03	64%	9.06E-04	4.53E-04	0.4831	0.30020	6.15E-02	57%	5.86E-03	2.93E-03	0.0156	0.0097	1.98E-03	56%	1.89E-04	9.44E-05	0.0143	0.0089	1.82E-03	56%	1.73E-04	8.67E-05
				15	1450	0.0688	0.04273	1.06E-02	71%	1.01E-03	5.04E-04	0.4588	0.28507	7.06E-02	65%	6.73E-03	3.36E-03	0.0141	0.0088	2.17E-03	62%	2.07E-04	1.03E-04	0.0130	0.0081	2.00E-03	62%	1.90E-04	9.50E-05
				16	1550	0.0693	0.04305	1.14E-02	76%	1.09E-03	5.43E-04	0.4586	0.28496	7.55E-02	70%	7.19E-03	3.59E-03	0.0140	0.0087	2.31E-03	66%	2.20E-04	1.10E-04	0.0129	0.0080	2.12E-03	66%	2.02E-04	1.01E-04
				17	1450	0.0654	0.04065	1.01E-02	67%	9.59E-04	4.79E-04	0.4666	0.28994	7.18E-02	66%	6.84E-03	3.42E-03	0.0146	0.0091	2.24E-03	64%	2.14E-04	1.07E-04	0.0134	0.0083	2.06E-03	64%	1.96E-04	9.82E-05
				18	2200	0.0591	0.03675	1.38E-02	92%	1.32E-03	6.58E-04	0.4238	0.26335	9.90E-02	92%	9.43E-03	4.71E-03	0.0124	0.0077	2.90E-03	83%	2.76E-04	1.38E-04	0.0114	0.0071	2.67E-03	83%	2.54E-04	1.27E-04
				19	2200	0.0529	0.03288	1.24E-02	83%	1.18E-03	5.88E-04	0.4042	0.25117	9.44E-02	87%	8.99E-03	4.50E-03	0.0117	0.0073	2.73E-03	78%	2.60E-04	1.30E-04	0.0107	0.0067	2.51E-03	78%	2.39E-04	1.19E-04
				20	1600	0.0463	0.02875	7.86E-03	53%	7.48E-04	3.74E-04	0.4117	0.25580	6.99E-02	65%	6.66E-03	3.33E-03	0.0120	0.0074	2.03E-03	58%	1.94E-04	9.69E-05	0.0110	0.0068	1.87E-03	58%	1.78E-04	8.91E-05
				21	1600	0.0482	0.02993	8.18E-03	55%	7.79E-04	3.90E-04	0.3973	0.24685	6.75E-02	62%	6.43E-03	3.21E-03	0.0122	0.0076	2.07E-03	59%	1.98E-04	9.88E-05	0.0112	0.0070	1.91E-03	59%	1.82E-04	9.08E-05
				22	1450	0.0474	0.02945	7.30E-03	49%	6.95E-04	3.47E-04	0.4079	0.25348	6.28E-02	58%	5.98E-03	2.99E-03	0.0119	0.0074	1.83E-03	52%	1.74E-04	8.70E-05	0.0109	0.0068	1.68E-03	52%	1.60E-04	8.00E-05
				23	1350	0.0493	0.03063	7.06E-03	47%	6.73E-04	3.36E-04	0.4369	0.27149	6.26E-02	58%	5.96E-03	2.98E-03	0.0128	0.0079	1.83E-03	52%	1.74E-04	8.72E-05	0.0118	0.0073	1.68E-03	52%	1.60E-04	8.02E-05
				24	1200	0.0601	0.03733	6.38E-03	43%	6.07E-04	3.04E-04	0.5334	0.33147	5.66E-02	52%	5.39E-03	2.70E-03	0.0143	0.0089	1.52E-03	43%	1.45E-04	7.25E-05	0.0132	0.0082	1.40E-03	43%	1.33E-04	6.67E-05
L001	D2 Landscape Deck (NB)	D2LNB	0.125	1	350	0.0723	0.0449	5.46E-04	21%	7.28E-05	3.64E-05	0.6244	0.3880	4.71E-03	40%	6.29E-04	3.14E-04	0.0118	0.0074	8.94E-05	28%	1.19E-05	5.96E-06	0.011	0.007	8.16E-05	28%	1.09E-05	5.44E-06
				2	300	0.0807	0.0501	5.22E-04	20%	6.96E-05	3.48E-05	0.5909	0.3672	3.82E-03	33%	5.10E-04	2.55E-04	0.0108	0.0067	6.99E-05	22%	9.32E-06	4.66E-06	0.010	0.006	6.40E-05	22%	8.53E-06	4.26E-06
				3	300	0.0612	0.0380	3.96E-04	15%	5.28E-05	2.64E-05	0.5489	0.3411	3.55E-03	30%	4.74E-04	2.37E-04	0.0101	0.0063	6.56E-05	21%	8.75E-06	4.38E-06	0.009	0.006	6.01E-05	21%	8.01E-06	4.01E-06
				4	300	0.0747	0.0464	4.84E-04	19%	6.45E-05	3.23E-05	0.5829	0.3622	3.77E-03	32%	5.03E-04	2.52E-04	0.0099	0.0062	6.48E-05	20%	8.58E-06	4.29E-06	0.009	0.006	5.91E-05	20%	7.88E-06	3.94E-06
				5	300	0.0767	0.0477	4.97E-04	19%	6.62E-05	3.31E-05	0.5797	0.3602	3.75E-03	32%	5.00E-04	2.50E-04	0.0103	0.0065	6.81E-05	21%	9.07E-06	4.54E-06	0.010	0.006	6.23E-05	21%	8.31E-06	4.16E-06
				6	300	0.0914	0.0568	5.92E-04	23%	7.89E-05	3.95E-05	0.5939	0.3691	3.84E-03	33%	5.13E-04	2.56E-04	0.0116	0.0072	7.48E-05	24%	9.97E-06	4.99E-06	0.011	0.007	6.84E-05	23%	9.12E-06	4.56E-06
				7	400	0.1279	0.0795	1.10E-03	42%	1.47E-04	7.36E-05	0.7902	0.4910	6.82E-03	58%	9.09E-04	4.55E-04	0.0149	0.0093	1.29E-04	40%	1.72E-05	8.58E-06	0.014	0.008	1.17E-04	40%	1.56E-05	7.81E-06
				8	750	0.1217	0.0756	1.97E-03	76%	2.63E-04	1.31E-04	0.6449	0.4007	1.04E-02	89%	1.39E-03	6.96E-04	0.0144	0.0089	2.33E-04	73%	3.10E-05	1.55E-05	0.013	0.008	2.14E-04	73%	2.85E-05	1.42E-05
				9	900	0.1110	0.0690	2.16E-03	83%	2.87E-04	1.44E-04	0.5855	0.3638	1.14E-02	97%	1.52E-03	7.58E-04	0.0147	0.0091	2.86E-04	90%	3.81E-05	1.90E-05	0.014	0.008	2.62E-04	90%	3.50E-05	1.75E-05
				10	600	0.1839	0.1143	2.38E-03	92%	3.17E-04	1.59E-04	0.7883	0.4898	1.02E-02	87%	1.36E-03	6.80E-04	0.0176	0.0109	2.28E-04	72%	3.04E-05	1.52E-05	0.016	0.010	2.08E-04	72%	2.78E-05	1.39E-05
				11	550	0.2066	0.1283	2.45E-03	94%	3.27E-04	1.63E-04	0.8360	0.5319	1.02E-02	87%	1.35E-03	6.77E-04	0.0183	0.0114	2.18E-04	68%	2.90E-05	1.45E-05	0.017	0.010	1.99E-04	68%	2.65E-05	1.33E-05
				12	550	0.1959	0.1217	2.32E-03	89%	3.10E-04	1.55E-04	0.8143	0.5060	9.66E-03	82%	1.29E-03	6.44E-04	0.0175	0.0109	2.08E-04	65%	2.77E-05	1.39E-05	0.016	0.010	1.90E-04	65%	2.53E-05	1.27E-05
				13	650	0.1582	0.0983	2.22E-03	85%	2.96E-04	1.48E-04	0.7742	0.4811	1.09E-02	93%	1.45E-03	7.24E-04	0.0158	0.0098	2.21E-04	69%	2.95E-05	1.47E-05	0.014	0.009	2.02E-04	69%	2.69E-05	1.35E-05
				14	600	0.1735	0.1078	2.25E-03	86%	2.99E-04	1.50E-04	0.7998	0.4970	1.04E-02	88%	1.38E-03	6.90E-04	0.0167	0.0104	2.16E-04	68%	2.89E-05	1.44E-05	0.015	0.009	1.98E-04	68%	2.64E-05	1.32E-05
				15	650	0.1853	0.1151	2.60E-03	100%	3.47E-04	1.73E-04	0.8186	0.5087	1.15E-02	98%	1.53E-03	7.65E-04	0.0175	0.0109	2.45E-04	77%	3.27E-05	1.64E-05	0.016	0.010	2.24E-04	77%	2.99E-05	1.49E-05
				16	700	0.1722	0.1070	2.60E-03	100%	3.47E-04	1.73E-04	0.7687	0.4776	1.16E-02	99%	1.55E-03	7.74E-04	0.0164	0.0102	2.48E-04	78%	3.30E-05	1.65E-05	0.015	0.009	2.27E-04	78%	3.02E-05	1.51E-05
				17	750	0.1376	0.0855	2.23E-03	86%	2.97E-04	1.48E-04	0.6831	0.4245	1.11E-02	94%	1.47E-03	7.37E-04	0.0162	0.0100	2.62E-04	82%	3.49E-05	1.74E-05	0.015	0.009	2.40E-04	82%	3.19E-05	1.60E-05
				18	850	0.1061	0.0659	1.95E-03	75%	2.59E-04	1.30E-04	0.5706	0.3546	1.05E-02	89%	1.40E-03	6.98E-04	0.0159	0.0099	2.92E-04	92%	3.89E-05	1.94E-05	0.015	0.009	2.67E-04	92%	3.56E-05	1.78E-05
				19	900	0.1236	0.0768	2.40E-03	92%	3.20E-04	1.60E-04	0.6033	0.3749	1.17E-02	100%	1.56E-03	7.81E-04	0.0164	0.0102	3.18E-04	100%	4.24E-05	2.12E-05	0.015	0.009	2.91E-04	100%	3.88E-05	1.94E-05
				20	700	0.0748	0.0465	1.13E-03	43%	1.51E-04	7.53E-05	0.5537	0.3440	8.36E-03	71%	1.11E-03	5.57E-04	0.0152	0.0094	2.29E-04	72%	3.05E-05	1.53E-05	0.014	0.009	2.09E-04	72%	2.78E-05	1.39E-05
				21	600	0.0588	0.0365	7.61E-04	29%	1.01E-04	5.07E-05	0.5182	0.3220	6.71E-03	57%	8.94E-04	4.47E-04	0.0135	0.0084	1.74E-04	55%	2.33E-05	1.16E-05	0.012	0.008	1.60E-04	55%	2.13E-05	1.06E-05
				22	550	0.0622	0.0386	7.38E-04	28%	9.84E-05	4.92E-05	0.5189	0.3224	6.16E-03	53%	8.21E-04	4.10E-04	0.0128	0.0080	1.52E-04	48%	7.03E-05	1.02E-05	0.012	0.007	1.39E-04	48%	1.86E-05	9.29E-06
				23	550	0.0657	0.0408	7.79E-04	30%	1.04E-04	5.19E-05	0.5384	0.3345	6.39E-03	55%	8.52E-04	4.26E-04	0.0131	0.0081	1.56E-04	49%	2.07E-05	1.04E-05	0.012	0.007	1.42E-04	49%	1.90E-05	9.48E-06
				24	450	0.0683	0.0424	6.63E-04	25%	8.84E-05	4.42E-05	0.5892	0.3661	5.72E-03	49%	7.63E-04	3.81E-04	0.0116	0.0072	1.13E-04	35%	1.50E-05	7.51E-06	0.011	0.007	1.03E-04	35%	1.37E-05	6.87E-06
L002	D2 Landscape Deck (SB)	D2MSB	0.125	1	300	0.0765	0.0475	4.95E-04	24%	6.60E-05	3.30E-05	0.6462	0.4015	4.18E-03	38%	5.58E-04	2.79E-04	0.0119	0.0074	7.68E-05	28%	1.02E-05	5.12E-06	0.011	0.007	7.02E-05	28%	9.35E-06	4.68E-06
				2	250	0.0680	0.0423	3.67E-04	17%	4.89E-05	2.45E-05	0.5710	0.3548	3.08E-03	28%	4.11E-04	2.05E-04	0.0102	0.0063	5.48E-05	20%	7.30E-06	3.65E-06	0.009	0.006	5.01E-05	20%	6.68E-06	3.34E-06
				3	250	0.0673	0.0418	3.63E-04	17%	4.84E-05	2.42E-05	0.5662	0.3518	3.05E-03	28%	4.07E-04	2.04E-04	0.0113	0.0070	6.09E-05	22%	8.12E-06	4.06E-06	0.010	0.006	5.56E-05	22%	7.41E-06	3.71E-06
				4	250	0.0768	0.0477	4.14E-04	20%	5.52E-05	2.76E-05	0.5891	0.3660	3.18E-03	29%	4.24E-04	2.12E-04	0.0099	0.0062	5.36E-05	20%	7.15E-06	3.57E-06	0.009	0.006	4.92E-05	20%	6.56E-06	3.28E-06
				5	250	0.0780	0.0484	4.21E-04	20%	5.61E-05	2.80E-05	0.5836	0.3626	3.15E-03	28%	4.20E-04	2.10E-04	0.0103	0.0064	5.57E-05	20%	7.42E-06	3.71E-06	0.009	0.006	5.10E-05	20%	6.80E-06	3.40E-06
				6	250	0.0765	0.0476	4.13E-04	20%	5.50E-05	2.75E-05	0.5701	0.3543	3.08E-03	28%	4.10E-04	2.05E-04	0.0112	0.0069	6.03E-05	22%	8.04E-06	4.02E-06	0.010	0.006	5.51E-05	22%	7.35E-06	3.67E-06
				7	350	0.1367	0.0849	1.03E-03	49%	1.38E-04	6.88E-05	0.8224	0.5110	6.21E-03	56%	8.28E-04	4.14E-04	0.0154	0.0096	1.16E-04	42%	1.55E-05	7.75E-06	0.014	0.009	1.06E-04	42%	1.41E-05	7.06E-06
				8	650	0.1271	0.0790	1.78E-03	85%	2.38E-04	1.19E-04	0.6840	0.4250	9.59E-03	87%	1.28E-03	6.39E-04	0.0149	0.0093	2.09E-04	76%	2.79E-05	1.40E-05	0.014	0.009	1.92E-04	76%	2.56E-05	1.28E-05
				9	850	0.1102	0.0685	2.02E-03	96%	2.69E-04	1.35E-04	0.6027	0.3745	1.11E-02	100%	1.47E-03	7.37E-04	0.0150	0.0093	2.74E-04	100%	3.66E-05	1.83E-05	0.014	0.009	2.52E-04	100%	3.36E-05	1.68E-05
				10	500	0.1812	0.1126	1.95E-03	93%	2.61E-04	1.30E-04	0.8014	0.4980	8.65E-03	78%	1.15E-03	5.76E-04	0.0181	0.0113	1.96E-04	71%	2.61E-05	1.30E-05	0.017	0.010	1.79E-04	71%	2.39E-05	1.19E-05
				11	450	0.1982	0.1231	1.92E-03	91%	2.57E-04	1.28E-04	0.8778	0.5454	8.52E-03	77%	1.14E-03	5.68E-04	0.0188	0.0117	1.83E-04	67%	2.43E-05	1.22E-05	0.017	0.011	1.67E-04	66%	2.22E-05	1.11E-05
				12	400	0.1831	0.1138	1.58E-03	75%	2.11E-04	1.05E-04	0.8149	0.5063	7.03E-03	64%	9.38E-04	4.69E-04	0.0180	0.0112	1.55E-04	56%	2.07E-05	1.03E-05	0.016	0.010	1.42E-04	56%	1.89E-05	9.44E-06
				13	500	0.1597	0.0992	1.72E-03	82%	2.30E-04	1.15E-04	0.7979	0.4958	8.61E-03	78%	1.15E-03	5.74E-04	0.0176	0.0109	1.90E-04	69%	2.53E-05	1.27E-05	0.016	0.010	1.73E-04	69%	2.31E-05	1.16E-05
				14	450	0.1690	0.1050	1.64E-03	78%	2.19E-04	1.09E-04	0.8037	0.4994	7.82E-03	71%	1.04E-03	5.20E-04	0.0180	0.0112	1.75E-04	64%	2.33E-05	1.16E-05	0.016	0.010	1.60E-04	63%	2.13E-05	1.06E-05
				15	500	0.1951	0.1212	2.10E-03	100%	2.81E-04	1.40E-04	0.8515	0.5291	9.19E-03	83%	1.22E-03	6.12E-04	0.0190	0.0118	2.05E-04	75%	2.73E-05	1.37E-05	0.017	0.011	1.87E-04	74%	2.49E-05	1.25E-05
				16	550	0.1751	0.1088	2.08E-03	99%	2.77E-04	1.39E-04	0.7931	0.4928	9.41E-03	85%	1.25E-03	6.27E-04	0.0179	0.0111	2.12E-04	77%	2.82E-05	1.41E-05	0.016	0.010	1.94E-04	77%	2.59E-05	1.29E-05
				17	600	0.1429	0.0888	1.85E-03	88%	2.47E-04	1.23E-04	0.6933	0.4308	8.97E-03	81%	1.20E-03	5.98E-04	0.0178	0.0111	2.31E-04	84%	3.08E-05	1.54E-05	0.016	0.010	2.11E-04	84%	2.82E-05	1.41E-05
				18	650	0.1125	0.0699	1.58E-03	75%	2.10E-04	1.05E-04	0.6117	0.3801	8.58E-03	78%	1.14E-03	5.72E-04	0.0170	0.0106	2.38E-04	87%	3.17E-05	1.59E-05	0.016	0.010	2.18E-04	88%	2.96E-05	1.45E-05
				19	650	0.1170	0.0727	1.64E-03	78%	2.19E-04	1.09E-04	0.6077	0.3776	8.52E-03	77%	1.14E-03	5.68E-04	0.0173	0.0107	2.42E-04	88%	3.23E-05	1.61E-05	0.016	0.010	2.21E-04	88%	2.95E-05	1.48E-05
				20	550	0.0742	0.0461	8.92E-04	42%	1.17E-04	5.87E-05	0.5616	0.3489	6.66E-03	60%	8.89E-04	4.44E-04	0.0161	0.0100	1.91E-04	70%	2.54E-05	1.27E-05	0.015	0.009	1.74E-04	69%	2.32E-05	1.16E-05
				21	500	0.0681	0.0423	7.34E-04	35%	9.79E-05	4.90E-05	0.5547	0.3447	5.98E-03	54%	7.98E-04	3.99E-04	0.0145	0.0090	1.58E-04	57%	2.08E-05	1.04E-05	0.013	0.008	1.63E-04	57%	1.90E-05	9.51E-06
				22	450	0.0563	0.0350	5.46E-04	26%	7.28E-05	3.64E-05	0.5013	0.3115	4.87E-03	44%	6.49E-04	3.24E-04	0.0136	0.0084	1.32E-04	48%	1.76E-05	8.79E-06	0.012	0.008	1.21E-04	48%	1.61E-05	8.04E-06
				23	450	0.0647	0.0402	6.29E-04	30%	8.38E-05	4.19E-05	0.5341	0.3319	5.19E-03	47%	6.91E-04	3.46E-04	0.0136	0.0085	1.32E-04	48%	1.76E-05	8.81E-06	0.012	0.008	1.21E-04	48%	1.61E-05	8.06E-06
				24	350	0.0732	0.0455	5.53E-04	26%	7.37E-05	3.68E-05	0.5886	0.3657	4.44E-03	40%	5.93E-04	2.96E-04	0.0130	0.0081	9.79E-05	36%	1.31E-05	6.53E-06	0.012	0.007	8.95E-05	36%	1.19E-05	5.97E-06
L003a	D2 Landscape Deck (NB)	D2MNB	0.037	1	350	0.0841	0.0522	1.90E-04	22%	2.53E-05	1.27E-05	0.6137	0.3813	1.39E-03	37%	1.85E-04	9.24E-05	0.0137	0.0085	3.09E-05	26%	4.12E-06	2.06E-06	0.012	0.008	2.82E-05	26%	3.76E-06	1.88E-06
				2	300	0.0862	0.0536	1.67E-04	19%	2.23E-05	1.11E-05	0.5699	0.3541	1.10E-03	30%	1.47E-04	7.36E-05	0.0119	0.0074	2.30E-05	20%	3.06E-06	1.53E-06	0.011	0.007	2.10E-05	20%	2.81E-06	1.40E-06
				3	300	0.0726	0.0451	1.41E-04	16%	1.87E-05	9.37E-06	0.5452	0.3387	1.06E-03	28%	1.41E-04	7.04E-05	0.0130	0.0081	2.51E-05	21%	3.35E-06	1.68E-06	0.012	0.007	2.29E-05	21%	3.06E-06	1.53E-06
				4	300	0.0858	0.0533	1.66E-04	19%	2.22E-05	1.11E-05	0.5703	0.3543	1.10E-03	30%	1.47E-04	7.36E-05	0.0114	0.0071	2.20E-05	19%	2.93E-06	1.47E-06	0.010	0.006	2.02E-05	19%	2.69E-06	1.35E-06
				5	250	0.0853	0.0530	1.38E-04	16%	1.83E-05	9.17E-06	0.5672	0.3524	9.15E-04	25%	1.22E-04	6.10E-05	0.0117	0.0073	1.85E-05	16%	2.52E-06	1.26E-06	0.011	0.007	1.73E-05	16%	2.31E-06	1.15E-06
				6	300	0.0966	0.0600	1.87E-04	21%	2.50E-05	1.25E-05	0.5767	0.3571	1.11E-03	30%	1.48E-04	7.42E-05	0.0129	0.0080	2.51E-05	21%	3.34E-06	1.67E-06	0.012	0.007	2.29E-05	21%	3.05E-06	1.53E-06
				7	400	0.1474	0.0916	3.81E-04	43%	5.07E-05	2.54E-05	0.8122	0.5047	2.10E-03	56%	2.80E-04	1.40E-04	0.0178	0.0111	4.60E-05	39%	6.13E-06	3.07E-06	0.016	0.010	4.19E-05	39%	5.58E-06	2.79E-06
				8	800	0.1366	0.0849	7.05E-04	80%	9.

L004b	DZ Landscape Deck (WSB)	DZWSB	0.037	1	250	0.1091	0.0678	1.76E-04	22%	2.35E-05	1.17E-05	0.6123	0.3805	9.88E-04	33%	1.32E-04	6.59E-05	0.0186	0.0116	3.01E-05	26%	4.01E-06	2.01E-06	0.017	0.011	2.74E-05	27%	3.66E-06	1.83E-06
				2	200	0.1042	0.0647	1.35E-04	17%	1.79E-05	8.97E-06	0.5271	0.3275	6.81E-04	23%	9.07E-05	4.54E-05	0.0159	0.0099	2.05E-05	18%	2.73E-06	1.37E-06	0.015	0.009	1.87E-05	18%	2.50E-06	1.25E-06
				3	200	0.0970	0.0603	1.25E-04	16%	1.67E-05	8.35E-06	0.5177	0.3217	6.68E-04	23%	8.91E-05	4.46E-05	0.0177	0.0110	2.29E-05	20%	3.05E-06	1.52E-06	0.016	0.010	2.08E-05	20%	2.78E-06	1.39E-06
				4	200	0.1223	0.0760	1.58E-04	20%	2.11E-05	1.05E-05	0.5579	0.3467	7.20E-04	24%	9.60E-05	4.80E-05	0.0155	0.0096	2.00E-05	18%	2.66E-06	1.33E-06	0.014	0.009	1.83E-05	18%	2.44E-06	1.22E-06
				5	200	0.1186	0.0737	1.53E-04	19%	2.04E-05	1.02E-05	0.5544	0.3445	7.16E-04	24%	9.54E-05	4.77E-05	0.0156	0.0097	2.02E-05	18%	2.69E-06	1.34E-06	0.014	0.009	1.85E-05	18%	2.46E-06	1.23E-06
				6	250	0.1318	0.0818	2.12E-04	26%	2.83E-05	1.42E-05	0.5798	0.3602	9.36E-04	32%	1.25E-04	6.24E-05	0.0181	0.0112	2.92E-05	26%	3.89E-06	1.94E-06	0.017	0.010	2.66E-05	26%	3.55E-06	1.78E-06
				7	300	0.2101	0.1306	4.07E-04	51%	5.43E-05	2.71E-05	0.8594	0.5340	1.66E-03	56%	2.22E-04	1.11E-04	0.0257	0.0159	4.97E-05	44%	6.63E-06	3.31E-06	0.023	0.014	4.52E-05	44%	6.02E-06	3.01E-06
				8	650	0.1811	0.1125	7.60E-04	95%	1.01E-04	5.06E-05	0.6921	0.4301	2.90E-03	98%	3.87E-04	1.94E-04	0.0218	0.0135	9.13E-05	80%	1.22E-05	6.09E-06	0.020	0.012	8.37E-05	81%	1.12E-05	5.58E-06
				9	850	0.1327	0.0825	7.28E-04	91%	9.71E-05	4.85E-05	0.5409	0.3361	2.97E-03	100%	3.96E-04	1.98E-04	0.0188	0.0117	1.03E-04	91%	1.38E-05	6.89E-06	0.017	0.011	9.50E-05	92%	1.27E-05	6.33E-06
				10	500	0.2463	0.1531	7.95E-04	99%	1.06E-04	5.30E-05	0.8346	0.5188	2.69E-03	91%	3.59E-04	1.80E-04	0.0297	0.0160	8.25E-05	73%	1.10E-05	5.52E-06	0.023	0.015	7.57E-05	73%	1.01E-05	5.05E-06
				11	450	0.2472	0.1536	7.18E-04	89%	9.57E-05	4.79E-05	0.8894	0.5527	2.58E-03	87%	3.44E-04	1.72E-04	0.0282	0.0175	8.25E-05	72%	1.09E-05	5.47E-06	0.026	0.016	7.45E-05	72%	9.94E-06	4.97E-06
				12	450	0.2410	0.1497	7.06E-04	87%	9.33E-05	4.67E-05	0.8483	0.5271	2.46E-03	83%	3.29E-04	1.64E-04	0.0252	0.0156	7.31E-05	64%	9.75E-06	4.88E-06	0.023	0.014	6.67E-05	64%	8.90E-06	4.45E-06
				13	500	0.1989	0.1236	6.42E-04	80%	8.56E-05	4.28E-05	0.7835	0.4869	2.53E-03	85%	3.37E-04	1.69E-04	0.0246	0.0153	7.95E-05	70%	1.06E-05	5.30E-06	0.022	0.014	7.24E-05	70%	9.66E-06	4.83E-06
				14	450	0.2289	0.1422	6.65E-04	83%	8.87E-05	4.43E-05	0.8308	0.5162	2.41E-03	81%	3.22E-04	1.61E-04	0.0252	0.0157	7.32E-05	64%	9.76E-06	4.88E-06	0.023	0.014	6.68E-05	65%	8.91E-06	4.45E-06
				15	500	0.2486	0.1543	8.02E-04	100%	1.07E-04	5.35E-05	0.8610	0.5350	2.78E-03	94%	3.71E-04	1.85E-04	0.0263	0.0163	8.67E-05	75%	1.13E-05	5.65E-06	0.024	0.015	7.73E-05	75%	1.03E-05	5.15E-06
				16	550	0.2236	0.1390	7.94E-04	99%	1.06E-04	5.29E-05	0.8081	0.5021	2.87E-03	97%	3.83E-04	1.91E-04	0.0245	0.0152	8.69E-05	77%	1.16E-05	5.82E-06	0.022	0.014	7.94E-05	77%	1.06E-05	5.30E-06
				17	650	0.1813	0.1127	7.61E-04	95%	1.01E-04	5.07E-05	0.7078	0.4398	2.97E-03	100%	3.96E-04	1.98E-04	0.0237	0.0147	9.95E-05	88%	1.33E-05	6.63E-06	0.022	0.013	9.08E-05	88%	1.21E-05	6.05E-06
				18	700	0.1330	0.0826	6.01E-04	75%	8.01E-05	4.01E-05	0.5814	0.3612	2.63E-03	88%	3.50E-04	1.75E-04	0.0217	0.0135	9.82E-05	86%	1.31E-05	6.55E-06	0.020	0.012	8.95E-05	87%	1.19E-05	5.97E-06
				19	700	0.1630	0.1013	7.37E-04	92%	9.82E-05	4.91E-05	0.6369	0.3958	2.88E-03	97%	3.84E-04	1.92E-04	0.0251	0.0156	1.14E-04	100%	1.52E-05	7.58E-06	0.023	0.014	1.03E-04	100%	1.38E-05	6.90E-06
				20	800	0.0821	0.0510	3.18E-04	40%	4.24E-05	2.12E-05	0.5349	0.3324	2.07E-03	70%	2.76E-04	1.38E-04	0.0215	0.0134	8.34E-05	73%	1.11E-05	5.56E-06	0.020	0.012	7.57E-05	73%	1.01E-05	5.04E-06
				21	550	0.0723	0.0449	2.57E-04	32%	3.42E-05	1.71E-05	0.4923	0.3059	1.75E-03	59%	2.33E-04	1.17E-04	0.0182	0.0113	6.48E-05	57%	8.62E-06	4.31E-06	0.017	0.010	5.90E-05	57%	7.86E-06	3.93E-06
				22	450	0.0683	0.0424	1.98E-04	25%	2.65E-05	1.32E-05	0.4658	0.2894	1.35E-03	46%	1.80E-04	9.02E-05	0.0175	0.0109	5.09E-05	45%	6.78E-06	3.39E-06	0.016	0.010	4.64E-05	45%	6.19E-06	3.09E-06
				23	450	0.0743	0.0462	2.16E-04	27%	2.88E-05	1.44E-05	0.4896	0.3042	1.42E-03	48%	1.90E-04	9.48E-05	0.0180	0.0112	5.22E-05	46%	6.95E-06	3.48E-06	0.016	0.010	4.76E-05	46%	6.34E-06	3.17E-06
				24	350	0.0903	0.0561	2.04E-04	25%	2.72E-05	1.36E-05	0.5436	0.3378	1.23E-03	41%	1.64E-04	8.19E-05	0.0177	0.0110	3.99E-05	35%	5.32E-06	2.66E-06	0.016	0.010	3.64E-05	35%	4.85E-06	2.43E-06
L158	CKR Tunnel Portal Emission (EB)	CKRTEEB	1.750	1	900	0.0458	0.0285	6.23E-03	24%	1.38E-03	6.92E-04	0.3628	0.2254	4.93E-02	24%	1.10E-02	5.48E-03	0.0130	0.0080	1.76E-03	25%	3.91E-04	1.96E-04	0.0126	0.008	1.71E-03	26%	3.81E-04	1.91E-04
				2	950	0.0460	0.0286	6.60E-03	25%	1.47E-03	7.34E-04	0.3655	0.2271	5.24E-02	26%	1.17E-02	5.83E-03	0.0131	0.0082	1.88E-03	27%	4.18E-04	2.09E-04	0.0111	0.007	1.59E-03	25%	3.54E-04	1.77E-04
				3	500	0.0452	0.0281	3.41E-03	13%	7.58E-04	3.79E-04	0.3685	0.2290	2.78E-02	14%	6.18E-03	3.09E-03	0.0129	0.0080	9.75E-04	14%	2.17E-04	1.08E-04	0.0110	0.007	8.77E-04	13%	1.84E-04	9.19E-05
				4	500	0.0446	0.0277	3.37E-03	13%	7.49E-04	3.74E-04	0.3666	0.2278	2.77E-02	13%	6.15E-03	3.08E-03	0.0129	0.0080	9.72E-04	14%	2.16E-04	1.08E-04	0.0109	0.007	8.74E-04	13%	1.83E-04	9.16E-05
				5	500	0.0443	0.0276	3.35E-03	13%	7.44E-04	3.72E-04	0.3703	0.2301	2.82E-02	14%	6.21E-03	3.11E-03	0.0129	0.0080	9.71E-04	14%	2.16E-04	1.08E-04	0.0109	0.007	8.73E-04	13%	1.83E-04	9.14E-05
				6	950	0.0462	0.0287	6.63E-03	25%	1.47E-03	7.36E-04	0.3726	0.2315	5.35E-02	26%	1.19E-02	5.94E-03	0.0131	0.0082	1.88E-03	27%	4.19E-04	2.09E-04	0.0111	0.007	1.60E-03	25%	3.55E-04	1.77E-04
				7	1400	0.0460	0.0286	9.73E-03	37%	2.16E-03	1.08E-03	0.3734	0.2320	7.90E-02	39%	1.75E-02	8.77E-03	0.0127	0.0076	2.58E-03	37%	5.74E-04	2.87E-04	0.0112	0.007	2.37E-03	37%	5.28E-04	2.64E-04
				8	2350	0.0460	0.0286	1.63E-02	62%	3.62E-03	1.81E-03	0.3768	0.2341	1.34E-01	65%	2.97E-02	1.49E-02	0.0127	0.0079	4.51E-03	64%	1.00E-03	5.01E-04	0.0113	0.007	4.01E-03	62%	8.92E-04	4.46E-04
				9	2950	0.0474	0.0295	2.11E-02	81%	4.70E-03	2.35E-03	0.3964	0.2463	1.77E-01	86%	3.92E-02	1.96E-02	0.0125	0.0077	5.55E-03	79%	1.23E-03	6.17E-04	0.0113	0.007	5.01E-03	77%	1.11E-03	5.57E-04
				10	2800	0.0483	0.0300	2.04E-02	78%	4.54E-03	2.27E-03	0.3892	0.2418	1.65E-01	80%	3.66E-02	1.83E-02	0.0131	0.0081	5.54E-03	79%	1.23E-03	6.15E-04	0.0121	0.008	5.12E-03	79%	1.14E-03	5.69E-04
				11	2350	0.0458	0.0284	1.62E-02	62%	3.61E-03	1.80E-03	0.3737	0.2322	1.33E-01	65%	2.95E-02	1.47E-02	0.0126	0.0078	4.46E-03	63%	9.92E-04	4.96E-04	0.0118	0.007	4.20E-03	65%	9.33E-04	4.66E-04
				12	2300	0.0459	0.0285	1.60E-02	61%	3.54E-03	1.77E-03	0.3711	0.2306	1.29E-01	63%	2.86E-02	1.43E-02	0.0127	0.0079	4.40E-03	62%	9.78E-04	4.89E-04	0.0119	0.007	4.15E-03	64%	9.22E-04	4.61E-04
				13	2300	0.0458	0.0284	1.59E-02	61%	3.53E-03	1.77E-03	0.3699	0.2298	1.28E-01	63%	2.86E-02	1.43E-02	0.0126	0.0078	4.37E-03	62%	9.71E-04	4.85E-04	0.0118	0.007	4.12E-03	63%	9.15E-04	4.57E-04
				14	2300	0.0460	0.0286	1.60E-02	61%	3.55E-03	1.77E-03	0.3706	0.2303	1.29E-01	63%	2.86E-02	1.43E-02	0.0128	0.0078	4.35E-03	62%	9.67E-04	4.83E-04	0.0118	0.007	4.09E-03	62%	9.10E-04	4.55E-04
				15	2700	0.0473	0.0294	1.93E-02	74%	4.29E-03	2.14E-03	0.3740	0.2324	1.53E-01	74%	3.39E-02	1.69E-02	0.0132	0.0082	5.40E-03	77%	1.20E-03	6.00E-04	0.0123	0.008	5.00E-03	77%	1.11E-03	5.55E-04
				16	2700	0.0468	0.0291	1.91E-02	73%	4.24E-03	2.12E-03	0.3725	0.2314	1.52E-01	74%	3.38E-02	1.69E-02	0.0131	0.0081	5.34E-03	76%	1.19E-03	5.94E-04	0.0121	0.008	4.95E-03	76%	1.10E-03	5.50E-04
				17	2650	0.0456	0.0283	1.82E-02	70%	4.05E-03	2.03E-03	0.3690	0.2293	1.48E-01	72%	3.28E-02	1.64E-02	0.0127	0.0079	5.09E-03	72%	1.13E-03	5.65E-04	0.0118	0.007	4.70E-03	72%	1.05E-03	5.23E-04
				18	2650	0.0459	0.0285	1.84E-02	70%	4.09E-03	2.04E-03	0.3713	0.2307	1.49E-01	72%	3.30E-02	1.65E-02	0.0127	0.0079	5.08E-03	72%	1.13E-03	5.65E-04	0.0118	0.007	4.71E-03	73%	1.05E-03	5.23E-04
				19	3400	0.0510	0.0317	2.62E-02	100%	5.82E-03	2.91E-03	0.3993	0.2481	2.05E-01	100%	4.56E-02	2.28E-02	0.0137	0.0085	7.05E-03	100%	1.57E-03	7.83E-04	0.0126	0.008	6.49E-03	100%	1.44E-03	7.21E-04
				20	2200	0.0450	0.0280	1.50E-02	57%	3.32E-03	1.66E-03	0.3577	0.2222	1.15E-01	58%	2.64E-02	1.32E-02	0.0129	0.0080	4.27E-03	61%	9.49E-04	4.75E-04	0.0122	0.008	4.05E-03	62%	8.99E-04	4.50E-04
				21	1800	0.0457	0.0284	1.24E-02	47%	2.76E-03	1.38E-03	0.3588	0.2230	9.76E-02	48%	2.17E-02	1.08E-02	0.0128	0.0080	3.49E-03	49%	7.75E-04	3.87E-04	0.0116	0.007	3.15E-03	49%	7.01E-04	3.50E-04
				22	1800	0.0458	0.0284	1.24E-02	48%	2.77E-03	1.38E-03	0.3606	0.2240	9.82E-02	48%	2.18E-02	1.09E-02	0.0130	0.0081	3.52E-03	50%	7.83E-04	3.92E-04	0.0117	0.007	3.19E-03	49%	7.09E-04	3.55E-04
				23	1350	0.0454	0.0282	9.26E-03	35%	2.06E-03	1.03E-03	0.3616	0.2247	7.37E-02	36%	1.64E-02	8.19E-03	0.0129	0.0080	2.62E-03	37%	5.83E-04	2.91E-04	0.0119	0.007	2.42E-03	37%	5.40E-04	2.70E-04
				24	1350	0.0449	0.0279	9.16E-03	35%	2.03E-03	1.02E-03	0.3602	0.2238	7.34E-02	36%	1.63E-02	8.16E-03	0.0128	0.0080	2.62E-03	37%	5.81E-04	2.91E-04	0.0118	0.007	2.42E-03	37%	5.37E-04	2.68E-04
L159	CKR Landscape Deck (SWB)	CKRLOSWB	0.195	1	1300	0.0275	0.0171	1.20E-03	18%	2.67E-04	1.34E-04	0.2067	0.1284	9.04E-03	20%	2.01E-03	1.00E-03	0.0077	0.0048	3.38E-04	24%	7.50E-05	3.75E-05	0.0071	0.004	3.12E-04	24%	6.92E-05	3.46E-05
				2	1300	0.0274	0.0170	1.20E-03	18%	2.67E-04	1.33E-04	0.2072	0.1287	9.07E-03	20%	2.01E-03	1.01E-03	0.0077	0.0048	3.38E-04	24%	7.47E-05	3.73E-05	0.0071	0.004	3.10E-04	24%	6.89E-05	3.45E-05
				3	700	0.0279	0.0173	6.57E-04	10%	1.46E-04	7.30E-05	0.2110	0.1311	4.97E-03	11%	1.10E-03	5.52E-04	0.0078	0.0048	1.84E-04	13%	4.08E-05	2.04E-05	0.0072	0.004	1.69E-04	13%	3.76E-05	1.88E-05
				4	700	0.0279	0.0173	6.58E-04	10%	1.46E-04	7.31E-05	0.2118	0.1316	4.99E-03	11%	1.11E-03	5.54E-04	0.0078	0.0048	1.83E-04	13%	4.08E-05	2.04E-05	0.0072	0.004	1.69E-04	13%	3.76E-05	1.88E-05
				5	700	0.0272	0.0169	6.42E-04	10%	1.43E-04	7.13E-05	0.2113	0.1313	4.98E-03	11%	1.11E-03	5.53E-04	0.0076	0.0047	1.79E-04	13%	3.97E-05	1.98E-05	0.0070	0.004	1.65E-04	13%	3.66E-05	1.83E-05
				6	1350	0.0276	0.0171	1.25E-03	19%	2.78E-04	1.39E-04	0.2109	0.1311	9.58E-03	21%	2.13E-03	1.06E-03	0.0076	0.0047	3.46E-04	24%	7.69E-05	3.84E-05	0.0070	0.004	3.19E-04	24%	7.09E-05	3.55E-05
				7	2000	0.0277	0.0172	1.87E-03	28%	4.15E-04	2.07E-04	0.2119	0.1317	1.43E-02	31%	3.17E-03	1.58E-03	0.0077	0.0048	5.15E-04	36%	1.15E-04	5.73E-05	0.0071	0.004	4.75E-04	36%	1.06E-04	5.28E-05
				8	3350	0.0297	0.0184	3.35E-03	50%	7.43E-04	3.72E-04	0.2296	0.1427	2.59E-02	56%	5.75E-03	2.88E-03	0.0078	0.0048	8.77E-04	62%	1.95E-04	9.75E-05	0.0072	0.004	8.08E-04	61%	1.79E-04	8.97E-05
				9	4700	0.0420	0.0261	6.65E-03	100%	1.48E-03	7.39E-04	0.2917	0.1813	4.61E-02	100%	1.03E-02	5.13E-03	0.0090	0.0056	1.42E-03	100%	3.16E-04	1.58E-04	0.0083	0.005	1.31E-03	100%	2.92E-04	1.46E-04
				10	3950	0.0336	0.0209	4.67E-03	67%	9.94E-04	4.97E-04	0.2477	0.1539	3.29E-02	71%	7.32E-03	3.66E-03	0.0082	0.0051	1.09E-03	76%	2.41E-04	1.21E-04	0.0075	0.005	1.00E-03	76%	2.23E-04	1.11E-04
				11	3300	0.0298	0.0185	3.31E-03	50%	7.35E-04	3.67E-04	0.2284	0.1419	2.54E-02	55%	5.64E-03	2.82E-03	0.0078	0.0049	8.71E-04	61%	1.93E-04	9.67E-05	0.0072	0.004	8.01E-04	61%	1.78E-04	8.90E-05
				12	3300	0.0295	0.0183	3.28E-03	49%	7.28E-04	3.64E-04	0.2272	0.1412	2.52E-02	55%	5.61E-03	2.80E-03	0.0078	0.0048	8.66E-04	61%	1.92E-04	9.62E-05	0.0072	0.004	7.97E-04	61%	1.77E-04	8.85E-05
				13	3250	0.0291	0.0181	3.18E-03	48%	7.07E-04	3.54E-04	0.2238	0.1390	2.45E-02	53%	5.44E-03	2.72E-03	0.0077	0.0048	8.48E-04	60%	1.88E-04	9.42E-05	0.0072	0.004	7.83E-04	60%	1.74E-04	8.70E-05
				14	3250	0.0292	0.0181	3.19E-03	48%	7.09E-04	3.55E-04	0.2245	0.1395	2.46E-02	53%	5.46E-03	2.73E-03	0.0078	0.0048	8.49E-04	60%	1.89E-04	9.44E-05	0.0072	0.004	7.85E-04	60%	1.74E-04	8.72E-05
				15	3850	0.0326	0.0203	4.23E-03	64%	9.39E-04	4.69E-04	0.2382	0.1480	3.09E-02	67%	6.86E-03	3.43E-03	0.0082	0.0051	1.06E-03	74%	2.35E-04	1.17E-04	0.0075	0.005	9.73E-04	74%	2.16E-04	1.08E-04
				16	3800	0.0324	0.0201	4.14E-03	62%	9.20E-04	4.60E-04	0.2376	0.1476	3.04E-02	66%	6.75E-03	3.38E-03	0.0081	0.0050	1.04E-03	73%	2.31E-04	1.15E-04	0.0075	0.005	9.57E-04	73%	2.13E-04	1.06E-04
				17	3800	0.0321	0.0199	4.10E-03	62%	9.11E-04	4.56E-04	0.2374	0.1475	3.04E-02	66%	6.75E-03	3.37E-03	0.0081	0.0050	1.03E-03	72%	2.29E-04	1.15E-04	0.0074	0.005	9.49E-04	72%	2.11E-04	1.05E-04
				18	3800	0.0320	0.0199	4.09E-03	62%	9.09E-04	4.55E-04	0.2371	0.1473	3.03E-02	66%	6.74E-03	3.37E-03	0.0081	0.0050	1.03E-03	72%	2.29E-04	1.14E-04	0.0074	0.005	9.49E-04	72%	2.11E-04	1.05E-04
				19	4300	0.0342	0.0213	4.96E-03	75%	1.10E-03	5.51E-04	0.2534	0.1574	3.67E-02	79%	8.15E-03	4.07E-03	0.0081	0.0050	1.17E-03	82%	2.61E-04	1.30E-04	0.0074	0.005	1.07E-03	82%	2.38E-04	1.19E-04
				20	3150	0.0285	0.0177	3.02E-03	45%	6.72E-04	3.36E-04	0.2166	0.1346	2.30E-02	50%	5.10E-03	2.55E-03	0.0078	0.0048	8.26E-04	58%	1.84E-04	9.18E-05	0.0072	0.004	7.59E-04	58%	1.69E-04	8.43E-05
				21	2950	0.0279	0.0173	2.40E-03	36%	5.33E-04	2.66E-04	0.2063	0.1295	1.79E-02	39%	3.97E-03	1.99E-03	0.0078	0.0048	6.98E-04	47%	1.56E-04	7.43E-05	0.0072	0.004	6.15E-04	47%	1.37E-04	6.84E-05
				22	2950	0.0277	0.0172	2.37E-03	36%	5.27E-04	2.64E-04	0.2083	0.1295	1.79E-02	39%	3.97E-03	1.99E-03	0.0077	0.0048	6.82E-04	46%	1.47E-04	7.35E-05	0.0071	0.004	6.09E-04	46%	1.35E-04	6.77E-05
				23	1950	0.0268	0.0167	1.76E-03	26%	3.92E-04	1.96E-04	0.2044	0.1270	1.34E-02	29%	2.98E-03	1.49E-03	0.0076	0.0047	4.98E-04	35%	1.11E-04	5.53E-05	0.0070	0.004	4.60E-04	35%	1.02E-04	5.11E-05
				24	1950	0.0271	0.0169	1.78E-03	27%	3.96E-04	1.98E-04	0.2055	0.1277	1.35E-02	29%	3.00E-03	1.50E-03	0.0077	0.0048	5.02E-04	35%	1.12E-04	5.58E-05	0.0071	0.004	4.63E-04	35%	1.03E-04	5.15E-05
L158	CKR Landscape Deck (NEB)	CKRLDNEB	0.195	1	900	0.046	0.028	1.39E-03	24%	3.08E-04	1.54E-04	0.363	0.225	1.10E-02	24%	2.44E-03	1.22E-03	0.013	0.008	3.92E-04	25%	8.72E-05	4.36E-05	0.013	0.008	3.82E-04	26%	8.49E-05	4.25E-05
				2	950	0.046	0.029	1.47E-03	25%	3.27E-04	1.64E-04	0.365	0.227	1.17E-02	26%	2.60E-03	1.30E-03	0.013	0.008	4.20E-04	27%	9.32E-05	4.66E-05	0.011	0.007	3.55E-04	25%	7.90E-05	3.95E-05
				3	500	0.045	0.028	7.60E-04	13%	1.69E-04	8.44E-05	0.369	0.229	6.20E-03	14%	1.38E-03	6.89E-04	0.013	0.008	2.17E-04	14%	4.83E-05	2.41E-05	0.011	0.007	1.84E-04	13%	4.10E-05	2.05E-05
				4	500	0.045	0.028	7.51E-04	13%	1.67E-04	8.35E-05	0.367	0.228	6.17E-03	13%	1.37E-03	6.85E-04	0.013	0.008	2.17E-04	14%	4.81E-05	2.41E-05	0.011	0.007	1.84E-04	13%	4.08E-05	2.04E-05
				5	500	0.044	0.028	7.46E-04	13%	1.66E-04	8.29E-05	0.370	0.230	6.23E-03	14%	1.38E-03	6.92E-04	0.013	0.008	2.16E-04	14%	4.81E-05	2.40E-05	0.011	0.007	1.83E-04	13%	4.07E-05	2.04E-05
				6	950	0.046	0.029	1.48E-03	25%	3.28E-04	1.64E-04	0.373	0.232	1.19E-02	26%	2.65E-03	1.32E-03	0.013	0.008	4.20E-04	27%	9.33E-05	4.66E-05	0.011	0.007	3.56E-04	25%	7.91E-05	3.95E-05
				7	1400	0.046	0.029	2.17E-03	37%	4.82E-04	2.41E-04	0.373	0.232	1.76E-02	39%	3.91E-03	1.96E-03	0.012	0.008	5.78E-04	37%	1.28E-04	6.39E-05	0.011	0.007	5.25E-04	37%	1.18E-04	5.88E-05
				8	2350	0.046	0.029	3.64E-03	62%	8.08E-04	4.04E-04	0.377	0.234	2.98E-02	65%	6.62E-03	3.31E-03	0.013	0.008	1.01E-03	64%	2.23E-04	1.12E-04	0.011	0.007	8.94E-04	62%	1.99E-04	9.93E-05
				9	2950	0.047	0.029	4.71E-03	81%	1.05E-03	5.23E-04	0.396	0.246	3.94E-02	86%	8.75E-03	4.37E-03	0.012	0.008	1.24E-03	79%	2.75E-04	1.37E-04	0.011	0.007	1.12E-03	77%	2.48E-04	1.24E-04
				10	2800	0.048	0.030	4.56E-03	78%	1.01E-03	5.06E-04	0.389	0.242	3.67E-02	80%	8.15E-03	4.08E-03	0.013	0.008	1.23E-03	79%	2.74E-04	1.37E-04	0.012	0.008	1.14E-03	79%	2.53E-04

