Appendix IV

Environmental Assessment

Prepared for

Star Success International Limited

Prepared by

Ramboll Hong Kong Limited

REDEVELOPMENT OF LAI SUN YUEN LONG CENTRE AT NOS. 21-35 WANG YIP STREET EAST, YLTL 362

ENVIRONMENTAL ASSESSMENT

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CHAPTERS

Page

1. INTRODUCTION 1-1
1.1 Background 1-1
1.2 The Application Site and Its Environs 1-2
1.3 The Proposed Development 1-2
1.4 Appraisal of Environmental Impacts 1-2
1.5 Organization of this Report 1-4

2. AIR QUALITY IMPACT ASSESSMENT 2-6
2.1 Introduction 2-6
2.2 Legislative Requirements and Evaluation Criteria 2-6
2.3 Existing Air Quality at the Application Site 2-8
2.4 Vehicular Emission Impact Assessment 2-9
2.5 Industrial Emission Impact Assessment 2-10
2.6 Conclusion 2-10

3. ROAD TRAFFIC NOISE IMPACT ASSESSMENT 3-1
3.1 Introduction 3-1
3.2 Assessment Criteria 3-1
3.3 Assessment Methodology 3-1
3.4 Noise Sensitive Receivers 3-1
3.5 Assessment Result for Base Case Scenario 3-2
3.6 Consideration of Noise Mitigation Measures (Mitigated Scenario) 3-2
3.7 Assessment Result with Proposed Noise Mitigation Measures 3-4
3.8 Conclusion 3-4

4. RAILWAY NOISE IMPACT ASSESSMENT 4-1
4.1 Introduction 4-1
4.2 Assessment Criteria 4-1
4.3 Existing Condition of Railway System and Surrounding 4-1
4.4 Operational Characteristics of Tuen Ma Line 4-2
4.5 Assessment Methodology 4-2
4.6 Method to predict Leq (30 min) Level during Night-time Period and Lmax Level 4-3
4.7 Noise Sensitive Receivers 4-3
4.8 Proposed Railway Noise Mitigation Measures and the Predicted Result 4-4
4.9 Conclusion 4-6

5. FIXED SOURCE NOISE IMPACT ASSESSMENT 5-1
5.1 Introduction 5-1
5.2 Assessment Criteria 5-1
5.3 Fixed Noise Sources 5-2
5.4 Representative Noise Sensitive Receivers 5-3
5.5 Assessment Methodology 5-3
5.6 Fixed Sources Noise Mitigation Measures Incorporated in the Design 5-4

5.7 Assessment Result 5-4
5.8 Conclusion 5-6
6. CONSTRUCTION PHASE IMPACTS 6-1
6.1 Introduction 6-1
6.2 Fugitive Dust Emission 6-1
6.3 Mitigation Measures for Fugitive Dust Emission and Gaseous Emission 6-2
6.4 Construction Noise Impact 6-4
6.5 Water Quality and Construction Wastewater Impact 6-5
6.6 Construction Waste Disposal 6-8
6.7 Conclusion 6-14
7. OVERALL SUMMARY 7-1

TABLES

Table 2.1 Hong Kong Air Quality Objectives 2-6
Table 2.2 HKPSG's Recommended Minimum Buffer Distance from Roads 2-7
Table 2.3 HKPSG's Recommended Minimum Buffer Distance from Industrial Chimneys 2-8
Table 2.4 EPD Air Quality Monitoring Data in Yuen Long AQMS and PATH-v3.0 (Grid (25,47) and (28,47)) 2-9
Table 4.1 Acceptable Noise Levels for the NSRs 4-1
Table 4.2 Maximum Predicted Leq (30 min) during Day & Evening and Night-time Period 4-5
Table 4.3 Maximum Predicted Leq (24-hour) and Lmax Noise Level 4-6
Table 5.1 Criteria for Fixed Noise Impact Assessment 5-1
Table 5.2 Predicted Fixed Noise Level 5-5
Table 6.1 Surrounding Noise and Air Sensitive Receivers 6-1
Table 6.2 Noise Limit for Daytime Construction Activities 6-4
Table 6.3 Estimated Quantities of C&D Materials to be Generated 6-11

FIGURES

Figure 1.1 Location of the Application Site and Its Environs
Figure 2.1 HKPSG Vehicular Emission Buffer Distance for Nearby Road Network
Figure 3.1 Locations of Selected Noise Sensitive Receivers for Road Traffic Noise Impact Assessment
Figure 3.2 Proposed Road Traffic Noise Mitigation Measures
Figure 4.1 Location of the Rail Segments Within 300m Assessment Area
Figure 4.2 Locations of Selected Noise Sensitive Receivers and Noise Mitigation Measures for Railway Noise Impact Assessment
Figure 5.1 Location of Identified Fixed Noise Sources
Figure 5.2 Locations of Selected Noise Sensitive Receivers for Fixed Source Noise Impact Assessment
Figure 5.3 Proposed Noise Mitigation Measures for Fixed Noise Source Impact Assessment
Figure 6.1 Location of Surrounding Noise and Air Sensitive Uses
Figure 7.1 Proposed Overall Noise Mitigation Measures

APPENDICES

Appendix 1.1	Master Layout Plan, Floor Plans and Sections of the Proposed Development
Appendix 3.1	Traffic Forecast for Year 2045
Appendix 3.2	Results of Road Traffic Noise Impact Assessment (Base Case and Mitigated Case Scenario)
Appendix 3.3	Estimation of Road Traffic Sound Attenuation of Acoustic Window (Baffle Type) and Enhanced Acoustic Balcony (Baffle Type)
Appendix 3.4	Indicative Design of Acoustic Window and Enhanced Acoustic Balcony (Baffle Type) for Proposed Development
Appendix 4.1	Correspondence from MTRC
Appendix 4.2	Results of Railway Noise Impact Assessment
Appendix 4.3	Sample Calculation of Railway Noise Impact Assessment
Appendix 4.4	Details of Railway Noise Measurement
Appendix 4.5	Line of Sight from R2-01 and R2-75
Appendix 5.1	Details of Site Survey and Derived Sound Power Level of Fixed Noise
Appendix 5.2	Detailed Calculation of Fixed Source Noise Impact Assessment
Appendix 5.3	Referenced Noise Levels of the Fixed Noise Sources
Appendix 7.1	Proposed Overall Noise Mitigation Measures Schedule

1. INTRODUCTION

1.1 Background

1.1.1 A residential development (the Proposed Development) has been proposed by Star Success International Limited (the project proponent) at Nos. 21-35 Wang Yip Street East, YLTL 362 (the Application Site). A rezoning application (no. Y/YL/16) to rezone the application site from "Other Specified Uses" (BUSINESS) under Yuen Long Outline Zoning Plan (OZP) (No. S/YL/25) to "Residential (Group E)2" was submitted to the Town Planning Board (TPB) for consideration. An environmental assessment (EA) report was prepared by Ramboll Hong Kong Limited based on a development scheme (comprising 2 residential towers and a clubhouse-cum-shop building) as one of the technical supporting documents (hereafter referred as EA1). According to the letter (Ref.: TPB/Y/YL/16) from TPB dated 10 Sep 2021, the application has been agreed.

1.1.2 Subsequent to the approved EA1 report, the development scheme has been finetuned with local revision of internal layout, relaxation on building height and inclusion of indoor area for social welfare purpose below residential towers while building disposition and shape are similar to the previous scheme. Due to the changes in the latest development scheme, the EA report (hereafter referred as EA2) is updated accordingly and was considered acceptable according to letter (Ref.: TPB/A/YL/304) from TPB dated 12 Jan 2024.

1.1.3 Approval condition (a) requires the submission of a revised noise impact assessment (NIA) and the implementation of the environmental mitigation measures to the satisfaction of the Director of Environmental Protection (DEP) or of the TPB. When compared to the master layout plan adopted in the approved planning application (No. A/YL/304) (EA2), the development scheme has been further finetuned with local revision of internal layout while the building disposition and shape are similar to the approved MLP. The traffic forecast has been revised due to the change of the completion year of the subject site. Westwood Hong & Associates Limited was commissioned by the applicant to prepare the revised NIA (hereafter referred as NIA1) for the proposed development for the finetuned development scheme with respect to the approval condition (a). According to the letter (Ref.: TPB/A/YL/30) from TPB dated 16 Dec 2025, the revised NIA report was considered as acceptable.

1.1.4 Recently, the development scheme adopted has been further finetuned. While the block disposition, orientation, shape, etc. are generally the same as before, the detailed layout has been revised. In addition, more number of storeys is now introduced with increased building height, number of flat units, etc. The clubhouse block design is also finetuned. Based on the latest schedule, the tentative completion year would also be shifted.

1.1.5 Ramboll Hong Kong Limited is commissioned by the project proponent to provide environmental consultancy service to update the EA based on the latest development scheme while the design and mitigation measures, assessment approach, etc. generally follows that of EA1, EA2 and NIA1. This EA is prepared as a technical supporting document to demonstrate that the Proposed Development is environmentally acceptable by addressing potential environmental noise, air quality, water quality and waste impact arising from the proposed redevelopment for Section 16 planning application. A standalone sewerage impact assessment report is also prepared as another technical supporting document for the same application.

1.1.6 The design of master layout plan (MLP) and other technical information on the Proposed Development are provided by the Project Architect (DLN Architects Limited)

whereas the updated traffic forecast is provided by the Project Traffic Consultant (CTA Consultants Limited).

1.2 The Application Site and Its Environs

1.2.1 The Application Site is approximately 7,271m^2 and currently occupied by the Lai Sun Yuen Long Centre, which is an industrial building. Major carriageways surrounding the Application Site include Wang Yip Street East (west), Keung Yip Street (north), Po Yip Street (east), Long Yip Street & Yuen Long On Lok Road (south).

1.2.2 **Figure 1.1** shows the location of the Application Site and its environment.

1.3 The Proposed Development

1.3.1 The Proposed Development consists of 2 residential blocks (i.e. Tower 1 & 2), 3 storeys of clubhouse cum shop building, a non-residential G/IC facility and carpark. The clubhouse-cum-shop building is of 15m height and will be central air conditioned. The maximum building height (measured at the main roof of the towers) is approximately 114.8mPD.

1.3.2 The flat mix is adjusted and number of residential flat units is increased from 1004 (in NIA1 Scheme) to 1099. The plot ratio has been adjusted from 6.0 to 6.5. The original single-level basement carpark has been replaced by a two-storey above ground carpark occupying G/F and 1/F. Elevation of first residential floor is therefore revised from 15.70mPD (in EA1 Scheme) to 22.95mPD. The floor-to-floor height of all towers remains as 3.15m, except refuge floor and the floor for special unit (3.50m).

1.3.3 The tentative occupation year is 2030.

1.3.4 The MLP, floor plans and sections of the Proposed Development are shown in **Appendix 1.1**.

1.4 Appraisal of Environmental Impacts

1.4.1 In previous EA1 and EA2, the following environmental impacts have been evaluated:

- Air quality
- Road traffic noise
- Railway noise
- Fixed source noise
- Construction phase impact
- Sewerage impact

1.4.2 Sewerage impact assessment is prepared as a standalone report. Other environmental impacts have been addressed in this context.

1.4.3 Onsite survey has been conducted to identify any potential environmental pollution sources. The survey was conducted in January & November in 2020, January 2022 and February 2023. Updated (verification) survey has been conducted in April 2026 which confirms that the environmental condition is generally the same as observed before. Potential road traffic noise, railway noise, fixed sources noise and emission, vehicular emission and construction phase environmental impacts are appraised below.

Air Quality

1.4.4 The Application Site is surrounded by carriageways, including Long Yip Street and Yuen Long On Lok Road to its south, Po Yip Street to its east, Keung Yip Street to its northeast and Wang Yip Street East to its northwest. With reference to the Annual Traffic Census 2024 issued by Transport Department, Long Yip Street and Yuen Long On Lok Road are classified as Primary Distributor, whereas the other nearby road links are regarded as local distributor as per previous advice from TD (**Appendix 3.1**). The

potential air quality impact of the vehicular emission from the roads in the vicinity of the Application Site should be addressed with reference to the recommendations under HKPSG.

1.4.5 According to the survey map and site survey result, designated industrial area is not found within 500m from the Application Site. There is also no industrial undertaking and chimney observed within 200m from the Application Site, resembling the observations in previous assessments. Therefore, air quality impact due to industrial operation on the Proposed Development is unlikely a concern (detailed in **Section 2**).

Road Traffic Noise Impact

1.4.6 The major road traffic noise source with respect to the Application Site is arising from Long Yip Street and Po Yip Street. Road traffic noise impact assessment has been conducted based on the latest development scheme and updated traffic forecast to address the potential road traffic noise impact with necessary noise mitigation measures proposed (detailed in **Section 3**).

Railway Noise Impact

1.4.7 The existing Tuen Ma Line (in the form of viaduct) is aligned on the southern side at around 40m away from the Application Site. As the Proposed Development consists of residential towers which are up to 27 storeys high, standard parapet of the existing viaducts would unlikely provide adequate protection. Thus, railway noise impact assessment has been conducted and detailed in **Section 4**. Necessary noise mitigation measures are proposed.

Fixed Sources Noise Impact

1.4.8 Site survey was conducted in January & November 2020, January 2022, February 2023 and updated in April 2026 to identify any environmental nuisance. Various fixed noise sources are identified within 300m from the Application Site, including garages, metal workshops, electrical substation, cooling towers and chillers, etc. They have been taken into account and the fixed source noise impact assessment is detailed in **Section 5**. Since the latest development scheme is generally the same as in the EA1 Scheme, the finding and conclusion is generally the same as well.

Water Quality Impact

1.4.9 The proposed development will be connected to public drainage and sewerage system for proper discharge of treated surface runoff and effluent. ProPECC PN 1/23 (which supersedes ProPECC PN 5/93) will be referenced and followed as also committed before in previous assessments. All surface runoff originated from the Application Site will be properly collected and drained via systems such as sand trap, oil interceptor, grease trap for treatment. The treated surface runoff will be discharged to the public drainage system. All sewage generated onsite will be discharged to public sewerage system. No adverse water quality impact during operation of the project is anticipated.

Construction Phase Environmental Impact

1.4.10 The major air quality impact during construction should be fugitive dust impact in relation to dusty activity and emission from dusty materials while there are other emissions as well such as SO_2/NO_2 due to use of diesel powered equipment. Best management practice and practical mitigation measures will be adopted where appropriate.

1.4.11 Construction noise is usually generated by using powered mechanical equipment. It will be controlled with reference to relevant technical memorandum. Best Management practice will be adopted where appropriate to suppress the impact.

1.4.12 For water quality aspect, during construction of the Proposed Development, water pollution is likely due to sediments, construction runoff and drainage, sewage effluent and liquid spillage if not mitigated. Best management practice will be adopted. No sewage effluent discharge will be allowed. ProPECC PN2/24 on construction site drainage will be observed and followed.

1.4.13 Waste generation during construction will be sorted and handled in compliance with the Waste Disposal Ordinance and regulations.

1.4.14 With adequate mitigation measures incorporated during construction of the project, no significant construction phase environmental impact is anticipated. Further discussion on construction phase environmental impact is also included in **Section 6**.

Operation Phase Waste Management

1.4.15 During the operation of the project, there will be waste generation from the residential, retail, clubhouse uses, etc. such as glass, metals, plastics, food wastes, textile, wood, household hazardous wastes and others. Adequate waste collection/storage facilities will be provided for collection and storage of sorted recyclable wastes (glass, paper, metal, plastic) to enable recycling. Based on Waste Statistics for 2024, the per capita disposal rates of municipal solid waste, domestic waste, commercial & industrial waste are respectively 1.40kg/person/day, 0.86kg/person/day and 0.53kg/person/day (Plate 2.7 of Waste Statistics for 2024). Among domestic and commercial waste, the recovery rates are 22% and 48% respectively (Plate 3.2 of Waste Statistics for 2024).

1.4.16 Based on the Proposed Development with around 3078 residential population and 140 working population, there will be around 2138kg/day of waste generation (i.e. 0.86/(1-22%) x 3078 + 0.53/(1-48%) x 140). With adequate waste collection/storage facilities provided to segregate recyclable and non-recyclable wastes, the burden of waste treatment facilities in Hong Kong will be reduced. In addition, the applicant will explore in detailed design stage to collect food waste alongside these recyclable wastes mentioned above to further reduce waste generation.

1.4.17 Retail facilities are proposed in the development, and chemical waste may be generated from retail operations and maintenance. If chemical wastes are generated, it will be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes. All chemical wastes will be collected by a licensed chemical waste collector and disposed of at the Chemical Waste Treatment Centre (CWTC) in Tsing Yi. Moreover, generation of other types of waste (such as clinical waste, etc.) is not anticipated from the Project during operation phase.

1.5 Organization of this Report

1.5.1 The report is structured as follows: -

- **Section 2** is an air quality impact assessment;
- **Section 3** is a road traffic noise impact assessment;
- **Section 4** is a railway noise impact assessment;
- **Section 5** is a fixed noise sources impact assessment;
- **Section 6** includes discussion of construction phase fugitive dust, noise, water quality and waste management issues
- **Section 7** is a concluding summary.

2. AIR QUALITY IMPACT ASSESSMENT

2.1 Introduction

2.1.1 This section identifies potential air quality constraint arising from vehicular emission of the road carriageways and chimney emission (if any) from industrial stack surrounding the Application Site during the operation of proposed development.

2.2 Legislative Requirements and Evaluation Criteria

Assessment Criteria

2.2.1 The principal legislation for the management of air quality in Hong Kong is the *Air Pollution Control Ordinance (APCO)* (Cap. 311). The Hong Kong AQOs enacted on 11 April 2025 are listed in **Table 2.1** below.

Table 2.1 Hong Kong Air Quality Objectives

Pollutants	Average Time	Concentration Limit [i] ($\mu g/m^3$)	No. of exceedances allowed per calendar year
SO_2	10-min	500	3
	24-Hour	40	3
RSP (PM_{10}) [ii]	24-Hour	75	9
	Annual	30	NA
FSP ($PM_{2.5}$) [iii]	24-Hour	37.5	18
	Annual	15	NA
NO_2	1-Hour	200	18
	24-Hour	120	9
	Annual	40	NA
Ozone (O_3)	8-Hour	160	9
	Peak Season	100	NA
Carbon Monoxide (CO)	1-Hour	30,000	0
	8-Hour	10,000	0
	24-Hour	4,000	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 (PM_{10}) means suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.

[iii] Fine suspended particulates ($PM_{2.5}$) means suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less.

Air Pollution Control (Construction Dust) Regulation

2.2.2 Notifiable and regulatory works are under the control of Air Pollution Control (Construction Dust) Regulation. Notifiable works include site formation, reclamation, demolition, foundation and superstructure construction for buildings and road construction. Regulatory works include building renovation, road opening and resurfacing, slope stabilisation, and other activities including stockpiling, dusty material handling, excavation, concrete production, etc. The Project is expected to include notifiable works (site formation, demolition, foundation and superstructure

construction for buildings) and regulatory works (dusty material handling and excavation). Contractors and site agents are required to inform EPD and adopt dust reduction measures to minimize dust emissions, while carrying out construction works, to the acceptable level.

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

2.2.3 The Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation comes into operation on 1 June 2015. Under the Regulation, Non-road mobile machinery (NRMMs), except those exempted, are required to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites. The Contractor is required to ensure the adopted machines or non-road vehicle under the Project could meet the prescribed emission standards and requirement.

Air Pollution Control (Fuel Restriction) Regulations

2.2.4 The Air Pollution Control (Fuel Restriction) Regulations were enacted in 1990 to impose legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes to reduce sulphur dioxide (SO_2) emissions. In November 2024, the Regulations were amended to further tighten the control requirements of liquid fuels and remove the restrictions on the use of liquid and solid fuel in Sha Tin Fuel Restriction Area. The Regulations do not apply to any fuel-using equipment that is used or operated in premises used solely as a dwelling or is used or operated in or on a vessel, motor vehicle, railway locomotive or aircraft. Gaseous fuel, conventional solid fuel with a sulphur content not exceeding 1% by weight or liquid fuel with a sulphur content not exceeding 0.001% by weight and a viscosity not more than 6 centistokes at 40°C, such as Ultra Low Sulphur Diesel (ULSD) are permitted to be used in commercial and industrial processes.

Recommended Pollution Control Clauses for Construction Contracts

2.2.5 The Recommended Pollution Control Clauses (RPCC) are generally good engineering practice to minimize inconvenience and environmental nuisance to nearby residents and other sensitive receivers. The Contractor shall undertake environmental protection measures to reduce the environmental impacts arising from the execution of the Works and to minimise the effects on the air, noise, water quality as well as nuisance of waste within and outside the Site, on transport routes and at the loading, dredging and dumping areas.

Hong Kong Planning Standards and Guidelines

2.2.6 Section 3 in Chapter 9 of the Hong Kong Planning Standards and Guidelines (the HKPSG) presents the principal framework for planning against air pollution and a summary of common pollution sources, which includes industrial processes, motor vehicles, construction and reclamation sites, odour sources, dusty uses, etc. The recommended buffer distances are reproduced in **Table 2.2** and **Table 2.3**.

Table 2.2 HKPSG's Recommended Minimum Buffer Distance from Roads

Type of Road	Buffer Distance	Permitted Uses
Trunk Road (including expressway) and Primary Distributor	> 20 m	Active and passive recreation uses
	3 – 20 m	Passive recreational uses
	< 3 m	Amenity areas

Type of Road	Buffer Distance	Permitted Uses
District Distributor	> 10 m	Active and passive recreational uses
	< 10 m	Passive recreational uses
Local Distributor	> 5 m	Active and passive recreational uses
	< 5 m	Passive recreational uses
Under Flyovers	-	Passive recreational uses

Table 2.3 HKPSG's Recommended Minimum Buffer Distance from Industrial Chimneys

Difference in Height between Industrial Chimney Exit and the Site	Buffer Distance	Permitted Uses
< 20 m	> 200 m	Active and passive recreation uses
	5 – 200 m	Passive recreational uses
20 m – 30 m	> 100 m	Active and passive recreational uses
	5 – 100 m	Passive recreational uses
30 m – 40 m	> 50 m	Active and passive recreational uses
	5 – 50 m	Passive recreational uses
> 40 m	> 10 m	Active & Passive recreational uses

2.3 Existing Air Quality at the Application Site

2.3.1 The nearest air quality monitoring station (AQMS) to the Application Site is the Yuen Long Air Quality Monitoring Station (AQMS). The five most recent years of air quality monitoring data, 2020 to 2024, from the Yuen Long Air Quality Monitoring Station (AQMS) are summarized in **Table 2.4**. According to the AQMS monitoring data presented in **Table 2.4**, exceedance in 24-hour average RSP concentration, annual average RSP concentration, 24-hour average FSP concentration, annual average FSP concentration, 8-hour average O_3 concentration, peak season average O_3 concentration and 8-hour average CO concentration were recorded between Year 2020 and 2024.

2.3.2 As the tentative year of completion of the Proposed Development is 2030, the year of 2030 hourly background concentrations from the PATH v3.0 model has been adopted for the purpose of this assessment, which is considered as a more conservative approach. The data for Year 2030 was extracted from the *Pollutants in the Atmosphere and the Transport over Hong Kong*-model version 3.0 (PATH v3.0) developed and released by EPD in January 2024 (Grid (25,47) and (28,47)). According to **Table 2.4**, except RSP, FSP and O_3, there would be no exceedance of AQOs for the future background air quality.

Table 2.4 EPD Air Quality Monitoring Data in Yuen Long AQMS and PATH-v3.0 (Grid (25,47) and (28,47))

Pollutant	Averaging time	Parameter	AQO (μg/m³)	Concentration [1] (μg/m³)						
				2020	2021	2022	2023	2024	PATH in Year 2030 (25, 47)	PATH in Year 2030 (25, 47)
RSP (PM_{10})	24-hour	10th highest	75	**77**	73	56	59	61	**77**	**78**
	Annual	Maximum	30	30	30	25	26	25	**33**	**32**
FSP ($PM_{2.5}$)	24-hour	19th highest	37.5	33	36	**38**	34	**38**	18	17
	Annual	Maximum	15	**16**	**17**	**16**	**16**	**17**	**54**	**54**
NO_2	1-hour	19th highest	200	135	148	122	130	125	21	21
	24-hour	10th highest	120	64	78	68	67	66	32	32
	Annual	Maximum	40	32	40	37	37	35	13	13
SO_2	10-minute	4th highest	500	26	24	21	20	14	21	26
	24-hour	4th highest	40	10	14	7	10	5	7	7
O_3	8-hour	10th highest	160	154	**178**	**194**	155	**168**	**186**	**185**
	Peak Season	Maximum	100	86	84	95	84	92	**120**	**120**
CO	1-Hour	Maximum	30,000	1530	2090	1700	1580	1920	527	527
	8-Hour	Maximum	10,000	**1279**	**1591**	**1519**	**1273**	**1778**	493	494
	24-hour	Maximum	4,000	1182	1183	1159	1047	1342	463	462

Notes:
[1] Bolded and underlined values exceed the relevant AQO.

2.4 Vehicular Emission Impact Assessment

2.4.1 The Application Site is surrounded by carriageways, including Long Yip Street and Yuen Long On Lok Road to its south, Po Yip Street to its east, Keung Yip Street to its northeast and Wang Yip Street East to its northwest. According to the Traffic Census published by Transport Department (TD) in 2024, Long Yip Street and Yuen Long On Lok Road are classified as Primary Distributor.

2.4.2 Po Yip Street, Keung Yip Street and Wang Yip Street East are two-way single-lane carriageways. According to the recommendation from project traffic consultant and reply from TD before, it is considered that all these 3 roads are classified as local distributor.

2.4.3 According to the Table 3.1 of the Chapter 9 (Environment) of the Hong Kong Planning Standard and Guideline (HKPSG), minimum horizontal buffer separations of 20m and 5m are recommended for Primary Distributor and Local Distributor respectively.

2.4.4 **Figure 2.1** presents the buffer distance between the carriageways and the air sensitive uses of the Application Site. The shortest separation distance from Long Yip Street and Yuen Long On Lok Road (primary distributor) to the residential towers of the proposed development is 23m which is more than the separation requirement of 20m; and distances from Po Yip Street, Keung Yip Street to the proposed development are 10m, 38m respectively, which can meet the separation requirement of 5m. For Wang Yip Street East, the separation distance to the Proposed Development is 4m, where a small portion of habitable room falls within the recommended 5m buffer zone. Therefore, fixed glazing is proposed at these strategic locations and no opening will be located within the 5m buffer zone from Wang Yip Street East for the residential towers (see **Figure 2.1**).

2.4.5 The proposed development will also be designed so that all fresh air intake location will be outside the 5m/20mbuffer zone.

2.4.6 It is noted that part of footprint of landscape area would maintain less than 20m from Long Yip Street (primary distributor) and maintain less than 5m from Wang Yip Street (local distributor). The landscape area will be used for planters (i.e. non air sensitive use). No adverse air quality impact due to vehicular emission is anticipated with the proposed fixed glazing at residential towers.

2.4.7 On the other hand, while the nature of the proposed development is not environmentally polluting in nature, there exists future use such as carpark with mechanical ventilation system that may emit pollutant at all. However, it is noted that vehicle movement within carpark is limited and vehicles in the carpark is stationary with no engine on and emission at most time. Emission from mechanical ventilation exhaust of basement carpark is not considered significant. In all circumstances, in detailed design of the development, it is advisable to locate the exhaust away from nearby air sensitive receivers as far as practicably possible.

2.5 Industrial Emission Impact Assessment

2.5.1 According to the survey map and site survey result (site surveys conducted in Jan & Nov 2020, Feb & Oct 2022 and Feb 2023 (during normal working day between 10:00 and 17:00) and verification survey in Apr 2026, covering area around the Application Site (walking along public roads)), there is no designated industrial area within 500m from the Application Site. There is also no industrial undertaking and chimney observed within 200m from the Application Site. There is no fluff, odour, smoke or any other criteria pollutant emission observed at the Application Site and adjacent areas such as from Tung Tai Street Refuse Collection Point on southeast side and workshop/garages on west side.

2.5.2 Since no emission sources has been identified at the vicinity of Application Site, it is expected that the ASRs of the proposed development would not be subject to adverse air quality impact from chimney emission.

2.6 Conclusion

2.6.1 As confirmed in site survey, there is no chimney identified within 200m from the Application Site so that the buffer separation requirement can be well met. At the same time, the air sensitive uses in the MLP including fresh air intake location, openable window and recreational uses are designed to meet the buffer separation requirement with respect to the existing/ future carriageways. Hence, it is envisaged that the proposed development at the Application Site would not be subject to significant air quality impact.

3. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

3.1 Introduction

3.1.1 This road traffic noise impact assessment is prepared to address potential road traffic noise impact on the noise sensitive uses of the Proposed Development and to recommend mitigation measures where practicable to attenuate the impact.

3.2 Assessment Criteria

3.2.1 Noise standards are recommended in the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against noise impact from sources such as road traffic, railway and aircraft. The Proposed Development comprises car park, plant room, clubhouse, commercial uses, residential uses and non-residential G/IC facility. The non-residential G/IC facility is not accommodation, educational institution, place of worship, performance venue, hospital, etc. and not noise sensitive in nature. Clubhouse and non-residential G/IC facility will be air conditioned and will not rely on opened window for ventilation. Only residential uses which rely on openable window for ventilation purpose is considered noise sensitive in nature. Under the HKPSG, the criterion for road traffic noise impact on domestic premises (habitable rooms) is $L_{10(1\text{-}hour)}$ 70dB(A).

3.3 Assessment Methodology

3.3.1 In the assessment, the potential noise impact arising from nearby existing and future road carriageways on the development has been assessed based on the proposed master layout plan (MLP).