Appendix 4.9 Traffic Forecast (Years 2033, 2040 and 2048) for Air Quality Impact Assessment

Project Title: URA KC-018 AND KC-019 IN MA TAU KOK	J7167	Figure No. AQIA/5AB	Revision B
Figure Title: LOCATION OF TRAFFIC DATA FOR AIR QUALITY IMPACT ASSESSMENT		Designed by THC / Drawn by CCL / Checked by KC	
		Scale in A3: N.T.S.	Date: 21 SEP 2022

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

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ANNEX I – SPEED LIMIT AND ROAD CLASSIFICATION

Job No.: J7167 Date: 08 四月 2022

Link ID	Road Section	From Road	To Road	Speed Limit (kph)	Road Classification
L001	Shing Kai Road (EB)	Unnamed Road	Muk Tai Street	50	DD
L002	Shing Kai Road (WB)	Shing Fung Road	Unnamed Road	50	DD
L003	Shing Kai Road (NB)	Sung Wong Toi Road	Unnamed Road	50	DD
L004	Shing Kai Road (SB)	Unnamed Road	Sung Wong Toi Road	50	DD
L005	To Kwa Wan Road (NB)	Mok Cheung Street	Sung Wong Toi Road	50	DD
L006	To Kwa Wan Road (SB)	Sung Wong Toi Road	Mok Cheong Street	50	DD
L007	Sung Wong Toi Road (EB)	Kowloon City Road	Shing Kai Road	50	DD
L008	Sung Wong Toi Road (WB)	To Kwa Wan Road	Kowloon City Road	50	DD
L009	Olympic Avenue Slip Road (SB)	Olympic Avenue	Sung Wong Toi Road	50	DD
L010	Sung Wong Toi Road (WB)	Kowloon City Road	Olympic Avenue Slip Road	50	DD
L011	Kowloon City Road (NB)	Mok Cheong Street	Sung Wong Toi Road	50	UT
L012	Olympic Avenue (EB)	Hang Wan Road	Kowloon City Road	50	DD
L013	Kai Tak Tunnel Slip Road (WB)	Kai Tak Tunnel	Sung Wong Toi Road	70	UT
L014	Sung Wong Toi Road (WB)	Olympic Avenue Slip Road	Kai Tak Tunnel Slip Road	50	DD
L016	Muk Yan Street (EB)	Muk Shun Street	End of section	50	LD
L017	Muk Yan Street (WB)	End of section	Muk Shun Street	50	LD
L051	Mok Cheong Street (EB)	Pak Tai Street	Pau Chung Street	50	DD
L052	Mok Cheong Street (EB)	Pau Chung Street	Kowloon City Road	50	DD
L053	Mok Cheong Street (EB)	Kowloon City Road	To Kwa Wan Road	50	DD
L054	To Kwa Wan Road (NB)	Ma Tau Chung Road	Mok Cheong Street	50	DD
L055	To Kwa Wan Road (SB)	Mok Cheong Street	Ma Tau Chung Road	50	DD
L056	Ma Tau Kok Road (WB)	To Kwa Wan Road	Kowloon City Road	50	DD
L057	Kowloon City Road (NB)	Ma Tau Chung Road	Mok Cheung Street	50	UT
L058	Ma Tau Kok Road (WB)	Kowloon City Road	Pau Chung Street	50	DD
L059	Pau Chung Street (SB)	Mok Cheong Street	Ma Tau Kok Road	50	LD
L060	Ma Tau Kok Road (WB)	Pau Chung Street	Pak Tai Street	50	DD
L074	San Shan Road (EB)	Pak Tai Street	Pau Chung Street	50	LD
L075	Pau Chung Street (NB)	San Shan Road	Ma Tau Kok Road	50	LD
L076	Pau Chung Street (SB)	Ma Tau Kok Road	San Shan Road	50	LD
L077	Pau Chung Street (NB)	Ma Hang Chung Road	San Shan Road	50	LD
L078	Pau Chung Street (SB)	San Shan Road	Ma Hang Chung Road	50	LD
L079	San Shan Road (WB)	Kowloon City Road	Pau Chung Street	50	LD
L080	Kowloon City Road (NB)	E Kowloon Corridor Slip Road	Ma Tau Kok Road	50	DD
L081	Kowloon City Road (NB)	San Shan Road	E Kowloon Corridor Slip Road	50	DD
L082	E Kowloon Corridor Slip Road (NB)	San Shan Road	Kowloon City Road	50	UT
L083	East Kowloon Corridor (NB)	San Shan Road	Kai Tak Tunnel	70	UT
L084	San Shan Road (EB)	Kai Tak Tunnel	To Kwa Wan Road	50	DD
L085	East Kowloon Corridor (SB)	Kai Tak Tunnel	San Shan Road	70	UT
L086	San Shan Road (WB)	To Kwa Wan Road	East Kowloon Corridor	50	DD
L087	To Kwa Wan Road (NB)	San Shan Road	Ma Tau Kok Road	50	DD
L088	To Kwa Wan Road (SB)	Ma Tau Kok Road	San Ma Tau Street	50	DD
L089	San Ma Tau Street (EB)	To Kwa Wan Road	End of section	50	LD
L090	San Ma Tau Street (WB)	End of section	To Kwa Wan Road	50	LD
L091	To Kwa Wan Road (NB)	San Ma Tau Street	San Shan Road	50	DD
L092	To Kwa Wan Road (SB)	San Ma Tau Street	San Ma Tau Street	50	DD
L093	San Ma Tau Street (EB)	To Kwa Wan Road	Mei King Street	50	LD
L094	San Ma Tau Street (EB)	Mei King Street	Wai King Street	50	LD
L095	San Ma Tau Street (EB)	Wai King Street	Long Yuet Street	50	LD
L096	Long Yuet Street (SB)	San Ma Tau Street	Shun Fung Street	50	LD
L097	Wai King Street (SB)	San Ma Tau Street	Kwei Chow Street	50	LD
L098	Mei King Street (NB)	Kwei Chow Street	San Ma Tau Street	50	LD
L099	To Kwa Wan Road (SB)	San Ma Tau Street	Kwei Chow Street	50	DD
L100	To Kwa Wan Road (NB)	Kwei Chow Street	San Ma Tau Street	50	DD

ANNEX I – SPEED LIMIT AND ROAD CLASSIFICATION

Job No.: J7167 Date: 08 四月 2022

Link ID	Road Section	From Road	To Road	Speed Limit (kph)	Road Classification
L101	Kwei Chow Street (WB)	Mei King Street	To Kwa Wan Road	50	LD
L102	Kwei Chow Street (WB)	Mei King Street	Mei Kwong Street	50	LD
L103	Kwei Chow Street (WB)	Wai King Street	Mei Kwong Street	50	LD
L104	Kwei Chow Street (WB)	Wai King Street	Long Yuet Street	50	LD
L105	Shun Fung Street (SB)	Long Yuet Street	Yuk Yat Street	50	LD
L106	Yuk Yat Street (NB)	Shun Fung Street	Kwei Chow Street	50	LD
L107	Yuk Yat Street (NB)	Lok Shan Road	Shun Fung Street	50	LD
L108	Yuk Yat Street (SB)	Shun Fung Street	Lok Shan Road	50	LD
L109	Mei Kwong Street (NB)	Mei King Street	Kwei Chow Street	50	LD
L110	Mei King Street (SB)	Kwei Chow Street	Mei Kwong Street	50	LD
L111	Mei King Street (SB)	Mei Kwong Street	Lok Shan Road	50	LD
L112	To Kwa Wan Road (NB)	Lok Shan Road	Sheung Heung Road	50	DD
L113	To Kwa Wan Road (SB)	Sheung Heung Road	Lok Shan Road	50	DD
L114	Sheung Heung Road (EB)	Cheung Ning Street	To Kwa Wan Road	50	LD
L115	Cheung Ning Street (NB)	Sheung Heung road	End of section	50	LD
L116	Cheung Ning Street (SB)	End of section	Sheung Heung Road	50	LD
L117	Cheung Ning Street (NB)	Lok Shan Road	Sheung Heung Road	50	LD
L118	Sheung Heung Road (EB)	Ha Heung Road	Cheung Ning Street	50	LD
L119	Ha Heung Road (NB)	Sheung Heung Road	Sheung Heung Road	50	LD
L120	Ha Heung Road (NB)	Lok Shan Road	Sheung Heung Road	50	LD
L121	Sheung Heung Road (EB)	Kowloon City Road	Ha Heung Road	50	LD
L122	Sheung Heung Road (WB)	Ha Heung Road	Kowloon City Road	50	LD
L123	Kowloon City Road (NB)	Lok Shan Road	Sheung Heung Road	50	DD
L124	Kowloon City Road (SB)	Sheung Heung Road	Lok Shan Road	50	DD
L125	East Kowloon Corridor (NB)	Lok Shan Road	E Kowloon Corridor Slip Road	70	UT
L126	East Kowloon Corridor (SB)	San Shan Road	Lok Shan Road	70	UT
L127	Kowloon City Road (NB)	Ma Hang Chung Road	San Shan Road	50	DD
L128	Ma Hang Chung Road (WB)	Kowloon City Road	Pau Chung Street	50	LD
L129	Kowloon City Road (NB)	Sheung Heung Road	Ma Hang Chung Road	50	DD
L130	Sheung Heung Road (EB)	Pau Chung Street	Kowloon City Road	50	LD
L131	Sheung Heung Road (WB)	Kowloon City Road	Pau Chung Street	50	LD
L132	Pau Chung Street (NB)	Sheung Heung Road	Ma Hang Chung Road	50	LD
L133	Pau Chung Street (SB)	Ma Hang Chung Road	Sheung Heung Road	50	LD
L152	Ma Hang Chung Road (WB)	Pau Chung Street	Pak Tai Street	50	LD
L156	Shing Fung Road (WB)	Shing Fung Road	Shing Fung Road	50	DD
L157	Shing Fung Road (EB)	Shing Fung Road	Shing Fung Road	50	DD
L158	Central Kowloon Route (EB)	Central Kowloon Route	Central Kowloon Route	80	UT
L159	Central Kowloon Route (WB)	Central Kowloon Route	Central Kowloon Route	80	UT

Note: UT – Urban Trunk Road
DD – District Distributor
LD – Local Distributor

TABLE D – HOURLY AVERAGE SPEED

YEAR 2033 TRAFFIC FORECAST

Job No.: J7167 Date: 08 四月 2022

Link ID	Average Speed (kph)																							
From	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
To	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
L001	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.25	37.50	39.00	39.25	39.25	38.75	39.00	38.75	38.50	38.25	37.75	37.50	38.50	39.00	39.25	39.25	39.75
L002	40.00	40.00	40.00	40.00	40.00	40.00	39.67	37.67	36.33	38.67	39.00	39.33	38.67	39.00	38.67	38.33	38.00	37.67	37.67	38.33	38.67	39.00	39.00	39.67
L003	39.67	40.00	40.00	40.00	40.00	40.00	39.33	36.67	36.00	38.00	38.33	38.33	38.00	38.00	37.67	37.33	36.67	35.67	35.33	37.00	37.33	37.67	38.00	39.00
L004	40.00	40.00	40.00	40.00	40.00	40.00	40.00	37.67	36.33	38.67	39.00	39.00	38.67	39.00	38.67	38.33	37.67	37.33	37.33	38.00	38.33	39.00	39.00	39.67
L005	39.33	39.67	39.67	39.67	39.67	39.33	38.67	35.67	34.33	37.00	37.00	37.33	36.67	37.00	36.67	36.33	35.67	34.33	34.00	35.67	36.67	37.00	37.33	38.33
L006	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.33	37.67	39.00	39.33	39.33	39.00	39.33	39.00	38.67	38.33	37.67	37.67	38.67	39.00	39.33	39.33	40.00
L007	39.00	40.00	39.50	39.50	40.00	39.50	39.00	36.00	35.00	37.00	37.50	37.50	37.00	37.00	37.00	36.50	36.00	34.50	34.00	36.00	36.50	37.00	37.50	38.50
L008	38.50	39.00	39.00	39.00	39.00	38.50	37.50	33.00	31.50	35.00	35.50	36.00	35.00	35.00	35.00	34.00	33.00	32.00	32.00	33.50	34.50	35.50	36.00	37.00
L009	39.00	39.00	39.00	39.00	39.00	39.00	38.00	35.00	34.00	37.00	37.00	37.00	37.00	37.00	37.00	36.00	35.00	33.00	34.00	35.00	36.00	37.00	37.00	38.00
L010	36.50	37.50	37.50	37.50	37.50	36.50	34.50	28.00	26.00	31.50	32.00	32.50	31.00	31.50	31.00	29.50	28.50	26.50	26.00	29.00	30.50	32.00	32.00	34.50
L011	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L012	39.33	39.67	39.67	39.67	40.00	39.33	39.00	36.00	35.00	37.00	37.33	37.67	37.00	37.33	37.00	36.33	35.67	34.33	34.00	36.00	36.67	37.33	37.33	38.33
L013	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	68.61	65.83	70.00	70.00	70.00	70.00	70.00
L014	37.33	38.33	38.00	38.00	38.33	37.67	36.00	30.67	29.00	33.00	34.00	34.33	33.00	33.67	33.00	32.00	30.67	28.67	28.67	31.33	32.67	33.67	34.00	35.67
L016	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L017	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L051	39.50	40.00	40.00	40.00	40.00	39.50	39.00	36.50	35.50	37.50	37.50	37.50	37.00	37.50	37.00	37.00	36.50	35.50	35.50	36.50	37.00	37.50	38.00	38.50
L052	40.00	40.00	40.00	40.00	40.00	40.00	39.89	38.14	37.44	38.84	38.84	39.19	38.84	38.84	38.84	38.49	38.14	37.79	37.79	38.49	38.84	39.19	39.19	39.54
L053	38.50	39.50	39.50	39.50	39.50	39.00	38.00	34.50	32.00	35.50	36.00	36.50	35.50	36.00	35.50	35.00	34.00	33.50	33.00	34.50	35.50	36.00	36.00	37.50
L054	40.00	40.00	40.00	40.00	40.00	40.00	39.67	38.00	37.67	38.67	39.00	39.00	38.67	38.67	38.67	38.33	38.00	37.00	37.00	38.00	38.67	39.00	39.00	39.67
L055	39.33	40.00	40.00	39.67	40.00	39.33	38.67	35.67	33.67	36.67	37.00	37.33	36.67	37.00	36.67	36.00	35.33	35.00	35.00	36.00	36.67	37.00	37.33	38.33
L056	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.49	38.49	39.19	39.19	39.54	39.19	39.19	39.19	39.19	38.49	38.14	37.79	38.84	39.19	39.54	39.54	39.89
L057	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L058	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	39.50	39.50	39.50	39.50	39.50	39.50	39.00	39.00	39.00	38.50	39.00	39.50	39.50	39.50	40.00
L059	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L060	40.00	40.00	40.00	40.00	40.00	40.00	39.89	38.32	38.84	38.84	39.37	39.37	38.84	38.84	38.84	38.84	38.32	38.32	37.79	38.84	38.84	39.37	39.37	39.89
L074	29.50	30.00	30.00	30.00	30.00	29.50	29.50	28.25	27.00	28.25	28.25	29.50	28.25	28.25	28.25	28.25	28.25	27.00	27.00	28.25	28.25	28.25	29.50	29.50
L075	29.50	29.50	29.50	29.50	29.50	29.50	29.50	24.50	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	24.50	24.50	27.00	27.00	27.00	27.00
L076	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00
L077	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L078	27.00	27.00	27.00	27.00	27.00	27.00	24.50	22.00	19.50	22.00	24.50	24.50	22.00	24.50	22.00	22.00	22.00	19.50	19.50	22.00	22.00	24.50	24.50	24.50
L079	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
L080	39.50	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	37.50	38.00	38.00	37.50	38.00	37.50	37.00	37.00	36.00	35.00	37.00	37.50	38.00	38.00	39.00
L081	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	37.00	37.00	37.00	38.00	38.00	39.00	39.00	39.00
L082	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L083	70.00	70.00	70.00	70.00	70.00	70.00	68.61	54.03	50.56	54.03	56.81	58.19	61.67	65.14	60.28	58.89	60.28	45.69	42.50	57.50	58.19	60.97	63.06	70.00
L084	39.00	39.50	40.00	40.00	40.00	40.00	38.50	36.00	34.00	36.00	36.50	36.50	37.50	38.00	37.00	36.50	37.00	34.50	35.00	36.50	36.50	37.00	37.50	38.50
L085	70.00	70.00	70.00	70.00	70.00	70.00	70.00	69.55	66.58	68.81	70.00	70.00	70.00	70.00	70.00	70.00	70.00	65.09	64.35	70.00	70.00	70.00	70.00	70.00
L086	39.00	39.00	39.00	39.00	39.00	39.00	38.00	35.00	32.00	36.00	36.00	36.00	35.00	36.00	35.00	35.00	34.00	34.00	34.00	35.00	36.00	37.00	37.00	38.00
L087	39.75	40.00	40.00	40.00	40.00	40.00	39.25	37.00	36.75	38.00	38.00	38.25	37.75	38.00	37.75	37.50	37.00	36.00	35.50	37.25	37.75	38.25	38.25	39.00
L088	40.00	40.00	40.00	40.00	40.00	40.00	39.75	37.50	36.00	38.25	38.50	38.75	38.25	38.25	38.25	37.75	37.25	37.00	37.00	37.75	38.25	38.50	38.75	39.50
L089	29.50	30.00	30.00	30.00	30.00	29.50	28.67	25.33	24.50	27.00	27.00	27.00	27.00	27.00	27.00	26.17	25.33	25.33	25.33	26.17	27.00	27.00	27.83	28.67
L090	28.67	29.50	29.50	29.50	29.50	29.50	27.83	25.33	24.50	26.17	26.17	26.17	26.17	26.17	25.33	25.33	24.50	24.50	24.50	25.33	26.17	27.00	27.00	27.83
L091	40.00	40.00	40.00	40.00	40.00	40.00	39.75	38.25	38.25	38.75	39.00	39.25	38.75	39.00	38.75	38.50	38.00	37.50	37.00	38.25	38.75	39.00	39.25	39.75
L092	39.00	40.00	40.00	39.67	40.00	39.67	38.33	35.67	34.00	36.67	37.00	37.33	36.67	36.67	36.67	36.00	35.33	35.00	35.00	35.67	36.33	37.00	37.00	38.00
L093	28.25	28.25	28.25	28.25	28.25	28.25	27.00	23.25	20.75	24.50	24.50	24.50	24.50	24.50	24.50	23.25	23.25	22.00	22.00	23.25	24.50	24.50	25.75	27.00
L094	25.33	27.00	27.00	27.00	27.00	25.33	23.67	17.00	15.33	20.33	20.33	20.33	20.33	20.33	20.33	18.67	17.00	17.00	15.33	18.67	20.33	20.33	22.00	23.67
L095	28.67	28.67	28.67	28.67	28.67	28.67	28.67	25.33	22.00	25.33	25.33	27.00	25.33	25.33	25.33	25.33	23.67	25.33	23.67	25.33	25.33	27.00	27.00	28.67
L096	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	17.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	19.50	19.50	22.00	22.00	24.50	24.50	24.50
L097	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	17.00	17.00	19.50	22.00	22.00	22.00	24.50

TABLE D – HOURLY AVERAGE SPEED

YEAR 2033 TRAFFIC FORECAST

Job No.: J7167 Date: 08 四月 2022

Link ID	Average Speed (kph)																							
From	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
To	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
L098	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	27.00	29.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	29.50	29.50	29.50	29.50
L099	39.67	40.00	40.00	40.00	40.00	40.00	39.00	36.67	35.33	37.67	37.67	38.00	37.67	37.67	37.33	37.00	36.67	36.33	36.33	36.67	37.33	37.67	38.00	38.67
L100	39.00	40.00	40.00	39.67	40.00	39.67	38.33	35.67	35.67	36.67	37.00	37.33	36.67	36.67	36.67	36.00	35.67	34.67	34.00	36.00	36.67	37.33	37.33	38.33
L101	30.00	30.00	30.00	30.00	30.00	30.00	29.50	27.63	27.63	28.25	28.88	28.88	28.25	28.25	28.25	28.25	27.63	27.00	27.00	27.63	28.25	28.88	28.88	29.50
L102	25.75	27.00	27.00	27.00	27.00	25.75	24.50	18.25	18.25	20.75	20.75	22.00	20.75	20.75	20.75	19.50	18.25	17.00	15.75	19.50	20.75	22.00	22.00	24.50
L103	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	20.75	22.00	22.00	23.25	22.00	22.00	20.75	20.75	19.50	18.25	17.00	20.75	22.00	23.25	23.25	24.50
L104	29.50	29.50	29.50	29.50	29.50	29.50	28.25	25.75	25.75	25.75	25.75	27.00	25.75	25.75	25.75	25.75	24.50	24.50	23.25	25.75	27.00	27.00	27.00	28.25
L105	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	14.50	19.50	19.50	22.00	19.50	19.50	19.50	19.50	17.00	19.50	17.00	19.50	22.00	22.00	24.50	24.50
L106	28.25	29.50	29.50	29.50	29.50	28.25	27.00	24.50	24.50	24.50	25.75	25.75	25.75	24.50	24.50	24.50	24.50	24.50	23.25	25.75	25.75	27.00	27.00	28.25
L107	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	19.50	17.00	22.00	22.00	24.50	24.50	24.50
L108	27.00	27.00	27.00	27.00	27.00	27.00	27.00	22.00	19.50	24.50	24.50	24.50	24.50	24.50	24.50	22.00	22.00	22.00	22.00	22.00	24.50	24.50	24.50	27.00
L109	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	29.50	29.50	29.50	29.50	29.50
L110	29.14	30.00	30.00	30.00	30.00	29.14	29.14	27.71	27.71	27.71	27.71	29.14	27.71	27.71	27.71	27.71	27.71	27.71	26.29	27.71	29.14	29.14	29.14	29.14
L111	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	27.71	29.14	29.14	29.14	29.14	30.00
L112	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.33	39.33	39.67	39.67	39.33	39.33	39.33	39.33	39.00	38.67	38.00	39.00	39.33	39.67	39.67	40.00
L113	39.00	39.67	39.67	39.67	39.67	39.33	38.00	35.00	34.00	36.33	36.67	37.00	36.00	36.33	36.00	35.67	35.00	34.33	34.00	35.33	36.00	36.67	36.67	37.67
L114	29.50	30.00	30.00	30.00	30.00	29.50	28.25	26.38	26.38	27.00	27.63	27.63	27.00	27.63	27.00	27.00	26.38	25.75	25.13	27.00	27.00	27.63	27.63	28.88
L115	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L116	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L117	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.50	29.50	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.50	29.50	29.50	29.50	30.00	30.00	30.00	30.00
L118	27.00	28.25	28.25	28.25	28.25	28.25	25.75	22.00	22.00	23.25	24.50	24.50	23.25	24.50	23.25	23.25	22.00	20.75	20.75	23.25	23.25	24.50	24.50	25.75
L119	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	29.50	29.50	29.50
L120	27.00	28.25	28.25	28.25	28.25	27.00	25.75	22.00	22.00	23.25	24.50	24.50	23.25	24.50	23.25	22.00	22.00	20.75	19.50	23.25	24.50	24.50	24.50	25.75
L121	24.50	27.00	27.00	24.50	27.00	24.50	22.00	14.50	14.50	17.00	19.50	19.50	17.00	19.50	19.50	17.00	17.00	14.50	14.50	17.00	19.50	19.50	19.50	22.00
L122	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	22.00	22.00	19.50	22.00	22.00	19.50	19.50	17.00	17.00	19.50	22.00	22.00	22.00	24.50
L123	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	38.00	38.00	38.00	38.00	38.00	38.00	37.00	37.00	37.00	36.00	38.00	38.00	39.00	39.00	39.00
L124	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	39.00	39.00	39.00	40.00	40.00	40.00	40.00
L125	70.00	70.00	70.00	70.00	70.00	70.00	67.22	49.86	47.08	57.50	58.89	60.97	56.81	58.19	56.11	54.03	49.86	38.75	32.50	49.86	54.03	57.50	58.89	65.14
L126	70.00	70.00	70.00	70.00	70.00	70.00	70.00	65.83	61.67	69.31	70.00	70.00	69.31	70.00	68.61	67.92	65.83	60.97	60.97	65.14	67.92	70.00	70.00	70.00
L127	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	36.00	37.00	38.00	38.00	37.00	38.00	38.00	37.00	37.00	36.00	36.00	37.00	38.00	38.00	38.00	39.00
L128	29.50	30.00	30.00	30.00	30.00	29.50	29.50	28.25	27.00	28.25	29.50	29.50	28.25	28.25	28.25	28.25	28.25	28.25	28.25	28.25	28.25	29.50	29.50	29.50
L129	38.00	39.00	39.00	39.00	39.00	39.00	37.00	34.00	33.00	35.00	36.00	36.00	35.00	36.00	35.00	35.00	34.00	33.00	33.00	35.00	36.00	36.00	36.00	38.00
L130	25.33	27.00	27.00	27.00	27.00	25.33	23.67	17.00	15.33	20.33	20.33	22.00	20.33	20.33	20.33	20.33	18.67	17.00	15.33	18.67	20.33	22.00	22.00	23.67
L131	27.00	29.50	29.50	27.00	29.50	27.00	27.00	24.50	24.50	24.50	27.00	27.00	24.50	24.50	24.50	24.50	24.50	24.50	22.00	24.50	24.50	24.50	27.00	27.00
L132	27.00	27.00	27.00	27.00	27.00	27.00	24.50	22.00	19.50	22.00	24.50	24.50	22.00	22.00	22.00	22.00	22.00	19.50	19.50	19.50	22.00	22.00	24.50	24.50
L133	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	24.50	24.50	27.00	27.00	27.00	27.00	27.00
L152	28.67	29.50	29.50	29.50	29.50	28.67	27.83	25.33	24.50	27.00	27.00	27.00	26.17	27.00	26.17	26.17	25.33	24.50	24.50	25.33	26.17	27.00	27.00	27.83
L156	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.67	40.00	39.67	40.00	40.00	40.00	40.00
L157	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.67	39.00	40.00	40.00	40.00	40.00	40.00
L158	80.00	80.00	80.00	80.00	80.00	80.00	80.00	75.17	69.00	70.54	75.17	75.68	75.68	75.68	71.57	71.57	72.08	72.08	64.37	76.71	80.00	80.00	80.00	80.00
L159	80.00	80.00	80.00	80.00	80.00	80.00	78.77	64.88	51.00	58.71	65.40	65.40	65.91	65.91	59.74	60.26	60.26	60.26	55.11	66.94	73.11	73.11	79.28	79.28

TABLE D – HOURLY AVERAGE SPEED

YEAR 2040 TRAFFIC FORECAST

Job No.: J7167 Date: 08 四月 2022

Link ID	Average Speed (kph)																						
From	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
To	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
L001	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.25	37.50	39.00	39.25	39.25	38.75	39.00	38.75	38.50	38.25	37.75	37.50	38.50	39.00	39.25	39.25	39.75
L002	40.00	40.00	40.00	40.00	40.00	40.00	39.67	37.67	36.33	38.67	39.00	39.00	38.67	39.00	38.67	38.33	38.00	37.67	37.67	38.33	38.67	39.00	39.00	39.67
L003	39.67	40.00	40.00	40.00	40.00	40.00	39.33	36.67	36.00	38.00	38.00	38.33	38.00	38.00	37.67	37.33	36.67	35.67	35.00	37.00	37.33	37.67	38.00	39.00
L004	40.00	40.00	40.00	40.00	40.00	40.00	40.00	37.67	36.33	38.67	38.67	39.00	38.67	39.00	38.67	38.33	37.67	37.33	37.33	38.00	38.33	39.00	39.00	39.67
L005	39.33	39.67	39.67	39.67	39.67	39.33	38.67	35.67	34.33	37.00	37.00	37.33	36.67	37.00	36.67	36.33	35.67	34.33	34.00	35.67	36.67	37.00	37.33	38.33
L006	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.33	37.67	39.00	39.33	39.33	39.00	39.33	39.00	38.67	38.33	37.67	37.67	38.67	39.00	39.33	39.33	40.00
L007	39.00	40.00	39.50	39.50	40.00	39.50	39.00	36.00	35.00	37.00	37.00	37.50	37.00	37.00	37.00	36.50	35.50	34.50	34.00	36.00	36.50	37.00	37.50	38.50
L008	38.50	39.00	39.00	39.00	39.00	38.50	37.50	33.00	31.50	35.00	35.50	36.00	35.00	35.00	35.00	34.00	33.00	32.00	32.00	33.50	34.50	35.50	36.00	37.00
L009	39.00	39.00	39.00	39.00	39.00	39.00	38.00	35.00	34.00	37.00	37.00	37.00	37.00	37.00	37.00	36.00	35.00	33.00	34.00	35.00	36.00	37.00	37.00	38.00
L010	36.50	37.50	37.50	37.00	37.50	36.50	34.50	28.00	26.00	31.00	32.00	32.50	31.00	31.50	31.00	29.50	28.50	26.50	26.00	29.00	30.50	31.50	32.00	34.50
L011	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L012	39.33	39.67	39.67	39.67	40.00	39.33	39.00	36.00	35.00	37.00	37.33	37.67	37.00	37.33	37.00	36.33	35.67	34.33	34.00	36.00	36.67	37.33	37.33	38.33
L013	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	68.61	65.83	70.00	70.00	70.00	70.00	70.00
L014	37.33	38.33	38.00	38.00	38.33	37.67	36.00	30.67	29.00	33.00	34.00	34.33	33.00	33.33	33.00	31.67	30.67	28.67	28.67	31.33	32.67	33.67	34.00	35.67
L016	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L017	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L051	39.50	40.00	40.00	40.00	40.00	39.50	39.00	36.50	35.50	37.50	37.50	37.50	37.00	37.50	37.00	37.00	36.50	35.50	35.50	36.50	37.00	37.50	38.00	38.50
L052	40.00	40.00	40.00	40.00	40.00	40.00	39.89	38.14	37.44	38.84	38.84	39.19	38.84	38.84	38.84	38.49	38.14	37.79	37.79	38.49	38.84	39.19	39.19	39.54
L053	38.50	39.50	39.50	39.50	39.50	39.00	38.00	34.50	32.00	35.50	36.00	36.00	35.50	36.00	35.50	35.00	34.00	33.00	33.00	34.50	35.50	36.00	36.00	37.50
L054	40.00	40.00	40.00	40.00	40.00	40.00	39.67	38.00	37.67	38.67	39.00	39.00	38.67	38.67	38.67	38.33	38.00	37.00	37.00	38.00	38.67	39.00	39.00	39.67
L055	39.33	40.00	40.00	39.67	40.00	39.33	38.67	35.67	33.67	36.67	37.00	37.33	36.67	37.00	36.67	36.00	35.33	35.00	35.00	35.67	36.67	37.00	37.33	38.33
L056	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.49	38.49	39.19	39.19	39.54	39.19	39.19	39.19	38.84	38.49	38.14	37.79	38.84	39.19	39.54	39.54	39.89
L057	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L058	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	39.50	39.50	39.50	39.50	39.50	39.50	39.00	39.00	39.00	38.50	39.00	39.50	39.50	39.50	40.00
L059	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L060	40.00	40.00	40.00	40.00	40.00	40.00	39.89	38.32	38.84	38.84	39.37	39.37	38.84	38.84	38.84	38.84	38.32	38.32	37.79	38.84	38.84	39.37	39.37	39.89
L074	29.50	30.00	30.00	30.00	30.00	29.50	29.50	28.25	27.00	28.25	28.25	29.50	28.25	28.25	28.25	28.25	28.25	27.00	27.00	28.25	28.25	28.25	29.50	29.50
L075	29.50	29.50	29.50	29.50	29.50	29.50	29.50	24.50	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	24.50	24.50	27.00	27.00	27.00	27.00
L076	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00
L077	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L078	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	24.50	24.50	22.00	24.50	22.00	22.00	22.00	19.50	19.50	22.00	22.00	24.50	24.50	24.50
L079	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
L080	39.50	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	37.50	38.00	38.00	37.50	38.00	37.50	37.00	37.00	36.00	35.00	37.00	37.50	38.00	38.00	39.00
L081	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	37.00	37.00	37.00	38.00	38.00	39.00	39.00	39.00
L082	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L083	70.00	70.00	70.00	70.00	70.00	70.00	68.61	53.33	50.56	54.03	56.81	58.19	61.67	65.14	60.28	58.89	60.28	45.00	42.50	57.50	58.19	60.97	63.06	70.00
L084	39.00	39.50	40.00	40.00	40.00	40.00	38.50	36.00	34.00	35.50	36.50	36.50	37.00	38.00	37.00	36.50	37.00	34.50	35.00	36.50	36.50	37.00	37.50	38.50
L085	70.00	70.00	70.00	70.00	70.00	70.00	70.00	69.55	66.58	68.81	70.00	70.00	70.00	70.00	70.00	70.00	70.00	64.35	64.35	70.00	70.00	70.00	70.00	70.00
L086	39.00	39.00	39.00	39.00	39.00	39.00	38.00	35.00	32.00	36.00	36.00	36.00	35.00	36.00	35.00	35.00	34.00	34.00	34.00	35.00	36.00	37.00	37.00	38.00
L087	39.75	40.00	40.00	40.00	40.00	40.00	39.25	37.00	36.50	38.00	38.00	38.25	37.75	38.00	37.75	37.50	37.00	36.00	35.50	37.00	37.75	38.00	38.25	39.00
L088	40.00	40.00	40.00	40.00	40.00	40.00	39.50	37.50	36.00	38.25	38.50	38.50	38.25	38.25	38.00	37.75	37.25	37.00	37.00	37.75	38.25	38.50	38.75	39.50
L089	29.50	30.00	30.00	30.00	30.00	29.50	28.67	25.33	24.50	27.00	27.00	27.00	27.00	27.00	27.00	26.17	25.33	25.33	25.33	26.17	27.00	27.00	27.83	28.67
L090	28.67	29.50	29.50	29.50	29.50	29.50	27.83	24.50	24.50	26.17	26.17	26.17	26.17	26.17	25.33	25.33	24.50	24.50	24.50	25.33	26.17	27.00	27.00	27.83
L091	40.00	40.00	40.00	40.00	40.00	40.00	39.75	38.00	38.25	38.75	39.00	39.25	38.75	39.00	38.75	38.50	38.00	37.50	37.00	38.25	38.75	39.00	39.25	39.75
L092	39.00	40.00	39.67	39.67	40.00	39.67	38.33	35.67	34.00	36.67	37.00	37.33	36.67	36.67	36.67	36.00	35.33	35.00	34.67	35.67	36.33	37.00	37.00	38.00
L093	28.25	28.25	28.25	28.25	28.25	28.25	27.00	23.25	20.75	24.50	24.50	24.50	24.50	24.50	24.50	23.25	23.25	22.00	22.00	23.25	24.50	24.50	24.50	27.00
L094	25.33	27.00	27.00	27.00	27.00	25.33	23.67	17.00	15.33	20.33	20.33	20.33	20.33	20.33	20.33	18.67	17.00	17.00	15.33	18.67	20.33	20.33	22.00	23.67
L095	28.67	28.67	28.67	28.67	28.67	28.67	28.67	25.33	22.00	25.33	25.33	27.00	25.33	25.33	25.33	23.67	25.33	23.67	25.33	25.33	25.33	27.00	27.00	28.67
L096	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	17.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	19.50	19.50	22.00	22.00	24.50	24.50	24.50
L097	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	17.00	17.00	19.50	22.00	22.00	22.00	24.50

TABLE D – HOURLY AVERAGE SPEED

YEAR 2040 TRAFFIC FORECAST

Job No.: J7167 Date: 08 四月 2022

Link ID	Average Speed (kph)																							
From	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
To	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
L098	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	27.00	29.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	29.50	29.50	29.50	29.50
L099	39.33	40.00	40.00	40.00	40.00	40.00	39.00	36.67	35.33	37.67	37.67	38.00	37.33	37.67	37.33	37.00	36.67	36.33	36.33	36.67	37.33	37.67	38.00	38.67
L100	39.00	40.00	40.00	39.67	40.00	39.67	38.33	35.67	35.67	36.67	37.00	37.33	36.67	36.67	36.67	36.00	35.67	34.67	34.00	36.00	36.67	37.33	37.33	38.33
L101	30.00	30.00	30.00	30.00	30.00	30.00	29.50	27.63	27.63	28.25	28.88	28.88	28.25	28.25	28.25	28.25	27.63	27.00	27.00	27.63	28.25	28.88	28.88	29.50
L102	25.75	27.00	27.00	27.00	27.00	25.75	24.50	18.25	18.25	20.75	20.75	22.00	20.75	20.75	20.75	19.50	18.25	17.00	15.75	19.50	20.75	22.00	22.00	24.50
L103	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	22.00	23.25	22.00	22.00	20.75	20.75	19.50	18.25	17.00	20.75	22.00	23.25	23.25	24.50
L104	29.50	29.50	29.50	29.50	29.50	29.50	28.25	25.75	25.75	25.75	25.75	27.00	25.75	25.75	25.75	25.75	24.50	24.50	23.25	25.75	27.00	27.00	27.00	28.25
L105	27.00	27.00	27.00	27.00	27.00	27.00	24.50	17.00	14.50	19.50	19.50	22.00	19.50	19.50	19.50	19.50	17.00	19.50	17.00	19.50	22.00	22.00	24.50	24.50
L106	28.25	29.50	29.50	29.50	29.50	28.25	27.00	24.50	24.50	24.50	25.75	25.75	25.75	24.50	24.50	24.50	24.50	24.50	23.25	25.75	25.75	27.00	27.00	28.25
L107	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	19.50	17.00	22.00	22.00	24.50	24.50	24.50
L108	27.00	27.00	27.00	27.00	27.00	27.00	27.00	22.00	19.50	24.50	24.50	24.50	24.50	24.50	24.50	22.00	22.00	22.00	22.00	22.00	24.50	24.50	24.50	27.00
L109	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	29.50	29.50	29.50	29.50	29.50
L110	29.14	30.00	30.00	30.00	30.00	29.14	29.14	27.71	27.71	27.71	27.71	29.14	27.71	27.71	27.71	27.71	27.71	27.71	26.29	27.71	29.14	29.14	29.14	29.14
L111	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	27.71	29.14	29.14	29.14	29.14	30.00
L112	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.33	39.33	39.67	39.67	39.33	39.33	39.33	39.33	39.00	38.67	38.00	39.00	39.33	39.67	39.67	40.00
L113	39.00	39.67	39.67	39.67	39.67	39.33	38.00	35.00	33.67	36.33	36.67	37.00	36.00	36.33	36.00	35.67	35.00	34.33	34.00	35.33	36.00	36.67	36.67	37.67
L114	29.50	30.00	30.00	30.00	30.00	29.50	28.25	26.38	26.38	27.00	27.63	27.63	27.00	27.63	27.00	27.00	26.38	25.75	25.13	27.00	27.00	27.63	27.63	28.88
L115	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L116	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L117	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.50	29.50	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.50	29.50	29.50	29.50	30.00	30.00	30.00	30.00
L118	27.00	28.25	28.25	28.25	28.25	28.25	25.75	22.00	22.00	23.25	24.50	24.50	23.25	24.50	23.25	23.25	22.00	20.75	20.75	23.25	23.25	24.50	24.50	25.75
L119	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	29.50	29.50	29.50
L120	27.00	28.25	28.25	28.25	28.25	27.00	25.75	22.00	22.00	23.25	24.50	24.50	23.25	24.50	23.25	22.00	22.00	20.75	19.50	22.00	23.25	24.50	24.50	25.75
L121	24.50	27.00	27.00	24.50	27.00	24.50	22.00	14.50	14.50	17.00	19.50	19.50	17.00	19.50	19.50	17.00	17.00	14.50	14.50	17.00	19.50	19.50	19.50	22.00
L122	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	22.00	22.00	19.50	22.00	22.00	19.50	19.50	17.00	17.00	19.50	22.00	22.00	22.00	24.50
L123	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	38.00	38.00	38.00	38.00	38.00	38.00	37.00	37.00	37.00	36.00	38.00	38.00	39.00	39.00	39.00
L124	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	39.00	39.00	39.00	40.00	40.00	40.00	40.00
L125	70.00	70.00	70.00	70.00	70.00	70.00	67.22	49.86	47.08	57.50	58.89	60.97	56.81	58.19	56.11	54.03	49.86	38.75	32.50	49.86	54.03	57.50	58.89	65.14
L126	70.00	70.00	70.00	70.00	70.00	70.00	70.00	65.14	61.67	69.31	70.00	70.00	69.31	70.00	68.61	67.92	65.14	60.97	60.97	64.44	67.92	70.00	70.00	70.00
L127	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	36.00	37.00	38.00	38.00	37.00	38.00	38.00	37.00	37.00	36.00	36.00	37.00	38.00	38.00	38.00	39.00
L128	29.50	30.00	30.00	30.00	30.00	29.50	29.50	28.25	27.00	28.25	29.50	29.50	28.25	28.25	28.25	28.25	28.25	28.25	28.25	28.25	28.25	29.50	29.50	29.50
L129	38.00	39.00	39.00	39.00	39.00	39.00	37.00	34.00	33.00	35.00	36.00	36.00	35.00	36.00	35.00	35.00	34.00	33.00	33.00	35.00	36.00	36.00	36.00	38.00
L130	25.33	27.00	27.00	27.00	27.00	25.33	23.67	17.00	15.33	20.33	20.33	22.00	20.33	20.33	20.33	18.67	18.67	17.00	15.33	18.67	20.33	20.33	22.00	23.67
L131	27.00	29.50	29.50	27.00	29.50	27.00	27.00	24.50	24.50	24.50	27.00	27.00	24.50	24.50	24.50	24.50	24.50	24.50	22.00	24.50	24.50	24.50	27.00	27.00
L132	27.00	27.00	27.00	27.00	27.00	27.00	24.50	22.00	19.50	22.00	24.50	24.50	22.00	22.00	22.00	22.00	22.00	19.50	19.50	19.50	22.00	22.00	24.50	24.50
L133	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	24.50	24.50	27.00	27.00	27.00	27.00	27.00
L152	28.67	29.50	29.50	29.50	29.50	28.67	27.83	25.33	24.50	27.00	27.00	27.00	26.17	27.00	26.17	26.17	25.33	24.50	23.67	25.33	26.17	27.00	27.00	27.83
L156	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.67	40.00	39.67	40.00	40.00	40.00	40.00
L157	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.67	39.00	40.00	40.00	40.00	40.00	40.00
L158	80.00	80.00	80.00	80.00	80.00	80.00	80.00	75.17	69.00	70.54	75.17	75.17	75.68	75.68	71.57	71.57	71.57	72.08	64.37	76.20	80.00	80.00	80.00	80.00
L159	80.00	80.00	80.00	80.00	80.00	80.00	78.77	64.88	50.10	58.71	65.40	65.40	65.40	65.40	59.74	59.74	60.26	60.26	55.11	66.94	73.11	73.11	79.28	79.28

TABLE D – HOURLY AVERAGE SPEED

YEAR 2048 TRAFFIC FORECAST

Job No.: J7167 Date: 08 四月 2022

Link ID	Average Speed (kph)																							
From	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
To	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
L001	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.25	37.50	39.00	39.25	39.25	38.75	39.00	38.75	38.50	38.25	37.75	37.50	38.50	39.00	39.25	39.25	39.75
L002	40.00	40.00	40.00	40.00	40.00	40.00	39.67	37.67	36.33	38.67	39.00	39.00	38.67	39.00	38.67	38.33	38.00	37.67	37.67	38.33	38.67	39.00	39.00	39.67
L003	39.67	40.00	40.00	40.00	40.00	40.00	39.33	36.67	36.00	38.00	38.00	38.33	38.00	38.00	37.67	37.33	36.67	35.67	35.00	37.00	37.33	37.67	38.00	39.00
L004	40.00	40.00	40.00	40.00	40.00	40.00	40.00	37.67	36.33	38.67	38.67	39.00	38.67	39.00	38.67	38.33	37.67	37.33	37.33	38.00	38.33	39.00	39.00	39.67
L005	39.33	39.67	39.67	39.67	39.67	39.33	38.67	35.67	34.33	37.00	37.00	37.33	36.67	37.00	36.67	36.33	35.67	34.33	34.00	35.67	36.67	37.00	37.33	38.33
L006	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.33	37.67	39.00	39.33	39.33	39.00	39.33	39.00	38.67	38.33	37.67	37.67	38.67	39.00	39.33	39.33	40.00
L007	39.00	40.00	39.50	39.50	40.00	39.50	39.00	36.00	35.00	37.00	37.00	37.50	37.00	37.00	37.00	36.50	35.50	34.50	34.00	36.00	36.50	37.00	37.50	38.50
L008	38.50	39.00	39.00	39.00	39.00	38.50	37.50	33.00	31.50	35.00	35.50	36.00	35.00	35.00	35.00	34.00	33.00	32.00	31.50	33.50	34.50	35.50	36.00	37.00
L009	39.00	39.00	39.00	39.00	39.00	39.00	38.00	35.00	34.00	37.00	37.00	37.00	37.00	37.00	37.00	36.00	35.00	33.00	34.00	35.00	36.00	37.00	37.00	38.00
L010	36.00	37.50	37.50	37.00	37.50	36.50	34.50	28.00	26.00	31.00	32.00	32.50	31.00	31.50	31.00	29.50	28.50	26.50	26.00	29.00	30.50	31.50	32.00	34.50
L011	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L012	39.33	39.67	39.67	39.67	40.00	39.33	39.00	35.67	35.00	37.00	37.33	37.67	37.00	37.33	37.00	36.33	35.67	34.33	34.00	36.00	36.67	37.33	37.33	38.33
L013	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	68.61	64.44	70.00	70.00	70.00	70.00	70.00
L014	37.33	38.33	38.00	38.00	38.33	37.67	36.00	30.67	29.00	33.00	33.67	34.33	33.00	33.33	33.00	31.67	30.67	28.67	28.67	31.33	32.33	33.67	33.67	35.67
L016	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L017	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L051	39.50	40.00	40.00	40.00	40.00	39.50	39.00	36.50	35.50	37.50	37.50	37.50	37.00	37.50	37.00	37.00	36.50	35.50	35.50	36.50	37.00	37.50	38.00	38.50
L052	40.00	40.00	40.00	40.00	40.00	40.00	39.89	38.14	37.44	38.84	38.84	39.19	38.84	38.84	38.84	38.49	38.14	37.79	37.79	38.14	38.84	39.19	39.19	39.54
L053	38.50	39.50	39.50	39.50	39.50	39.00	38.00	34.50	32.00	35.50	36.00	36.00	35.50	36.00	35.50	35.00	34.00	33.00	33.00	34.50	35.50	36.00	36.00	37.50
L054	40.00	40.00	40.00	40.00	40.00	40.00	39.67	38.00	37.67	38.67	39.00	39.00	38.67	38.67	38.67	38.33	38.00	37.00	37.00	38.00	38.67	39.00	39.00	39.67
L055	39.33	40.00	40.00	39.67	40.00	39.33	38.67	35.67	33.67	36.67	37.00	37.33	36.67	37.00	36.67	36.00	35.33	35.00	35.00	35.67	36.67	37.00	37.33	38.33
L056	40.00	40.00	40.00	40.00	40.00	40.00	40.00	38.49	38.49	39.19	39.19	39.54	39.19	39.19	39.19	38.84	38.49	38.14	37.79	38.84	39.19	39.19	39.54	39.89
L057	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L058	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	39.50	39.50	39.50	39.50	39.50	39.50	39.00	39.00	39.00	38.50	39.00	39.50	39.50	39.50	40.00
L059	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L060	40.00	40.00	40.00	40.00	40.00	40.00	39.89	38.32	38.84	38.84	39.37	39.37	38.84	38.84	38.84	38.84	38.32	38.32	37.79	38.84	38.84	39.37	39.37	39.89
L074	29.50	30.00	30.00	30.00	30.00	29.50	29.50	28.25	27.00	28.25	28.25	29.50	28.25	28.25	28.25	28.25	28.25	27.00	27.00	28.25	28.25	28.25	29.50	29.50
L075	29.50	29.50	29.50	29.50	29.50	29.50	29.50	24.50	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	24.50	24.50	27.00	27.00	27.00	27.00
L076	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00
L077	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L078	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	24.50	24.50	22.00	24.50	22.00	22.00	22.00	19.50	19.50	22.00	22.00	24.50	24.50	24.50
L079	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
L080	39.50	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	37.50	38.00	38.00	37.50	38.00	37.50	37.00	37.00	36.00	35.00	37.00	37.50	38.00	38.00	39.00
L081	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	37.00	37.00	37.00	38.00	38.00	39.00	39.00	39.00
L082	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L083	70.00	70.00	70.00	70.00	70.00	70.00	68.61	53.33	50.56	54.03	56.81	58.19	61.67	65.14	60.28	58.89	60.28	45.00	42.50	56.81	58.19	60.97	62.36	70.00
L084	39.00	39.50	40.00	40.00	40.00	40.00	38.50	36.00	34.00	35.50	36.50	36.50	37.00	38.00	37.00	36.50	37.00	34.50	35.00	36.50	36.50	37.00	37.50	38.50
L085	70.00	70.00	70.00	70.00	70.00	70.00	70.00	69.55	66.58	68.81	70.00	70.00	70.00	70.00	70.00	70.00	70.00	64.35	64.35	70.00	70.00	70.00	70.00	70.00
L086	39.00	39.00	39.00	39.00	39.00	39.00	38.00	35.00	32.00	36.00	36.00	36.00	35.00	36.00	35.00	35.00	34.00	34.00	34.00	35.00	36.00	37.00	37.00	38.00
L087	39.75	40.00	40.00	40.00	40.00	40.00	39.25	37.00	36.50	38.00	38.00	38.25	37.75	38.00	37.75	37.50	37.00	35.75	35.50	37.00	37.75	38.00	38.25	39.00
L088	40.00	40.00	40.00	40.00	40.00	40.00	39.50	37.50	36.00	38.25	38.50	38.50	38.25	38.25	38.00	37.75	37.25	37.00	37.00	37.50	38.00	38.50	38.75	39.50
L089	29.50	30.00	30.00	30.00	30.00	29.50	28.67	25.33	24.50	27.00	27.00	27.00	27.00	27.00	27.00	26.17	25.33	25.33	25.33	26.17	27.00	27.00	27.83	28.67
L090	28.67	29.50	29.50	29.50	29.50	29.50	27.83	24.50	24.50	26.17	26.17	26.17	26.17	26.17	25.33	25.33	24.50	24.50	24.50	25.33	26.17	27.00	27.00	27.83
L091	40.00	40.00	40.00	40.00	40.00	40.00	39.75	38.00	38.25	38.75	39.00	39.25	38.75	39.00	38.75	38.50	38.00	37.50	37.00	38.25	38.75	39.00	39.25	39.75
L092	39.00	40.00	39.67	39.67	40.00	39.67	38.33	35.33	34.00	36.67	37.00	37.33	36.67	36.67	36.67	36.00	35.33	35.00	34.67	35.67	36.33	37.00	37.00	38.00
L093	28.25	28.25	28.25	28.25	28.25	28.25	27.00	23.25	20.75	24.50	24.50	24.50	24.50	24.50	24.50	23.25	23.25	22.00	22.00	23.25	24.50	24.50	24.50	27.00
L094	25.33	27.00	27.00	27.00	27.00	25.33	23.67	17.00	15.33	20.33	20.33	20.33	20.33	20.33	20.33	18.67	17.00	17.00	15.33	18.67	20.33	20.33	22.00	23.67
L095	28.67	28.67	28.67	28.67	28.67	28.67	28.67	25.33	22.00	25.33	25.33	27.00	25.33	25.33	25.33	23.67	25.33	23.67	25.33	25.33	25.33	27.00	27.00	28.67
L096	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	17.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	19.50	19.50	22.00	22.00	24.50	24.50	24.50
L097	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	17.00	17.00	19.50	22.00	22.00	22.00	24.50

TABLE D – HOURLY AVERAGE SPEED

YEAR 2048 TRAFFIC FORECAST

Job No.: J7167 Date: 08 四月 2022

Link ID	Average Speed (kph)																							
From	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
To	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
L098	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	27.00	29.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	29.50	29.50	29.50	29.50
L099	39.33	40.00	40.00	40.00	40.00	40.00	39.00	36.67	35.33	37.67	37.67	38.00	37.33	37.67	37.33	37.00	36.67	36.33	36.33	36.67	37.33	37.67	38.00	38.67
L100	39.00	40.00	40.00	39.67	40.00	39.67	38.33	35.67	35.67	36.67	37.00	37.33	36.67	36.67	36.67	36.00	35.67	34.67	34.00	36.00	36.67	37.33	37.33	38.33
L101	30.00	30.00	30.00	30.00	30.00	30.00	29.50	27.63	27.63	28.25	28.88	28.88	28.25	28.25	28.25	28.25	27.63	27.00	27.00	27.63	28.25	28.88	28.88	29.50
L102	25.75	27.00	27.00	27.00	27.00	25.75	24.50	18.25	18.25	20.75	20.75	22.00	20.75	20.75	20.75	19.50	18.25	17.00	15.75	19.50	20.75	22.00	22.00	24.50
L103	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	22.00	23.25	22.00	22.00	20.75	20.75	19.50	18.25	17.00	20.75	22.00	23.25	23.25	24.50
L104	29.50	29.50	29.50	29.50	29.50	29.50	28.25	25.75	25.75	25.75	25.75	27.00	25.75	25.75	25.75	25.75	24.50	24.50	23.25	25.75	27.00	27.00	27.00	28.25
L105	27.00	27.00	27.00	27.00	27.00	27.00	24.50	17.00	14.50	19.50	19.50	22.00	19.50	19.50	19.50	19.50	17.00	19.50	17.00	19.50	22.00	22.00	24.50	24.50
L106	28.25	29.50	29.50	29.50	29.50	28.25	27.00	24.50	24.50	24.50	25.75	25.75	25.75	24.50	24.50	24.50	24.50	24.50	23.25	25.75	25.75	27.00	27.00	28.25
L107	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	19.50	19.50	17.00	22.00	22.00	24.50	24.50	24.50
L108	27.00	27.00	27.00	27.00	27.00	27.00	27.00	22.00	19.50	24.50	24.50	24.50	24.50	24.50	24.50	22.00	22.00	22.00	22.00	22.00	24.50	24.50	24.50	27.00
L109	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	29.50	29.50	29.50	29.50	29.50
L110	29.14	30.00	30.00	30.00	30.00	29.14	29.14	27.71	27.71	27.71	27.71	29.14	27.71	27.71	27.71	27.71	27.71	27.71	26.29	27.71	29.14	29.14	29.14	29.14
L111	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	29.14	27.71	29.14	29.14	29.14	29.14	30.00
L112	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.33	39.33	39.67	39.67	39.33	39.33	39.33	39.33	39.00	38.67	37.67	39.00	39.33	39.67	39.67	40.00
L113	39.00	39.67	39.67	39.67	39.67	39.33	38.00	35.00	33.67	36.00	36.67	37.00	36.00	36.33	36.00	35.67	35.00	34.33	34.00	35.33	36.00	36.67	36.67	37.67
L114	29.50	30.00	30.00	30.00	30.00	29.50	28.25	26.38	26.38	27.00	27.63	27.63	27.00	27.63	27.00	27.00	26.38	25.75	25.13	27.00	27.00	27.63	27.63	28.88
L115	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L116	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50	29.50
L117	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.50	29.50	30.00	30.00	30.00	30.00	30.00	30.00	30.00	29.50	29.50	29.50	29.50	30.00	30.00	30.00	30.00
L118	27.00	28.25	28.25	28.25	28.25	28.25	25.75	22.00	22.00	23.25	24.50	24.50	23.25	24.50	23.25	23.25	22.00	20.75	20.75	23.25	23.25	24.50	24.50	25.75
L119	29.50	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	29.50	29.50	29.50
L120	27.00	28.25	28.25	28.25	28.25	27.00	25.75	22.00	22.00	23.25	24.50	24.50	23.25	24.50	23.25	22.00	22.00	20.75	19.50	22.00	23.25	24.50	24.50	25.75
L121	24.50	27.00	27.00	24.50	27.00	24.50	22.00	14.50	14.50	17.00	19.50	19.50	17.00	19.50	19.50	17.00	17.00	14.50	14.50	17.00	19.50	19.50	19.50	22.00
L122	27.00	27.00	27.00	27.00	27.00	27.00	24.50	19.50	19.50	22.00	22.00	22.00	19.50	22.00	22.00	19.50	19.50	17.00	17.00	19.50	22.00	22.00	22.00	24.50
L123	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	37.00	38.00	38.00	38.00	38.00	38.00	38.00	37.00	37.00	37.00	36.00	38.00	38.00	39.00	39.00	39.00
L124	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	39.00	39.00	39.00	39.00	40.00	40.00	40.00	40.00
L125	70.00	70.00	70.00	70.00	70.00	70.00	67.22	49.86	47.08	57.50	58.89	60.97	56.11	58.19	56.11	53.33	49.17	38.75	32.50	49.17	54.03	57.50	58.89	65.14
L126	70.00	70.00	70.00	70.00	70.00	70.00	70.00	65.14	60.97	69.31	70.00	70.00	69.31	70.00	68.61	67.92	65.14	60.97	60.97	64.44	67.92	70.00	70.00	70.00
L127	40.00	40.00	40.00	40.00	40.00	40.00	39.00	37.00	36.00	37.00	38.00	38.00	37.00	38.00	38.00	37.00	37.00	36.00	36.00	37.00	38.00	38.00	38.00	39.00
L128	29.50	30.00	30.00	30.00	30.00	29.50	29.50	28.25	27.00	28.25	29.50	29.50	28.25	28.25	28.25	28.25	28.25	28.25	28.25	28.25	28.25	29.50	29.50	29.50
L129	38.00	39.00	39.00	39.00	39.00	39.00	37.00	34.00	33.00	35.00	36.00	36.00	35.00	36.00	35.00	35.00	34.00	33.00	33.00	35.00	36.00	36.00	36.00	38.00
L130	25.33	27.00	27.00	27.00	27.00	25.33	23.67	17.00	15.33	20.33	20.33	22.00	20.33	20.33	20.33	18.67	18.67	17.00	15.33	18.67	20.33	20.33	22.00	23.67
L131	27.00	29.50	29.50	27.00	29.50	27.00	27.00	24.50	24.50	24.50	27.00	27.00	24.50	24.50	24.50	24.50	24.50	24.50	22.00	24.50	24.50	24.50	27.00	27.00
L132	27.00	27.00	27.00	27.00	27.00	27.00	24.50	22.00	19.50	22.00	24.50	24.50	22.00	22.00	22.00	22.00	22.00	19.50	19.50	19.50	22.00	22.00	24.50	24.50
L133	29.50	29.50	29.50	29.50	29.50	29.50	27.00	27.00	24.50	27.00	27.00	27.00	27.00	27.00	27.00	27.00	24.50	24.50	24.50	27.00	27.00	27.00	27.00	27.00
L152	28.67	29.50	29.50	29.50	29.50	28.67	27.83	25.33	24.50	27.00	27.00	27.00	26.17	27.00	26.17	26.17	25.33	24.50	23.67	25.33	26.17	27.00	27.00	27.83
L156	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.67	40.00	39.67	40.00	40.00	40.00	40.00
L157	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	39.67	39.00	40.00	40.00	40.00	40.00	40.00
L158	80.00	80.00	80.00	80.00	80.00	80.00	80.00	75.17	69.00	70.54	75.17	75.17	75.68	75.68	71.57	71.57	71.57	71.57	64.37	76.20	80.00	80.00	80.00	80.00
L159	80.00	80.00	80.00	80.00	80.00	80.00	78.77	64.88	50.10	58.20	64.88	65.40	65.40	65.40	59.74	59.74	60.26	60.26	55.11	66.43	73.11	72.60	79.28	79.28

Appendix 4.10 EMFAC-HK Information (EMFAC-HK Information for Years 2033, 2040 and 2048 is provided in CD)

Calculation of Odour Emission

Company	Source Type	Odour Source ID	x-coordinate	y-coordinate	Release Height	Exit Temperature	Exit Velocity	Internal Diameter	Radius/Diameter of the circular	Odour Emission Rate	Operation Hours
					(mAG)	(K)	(m/s)	(m)	(m)	(ou/s or ou/m²/s)	
The Hong Kong and China Gas Company Limited	Point	OU1	837885	820139	6.8	Ambient	1.0	0.08	-	1.19E+01	24 hours (0000-2400)
	Point	OU2	837903	820129	6.8	Ambient	1.0	0.08	-	1.19E+01	
	Point	OU3	837918	820123	6.8	Ambient	1.0	0.08	-	1.19E+01	
	Area	OU4	837838	820116	17.0	Ambient	-	-	20.0/40.0	4.14E-03	
	Area	OU5	837861	820072	15.0	Ambient	-	-	15.0/30.0	5.66E-03	

Notes:
[1] Odour Source ID OU1-OU5 are based on SP License (No. L-8-004(5)) . For OU4, Odour Emission Rate = 5.2 OU/s ÷ ($\pi \times 20^2$) = 4.14E-03 OU/m^2/s. For OU5, Odour Emission Rate = 4.0 OU/s ÷ ($\pi \times 15^2$) = 5.66E-03 OU/m^2.
[2] "-" means "Not Applicable"

Appendix 4.11 Derivation of Emission Rate and Input Parameters of Odour Source in AERMOD

Appendix 4.12 Predicted Air Quality Impact Assessment Results

ASRs & Impact Summary(KC-018)

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mPD	Flag Pole Receiver Height, mAG	Predicted Cumulative Impacts (µg/m³) in Year 2033							
							NO_2		RSP		FSP		SO_2	
		x	y				1-h (AQO=200)	Annual (AQO=40)	24-h (AQO=100)	Annual (AQO=50)	24-h (AQO=50)	Annual (AQO=25)	10-min (AQO=500)	24-h (AQO=50)
		Easting	Northing				19th highest		10th highest		36th highest		4th highest	4th highest
A1-1	42,33	838116	820048	GF	3.60	1.50	142.5	30.9	62.3	27.0	23.2	14.6	48.0	9.8
A1-2	42,33	838116	820048	1F	8.60	5.00	141.8	30.4	62.3	27.0	23.2	14.6	48.0	9.8
A1-3	42,33	838116	820048	2F	13.60	10.00	137.9	29.4	62.3	26.9	23.2	14.5	48.0	9.8
A1-4	42,33	838116	820048	3F	21.10	17.50	133.5	27.8	62.2	26.9	23.1	14.5	48.0	9.8
A1-5	42,33	838116	820048	4F	24.25	20.65	132.9	27.3	62.2	26.9	23.1	14.5	48.0	9.8
A1-6	42,33	838116	820048	5F	27.40	23.80	129.3	26.8	62.2	26.9	23.1	14.5	48.0	9.8
A1-7	42,33	838116	820048	6F	30.55	26.95	128.1	26.4	62.2	26.9	23.1	14.5	48.0	9.8
A1-8	42,33	838116	820048	7F	33.70	30.10	127.7	26.1	62.2	26.8	23.1	14.4	48.0	9.8
A1-9	42,33	838116	820048	8F	36.85	33.25	127.7	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A1-10	42,33	838116	820048	9F	40.00	36.40	127.6	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A1-11	42,33	838116	820048	10F	43.15	39.55	127.7	25.4	62.2	26.8	23.1	14.4	48.0	9.8
A1-12	42,33	838116	820048	12F	49.45	45.85	128.5	25.3	62.2	26.8	23.1	14.4	48.0	9.8
A1-13	42,33	838116	820048	14F	55.75	52.15	129.9	25.2	62.2	26.8	23.1	14.4	48.0	9.8
A1-14	42,33	838116	820048	16F	62.05	58.45	129.6	25.1	62.2	26.8	23.1	14.4	48.0	9.8
A1-15	42,33	838116	820048	20F	74.65	71.05	128.3	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A1-16	42,33	838116	820048	23F	84.10	80.50	128.0	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A1-17	42,33	838116	820048	26F	93.55	89.95	128.0	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A1-18	42,33	838116	820048	RF	120.00	116.40	128.9	24.6	62.2	26.8	23.1	14.4	53.7	9.8
A2-1	42,33	838102	820016	GF	3.60	1.50	149.9	31.4	62.3	27.0	23.2	14.6	48.0	9.8
A2-2	42,33	838102	820016	1F	8.60	5.00	144.9	30.8	62.3	27.0	23.2	14.6	48.0	9.8
A2-3	42,33	838102	820016	2F	13.60	10.00	139.8	29.4	62.2	26.9	23.1	14.5	48.0	9.8
A2-4	42,33	838102	820016	3F	21.10	17.50	132.7	27.7	62.2	26.9	23.1	14.5	48.0	9.8
A2-5	42,33	838102	820016	4F	24.25	20.65	130.9	27.2	62.2	26.9	23.1	14.5	48.0	9.8
A2-6	42,33	838102	820016	5F	27.40	23.80	128.5	26.7	62.2	26.9	23.1	14.5	48.0	9.8
A2-7	42,33	838102	820016	6F	30.55	26.95	128.1	26.3	62.2	26.8	23.1	14.5	48.0	9.8
A2-8	42,33	838102	820016	7F	33.70	30.10	127.6	26.0	62.2	26.8	23.1	14.4	48.0	9.8
A2-9	42,33	838102	820016	8F	36.85	33.25	127.5	25.7	62.2	26.8	23.1	14.4	48.0	9.8
A2-10	42,33	838102	820016	9F	40.00	36.40	127.4	25.5	62.2	26.8	23.1	14.4	48.0	9.8
A2-11	42,33	838102	820016	10F	43.15	39.55	127.3	25.3	62.2	26.8	23.1	14.4	48.0	9.8
A2-12	42,33	838102	820016	12F	49.45	45.85	128.0	25.1	62.2	26.8	23.1	14.4	48.0	9.8
A2-13	42,33	838102	820016	14F	55.75	52.15	129.8	25.0	62.2	26.8	23.1	14.4	48.0	9.8
A2-14	42,33	838102	820016	16F	62.05	58.45	129.5	25.0	62.2	26.8	23.1	14.4	48.0	9.8
A2-15	42,33	838102	820016	20F	74.65	71.05	127.8	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A2-16	42,33	838102	820016	23F	84.10	80.50	128.5	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A2-17	42,33	838102	820016	26F	93.55	89.95	129.0	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A2-18	42,33	838102	820016	RF	120.00	116.40	129.2	24.7	62.2	26.8	23.1	14.4	55.1	9.8
A3-1	42,33	838060	820034	GF	3.60	1.50	151.4	32.3	62.3	27.0	23.2	14.6	48.0	9.8
A3-2	42,33	838060	820034	1F	8.60	5.00	149.4	31.6	62.3	27.0	23.2	14.6	48.0	9.8
A3-3	42,33	838060	820034	2F	13.60	10.00	138.9	30.2	62.2	26.9	23.2	14.5	48.0	9.8
A3-4	42,33	838060	820034	3F	21.10	17.50	132.0	28.3	62.2	26.9	23.1	14.5	48.0	9.8
A3-5	42,33	838060	820034	4F	24.25	20.65	130.4	27.6	62.2	26.9	23.1	14.5	48.0	9.8
A3-6	42,33	838060	820034	5F	27.40	23.80	128.3	27.0	62.2	26.9	23.1	14.5	48.0	9.8
A3-7	42,33	838060	820034	6F	30.55	26.95	127.9	26.5	62.2	26.9	23.1	14.5	48.0	9.8
A3-8	42,33	838060	820034	7F	33.70	30.10	127.6	26.2	62.2	26.8	23.1	14.4	48.0	9.8
A3-9	42,33	838060	820034	8F	36.85	33.25	127.3	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A3-10	42,33	838060	820034	9F	40.00	36.40	127.2	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A3-11	42,33	838060	820034	10F	43.15	39.55	127.1	25.4	62.2	26.8	23.1	14.4	48.0	9.8
A3-12	42,33	838060	820034	12F	49.45	45.85	128.4	25.3	62.2	26.8	23.1	14.4	48.0	9.8
A3-13	42,33	838060	820034	14F	55.75	52.15	130.0	25.2	62.2	26.8	23.1	14.4	48.0	9.8
A3-14	42,33	838060	820034	16F	62.05	58.45	129.7	25.1	62.2	26.8	23.1	14.4	48.0	9.8
A3-15	42,33	838060	820034	20F	74.65	71.05	129.3	24.8	62.2	26.8	23.1	14.4	48.0	9.8
A3-16	42,33	838060	820034	23F	84.10	80.50	127.8	24.6	62.2	26.8	23.1	14.4	48.0	9.8
A3-17	42,33	838060	820034	26F	93.55	89.95	128.5	24.6	62.2	26.8	23.1	14.4	48.0	9.8
A3-18	42,33	838060	820034	RF	120.00	116.40	130.6	24.7	62.2	26.8	23.1	14.4	53.5	9.8
A4-1	42,33	838019	820052	GF	3.60	1.50	157.7	33.6	62.3	27.0	23.2	14.6	48.0	9.8
A4-2	42,33	838019	820052	1F	8.60	5.00	153.2	32.9	62.3	27.0	23.2	14.6	48.0	9.8
A4-3	42,33	838019	820052	2F	13.60	10.00	140.5	31.4	62.3	27.0	23.2	14.6	48.0	9.8
A4-4	42,33	838019	820052	3F	21.10	17.50	133.6	28.9	62.2	26.9	23.1	14.5	48.0	9.8
A4-5	42,33	838019	820052	4F	24.25	20.65	130.3	28.1	62.2	26.9	23.1	14.5	48.0	9.8
A4-6	42,33	838019	820052	5F	27.40	23.80	128.4	27.4	62.2	26.9	23.1	14.5	48.0	9.8
A4-7	42,33	838019	820052	6F	30.55	26.95	127.7	26.8	62.2	26.9	23.1	14.5	48.0	9.8
A4-8	42,33	838019	820052	7F	33.70	30.10	127.6	26.4	62.2	26.8	23.1	14.4	48.0	9.8
A4-9	42,33	838019	820052	8F	36.85	33.25	127.6	26.1	62.2	26.8	23.1	14.4	48.0	9.8
A4-10	42,33	838019	820052	9F	40.00	36.40	127.6	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A4-11	42,33	838019	820052	10F	43.15	39.55	127.5	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A4-12	42,33	838019	820052	12F	49.45	45.85	129.4	25.5	62.2	26.8	23.1	14.4	48.0	9.8
A4-13	42,33	838019	820052	14F	55.75	52.15	130.8	25.5	62.2	26.8	23.1	14.4	48.0	9.8
A4-14	42,33	838019	820052	16F	62.05	58.45	129.8	25.4	62.2	26.8	23.1	14.4	48.0	9.8
A4-15	42,33	838019	820052	20F	74.65	71.05	129.3	25.0	62.2	26.8	23.1	14.4	48.0	9.8
A4-16	42,33	838019	820052	23F	84.10	80.50	127.9	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A4-17	42,33	838019	820052	26F	93.55	89.95	128.0	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A4-18	42,33	838019	820052	RF	120.00	116.40	132.4	24.7	62.2	26.8	23.1	14.4	51.8	9.8
A5-1	42,33	837977	820072	GF	3.60	1.50	159.3	36.3	62.4	27.1	23.2	14.7	48.0	9.8
A5-2	42,33	837977	820072	1F	8.60	5.00	156.1	35.3	62.3	27.1	23.2	14.7	48.0	9.8
A5-3	42,33	837977	820072	2F	13.60	10.00	144.7	33.0	62.3	27.0	23.2	14.6	48.0	9.8
A5-4	42,33	837977	820072	3F	21.10	17.50	134.1	29.5	62.3	26.9	23.2	14.5	48.0	9.8
A5-5	42,33	837977	820072	4F	24.25	20.65	129.1	28.5	62.3	26.9	23.1	14.5	48.0	9.8
A5-6	42,33	837977	820072	5F	27.40	23.80	128.7	27.7	62.2	26.9	23.1	14.5	48.0	9.8
A5-7	42,33	837977	820072	6F	30.55	26.95	128.2	27.1	62.2	26.9	23.1	14.5	48.0	9.8
A5-8	42,33	837977	820072	7F	33.70	30.10	128.1	26.7	62.2	26.8	23.1	14.5	48.0	9.8
A5-9	42,33	837977	820072	8F	36.85	33.25	128.0	26.5	62.2	26.8	23.1	14.4	48.0	9.8
A5-10	42,33	837977	820072	9F	40.00	36.40	128.0	26.3	62.2	26.8	23.1	14.4	48.0	9.8
A5-11	42,33	837977	820072	10F	43.15	39.55	128.0	26.3	62.2	26.8	23.1	14.4	48.0	9.8
A5-12	42,33	837977	820072	12F	49.45	45.85	137.9	26.5	62.2	26.8	23.1	14.4	48.0	9.8
A5-13	42,33	837977	820072	14F	55.75	52.15	140.9	26.4	62.2	26.8	23.1	14.4	48.0	9.8
A5-14	42,33	837977	820072	16F	62.05	58.45	136.2	26.1	62.2	26.8	23.1	14.4	47.9	9.8
A5-15	42,33	837977	820072	20F	74.65	71.05	128.4	25.2	62.2	26.8	23.1	14.4	47.9	9.8
A5-16	42,33	837977	820072	23F	84.10	80.50	128.3	24.9	62.2	26.8	23.1	14.4	47.9	9.8
A5-17	42,33	837977	820072	26F	93.55	89.95	128.4	24.8	62.2	26.8	23.1	14.4	47.9	9.8
A5-18	42,33	837977	820072	RF	120.00	116.40	132.4	24.7	62.2	26.8	23.1	14.4	49.7	9.8
A6-1	42,33	837939	820089	GF	3.60	1.50	205.8	52.2	62.9	27.5	23.6	15.1	48.0	9.8
A6-2	42,33	837939	820089	1F	8.60	5.00	169.9	40.6	62.6	27.2	23.2	14.8	48.0	9.8
A6-3	42,33	837939	820089	2F	13.60	10.00	153.5	34.2	62.4	27.0	23.2	14.6	48.0	9.8
A6-4	42,33	837939	820089	3F	21.10	17.50	137.6	29.7	62.3	26.9	23.2	14.5	48.0	9.8
A6-5	42,33	837939	820089	4F	24.25	20.65	133.5	28.6	62.3	26.9	23.2	14.5	48.0	9.8
A6-6	42,33	837939	820089	5F	27.40	23.80	129.0	27.8	62.2	26.9	23.1	14.5	47.9	9.8
A6-7	42,33	837939	820089	6F	30.55	26.95	129.0	27.4	62.2	26.8	23.1	14.5	47.9	9.8
A6-8	42,33	837939	820089	7F	33.70	30.10	128.5	27.2	62.2	26.8	23.1	14.5	47.9	9.8
A6-9	42,33	837939	820089	8F	36.85	33.25	128.1	27.4	62.2	26.8	23.1	14.4	47.9	9.8
A6-10	42,33	837939	820089	9F	40.00	36.40	128.1	28.0	62.2	26.8	23.1	14.4	47.9	9.8
A6-11	42,33	837939	820089	10F	43.15	39.55	140.1	29.1	62.2	26.8	23.1	14.4	47.9	9.8
A6-12	42,33	837939	820089	12F	49.45	45.85	164.7	29.7	62.2	26.8	23.1	14.4	47.9	9.8
A6-13	42,33	837939	820089	14F	55.75	52.15	147.7	28.5	62.2	26.8	23.1	14.4	47.9	9.8
A6-14	42,33	837939	820089	16F	62.05	58.45	131.6	27.3	62.2	26.8	23.1	14.4	47.9	9.8
A6-15	42,33	837939	820089	20F	74.65	71.05	128.6	25.6	62.2	26.8	23.1	14.4	47.9	9.8
A6-16	42,33	837939	820089	23F	84.10	80.50	128.7	25.0	62.2	26.8	23.1	14.4	47.9	9.8
A6-17	42,33	837939	820089	26F	93.55	89.95	128.8	24.8	62.2	26.8	23.1	14.4	47.9	9.8
A6-18	42,33	837939	820089	RF	120.00	116.40	131.4	24.7	62.2	26.8	23.1	14.4	47.9	9.8