3.3.2 It involved the prediction of future noise impacts on Noise Sensitive Receivers (NSRs) arising from traffic flows along existing and future road carriageways situated within the vicinity of the Application Site. Calculation of predicted road traffic noise was based on the worst case peak hour traffic flows projected within a 15-year period from the tentative completion date (Year 2030) of the Proposed Development. For worst-case scenario evaluation, the assessment year was chosen to be Year 2045, which has the maximum forecasted traffic flow within the 15-year period. The year 2045 traffic forecast data based on the latest development parameters are attached in **Appendix 3.1**. Endorsement from Transport Department and confirmation letter from project traffic consultant will be provided once available.

3.3.3 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" was used to predict the hourly $L_{10(1\text{-}hour)}$ noise levels generated from road traffic at selected representative NSRs. Practicable environmental mitigation measures have been recommended, where necessary. The predicted noise levels were compared with the relevant HKPSG noise standards (i.e. $L_{10(1\text{-}hour)}$ 70dB(A)).

3.4 Noise Sensitive Receivers

3.4.1 A number of Noise Sensitive Receivers (NSRs), which are likely to be subject to adverse traffic noise impacts, were selected for the assessment. All assessment points were taken at 1.2m above the floor and 1m away from the façade of openable windows (which would be for ventilation purpose) of rooms of sensitive use (living rooms & bedrooms for residential towers). **Figure 3.1** illustrates the locations of the selected representative NSRs for road traffic noise impact assessment.

3.5 Assessment Result for Base Case Scenario

3.5.1 The predicted road traffic noise levels on the representative NSRs based on the development scheme without any noise mitigation measures at the Application Site were assessed.

3.5.2 The assessment result for dwellings under base case scenario is presented **in Appendix 3.2**. The compliance rate of road traffic noise standard is 74%. The maximum predicted noise level is 77dB(A). Noise mitigation measures are therefore recommended at the Proposed Development to attenuate the noise impact from road traffic.

3.6 Consideration of Noise Mitigation Measures (Mitigated Scenario)

3.6.1 According to the assessment result of base case scenario, the following noise mitigation measures (same as what recommended in EA1, EA2 and NIA1) are considered and incorporated in the MLP.

a. Acoustic Window / Enhanced Acoustic Balcony (Baffle Type) (AW(BT) / EAB(BT))

Innovative noise mitigation measures are being explored in recent years. Baffle type acoustic windows and enhanced acoustic balconies have been adopted for numerous residential developments for attenuating road traffic noise.

EPD's Practice Note on Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact (hereafter referred as "EPD-PN") has been referenced for the purpose to demonstrate the feasibility of mitigating noise impact.

i. The outer window/door system with side hung openable window/door and

ii. The inner sliding panel.

The Acoustic Window / Enhanced Acoustic Balcony (Baffle Type) in EPD-PN (see **Appendix 3.4**) refers to the type of window/ balcony door that has an inner sliding panel behind the outer opening, both readily openable, for creating an air gap for the supply of fresh air with noise mitigation effect. It comprises two glazing:-

The "designed setting" to reduce noise entering indoor area is achieved by placing the inner sliding panel behind the openable window/door, so that noise from outside cannot pass through the opening window/door and enter indoor area directly. As there is no gap at top and bottom of the sliding panel, direct transmission of sound energy into the habitable room is avoided. Instead, outdoor noise has to pass through the gap between the inner sliding panel and outer façade aside the opening window/door in order to enter indoor area. The design allows natural ventilation through the aforementioned gap (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. According to the latest PNAP APP-130: "Lighting and Ventilation Requirements – Performance-based Approach", the proposed AW(BT) and EAB(BT) are 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/door at the outer façade.

A road traffic noise sound attenuation of 6.0dB(A) to 7.0dB(A) can be achieved for AW(BT), while a road traffic noise sound attenuation of 8.0dB(A) to 9.0dB(A) for EAB(BT) with reference to EPD-PN assuming that the noise source is right in front of the opening.

With the designed setting of the AW(BT) and EAB(BT) described above, the noise reduction performance can be improved by various means including tilting the

AW(BT) and EAB(BT) to a horizontal incident angle not less than 30 degree to the dominant line source (-1.0dB(A) for AW(BT) and -2.0dB(A) to -3.0dB(A) for EAB(BT)), adding 1.5m long full-height architectural fin (only applicable to AW(BT) only) (-1.0dB(A) for tilting not less than 30 degree and -2.0dB(A) for not less than 60 degree), adding sound absorptive material (SAM) (i.e. Noise Reduction Coefficient, NRC≥0.7) at the top and outer opening side of mullion (-1.5dB(A)). The additional improvements from EPD-PN mentioned above have been referenced and adopted where necessary.

The configurations of the optimised AW(BT) and EAB(BT) design are shown in **Appendix 3.3**. With the optimised configurations, the noise reduction effectiveness of the proposed AW(BT) and EAB(BT) should not be worse than the reference cases. It is anticipated the proposed AW(BT) and EAB(BT) should have at least the same sound transmission loss performance as the reference case as a conservative assumption. Further, if the room size of the proposed development is significantly (more than 10%) lower than the reference case in EPD-PN, room size adjustment is conducted so that the noise reduction will be lowered. Lastly, in case the noise reduction of the proposed AW(BT) and EAB(BT) is higher than the residual exceedance, it is assumed that the noise reduction is equal to the residual exceedance.

b. Fixed Glazing with or without Maintenance Window

For those window façades that are not necessary to serve ventilation purpose yet exposed to adverse road traffic noise, Fixed Glazing with or without Maintenance Window is proposed. The fixed glazing of not less 8mm will be equipped with well gasketed maintenance window, if any, and a removable handle or key lock system to ensure the maintenance window remains locked except for cleaning and maintenance purpose.

c. Door with Auto-closing Mechanism

Similar to Fixed Glazing with or without Maintenance Window discussed above, door (with glass pane, if adopted, of not less than 8mm) with auto-closing mechanism will be adopted at door openings that do not serve ventilation purpose yet exposed to adverse road noise. The door with auto-closing mechanism would remain closed except accessing to the balcony/ utility platform.

d. Vertical Acoustic Fin

One (1) full height vertical fins with length of 1.5m is proposed next to N2-75 as shown in **Figure 3.2**, where Acoustic Window (Baffle Type) are also proposed. The additional noise reduction for the corresponding NSR with AW(BT) adopted follows that in the EPD-PN. For NSR location further apart, the vertical fin can also effect to reduce some view angle. The noise reduction performance of vertical fin not adjacent to the NSR (window opening) location (i.e. additional noise reduction performance not accounted by referencing to EPD-PN), it is evaluated by using road traffic noise model. The side of the fin adjacent to ventilation opening will be covered with SAM to minimise noise reflection or reverberation. Noise reduction due to use of vertical fin is determined based on approach of CRTN but capped to not more than 3 dB(A).

e. Sound Absorption Material

It is noted that sideway opening may be located within a deeper semi-enclosed area (re-entrant space). Or, erection of vertical acoustic fins near NSRs may create a semi-enclosed area with respect to the NSR location if the fin is located parallel to building structure or fins are too close to each other and hence inducing possible multiple noise reflection effect. In order to avoid the potential multiple noise

reflection effect at NSRs, SAM is proposed to the building façade within the semi-enclosed area where practicable and the sides of the vertical fin adjacent to ventilation window opening of habitable rooms.

3.6.2 All practical mitigation measures have been considered and exhausted where practicable and effective, and incorporated into the MLP. Location of proposed road traffic noise mitigation measures is presented in **Figure 3.2**.

3.7 Assessment Result with Proposed Noise Mitigation Measures

3.7.1 With all practical noise mitigation measures considered and incorporated for implementation as described in **Figure 3.2**, all residential units comply with predicted noise levels exceeded the criterion of 70dB(A). Under mitigated scenario, the road traffic noise compliance rate for the Proposed Development is significantly improved to full compliance.

3.7.2 Direct noise mitigation measures including acoustic window (baffle type), enhanced acoustic balcony (baffle type), fixed glazing with or without maintenance window, door with auto-closing mechanism, and vertical acoustic fin are provided to achieve full compliance with respect to the road traffic noise criteria for the Proposed Development.

3.8 Conclusion

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

3.8.2 With all practical noise mitigation measures considered, the road traffic noise compliance is improved from 74% (base case scenario) to full compliance.

4. RAILWAY NOISE IMPACT ASSESSMENT

4.1 Introduction

4.1.1 Tuen Ma Line Long Ping Station and its associated viaduct track line are aligned to the southwest and south of the Application Site. Existing 2m-high parapet wall is built along the Station.

4.1.2 The assessment has been prepared to assess the potential railway noise during the operation of Tuen Ma Line with respect to the latest development scheme. Noise mitigation measures for the protection of the Proposed Redevelopment will be proposed, where necessary.

4.2 Assessment Criteria

4.2.1 According to the *Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Spaces or Construction Sites* (IND-TM), the airborne noise shall comply with the Acceptable Noise Level (ANL) which depends on the Area Sensitivity Rating (ASR).

4.2.2 The type of the area where the Application Site located is considered to be "(iv) Area other than (i) to (iii) ((i) rural area; (ii) low density residential area; (iii) urban area)" and not affected by influential factor (disregard there are existing industrial buildings to the west to northwest of the Application Site as a more conservative approach). Therefore, the Area Sensitivity Rating "B" is adopted as the assessment criteria. Noise standards of 65dB(A) and 55dB(A) are adopted for day-time and night-time respectively. **Table 4.1** below shows the details of the railway noise impact assessment criteria for this study.

Table 4.1 Acceptable Noise Levels for the NSRs

Time Period	ANL for ASR "B", Leq(30min), dB(A)
Day & Evening (0700 to 2300 hours)	65
Night (2300 to 0700 hours)	55

4.2.3 Besides the TM, HKPSG also provides additional criteria for assessing railway noise:

Table 4.2 Relevant Noise Standard under HKPSG

Description	Standard
Lmax (2300-0700)	85dB(A)
Leq (24-hour)	65dB(A)

4.3 Existing Condition of Railway System and Surrounding

4.3.1 Referring to **Figure 4.1** showing railway system within 300m assessment area from the Application Site, part of the Tuen Ma Line Long Ping Station and railway viaduct (comprising single viaduct and twin viaduct) can be found.

4.3.2 The railway station itself has a total length of about 380m. The Tuen Ma Line of the station and platform is elevated and the railway station concourse is located at grade.

4.3.3 The railway line is on two sides of the Tuen Ma Line Long Ping Station. The railway station is equipped with glazed wall and door at the platform level on two sides. Moreover, the railway station platform is covered by a solid canopy structure, which also extends outward to cover the railway line on top. The solid canopy is of about 240m long, which means that sections of the railway station at two ends are not covered. At two ends of the railway station situates the station facilities of about 5.5m

high between the railway tracks, which would provide substantial screening for train on far track. Along the railway station, fence wall is also erected to contain poster on two sides of the railway track. The height of solid fence wall is over 2m. The potential shielding effect of the features mentioned above will be accounted.

4.3.4 For single viaduct, there is parapet on both sides with horizontal separation of about 1.3m between parapet and notional noise source. For twin viaduct, there is parapet on two sides but no barrier structure between 2 railway line. The horizontal separation between parapet and notional noise source of train on the other side is around 5m. It is taken into account when determining the barrier shielding effect.

4.4 Operational Characteristics of Tuen Ma Line

4.4.1 For the day time peak train frequency, reference is made to the previous enquiry submitted to MTRC, the future ultimate daily Tuen Ma Line peak operating train frequency during the period of 0700-2300 would be 28 trains per hour per direction (See **Appendix 4.1**). the maximum number of trains in each direction would be 15 numbers in 30 minutes (with headway 1 additional train).

4.4.2 For the night time peak train frequency, the maximum frequency during 0600-0700 (representative of worst case during night time) will be 40 trains per hour (two directions) in accordance to the latest Environmental Permit for West Rail operation (FEP-24/004/1998/J) (Also see MTRC reply in **Appendix 4.1**). The maximum number of trains in each direction would be 11 numbers in 30 minutes (with headway 1 additional train).

4.4.3 According to MTRC reply, the peak train speed is about 70kph for both directions between Yuen Long Station and Long Ping Station.

4.4.4 With reference to the enquiry submitted to MTRC for operation mode of the captioned railway segment, it is informed that the number of cars per train is 8 cars per train for the operating condition of the Tuen Ma Line. However, the latest Environmental Permit for West Rail operation (FEP-24/004/1998/J) allows for the operation of 9-car train. Hence, 9-car train operation instead of the 8-car train operation would be adopted in this assessment as a conservative approach (Also see MTRC reply in **Appendix 4.1**).

4.5 Assessment Methodology

4.5.1 The assessment methodology resembles that in the EA1 and EA2. On-site railway noise measurement was conducted on the rooftop of Lai Sun Yuen Long Centre to determine reference sound exposure level (SEL) from the West Rail Line (currently Tuen Ma Line) in December 2019 (See **Appendix 4.4**) and was adopted to derive the reference noise level. During the measurement, 8-car train was used. SELs for train movement along tracks among both directions (Near Track (To Hung Hom) and Far Track (To Tuen Mun)) was captured as the reference noise level for this assessment.

4.5.2 Noise level during the period when railway noise is audible has been adopted to determine the SEL by summing the sound energy during this period. The SEL calculated based on this approach would include background noise. To discount the background noise effect (mainly road traffic noise based on onsite observation) for individual SEL, the minimum noise level recorded during the same period is regarded as the background noise level and deducted to determine the SEL due to railway noise.

4.5.3 The SELs determined based on on-site measurement result are then corrected to 9-car train, 25m reference distance and view angle of 180 degree. Corresponding correction (e.g. distance correction, view angle correction and façade correction) has been incorporated into the calculation of railway noise at representative NSRs. The reference SEL of 80.3dB(A) and 81.8dB(A) was determined and applied to near track

and far track respectively. Speed correction is not considered as the measurement was conducted onsite and already reflects the actual train speed.

Corr (9 cars) = 10 x log(9/8)
Corr (distance to 25m) = 10 x log(measurement distance/25)
Corr (view angle to 180°) = −[10 x log (π x measurement angle/180 – Cos(2 x measurement acute angle) Sin(measurement angle) – 5]

4.5.4 Similarly, the Lmax determined based on on-site measurement result are then corrected to 9-car train and 25m reference distance.

4.6 Method to predict Leq (30 min) Level during Night-time Period and Lmax Level

4.6.1 The U.K. Department of Transport's procedure "Calculation of Railway Noise" (CRN) was used to predict the hourly Leq (30 min) noise levels generated from railway tracks at selected NSRs. For ordinary assessment based on the reference SEL, the Leq (30 min) level during the night-time period can be determined by accounting the following factors:

- Distance correction [DC = 10 x log (Dref / D)] where Dref is reference distance during measurement;
- View angle correction [VAC = 10 x log ($\pi\theta$/180 – Cos2αSinθ) - 5] where θ = view angle to railway track not shielded from the NSR & α = acute angle defined in "Calculation of Railway Noise" published by the Department of Transport of London (CRN). View angle correction for the location where direct measurement is conducted and the NSR selected for assessment purpose are determined and subtracted with each other to determine the net correction;
- Poor track correction [+3dB(A)] to account for poor track;
- Façade correction [+2.5dB(A)];
- Conversion from SEL to Leq (30 min) during day & evening time/night-time [a frequency of 15/11 trains in 30 minutes per direction based on information from MTRC and the latest Environmental Permit condition with 1 additional train to capture possible worst case impact].
- The peak frequency in a day will be 28 trains per hour per direction. Assuming Tuen Ma Line operates 24 hours a day with peak frequency at each of 24 hours, the frequency in 24 hours will not be higher than 28 x 24 = 672 trains. Conversion from SEL to Leq (24-hr) will be made based on 672 trains in 24 hours as most conservative scenario.

4.6.2 Similarly, Lmax noise level at selected NSRs is determined by accounting factors including distance correction, poor track correction and façade correction.

4.7 Noise Sensitive Receivers

4.7.1 For residential towers, NSRs are selected at the southernmost location of Tower 1 (with no vertical fin assumed), the westernmost location of Tower 2, south and southeastern façade of Tower 2 of the proposed redevelopment nearest and facing Tuen Ma Line to represent the worst affected location. A total of 19 NSRs are selected as representative for the assessment. The assessment points are taken at 1m away from the façade and 1.2m above the corresponding floor slab. Moreover, no shielding by surrounding existing buildings is assumed as a conservative approach. **Figure 4.2** showed the location of the representative NSRs.

4.7.2 Some of the NSRs (i.e. R2-01, R2-75), are in close proximity to the railway track segment. Yet, noise mitigation measures in terms of orientation and long vertical fin

are provided so that there is no direct line of sight towards the track from these NSRs, Therefore, they are not included in this assessment.

4.7.3 The night time noise standard is considered as the most stringent. Should the predicted night time noise level be within the acceptable criterion, no unacceptable railway noise impact is anticipated. Nevertheless, day and evening time noise level is also projected based on correction for the frequency of train for completeness.

4.8 Proposed Railway Noise Mitigation Measures and the Predicted Result

4.8.1 The assessment scenario has incorporated the self-protecting building design to minimize the view angle of the NSRs towards the railway track. Building re-entrant design and vertical acoustic fins are incorporated into the design and adopted which helps to cut down the angle of view from representative NSRs.

Building re-entrant design (with Sound Absorptive Material applied)

4.8.2 In order to limit the angle of view towards the railway track, window openings are assigned at the building re-entrants for ventilation purpose. Fixed glazing with or without maintenance window is proposed at the building frontage of these concerned residential units and not for ventilation purpose. The balcony door opening is for access purpose only and will be equipped with auto-closing door. To avoid noise reverberation problem for opening at re-entrant area, SAM will be applied to the façade of re-entrant area (except glazing area) to avoid reverberation problem.

Vertical Acoustic Fin

4.8.3 For the location that building re-entrants design alone is not sufficient for mitigating the potential railway noise impact, vertical acoustic fins of 1.0m to 1.9m long are proposed at strategic locations to further reduce the view angle towards the railway track. It is noted that the erection of acoustic fins near NSRs would induce potential noise reflection effects, SAM is proposed at such surface (and tip) of the vertical acoustic fin adjacent to ventilation opening.

4.8.4 **Figure 4.2** showed the location of the proposed railway noise mitigation measures. Predicted railway noise impacts for day and evening time, night-time, Lmax and Leq(24-hour) are assessed. All assessment results are presented in **Appendix 4.2**.

Leq (30 min) Noise Level during Day & Evening and Night time

4.8.5 The predicted day & evening time and night-time Leq (30min) noise levels for the selected NSRs according to the methodology discussed above are presented in **Appendix 4.2**. According to the assessment result, no non-compliance is found during day & evening and night-time period.

Table 4.2 Maximum Predicted Leq (30 min) during Day & Evening and Night-time Period

NSR	Leq (30 min), dB(A)	
	Day & Evening (0700 to 2300)	Night (2300 to 0700)
R1-44	54	52
R2-49	54	53
R2-56	56	55
R2-57	56	54
R2-59	52	51
R2-62	46	44
R2-64	57	55
R2-65	57	55
R2-67	56	55
R2-68	56	55
R2-69	57	55
R2-72	57	55
R2-73	56	54
R2-74	53	52
R2-77	56	55
R2-78	55	54
R2-81	57	55
R2-82	56	55
R2-85	56	55

Note: NSRs R2-01 and R2-75 do not have direct line of sight with railway line within 300m. No assessment result for these NSRs is presented.

Leq (24-hour) Noise Level

4.8.6 According to MTRC, the daily operation hours would be from 0500 – 0130 approximately (total 20.5 hours per day). Nevertheless, to take into account special days when the railway system would extend the opening hours, it is prudent to assume worst case situation with train operations in 24 hours and maximum frequency throughout the day is applied (i.e. 28 * 24hours = 672 trains). The conversion factor from SEL to Leq (24-hour) would then be [10 * log(672/86400)= -21.1 dB(A)].

4.8.7 The predicted Leq (24hr) noise levels for the representative NSRs are shown in **Appendix 4.2** and tabulated in **Table 4.3** below. The predicted noise levels for all NSRs are below the noise standard of 65dB(A) and no adverse railway noise impact under the Leq (24hr) criteria is anticipated under the Base Case scenario.

Lmax Noise Level

4.8.8 The Lmax noise levels for the selected NSRs are projected based on horizontal distance. Barrier correction and view angle correction are not accounted in assessment. It is assumed that trains pass along each track (EB and WB) concurrently so that the result is representative of the most conservative scenario.

4.8.9 All representative NSRs for residential units are complied with the Lmax noise criteria of 85dB(A). The predicted Lmax noise levels for the representative NSRs are shown in **Appendix 4.2** and tabulated below in **Table 4.3**.

Table 4.3 Maximum Predicted Leq (24-hour) and Lmax Noise Level

NSR	Leq (24-hour), dB(A)	Lmax, dB(A)
R1-44	53	63
R2-49	54	62
R2-56	56	63
R2-57	55	63
R2-59	52	63
R2-62	45	63
R2-64	56	64
R2-65	56	64
R2-67	56	65
R2-68	56	65
R2-69	56	65
R2-72	56	65
R2-73	55	65
R2-74	53	66
R2-77	56	68
R2-78	55	65
R2-81	56	66
R2-82	56	65
R2-85	56	65

Note: NSRs R2-01 and R2-75 do not have direct line of sight with railway line within 300m. No assessment result for these NSRs is presented.

4.9 Conclusion

4.9.1 The potential noise impact from railway noise has been assessed based on the Proposed Redevelopment. The predicted noise level of selected NSR comply with the relevant Noise Control Ordinance standard with building re-entrant design (including provision of door with auto-closing mechanism and fixed glazing with or without maintenance window) and vertical acoustic fins incorporated in the proposed layout. SAM will be applied at appropriate locations to avoid noise reverberation effect. The finding is similar to the EA1, EA2 and NIA1. It is noted that the noise reduction effect of innovative measures such as acoustic window and enhanced acoustic balcony has not been accounted in this assessment. Therefore, the impact on the noise sensitive area of the dwellings should be further reduced in light of presence of the innovative measures.

5. FIXED SOURCE NOISE IMPACT ASSESSMENT

5.1 Introduction

5.1.1 The aim of this study is to assess potential noise impact arising from nearby fixed noise source within 300m assessment area of the Proposed Development. Practical noise mitigation measures would be recommended, where necessary.

5.2 Assessment Criteria

5.2.1 The Proposed Development is situated at Tung Tau Industrial Area. In accordance with the *Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites* (herein referred to as "IND-TM"), the type of the area where the Application Site located is considered to be either "Type (iii) Urban Area" or "Type (iv) Area other than those above".

5.2.2 Tung Tau Industrial Area has already been zoned to other uses instead of industrial use. However, most of the industrial buildings are still in place and on the opposite side of Wang Yip Street East. As a conservative approach, however, the existing industrial area and undertakings are not regarded as an influencing factor. Therefore, Area Sensitivity Rating (ASR) "B" is adopted as the assessment criteria.

5.2.3 **Table 5.1** below presents the fixed noise impact assessment criteria for Daytime & Evening time and Night-time Periods adopted in this assessment.

Table 5.1 Criteria for Fixed Noise Impact Assessment

Standards	ASRs[2]	Time Period	Acceptable Noise Level (ANL) [1][2]	Noise Criteria in Current Assessment Leq (30mins), dB(A)
NCO	B	Daytime & Evening time Leq (30 mins) (07:00 – 23:00)	65dB(A)	65dB(A)
		Night-time Leq (30 mins) (23:00 – 07:00)	55dB(A)	55dB(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. Under the "Urban Area" type of the area containing NSR, an ASR of "B" is assigned to the NSR "Not Affected" by IF.

[2] In any event, the Area Sensitivity Rating and the ANLs adopted in this report are only indicative and they are used for assessment only. It should be noted that noise from fixed sources is controlled undersection 13 of the Noise Control Ordinance. Therefore, the Noise Control Authority shall determine fixed plant noise impact on the basis of prevailing legislation and practices being in force, and taking account of contemporary conditions / situations of adjoining land uses. The assessment of noise impacts from fixed sources in this report shall not bind the Noise Control Authority in the context of law enforcement against any of the industrial noise being assessed.

5.3 Fixed Noise Sources

5.3.1 Desktop review and site investigations have been carried out to identify potential fixed noise sources in the vicinity of the Application Site.

5.3.2 Site visits were conducted in Dec 2019, Jan 2020, Nov 2020, Jan 2022, Feb 2023 and Apr 2026 during both daytime & evening time and night-time periods in an attempt to identify fixed noise sources at the vicinity and determine their operating hours. Noise measurement was carried out during site visit to estimate the SWL of the potential fixed noise sources at the vicinity in previous site surveys. The measurement was conducted using a calibrated Bruel & Kjaer (B&K) Precision Integration Sound Level Meter Type 2250L, which complies with International Electrotechnical Commission Publication 651:1979 (Type 1) and 804:1985 (Type 1). The weather condition was fine with calm wind during measurement, which satisfied the required measurement criteria. The equipment was properly calibrated immediately prior to and following each measurement by a B&K Sound Level Calibrator Type 4321. In the recent verification survey in Apr 2026, all identified noise sources at street level were not in action operation so that no update of direct measurement was conducted.

5.3.3 Findings in NIA1 prepared in late 2025 is also referred as appropriate. Based on the recent verification survey in Apr 2026 and desktop search, it is observed that all identified noise sources in the survey resemble what identified in the NIA1 while based on desktop search, two additional chillers were found at rooftop of One North.

5.3.4 Details of identified fixed noise sources are listed as follows:

(a) <u>On Lok Road Electrical Substation</u>

On Lok Road Electrical Substation (ESS) is located at the southwest of the Application Site, with approximately 3m of separation from the nearest site boundary. Six transformers (Source ID: S1a to S1f) are identified and placed at the side near the Application site. A 5m high solid fence wall is built along the transformer bay. Audible noise from these transformers is detected from the site survey during both daytime & evening time and night-time period. On-site noise measurement was therefore conducted within both periods to evaluate the Sound Power Level (SWL) for assessment. Tonal noise was identified during measurement and 1/3 octave band spectrum analysis.

(b) <u>Metal Workshop</u>

A metal workshop is situated at the immediate southwest of the Application Site (Source ID: S2) along Wang Yip Street South. Apart from selling metal and steel products, as observed during site survey, the workshop will also provide metal processing service. The processing includes cutting and compressing metal sheets by mechanical equipment. The workshop is opened during daytime & evening period, no night-time operation (23:00-07:00) was observed and this was also confirmed by workshop staff.

(c) <u>Garage and Vehicle Testing Centre</u>

There are several car-repairing workshops in the vicinity of Proposed Redevelopment, which are mainly located along Wang Yip Street East and Hi Yip Street (Source ID: S3 to S9, S11 to S18). These garages are open during daytime & evening period, no night-time operation (23:00-07:00) was observed and this was confirmed by garage staff. The operation activities of garages involve using vehicle lifting machines and hand-held pneumatic tools, hammering, car washing and grinding works. Some of the garages would also offer tyre replacement service. Noise measurement was carried out at some of the garages where audible noise was noticed. For garages without operation, the noise level based on findings in previous environmental assessment studies have been referenced.

A Vehicle Testing Centre (Source ID: S15) is located at the further northeast of the site. Noise measurement was conducted in previous site survey to determine the SWL of its operation activity.

(d) Fixed Noise Sources at higher levels

There are a number of cooling towers, chillers and VRV (Source ID: C6 to C10) observed at either podium or rooftop of surrounding buildings based on latest survey. These fixed noise sources are inaccessible and can only be observed at the rooftop of existing Lai Sun Yuen Long Centre onsite. There was no audible noise observed during survey, due to long separation and high background noise from road traffic, etc. Due to the inaccessibility, sound power level of comparable equipment based on equipment catalogue of comparable equipment. Same approach has been adopted in other projects by the same consultant to evaluate the potential fixed noise impact.

5.3.5 Locations of the identified fixed noise sources are indicated in **Figure 5.1**. Site Survey photo records and details are shown in **Appendix 5.1**. Summary of SWLs applied in fixed noise impact assessment is included in same appendix.

5.4 Representative Noise Sensitive Receivers

5.4.1 Representative NSRs which have direct line of sight towards the identified fixed nose sources have been selected for the assessment. The concerned NSRs are mainly at the northeastern and southwestern façade of Tower 1, as well as the northwestern side of Tower 2.

5.4.2 The location of the representative NSRs are presented in **Figure 5.2**.

5.5 Assessment Methodology

5.5.1 Standard acoustic principles were adopted for prediction of cumulative fixed noise impact. In accordance with the IND-TM, a barrier correction of -10 dB(A) is applied where the line of sight from the representative NSR would be completely blocked by building structure or barriers. A façade correction of +3dB(A) is also adopted. Tonalnoise was detected for electrical substation, which is also included in the assessment. Tonality of 6dB(A) is also assumed for chillers which are not accessible but with tonal characteristics generally.