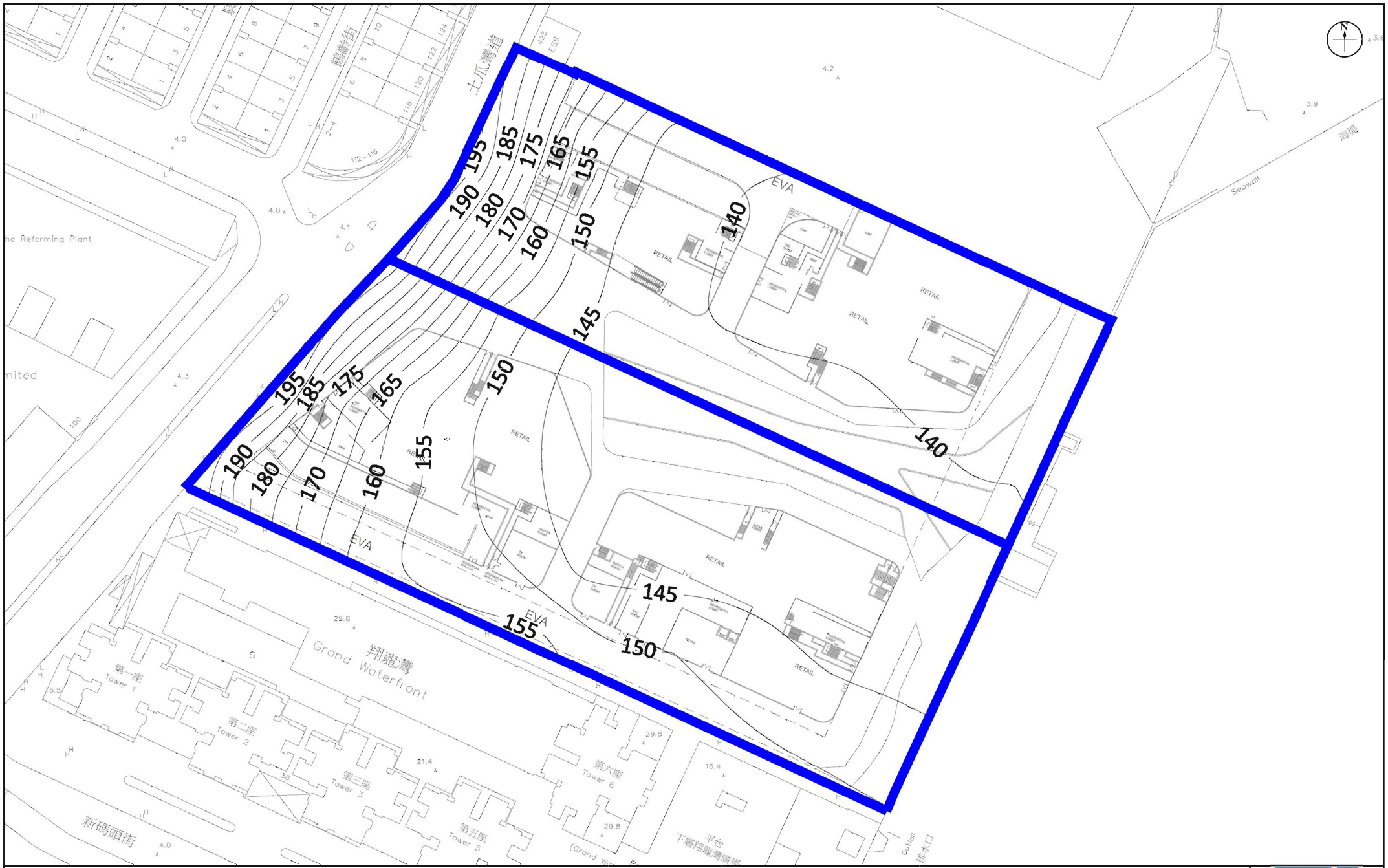
ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mPD	Flag Pole Receiver Height, mAG	Predicted Cumulative Impacts (µg/m³) in Year 2033							
							NO_2		RSP		FSP		SO_2	
		x	y				1-h (AQO=200)	Annual (AQO=40)	24-h (AQO=100)	Annual (AQO=50)	24-h (AQO=50)	Annual (AQO=25)	10-min (AQO=500)	24-h (AQO=50)
		Easting	Northing				19th highest		10th highest		36th highest		4th highest	4th highest
A7-1	42,33	837962	820116	GF	3.60	1.50	205.0	49.4	62.8	27.5	23.5	15.0	48.0	9.8
A7-2	42,33	837962	820116	1F	8.60	5.00	166.2	39.0	62.5	27.2	23.2	14.7	48.0	9.8
A7-3	42,33	837962	820116	2F	13.60	10.00	148.6	33.3	62.4	27.0	23.2	14.6	48.0	9.8
A7-4	42,33	837962	820116	3F	21.10	17.50	137.3	29.5	62.3	26.9	23.2	14.5	48.0	9.8
A7-5	42,33	837962	820116	4F	24.25	20.65	135.2	28.5	62.3	26.9	23.2	14.5	48.0	9.8
A7-6	42,33	837962	820116	5F	27.40	23.80	130.5	27.9	62.2	26.9	23.1	14.5	47.9	9.8
A7-7	42,33	837962	820116	6F	30.55	26.95	129.9	27.5	62.2	26.9	23.1	14.5	47.9	9.8
A7-8	42,33	837962	820116	7F	33.70	30.10	128.0	27.5	62.2	26.9	23.1	14.5	47.9	9.8
A7-9	42,33	837962	820116	8F	36.85	33.25	127.1	28.0	62.2	26.8	23.1	14.4	47.9	9.7
A7-10	42,33	837962	820116	9F	40.00	36.40	130.5	29.0	62.2	26.8	23.1	14.4	47.9	9.7
A7-11	42,33	837962	820116	10F	43.15	39.55	149.1	30.4	62.2	26.8	23.1	14.4	47.9	9.7
A7-12	42,33	837962	820116	12F	49.45	45.85	176.6	31.1	62.2	26.8	23.1	14.4	47.9	9.7
A7-13	42,33	837962	820116	14F	55.75	52.15	156.3	29.3	62.2	26.8	23.1	14.4	47.9	9.7
A7-14	42,33	837962	820116	16F	62.05	58.45	131.7	27.5	62.2	26.8	23.1	14.4	47.9	9.7
A7-15	42,33	837962	820116	20F	74.65	71.05	127.3	25.6	62.2	26.8	23.1	14.4	47.9	9.7
A7-16	42,33	837962	820116	23F	84.10	80.50	127.0	24.9	62.2	26.8	23.1	14.4	47.9	9.7
A7-17	42,33	837962	820116	26F	93.55	89.95	127.1	24.7	62.2	26.8	23.1	14.4	47.9	9.7
A7-18	42,33	837962	820116	RF	120.00	116.40	128.8	24.5	62.2	26.8	23.1	14.4	50.6	9.7
A8-1	42,33	837986	820142	GF	3.60	1.50	200.1	50.1	62.9	27.4	23.3	15.0	48.0	9.8
A8-2	42,33	837986	820142	1F	8.60	5.00	168.5	38.5	62.6	27.1	23.2	14.7	48.0	9.8
A8-3	42,33	837986	820142	2F	13.60	10.00	147.5	33.0	62.4	27.0	23.2	14.6	48.0	9.8
A8-4	42,33	837986	820142	3F	21.10	17.50	139.1	29.7	62.3	26.9	23.2	14.5	48.0	9.8
A8-5	42,33	837986	820142	4F	24.25	20.65	136.3	28.9	62.3	26.9	23.2	14.5	48.0	9.8
A8-6	42,33	837986	820142	5F	27.40	23.80	132.0	28.4	62.3	26.9	23.2	14.5	48.0	9.8
A8-7	42,33	837986	820142	6F	30.55	26.95	130.9	28.3	62.2	26.9	23.1	14.5	48.0	9.7
A8-8	42,33	837986	820142	7F	33.70	30.10	128.9	28.4	62.2	26.9	23.1	14.5	48.0	9.7
A8-9	42,33	837986	820142	8F	36.85	33.25	127.5	28.8	62.2	26.8	23.1	14.4	48.0	9.7
A8-10	42,33	837986	820142	9F	40.00	36.40	128.0	29.5	62.2	26.8	23.1	14.4	48.0	9.7
A8-11	42,33	837986	820142	10F	43.15	39.55	137.1	30.6	62.2	26.8	23.1	14.4	48.0	9.7
A8-12	42,33	837986	820142	12F	49.45	45.85	178.6	32.2	62.2	26.8	23.1	14.4	47.9	9.7
A8-13	42,33	837986	820142	14F	55.75	52.15	177.1	31.3	62.2	26.8	23.1	14.4	47.9	9.7
A8-14	42,33	837986	820142	16F	62.05	58.45	148.9	29.0	62.2	26.8	23.1	14.4	47.9	9.7
A8-15	42,33	837986	820142	20F	74.65	71.05	129.3	26.0	62.2	26.8	23.1	14.4	47.9	9.7
A8-16	42,33	837986	820142	23F	84.10	80.50	127.8	25.2	62.2	26.8	23.1	14.4	47.9	9.7
A8-17	42,33	837986	820142	26F	93.55	89.95	127.4	24.8	62.2	26.8	23.1	14.4	47.9	9.8
A8-18	42,33	837986	820142	RF	120.00	116.40	127.4	24.5	62.2	26.8	23.1	14.4	50.5	9.8
A9-1	42,33	838033	820121	GF	3.60	1.50	143.2	33.4	62.3	27.0	23.2	14.6	48.0	9.8
A9-2	42,33	838033	820121	1F	8.60	5.00	141.3	32.9	62.3	27.0	23.2	14.6	48.0	9.8
A9-3	42,33	838033	820121	2F	13.60	10.00	139.4	31.7	62.3	27.0	23.2	14.6	48.0	9.8
A9-4	42,33	838033	820121	3F	21.10	17.50	134.0	29.4	62.3	26.9	23.2	14.5	48.0	9.8
A9-5	42,33	838033	820121	4F	24.25	20.65	129.4	28.6	62.3	26.9	23.2	14.5	48.0	9.8
A9-6	42,33	838033	820121	5F	27.40	23.80	128.8	27.9	62.2	26.9	23.2	14.5	48.0	9.8
A9-7	42,33	838033	820121	6F	30.55	26.95	128.3	27.4	62.2	26.9	23.1	14.5	48.0	9.8
A9-8	42,33	838033	820121	7F	33.70	30.10	127.9	27.0	62.2	26.8	23.1	14.5	48.0	9.8
A9-9	42,33	838033	820121	8F	36.85	33.25	127.6	26.8	62.2	26.8	23.1	14.4	48.0	9.8
A9-10	42,33	838033	820121	9F	40.00	36.40	127.5	26.6	62.2	26.8	23.1	14.4	48.0	9.8
A9-11	42,33	838033	820121	10F	43.15	39.55	127.6	26.6	62.2	26.8	23.1	14.4	48.0	9.8
A9-12	42,33	838033	820121	12F	49.45	45.85	136.2	27.0	62.2	26.8	23.1	14.4	48.0	9.8
A9-13	42,33	838033	820121	14F	55.75	52.15	143.3	27.2	62.2	26.8	23.1	14.4	48.0	9.8
A9-14	42,33	838033	820121	16F	62.05	58.45	142.8	26.9	62.2	26.8	23.1	14.4	48.0	9.8
A9-15	42,33	838033	820121	20F	74.65	71.05	129.3	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A9-16	42,33	838033	820121	23F	84.10	80.50	128.1	25.0	62.2	26.8	23.1	14.4	48.0	9.8
A9-17	42,33	838033	820121	26F	93.55	89.95	128.2	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A9-18	42,33	838033	820121	RF	120.00	116.40	127.9	24.6	62.2	26.8	23.1	14.4	50.8	9.8
A10-1	42,33	838081	820098	GF	3.60	1.50	141.8	31.5	62.3	27.0	23.2	14.6	48.0	9.8
A10-2	42,33	838081	820098	1F	8.60	5.00	141.7	31.2	62.3	27.0	23.2	14.6	48.0	9.8
A10-3	42,33	838081	820098	2F	13.60	10.00	138.8	30.4	62.3	27.0	23.2	14.5	48.0	9.8
A10-4	42,33	838081	820098	3F	21.10	17.50	131.7	28.6	62.3	26.9	23.2	14.5	48.0	9.8
A10-5	42,33	838081	820098	4F	24.25	20.65	129.7	28.0	62.2	26.9	23.2	14.5	48.0	9.8
A10-6	42,33	838081	820098	5F	27.40	23.80	128.6	27.4	62.2	26.9	23.1	14.5	48.0	9.8
A10-7	42,33	838081	820098	6F	30.55	26.95	128.3	26.9	62.2	26.9	23.1	14.5	48.0	9.8
A10-8	42,33	838081	820098	7F	33.70	30.10	128.1	26.5	62.2	26.8	23.1	14.5	48.0	9.8
A10-9	42,33	838081	820098	8F	36.85	33.25	127.8	26.2	62.2	26.8	23.1	14.4	48.0	9.8
A10-10	42,33	838081	820098	9F	40.00	36.40	127.7	26.0	62.2	26.8	23.1	14.4	48.0	9.8
A10-11	42,33	838081	820098	10F	43.15	39.55	128.1	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A10-12	42,33	838081	820098	12F	49.45	45.85	128.3	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A10-13	42,33	838081	820098	14F	55.75	52.15	132.5	25.9	62.2	26.8	23.1	14.4	48.0	9.8
A10-14	42,33	838081	820098	16F	62.05	58.45	131.1	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A10-15	42,33	838081	820098	20F	74.65	71.05	129.4	25.1	62.2	26.8	23.1	14.4	48.0	9.8
A10-16	42,33	838081	820098	23F	84.10	80.50	128.5	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A10-17	42,33	838081	820098	26F	93.55	89.95	128.6	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A10-18	42,33	838081	820098	RF	120.00	116.40	128.5	24.5	62.2	26.8	23.1	14.4	50.5	9.8
A11-1	42,33	838129	820076	GF	3.60	1.50	140.5	30.7	62.3	27.0	23.2	14.6	48.0	9.8
A11-2	42,33	838129	820076	1F	8.60	5.00	141.8	30.4	62.3	27.0	23.2	14.6	48.0	9.8
A11-3	42,33	838129	820076	2F	13.60	10.00	137.6	29.5	62.3	26.9	23.2	14.5	48.0	9.8
A11-4	42,33	838129	820076	3F	21.10	17.50	133.9	28.0	62.2	26.9	23.2	14.5	48.0	9.8
A11-5	42,33	838129	820076	4F	24.25	20.65	133.3	27.4	62.2	26.9	23.2	14.5	48.0	9.8
A11-6	42,33	838129	820076	5F	27.40	23.80	130.4	26.9	62.2	26.9	23.1	14.5	48.0	9.8
A11-7	42,33	838129	820076	6F	30.55	26.95	128.7	26.5	62.2	26.9	23.1	14.5	48.0	9.8
A11-8	42,33	838129	820076	7F	33.70	30.10	128.4	26.2	62.2	26.8	23.1	14.4	48.0	9.8
A11-9	42,33	838129	820076	8F	36.85	33.25	128.1	25.9	62.2	26.8	23.1	14.4	48.0	9.8
A11-10	42,33	838129	820076	9F	40.00	36.40	128.0	25.7	62.2	26.8	23.1	14.4	48.0	9.8
A11-11	42,33	838129	820076	10F	43.15	39.55	128.7	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A11-12	42,33	838129	820076	12F	49.45	45.85	128.7	25.4	62.2	26.8	23.1	14.4	48.0	9.8
A11-13	42,33	838129	820076	14F	55.75	52.15	129.7	25.4	62.2	26.8	23.1	14.4	48.0	9.8
A11-14	42,33	838129	820076	16F	62.05	58.45	129.5	25.3	62.2	26.8	23.1	14.4	48.0	9.8
A11-15	42,33	838129	820076	20F	74.65	71.05	129.3	24.8	62.2	26.8	23.1	14.4	48.0	9.8
A11-16	42,33	838129	820076	23F	84.10	80.50	129.0	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A11-17	42,33	838129	820076	26F	93.55	89.95	129.1	24.4	62.2	26.8	23.1	14.4	48.0	9.8
A11-18	42,33	838129	820076	RF	120.00	116.40	129.0	24.5	62.2	26.8	23.1	14.4	49.6	9.8

ASRs & Impact Summary(KC-019)

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mPD	Flag Pole Receiver Height, mAG	Predicted Cumulative Impacts (µg/m³) in Year 2033							
							NO_2		RSP		FSP		SO_2	
		x	y				1-h (AQO=200)	Annual (AQO=40)	24-h (AQO=100)	Annual (AQO=50)	24-h (AQO=50)	Annual (AQO=25)	10-min (AQO=500)	24-h (AQO=50)
		Easting	Northing				19th highest		10th highest		36th highest		4th highest	4th highest
A8-1	42,33	837986	820142	GF	3.60	1.50	200.1	50.1	62.9	27.4	23.3	15.0	48.0	9.8
A8-2	42,33	837986	820142	1F	8.60	5.00	168.5	38.5	62.6	27.1	23.2	14.7	48.0	9.8
A8-3	42,33	837986	820142	2F	13.60	10.00	147.5	33.0	62.4	27.0	23.2	14.6	48.0	9.8
A8-4	42,33	837986	820142	3F	21.10	17.50	139.1	29.7	62.3	26.9	23.2	14.5	48.0	9.8
A8-5	42,33	837986	820142	4F	24.25	20.65	136.3	28.9	62.3	26.9	23.2	14.5	48.0	9.8
A8-6	42,33	837986	820142	5F	27.40	23.80	132.0	28.4	62.3	26.9	23.2	14.5	48.0	9.8
A8-7	42,33	837986	820142	6F	30.55	26.95	130.9	28.3	62.2	26.9	23.1	14.5	48.0	9.7
A8-8	42,33	837986	820142	7F	33.70	30.10	128.9	28.4	62.2	26.9	23.1	14.5	48.0	9.7
A8-9	42,33	837986	820142	8F	36.85	33.25	127.5	28.8	62.2	26.8	23.1	14.4	48.0	9.7
A8-10	42,33	837986	820142	9F	40.00	36.40	128.0	29.5	62.2	26.8	23.1	14.4	48.0	9.7
A8-11	42,33	837986	820142	10F	43.15	39.55	137.1	30.6	62.2	26.8	23.1	14.4	48.0	9.7
A8-12	42,33	837986	820142	12F	49.45	45.85	178.6	32.2	62.2	26.8	23.1	14.4	47.9	9.7
A8-13	42,33	837986	820142	14F	55.75	52.15	177.1	31.3	62.2	26.8	23.1	14.4	47.9	9.7
A8-14	42,33	837986	820142	16F	62.05	58.45	148.9	29.0	62.2	26.8	23.1	14.4	47.9	9.7
A8-15	42,33	837986	820142	20F	74.65	71.05	129.3	26.0	62.2	26.8	23.1	14.4	47.9	9.7
A8-16	42,33	837986	820142	23F	84.10	80.50	127.8	25.2	62.2	26.8	23.1	14.4	47.9	9.7
A8-17	42,33	837986	820142	26F	93.55	89.95	127.4	24.8	62.2	26.8	23.1	14.4	47.9	9.8
A8-18	42,33	837986	820142	RF	120.00	116.40	127.4	24.5	62.2	26.8	23.1	14.4	50.5	9.8
A9-1	42,33	838033	820121	GF	3.60	1.50	143.2	33.4	62.3	27.0	23.2	14.6	48.0	9.8
A9-2	42,33	838033	820121	1F	8.60	5.00	141.3	32.9	62.3	27.0	23.2	14.6	48.0	9.8
A9-3	42,33	838033	820121	2F	13.60	10.00	139.4	31.7	62.3	27.0	23.2	14.6	48.0	9.8
A9-4	42,33	838033	820121	3F	21.10	17.50	134.0	29.4	62.3	26.9	23.2	14.5	48.0	9.8
A9-5	42,33	838033	820121	4F	24.25	20.65	129.4	28.6	62.3	26.9	23.2	14.5	48.0	9.8
A9-6	42,33	838033	820121	5F	27.40	23.80	128.8	27.9	62.2	26.9	23.2	14.5	48.0	9.8
A9-7	42,33	838033	820121	6F	30.55	26.95	128.3	27.4	62.2	26.9	23.1	14.5	48.0	9.8
A9-8	42,33	838033	820121	7F	33.70	30.10	127.9	27.0	62.2	26.8	23.1	14.5	48.0	9.8
A9-9	42,33	838033	820121	8F	36.85	33.25	127.6	26.8	62.2	26.8	23.1	14.4	48.0	9.8
A9-10	42,33	838033	820121	9F	40.00	36.40	127.5	26.6	62.2	26.8	23.1	14.4	48.0	9.8
A9-11	42,33	838033	820121	10F	43.15	39.55	127.6	26.6	62.2	26.8	23.1	14.4	48.0	9.8
A9-12	42,33	838033	820121	12F	49.45	45.85	136.2	27.0	62.2	26.8	23.1	14.4	48.0	9.8
A9-13	42,33	838033	820121	14F	55.75	52.15	143.3	27.2	62.2	26.8	23.1	14.4	48.0	9.8
A9-14	42,33	838033	820121	16F	62.05	58.45	142.8	26.9	62.2	26.8	23.1	14.4	48.0	9.8
A9-15	42,33	838033	820121	20F	74.65	71.05	129.3	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A9-16	42,33	838033	820121	23F	84.10	80.50	128.1	25.0	62.2	26.8	23.1	14.4	48.0	9.8
A9-17	42,33	838033	820121	26F	93.55	89.95	128.2	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A9-18	42,33	838033	820121	RF	120.00	116.40	127.9	24.6	62.2	26.8	23.1	14.4	50.8	9.8
A10-1	42,33	838081	820098	GF	3.60	1.50	141.8	31.5	62.3	27.0	23.2	14.6	48.0	9.8
A10-2	42,33	838081	820098	1F	8.60	5.00	141.7	31.2	62.3	27.0	23.2	14.6	48.0	9.8
A10-3	42,33	838081	820098	2F	13.60	10.00	138.8	30.4	62.3	27.0	23.2	14.5	48.0	9.8
A10-4	42,33	838081	820098	3F	21.10	17.50	131.7	28.6	62.3	26.9	23.2	14.5	48.0	9.8
A10-5	42,33	838081	820098	4F	24.25	20.65	129.7	28.0	62.2	26.9	23.2	14.5	48.0	9.8
A10-6	42,33	838081	820098	5F	27.40	23.80	128.6	27.4	62.2	26.9	23.1	14.5	48.0	9.8
A10-7	42,33	838081	820098	6F	30.55	26.95	128.3	26.9	62.2	26.9	23.1	14.5	48.0	9.8
A10-8	42,33	838081	820098	7F	33.70	30.10	128.1	26.5	62.2	26.8	23.1	14.5	48.0	9.8
A10-9	42,33	838081	820098	8F	36.85	33.25	127.8	26.2	62.2	26.8	23.1	14.4	48.0	9.8
A10-10	42,33	838081	820098	9F	40.00	36.40	127.7	26.0	62.2	26.8	23.1	14.4	48.0	9.8
A10-11	42,33	838081	820098	10F	43.15	39.55	128.1	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A10-12	42,33	838081	820098	12F	49.45	45.85	128.3	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A10-13	42,33	838081	820098	14F	55.75	52.15	132.5	25.9	62.2	26.8	23.1	14.4	48.0	9.8
A10-14	42,33	838081	820098	16F	62.05	58.45	131.1	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A10-15	42,33	838081	820098	20F	74.65	71.05	129.4	25.1	62.2	26.8	23.1	14.4	48.0	9.8
A10-16	42,33	838081	820098	23F	84.10	80.50	128.5	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A10-17	42,33	838081	820098	26F	93.55	89.95	128.6	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A10-18	42,33	838081	820098	RF	120.00	116.40	128.5	24.5	62.2	26.8	23.1	14.4	50.5	9.8
A11-1	42,33	838129	820076	GF	3.60	1.50	140.5	30.7	62.3	27.0	23.2	14.6	48.0	9.8
A11-2	42,33	838129	820076	1F	8.60	5.00	141.8	30.4	62.3	27.0	23.2	14.6	48.0	9.8
A11-3	42,33	838129	820076	2F	13.60	10.00	137.6	29.5	62.3	26.9	23.2	14.5	48.0	9.8
A11-4	42,33	838129	820076	3F	21.10	17.50	133.9	28.0	62.2	26.9	23.2	14.5	48.0	9.8
A11-5	42,33	838129	820076	4F	24.25	20.65	133.3	27.4	62.2	26.9	23.2	14.5	48.0	9.8
A11-6	42,33	838129	820076	5F	27.40	23.80	130.4	26.9	62.2	26.9	23.1	14.5	48.0	9.8
A11-7	42,33	838129	820076	6F	30.55	26.95	128.7	26.5	62.2	26.9	23.1	14.5	48.0	9.8
A11-8	42,33	838129	820076	7F	33.70	30.10	128.4	26.2	62.2	26.8	23.1	14.4	48.0	9.8
A11-9	42,33	838129	820076	8F	36.85	33.25	128.1	25.9	62.2	26.8	23.1	14.4	48.0	9.8
A11-10	42,33	838129	820076	9F	40.00	36.40	128.0	25.7	62.2	26.8	23.1	14.4	48.0	9.8
A11-11	42,33	838129	820076	10F	43.15	39.55	128.7	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A11-12	42,33	838129	820076	12F	49.45	45.85	128.7	25.4	62.2	26.8	23.1	14.4	48.0	9.8
A11-13	42,33	838129	820076	14F	55.75	52.15	129.7	25.4	62.2	26.8	23.1	14.4	48.0	9.8
A11-14	42,33	838129	820076	16F	62.05	58.45	129.6	25.3	62.2	26.8	23.1	14.4	48.0	9.8
A11-15	42,33	838129	820076	20F	74.65	71.05	129.3	24.8	62.2	26.8	23.1	14.4	48.0	9.8
A11-16	42,33	838129	820076	23F	84.10	80.50	129.0	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A11-17	42,33	838129	820076	26F	93.55	89.95	129.1	24.4	62.2	26.8	23.1	14.4	48.0	9.8
A11-18	42,33	838129	820076	RF	120.00	116.40	129.0	24.5	62.2	26.8	23.1	14.4	49.6	9.8
A12-1	42,33	838142	820103	GF	3.60	1.50	138.0	30.8	62.3	27.0	23.2	14.6	48.0	9.8
A12-2	42,33	838142	820103	1F	8.60	5.00	138.1	30.5	62.3	27.0	23.2	14.6	48.0	9.8
A12-3	42,33	838142	820103	2F	13.60	10.00	137.0	29.8	62.3	26.9	23.2	14.5	48.0	9.8
A12-4	42,33	838142	820103	3F	21.10	17.50	134.0	28.2	62.3	26.9	23.2	14.5	48.0	9.8
A12-5	42,33	838142	820103	4F	24.25	20.65	133.3	27.6	62.2	26.9	23.2	14.5	48.0	9.8
A12-6	42,33	838142	820103	5F	27.40	23.80	132.5	27.1	62.2	26.9	23.2	14.5	48.0	9.8
A12-7	42,33	838142	820103	6F	30.55	26.95	129.7	26.6	62.2	26.9	23.1	14.5	48.0	9.8
A12-8	42,33	838142	820103	7F	33.70	30.10	129.2	26.3	62.2	26.8	23.1	14.5	48.0	9.8
A12-9	42,33	838142	820103	8F	36.85	33.25	128.8	26.0	62.2	26.8	23.1	14.4	48.0	9.8
A12-10	42,33	838142	820103	9F	40.00	36.40	128.5	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A12-11	42,33	838142	820103	10F	43.15	39.55	129.8	25.7	62.2	26.8	23.1	14.4	48.0	9.8
A12-12	42,33	838142	820103	12F	49.45	45.85	129.9	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A12-13	42,33	838142	820103	14F	55.75	52.15	130.3	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A12-14	42,33	838142	820103	16F	62.05	58.45	129.9	25.5	62.2	26.8	23.1	14.4	48.0	9.8
A12-15	42,33	838142	820103	20F	74.65	71.05	129.3	24.8	62.2	26.8	23.1	14.4	48.0	9.8
A12-16	42,33	838142	820103	23F	84.10	80.50	128.7	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A12-17	42,33	838142	820103	26F	93.55	89.95	129.1	24.4	62.2	26.8	23.1	14.4	48.0	9.8
A12-18	42,33	838142	820103	RF	120.00	116.40	129.0	24.4	62.2	26.8	23.1	14.4	48.0	9.8

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mPD	Flag Pole Receiver Height, mAG	Predicted Cumulative Impacts (μg/m³) in Year 2033							
							NO_2		RSP		FSP		SO_2	
		x	y				1-h (AQO=200)	Annual (AQO=40)	24-h (AQO=100)	Annual (AQO=50)	24-h (AQO=50)	Annual (AQO=25)	10-min (AQO=500)	24-h (AQO=50)
		Easting	Northing				19th highest		10th highest		36th highest		4th highest	4th highest
A13-1	42,33	838153	820128	GF	3.60	1.50	137.4	31.0	62.4	27.0	23.3	14.6	48.0	9.8
A13-2	42,33	838153	820128	1F	8.60	5.00	137.0	30.8	62.4	27.0	23.2	14.6	48.0	9.8
A13-3	42,33	838153	820128	2F	13.60	10.00	135.9	30.3	62.4	27.0	23.2	14.6	48.0	9.8
A13-4	42,33	838153	820128	3F	21.10	17.50	134.0	28.5	62.3	26.9	23.2	14.5	48.0	9.8
A13-5	42,33	838153	820128	4F	24.25	20.65	133.3	27.8	62.3	26.9	23.2	14.5	48.0	9.8
A13-6	42,33	838153	820128	5F	27.40	23.80	132.6	27.2	62.2	26.9	23.2	14.5	48.0	9.8
A13-7	42,33	838153	820128	6F	30.55	26.95	131.2	26.8	62.2	26.9	23.1	14.5	48.0	9.8
A13-8	42,33	838153	820128	7F	33.70	30.10	130.9	26.4	62.2	26.8	23.1	14.5	48.0	9.8
A13-9	42,33	838153	820128	8F	36.85	33.25	128.8	26.1	62.2	26.8	23.1	14.4	48.0	9.8
A13-10	42,33	838153	820128	9F	40.00	36.40	127.8	26.0	62.2	26.8	23.1	14.4	48.0	9.8
A13-11	42,33	838153	820128	10F	43.15	39.55	127.7	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A13-12	42,33	838153	820128	12F	49.45	45.85	129.9	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A13-13	42,33	838153	820128	14F	55.75	52.15	130.6	25.8	62.2	26.8	23.1	14.4	48.0	9.8
A13-14	42,33	838153	820128	16F	62.05	58.45	130.1	25.6	62.2	26.8	23.1	14.4	48.0	9.8
A13-15	42,33	838153	820128	20F	74.65	71.05	127.4	24.8	62.2	26.8	23.1	14.4	48.0	9.8
A13-16	42,33	838153	820128	23F	84.10	80.50	128.1	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A13-17	42,33	838153	820128	26F	93.55	89.95	128.8	24.4	62.2	26.8	23.1	14.4	48.0	9.8
A13-18	42,33	838153	820128	RF	120.00	116.40	129.0	24.4	62.2	26.8	23.1	14.4	48.0	9.8
A14-1	42,33	838109	820148	GF	3.60	1.50	138.0	31.7	62.4	27.0	23.2	14.6	48.0	9.8
A14-2	42,33	838109	820148	1F	8.60	5.00	138.0	31.4	62.3	27.0	23.2	14.6	48.0	9.8
A14-3	42,33	838109	820148	2F	13.60	10.00	137.6	30.9	62.4	27.0	23.2	14.6	48.0	9.8
A14-4	42,33	838109	820148	3F	21.10	17.50	135.0	29.0	62.3	26.9	23.2	14.5	48.0	9.8
A14-5	42,33	838109	820148	4F	24.25	20.65	134.1	28.3	62.3	26.9	23.2	14.5	48.0	9.8
A14-6	42,33	838109	820148	5F	27.40	23.80	130.4	27.6	62.2	26.9	23.2	14.5	48.0	9.8
A14-7	42,33	838109	820148	6F	30.55	26.95	130.3	27.1	62.2	26.9	23.1	14.5	48.0	9.8
A14-8	42,33	838109	820148	7F	33.70	30.10	130.0	26.7	62.2	26.9	23.1	14.5	48.0	9.8
A14-9	42,33	838109	820148	8F	36.85	33.25	127.8	26.4	62.2	26.8	23.1	14.4	48.0	9.8
A14-10	42,33	838109	820148	9F	40.00	36.40	127.6	26.2	62.2	26.8	23.1	14.4	48.0	9.8
A14-11	42,33	838109	820148	10F	43.15	39.55	127.5	26.1	62.2	26.8	23.1	14.4	48.0	9.8
A14-12	42,33	838109	820148	12F	49.45	45.85	130.0	26.2	62.2	26.8	23.1	14.4	48.0	9.8
A14-13	42,33	838109	820148	14F	55.75	52.15	129.7	26.3	62.2	26.8	23.1	14.4	48.0	9.8
A14-14	42,33	838109	820148	16F	62.05	58.45	127.0	26.1	62.2	26.8	23.1	14.4	48.0	9.8
A14-15	42,33	838109	820148	20F	74.65	71.05	127.3	25.1	62.2	26.8	23.1	14.4	48.0	9.8
A14-16	42,33	838109	820148	23F	84.10	80.50	127.9	24.7	62.2	26.8	23.1	14.4	48.0	9.8
A14-17	42,33	838109	820148	26F	93.55	89.95	128.6	24.5	62.2	26.8	23.1	14.4	48.0	9.8
A14-18	42,33	838109	820148	RF	120.00	116.40	129.0	24.4	62.2	26.8	23.1	14.4	48.0	9.8
A15-1	42,33	838063	820170	GF	3.60	1.50	141.7	33.4	62.3	27.0	23.2	14.6	48.0	9.8
A15-2	42,33	838063	820170	1F	8.60	5.00	141.1	32.9	62.3	27.0	23.2	14.6	48.0	9.8
A15-3	42,33	838063	820170	2F	13.60	10.00	138.3	32.0	62.4	27.0	23.2	14.6	48.0	9.8
A15-4	42,33	838063	820170	3F	21.10	17.50	130.9	29.7	62.3	26.9	23.2	14.5	48.0	9.8
A15-5	42,33	838063	820170	4F	24.25	20.65	130.3	28.8	62.3	26.9	23.2	14.5	48.0	9.8
A15-6	42,33	838063	820170	5F	27.40	23.80	129.9	28.1	62.2	26.9	23.2	14.5	48.0	9.8
A15-7	42,33	838063	820170	6F	30.55	26.95	129.7	27.5	62.2	26.9	23.1	14.5	48.0	9.8
A15-8	42,33	838063	820170	7F	33.70	30.10	129.1	27.1	62.2	26.9	23.1	14.5	48.0	9.8
A15-9	42,33	838063	820170	8F	36.85	33.25	127.6	26.8	62.2	26.8	23.1	14.4	48.0	9.8
A15-10	42,33	838063	820170	9F	40.00	36.40	127.4	26.6	62.2	26.8	23.1	14.4	48.0	9.8
A15-11	42,33	838063	820170	10F	43.15	39.55	127.3	26.6	62.2	26.8	23.1	14.4	48.0	9.8
A15-12	42,33	838063	820170	12F	49.45	45.85	129.6	26.9	62.2	26.8	23.1	14.4	48.0	9.8
A15-13	42,33	838063	820170	14F	55.75	52.15	136.2	27.1	62.2	26.8	23.1	14.4	48.0	9.8
A15-14	42,33	838063	820170	16F	62.05	58.45	138.7	26.8	62.2	26.8	23.1	14.4	48.0	9.8
A15-15	42,33	838063	820170	20F	74.65	71.05	128.7	25.5	62.2	26.8	23.1	14.4	48.0	9.8
A15-16	42,33	838063	820170	23F	84.10	80.50	127.7	24.9	62.2	26.8	23.1	14.4	48.0	9.8
A15-17	42,33	838063	820170	26F	93.55	89.95	128.3	24.7	62.2	26.8	23.1	14.4	47.9	9.8
A15-18	42,33	838063	820170	RF	120.00	116.40	128.9	24.4	62.2	26.8	23.1	14.4	47.9	9.8
A16-1	42,33	838015	820191	GF	3.60	1.50	189.5	52.2	62.8	27.5	23.4	15.0	48.0	9.8
A16-2	42,33	838015	820191	1F	8.60	5.00	163.7	37.5	62.5	27.1	23.2	14.7	48.0	9.8
A16-3	42,33	838015	820191	2F	13.60	10.00	141.0	32.9	62.4	27.0	23.2	14.6	48.0	9.8
A16-4	42,33	838015	820191	3F	21.10	17.50	137.2	29.9	62.3	26.9	23.2	14.5	48.0	9.8
A16-5	42,33	838015	820191	4F	24.25	20.65	134.3	29.1	62.3	26.9	23.2	14.5	48.0	9.8
A16-6	42,33	838015	820191	5F	27.40	23.80	133.6	28.4	62.2	26.9	23.2	14.5	48.0	9.8
A16-7	42,33	838015	820191	6F	30.55	26.95	131.0	27.9	62.2	26.9	23.1	14.5	48.0	9.8
A16-8	42,33	838015	820191	7F	33.70	30.10	130.4	27.6	62.2	26.9	23.1	14.5	48.0	9.8
A16-9	42,33	838015	820191	8F	36.85	33.25	127.9	27.4	62.2	26.8	23.1	14.4	48.0	9.8
A16-10	42,33	838015	820191	9F	40.00	36.40	127.3	27.3	62.2	26.8	23.1	14.4	47.9	9.8
A16-11	42,33	838015	820191	10F	43.15	39.55	127.2	27.3	62.2	26.8	23.1	14.4	47.9	9.7
A16-12	42,33	838015	820191	12F	49.45	45.85	127.0	27.9	62.2	26.8	23.1	14.4	47.9	9.7
A16-13	42,33	838015	820191	14F	55.75	52.15	133.8	28.1	62.2	26.8	23.1	14.4	47.9	9.7
A16-14	42,33	838015	820191	16F	62.05	58.45	137.1	27.6	62.2	26.8	23.1	14.4	47.9	9.7
A16-15	42,33	838015	820191	20F	74.65	71.05	126.8	25.8	62.2	26.8	23.1	14.4	47.9	9.7
A16-16	42,33	838015	820191	23F	84.10	80.50	127.5	25.1	62.2	26.8	23.1	14.4	47.9	9.7
A16-17	42,33	838015	820191	26F	93.55	89.95	128.0	24.8	62.2	26.8	23.1	14.4	47.9	9.7
A16-18	42,33	838015	820191	RF	120.00	116.40	128.9	24.4	62.2	26.8	23.1	14.4	47.9	9.7
A17-1	42,33	838004	820167	GF	3.60	1.50	200.4	52.1	62.8	27.5	23.3	15.0	48.0	9.8
A17-2	42,33	838004	820167	1F	8.60	5.00	165.4	37.7	62.5	27.1	23.2	14.7	48.0	9.8
A17-3	42,33	838004	820167	2F	13.60	10.00	144.5	33.0	62.5	27.0	23.2	14.6	48.0	9.8
A17-4	42,33	838004	820167	3F	21.10	17.50	138.3	29.9	62.3	26.9	23.2	14.5	48.0	9.8
A17-5	42,33	838004	820167	4F	24.25	20.65	137.4	29.1	62.3	26.9	23.2	14.5	48.0	9.8
A17-6	42,33	838004	820167	5F	27.40	23.80	133.4	28.5	62.3	26.9	23.2	14.5	48.0	9.8
A17-7	42,33	838004	820167	6F	30.55	26.95	130.8	28.2	62.2	26.9	23.1	14.5	48.0	9.8
A17-8	42,33	838004	820167	7F	33.70	30.10	129.3	28.0	62.2	26.9	23.1	14.5	48.0	9.8
A17-9	42,33	838004	820167	8F	36.85	33.25	128.2	28.0	62.2	26.8	23.1	14.4	48.0	9.8
A17-10	42,33	838004	820167	9F	40.00	36.40	127.9	28.1	62.2	26.8	23.1	14.4	48.0	9.7
A17-11	42,33	838004	820167	10F	43.15	39.55	128.1	28.5	62.2	26.8	23.1	14.4	48.0	9.7
A17-12	42,33	838004	820167	12F	49.45	45.85	137.5	29.5	62.2	26.8	23.1	14.4	47.9	9.7
A17-13	42,33	838004	820167	14F	55.75	52.15	145.9	29.5	62.2	26.8	23.1	14.4	47.9	9.7
A17-14	42,33	838004	820167	16F	62.05	58.45	144.6	28.4	62.2	26.8	23.1	14.4	47.9	9.7
A17-15	42,33	838004	820167	20F	74.65	71.05	127.2	26.1	62.2	26.8	23.1	14.4	47.9	9.7
A17-16	42,33	838004	820167	23F	84.10	80.50	127.8	25.3	62.2	26.8	23.1	14.4	47.9	9.7
A17-17	42,33	838004	820167	26F	93.55	89.95	128.2	24.8	62.2	26.8	23.1	14.4	47.9	9.7
A17-18	42,33	838004	820167	RF	120.00	116.40	128.3	24.5	62.2	26.8	23.1	14.4	47.9	9.7

Appendix 4.13 Contour Map of NO2, RSP, FSP and SO2



Appendix: 4.13a	RAMBOLL
Title: Contour Map of the 19th Highest Hourly Average Concentration of NO_2 in μgm^{-3} (Assessment Level: 1.5m Above Ground) (AQO standard: $200\mu gm^{-3}$)	Drawn by: SC Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: Sep 2022

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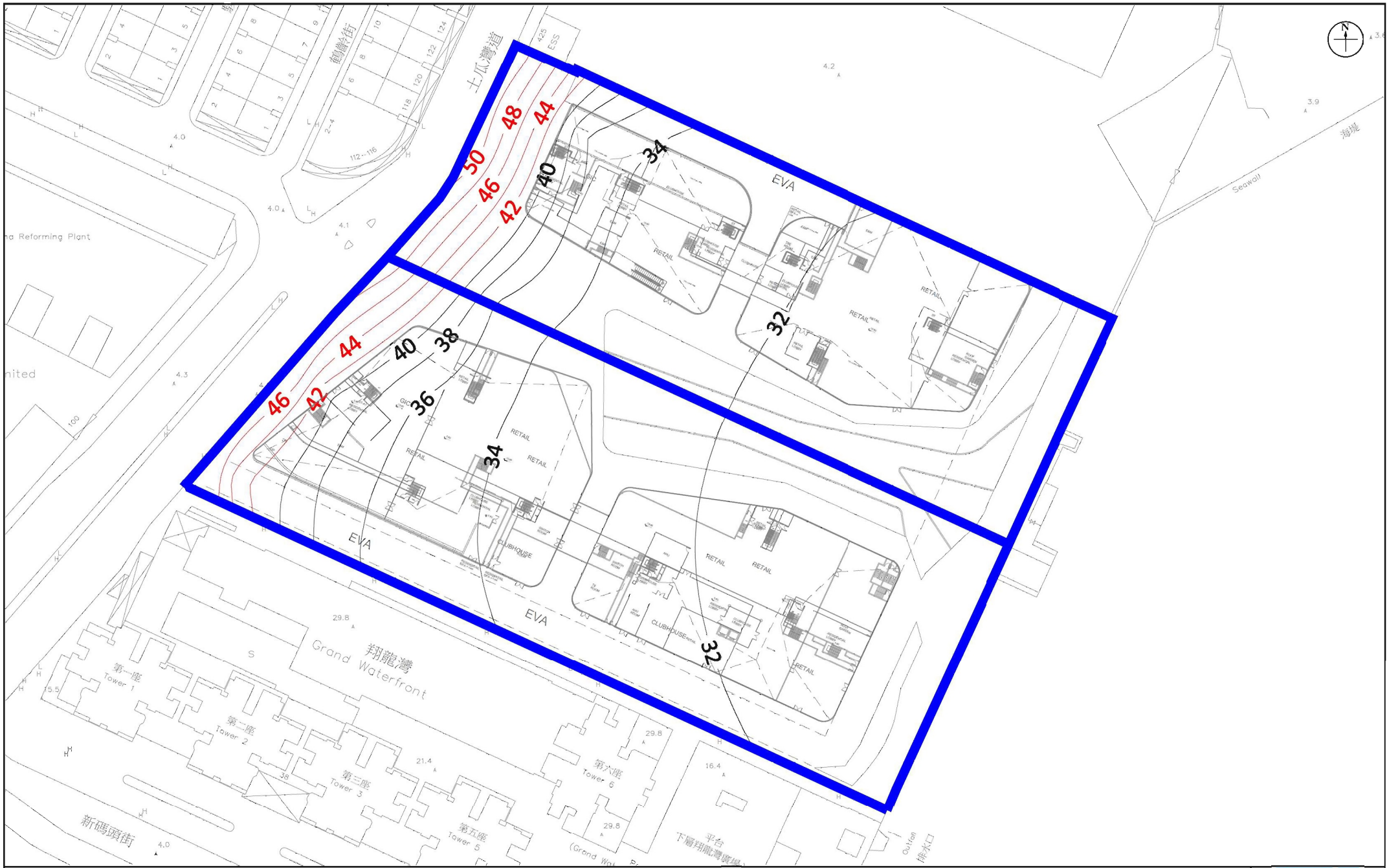

Appendix: 4.13b

Title: Contour Map of Annual Average Concentration of NO_2 in μgm^{-3} (Assessment Level: 1.5m Above Ground) (AQO standard: $40\mu gm^{-3}$)

Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)

RAMBOLL

Drawn by:	SC
Checked by:	BF
Rev.:	1.0
Date:	Sep 2022

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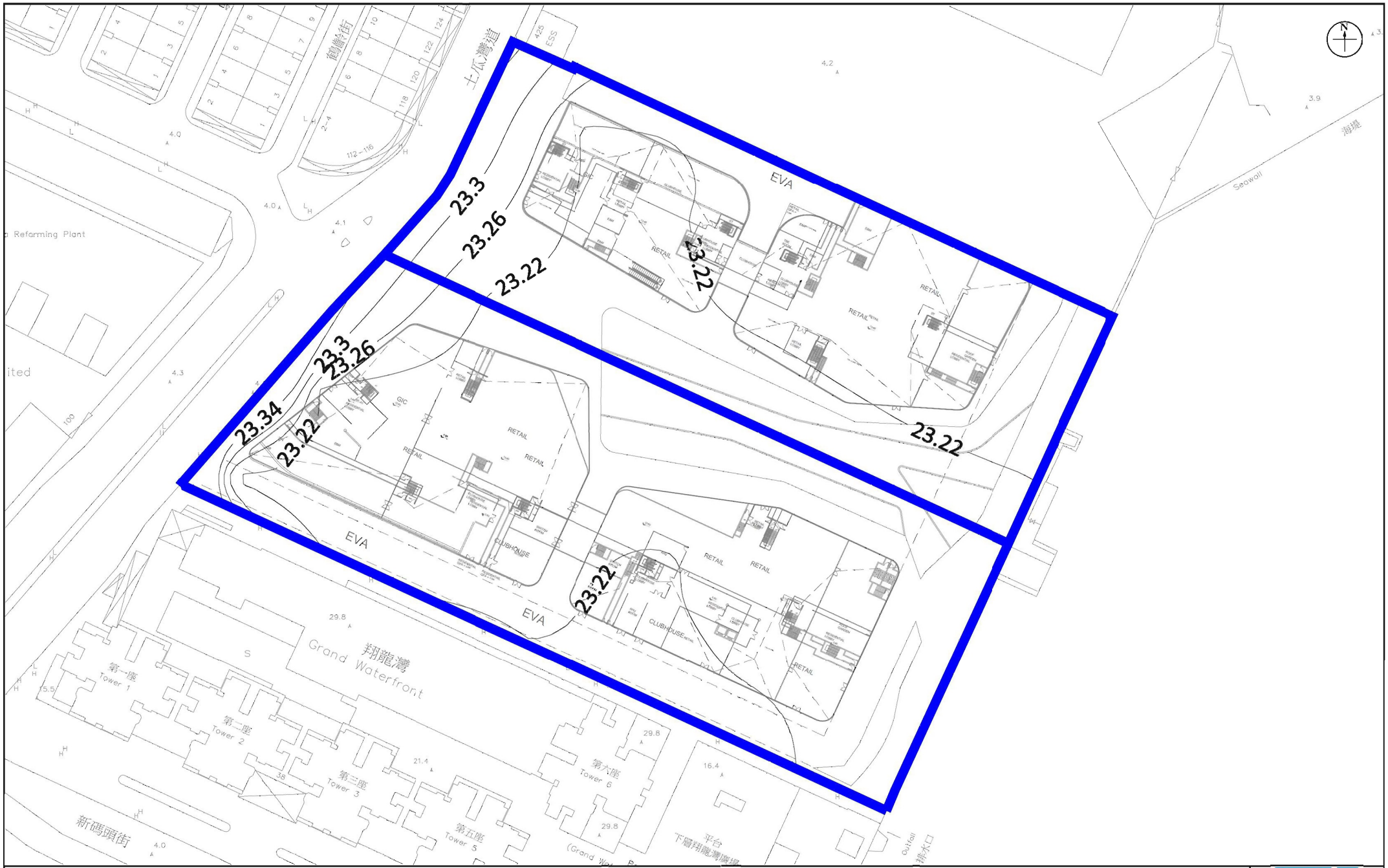

Appendix: 4.13c	RAMBOLL
Title: Contour Map of the 10th Highest Daily Average Concentration of FSP in μgm^{-3} (Assessment Level: 1.5m Above Ground) (AQO standard: $50\mu gm^{-3}$)	Drawn by: SC Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: Sep 2022

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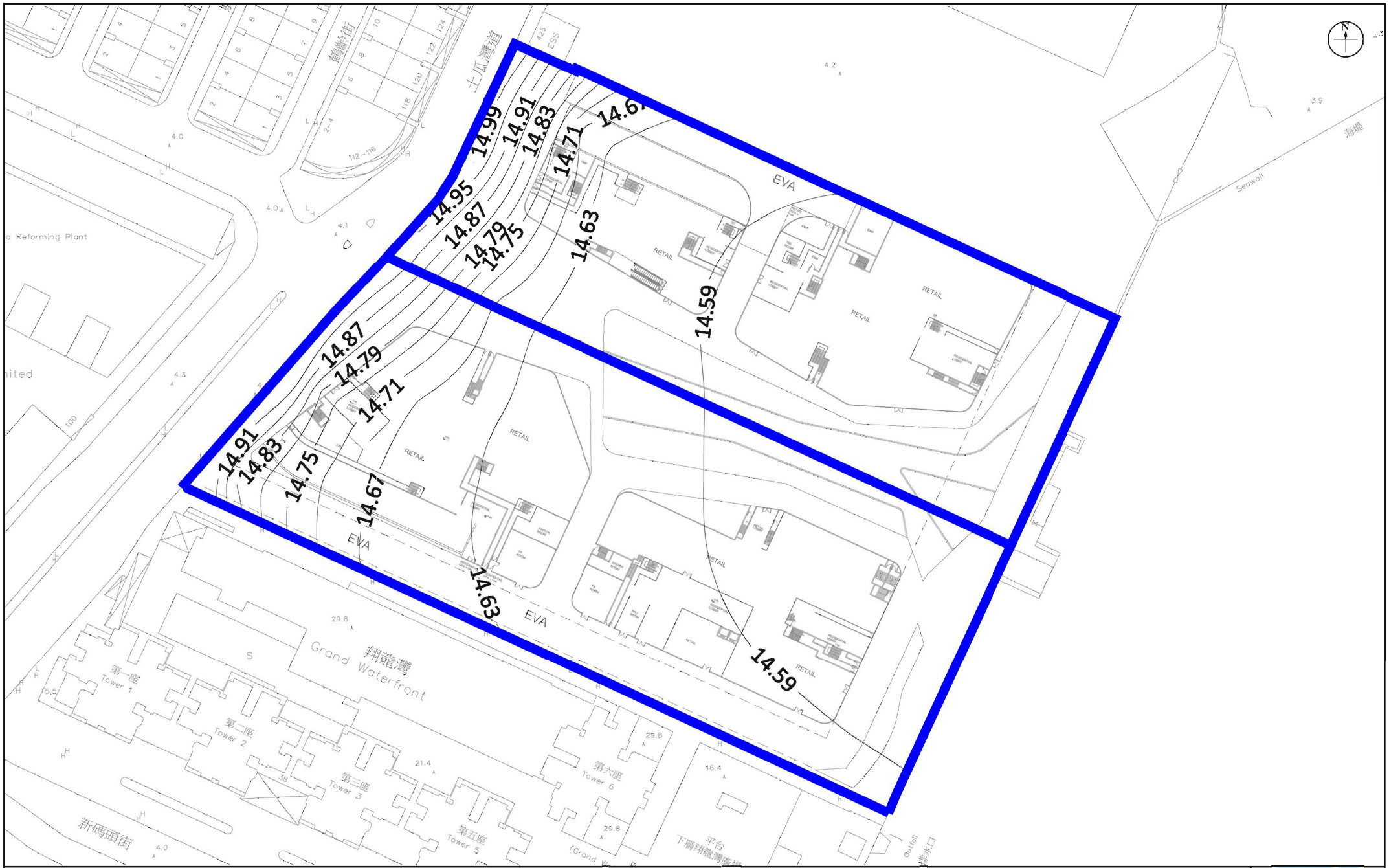

Appendix: 4.13d	RAMBOLL
Title: Contour Map of the Annual Average Concentration of FSP in μgm^{-3} (Assessment Level: 1.5m Above Ground) (AQO standard: $25\mu gm^{-3}$)	Drawn by: SC Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: Sep 2022

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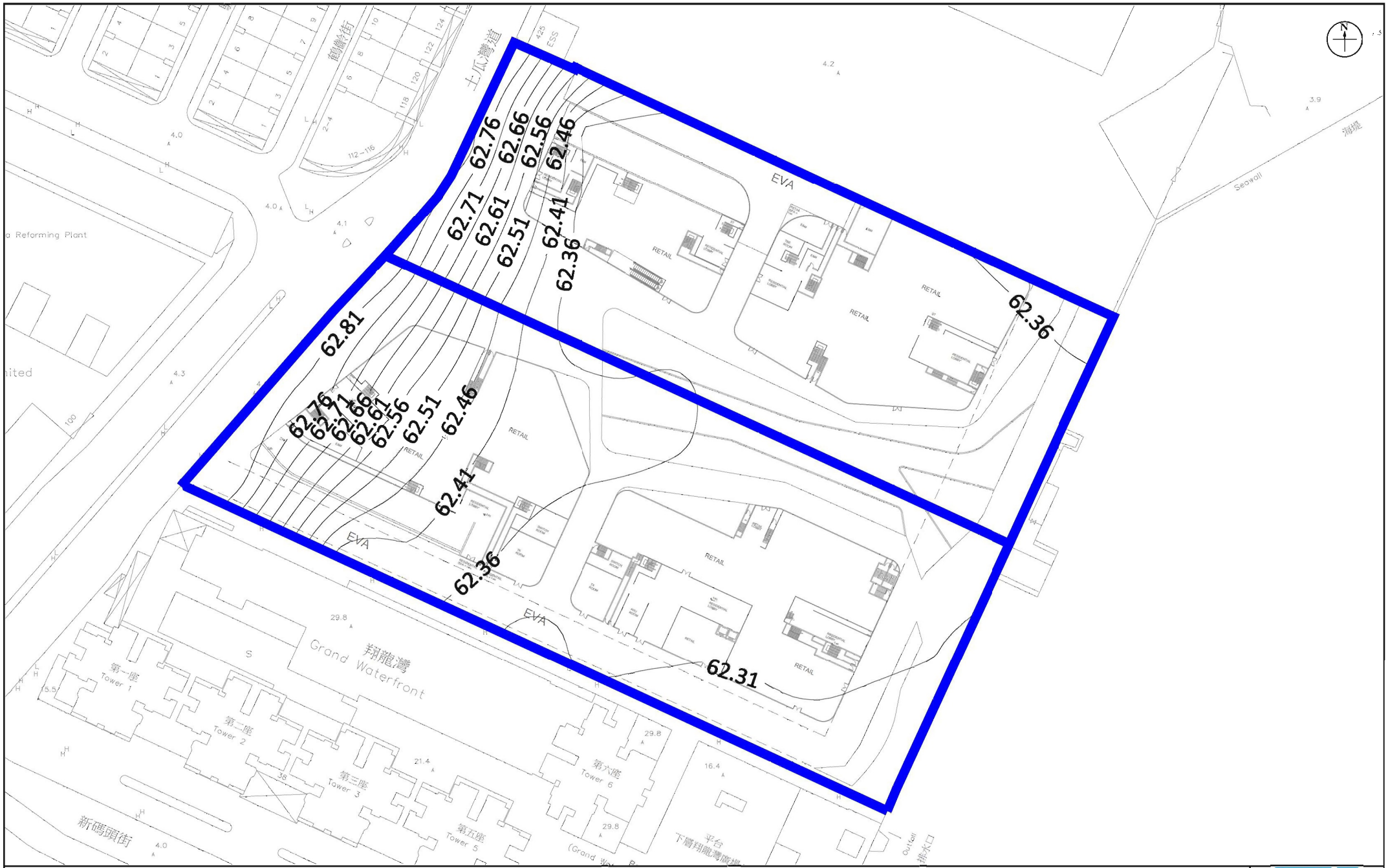

Appendix: 4.13e	RAMBOLL
Title: Contour Map of the 10th Highest Daily Average Concentration of RSP in μgm^{-3} (Assessment Level: 1.5m Above Ground) (AQO standard: $50\mu gm^{-3}$)	Drawn by: SC
	Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0
	Date: Sep 2022

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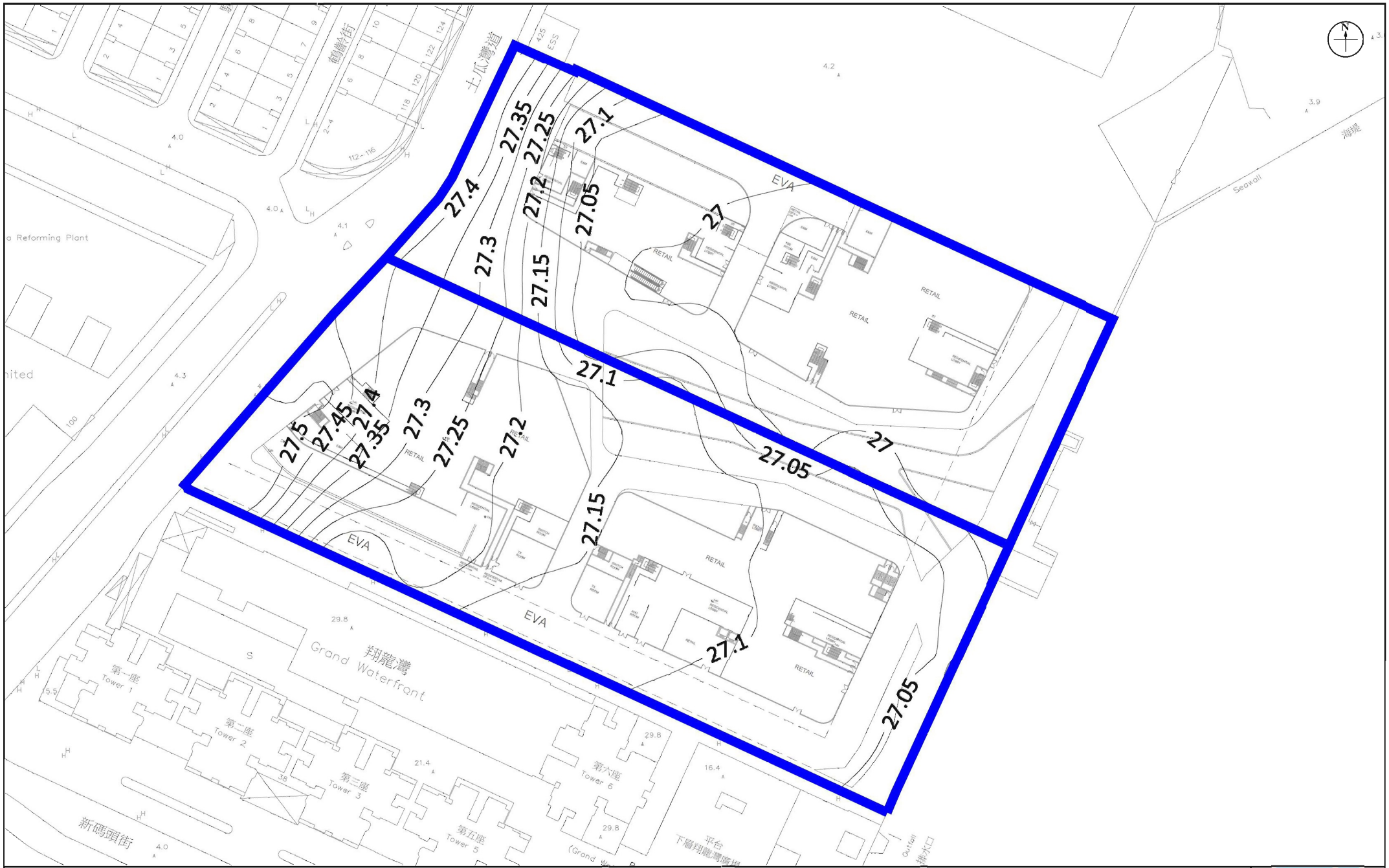
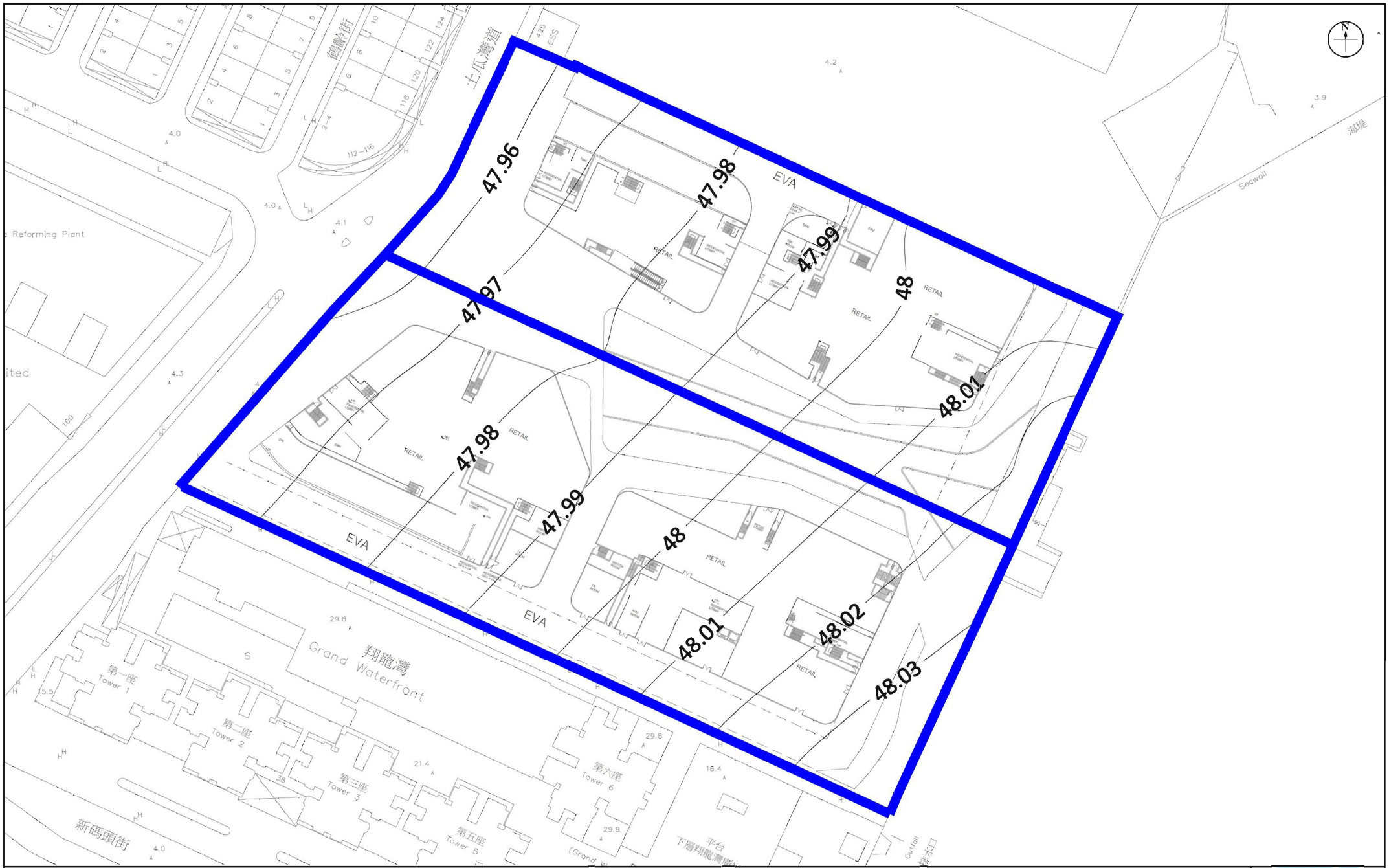


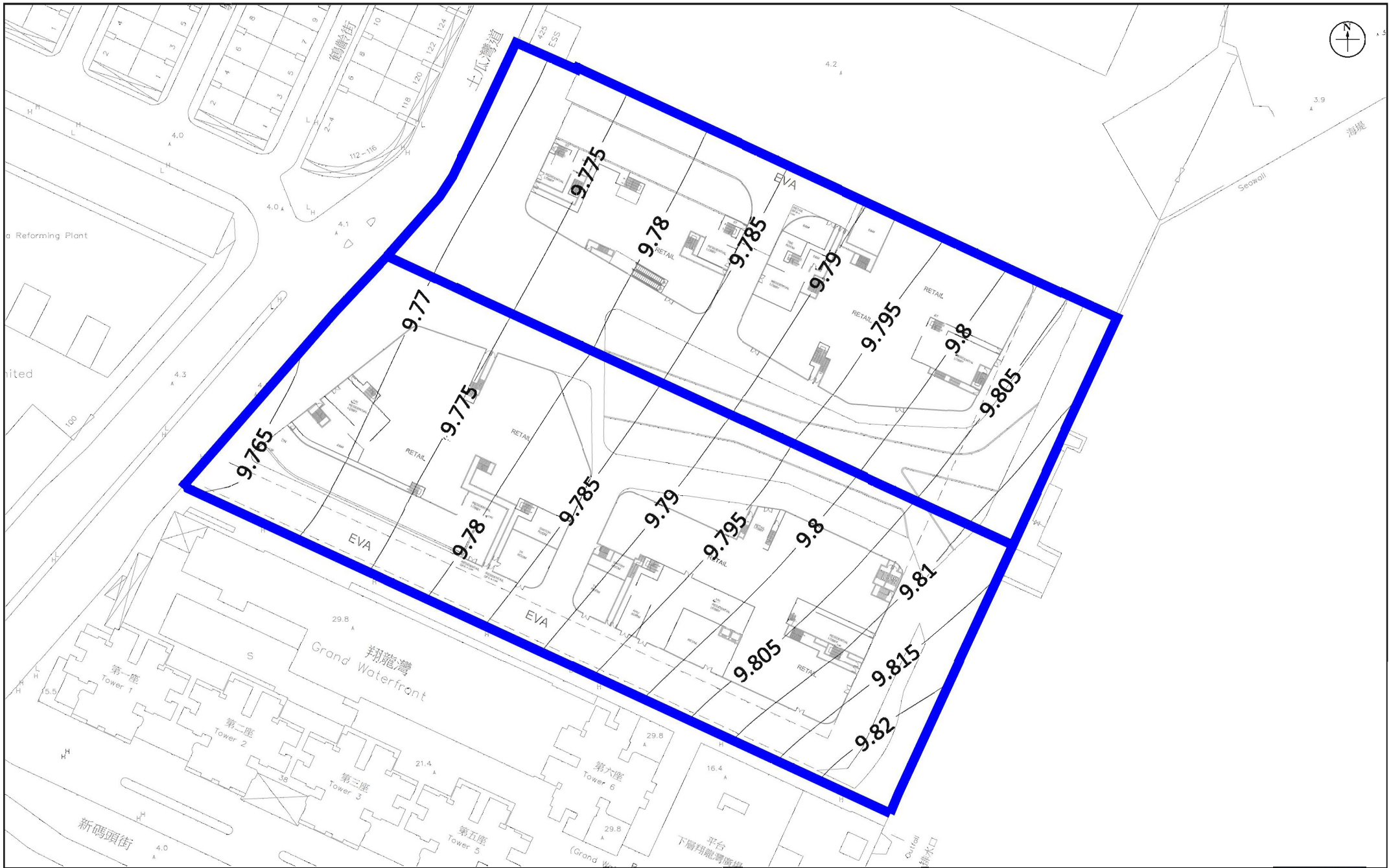
Appendix: 4.13f	RAMBOLL
Title: Contour Map of the Annual Average Concentration of RSP in μgm^{-3} (Assessment Level: 1.5m Above Ground) (AQO standard: $50\mu gm^{-3}$)	Drawn by: SC Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: Sep 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\01 Air\10 Contour\v1.1_3\Contour maps.dwg



Appendix: 4.13g		RAMBOLL
Title:	Contour Map of the 4th Highest 10-minute Average Concentration of SO2 in μgm^{-3} (Assessment Level: 1.5m Above Ground) (AQO standard: $500\mu gm^{-3}$)	Drawn by: SC Checked by: BF
Project:	Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: Sep 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\01 Air\10 Contour\v1.1_3\Contour maps.dwg



Appendix: 4.13h	RAMBOLL
Title: Contour Map of the 4th Highest Daily Average Concentration of SO2 in μgm^{-3} (Assessment Level: 1.5m Above Ground) (AQO standard: $50\mu gm^{-3}$)	Drawn by: SC Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: Sep 2022

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Appendix 4.14 Predicted Odour Impact Assessment Results

Odour_Impact Summary(KC-018)						
ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mAG	Odour Impact
		x	y			5-second
		Easting	Northing			(Criteria: 5 OU)
A1-1	42,33	838116	820048	GF	1.50	0.05
A1-2	42,33	838116	820048	1F	5.00	0.05
A1-3	42,33	838116	820048	2F	10.00	0.06
A1-4	42,33	838116	820048	3F	17.50	0.05
A1-5	42,33	838116	820048	4F	20.65	0.05
A1-6	42,33	838116	820048	5F	23.80	0.05
A1-7	42,33	838116	820048	6F	26.95	0.04
A1-8	42,33	838116	820048	7F	30.10	0.04
A1-9	42,33	838116	820048	8F	33.25	0.03
A1-10	42,33	838116	820048	9F	36.40	0.03
A1-11	42,33	838116	820048	10F	39.55	0.03
A1-12	42,33	838116	820048	12F	45.85	0.03
A1-13	42,33	838116	820048	14F	52.15	0.03
A1-14	42,33	838116	820048	16F	58.45	0.03
A1-15	42,33	838116	820048	20F	71.05	0.02
A1-16	42,33	838116	820048	23F	80.50	0.02
A1-17	42,33	838116	820048	26F	89.95	0.02
A1-18	42,33	838116	820048	RF	116.40	0.01
A2-1	42,33	838102	820016	GF	1.50	0.03
A2-2	42,33	838102	820016	1F	5.00	0.05
A2-3	42,33	838102	820016	2F	10.00	0.06
A2-4	42,33	838102	820016	3F	17.50	0.05
A2-5	42,33	838102	820016	4F	20.65	0.04
A2-6	42,33	838102	820016	5F	23.80	0.03
A2-7	42,33	838102	820016	6F	26.95	0.03
A2-8	42,33	838102	820016	7F	30.10	0.03
A2-9	42,33	838102	820016	8F	33.25	0.03
A2-10	42,33	838102	820016	9F	36.40	0.03
A2-11	42,33	838102	820016	10F	39.55	0.03
A2-12	42,33	838102	820016	12F	45.85	0.03
A2-13	42,33	838102	820016	14F	52.15	0.03
A2-14	42,33	838102	820016	16F	58.45	0.02
A2-15	42,33	838102	820016	20F	71.05	0.02
A2-16	42,33	838102	820016	23F	80.50	0.02
A2-17	42,33	838102	820016	26F	89.95	0.02
A2-18	42,33	838102	820016	RF	116.40	0.01
A3-1	42,33	838060	820034	GF	1.50	0.05
A3-2	42,33	838060	820034	1F	5.00	0.07
A3-3	42,33	838060	820034	2F	10.00	0.08
A3-4	42,33	838060	820034	3F	17.50	0.06
A3-5	42,33	838060	820034	4F	20.65	0.05
A3-6	42,33	838060	820034	5F	23.80	0.05
A3-7	42,33	838060	820034	6F	26.95	0.05
A3-8	42,33	838060	820034	7F	30.10	0.04
A3-9	42,33	838060	820034	8F	33.25	0.04
A3-10	42,33	838060	820034	9F	36.40	0.04
A3-11	42,33	838060	820034	10F	39.55	0.04
A3-12	42,33	838060	820034	12F	45.85	0.04
A3-13	42,33	838060	820034	14F	52.15	0.03
A3-14	42,33	838060	820034	16F	58.45	0.03
A3-15	42,33	838060	820034	20F	71.05	0.02
A3-16	42,33	838060	820034	23F	80.50	0.02
A3-17	42,33	838060	820034	26F	89.95	0.02
A3-18	42,33	838060	820034	RF	116.40	0.01