5.5.2 Prediction of the fixed noise level can be represented by the formula below:

$$SPL_{NSR} = SWL_{source} + Corr_{dist} + Corr_{bar} + Corr_{fac} + Corr_{ton}$$

where

SPL_{NSR} = Predicted Noise Level at Selected Representative NSR

SWL_{source} = Derived Sound Power Level of the Fixed Noise Source

$Corr_{dist}$ = Distance Correction (20 x Log (Horizontal Distance between NSR and Source))

$Corr_{bar}$ = Barrier Correction (-10 dB(A))

$Corr_{fac}$ = Façade Correction (+3 dB(A))

$Corr_{ton}$ = Tonality Correction (+6 dB(A))

5.6 Fixed Sources Noise Mitigation Measures Incorporated in the Design

5.6.1 As mentioned in S5.3, there are a number of fixed noise sources identified at the vicinity of the Application Site and potential fixed noise impact is envisaged. The following noise mitigation measures are incorporated in the design to alleviate the anticipated impact due to surrounding fixed noise sources. The location of proposed noise mitigation measures is indicated in **Figure 5.3**.

a. Single Aspect of Building

Building designed in single aspect means arranging rooms of non-noise sensitive uses to face the noise source, which reduces the impact on occupants. This approach is considered and incorporated into the proposed layout plan (a portion of Tower 1 facing noise sources along Wang Yip Street East and southern portion of Tower 2 facing ESS (S1)). Non-noise sensitive uses, corridor, lift shaft and staircase are arranged to avoid residential units with direct line of sight towards the noise sources.

b. Vertical Acoustic Fin

Vertical Acoustic Fins range from 1.2m to 1.6m are proposed at strategic locations that are vulnerable to potential fixed noise impact. For both towers, the flat units closest to ESS (S1) are proposed with fin to avoid having direct line of sight towards S1 and corrections applied in calculation due to shielding of S1. Similar principle is applied to NSR F1-02, which is under the impact of fixed noise because of its proximity to the garage S6.

It is noted that the erection of vertical acoustic fins near NSRs would induce potential noise reflection effects, SAM is proposed at such surface (and tip) of the vertical acoustic fins.

c. Noise Barrier on top of the Podium Building

Since approximately half of Tower 1 is arranged in parallel to On Lok Road Electrical Substation (S1), proposing vertical acoustic fin cannot reduce the angle of view towards S1. In view of the ineffectiveness of acoustic fin, a noise barrier (top level 39.3mPD) is proposed on top of the podium building. The noise barrier facing S1 will be covered with SAM to avoid multiple reflection effect between the noise barrier and the façade of substation building. The screening effect by the proposed noise barrier is taken into account in this assessment.

d. Fixed Glazing with or without Maintenance Window

For those window façade that are not necessary to serve ventilation purpose yet exposed to adverse road traffic noise, Fixed Glazing with or without Maintenance Window is proposed. The fixed glazing of not less 8mm will be equipped with well gasketed maintenance window, if any, and a removable handle or key lock system to ensure the maintenance window remains locked except for cleaning and maintenance purpose.

5.7 Assessment Result

5.7.1 A summary of predicted industrial noise levels at representative NSRs is tabulated in **Table 5.2**. The maximum predicted fixed noise levels Leq(30mins) for daytime & evening period is up to 65dB(A), whilst for night-time period is 55dB(A). Therefore, the above results show that there is no non-compliance with the assessment criteria of 65dB(A) and 55dB(A) for daytime & evening and night-time periods respectively. The finding is similar to previous assessments in EA1, EA2, NIA1.

Table 5.2 Predicted Fixed Noise Level

Selected Representative NSRs	Predicted Fixed Noise Level, ($L_{eq\ (30mins)}$, dB(A))	
	Day and Evening Time (07:00-23:00)	Night-time (23:00-07:00)
F1-02	65	50
F1-03	65	50
F1-07	63	50
F1-09	62	50
F1-12	61	50
F1-14	61	50
F1-16	60	50
F1-19	60	49
F1-23	58	53
F1-25	58	51
F1-27	59	53
F1-28	59	53
F1-30	60	53
F1-31	60	53
F1-33	60	53
F1-39	61	54
F1-42	62	55
F1-43	61	55
F2-07	61	55
F2-10	60	54
F2-19	60	54
F2-23	59	54
F2-25	59	54
F2-26	59	54
F2-30	58	53
F2-77	55	50

Note: NSRs F1-44 and F2-01 do not have direct line of sight with fixed noise sources within 300m. No assessment result for these NSRs is presented.

5.8 Conclusion

5.8.1 The potential noise impact from fixed sources has been assessed. According to the assessment results, the Proposed Development would not be subject to adverse fixed noise impact from fixed noise sources with the proposed noise mitigation measures.

5.8.2 Furthermore, in order to ensure that the fixed noise generated by the Proposed Development would not cause excessive impact to neighbouring noise sensitive uses, the ventilation and air conditioning systems for the carpark, plant room etc., will be designed and installed to meet the relevant noise criteria as stipulated in the HKPSG.

6. CONSTRUCTION PHASE IMPACTS

6.1 Introduction

6.1.1 During the construction phase of the Proposed Development, there may be potential dust, noise and water quality impacts upon the nearby sensitive receivers such as villages. Practicable environmental mitigation measures are recommended to reduce these impacts to acceptable ranges. Nearest noise and air sensitive uses are summarised below and **Figure 6.1**. Among these uses, Tung Tau Industrial Area Playground and Kwan Lok Sun Chuen to the north and east are sited nearest to the Application Site.

Table 6.1 Surrounding Noise and Air Sensitive Receivers

(N)oise/(A)ir Sensitive Receivers	Horizontal Separation from Site Boundary
Tung Tau Industrial Area Playground (A)	about 47m to the north
One Regent Place (N)(A)	about 137m to the northeast
Cumberland Presbyterian Church Yao Dao Secondary School (N)(A)	about 213m to the northeast
Kwan Lok Sun Chuen (N)(A)	about 51m to the east
Tai Hang Building (N)(A)	about 132m to the south
Long Ching Estate (N)(A)	about 107m to the south
Keader Centre (A)	About 60m to the south
Yuccie Square (N)(A)	about 125m to the southwest
Tai Kiu Tsuen (N)(A)	about 246m to the southwest
The Spectra (N)(A)	about 169m to the west
Wang Fu Court (N)(A)	about 220m to the northwest
After The Rain (N)(A)	about 192m to the northwest
Hing Wah Industrial Building (A)	about 17m to the northwest
Fu Wah Industrial Building (A)	about 17m to the northwest
Annking Industrial Building (A)	about 17m to the northwest

6.2 Fugitive Dust Emission

6.2.1 The existing Lai Sun Yuen Long Centre will be demolished for the proposed development. The major air quality impact of concern during the demolition and construction phase will be the potential fugitive dust emission. The major dust emission sources during the construction phase of the Proposed Development are expected to arise from construction activities during site formation stage such as:

- Demolition of existing building structures;
- Earthworks (minor excavation and backfilling activities;
- Wind effect on material stockpiling; and
- Vehicle movements on haul roads and over the construction site.

6.2.2 For the demolition of existing building, C&D materials generated is estimated to be around 27,740m^3. Assuming a demolition period of around 1 year, there will be around 22 truckloads of materials generated per day. During the superstructure construction, it is estimated that 5,140m^3 construction waste will be generated. Assuming a period of 3 years for superstructure construction, there will be about 2 truckloads of construction waste generated per day. Therefore, necessary mitigation measures are recommended and will be implemented in order to avoid adverse fugitive dust impact.

6.2.3 On the other hand, there is a planned developments under the Approved Planning Application A/YL/253 identified in the surrounding but not in close vicinity to the Application Site. The planned development is at the existing site of Denker Plaza separated from the Application Site by 70m. The site area of this planned development is about 3,100 m^2 and will be developed as office use with one basement floor. Given the smaller site area and only 1 level of basement with area equivalent to about 2/3 of the site area, the excavation material generated is estimated not significant. The contribution to the cumulative fugitive dust impact assuming there are concurrent dusty activities is not considered significant by considering the scale and fairly long separation. Fugitive dust emission arising from construction activities can be effectively suppressed by incorporating proper mitigation measures into work procedures through contractual clauses with reference to EPD's Recommended Pollution Control Clauses for Construction Contracts, where applicable, 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 for demolition and construction of the project. With the adaptation of good practices, it is expected that emission of construction dust can be kept at an acceptable level.

Construction Gaseous Emission Impact

6.2.4 There will be potential impacts from the criteria pollutants (e.g. nitrogen oxides (NOx), sulphur dioxide (SO_2), and carbon monoxide (CO)). 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 0.001% by weight will be used as fuel to minimize SO_2 emission. 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.

6.2.5 In addition, availability of electricity supply during construction of the project will be explored and such requirement will be specified in future contract. If available, contractor should maximise use of electricity and with least reliance of diesel fuelled equipment (e.g. for electricity powered stationary equipment such as pump instead of using generator).

6.3 Mitigation Measures for Fugitive Dust Emission and Gaseous Emission

6.3.1 Fugitive dust and gaseous 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 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

6.3.2 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.

6.3.3 A high standard of housekeeping shall be maintained. Any piles of materials accumulated on or around the work areas shall be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas shall be carried out in a manner that does not generate fugitive dust emissions. Prior to cleaning, the materials should be handled properly to prevent fugitive dust emission. Any exposed earth shall be properly treated by compacting or hydro seeding, within 6 months after the last construction activity.

6.3.4 Frequent mist/ water spraying should be applied on dusty areas and among dusty activities such as excavation work. 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.

6.3.5 It is also recommended that the environmental officer of the contractor should conduct regular audit to ensure that all practical mitigation measures are properly implemented onsite and there is no excessive dust emission.

Vehicles and Unpaved Site Roads

6.3.6 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

6.3.7 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.

Maximising Use of Electric Power Supply

6.3.8 Only approved Non-road Mobile Machinery (NRMM) should be used for construction work with respect to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation. Exempted NRMMs shall be avoided. Electrified NRMMs should be deployed as far as practicable. In addition, electric power supply shall be provided for onsite machinery as far as practicable to minimize PM and gaseous emissions.

6.3.9 The dust control measures detailed below shall also be incorporated into the Contract Specification where practicable as an integral part of good construction practices:

- The area at which demolition work takes place shall be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet;
- Impervious dust screens or sheeting shall be used to enclose the whole wall to a height of at least 1m higher than the highest level of the structure being demolished;
- Any dusty materials remaining after a stockpile is removed shall be wetted with water and cleared from the surface of roads or streets.

- Plan site layout so that machineries, dust causing activities and stockpiling are away from receptors as far as possible;
- Higher site hoarding (not less than 2.4m) should be implemented where there are receptors at close proximity to the construction site and dusty activities; and
- Haul road shall be away from the project boundary as much as possible.

6.4 Construction Noise Impact

6.4.1 During the construction phase of the Proposed Development, major noise impacts would arise from piling works, operation of Powered Mechanical Equipment (PME), and construction-related traffic.

Construction Noise Criteria

6.4.2 Construction noise is controlled under the Noise Control Ordinance (NCO) which prohibits the use of powered mechanical equipment (PME) during the restricted hours (7 p.m. to 7 a.m. on normal weekdays and any time on a public holiday, including Sunday) without a valid Construction Noise Permit (CNP) from the Authority. The criteria and procedures for issuing such a permit are specified in the "Technical Memorandum on Noise From Construction Works Other than Percussive Piling" (TM1). While there is no planned construction works to be carried out during the restricted hours, TM1 should be followed in case there is any need to carry out works in such time period in future.

6.4.3 With effect from 1 November 96, the use of specified powered mechanical equipment (SPME) for carrying out construction work other than percussive piling and/ or the carrying out of prescribed construction work (PCW) within a designated area are also brought under control. The relevant technical details are provided in the "Technical Memorandum on Noise from Construction Work in Designated Areas" (TM2).

6.4.4 Percussive pilling is controlled similarly by a construction noise permit system and described in the NCO and the "Technical Memorandum On Noise From Percussive Piling" (TM3) which restrict the number of hours during which piling can be conducted. Percussive piling is prohibited between 7 p.m. and 7 a.m. and on holidays (including Sundays). Percussive piling during the daytime (i.e. between 7 a.m. and 7 p.m. on any day not being a holiday) may be carried out in accordance with the permitted hours and other conditions under a valid construction noise permit.

6.4.5 For construction works other than percussive piling, although GW-TM does not provide control over daytime construction activities, noise limits as shown in below Table are set out in the ProPECC PN 1/24.

Table 6.2 Noise Limit for Daytime Construction Activities

NSR	0700 to 1900 Hours on Any Day Not Being a Sunday or General Holiday, Leq (30 min), dB(A)
Dwelling	75
School	70 (65 during examination)

Notes:
(i) The above standards apply to uses which reply on opened windows for ventilation;
(ii) The above standards shall be viewed as the maximum permissible noise levels assessed at 1 m from the external façade.

Noise Mitigation Measures

6.4.6 Sufficient noise mitigation measures should be introduced in the development to alleviate potential noise impacts on nearby NSRs. The Contractor(s) will be required under the contract to ensure regular maintenance of all plant and equipment, and that

noise generation at source would be minimized and practicable noise mitigation measures would be in use. The Contractor(s) will be required to adopt quiet type construction plants (e.g. EPD's quality powered mechanical equipment (QPME) inventory), wherever practicable. Similarly, quieter method other than percussive piling will be adopted as far as practicable for any piling works subject to ground investigation result (which usually dictates the piling method). Movable noise barriers will also be erected around noisy plants in order to minimize noise generation at source. With these measures in place noise generation due to construction activities would be minimized.

6.4.7 The following general noise mitigation measures are recommended for implementation:

- Application of properly designed silencers, mufflers, acoustically dampened panels and acoustic sheds or shields, etc.;
- Making use of onsite electricity and use of electric-powered equipment where applicable instead of diesel-powered or pneumatic-powered equipment;
- Erecting noise enclosures/ movable noise barriers around noisy plants;
- Only well-maintained plants should be operated on-site;
- Plants should be serviced regularly during the construction programme;
- Noisy activities can be scheduled to minimize exposure of nearby NSRs to high levels of construction noise. For example, noisy activities can be scheduled for midday or at times coinciding with periods of high background noise;
- Noisy equipment such as emergency generators shall always be sited as far away as possible from noise sensitive receivers;
- Location of noise emitting plants at maximum possible distances from sensitive receivers;
- Contractual clauses for construction works;
- Schedule of noisy operations during non-restricted hours where possible; and
- Quieter construction method & equipment such as using high pressure water jetting, quieter type wire saws or diamond wire saws, hydraulic crusher for concrete breaking for demolition works, handheld concrete crushers, silent piling by press-in method for foundation works.

6.4.8 The above-mentioned noise mitigation measures, and all other relevant measures in "Recommended Pollution Control Clauses for Construction Contracts" from EPD website and ProPECC PN 1/24 will be included in the contractual clauses for the contractor(s) to follow and implement during the construction stage for construction of the proposed development. Furthermore, the Project Proponent will be recommended to specify the quieter construction equipment/methods in the construction contract to adopt through the preparation of a Construction Noise Management Plan (CNMP) by the successful tenderer with reference to ProPECC PN 1/24. With these measures in place, construction noise due to the Proposed Development can be minimized, and no significant noise impact is anticipated.

6.5 Water Quality and Construction Wastewater Impact

Relevant Legislation, Standards and Guidelines

6.5.1 Relevant legislations and standards include:

- Water Pollution Control Ordinance (Cap. 358); and
- Hong Kong Planning Standards and Guidelines.

6.5.2 Other relevant guidelines include:

- Water Supplies Department (WSD) Water Quality Criteria;
- Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS);
- Professional Persons Environmental Consultative Committee Practice Note 2/24 "Construction Site Drainage" (ProPECC PN 2/24);
- Professional Persons Environmental Consultative Committee Practice Note 1/23 "Drainage Plans subject to Comment by the Environmental Protection Department" (ProPECC PN 1/23); and
- Sewerage Manual (SM) and the Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF).
- Environmental, Transport and Works Bureau (ETWB) Technical Circular (Works) No. 5/2005 Protection of natural streams/rivers from adverse impacts arising from construction works
- Drainage Services Department (DSD) Technical Circular and Practice Notes
- EPD Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (version 1.0) (Report No. EPD/TP 1/05)

Source of Construction Wastewater

6.5.3 Construction activities would inevitably have the potential to generate wastewater and affect the nearby water quality. Works should be carried out in such a manner so as to minimise significant impacts on local water bodies. Activities that are likely to cause water pollution include:

- Demolition and construction runoff and drainage;
- Sewage effluent from the site; and
- Accidental spillage of chemical, e.g. oil, diesel, solvents etc.

6.5.4 Liquid spillage, e.g. oil, diesel, solvents etc. Demolition and construction runoff contain increased loads of sediments, other suspended solids and contaminants. Potential sources of pollution include runoff and erosion from the site surfaces, drainage channels, bentonite slurries and runoff from dust suppression sprays, fuel, oil and lubricants from vehicles and other equipment.

6.5.5 Sewage effluent could be potentially generated from eating areas, temporary site facilities (e.g. toilets) and waste disposal area for onsite construction workforce. The sewage effluent is characterized by high levels of biochemical oxygen demand (BOD), ammonia, E. coli and some oil/ grease.

6.5.6 Liquid spillage could be caused by general construction works to contaminate surface soils, e.g. oil, diesel, solvents etc. The contaminated soil may be washed away through runoff from construction site and enter nearby stormwater drains, thus leading to negative water quality impact.

6.5.7 The effects on water quality from these construction activities are likely to be minimal provided that site boundaries are well maintained a goods site practice is observed to ensure that litter and fuels are managed, stored, and handled properly.

Mitigation Measures

6.5.8 The good practice given in the Practice Notes for Professional Persons on "Construction Site Drainage" (ProPECC PN 2/24) in controlling water pollution at construction site shall be implemented during the construction phase of the Proposed Development. Soil

erosion from the construction site can be minimised through good on-site management practices by implementing viable erosion control measures which should be incorporated in contract clauses. The main practices provided in the above-mentioned document (i.e. ProPECC PN 2/24) are also summarized in the following paragraphs which should be enforced to prevent unacceptable construction stage impacts and for compliance with the statutory criteria.

A. Construction Site Runoff

- Exposed soil surfaces should be protected from rainfall through, for example, by covering temporarily exposed slope surfaces or stockpiles with tarpaulin and protect temporary access roads by crushed stone or gravel;
- Exposed soil areas should be minimised to reduce the potential for increased siltation and contamination of runoff;
- Minimise the time that soil surfaces are exposed;
- Slow down water run-off flowing across exposed soil surfaces;
- Channels, earth bunds or sand bag barriers should be provided on site to properly direct surface runoff through drainage systems;
- Oil interceptors are also recommended to be provided for stormwater drains near plant maintenance/ repair areas, where necessary.
- Manholes (including newly constructed ones) should be adequately covered or temporarily sealed so as to prevent slit, construction materials or debris from getting into the drainage system;
- Construction works should be programmed to minimise soil excavation works where practicable during rainy conditions;
- Drainage facilities must be adequate for the controlled release of storm flows;
- Sedimentation basins and sand traps designed in accordance with the requirements of ProPECC Note PN 2/24 should be installed at the construction site for collecting surface runoff. Perimeter channels at site boundaries should be provided where necessary to intercept surface runoff from outside the site. Silt removal facilities, channels and manholes should be maintained and deposited silt and grit should be removed regularly;
- There should be no direct discharge without treatment of construction site runoff into the nearby streams and public drains;
- The Contractor shall prepare a construction site drainage management plan with details of the construction phase drainage system proposed to be constructed; discharge location(s); and screening facilities; and
- The Contractor(s) shall apply for a discharge licence under the WPCO and the discharge shall comply with the terms and conditions of the licence throughout the construction phase.
- Construction works should be arranged so that there should be no disturbance to water quality at the nearby stream. Construction site runoff should be intercepted by drains so that there will be no direct discharge without treatment into the nearby stream and other sensitive areas.

B. Wastewater from Construction Site

- Sewage generated from the construction workforce should be contained by chemical toilets before connection to public foul sewer can be provided. The number of chemical toilets required would be subject to the capacity of the

chemical toilets, and contractor's practices/ work programme. The Contractor(s) will be required to provide an estimation on the amount of sewage to be generated and to provide sufficient number of chemical toilets for construction workers. The chemical toilets should be serviced and cleaned by a specialist contractor at regular intervals. No discharge of sewage into nearby environment will be allowed during construction stage. Such requirements will be incorporated into relevant contractual clauses of this Proposed Development for proper implementation;

- Foul water from canteens on-site, if any, should also be contained by chemical toilets before connection to public foul sewer can be provided;
- Vehicle wheel washing facilities should be provided at every site exit such that mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before leaving the site area;
- Section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains; and
- If bentonite is used, bentonite slurry should be reconditioned and reused as far as practicable. Spent bentonite should be kept in a separate slurry collection system for disposal at a marine spoil grounds subject to obtaining a marine dumping licence from EPD. If used bentonite slurry is to be disposed of through public drainage system, it should be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards in accordance with ProPECC PN 2/24.

C. Oils and Solvents

- Spillage of fuel oils or other polluting fluids should be prevented at source. It is recommended that all stocks should be stored inside proper containers and sited on sealed areas, preferably surrounded by berms;
- Regular site inspections to ensure the proper implementation of the above measures shall be carried out;
- A chemical waste producer must be registered by the Contractor if chemical waste would be produced from the construction site;
- Control of chemical waste shall observe and comply with the Waste Disposal Ordinance (Cap. 354) and its subsidiary regulations, particularly the Waste Disposal (Chemical Waste) (General) Regulation;
- Any maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided; and
- Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should be undertaken with the areas appropriately equipped to control these discharges.

6.6 Construction Waste Disposal

Legislation

6.6.1 The principal legislation controlling waste materials in Hong Kong is the Waste Disposal Ordinance (WDO) (Cap. 354) and its subsidiary regulations including Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) and Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Other relevant ordinance includes Land (Miscellaneous Provisions) Ordinance (Cap 28) and Public Health and Municipal Services Ordinance (Cap 132) - Public Cleansing and Prevention of Nuisances

Regulation. Other relevant guidelines which cover how applicant and contractor should comply with the regulations are as follows:

- Waste Disposal Plan for Hong Kong (December 1989), Planning, Environment and Lands Branch Government Secretariat, Hong Kong Government;
- Environmental Guidelines for Planning In Hong Kong (2024), Hong Kong Planning Standards and Guidelines, Hong Kong Government;
- Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (2023), EPD, Hong Kong Government;
- Works Branch Technical Circular (WBTC) No. 2/93, Public Dumps, Works Branch, Hong Kong Government;
- WBTC No. 2/93B, Public Filling Facilities, Works Branch, Hong Kong Government;
- WBTC No. 12/2000, Fill Management; Works Bureau, Hong Kong SAR Government;
- DevB TCW No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness. Development Bureau, Hong Kong SAR Government;
- WBTC No. 12/2002, Specification Facilitating the Use of Recycled Aggregates. Works Bureau, Hong Kong SAR Government;
- DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials, Development Bureau, Hong Kong SAR Government;
- Practice Note for Authorized Persons and Registered Structural Engineers – Construction and Demolition Waste (PNAP ADV-19, also known as PN for AR&RSE No.243);
- Code of Practice on the Handling, Transport and Disposal of Asbestos Waste (2020), EPD, Hong Kong Government;
- A Guide to the Chemical Waste Control Scheme; and
- Monitoring of Solid Waste in Hong Kong 2024.

Construction Waste Impact

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

- C&D materials
- General refuse generated by the workforce (about 100 kg/day based on 150 workers; to be disposed of at landfill);
- Chemical and oily wastes due to maintenance of equipment (say, 200 kg; to be delivered to Chemical Waste Treatment Facilities for treatment by licensed contractor); and
- Asbestos containing materials

6.6.3 C&D materials comprise mainly of unwanted materials, including surplus materials arising from excavations that are generated from the works (e.g. site clearance and demolition works of substructure). Inert soft C&D materials comprise of soil, sand, clay, slurry, etc., while hard C&D materials comprise of crushed concrete, asphalt, rock, etc. The amount of non-inert C&D materials generated during site clearance would be minor (as there is little vegetation at the Application Site). C&D materials may comprise different types of materials, including:

- Non-inert C&D materials (e.g. bamboo, timber, paper, metal, glass, plastic, packaging wastes, etc.) decompose and are not suitable for land reclamation. Non-inert C&D materials should be reused or recycled as far as possible. For those

non-inert C&D materials that cannot be reused or recycled should be disposed of at landfill as last resort;

- Inert C&D materials do not decompose (e.g. soil, rock debris, rubble earth, concrete, etc.) and is suitable to reuse as filling materials for land reclamation and site formation. Inert C&D materials could be reused on-site as filling materials. For those inert C&D materials that cannot be reused should be delivered to a Public Fill Reception Facilities.

6.6.4 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.

Identification and Evaluation of Waste Management Implications in Construction Phase

C&D Waste

6.6.5 C&D material of different types may be mixed together, thus not possible to recycle C&D material subsequently and increase burden to landfill facilities. In accordance with the development scheme, the existing building will be demolished. An approximate total of 27,740m^3 will be generated during demolition stage. Approximate 24,970m^3 of inert C&D (i.e. 90% of total demolition materials) and 2,770m^3 of non-inert C&D materials (i.e. 10% of total demolition materials) will be generated during the demolition works. There is minimal excavation required because aboveground carpark instead of basement carpark will be provided. In addition, approximate total of 5,140m^3 will be generated during superstructure stage. Approximate 4,110m^3 of Inert C&D materials (i.e. 80% of total superstructure materials) and 1,030m^3 of non-inert C&D materials (i.e. 20% of total superstructure materials) will be generated during the superstructure works.

General refuse

6.6.6 Without any handling arrangement/ control measures in place, the storage, handling and disposal of general refuse have the potential to give rise to some environmental impacts. These include odour and hygienic problem if waste is not collected frequently, windblown litter, water quality impacts if waste enters water bodies, and visual impact. To estimate the general refuse generated during construction phase, an assumption of 150 workers per day with 0.65 kg per worker per day has been made, an approximate total of 97.5kg of general refuse (i.e. 0.65kg X150 workers) will be generated per day.

Chemical Waste

6.6.7 The possible chemical waste includes oil and grease associated with plant maintenance, hydraulic fluid from plant machinery, scrap batteries from vehicle maintenance, and used paint, cleaners, solvents used in maintaining mechanical equipment. Chemical wastes arising during the construction phase may pose environmental, health and safety hazards if not properly labelled, packaged, handled, stored and disposed of in an appropriate manner. For chemical waste, only a small amount will be generated during the construction period, estimated at no more than 50 L per month. The amount of chemical waste to be generated shall be quantified in the Waste Management Plan (WMP) as part of the Environmental Management Plan (EMP) to be prepared by Contractor in subsequent construction stage.

Asbestos Containing Materials

6.6.8 The proposed redevelopment will involve demolition of existing building. It was built in the 1980s and building insulation materials may contain asbestos. Hence, demolition of the existing building may possibly generate asbestos waste. Approximate 1000kg asbestos containing materials will be generated during demolition work.

6.6.9 The estimated quantities and types of waste to be generated by the project are summarized in **Table 6.3**.

Table 6.3 Estimated Quantities of C&D Materials to be Generated

Waste material	Estimated Waste Generation	Proposed Handling Method and Destination
Inert C&D Materials	~29,080 (24,970m^3 during demolition period and 4,110m^3 during the superstructure period)	~99% (i.e. 28,790$m^{3)}$ would be delivered to public fill reception facility (i.e. Tuen Mun Area 38 Fill Bank) ~1% (i.e. 290m^3) would be reused on-site.
Non-inert C&D Materials	~3,800 (2,770m^3 during demolition period and 1,030m^3 during the superstructure period)	Recyclable waste to be sorted and segregated from non-recyclable waste; ~200m^3 of recyclable wastes to be collected by/delivered to recycler; Remaining ~3,600m^3 of non-recyclable wastes to be disposed of at designed landfill site
General Refuse	~97.5kg/day	Collected by refuse collection vehicle and disposed of at designated landfill site
Asbestos Containing Materials	1000 kg	Collected by licensed contractor and disposed of as chemical waste at designated landfill site
Chemical Waste	Anticipated to be limited (say, <50 litre / month)	Collected by licensed chemical waste collector and delivered to Chemical Waste Treatment Centre or equivalent

Notes:

(i) The above estimated quantities are subject to the detailed design stage.

(ii) The destination of inert C&D materials is subject to the designation by the Public Fill Committee according to DEVB TC(W) No, 6/2010

(iii) *The disposal of non-inert C&D materials at designated landfill shall be subject to agreement with the relevant section of the EPD*

Mitigation Measures during Construction Phase

6.6.10 The various waste management options are categorised in terms of preference from an environmental viewpoint. The options considered to be most preferable have the least environmental impacts and are more sustainable in the long term. The hierarchy is as follows. The waste management strategy is to avoid waste generation in the first place (i.e. in descending order of preference as listed below).

- Avoidance and reduction;
- Reuse of materials;
- Recovery and recycling; and
- Treatment and disposal.

6.6.11 The following section describes the best management practices in construction site to avoid or further reduce the potential environmental impacts associated with the

handling, collection and disposal of construction and chemical wastes arising from the construction of the Proposed Development.

6.6.12 Contractor will be required to develop and implement a proper waste management plan (WMP) according to the PNAP ADV-19. The WMP should include designation of areas for the segregation and temporary storage of materials for future use or recycling, the hierarchy for waste management on and off-site as well as a complete list of mitigation measures for handling excavated materials.

6.6.13 It will be the contractor's responsibility to ensure that only reputable licensed waste collectors are used and that appropriate measures to reduce adverse impacts, including windblown litter and dust from the transportation of these wastes, are employed. In addition, the contractor must ensure that all the necessary permits or licences required under the Waste Disposal Ordinance are obtained for the construction phase.

6.6.14 It can be achieved through careful planning of works method and material consumption before ordering of materials. Material should be properly stored and protected to reduce damage and contamination to reduce waste generation as well. Non-timber formwork, or used timber, instead of virgin timber, should be adopted where possible.

6.6.15 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.

6.6.16 In order to monitor the disposal of C&D material at landfills and public fill reception facilities, as appropriate, and to control fly tipping, a trip-ticket system should be included as one of the contractual requirements to be implemented by Contractor. Reference shall be made to DEVB TCW No.6/2010 for details.