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mAG	Odour Impact
		x	y			5-second
		Easting	Northing			(Criteria: 5 OU)
A4-1	42,33	838019	820052	GF	1.50	0.08
A4-2	42,33	838019	820052	1F	5.00	0.09
A4-3	42,33	838019	820052	2F	10.00	0.10
A4-4	42,33	838019	820052	3F	17.50	0.09
A4-5	42,33	838019	820052	4F	20.65	0.08
A4-6	42,33	838019	820052	5F	23.80	0.07
A4-7	42,33	838019	820052	6F	26.95	0.07
A4-8	42,33	838019	820052	7F	30.10	0.06
A4-9	42,33	838019	820052	8F	33.25	0.06
A4-10	42,33	838019	820052	9F	36.40	0.05
A4-11	42,33	838019	820052	10F	39.55	0.05
A4-12	42,33	838019	820052	12F	45.85	0.04
A4-13	42,33	838019	820052	14F	52.15	0.04
A4-14	42,33	838019	820052	16F	58.45	0.03
A4-15	42,33	838019	820052	20F	71.05	0.02
A4-16	42,33	838019	820052	23F	80.50	0.02
A4-17	42,33	838019	820052	26F	89.95	0.01
A4-18	42,33	838019	820052	RF	116.40	0.01
A5-1	42,33	837977	820072	GF	1.50	0.14
A5-2	42,33	837977	820072	1F	5.00	0.19
A5-3	42,33	837977	820072	2F	10.00	0.20
A5-4	42,33	837977	820072	3F	17.50	0.15
A5-5	42,33	837977	820072	4F	20.65	0.12
A5-6	42,33	837977	820072	5F	23.80	0.10
A5-7	42,33	837977	820072	6F	26.95	0.09
A5-8	42,33	837977	820072	7F	30.10	0.08
A5-9	42,33	837977	820072	8F	33.25	0.07
A5-10	42,33	837977	820072	9F	36.40	0.06
A5-11	42,33	837977	820072	10F	39.55	0.06
A5-12	42,33	837977	820072	12F	45.85	0.05
A5-13	42,33	837977	820072	14F	52.15	0.03
A5-14	42,33	837977	820072	16F	58.45	0.03
A5-15	42,33	837977	820072	20F	71.05	0.02
A5-16	42,33	837977	820072	23F	80.50	0.01
A5-17	42,33	837977	820072	26F	89.95	0.01
A5-18	42,33	837977	820072	RF	116.40	0.01
A6-1	42,33	837939	820089	GF	1.50	0.32
A6-2	42,33	837939	820089	1F	5.00	0.44
A6-3	42,33	837939	820089	2F	10.00	0.43
A6-4	42,33	837939	820089	3F	17.50	0.24
A6-5	42,33	837939	820089	4F	20.65	0.14
A6-6	42,33	837939	820089	5F	23.80	0.11
A6-7	42,33	837939	820089	6F	26.95	0.09
A6-8	42,33	837939	820089	7F	30.10	0.08
A6-9	42,33	837939	820089	8F	33.25	0.06
A6-10	42,33	837939	820089	9F	36.40	0.05
A6-11	42,33	837939	820089	10F	39.55	0.04
A6-12	42,33	837939	820089	12F	45.85	0.03
A6-13	42,33	837939	820089	14F	52.15	0.02
A6-14	42,33	837939	820089	16F	58.45	0.02
A6-15	42,33	837939	820089	20F	71.05	0.01
A6-16	42,33	837939	820089	23F	80.50	0.01
A6-17	42,33	837939	820089	26F	89.95	0.00
A6-18	42,33	837939	820089	RF	116.40	0.00

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mAG	Odour Impact
		x	y			5-second
		Easting	Northing			(Criteria: 5 OU)
A7-1	42,33	837962	820116	GF	1.50	0.36
A7-2	42,33	837962	820116	1F	5.00	0.51
A7-3	42,33	837962	820116	2F	10.00	0.50
A7-4	42,33	837962	820116	3F	17.50	0.27
A7-5	42,33	837962	820116	4F	20.65	0.18
A7-6	42,33	837962	820116	5F	23.80	0.15
A7-7	42,33	837962	820116	6F	26.95	0.13
A7-8	42,33	837962	820116	7F	30.10	0.11
A7-9	42,33	837962	820116	8F	33.25	0.09
A7-10	42,33	837962	820116	9F	36.40	0.07
A7-11	42,33	837962	820116	10F	39.55	0.05
A7-12	42,33	837962	820116	12F	45.85	0.04
A7-13	42,33	837962	820116	14F	52.15	0.03
A7-14	42,33	837962	820116	16F	58.45	0.02
A7-15	42,33	837962	820116	20F	71.05	0.01
A7-16	42,33	837962	820116	23F	80.50	0.01
A7-17	42,33	837962	820116	26F	89.95	0.01
A7-18	42,33	837962	820116	RF	116.40	0.00
A8-1	42,33	837986	820142	GF	1.50	0.20
A8-2	42,33	837986	820142	1F	5.00	0.28
A8-3	42,33	837986	820142	2F	10.00	0.31
A8-4	42,33	837986	820142	3F	17.50	0.25
A8-5	42,33	837986	820142	4F	20.65	0.21
A8-6	42,33	837986	820142	5F	23.80	0.17
A8-7	42,33	837986	820142	6F	26.95	0.14
A8-8	42,33	837986	820142	7F	30.10	0.11
A8-9	42,33	837986	820142	8F	33.25	0.08
A8-10	42,33	837986	820142	9F	36.40	0.07
A8-11	42,33	837986	820142	10F	39.55	0.06
A8-12	42,33	837986	820142	12F	45.85	0.04
A8-13	42,33	837986	820142	14F	52.15	0.04
A8-14	42,33	837986	820142	16F	58.45	0.03
A8-15	42,33	837986	820142	20F	71.05	0.02
A8-16	42,33	837986	820142	23F	80.50	0.02
A8-17	42,33	837986	820142	26F	89.95	0.01
A8-18	42,33	837986	820142	RF	116.40	0.01
A9-1	42,33	838033	820121	GF	1.50	0.12
A9-2	42,33	838033	820121	1F	5.00	0.15
A9-3	42,33	838033	820121	2F	10.00	0.17
A9-4	42,33	838033	820121	3F	17.50	0.15
A9-5	42,33	838033	820121	4F	20.65	0.13
A9-6	42,33	838033	820121	5F	23.80	0.11
A9-7	42,33	838033	820121	6F	26.95	0.10
A9-8	42,33	838033	820121	7F	30.10	0.09
A9-9	42,33	838033	820121	8F	33.25	0.08
A9-10	42,33	838033	820121	9F	36.40	0.07
A9-11	42,33	838033	820121	10F	39.55	0.06
A9-12	42,33	838033	820121	12F	45.85	0.05
A9-13	42,33	838033	820121	14F	52.15	0.04
A9-14	42,33	838033	820121	16F	58.45	0.04
A9-15	42,33	838033	820121	20F	71.05	0.02
A9-16	42,33	838033	820121	23F	80.50	0.02
A9-17	42,33	838033	820121	26F	89.95	0.01
A9-18	42,33	838033	820121	RF	116.40	0.01

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mAG	Odour Impact
		x	y			5-second
		Easting	Northing			(Criteria: 5 OU)
A10-1	42,33	838081	820098	GF	1.50	0.08
A10-2	42,33	838081	820098	1F	5.00	0.09
A10-3	42,33	838081	820098	2F	10.00	0.11
A10-4	42,33	838081	820098	3F	17.50	0.10
A10-5	42,33	838081	820098	4F	20.65	0.10
A10-6	42,33	838081	820098	5F	23.80	0.09
A10-7	42,33	838081	820098	6F	26.95	0.08
A10-8	42,33	838081	820098	7F	30.10	0.07
A10-9	42,33	838081	820098	8F	33.25	0.06
A10-10	42,33	838081	820098	9F	36.40	0.05
A10-11	42,33	838081	820098	10F	39.55	0.04
A10-12	42,33	838081	820098	12F	45.85	0.04
A10-13	42,33	838081	820098	14F	52.15	0.03
A10-14	42,33	838081	820098	16F	58.45	0.03
A10-15	42,33	838081	820098	20F	71.05	0.03
A10-16	42,33	838081	820098	23F	80.50	0.02
A10-17	42,33	838081	820098	26F	89.95	0.02
A10-18	42,33	838081	820098	RF	116.40	0.01
A11-1	42,33	838129	820076	GF	1.50	0.05
A11-2	42,33	838129	820076	1F	5.00	0.06
A11-3	42,33	838129	820076	2F	10.00	0.07
A11-4	42,33	838129	820076	3F	17.50	0.07
A11-5	42,33	838129	820076	4F	20.65	0.07
A11-6	42,33	838129	820076	5F	23.80	0.06
A11-7	42,33	838129	820076	6F	26.95	0.06
A11-8	42,33	838129	820076	7F	30.10	0.06
A11-9	42,33	838129	820076	8F	33.25	0.05
A11-10	42,33	838129	820076	9F	36.40	0.05
A11-11	42,33	838129	820076	10F	39.55	0.04
A11-12	42,33	838129	820076	12F	45.85	0.03
A11-13	42,33	838129	820076	14F	52.15	0.03
A11-14	42,33	838129	820076	16F	58.45	0.02
A11-15	42,33	838129	820076	20F	71.05	0.02
A11-16	42,33	838129	820076	23F	80.50	0.02
A11-17	42,33	838129	820076	26F	89.95	0.02
A11-18	42,33	838129	820076	RF	116.40	0.01

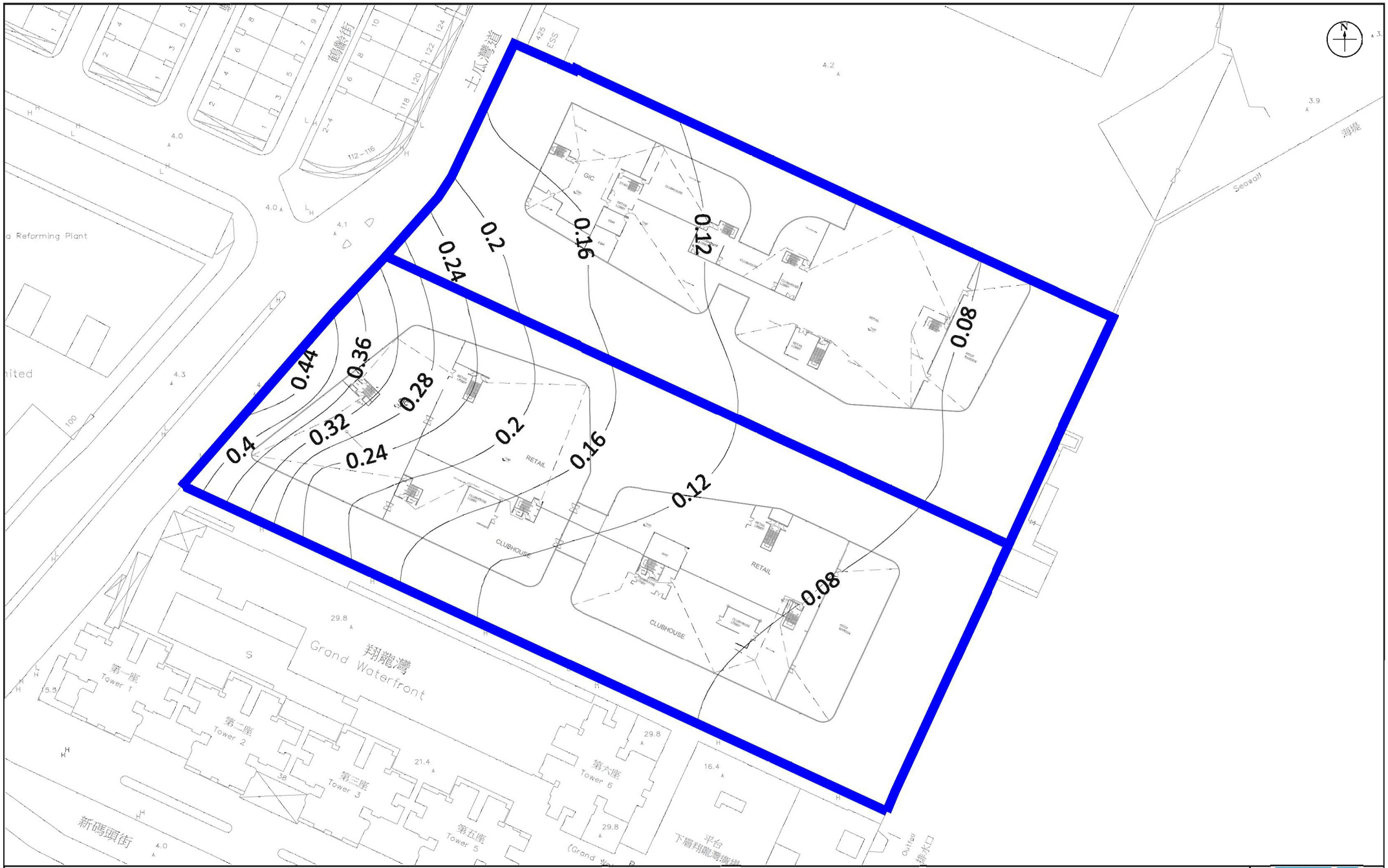
Odour_Impact Summary(KC-019)						
ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mAG	Odour Impact
		x	y			5-second
		Easting	Northing			(Criteria: 5 OU)
A8-1	42,33	837986	820142	GF	1.50	0.20
A8-2	42,33	837986	820142	1F	5.00	0.28
A8-3	42,33	837986	820142	2F	10.00	0.31
A8-4	42,33	837986	820142	3F	17.50	0.25
A8-5	42,33	837986	820142	4F	20.65	0.21
A8-6	42,33	837986	820142	5F	23.80	0.17
A8-7	42,33	837986	820142	6F	26.95	0.14
A8-8	42,33	837986	820142	7F	30.10	0.11
A8-9	42,33	837986	820142	8F	33.25	0.08
A8-10	42,33	837986	820142	9F	36.40	0.07
A8-11	42,33	837986	820142	10F	39.55	0.06
A8-12	42,33	837986	820142	12F	45.85	0.04
A8-13	42,33	837986	820142	14F	52.15	0.04
A8-14	42,33	837986	820142	16F	58.45	0.03
A8-15	42,33	837986	820142	20F	71.05	0.02
A8-16	42,33	837986	820142	23F	80.50	0.02
A8-17	42,33	837986	820142	26F	89.95	0.01
A8-18	42,33	837986	820142	RF	116.40	0.01
A9-1	42,33	838033	820121	GF	1.50	0.12
A9-2	42,33	838033	820121	1F	5.00	0.15
A9-3	42,33	838033	820121	2F	10.00	0.17
A9-4	42,33	838033	820121	3F	17.50	0.15
A9-5	42,33	838033	820121	4F	20.65	0.13
A9-6	42,33	838033	820121	5F	23.80	0.11
A9-7	42,33	838033	820121	6F	26.95	0.10
A9-8	42,33	838033	820121	7F	30.10	0.09
A9-9	42,33	838033	820121	8F	33.25	0.08
A9-10	42,33	838033	820121	9F	36.40	0.07
A9-11	42,33	838033	820121	10F	39.55	0.06
A9-12	42,33	838033	820121	12F	45.85	0.05
A9-13	42,33	838033	820121	14F	52.15	0.04
A9-14	42,33	838033	820121	16F	58.45	0.04
A9-15	42,33	838033	820121	20F	71.05	0.02
A9-16	42,33	838033	820121	23F	80.50	0.02
A9-17	42,33	838033	820121	26F	89.95	0.01
A9-18	42,33	838033	820121	RF	116.40	0.01
A10-1	42,33	838081	820098	GF	1.50	0.08
A10-2	42,33	838081	820098	1F	5.00	0.09
A10-3	42,33	838081	820098	2F	10.00	0.11
A10-4	42,33	838081	820098	3F	17.50	0.10
A10-5	42,33	838081	820098	4F	20.65	0.10
A10-6	42,33	838081	820098	5F	23.80	0.09
A10-7	42,33	838081	820098	6F	26.95	0.08
A10-8	42,33	838081	820098	7F	30.10	0.07
A10-9	42,33	838081	820098	8F	33.25	0.06
A10-10	42,33	838081	820098	9F	36.40	0.05
A10-11	42,33	838081	820098	10F	39.55	0.04
A10-12	42,33	838081	820098	12F	45.85	0.04
A10-13	42,33	838081	820098	14F	52.15	0.03
A10-14	42,33	838081	820098	16F	58.45	0.03
A10-15	42,33	838081	820098	20F	71.05	0.03
A10-16	42,33	838081	820098	23F	80.50	0.02
A10-17	42,33	838081	820098	26F	89.95	0.02
A10-18	42,33	838081	820098	RF	116.40	0.01

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mAG	Odour Impact
		x	y			5-second
		Easting	Northing			(Criteria: 5 OU)
A11-1	42,33	838129	820076	GF	1.50	0.05
A11-2	42,33	838129	820076	1F	5.00	0.06
A11-3	42,33	838129	820076	2F	10.00	0.07
A11-4	42,33	838129	820076	3F	17.50	0.07
A11-5	42,33	838129	820076	4F	20.65	0.07
A11-6	42,33	838129	820076	5F	23.80	0.06
A11-7	42,33	838129	820076	6F	26.95	0.06
A11-8	42,33	838129	820076	7F	30.10	0.06
A11-9	42,33	838129	820076	8F	33.25	0.05
A11-10	42,33	838129	820076	9F	36.40	0.05
A11-11	42,33	838129	820076	10F	39.55	0.04
A11-12	42,33	838129	820076	12F	45.85	0.03
A11-13	42,33	838129	820076	14F	52.15	0.03
A11-14	42,33	838129	820076	16F	58.45	0.02
A11-15	42,33	838129	820076	20F	71.05	0.02
A11-16	42,33	838129	820076	23F	80.50	0.02
A11-17	42,33	838129	820076	26F	89.95	0.02
A11-18	42,33	838129	820076	RF	116.40	0.01
A12-1	42,33	838142	820103	GF	1.50	0.05
A12-2	42,33	838142	820103	1F	5.00	0.06
A12-3	42,33	838142	820103	2F	10.00	0.07
A12-4	42,33	838142	820103	3F	17.50	0.07
A12-5	42,33	838142	820103	4F	20.65	0.07
A12-6	42,33	838142	820103	5F	23.80	0.06
A12-7	42,33	838142	820103	6F	26.95	0.06
A12-8	42,33	838142	820103	7F	30.10	0.06
A12-9	42,33	838142	820103	8F	33.25	0.05
A12-10	42,33	838142	820103	9F	36.40	0.05
A12-11	42,33	838142	820103	10F	39.55	0.04
A12-12	42,33	838142	820103	12F	45.85	0.03
A12-13	42,33	838142	820103	14F	52.15	0.03
A12-14	42,33	838142	820103	16F	58.45	0.02
A12-15	42,33	838142	820103	20F	71.05	0.02
A12-16	42,33	838142	820103	23F	80.50	0.02
A12-17	42,33	838142	820103	26F	89.95	0.02
A12-18	42,33	838142	820103	RF	116.40	0.01
A13-1	42,33	838153	820128	GF	1.50	0.04
A13-2	42,33	838153	820128	1F	5.00	0.05
A13-3	42,33	838153	820128	2F	10.00	0.07
A13-4	42,33	838153	820128	3F	17.50	0.06
A13-5	42,33	838153	820128	4F	20.65	0.05
A13-6	42,33	838153	820128	5F	23.80	0.05
A13-7	42,33	838153	820128	6F	26.95	0.05
A13-8	42,33	838153	820128	7F	30.10	0.05
A13-9	42,33	838153	820128	8F	33.25	0.05
A13-10	42,33	838153	820128	9F	36.40	0.04
A13-11	42,33	838153	820128	10F	39.55	0.04
A13-12	42,33	838153	820128	12F	45.85	0.04
A13-13	42,33	838153	820128	14F	52.15	0.03
A13-14	42,33	838153	820128	16F	58.45	0.03
A13-15	42,33	838153	820128	20F	71.05	0.02
A13-16	42,33	838153	820128	23F	80.50	0.02
A13-17	42,33	838153	820128	26F	89.95	0.02
A13-18	42,33	838153	820128	RF	116.40	0.01

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mAG	Odour Impact
		x	y			5-second
		Easting	Northing			(Criteria: 5 OU)
A14-1	42,33	838109	820148	GF	1.50	0.06
A14-2	42,33	838109	820148	1F	5.00	0.07
A14-3	42,33	838109	820148	2F	10.00	0.09
A14-4	42,33	838109	820148	3F	17.50	0.08
A14-5	42,33	838109	820148	4F	20.65	0.08
A14-6	42,33	838109	820148	5F	23.80	0.07
A14-7	42,33	838109	820148	6F	26.95	0.07
A14-8	42,33	838109	820148	7F	30.10	0.07
A14-9	42,33	838109	820148	8F	33.25	0.06
A14-10	42,33	838109	820148	9F	36.40	0.06
A14-11	42,33	838109	820148	10F	39.55	0.06
A14-12	42,33	838109	820148	12F	45.85	0.05
A14-13	42,33	838109	820148	14F	52.15	0.04
A14-14	42,33	838109	820148	16F	58.45	0.03
A14-15	42,33	838109	820148	20F	71.05	0.02
A14-16	42,33	838109	820148	23F	80.50	0.02
A14-17	42,33	838109	820148	26F	89.95	0.01
A14-18	42,33	838109	820148	RF	116.40	0.01
A15-1	42,33	838063	820170	GF	1.50	0.08
A15-2	42,33	838063	820170	1F	5.00	0.10
A15-3	42,33	838063	820170	2F	10.00	0.11
A15-4	42,33	838063	820170	3F	17.50	0.10
A15-5	42,33	838063	820170	4F	20.65	0.10
A15-6	42,33	838063	820170	5F	23.80	0.09
A15-7	42,33	838063	820170	6F	26.95	0.09
A15-8	42,33	838063	820170	7F	30.10	0.08
A15-9	42,33	838063	820170	8F	33.25	0.08
A15-10	42,33	838063	820170	9F	36.40	0.07
A15-11	42,33	838063	820170	10F	39.55	0.06
A15-12	42,33	838063	820170	12F	45.85	0.05
A15-13	42,33	838063	820170	14F	52.15	0.04
A15-14	42,33	838063	820170	16F	58.45	0.03
A15-15	42,33	838063	820170	20F	71.05	0.02
A15-16	42,33	838063	820170	23F	80.50	0.02
A15-17	42,33	838063	820170	26F	89.95	0.02
A15-18	42,33	838063	820170	RF	116.40	0.01

ASRs ID	PATH Grid	ASR Coordinates		Floor	Flag Pole Receiver Height, mAG	Odour Impact
		x	y			5-second
		Easting	Northing			(Criteria: 5 OU)
A16-1	42,33	838015	820191	GF	1.50	0.09
A16-2	42,33	838015	820191	1F	5.00	0.11
A16-3	42,33	838015	820191	2F	10.00	0.13
A16-4	42,33	838015	820191	3F	17.50	0.11
A16-5	42,33	838015	820191	4F	20.65	0.10
A16-6	42,33	838015	820191	5F	23.80	0.10
A16-7	42,33	838015	820191	6F	26.95	0.09
A16-8	42,33	838015	820191	7F	30.10	0.08
A16-9	42,33	838015	820191	8F	33.25	0.07
A16-10	42,33	838015	820191	9F	36.40	0.06
A16-11	42,33	838015	820191	10F	39.55	0.05
A16-12	42,33	838015	820191	12F	45.85	0.04
A16-13	42,33	838015	820191	14F	52.15	0.04
A16-14	42,33	838015	820191	16F	58.45	0.03
A16-15	42,33	838015	820191	20F	71.05	0.02
A16-16	42,33	838015	820191	23F	80.50	0.02
A16-17	42,33	838015	820191	26F	89.95	0.02
A16-18	42,33	838015	820191	RF	116.40	0.01
A17-1	42,33	838004	820167	GF	1.50	0.12
A17-2	42,33	838004	820167	1F	5.00	0.16
A17-3	42,33	838004	820167	2F	10.00	0.17
A17-4	42,33	838004	820167	3F	17.50	0.16
A17-5	42,33	838004	820167	4F	20.65	0.15
A17-6	42,33	838004	820167	5F	23.80	0.13
A17-7	42,33	838004	820167	6F	26.95	0.12
A17-8	42,33	838004	820167	7F	30.10	0.10
A17-9	42,33	838004	820167	8F	33.25	0.09
A17-10	42,33	838004	820167	9F	36.40	0.07
A17-11	42,33	838004	820167	10F	39.55	0.06
A17-12	42,33	838004	820167	12F	45.85	0.04
A17-13	42,33	838004	820167	14F	52.15	0.03
A17-14	42,33	838004	820167	16F	58.45	0.03
A17-15	42,33	838004	820167	20F	71.05	0.02
A17-16	42,33	838004	820167	23F	80.50	0.02
A17-17	42,33	838004	820167	26F	89.95	0.02
A17-18	42,33	838004	820167	RF	116.40	0.01

Appendix 4.15 Contour Map of Odour



Appendix: 4.15	RAMBOLL
Title: Contour Map of the Highest 5-second Average Concentration of Odour in OU (Assessment Level: 10.0m Above Ground, Worst Hit Level) (Standard: 5OU)	Drawn by: SC Checked by: BF
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0 Date: Sep 2022

Q:\Projects\URAKCAA2EI01\05 Assessments\01 Air\10 Contour\v1.1_3\Contour maps.dwg

Appendix 4.16 Calculation of Surface Roughness for CALINE4

Estimation of Area-weighted Surface Roughness		
Nature of Use	**Typical Surface Roughness (cm)**	**% of Area within Study Area**
Sea	0.1	20%
Medium/low-rise Development Area	100	0%
Urban Area	370	80%
Area-weighted surface roughness, z_0 (cm) =		296
Surface roughness factor		1.82

Appendix 4.17 Input parameters of vehicular sources in Caline4

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q1

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 1					Hour 2					Hour 3					Hour 4					Hour 5					Hour 6				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source)_Q1

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 7					Hour 8					Hour 9					Hour 10					Hour 11					Hour 12				
																Traffic Flows (VPH)	Weighted NO2 EF (g/vehicle/mile)	Weighted NO EF (g/vehicle/mile)	Weighted RSP EF (g/vehicle/mile)	Weighted FSP EF (g/vehicle/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source)_Q1

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 12					Hour 14					Hour 15					Hour 16					Hour 17					Hour 18				
																Traffic Flows (VPH)	Weighted NO2 EF (g/vehicle/mile)	Weighted NO EF (g/vehicle/mile)	Weighted RSP EF (g/vehicle/mile)	Weighted FSP EF (g/vehicle/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source)_Q1

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 19					Hour 20					Hour 21					Hour 22					Hour 23					Hour 24				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q2

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 1				Hour 2				Hour 3				Hour 4				Hour 5				Hour 6			
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Lite Source)_Q2

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 7					Hour 8					Hour 9					Hour 10					Hour 11					Hour 12				
																Traffic Flows (VPH)	Weighted NO2 EF (g/vehi/mile)	Weighted NO EF (g/vehi/mile)	Weighted RSP EF (g/vehi/mile)	Weighted FSP EF (g/vehi/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q2

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 12					Hour 14					Hour 15					Hour 16					Hour 17					Hour 18				
																Traffic Flows (VPH)	Weighted NO2 EF (g/vehicle/mile)	Weighted NO EF (g/vehicle/mile)	Weighted RSP EF (g/vehicle/mile)	Weighted FSP EF (g/vehicle/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q2

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 19					Hour 20					Hour 21					Hour 22					Hour 23					Hour 24				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Roads (Line Source), Q3

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 1					Hour 2					Hour 3					Hour 4					Hour 5					Hour 6				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q3

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 7					Hour 8					Hour 9					Hour 10					Hour 11					Hour 12				
																Traffic Flows (VPH)	Weighted NO2 EF (g/vehicle/mile)	Weighted NO EF (g/vehicle/mile)	Weighted RSP EF (g/vehicle/mile)	Weighted FSP EF (g/vehicle/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q3

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 12					Hour 14					Hour 15					Hour 16					Hour 17					Hour 18				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q3

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 19					Hour 20					Hour 21					Hour 22					Hour 23					Hour 24				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q4

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 1					Hour 2					Hour 3					Hour 4					Hour 5					Hour 6				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source)_Q4

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 7					Hour 8					Hour 9					Hour 10					Hour 11					Hour 12				
																Traffic Flows (VPH)	Weighted NO2 EF (g/vehi/mile)	Weighted NO EF (g/vehi/mile)	Weighted RSP EF (g/vehi/mile)	Weighted FSP EF (g/vehi/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source)_Q4

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 12					Hour 14					Hour 15					Hour 16					Hour 17					Hour 18				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Project-related Emission Inventory in 2033 - Vehicle Fleet on Open Roads (Line Source), Q4

Index	Link ID	Road Name	X1	Y1	Z1 (mPD)	X2	Y2	Z2 (mPD)	Highway Type	Segment Length (m)	Mean mPD	Actual Road Width (m)	Road Width + L/R Mixing Zone, W	Check: Segment Width > Length	Speed limit (kph)	Hour 19					Hour 20					Hour 21					Hour 22					Hour 23					Hour 24				
																Traffic Flows (VPH)	Weighted NO2 EF (g/veh/mile)	Weighted NO EF (g/veh/mile)	Weighted RSP EF (g/veh/mile)	Weighted FSP EF (g/veh/mile)

Appendix 4.18 Summary of Total Pollutant Emission (from EMFAC-HK)

Summary of Total Pollutant Emissions (from EMFAC-HK)

Total Emission per day

Year 2033	NO2 (g)	NO (g)	NOx (g)	RSP (g)	FSP (g)
1st Quarter	12136.1	71115.2	83251.3	1615.3	1482.5
2nd Quarter	11631.8	64831.7	76463.5	1615.3	1482.5
3rd Quarter	11268.3	61609.6	72877.8	1615.3	1482.5
4th Quarter	12082.9	70307.1	82389.9	1615.3	1482.5

Year 2040	NO2 (g)	NO (g)	NOx (g)	RSP (g)	FSP (g)
1st Quarter	13353.0	54926.1	68279.1	1196.2	1101.6
2nd Quarter	12847.2	49256.7	62103.9	1196.2	1101.6
3rd Quarter	12481.5	46521.9	59003.4	1196.2	1101.6
4th Quarter	13280.5	54121.0	67401.5	1195.3	1100.7

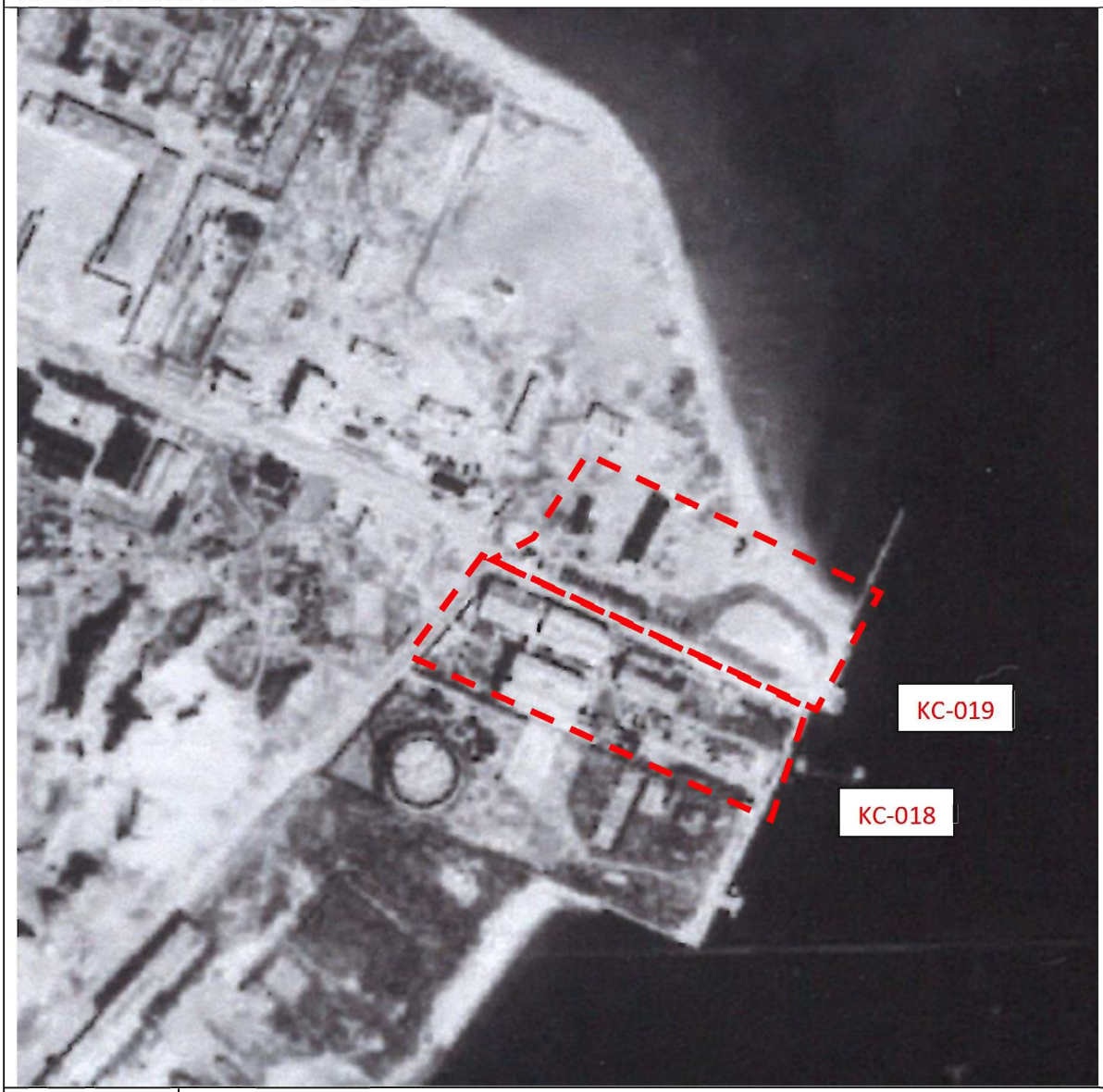
Year 2048	NO2 (g)	NO (g)	NOx (g)	RSP (g)	FSP (g)
1st Quarter	13558.2	55114.0	68672.2	1195.6	1102.4
2nd Quarter	13046.1	49470.1	62516.3	1195.6	1102.4
3rd Quarter	12673.2	46739.7	59412.9	1195.6	1102.4
4th Quarter	13504.1	54375.6	67879.7	1195.6	1102.4

Total Emission per year

	NO2 (g)	NO (g)	NOx (g)	RSP (g)	FSP (g)
Year 2033	4,299,046.16	24,436,382.45	28,735,428.60	589,579.21	541,107.59
Year 2040	4,740,967.59	18,684,854.44	23,425,822.03	436,538.19	402,011.55
Year 2048	4,815,750.99	18,764,651.70	23,580,402.69	436,392.96	402,383.21

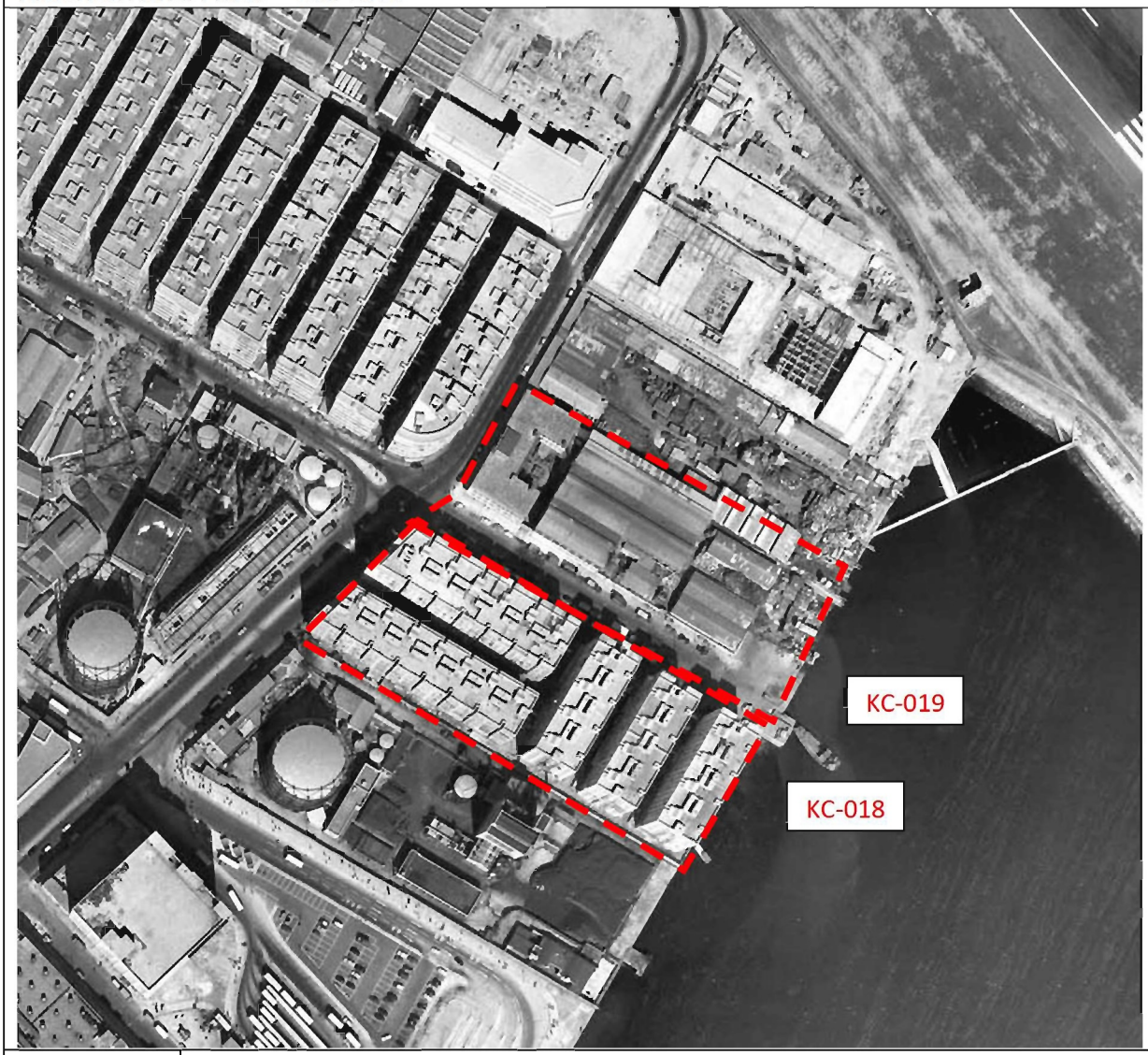
Appendix 5.1 Historical Aerial Photos

Historical Aerial Photo – Year 1945



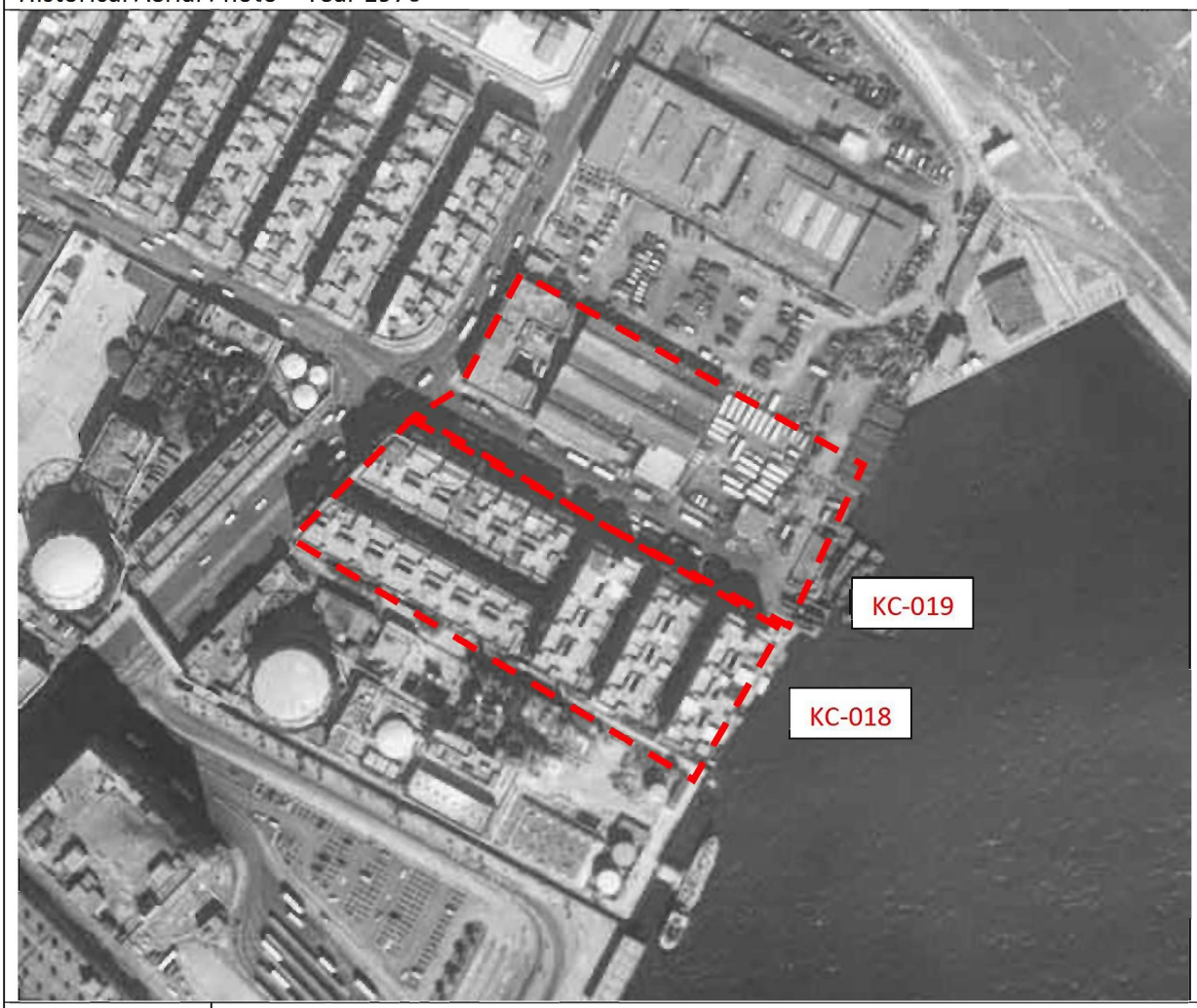
Year	Landuse/Description
1945	KC-018: Occupied by low-rise buildings. A Gas Work was erected to its immediate south. KC-019: Reclamation in progress.
1963	KC-018: Compacted residential buildings were established. New portion of Gas Work was established to its immediate west. KC-019: Occupied by low-rise building, with loading/unloading facilities at shore
1976	No significant landuse change for both sites.
1980	KC-018: No change of landuse KC-019: Redevelopment of Newport Centre was undergoing. Phase 1 (i.e. east portion) was in place; Phase 2 (i.e. west portion) was under construction (N.B.: Phase 1 and demolition of previous building at Phase 2 were completed in 1979; Phase 2 was completed in 1981)
1985	KC-018: No change of landuse KC-019: EMSD workshop with rooftop carpark was established to KC-019's immediate north. Part of the workshop was inside KC-019 (i.e. east portion)
2017	No significant landuse change for both sites. The Gas Work to KC-018's immediate south was demolished in 1993 and a residential development (i.e. Grand Waterfront) was established since 2007.
2020	No significant landuse change for both sites. EMSD workshop (immediate north of KC-019) has been demolished.