C&D Materials

6.6.17 On-site sorting of C&D materials will be recommended. On-site sorting can be achieved by avoiding the generation of "mixed waste" through good site control. Waste generated by construction activities should be sorted into inert C&D materials and non-inert C&D materials. Adequate areas for sorting and storage of segregated materials should be provided onsite. The inert C&D materials which comprise soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused in site formation works (such as backfilling).

6.6.18 Used timber in good condition will be reused in other contract and construction site of the contractor to reduce the amount of timber wastes.

6.6.19 Surplus inert construction material and other non-inert C&D materials which comprises metal, timber, paper, glass, etc. shall be recycled. Recycle bins should be provided onsite and workers should be trained and encouraged to segregate recyclable and non-recyclable wastes upon disposal.

6.6.20 The Applicant and its contractor will consider to use dump trucks equipped with GPS or an equivalent system for tracking the delivery of inert and non-inert C&D material from the site to the designated disposal location. The trip-ticket system and other measures for transportation, storage and collection of waste, such as using trucks with cover or enclosed containers for waste transportation will be implemented. Disposal and transportation of C&D materials are recommended before foreseeable inclement weather such as typhoon or heavy rain. The stockpiled soil shall be properly covered with tarpaulin when heavy storms are forecast.

Chemical Waste

6.6.21 Any unused chemicals and those with remaining functional capacity should be recycled as far as possible. Chemical waste will be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes. All chemical waste that cannot be recycled or re-refined in the case of waste lubricants should be collected by a licensed chemical waste collector and disposed of Chemical Waste Treatment Centre (CWTC) at Tsing Yi. Provided that the handling, storage and disposal of chemical waste are in accordance with these requirements, adverse waste management implications, including the potential hazards, air and odour emissions, noise, wastewater discharge, ecology and public transport, associated with handling, storage and disposal of chemical waste are not expected.

6.6.22 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. Any person who produces or causes to produce chemical waste is required to register with EPD. The Applicant and its contractor will duly follow the requirement and register with EPD as a chemical waste producer.

Asbestos Containing Materials

6.6.23 Asbestos waste is categorised as chemical waste under the Waste Disposal (Chemical Waste) Regulation. Asbestos investigation should be conducted by a registered asbestos consultant prior to demolition of existing building structure. The investigation should reveal the presence, quantity and location of Asbestos Containing Materials (ACM). Asbestos waste will be handled in accordance with the Code of Practice on the Handling, Transportation and Disposal of Asbestos Waste issued by EPD. Should there be any ACM found in the existing buildings, any demolition works of these buildings should engage Registered Asbestos Contractors and the asbestos waste should be collected and transported by the licensed waste collector to designated landfill site for secure burial in accordance with the "Code of Practice on the Handling, Transport and Disposal of Asbestos Waste" issued by the EPD. The latest designated landfill site is West New Territories (WENT) landfill in Nim Wan, Tuen Mun to receive asbestos waste.

General Refuse

6.6.24 Waste such as bamboo, contaminated plastic and glass, packaging waste and other organic materials will be considered as non-recyclable waste and disposed to landfills.

6.6.25 For general refuse (including food waste, paper, plastic bottles and aluminium cans, etc.), mitigation measures should include provision of a collection area where waste can be sorted, stored and loaded prior to removal from the site. Recyclable materials (i.e. paper, plastic bottles and aluminium cans) will be separated for recycling, in order to reduce the amount of general refuse to be disposed of at landfill.

6.6.26 The removal of general refuse from the site will be arranged on a daily basis or at least on every second day to minimize any potential odour impacts. Disposal of general refuse is recommended before foreseeable inclement weather such as typhoon or heavy rain.

6.6.27 The Applicant and its contractor will consider if recycling of food waste is practicable during the construction phase.

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

6.7 Conclusion

6.7.1 Potential environmental impacts arising from construction activities of the Proposed Development, including dust emission, construction wastewater, noise and waste impacts have been qualitatively assessed. Potential environmental impacts are anticipated to be acceptable with the implementation of effective environmental mitigation measures. In conclusion, it is envisaged that construction phase environmental impacts arising from the Proposed Development would be acceptable.

7. OVERALL SUMMARY

7.1.1 An environmental assessment has been conducted for the proposed redevelopment to address the potential air quality, environmental noise, construction phase environmental impact and sewerage impact.

7.1.2 There is no air sensitive uses including openable window, fresh air intake and recreational uses within the recommended buffer zone from HKPSG with the proposed fixed glazing in place. Therefore, no adverse air quality impact due to traffic is anticipated. Chimney stacks are not identified within 200m of the Application Site, hence it is unlikely to have industrial emission impact.

7.1.3 Road Traffic Noise Impact Assessment has been carried out for the proposed redevelopment. With noise mitigation measures incorporated, including acoustic window (baffle type), enhanced acoustic balcony (baffle type), vertical acoustic fin, fixed glazing with or without maintenance window and door with auto-closing mechanism, the proposed redevelopment would not be subject to adverse road traffic noise impact.

7.1.4 Railway noise impact from open track section has been assessed. With building re-entrant design and vertical acoustic fins incorporated in the design, no unacceptable railway noise impact is anticipated. The predicted railway noise level would comply with the relevant criteria stipulated in the Noise Control Ordinance and Hong Kong Planning Standards and Guidelines.

7.1.5 Fixed Noise Impact Assessment has also been conducted. Single aspect building design, fixed glazing with or without maintenance window and noise barrier on top of retail building with sound absorptive material are proposed and incorporated at strategic locations. With the aforementioned noise mitigation measures in place, the predicted noise levels of all NSRs from all identified fixed noise sources within 300m study area comply with the criteria as stipulated in NCO. It can be concluded that the proposed redevelopment would not be subject to adverse fixed noise impact.

7.1.6 A consolidated figure showing all noise mitigation measures is presented in **Figure 7.1**.

7.1.7 Environmental implication during construction (including demolition) of the project has been appraised. With best management practice and relevant environmental mitigation measures implemented, no adverse construction phase environmental impact is anticipated.

7.1.8 No insurmountable environmental noise, air quality and construction phase environmental impact is anticipated with the recommended environmental mitigation measures properly implemented. The environmental acceptability of the proposed redevelopment is demonstrated in this study.

7.1.9 The Application Site was used for industrial purpose. A Land Contamination Assessment Plan was submitted in December 2021 under the approved S16 Planning Application No. A/YL/259 for the same Application Site. The applicant commits to conduct/update the land contamination assessment in later stage where necessary to ensure that remediation work, if required, should be properly implemented in prior to the commencement of construction work of the redevelopment. Relevant prevailing guidelines will be followed for all assessment and remediation works.

Figure

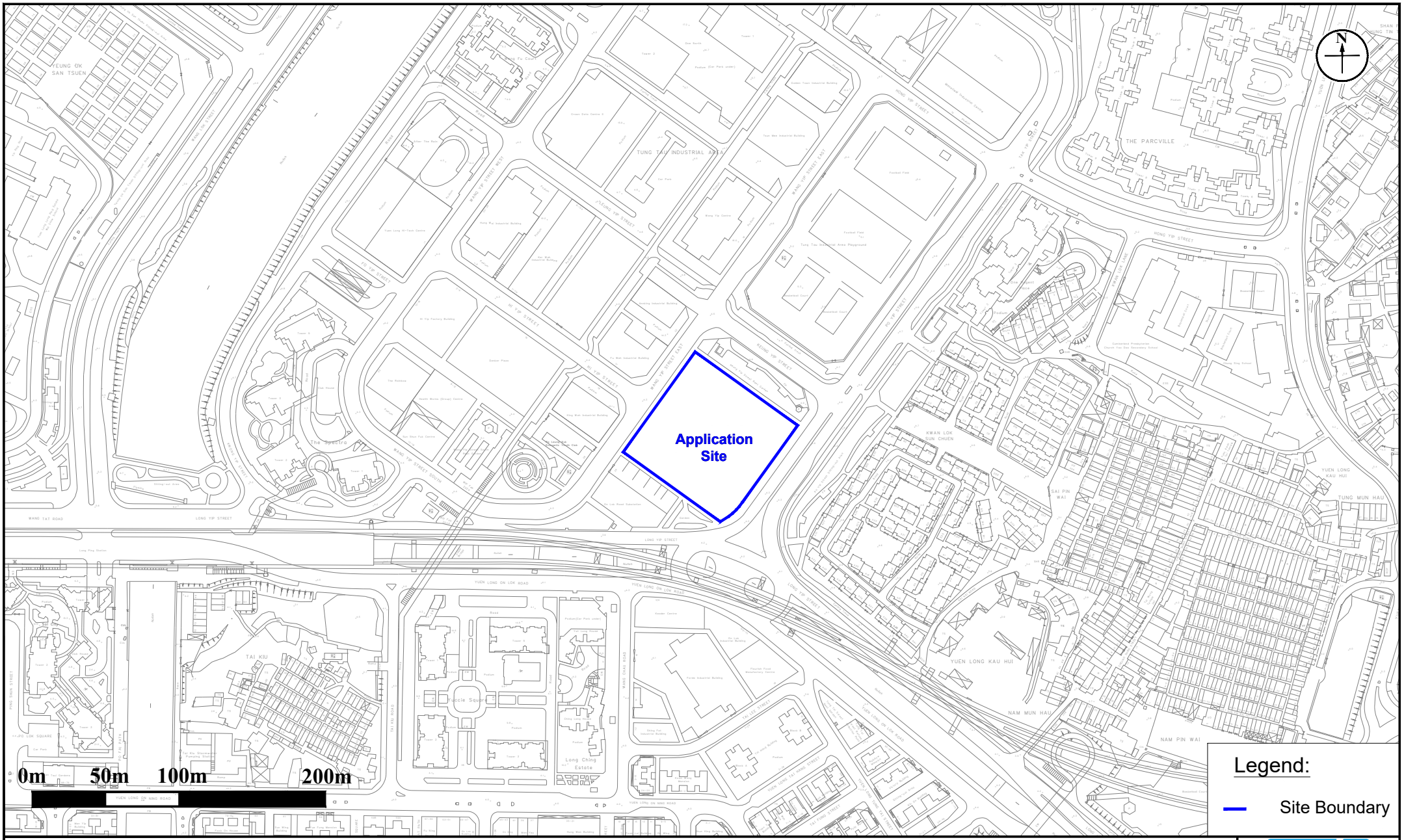


Figure: 1.1	RAMBOLL
Title: Location of the Application Site and Its Environs	Drawn by: CM
	Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0
	Date: Apr 2026

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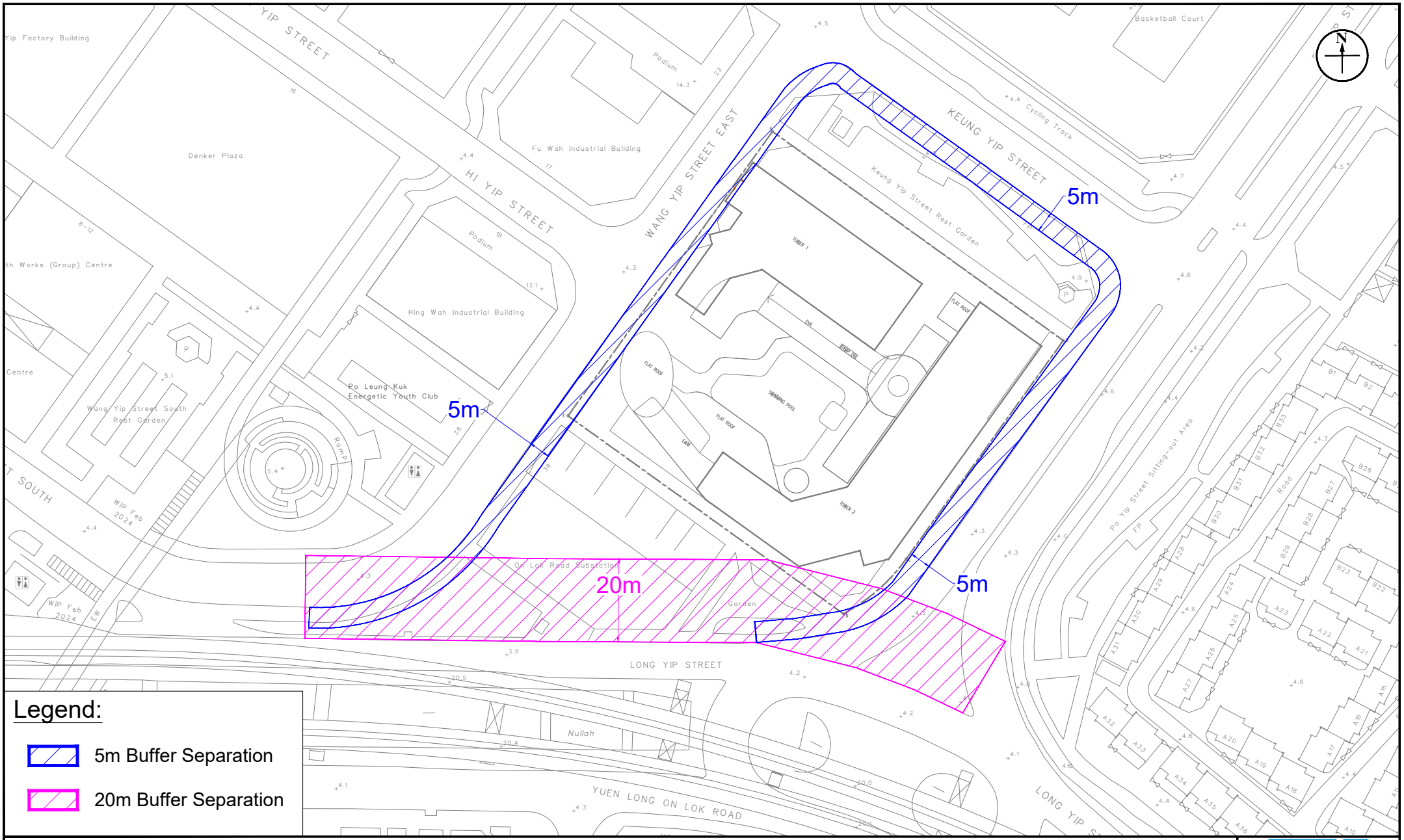


Figure: 2.1a	RAMBOLL
Title: HKPSG Vehicular Emission Buffer Distance for Nearby Road Network (Podium)	Drawn by: CM Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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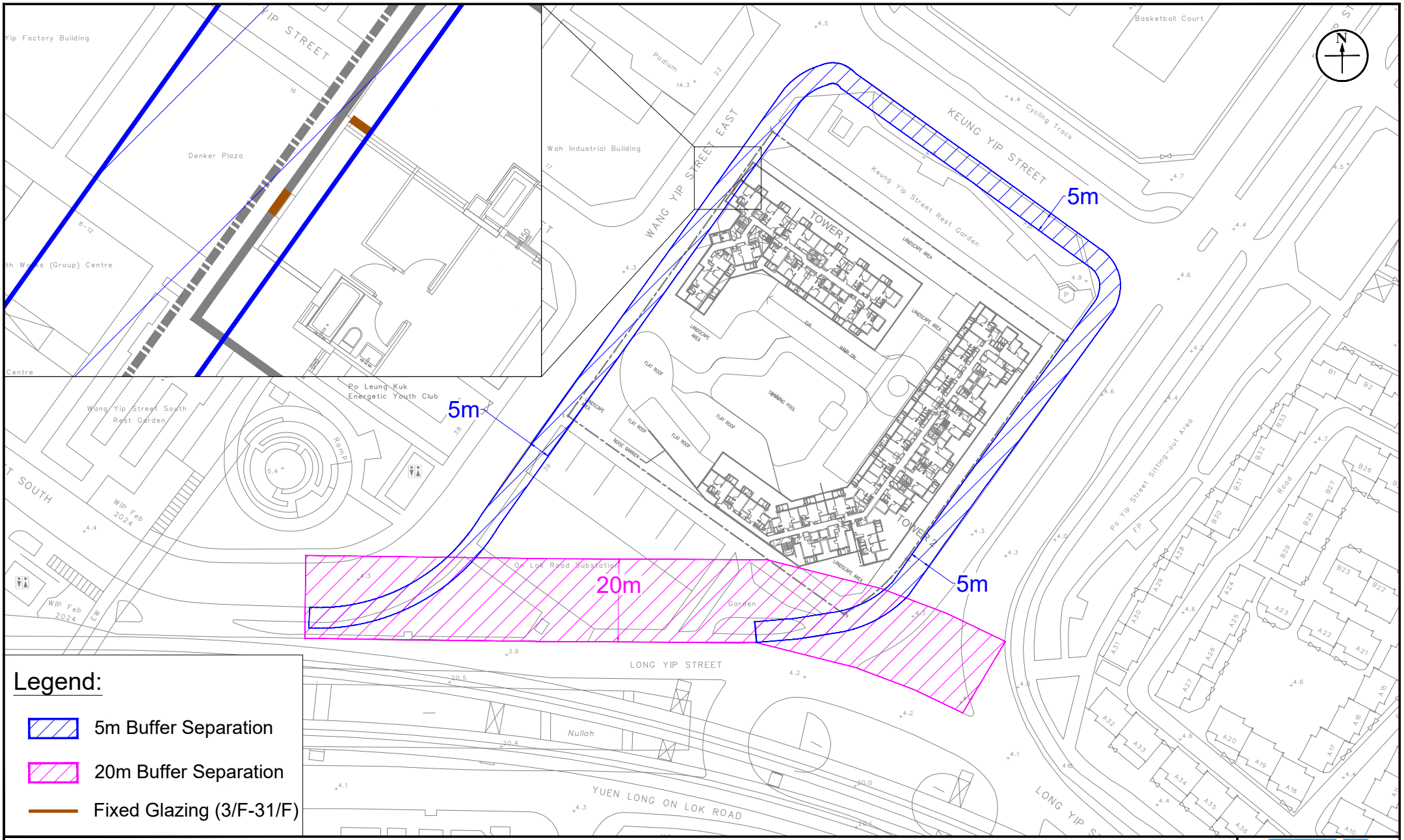


Figure: 2.1b	RAMBOLL
Title: HKPSG Vehicular Emission Buffer Distance for Nearby Road Network (Residential Tower)	Drawn by: CM Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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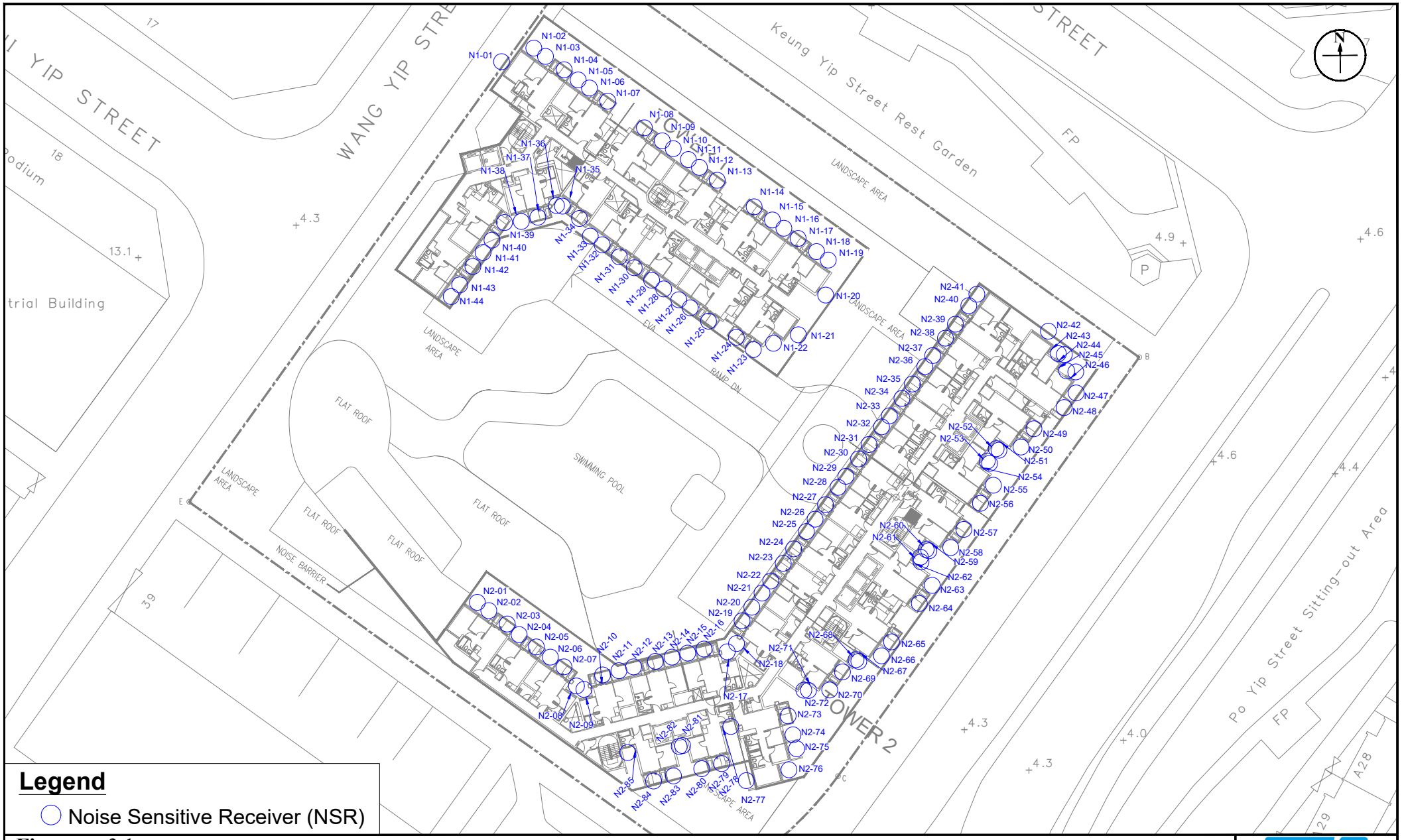


Figure: 3.1a	RAMBOLL
Title: Locations of Selected Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (Overall Residential Development)	Drawn by: CM Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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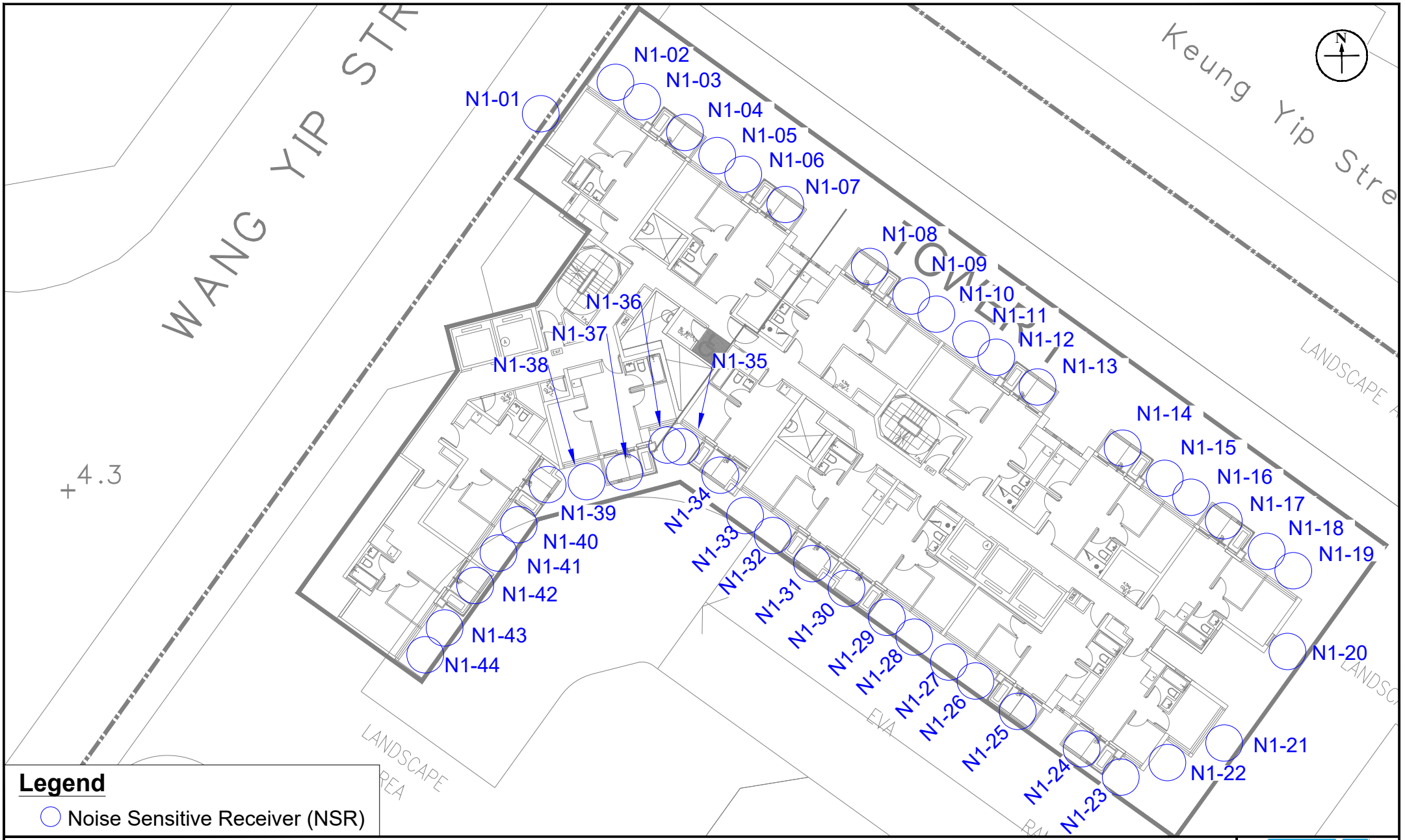


Figure: 3.1b	RAMBOLL
Title: Locations of Selected Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (Zoom In, 1 of 3)	Drawn by: CM Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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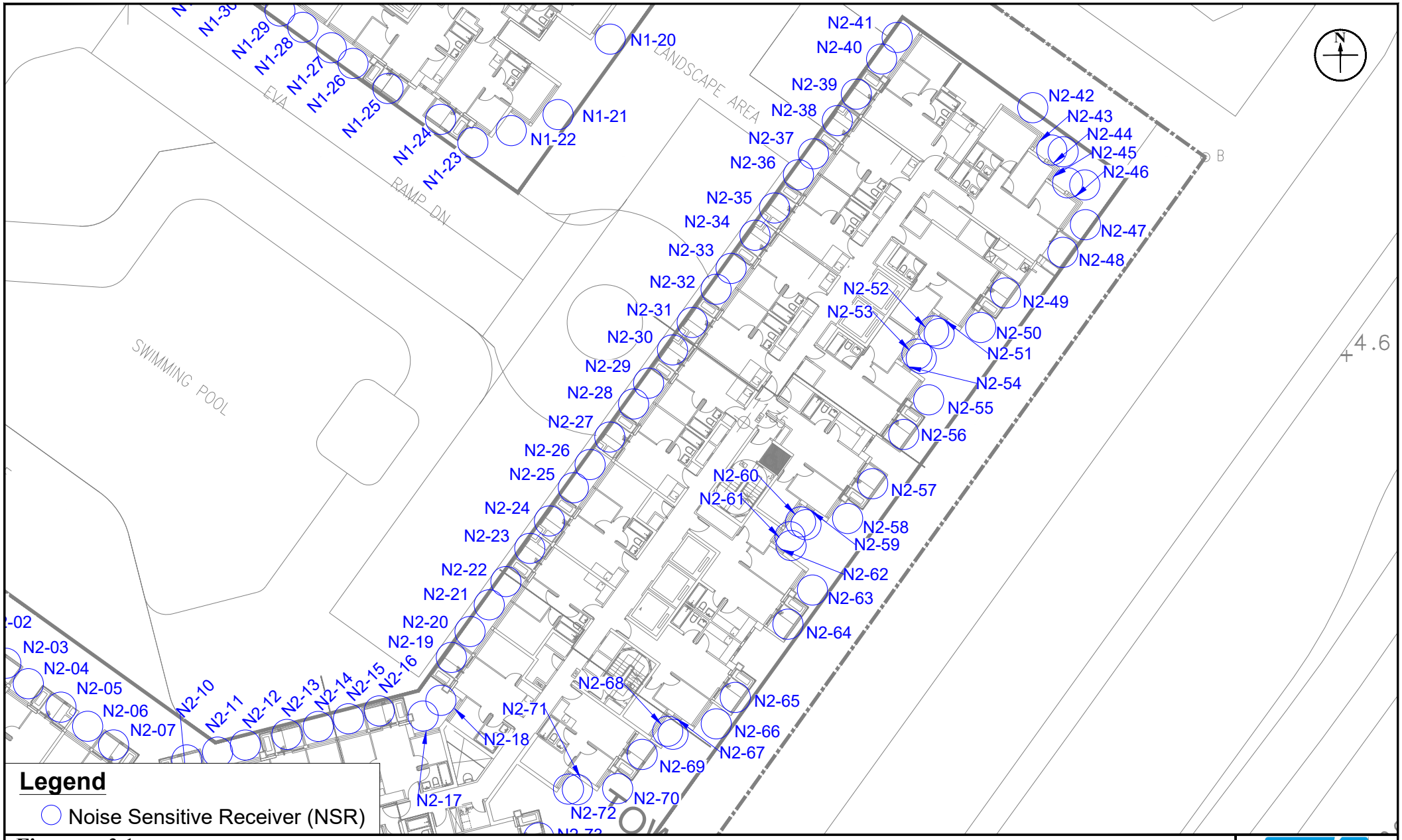


Figure: 3.1c

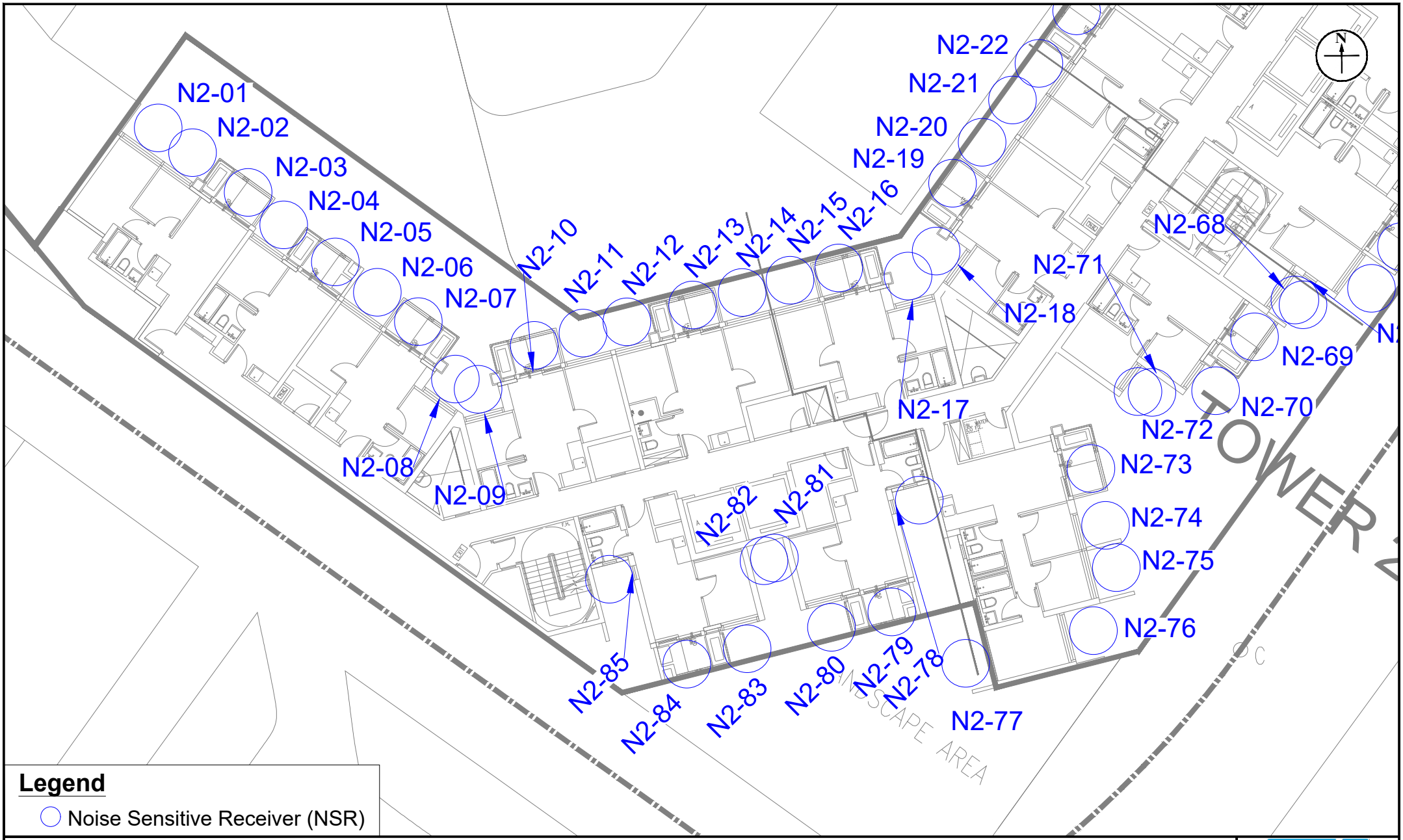
Title: Locations of Selected Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (Zoom In, 2 of 3)

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

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Legend

○ Noise Sensitive Receiver (NSR)

Figure:	3.1e	RAMBOLL
Title:	Locations of Selected Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (Zoom In, 3 of 3)	Drawn by: CM Checked by: CC
Project:	Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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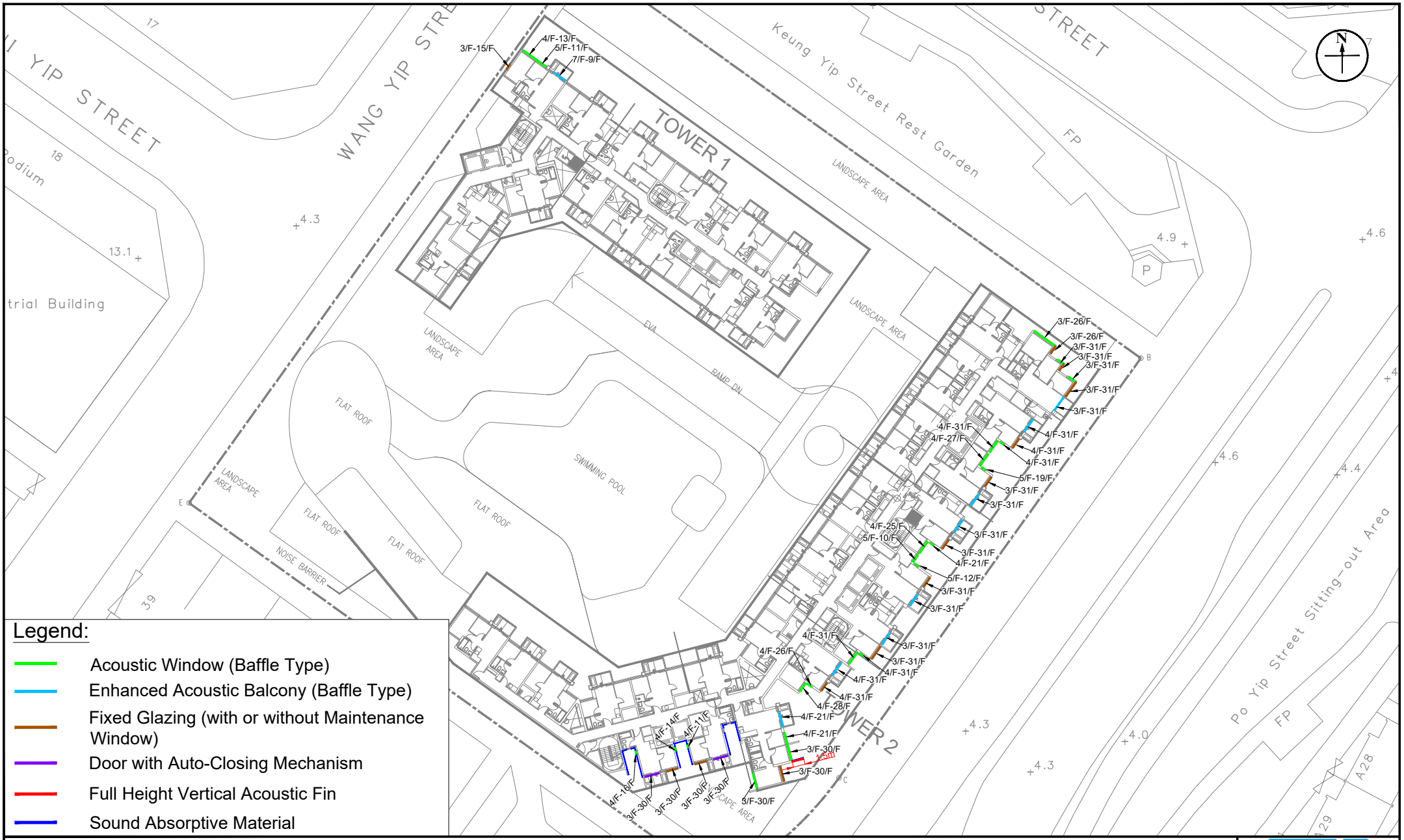


Figure: 3.2a

Title: Proposed Road Traffic Noise Mitigation Measures (Overall Residential Development)

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

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Date:	Apr 2026

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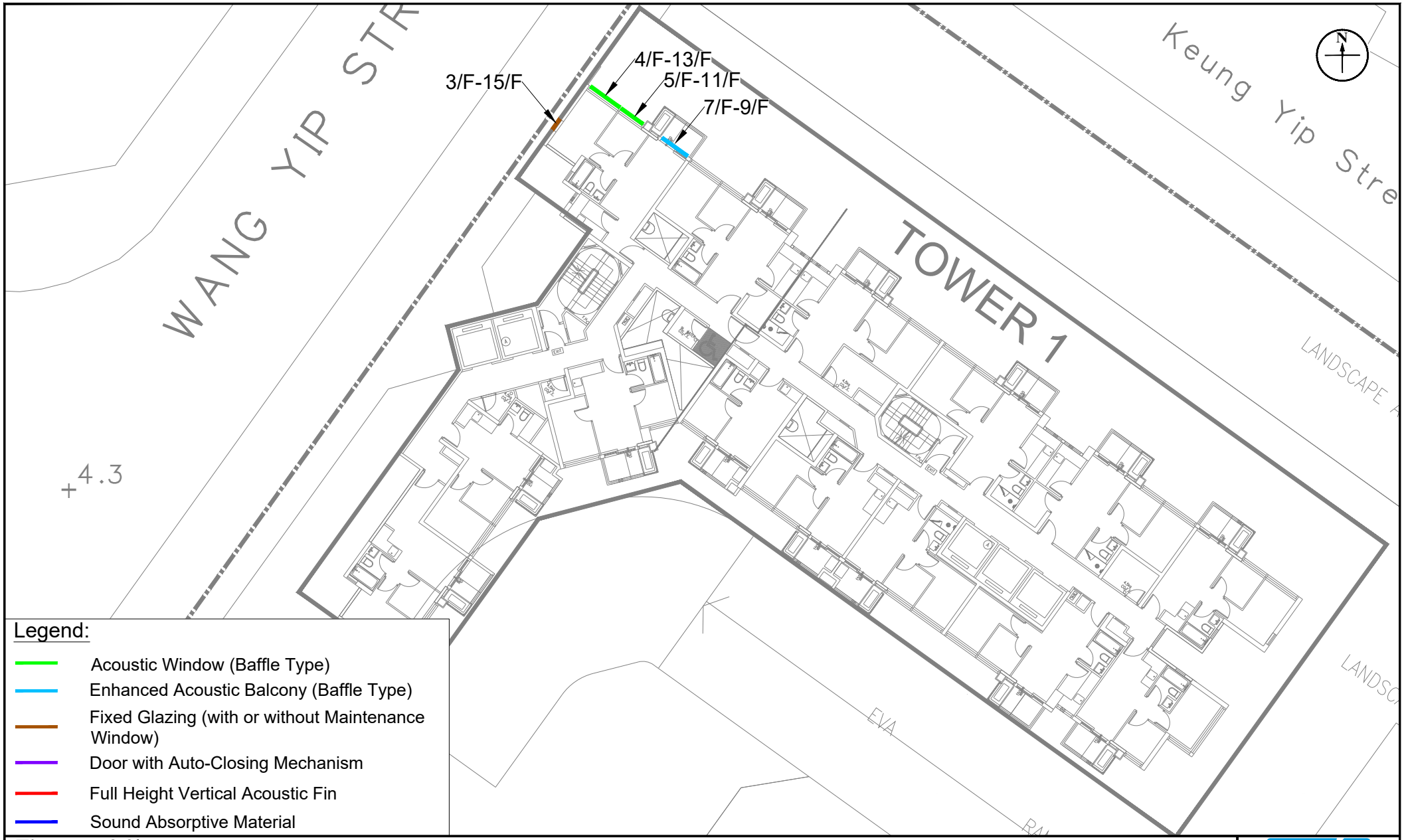


Figure: 3.2b	RAMBOLL
Title: Proposed Road Traffic Noise Mitigation Measures (Zoom In, 1 of 3)	Drawn by: CM Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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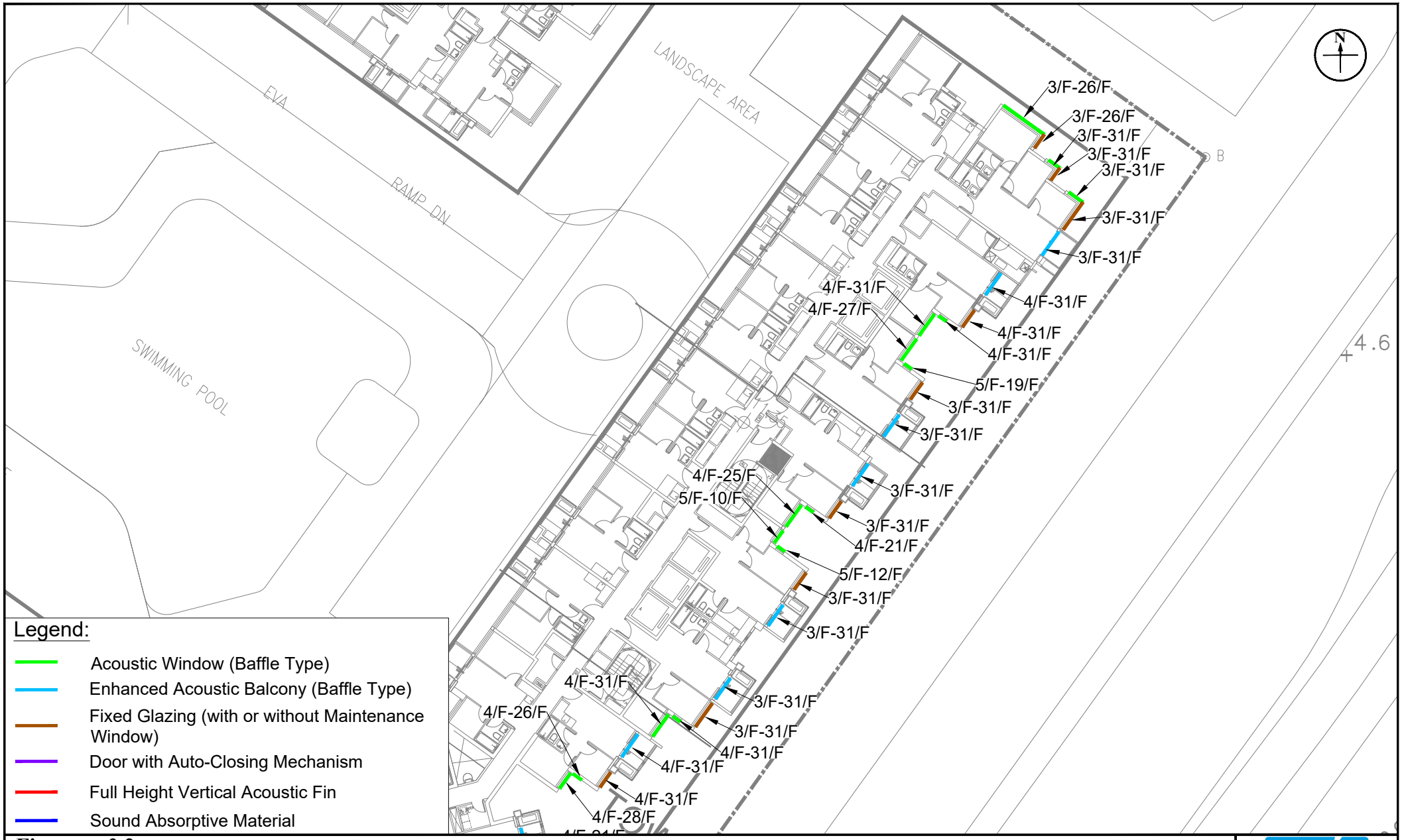


Figure: 3.2c

Title: Proposed Road Traffic Noise Mitigation Measures (Zoom In, 2 of 3)

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

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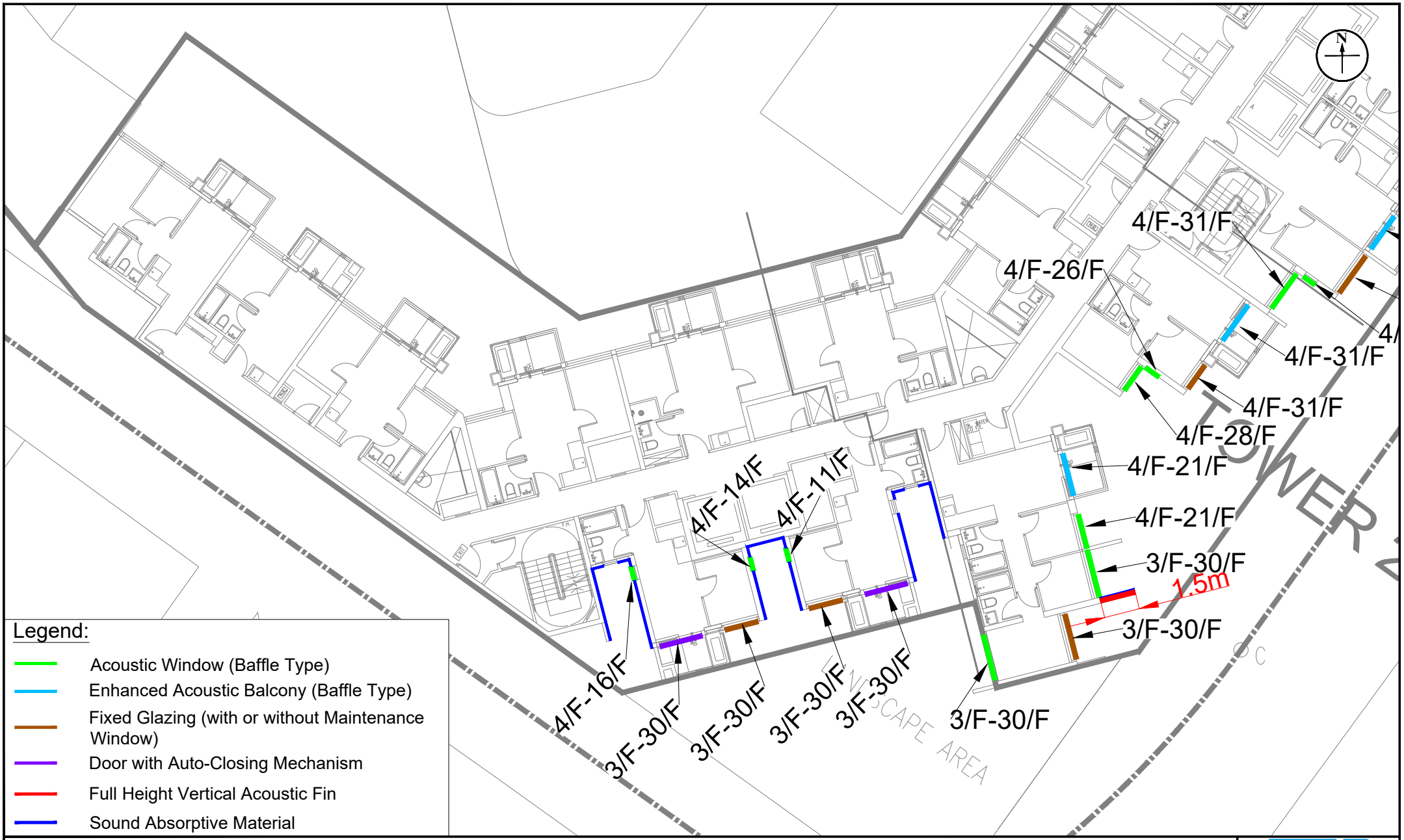


Figure: 3.2d

Title: Proposed Road Traffic Noise Mitigation Measures (Zoom In, 3 of 3)

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

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Date:	Apr 2026

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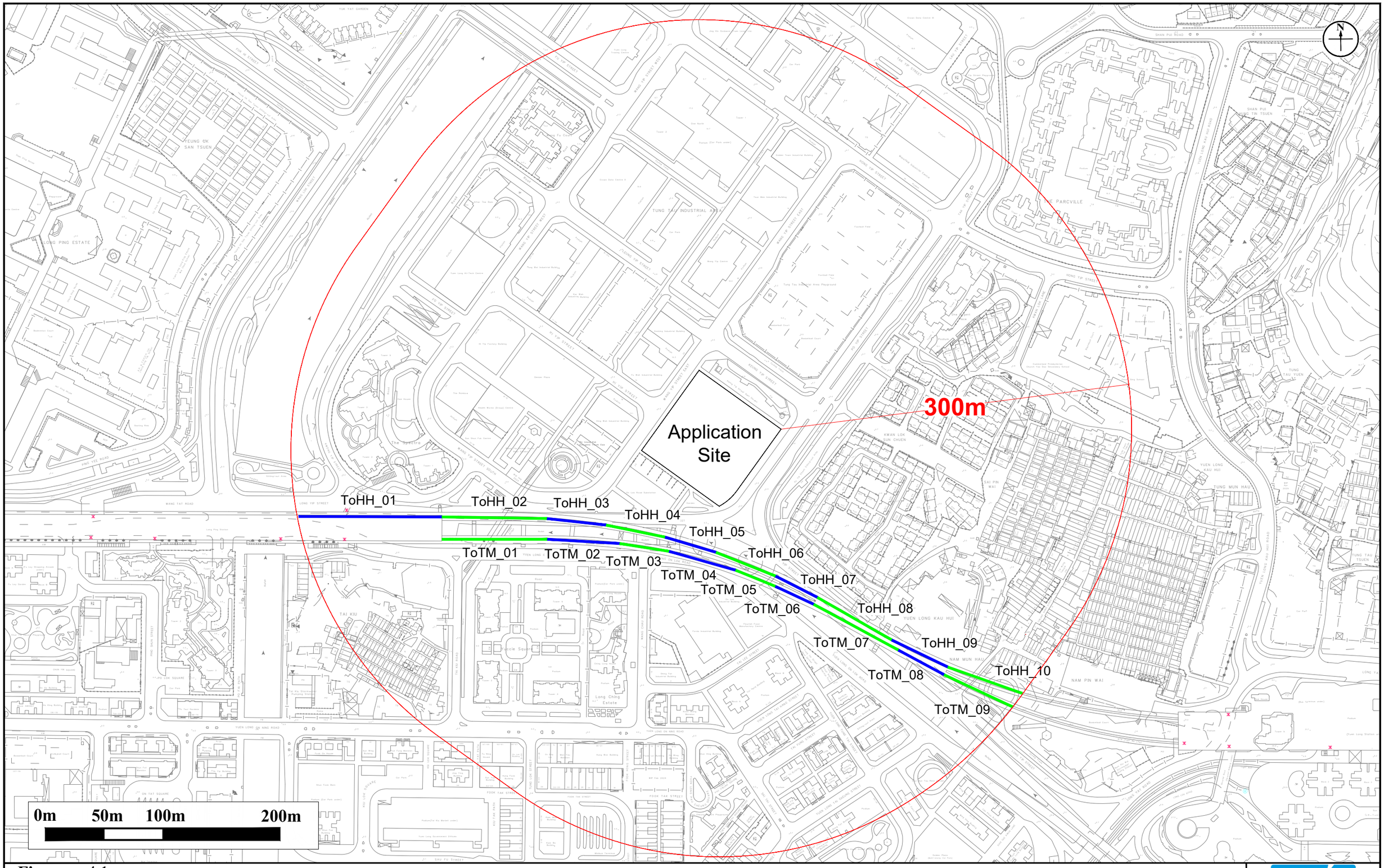


Figure: 4.1

Title: Location of the Rail Segments within 300m Assessment Area

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

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Date:	Apr 2026

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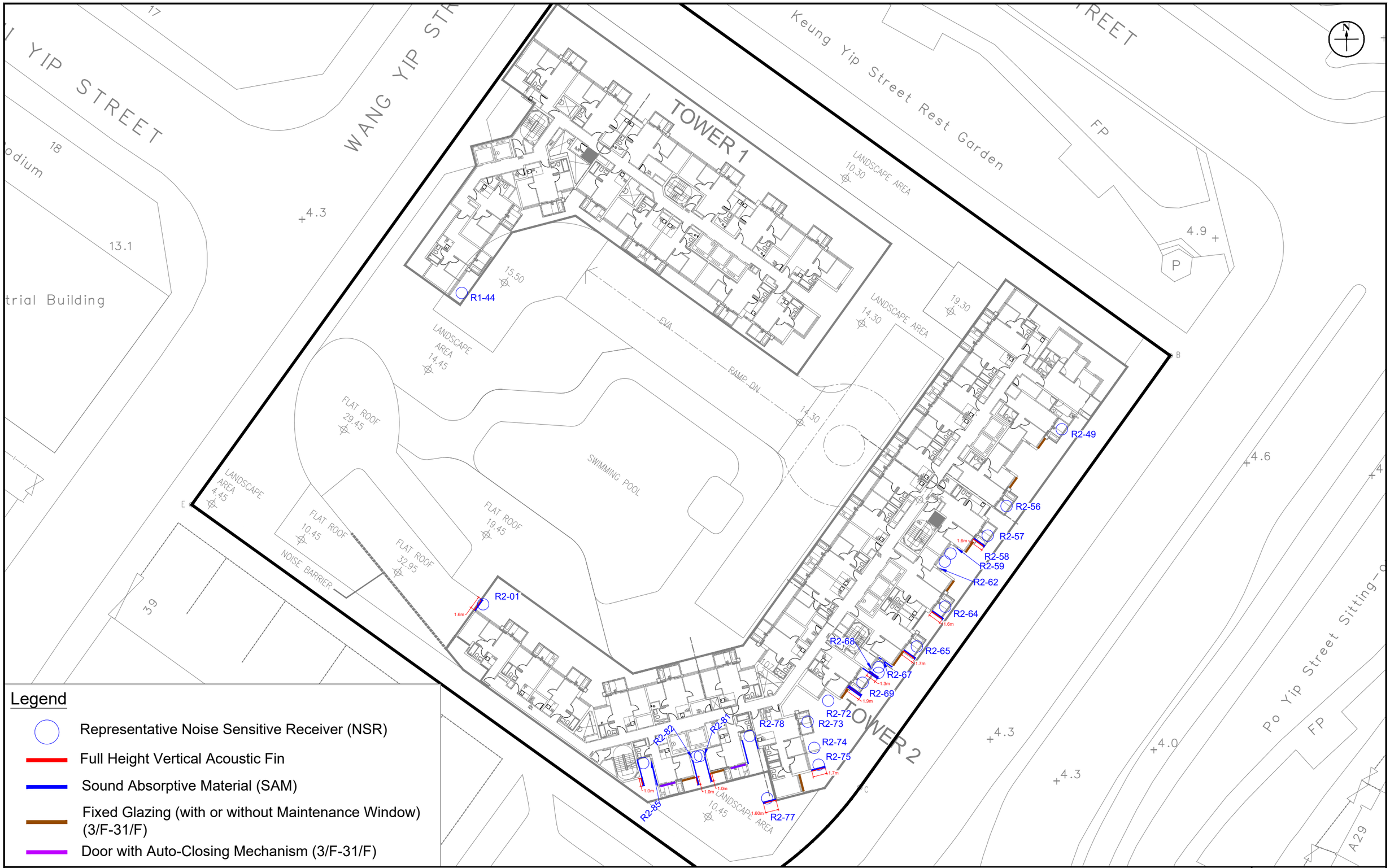


Figure: 4.2

Title: Location of Selected Noise Sensitive Receivers and Noise Mitigation Measures for Railway Noise Impact Assessment (Overall)

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	4.0
Date:	Apr 2026

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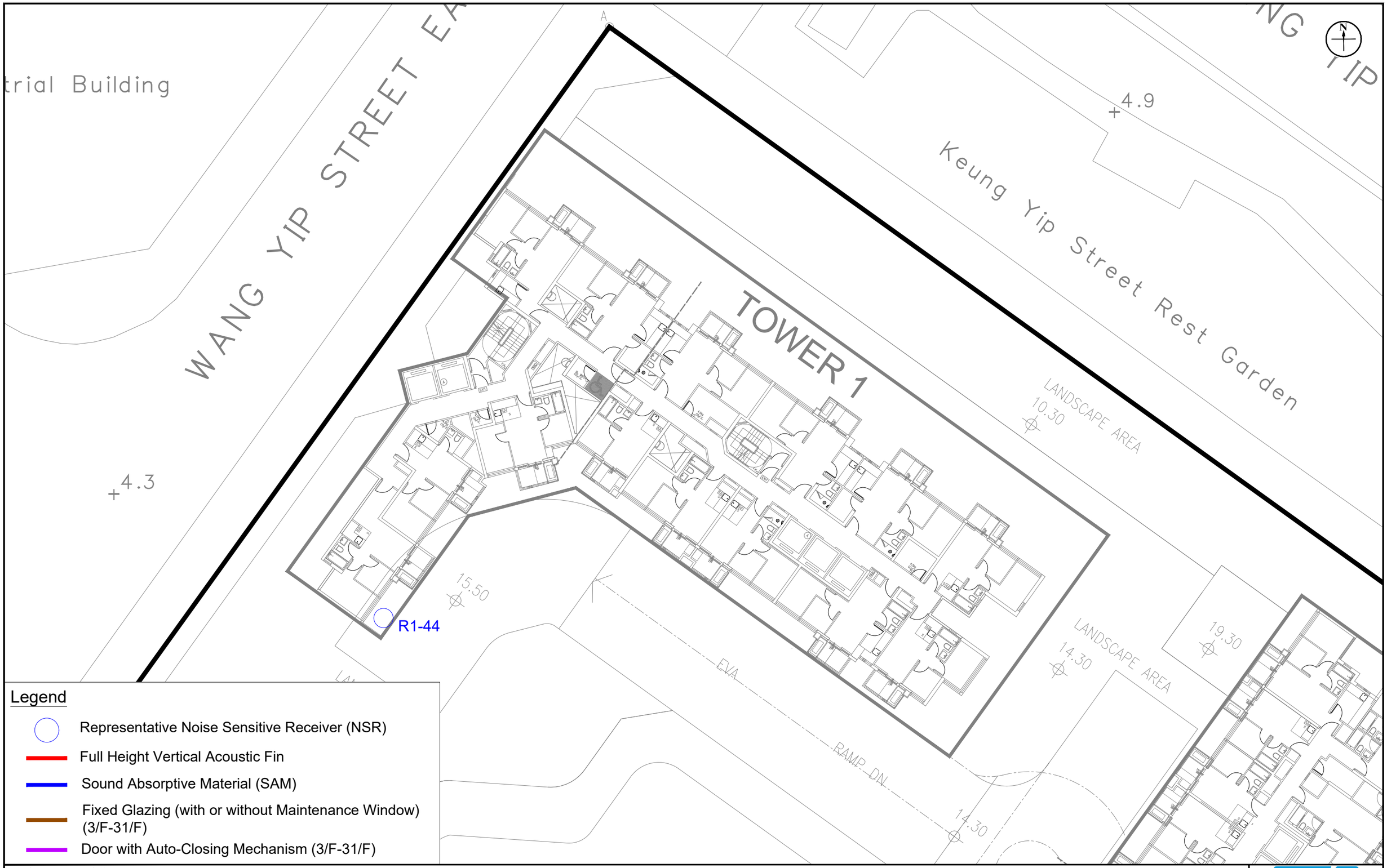