Historical Aerial Photo – Year 1963



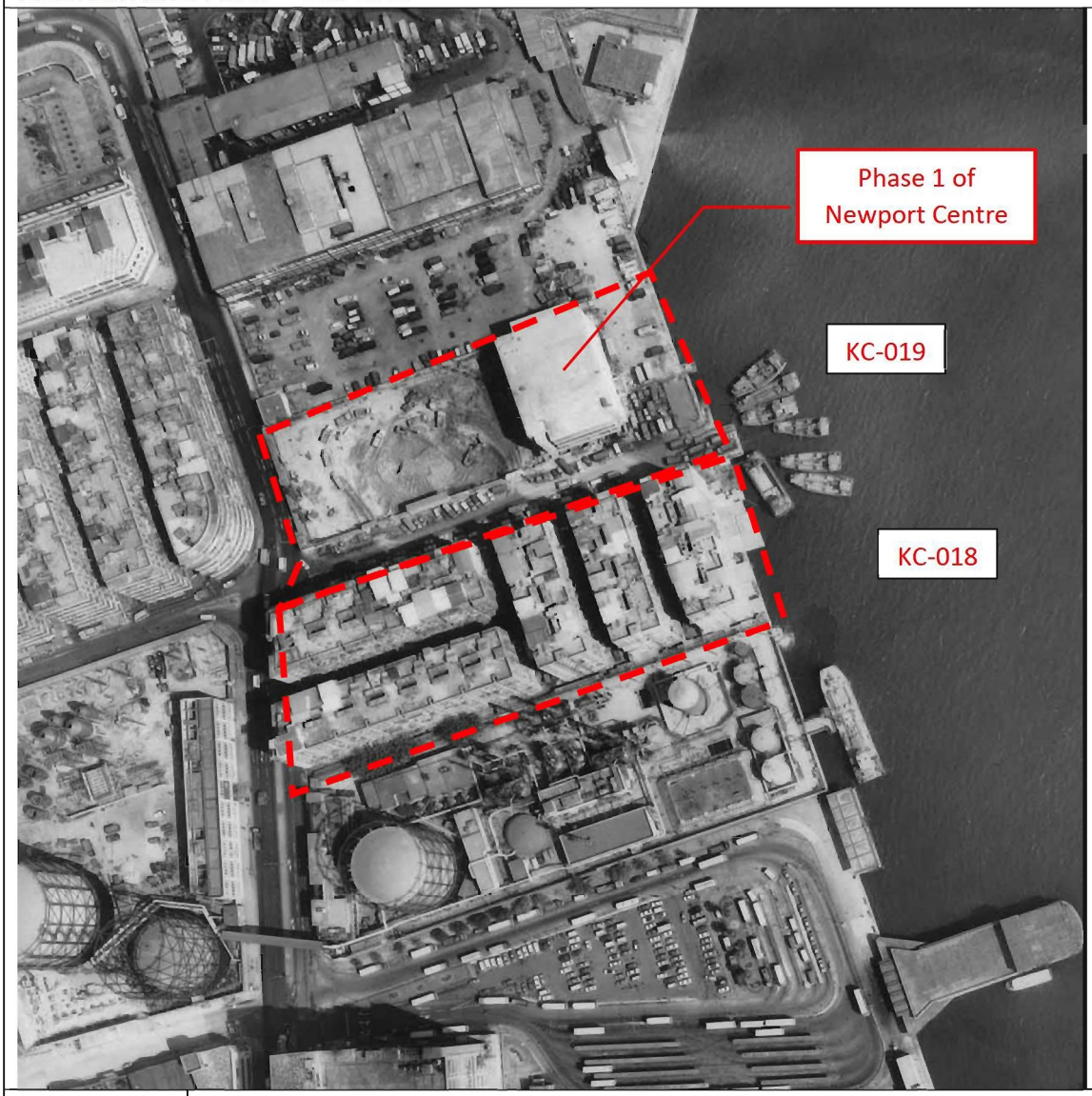
Year	Landuse/Description
1945	KC-018: Occupied by low-rise buildings. A Gas Work was erected to its immediate south. KC-019: Reclamation in progress.
1963	KC-018: Compacted residential buildings were established. New portion of Gas Work was established to its immediate west. KC-019: Occupied by low-rise building, with loading/unloading facilities at shore
1976	No significant landuse change for both sites.
1980	KC-018: No change of landuse KC-019: Redevelopment of Newport Centre was undergoing. Phase 1 (i.e. east portion) was in place; Phase 2 (i.e. west portion) was under construction (N.B.: Phase 1 and demolition of previous building at Phase 2 were completed in 1979; Phase 2 was completed in 1981)
1985	KC-018: No change of landuse KC-019: EMSD workshop with rooftop carpark was established to KC-019's immediate north. Part of the workshop was inside KC-019 (i.e. east portion)
2017	No significant landuse change for both sites. The Gas Work to KC-018's immediate south was demolished in 1993 and a residential development (i.e. Grand Waterfront) was established since 2007.
2020	No significant landuse change for both sites. EMSD workshop (immediate north of KC-019) has been demolished.

Historical Aerial Photo – Year 1976



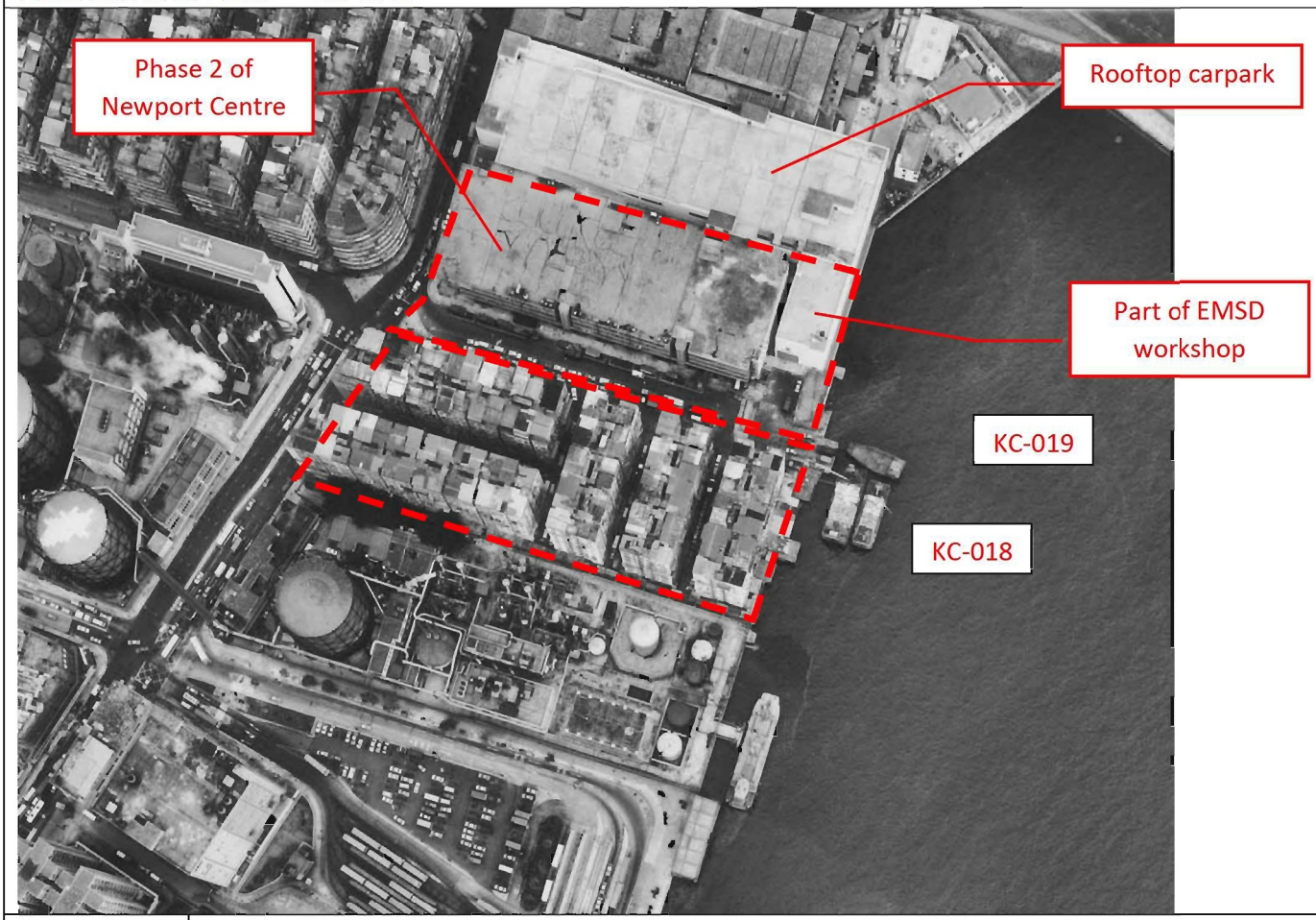
Year	Landuse/Description
1945	KC-018: Occupied by low-rise buildings. A Gas Work was erected to its immediate south. KC-019: Reclamation in progress.
1963	KC-018: Compacted residential buildings were established. New portion of Gas Work was established to its immediate west. KC-019: Occupied by low-rise building, with loading/unloading facilities at shore
1976	No significant landuse change for both sites.
1980	KC-018: No change of landuse KC-019: Redevelopment of Newport Centre was undergoing. Phase 1 (i.e. east portion) was in place; Phase 2 (i.e. west portion) was under construction (N.B.: Phase 1 and demolition of previous building at Phase 2 were completed in 1979; Phase 2 was completed in 1981)
1985	KC-018: No change of landuse KC-019: EMSD workshop with rooftop carpark was established to KC-019's immediate north. Part of the workshop was inside KC-019 (i.e. east portion)
2017	No significant landuse change for both sites. The Gas Work to KC-018's immediate south was demolished in 1993 and a residential development (i.e. Grand Waterfront) was established since 2007.
2020	No significant landuse change for both sites. EMSD workshop (immediate north of KC-019) has been demolished.

Historical Aerial Photo – Year 1980



Year	Landuse/Description
1945	KC-018: Occupied by low-rise buildings. A Gas Work was erected to its immediate south. KC-019: Reclamation in progress.
1963	KC-018: Compacted residential buildings were established. New portion of Gas Work was established to its immediate west. KC-019: Occupied by low-rise building, with loading/unloading facilities at shore
1976	No significant landuse change for both sites.
1980	KC-018: No change of landuse KC-019: Redevelopment of Newport Centre was undergoing. Phase 1 (i.e. east portion) was in place; Phase 2 (i.e. west portion) was under construction (N.B.: Phase 1 and demolition of previous building at Phase 2 were completed in 1979; Phase 2 was completed in 1981)
1985	KC-018: No change of landuse KC-019: EMSD workshop with rooftop carpark was established to KC-019's immediate north. Part of the workshop was inside KC-019 (i.e. east portion)
2017	No significant landuse change for both sites. The Gas Work to KC-018's immediate south was demolished in 1993 and a residential development (i.e. Grand Waterfront) was established since 2007.
2020	No significant landuse change for both sites. EMSD workshop (immediate north of KC-019) has been demolished.

Historical Aerial Photo – Year 1985



Year	Landuse/Description
1945	KC-018: Occupied by low-rise buildings. A Gas Work was erected to its immediate south. KC-019: Reclamation in progress.
1963	KC-018: Compacted residential buildings were established. New portion of Gas Work was established to its immediate west. KC-019: Occupied by low-rise building, with loading/unloading facilities at shore
1976	No significant landuse change for both sites.
1980	KC-018: No change of landuse KC-019: Redevelopment of Newport Centre was undergoing. Phase 1 (i.e. east portion) was in place; Phase 2 (i.e. west portion) was under construction (N.B.: Phase 1 and demolition of previous building at Phase 2 were completed in 1979; Phase 2 was completed in 1981)
1985	KC-018: No change of landuse KC-019: EMSD workshop with rooftop carpark was established to KC-019's immediate north. Part of the workshop was inside KC-019 (i.e. east portion)
2017	No significant landuse change for both sites. The Gas Work to KC-018's immediate south was demolished in 1993 and a residential development (i.e. Grand Waterfront) was established since 2007.
2020	No significant landuse change for both sites. EMSD workshop (immediate north of KC-019) has been demolished.

Historical Aerial Photo – Year 2017

Year	Landuse/Description
1945	KC-018: Occupied by low-rise buildings. A Gas Work was erected to its immediate south. KC-019: Reclamation in progress.
1963	KC-018: Compacted residential buildings were established. New portion of Gas Work was established to its immediate west. KC-019: Occupied by low-rise building, with loading/unloading facilities at shore
1976	No significant landuse change for both sites.
1980	KC-018: No change of landuse KC-019: Redevelopment of Newport Centre was undergoing. Phase 1 (i.e. east portion) was in place; Phase 2 (i.e. west portion) was under construction (N.B.: Phase 1 and demolition of previous building at Phase 2 were completed in 1979; Phase 2 was completed in 1981)
1985	KC-018: No change of landuse KC-019: EMSD workshop with rooftop carpark was established to KC-019's immediate north. Part of the workshop was inside KC-019 (i.e. east portion)
2017	No significant landuse change for both sites. The Gas Work to KC-018's immediate south was demolished in 1993 and a residential development (i.e. Grand Waterfront) was established since 2007.
2020	No significant landuse change for both sites. EMSD workshop (immediate north of KC-019) has been demolished.

Historical Aerial Photo – Year 2020

Year	Landuse/Description
1945	KC-018: Occupied by low-rise buildings. A Gas Work was erected to its immediate south. KC-019: Reclamation in progress.
1963	KC-018: Compacted residential buildings were established. New portion of Gas Work was established to its immediate west. KC-019: Occupied by low-rise building, with loading/unloading facilities at shore
1976	No significant landuse change for both sites.
1980	KC-018: No change of landuse KC-019: Redevelopment of Newport Centre was undergoing. Phase 1 (i.e. east portion) was in place; Phase 2 (i.e. west portion) was under construction (N.B.: Phase 1 and demolition of previous building at Phase 2 were completed in 1979; Phase 2 was completed in 1981)
1985	KC-018: No change of landuse KC-019: EMSD workshop with rooftop carpark was established to KC-019's immediate north. Part of the workshop was inside KC-019 (i.e. east portion)
2017	No significant landuse change for both sites. The Gas Work to KC-018's immediate south was demolished in 1993 and a residential development (i.e. Grand Waterfront) was established since 2007.
2020	No significant landuse change for both sites. EMSD workshop (immediate north of KC-019) has been demolished.

Appendix 5.2 Copy of the Letters from Various Departments of the Government of the HKSAR

本署檔號 Our Ref: ( ) in EP650/G1/4
來函檔號 Your Ref: URAKCAA2EI00_0_0007L.20
電話 Tel. No.: 2117 7527
傳真 Fax No.: 2756 8588
電子郵件 E-Mail: vivianatstong@epd.gov.hk
網址 Homepage: http://www.epd.gov.hk/

Environmental Protection Department
Environmental Compliance Division
Regional Office (East)
5th Floor, Nan Fung Commercial Centre,
19 Lam Lok Street, Kowloon Bay,
Kowloon, Hong Kong.

環境保護署
環保法規管理科
區域辦事處（東）
香港九龍九龍灣臨樂街
十九號南豐商業中心五樓

By Fax (3465 2899)

17 June 2020

Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre,
56 Gloucester Road,
Wan Chai,
Hong Kong
(Attn: Ms. Michelle CHAN (Environmental Consultant))

Dear Ms. CHAN,

Land Contamination Assessment Study for
Proposed Development in Ma Tau Kok
Enquiry for Land Contamination Information

I refer to your letter dated 10 June 2020 regarding the subject.

Under the Waste Disposal (Chemical Waste)(General) Regulation, the Director of Environmental Protection has maintained a register containing the name of producers of chemical waste, the location of the premises where the chemical waste is produced, and the description of the businesses or activities concerned. The register is open for inspection by public at the Territorial Control Office of this Department on 25/F., Southorn Centre, 130 Hennessey Road, Wan Chai, Hong Kong. Please contact Mr. Dennis LEUNG at 2835 1017 for making an appointment to view the records.

Please note that this office has no record of chemical spillage and also waste disposal within the Site as marked in your attached site map. As this information is not exhaustive, you may need to seek further advice from other relevant departments (including Fire Services Department) or parties and previous users of the buildings on such issue.

Please note that this office does not have the record of submission relating to land contamination assessment. Please seek advice from the Waste Assessment Section under the Environmental Assessment Division of our Department for information.

Yours faithfully,

(Viviana TONG)
Regional Office (East)
for Director of Environmental Protection

消 防 處
香港九龍尖沙咀東部康莊道 1 號
消防總部大廈

FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 **OUR REF.** : (148) in FSD GR 6-5/4 R Pt. 27
來函檔號 **YOUR REF.** : URAKCAA2E100_0_0008L.20
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2739 5879
電 話 **TEL NO.** : 2733 7741

6 July 2020

Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre,
56 Gloucester Road,
Wanchai, Hong Kong.
(Attn: Ms. Michelle CHAN, Environmental Consultant)

Dear Ms. CHAN,

Land Contamination Assessment Study for Proposed Development in Ma Tau Kok – Enquiry for Land Contamination Information
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 10.6.2020 regarding the captioned request and reply below in response to your questions:-

1. No Dangerous Goods Licence was issued in respect of the captioned address.

2. A total of four incident records was found at the subject location. Please refer to **Appendix A** for details.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(KONG Wai-chung)
for Director of Fire Services

Appendix A

Land Contamination Assessment Study for Proposed Development in Ma Tau Kok – Enquiry for Land Contamination Information
Request for Information of Dangerous Goods & Incident Records

No.	Date	Type of Incident	Address
1.	29.8.2017	Special Services (Leakage of flammable liquid / gas)	4/F, 5 Ming Lun Street
2.	15.10.2017		6/F, 19 Ming Lun Street
3.	15.10.2017		6/F, 5 Ming Lun Street
4.	15.4.2019	No.1 Alarm Fire	1/F, 18 Ming Lun Street

Our Ref: (37) in CP OPS EOD 6-20/1 Pt.4
Telefax No. : +852 2203 4273
Telephone No. : +852 2203 4294
Date : 2020-06-22

Explosive Ordnance Disposal Bureau
Hong Kong Police
EOD Depot,
150 Mount Butler Road,
Jardine's Lookout,
Hong Kong.

FACSIMILE TRANSMISSION

To : Ramboll Hong Kong Limited (Attn: Michelle CHAN)
Addressee's Telefax No.: +852 3465 2899
Thro' (SBDO)
Your Ref.: URAKCAA2EI00_0_0009L.20
Total Number of Pages Transmitted: 1 (including this page)
Dated: 2020-06-10
Please notify Ms. TSE, General Registry, EOD (2203 4325) if the message is incom

Dear Sir/Madam,

Re: Land Contamination Assessment Study for Proposed Development in Ma Tau Kok – Enqui for Land Contamination Information

Your letter dated 2020-06-10 refers.

Please be advised that we do not keep record of explosive storage location, nor explosive spillage incidents record for the mentioned site. You may wish to approach the Mines Division of the Civil Engineering and Development Department for further advice.

Should you require further information, please contact our headquarters Senior Inspector, Mr. Kelvin LAM at 2203 4324.

Yours faithfully,

Nestor Lai
Bomb Disposal Officer
Explosive Ordnance Disposal Bureau
Hong Kong Police Force

規劃署

香港北角渣華道三百三十三號
北角政府合署

Planning Department

North Point Government Offices
333 Java Road, North Point,
Hong Kong

本函檔號 Your Reference ( ) URAKCAA2EI00_0_0010L.20

本署檔號 Our Reference ( ) K-22/23

電話號碼 Tel. No. : 2231 4971

傳真機號碼 Fax No. : 2894 9502

By Fax (3465 2899) and Post

23 June 2020

Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre,
56 Gloucester Road,
Wan Chai, Hong Kong
(Attn.: Ms Michelle CHAN)

Dear Madam,

Land Contamination Assessment Study for Proposed Development in Ma Tau Kok
Enquiry for Land Contamination Information

I refer to your letter dated 10.6.2020 enquiring the current and historical site information and land use changes of the site as indicated on the site map attached to your letter for land contamination investigation purposes.

The subject site falls within an area zoned "Comprehensive Development Area" ("CDA") on the prevailing approved Kai Tak Outline Zoning Plan (OZP) No. S/K22/6, which is intended for a comprehensive development/redevelopment of the area for residential and/or commercial uses with the provision of waterfront promenade, open space and other supporting facilities. The current "CDA" zoning for the site was first designated on the draft Kai Tak OZP No. S/K22/1 exhibited in November 2006 and has remained unchanged since then.

Before that, the site had been subject to various land use zonings/designation on statutory town plan, including:

- "Residential or Light Industrial or a Mixture of Both" and 'Road' on the draft Ma Tau Kok Outline Development Plan No. LK/10/18/4 exhibited in April 1957;

- "Industrial" and 'Road' on the draft Ma Tau Kok OZP No. LK/10/28 exhibited in November 1967;

- "Residential (Group A)" and 'Road' on the draft Kai Tak (South) OZP No. S/K21/1 exhibited in September 1998; and

- "CDA(1)", "Open Space" and 'Road' on the draft Kai Tak (South) OZP No. S/K21/2 exhibited in August 2001.

According to our record, the existing tenement buildings in the five street blocks of the site were issued with Occupation Permits by the Building Authority by phases in July 1959 to December 1960. However, we have no information as regards the physical land use(s) of the site before the emergence of the existing tenement buildings. For details, you are advised to further check with the relevant aerial photos and land lease records.

Yours sincerely,

(Miss Joyce LEE)
for District Planning Officer/Kowloon
Planning Department

Internal
K-R/PUB/1A
Site Record

KKL/JL/jl

地 政 總 署
九 龍 西 區 地 政 處
DISTRICT LANDS OFFICE,
KOWLOON WEST
LANDS DEPARTMENT

13

電　　話　Tel:　3842 7513
圖文傳真　Fax:　2782 5061
電郵地址　Email:　eskwhh@landsd.gov.hk
本署檔號　Our Ref.:　(2) in DLO KW 309/KPT/KW
來函檔號　Your Ref.:　URAKCAA2EI00_0_0011L.20

我們矢志努力不懈，提供盡善盡美的土地行政服務。
We strive to achieve excellence in land administration.

九龍海庭道 11 號西九龍政府合署南座 4 樓
4/F, SOUTH TOWER, WEST KOWLOON GOVERNMENT OFFICES, 11 HOI TING ROAD, KOWLOON

網址 Web Site : www.landsd.gov.hk

來函請註明本署檔號
Please quote our reference in your reply

By Fax (3465 2899) and By Post

16 June 2020

Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre
56 Gloucester Road
Wan Chai
Hong Kong
(Attn.: Michelle Chan)

Dear Sirs,

Land Contamination Assessment Study for
Proposed Development in Ma Tau Kok – Enquiry for Land Contamination Information

I refer to your letter dated 10 June 2020.

Please note that this office is not in a position to advise the information on spillage accidents, illegal/ contaminating land uses or uncontrolled dumping uses and historical use information for your captioned study.

Yours faithfully,

(Ms. Jenny YEUNG)
for District Lands Officer/Kowloon West

Appendix 5.3 Building Plans from BRAVO

Plan(s) of Building Record - BRAVO - Google Chrome

bravo.bd.gov.hk/viewPlanList?recId=55028

BRAVO Related Plan(s) / Document(s) of Selected Building Record

+ Add to Shopping Cart | Shopping Cart | View Thumbnail

Address	93-113 MA TAU KOK ROAD	Building Name		Lot No.	K.M.L. 97 S.A SS.5,K.M.L. 97 S.A SS.4,K.M.L. 97 S.A SS.3,K.M.L. 97 S.A SS.2,K.M.L. 97 S.A SS.1,K.M.L
File Ref No.	2/4107/51	File Type	Building	Remarks	

☐ Select All Certified ☐ Select All Non-Certified

Preview	Inspect Full Image	Plan Type	Drawing No.	Drawing Title	Remarks	Approval / Receipt Date	Certified	Non-Certified
		Approved Plan	1	GROUND FLOOR PLAN,FIRST FLOOR PLAN,SOUTHWEST ELEVATION,BLOCK PLAN,SCHEDULE,NOTES		29/06/1951	☐	☐
		Approved Plan	1	FIRST FLOOR PLAN,CEILING PLAN,SECTION A-A,BLOCK PLAN		11/08/1951	☐	☐
		Approved Plan	1	GROUND FLOOR PLAN,FIRST FLOOR PLAN,SECTION A-A,BLOCK PLAN,NOTES		10/09/1951	☐	☐
		Approved Plan	2	ROOF PLAN,NORTHEAST ELEVATION,SOUTHEAST ELEVATION,SECTION A-A		29/06/1951	☐	☐
		Approved Plan	2	ROOF PLAN,SOUTHWEST ELEVATION,NORTHEAST ELEVATION,SECTION B-B		10/09/1951	☐	☐

1 - 5 of 5 items 25 | 50 | 100 | All 1

Customize

No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)

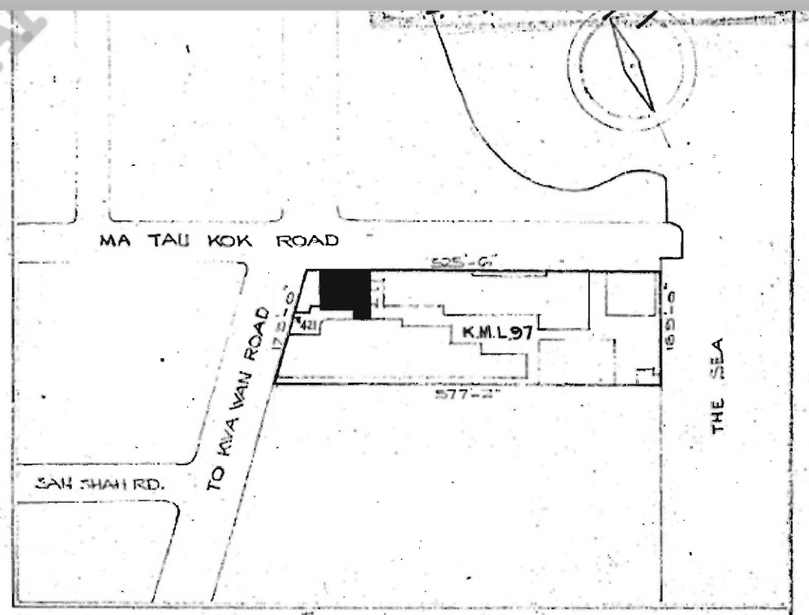
NOTES:

1. EXISTING WORK TO BE WELL BOUNDED INTO OLD WORKS IN CEMENT MORTAR.
2. ALL WALLS TO BE BUILT IN CEMENT MORTAR 1 : 3 MIX.
3. R.C.C. TO BE OF 1 : 2 : 4 MIX.
4. NO WORK TO START UNTIL R.C.C. DETAILS AND CALCULATIONS HAVE BEEN SUBMITTED.
5. THREAD OF STAIRCASE NOT LESS THAN 9" AND RISERS NOT MORE THAN 7".
6. CEMENT CONCRETE TO BE OF 1 : 3 : 6 MIX.
7. ALL EXIT DOORS TO BE FITTED WITH PANIC BOLTS AND ILLUMINATED EXIT SIGNS IN CHINESE AND ENGLISH.
8. FIRE FIGHTING APPLIANCES TO BE INSTALLED TO THE SATISFACTION OF THE CHIEF OFFICER OF THE FIRE BRIGADE.
9. 6 FEMAL AND 10 MALE WORKERS WILL BE EMPLOYED IN THE PREMISES.
10. ALL SASHES TO BE OPENED AT 50%.
11. ALL ~~TIMBER~~ DOORS TO BE 2" IN THICKNESS MADE OF HARDWOOD.
12. WINDOWS TO BE WIRED GLAZED.
13. EXIT SIGNS TO BE FITTED TO BOTH EXITS.

INDICATION

- EXISTING WORK
- EXISTING WORK TO BE REMOVED
- R.C.C. WORK
- CEMENT CONCRETE
- HARD CORE
- NEW BRICK WALL
- GRANITE STONE WILL

TYPE	WIDTH X HEIGHT	SEC.	NO.	
1	12'-0" x 4'-0"	1¼	5	STEEL SASHES WITH OPERATOR
2	12'-0" x 6'-0"	1¼	12	" " " "
2A	6'-0" x 6'-0"	"	1	" " " "
3	6'-0" x 11'-0"	1½	1	STEEL WIRED GLASS DOOR WITH PANIC BOLTS
4	12'-0" x 2'-0"		2	STEEL WINDOWS
A	6'-0" x 7'-0" EXIT DOOR	2"	1	SOLID HARD WOOD DOOR WITH PANIC BOLTS
B	4'-0" x 7'-0"	"	1	" " " "
B1	5'-0" x 7'-0" EXIT DOOR	2"	1	SOLID H.W. DOOR WITH PANIC BOLTS



BLOCK PLAN

SCALE 1/200

REVISED PLAN

K.M.L. 97

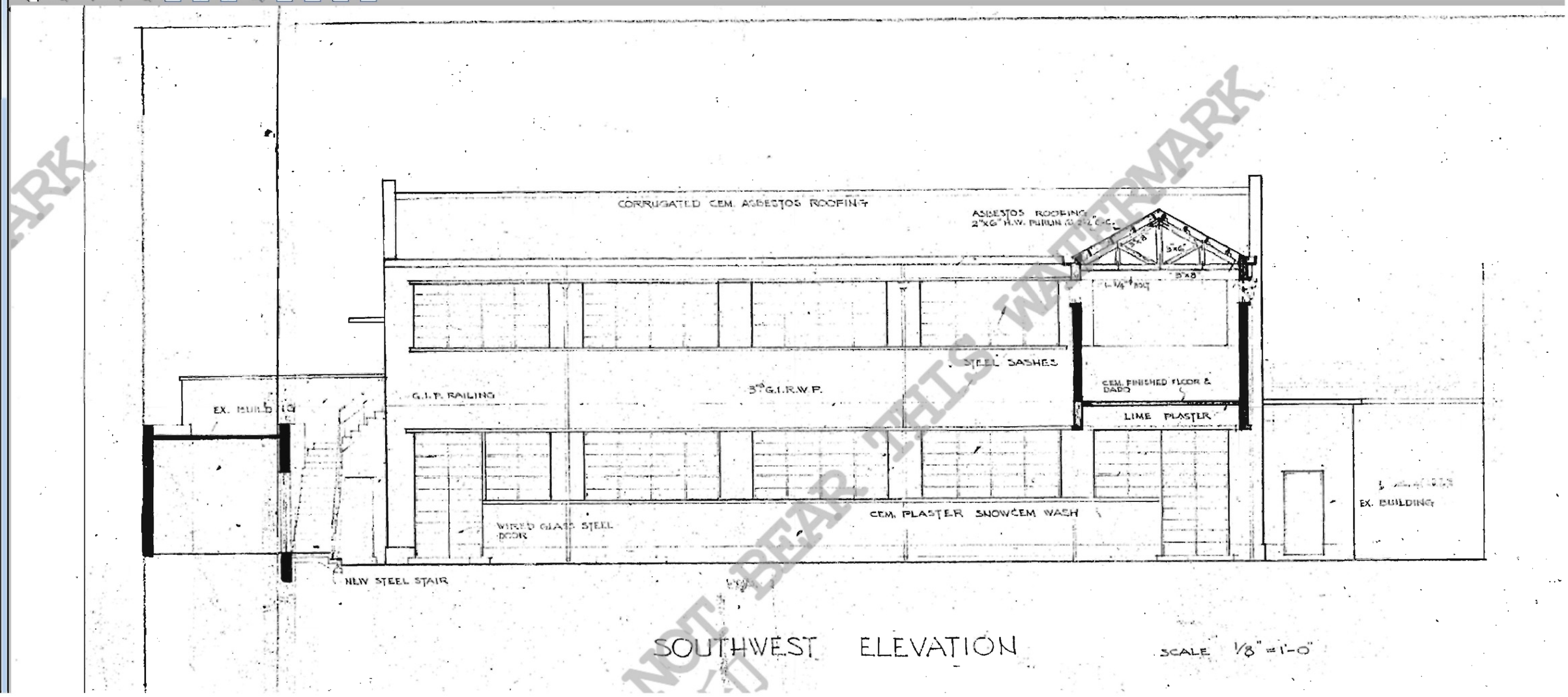
Lot No. 5106	EAST SUN TEXTILE CO. LTD. 421 TO KWA WAN ROAD	Drawing No. 1
ALTERNATIONS & ADDITIONS		
Designed by	師錦建 GIN-DJIH SU HSIN YIEH ARCHITECTS HONG KONG	Scale 1/8"=1'-0"
Traced by		Date
Checked by		Revised Date
Approved by		

No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)

Inspection of Plan(s) - BRAVO - Google Chrome

bravo.bd.gov.hk/inspectionPlan?imageId=418c58890750a2a0030a54ab20694f04&timestamp=1594183583891

BRAVO **Inspection of Plan(s)**



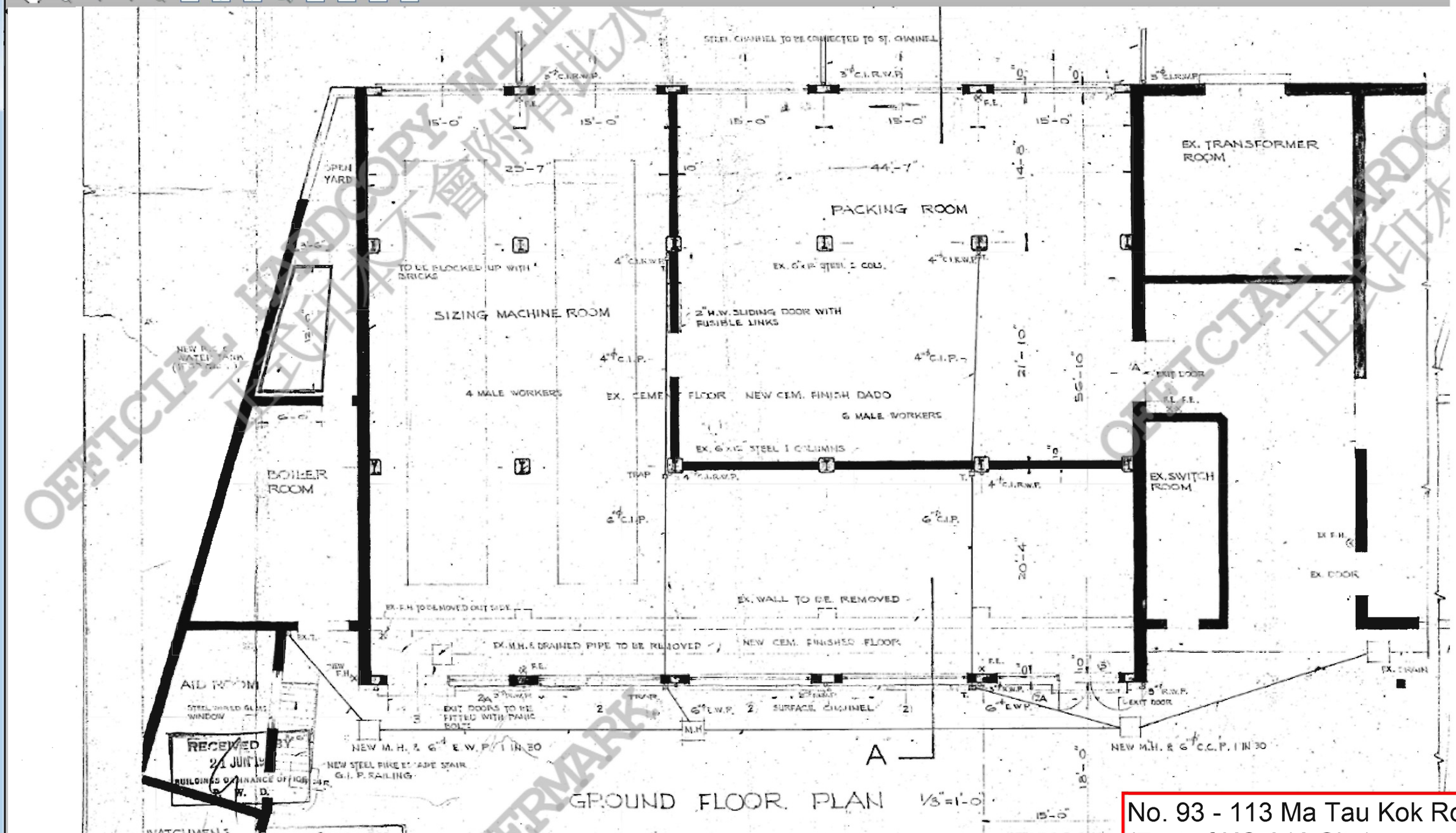
SOUTHWEST ELEVATION SCALE 1/8" = 1'-0"