Figure: 4.2a

Title: Location of Selected Noise Sensitive Receivers and Noise Mitigation Measures for Railway Noise Impact Assessment (Zoom In, 1 of 2)

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

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Date:	Apr 2026

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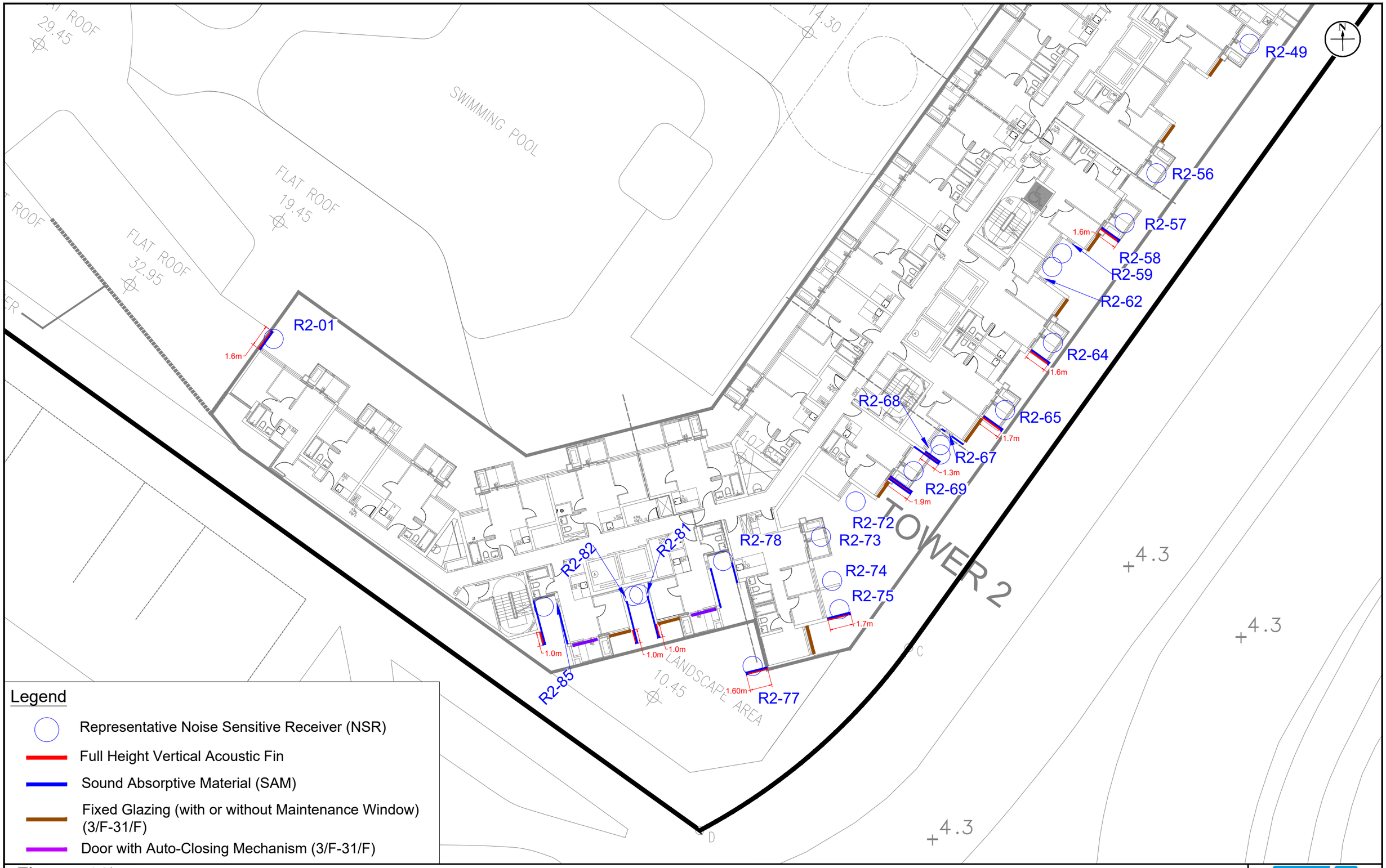


Figure: 4.2b

Title: Location of Selected Noise Sensitive Receivers and Noise Mitigation Measures for Railway Noise Impact Assessment (Zoom In, 2 of 2)

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

Drawn by:	MW
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Rev.:	4.0
Date:	Apr 2026

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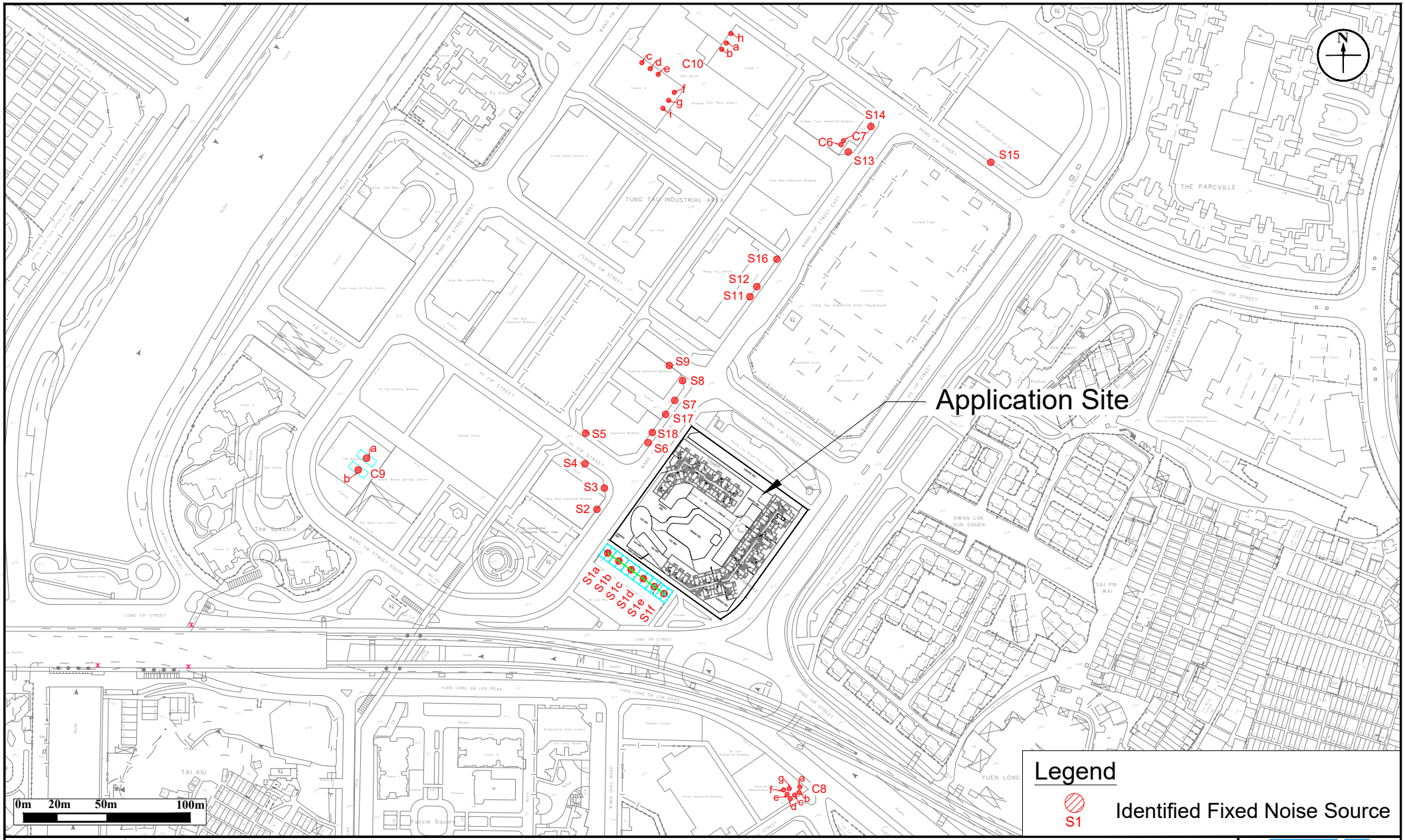


Figure: 5.1

Title: Location of Identified Fixed Noise Sources

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	4.0
Date:	Apr 2026

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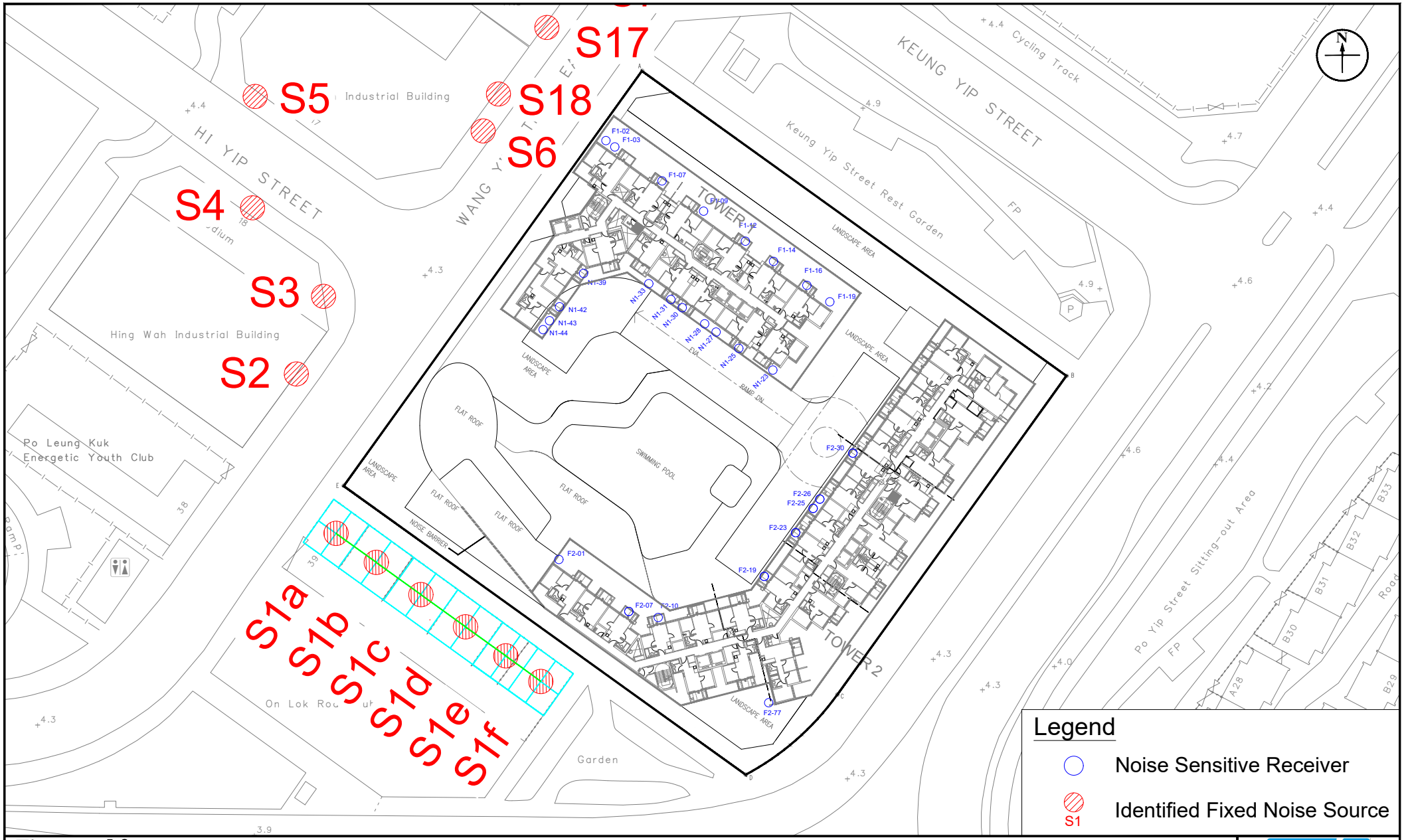


Figure: 5.2	RAMBOLL
Title: Location of Selected Noise Sensitive Receivers for Fixed Sources Noise Impact Assessment	Drawn by: MW Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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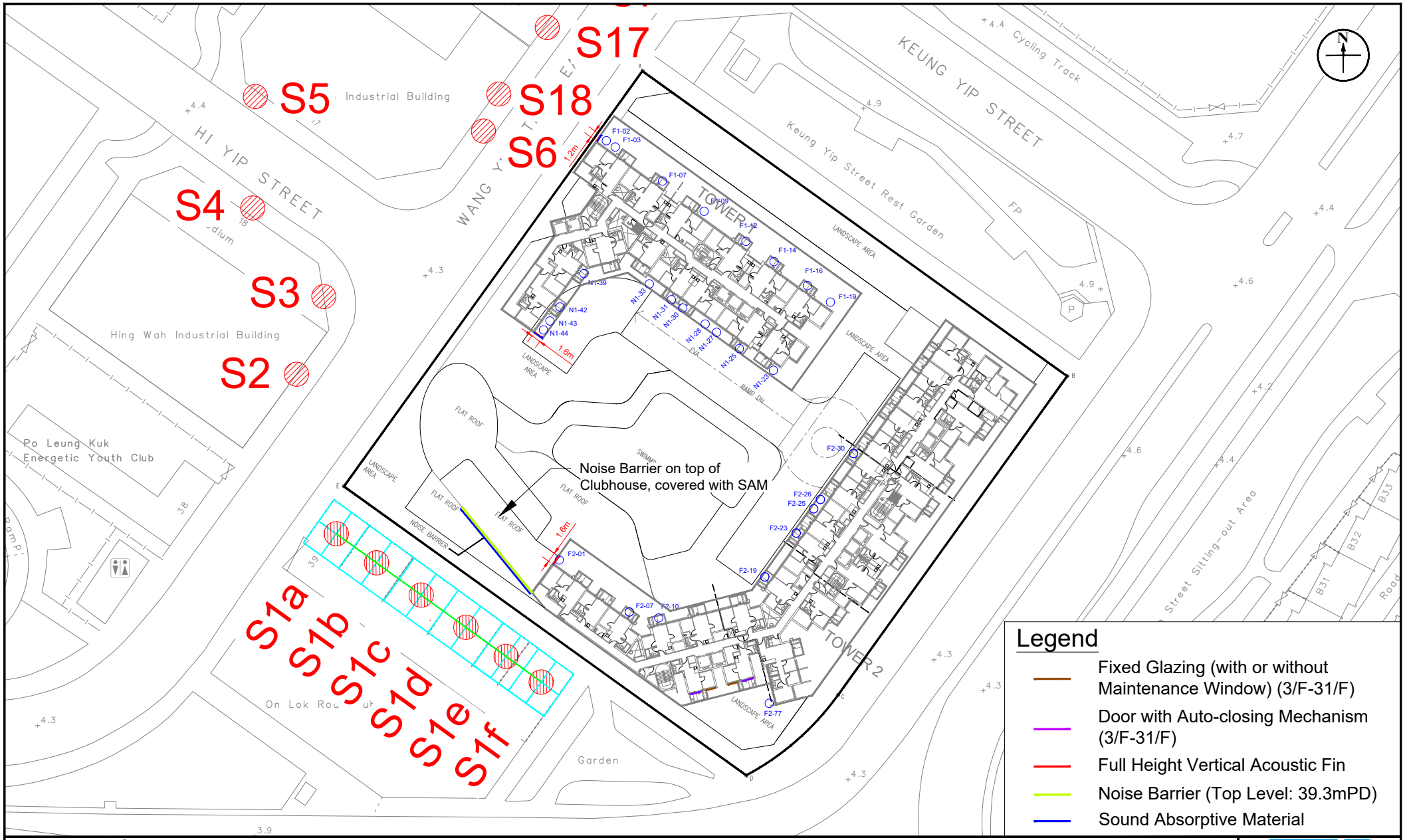


Figure: 5.3	RAMBOLL
Title: Proposed Noise Mitigation Measures for Fixed Sources Noise Impact Assessment	Drawn by: MW Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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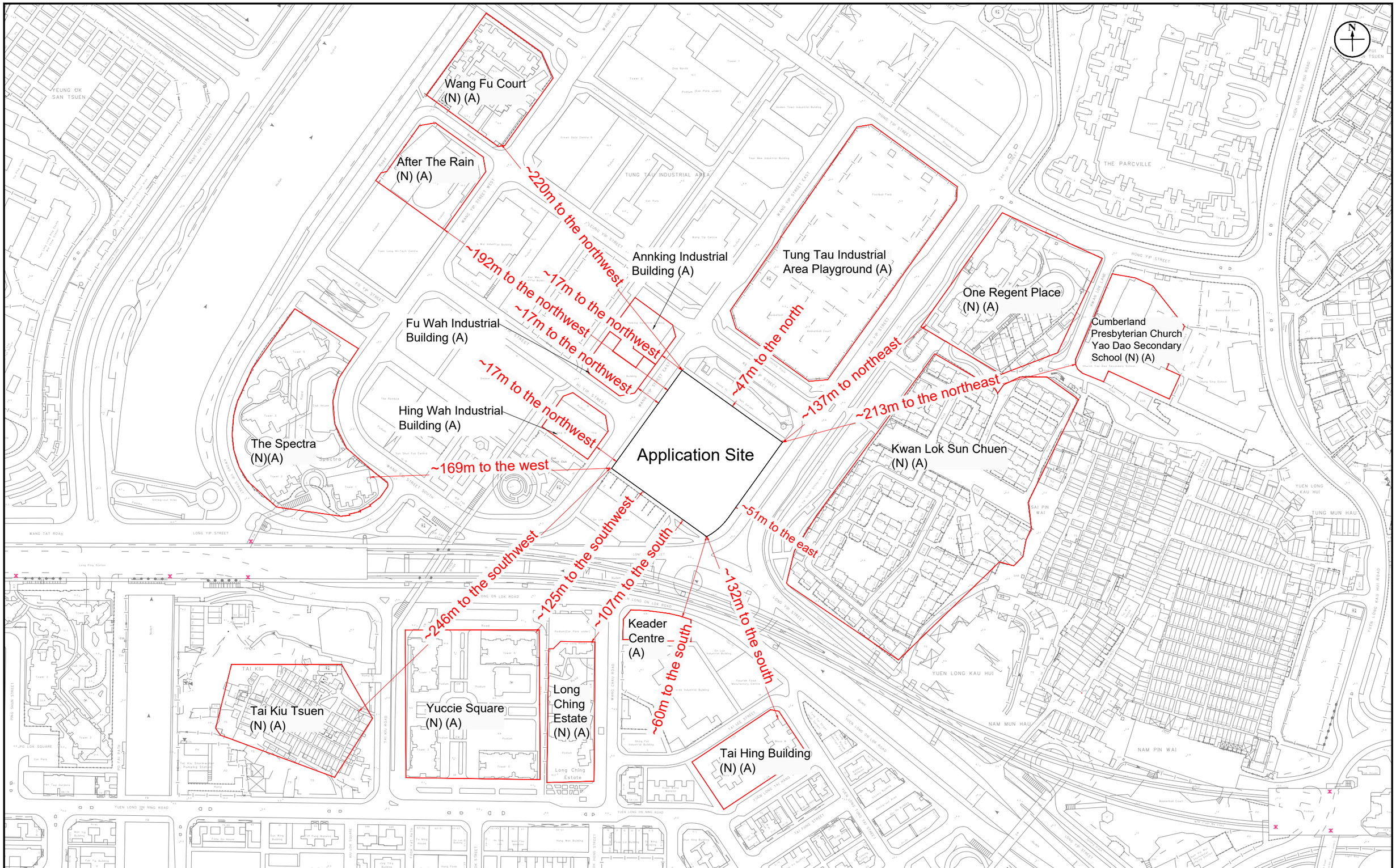


Figure: 6.1	RAMBOLL
Title: Location of Surrounding Noise and Air Sensitive Uses	Drawn by: MW Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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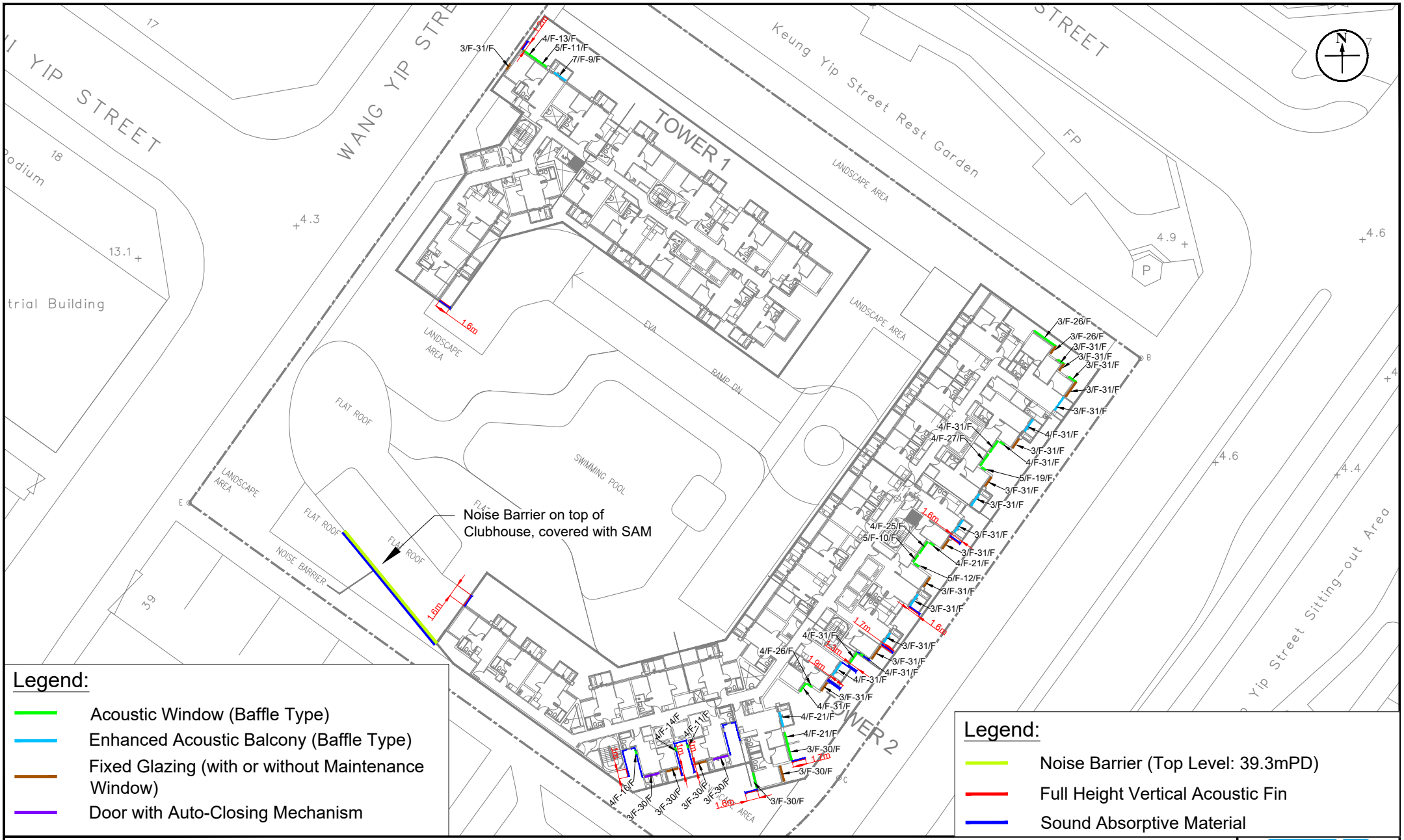


Figure: 7.1a

Title: Proposed Overall Noise Mitigation Measures (Overall Residential Development)

Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

Drawn by:	CM
Checked by:	CC
Rev.:	4.0
Date:	Apr 2026

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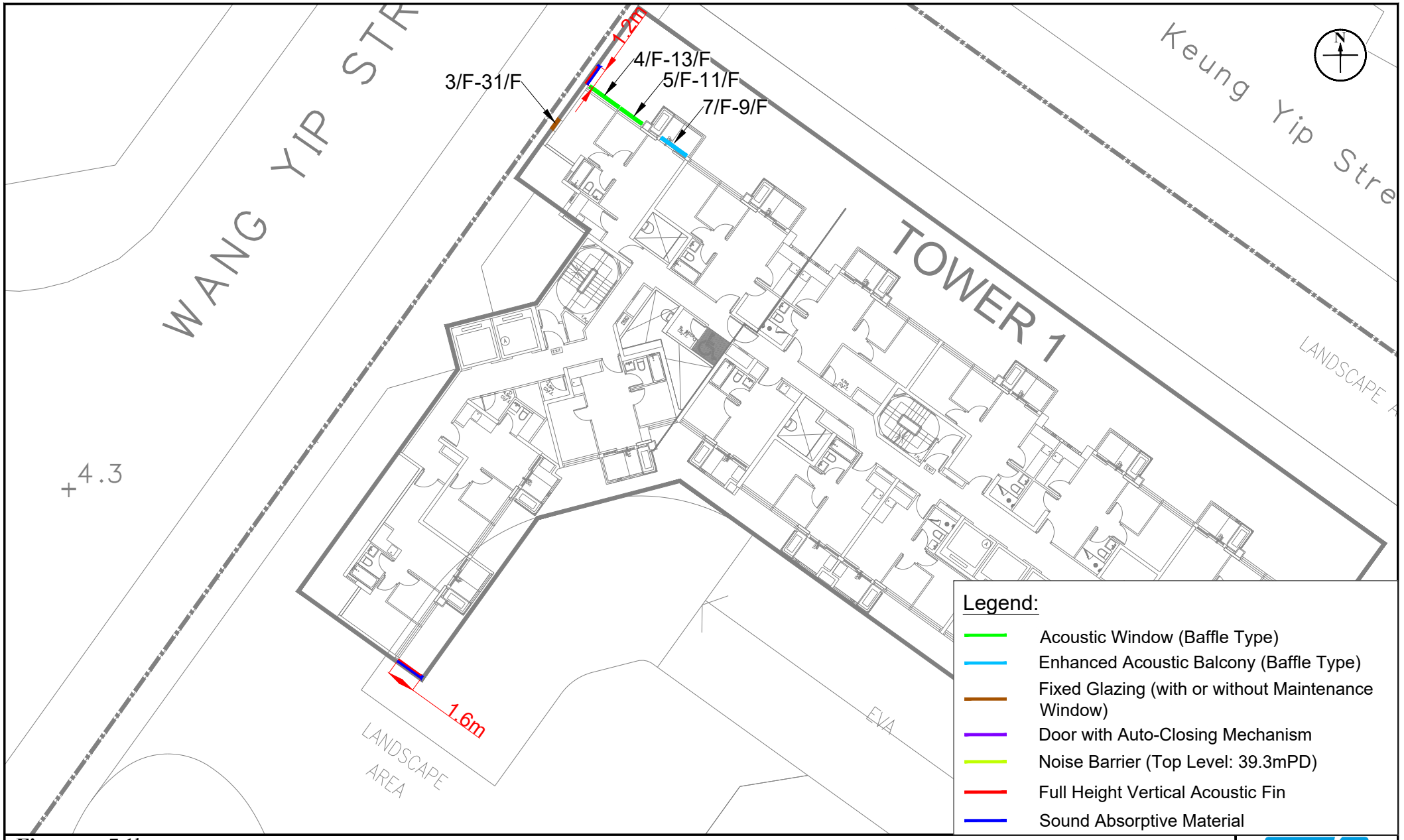


Figure: 7.1b	RAMBOLL
Title: Proposed Overall Noise Mitigation Measures (Zoom In, 1 of 3)	Drawn by: CM Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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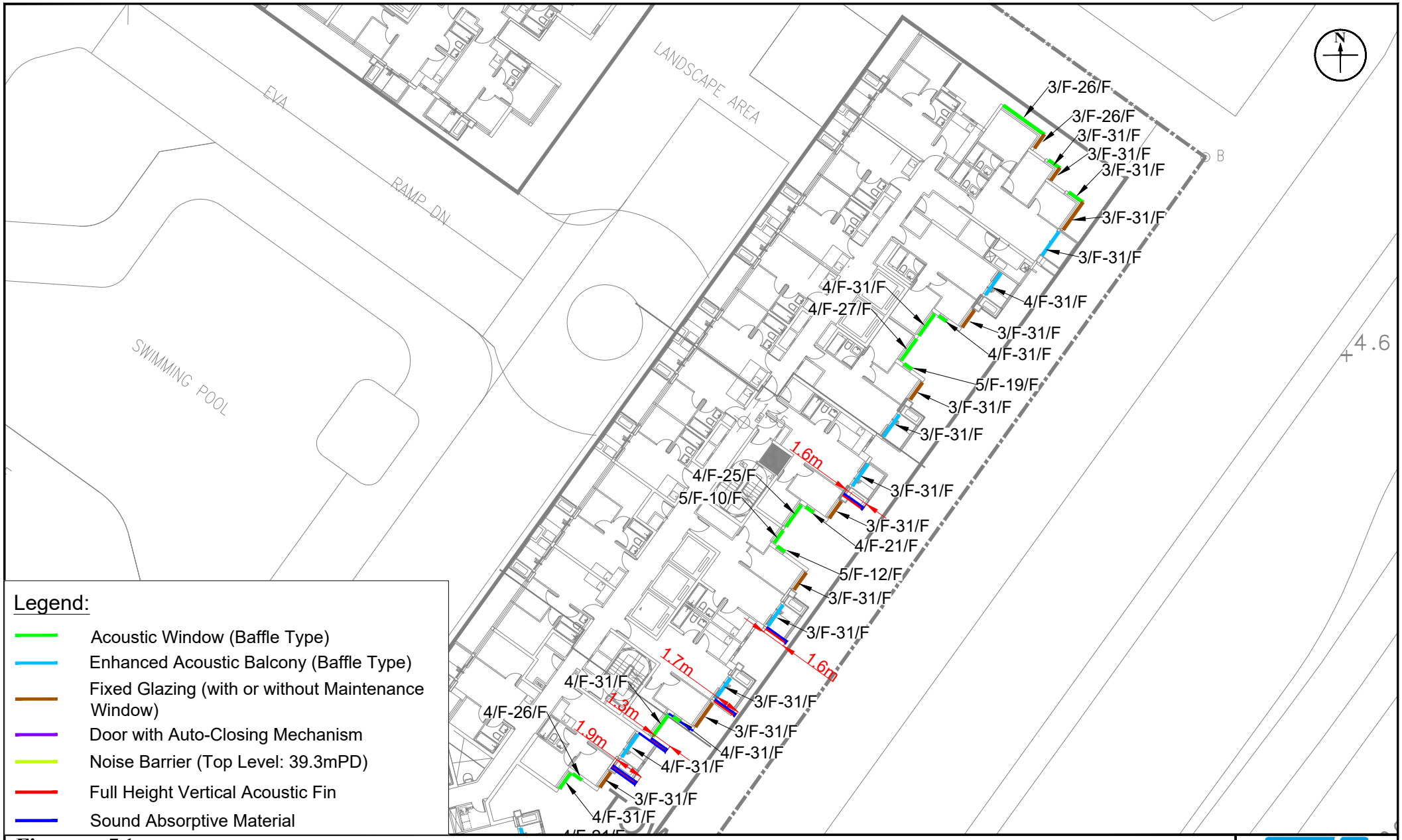


Figure: 7.1c	RAMBOLL
Title: Proposed Overall Noise Mitigation Measures (Zoom In, 2 of 3)	Drawn by: CM Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

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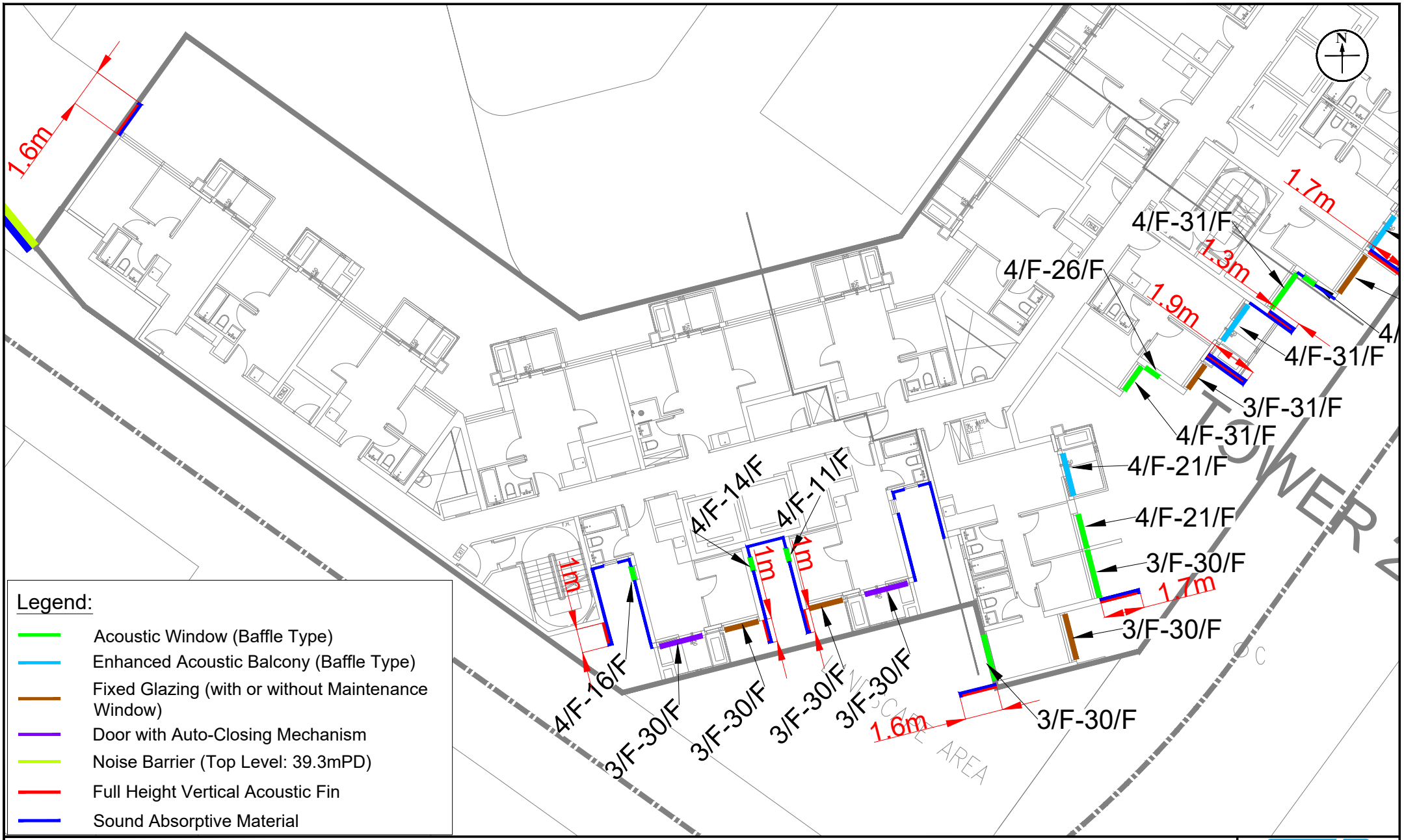
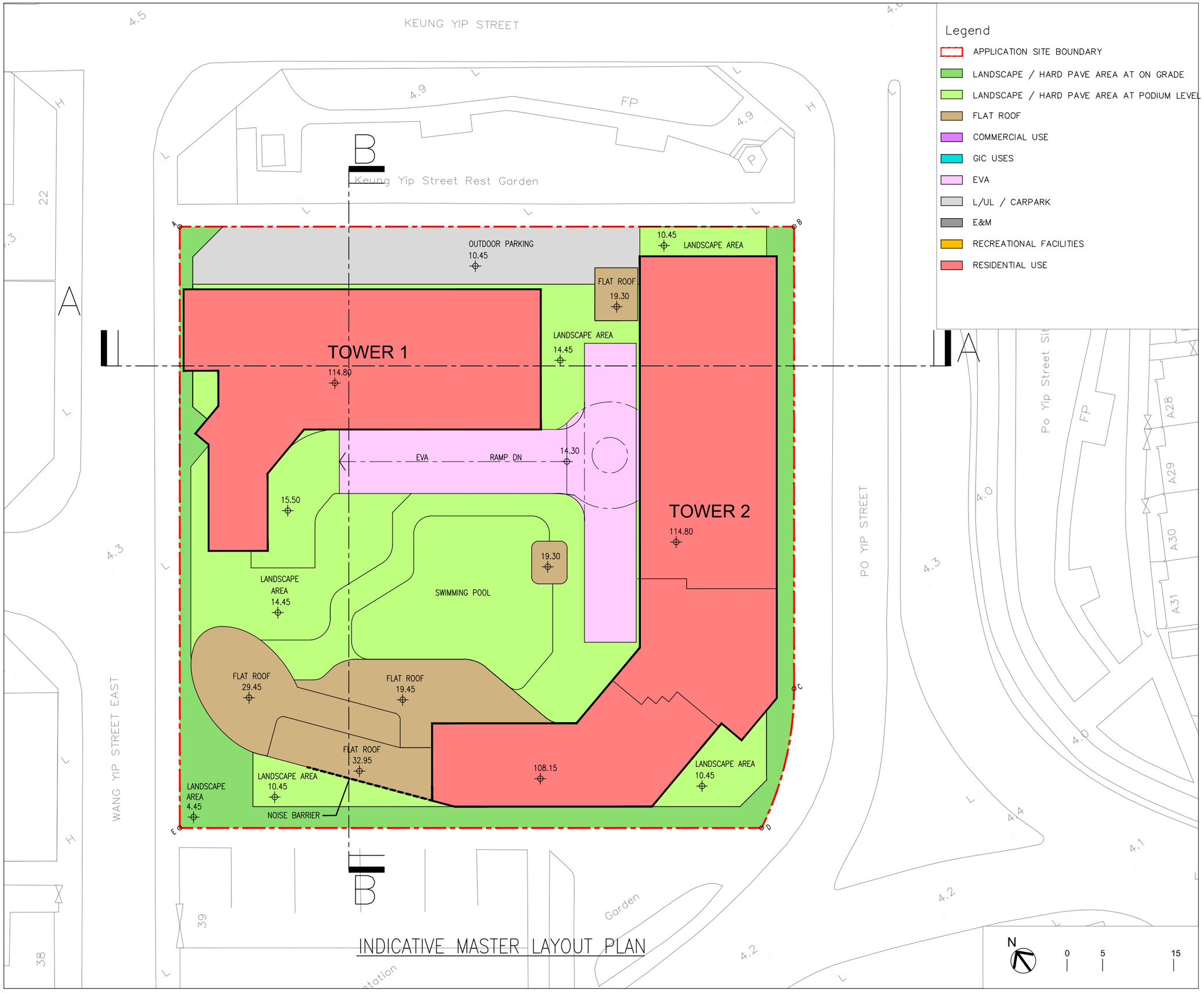


Figure: 7.1d	RAMBOLL
Title: Proposed Overall Noise Mitigation Measures (Zoom In, 3 of 3)	Drawn by: CM Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 4.0 Date: Apr 2026

\\aphkfps3\Drive Q\Projects\GYULSYLCEI00\05 Assessments\02 Noise\02 Traffic\20260422 EAv4.0\Fig 7.1 Overall NMM.dwg

Appendix 1.1 Master Layout Plan, Floor Plans and Sections of the Proposed Development



INDICATIVE MASTER LAYOUT PLAN

B.D. REFERENCE	屋宇署檔案
F.S.D. REFERENCE	消防處檔案
W.W.O. REFERENCE	水務署檔案
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PROJECT 項目名稱

21–25 WANG YIP STREET EAST, YUEN LONG, NEW TERRITORIES, HONG KONG

TITLE 標題

INDICATIVE MASTER LAYOUT PLAN

SCALE 比例 1:500(A3)	DATE 日期 MAR 2026
DRAWN BY 製作人 –	CHECKED BY 檢查 –
JOB NO. 工程項目 N3147–H	DRAWING NO. 圖號 –

KEUNG YIP STREET

Keung Yip Street Rest Garden

RETAIL SHOP
4.45

RESIDENTIAL LOBBY
4.45

RETAIL SHOP
4.45

X1
Y1
Z1
RUN IN/OUT

X2
Y2
Z2
RUN IN/OUT

4.30

GIC LOBBY

3.5M

EVA

1.6M

RSMRC

RAMP UP

BICYCLE PARKING
136 NOS. BICYCLE

5.80

RETAIL SHOP
4.45

RESIDENTIAL LOBBY

RECREATIONAL FACILITIES
4.45

E&M
4.45

GF CARPARK = 73 NOS.

LANDSCAPE AREA
4.45

E&M

3M

WANG YIP STREET EAST

PO YIP STREET

Po Yip Street Sit

INDICATIVE GROUND FLOOR PLAN

N

0 5 15

Legend

- APPLICATION SITE BOUNDARY
- LANDSCAPE / HARD PAVE AREA AT ON GRADE
- LANDSCAPE / HARD PAVE AREA AT PODIUM LEVEL
- FLAT ROOF
- COMMERCIAL USE
- GIC USES
- EVA
- L/UL / CARPARK
- E&M
- RECREATIONAL FACILITIES
- RESIDENTIAL USE

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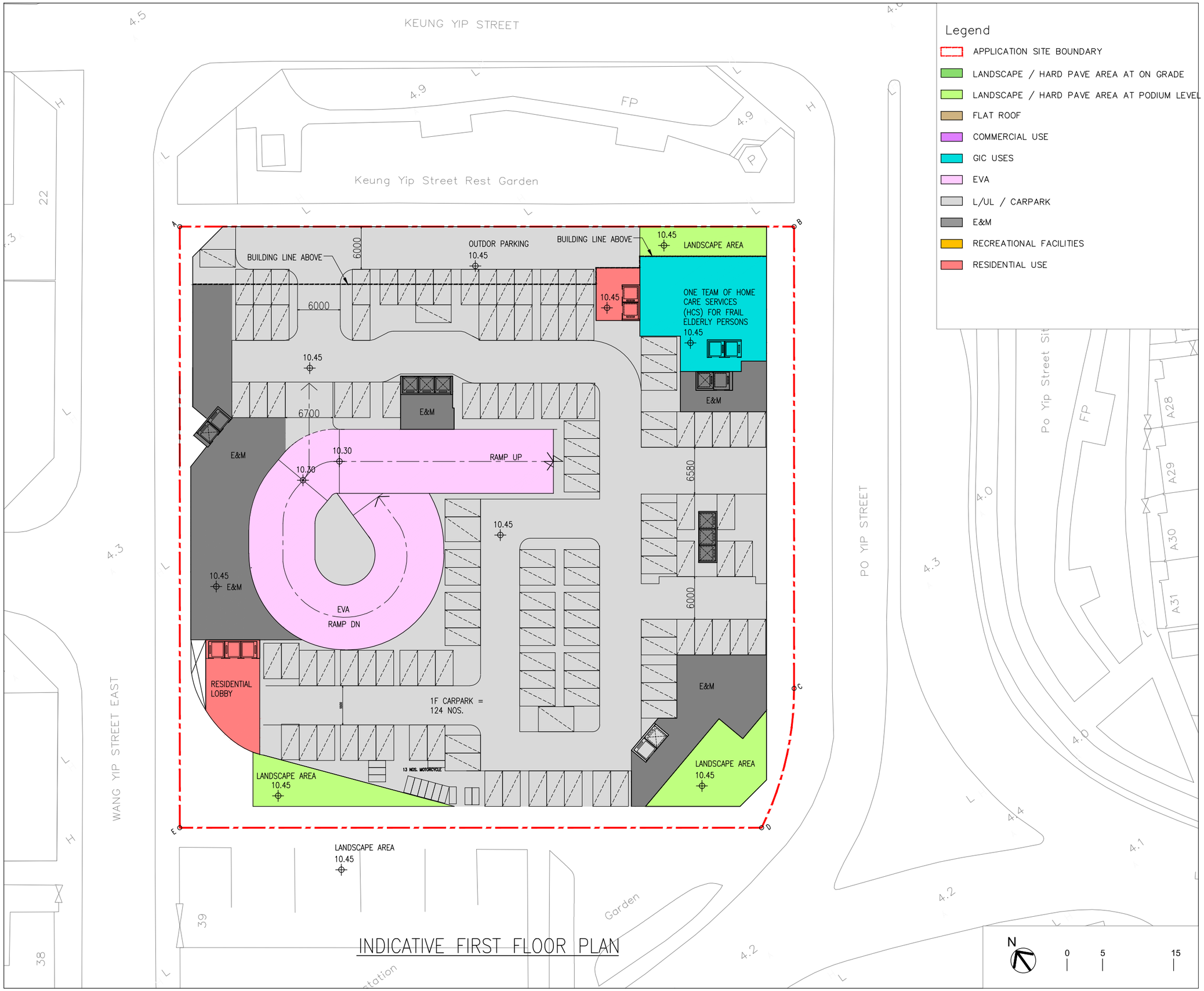
PROJECT 項目名稱

21–25 WANG YIP STREET EAST, YUEN LONG, NEW TERRITORIES, HONG KONG

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INDICATIVE GROUND FLOOR PLAN

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INDICATIVE FIRST FLOOR PLAN

Legend

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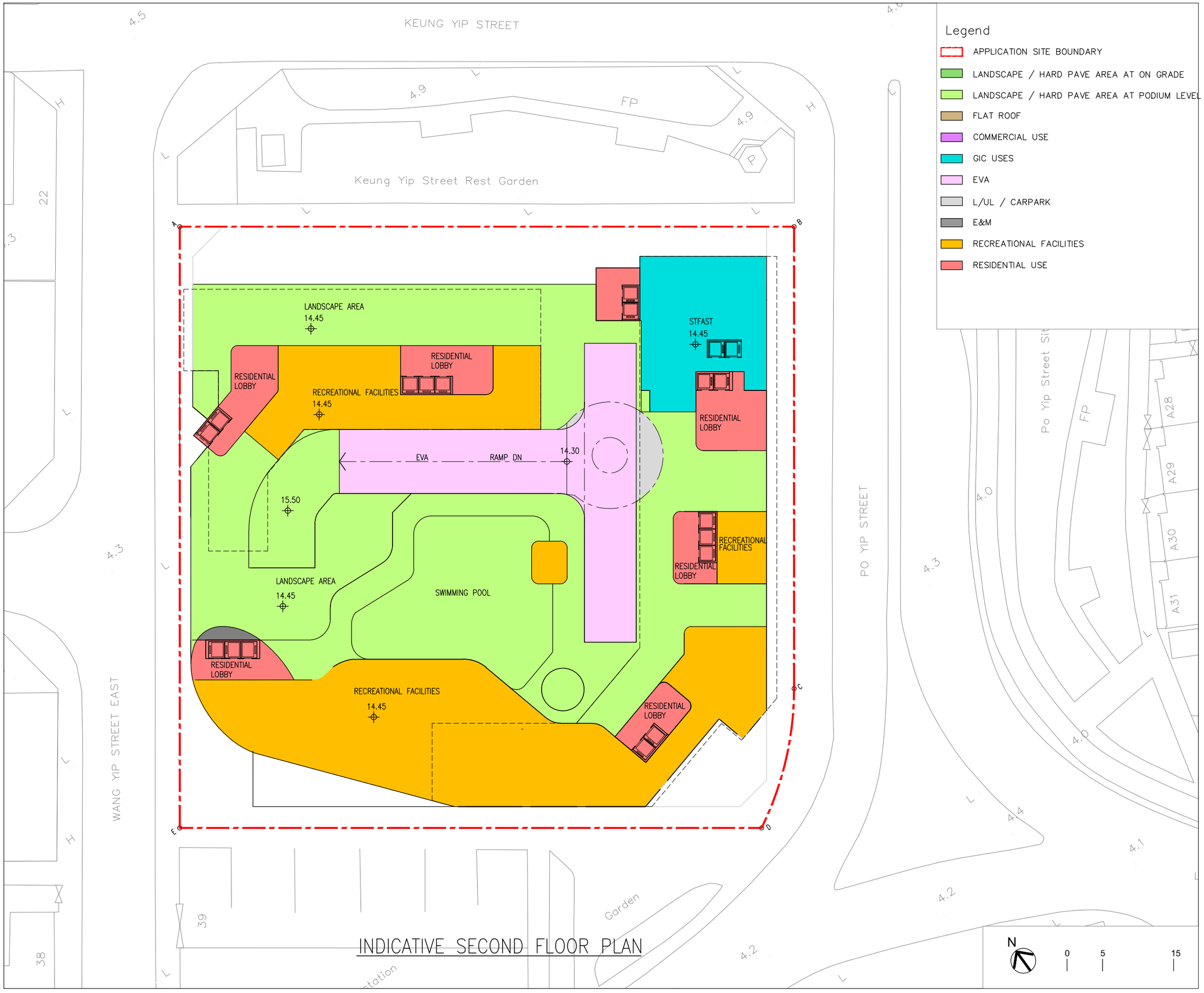
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INDICATIVE SECOND FLOOR PLAN

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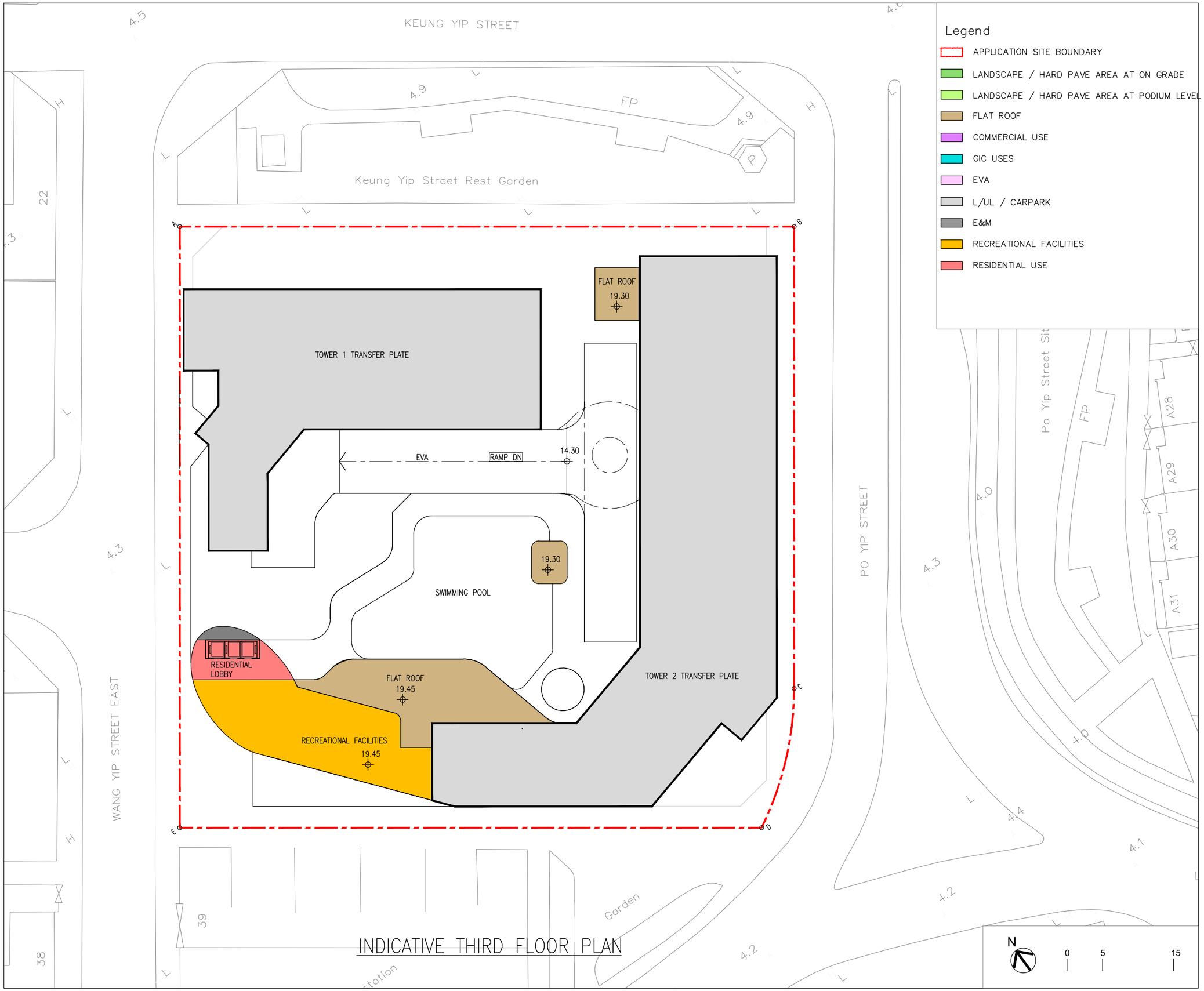
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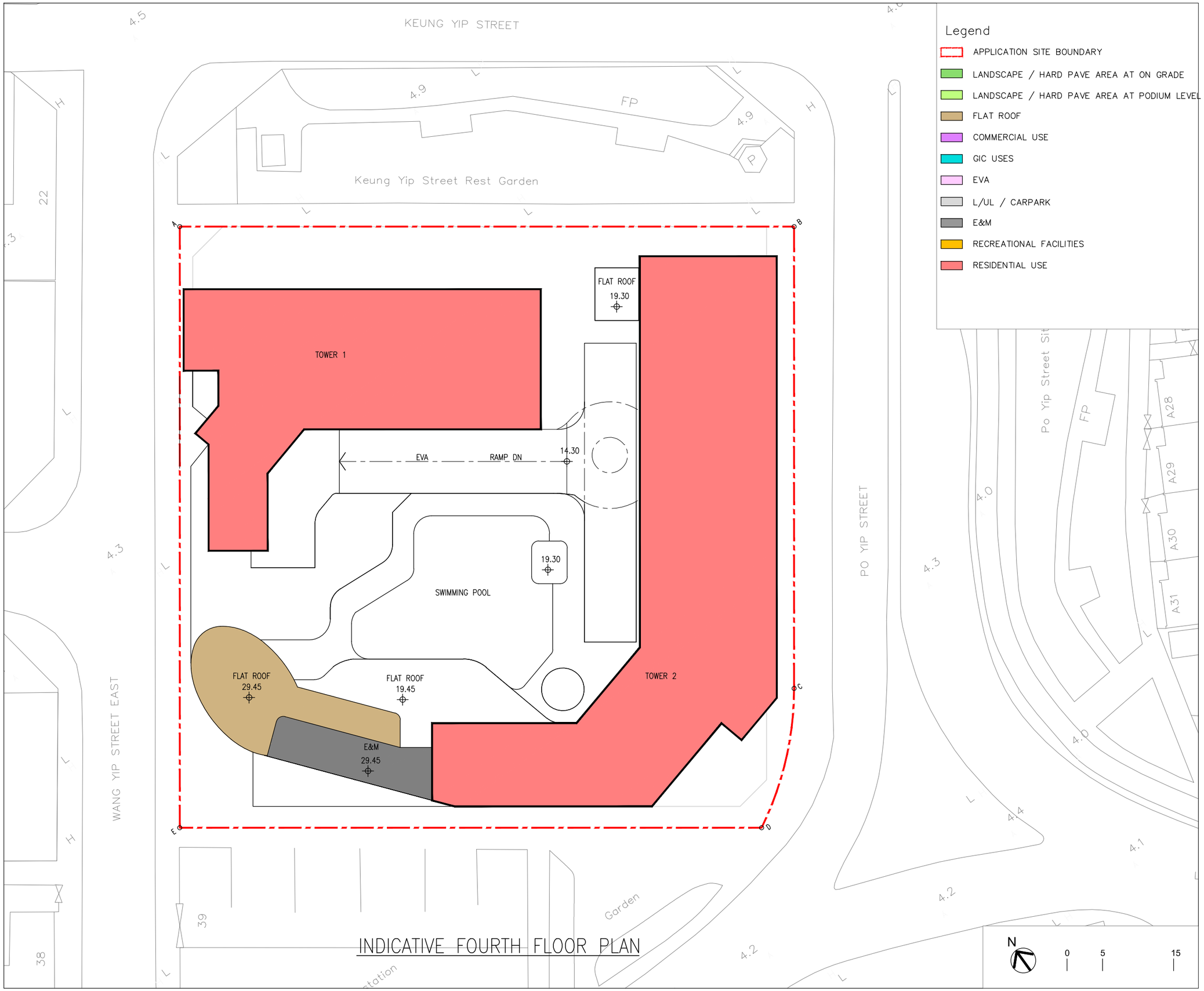
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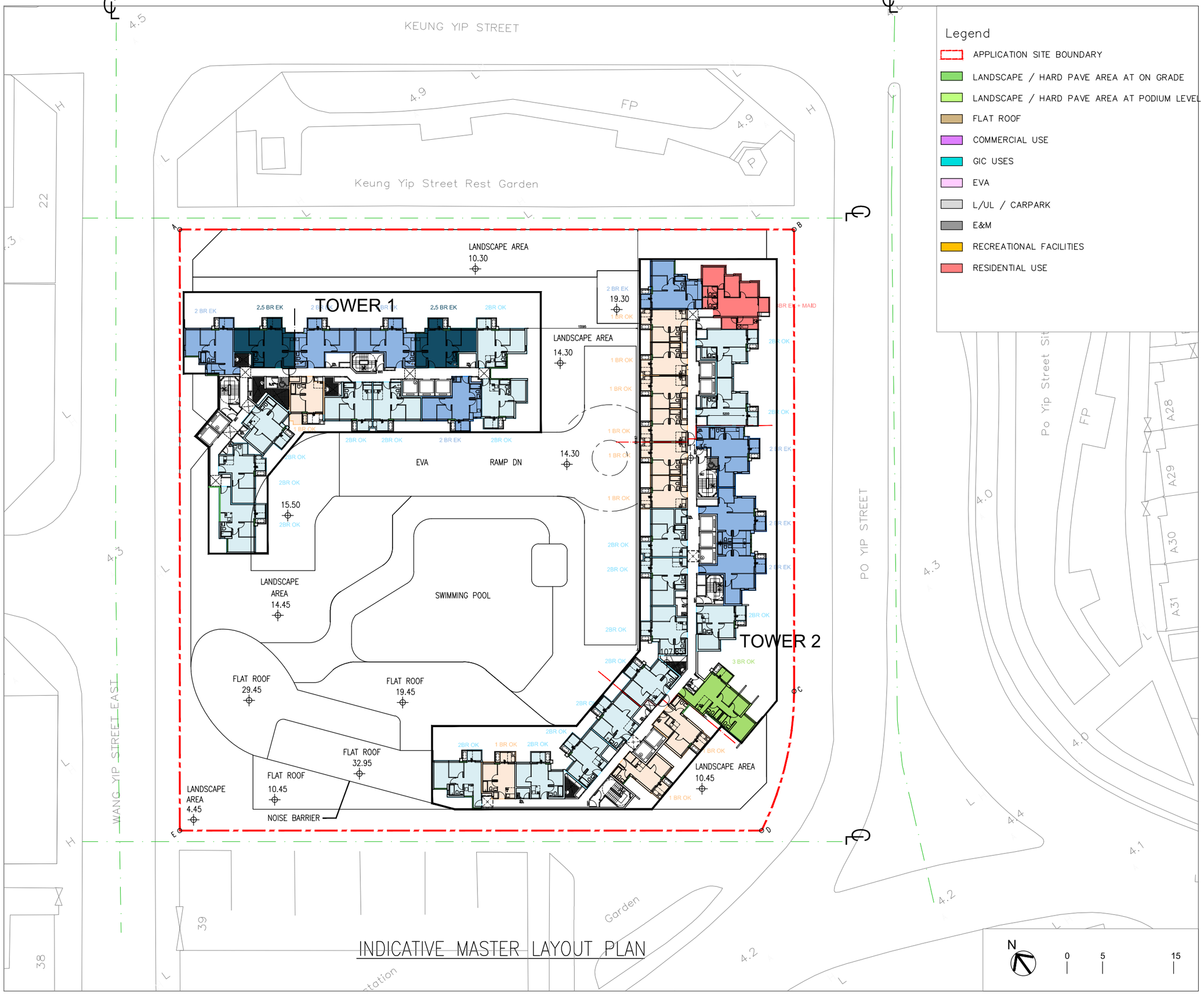
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INDICATIVE MASTER LAYOUT PLAN