No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)

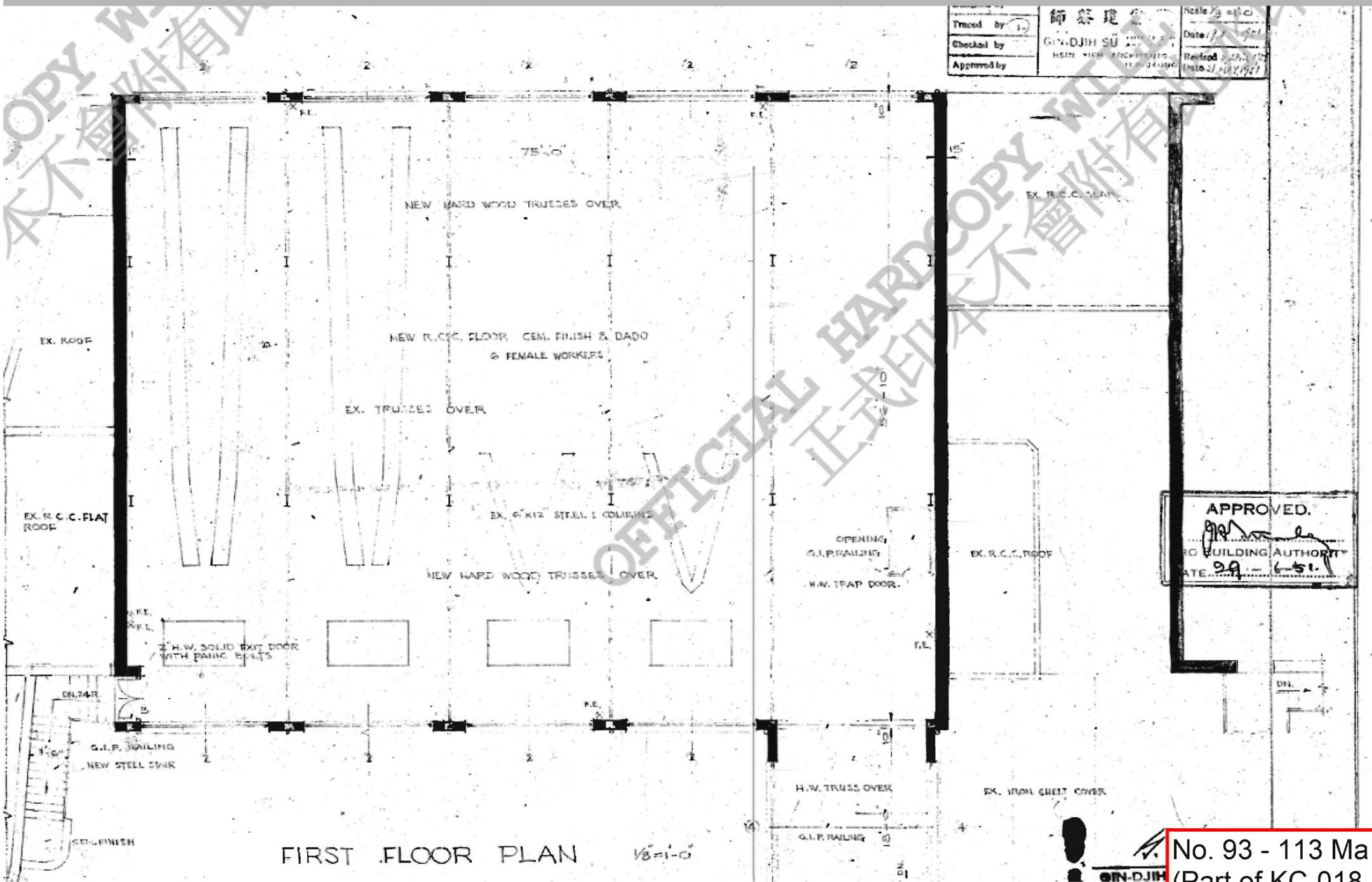
Inspection of Plan(s) - BRAVO - Google Chrome

bravo.bd.gov.hk/inspectionPlan?imageId=418c58890750a2a0030a54ab20694f04&timestamp=1594183583891

BRAVO Inspection of Plan(s)



No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)



No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)

Inspection of Plan(s) - BRAVO - Google Chrome

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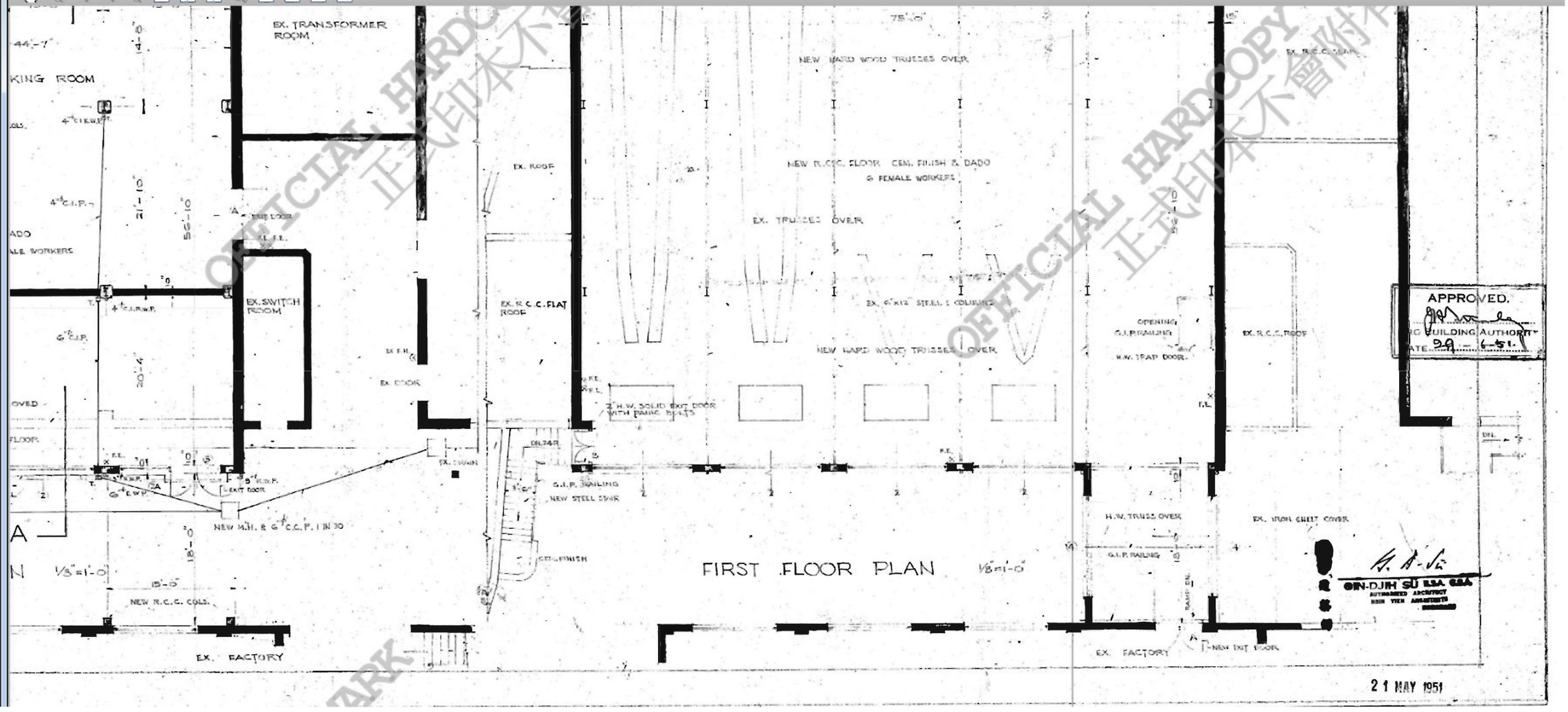
BRAVO **Inspection of Plan(s)**



No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)

Inspection of Plan(s) - BRAVO - Google Chrome

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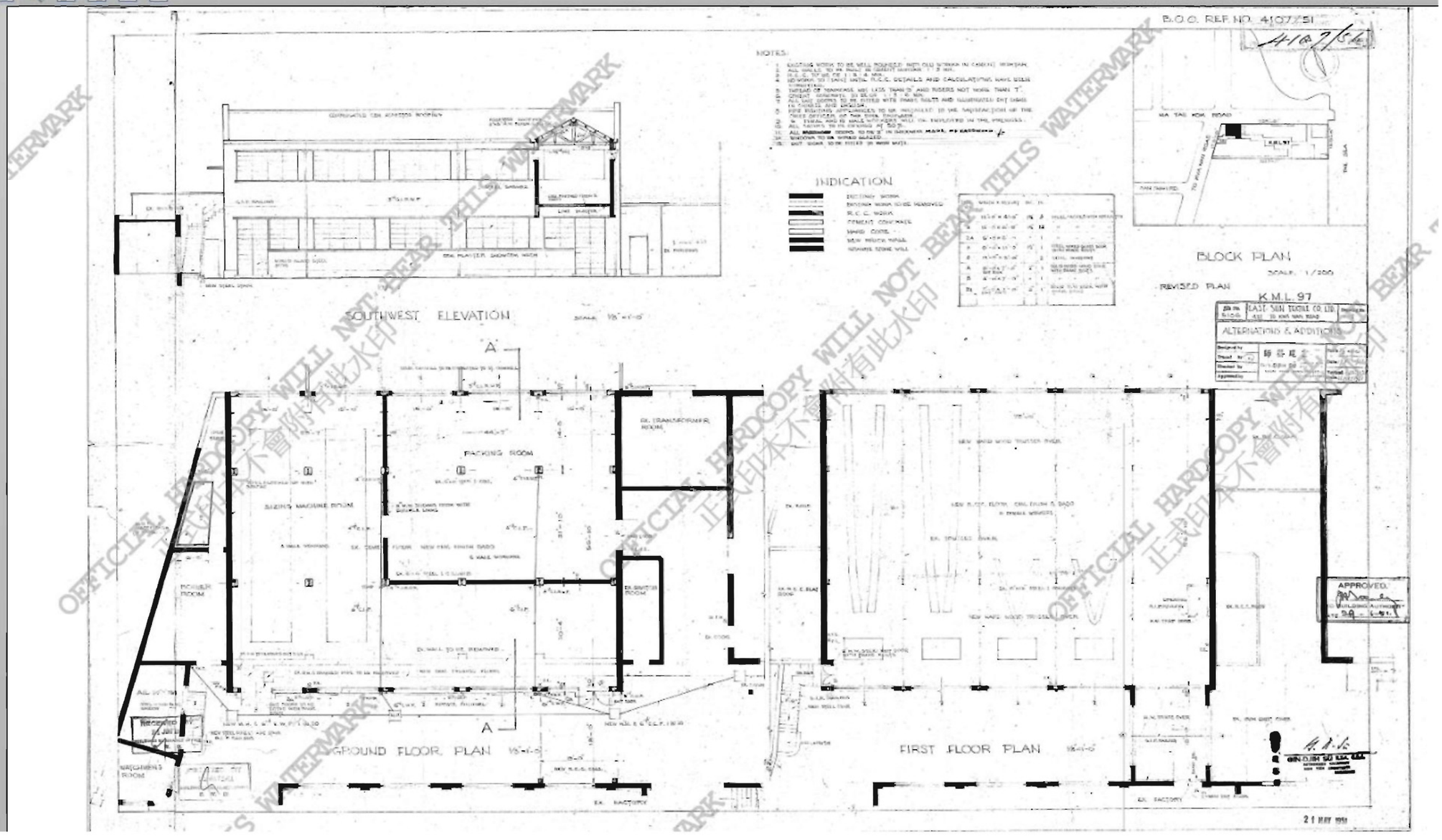
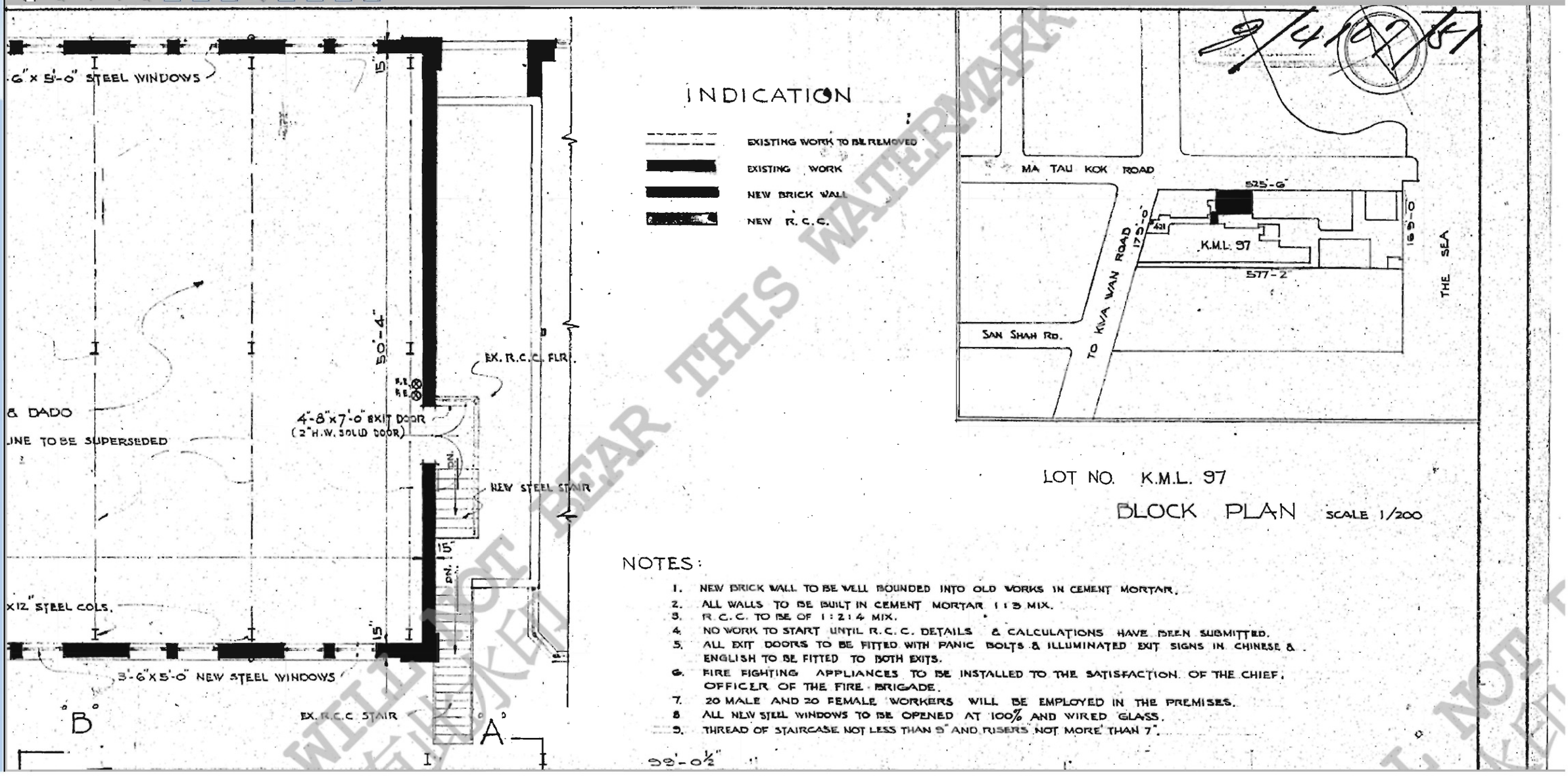
BRAVO **Inspection of Plan(s)**



No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)



No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)

Inspection of Plan(s) - BRAVO - Google Chrome

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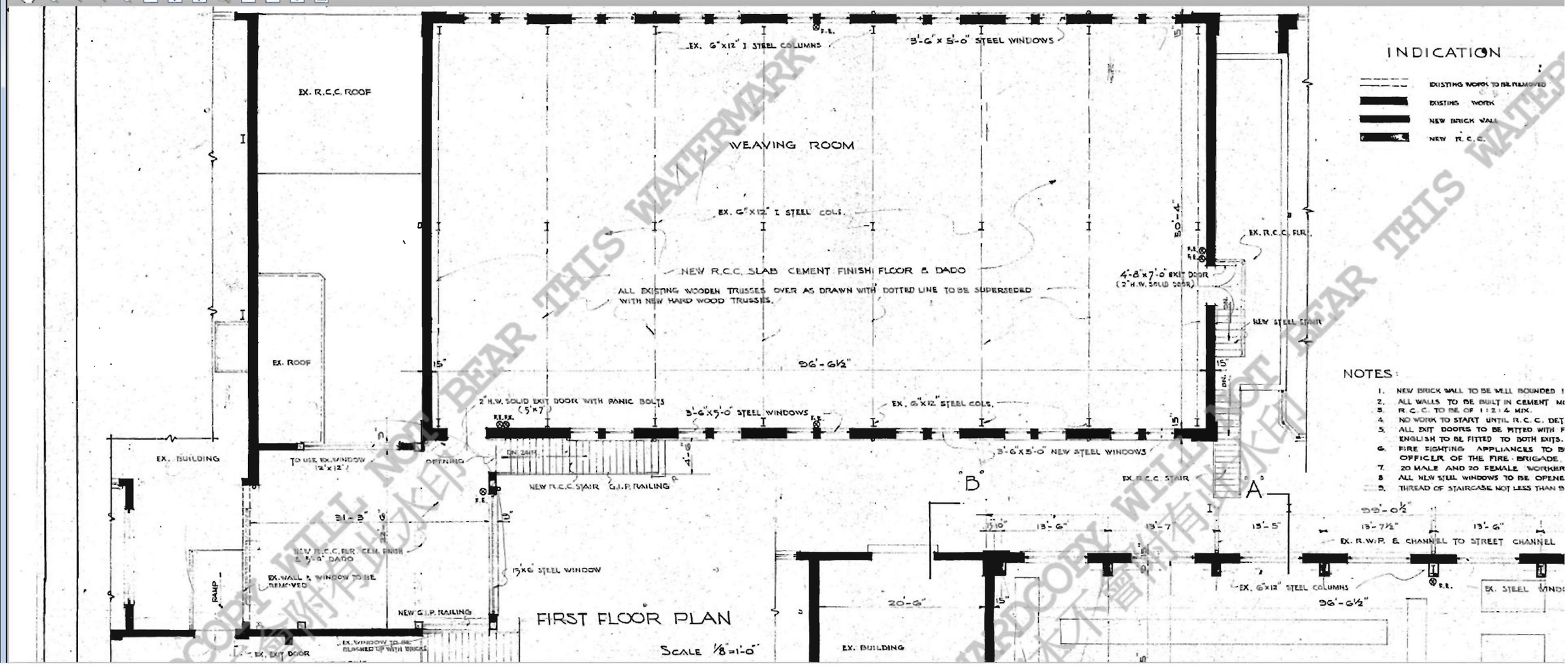
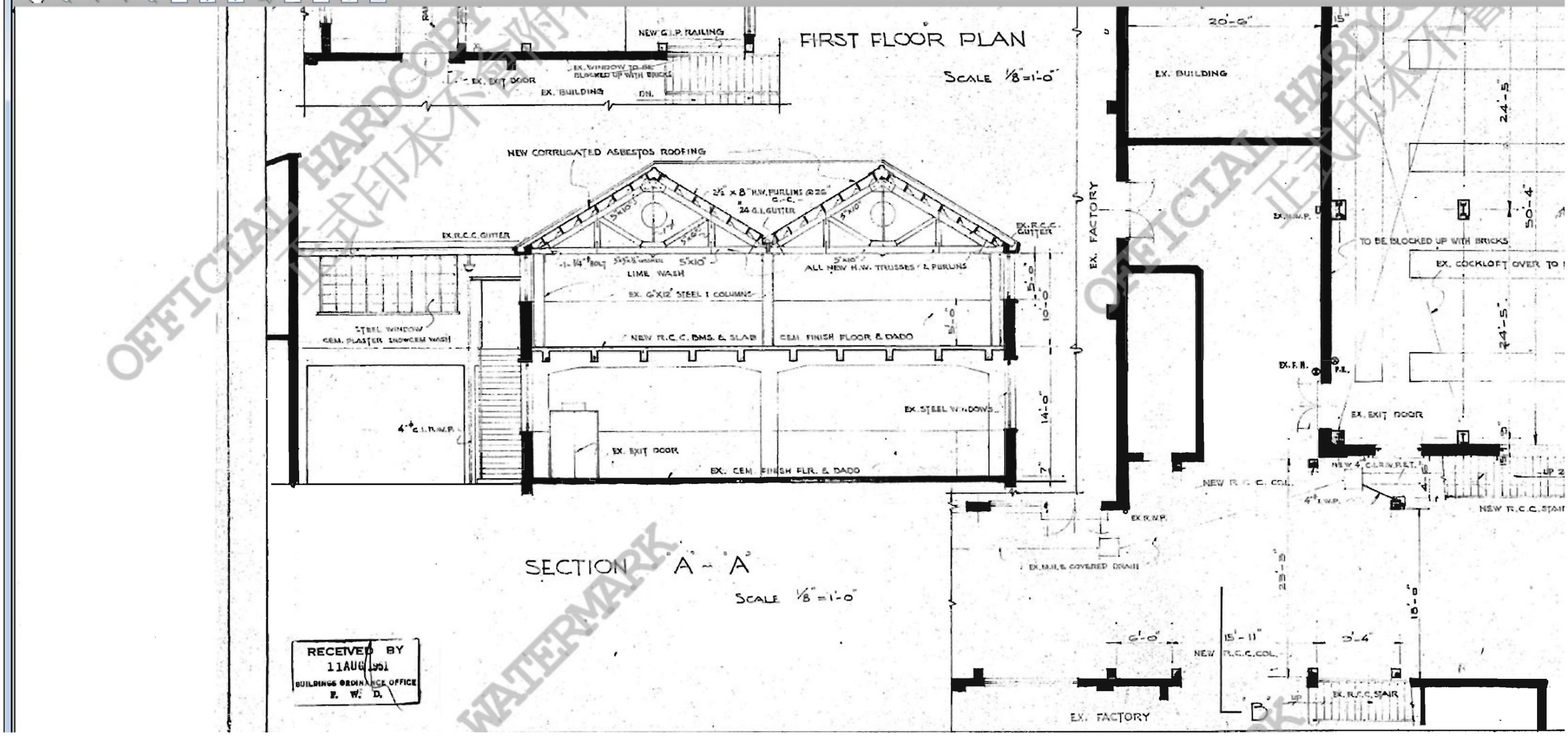
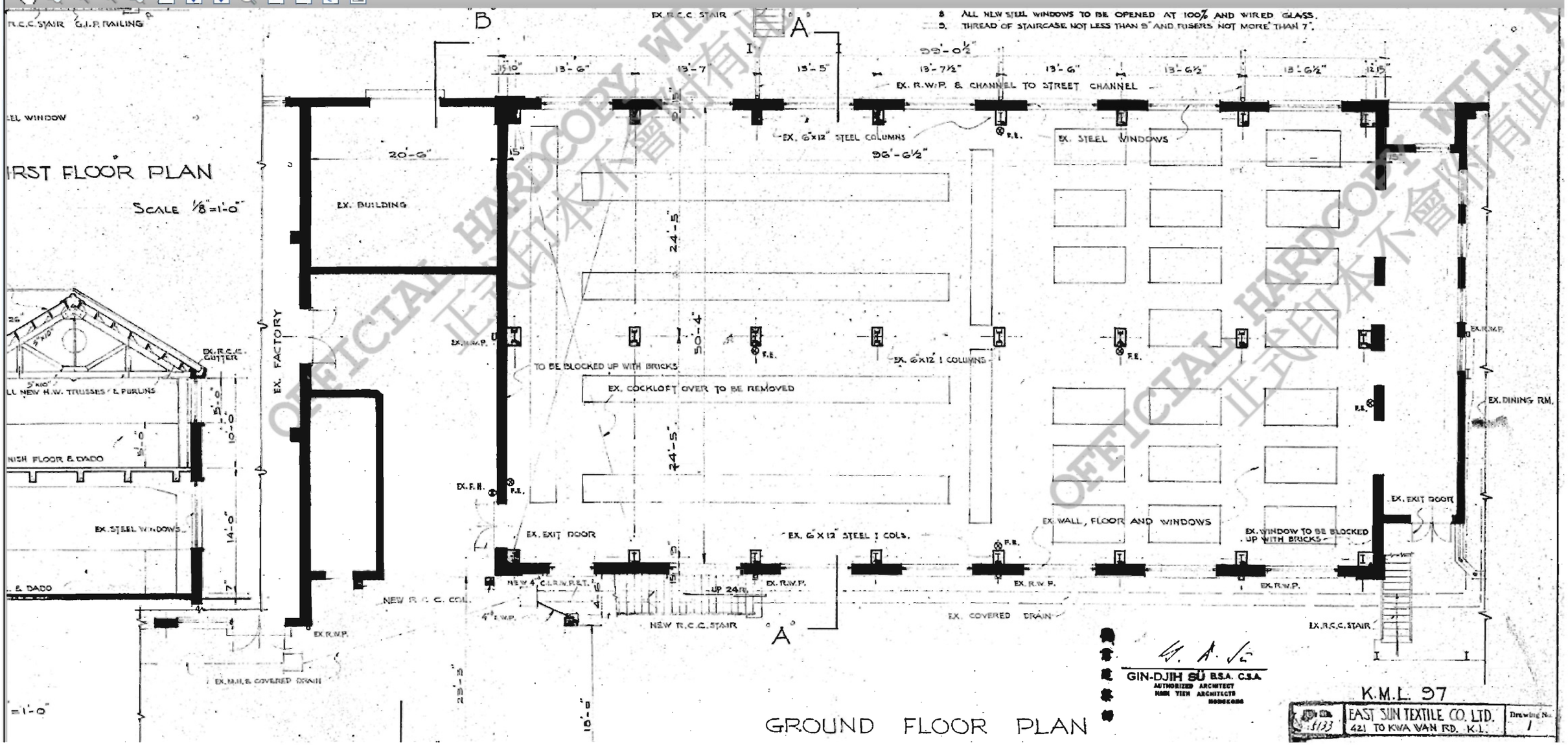
BRAVO **Inspection of Plan(s)**



No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)



No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)



No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)

Inspection of Plan(s) - BRAVO - Google Chrome

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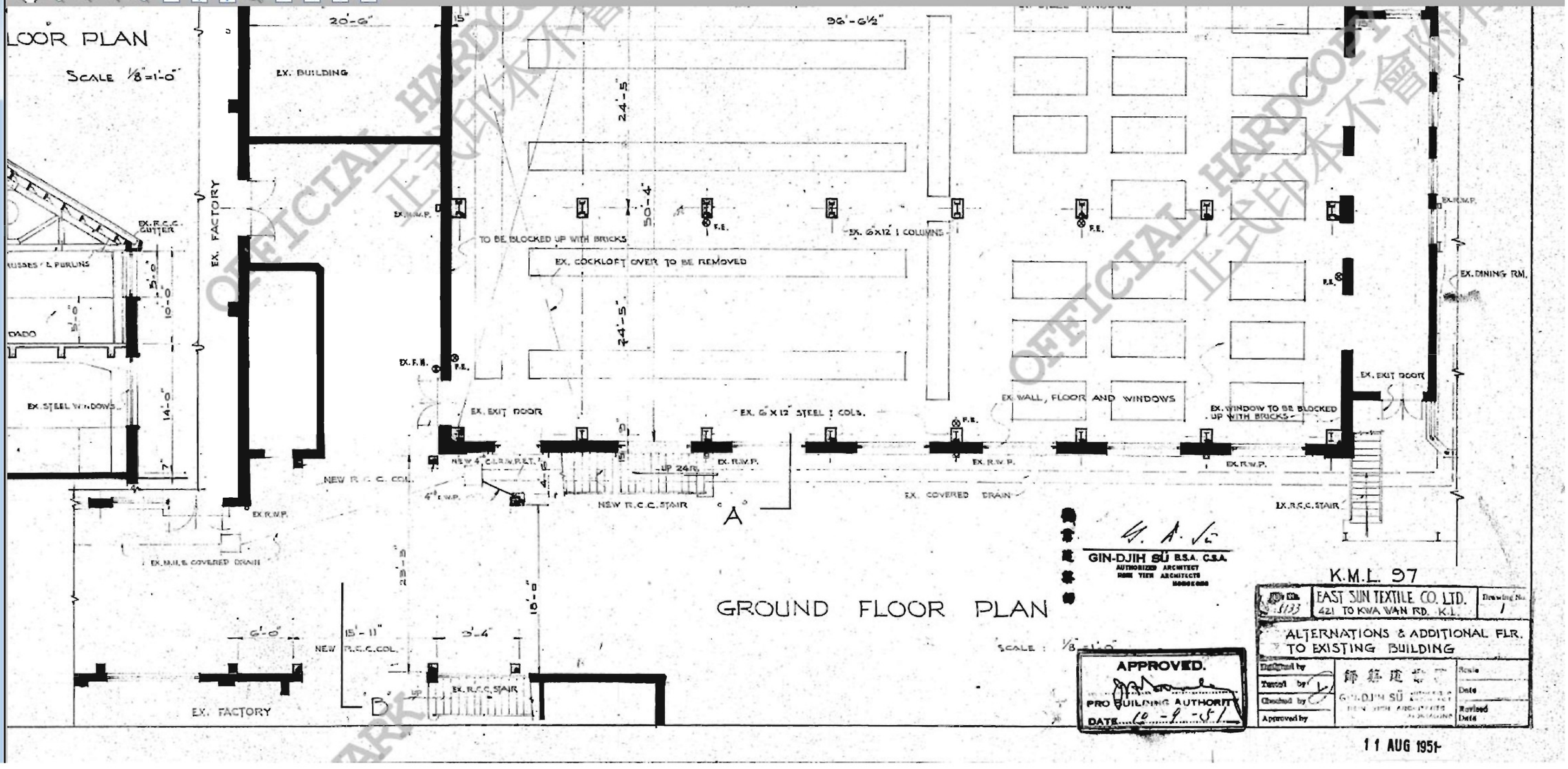
BRAVO **Inspection of Plan(s)**

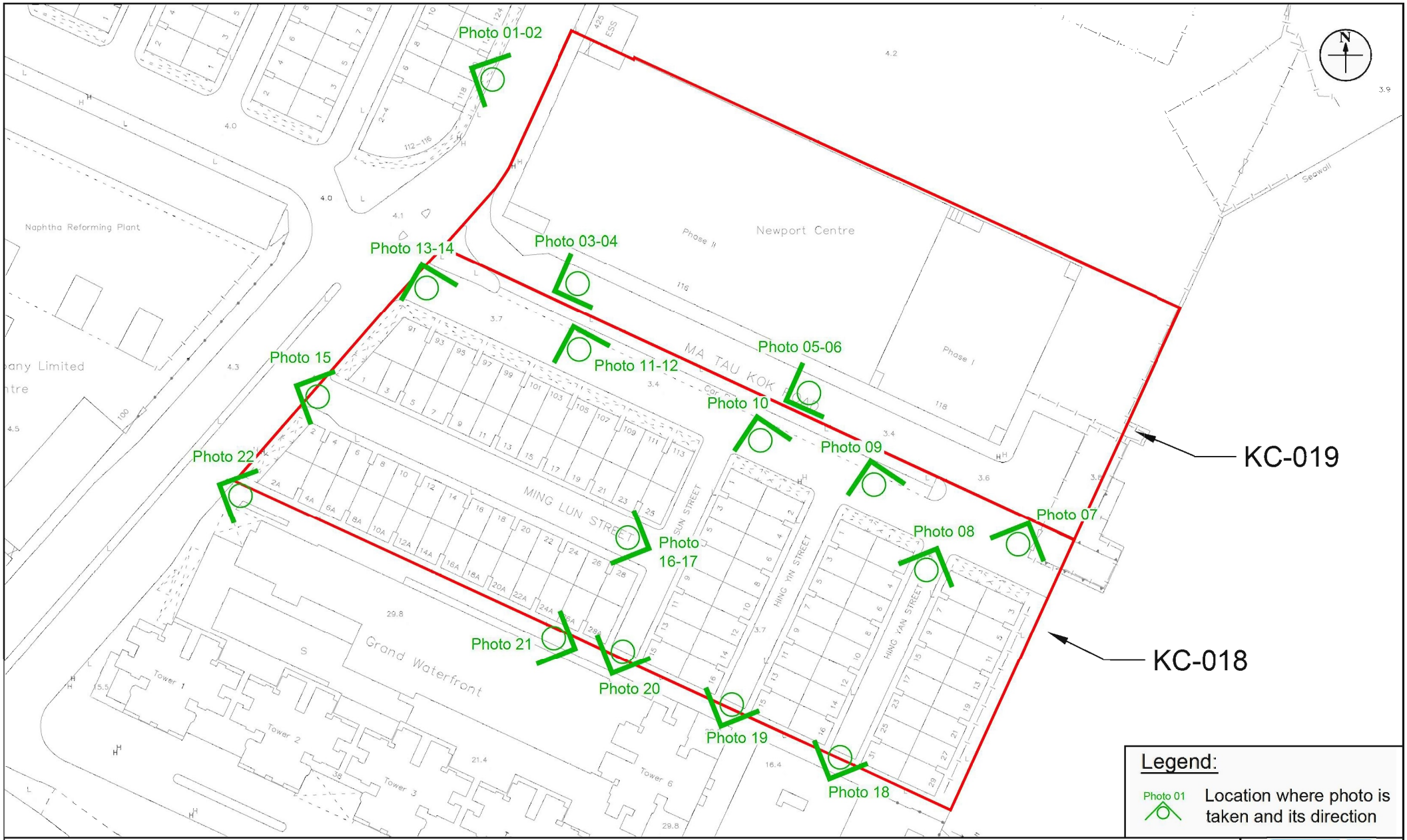


GROUND FLOOR PLAN

SCALE : 1/8"=1'-0"

No. 93 - 113 Ma Tau Kok Road
(Part of KC-018 Site)

Appendix 5.4 Site Survey Records



Appendix: 5.4	RAMBOLL
Title: Site Survey Records	Drawn by: PL
	Checked by: CC
Project: Two Development Schemes - Ming Lun Street/ Ma Tau Kok Road (KC-018) and To Kwa Wan Road/ Ma Tau Kok Road (KC-019)	Rev.: 1.0
	Date: Sep 2022

\\aphkfps3\Drive Q\Projects\URAKCAA2EI01\05 Assessments\07 Land Con\20220902 EA V1.2\Site Record_20220906.dwg

Photo Records

Photo 01: KC-019 (To Kwa Wan Road)
Retail shop was spotted

Photo 02: KC-019 (To Kwa Wan Road)
Heating system factory was spotted

Photo 03: KC-019 (To Kwa Wan Road)
Hockey court and carpark were spotted

Photo 04: KC-019 (To Kwa Wan Road)
Office was spotted

Photo 05: KC-019 (To Kwa Wan Road)
Logistic warehouse was spotted

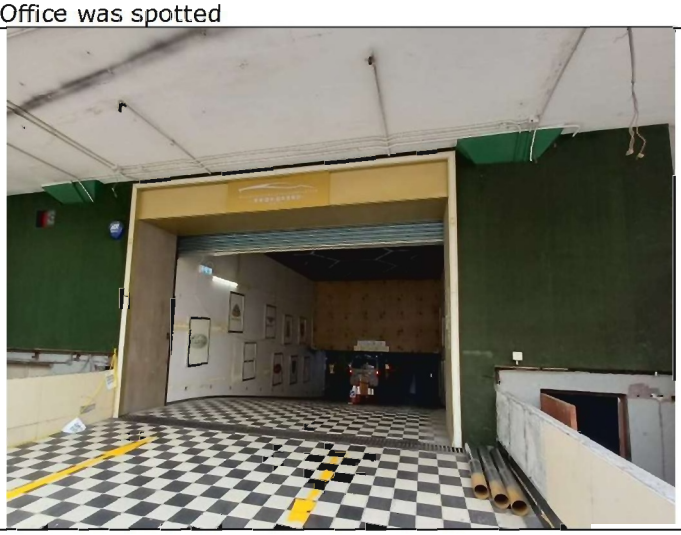


Photo 06: KC-019 (To Kwa Wan Road)
Carpark was spotted

Photo Records

Photo 07: KC-018 (Ma Tau Kok Road)
Car repairing workshops and carpark were spotted

Photo 08: KC-018 (Hing Yan Street)
Car repairing workshops were spotted

Photo 09: KC-018 (Ma Tau Kok Road)
Car repairing workshop was spotted

Photo 10: KC-018 (Ma Tau Kok Road)
Car repairing workshop was spotted

Photo 11: KC-018 (Ma Tau Kok Road)
Logistic warehouse and printing shop were spotted

Photo 12: KC-018 (Ma Tau Kok Road)
Retail shops were spotted

Photo Records

Photo 13: KC-018 (Ma Tau Kok Road)
Car repairing workshops and massage shop were spotted

Photo 14: KC-018 (Ma Tau Kok Road)
Car repairing workshops were spotted

Photo 15: KC-018 (Ming Lun Street)
Car repairing workshops were spotted

Photo 16: KC-018 (Ming Lun Street)
Car repairing workshops were spotted

Photo 17: KC-018 (Ming Lun Street)
Car repairing workshops were spotted

Photo 18: KC-018 (Hing Yan Street)
Car repairing workshop was spotted

Photo Records

Photo 19: KC-018 (Hing Yin Street)
Car repairing workshops were spotted

Photo 20: KC-018 (Chung Sun Street)
Car repairing workshops were spotted

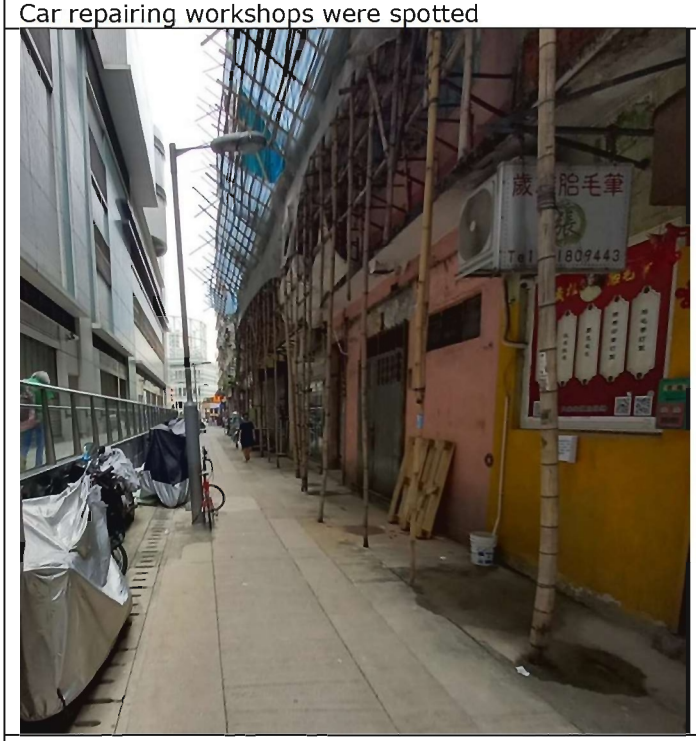


Photo 21: KC-018 (Alley adjacent to Grand Waterfront)
Retail shop was spotted

Photo 22: KC-018 (Alley adjacent to Grand Waterfront)
Real estate, pet shop, laundry were spotted