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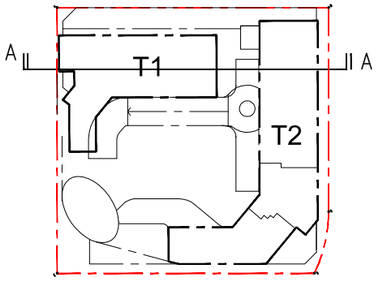
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TITLE 標題

INDICATIVE MASTER LAYOUT PLAN

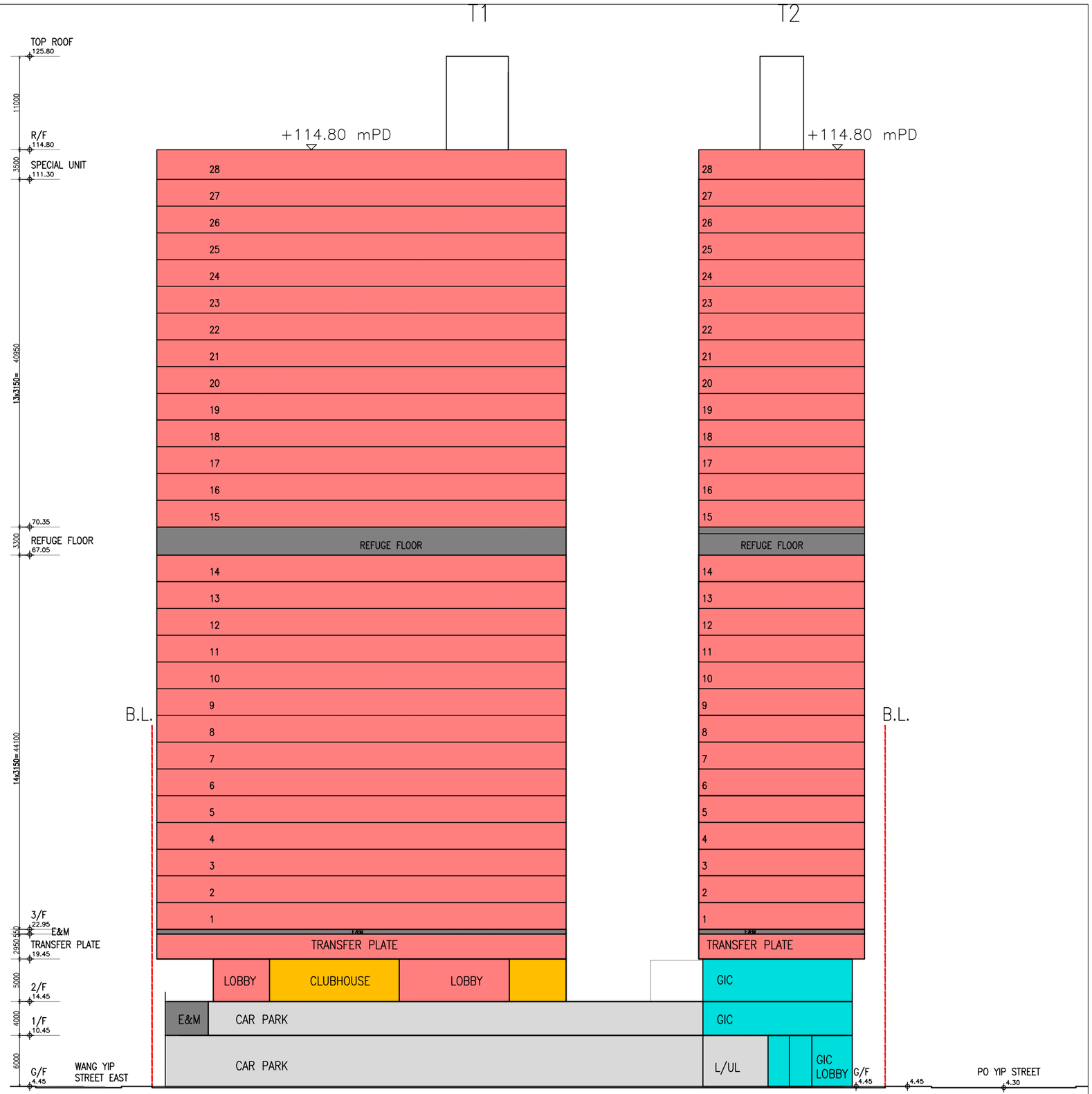
SCALE 比例	DATE 日期
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DRAWN BY 製作人	CHECKED BY 檢查
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JOB NO. 工程項目	DRAWING NO. 圖號
N3147–H	–



KP

Legend

- APPLICATION SITE BOUNDARY
- COMMERCIAL USE
- GIC USES
- EVA
- L/UL / CARPARK
- E&M
- RECREATIONAL FACILITIES
- RESIDENTIAL USE



SECTION A–A

B.D. REFERENCE	屋宇署檔案
F.S.D. REFERENCE	消防處檔案
W.W.O. REFERENCE	水務署檔案
CAD FILE NAME	檔案編號
NOTES	注釋

NO. 修定號	REVISIONS 修定內容	DATE 日期	BY 經手人

DLN

DLN Architects Limited
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2ND DRAFT

ALL MEASUREMENTS MUST BE CHECKED AT THE WORK BY THE CONTRACTOR
所有尺寸應由承建商於工地核實
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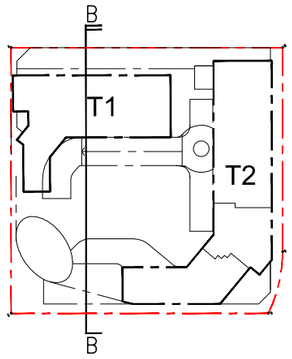
PROJECT 項目名稱

21–25 WANG YIP STREET EAST, YUEN LONG, NEW TERRITORIES, HONG KONG

TITLE 標題

INDICATIVE SECTION PLAN

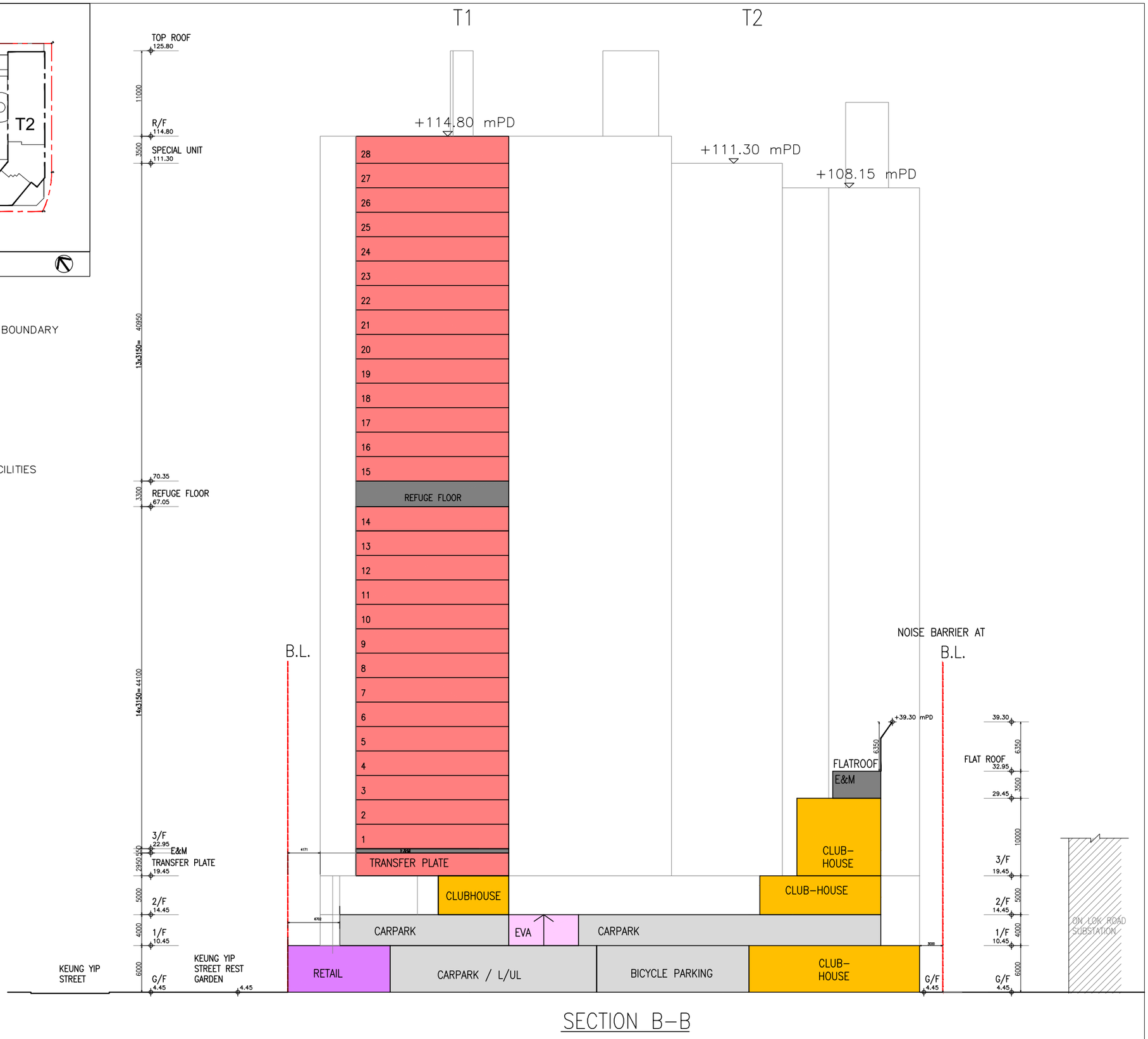
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JOB NO. 工程項目	DRAWING NO. 圖號
N3147–H	–



KP

Legend

- APPLICATION SITE BOUNDARY
- COMMERCIAL USE
- GIC USES
- EVA
- L/UL / CARPARK
- E&M
- RECREATIONAL FACILITIES
- RESIDENTIAL USE



SECTION B-B

B.D. REFERENCE	屋宇署檔案
F.S.D. REFERENCE	消防處檔案
W.W.O. REFERENCE	水務署檔案
CAD FILE NAME	檔案編號
NOTES	注釋

NO. 修定號	REVISIONS 修定內容	DATE 日期	BY 經手人

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PROJECT 項目名稱

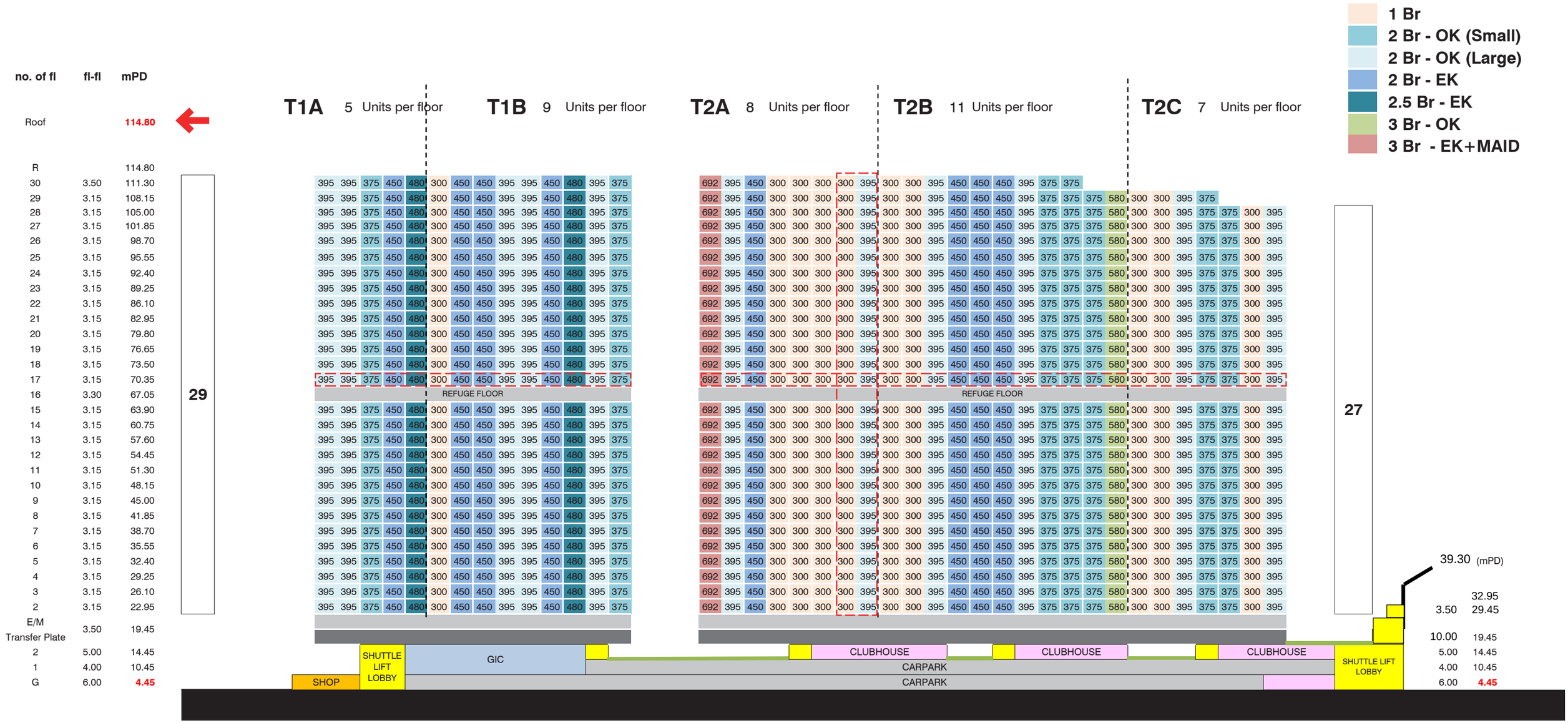
21-25 WANG YIP STREET EAST, YUEN LONG, NEW TERRITORIES, HONG KONG

TITLE 標題

INDICATIVE SECTION PLAN

SCALE 比例	DATE 日期
1:500(A3)	APRIL 2026
DRAWN BY 製作人	CHECKED BY 檢查
–	–
JOB NO. 工程項目	DRAWING NO. 圖號
N3147-H	–

SCHEMATIC SECTION



	Tower 1A	Tower 1B	Tower 2A	Tower 2B	Tower 2C	Overall
TOTAL SFA (sq.ft.)	58,660 (sq.ft.)	103,320 (sq.ft.)	87,696 (sq.ft.)	123,505 (sq.ft.)	63,440 (sq.ft.)	436,621 (sq.ft.)
No of Units	140	252	224	306	186	1,108

Appendix 3.1 Traffic Forecast for Year 2045

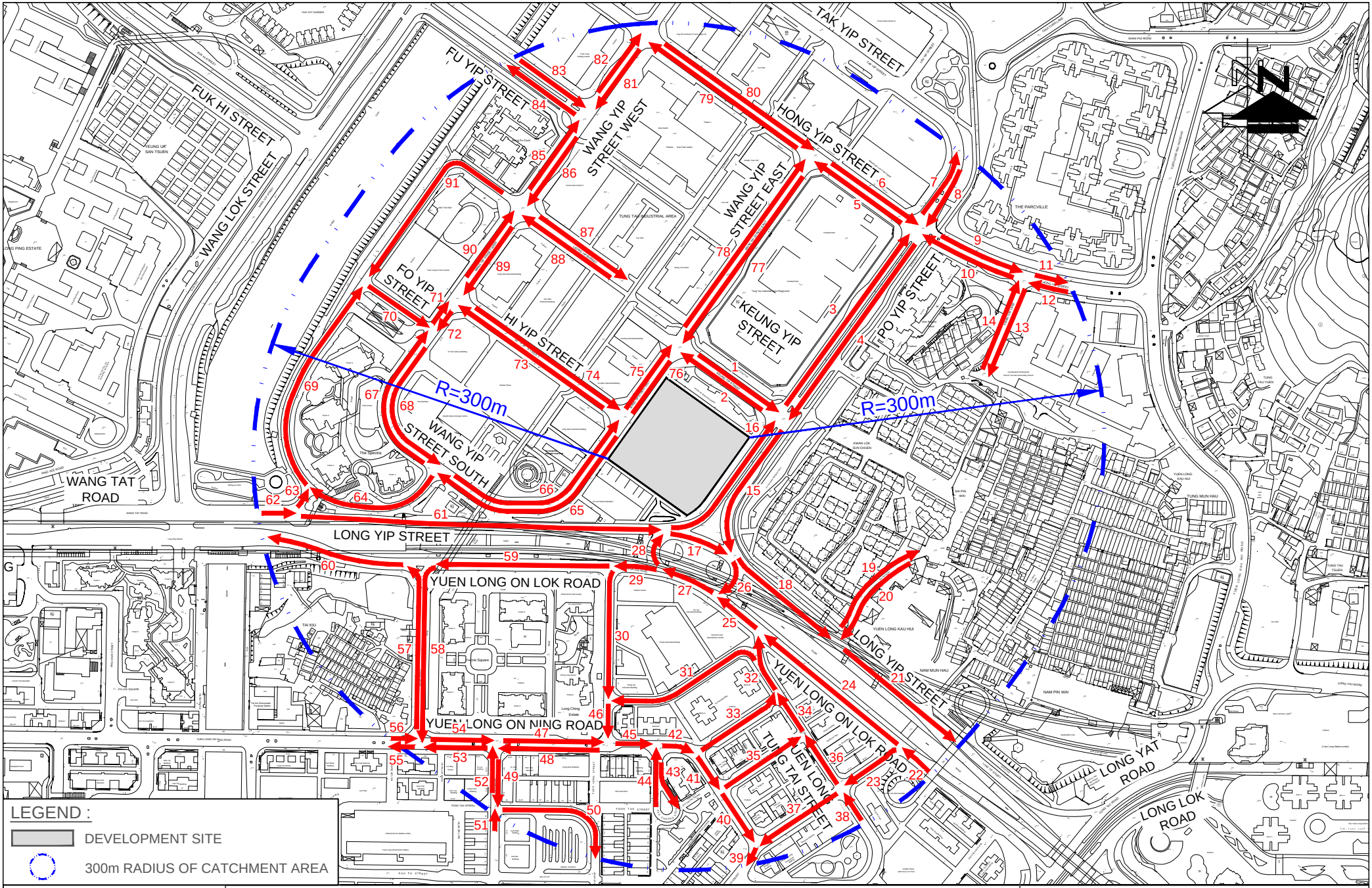


FIGURE NO.: 1	PROJECT TITLE: S16 of Lai Sun Yuen Long Center at 21-35 Wang Yip Street East, Yuen Long	CTA Consultants Limited 志達顧問有限公司
PROJECT NO.: 26016HK	DRAWING TITLE: INDEX PLAN	
SCALE: 1 : 4200 @A4 / DATE: 01 APR 2026		

26016HK

Lai Sun Yuen Long Centre, 21-35 Wang Yip Street East, Yuen Long

(Yuen Long Town Lot No. 362)

2045 TRAFFIC FORECAST FOR TRAFFIC NOISE IMPACT ASSESSMENT

Link No.	Road Name	Speed	Direction	Year 2045			
				AM Peak		PM Peak	
				Traffic Flow (veh/hr)	HV%[(1)]	Traffic Flow (veh/hr)	HV%[(1)]
1	Keung Yip Street	50	EB	230	40%	220	37%
2	Keung Yip Street	50	WB	170	34%	190	42%
3	Po Yip Street	50	NB	360	40%	310	44%
4	Po Yip Street	50	SB	590	49%	450	29%
5	Hong Yip Street	50	WB	340	42%	250	39%
6	Hong Yip Street	50	EB	290	36%	290	32%
7	Tak Yip Street	50	NB	80	36%	160	28%
8	Tak Yip Street	50	SB	390	52%	290	27%
9	Hong Yip Street	50	EB	380	26%	200	32%
10	Hong Yip Street	50	WB	330	38%	210	29%
11	Hong Yip Street	50	EB	380	27%	200	33%
12	Hong Yip Street	50	WB	330	39%	210	32%
13	Kwan Lok Lane	50	SB	60	42%	60	29%
14	Kwan Lok Lane	50	NB	110	36%	110	14%
15	Po Yip Street	50	SB	790	46%	650	31%
16	Po Yip Street	50	NB	510	36%	480	41%
17	Long Yip Street	50	EB	1550	40%	1290	33%
18	Long Yip Street	50	EB	1960	45%	1550	34%
19	Sai Kai Road	50	NB	60	53%	60	21%
20	Sai Kai Road	50	SB	60	30%	110	23%
21	Long Yip Street	50	EB	1960	45%	1550	34%
22	Yuen Long On Lok Road	50	WB	1430	32%	1600	39%
23	Yuen Long Tai Cheung Street	50	WB	200	39%	270	36%
24	Yuen Long On Lok Road	50	WB	10	30%	10	40%
25	Yuen Long On Lok Road	50	WB	1880	33%	2090	39%
26	Po Yip Street	50	SB	380	33%	400	24%
27	Yuen Long On Lok Road	50	WB	2260	33%	2490	37%
28	Po Yip Street	50	NB	700	44%	690	42%
29	Yuen Long On Lok Road	50	EB	1560	28%	1810	34%
30	Wang Chau Road	50	SB	290	32%	410	28%
31	Tai Lee Street	50	WB	70	55%	90	33%
32	Yuen Long Tung Tai Street	50	NB	340	46%	430	35%
33	Yuen Long Tai Hang Street	50	EB	190	43%	240	30%
34	Yuen Long Tung Tai Street	50	NB	230	49%	270	39%
35	Tai Fung Street	50	EB	40	51%	60	37%
36	Yuen Long Tung Tai Street	50	NB	190	48%	200	39%
37	Yuen Long Tai Cheung Street	50	WB	210	40%	280	37%
38	Shui Che Kwun Street	50	NB	200	51%	210	43%
39	Kuk Ting Street	50	WB	290	37%	370	33%
40	Sai Tai Street	50	SB	380	37%	420	31%
41	Sai Tai Street	50	SB	420	39%	490	32%

42	Yuen Long On Ning Road	50	EB	610	40%	730	31%
43	Yuen Long Pau Cheung Square	50	SB	590	48%	710	35%
44	Yuen Long Pau Cheung Square	50	NB	20	63%	20	28%
45	Yuen Long On Ning Road	50	EB	600	40%	720	31%
46	Wang Chau Road	50	SB	360	39%	500	29%
47	Yuen Long On Ning Road	50	EB	340	37%	410	30%
48	Yuen Long On Ning Road	50	WB	100	31%	180	23%
49	Tung Lok Street	50	SB	140	32%	220	27%
50	Fook Tak Street	50	SB	270	39%	380	32%
51	Tung Lok Street	50	NB	300	43%	360	32%
52	Tung Lok Street	50	NB	160	41%	190	30%
53	Yuen Long On Ning Road	50	WB	280	44%	450	30%
54	Yuen Long On Ning Road	50	EB	500	37%	600	31%
55	Yuen Long On Ning Road	50	WB	300	24%	450	38%
56	Yuen Long On Ning Road	50	EB	320	43%	440	33%
57	Tai Kiu Road	50	NB	150	52%	190	34%
58	Tai Kiu Road	50	SB	350	20%	360	35%
59	Yuen Long On Lok Road	50	WB	1010	27%	1140	36%
60	Yuen Long On Lok Road	50	WB	1040	32%	1200	36%
61	Long Yip Street	50	EB	1360	35%	1090	30%
62	Long Yip Street	50	EB	1500	38%	1200	32%
63	Slip Road to Kwong Yip Street	50	NB	140	47%	110	37%
64	Kwong Yip Street	50	WB	30	36%	30	56%
65	Wang Yip Street South	50	WB	40	44%	50	31%
66	Wang Yip Street South	50	EB	100	48%	110	50%
67	Wang Yip Street South	50	NB	30	49%	40	26%
68	Wang Yip Street South	50	SB	110	47%	120	49%
69	Kwong Yip Street	50	NB	170	46%	140	39%
70	Fo Yip Street	50	EB	210	48%	180	41%
71	Wang Yip Street West	50	NB	140	46%	150	35%
72	Wang Yip Street West	50	SB	110	43%	120	47%
73	Hi Yip Street	50	WB	90	41%	100	52%
74	Hi Yip Street	50	EB	120	46%	100	40%
75	Wang Yip Street East	50	NB	270	41%	220	43%
76	Wang Yip Street East	50	SB	110	41%	130	43%
77	Wang Yip Street East	50	SB	70	46%	80	33%
78	Wang Yip Street East	50	NB	140	38%	80	56%
79	Hong Yip Street	50	WB	390	41%	220	43%
80	Hong Yip Street	50	EB	280	35%	320	29%
81	Wang Yip Street West	50	SB	300	35%	310	31%
82	Wang Yip Street West	50	NB	660	34%	370	22%
83	Fu Yip Street	50	EB	590	45%	270	24%
84	Fu Yip Street	50	WB	390	50%	410	34%
85	Wang Yip Street West	50	NB	300	50%	350	38%
86	Wang Yip Street West	50	SB	150	51%	150	42%
87	Leung Yip Street	50	EB	110	54%	110	48%
88	Leung Yip Street	50	WB	110	80%	110	47%
89	Wang Yip Street West	50	SB	100	52%	110	39%
90	Wang Yip Street West	50	NB	200	48%	220	39%

91	Leung Yip Street	50	WB	30	34%	30	40%

Note:

(1) HV includes Light Van, Public Light Bus, Light Goods Vehicle, Medium Goods Vehicle, Heavy Goods Vehicle and Container/Tractor, Coach and Bus.

Appendix 3.2 Results of Road Traffic Noise Impact Assessment (Base Case and Mitigated Case Scenario)

Predicted Road Traffic Noise at Selected Sensitive Receivers
Base Case (AM Peak Flow)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20
3/F	23.0	**73**	66	65	65	65	65	65	65	65	65	65	65	65	65	66	65	66	66	66	66
4/F	26.1	**73**	**72**	70	69	69	69	70	70	70	70	70	70	70	70	70	70	70	70	70	68
5/F	29.3	**73**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
6/F	32.4	**72**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
7/F	35.6	**72**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
8/F	38.7	**72**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
9/F	41.9	**71**	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
10/F	45.0	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
11/F	48.2	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
12/F	51.3	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
13/F	54.5	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
14/F	57.6	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	69	69	67
15/F	60.8	**71**	70	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	67
16/F	63.9	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
17/F	67.1	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
18/F	70.4	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
19/F	73.5	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
20/F	76.7	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
21/F	79.8	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
22/F	83.0	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	66
23/F	86.1	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	66
24/F	89.3	70	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	68	68	68	66
25/F	92.4	70	69	69	69	69	69	69	69	69	68	69	69	68	68	68	68	68	68	68	66
26/F	95.6	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
27/F	98.7	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
28/F	101.9	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
29/F	105.0	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
30/F	108.2	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
31/F	111.3	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
Max Noise Level		**73**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
Exceedance		13				0			0			0			0			0			

Floor	mPD	N1-21	N1-22	N1-23	N1-24	N1-25	N1-26	N1-27	N1-28	N1-29	N1-30	N1-31	N1-32	N1-33	N1-34	N1-35	N1-36	N1-37	N1-38	N1-39	N1-40	N1-41	N1-42	N1-43	N1-44
3/F	23.0	64	47	48	48	48	48	48	48	48	48	48	48	48	48	47	47	47	47	47	47	47	47	48	52
4/F	26.1	66	47	48	48	49	49	49	49	49	49	49	49	49	48	48	48	48	47	47	47	47	48	49	55
5/F	29.3	66	47	50	50	50	50	51	51	51	51	51	51	51	50	48	48	48	48	47	48	48	48	50	57
6/F	32.4	66	48	52	52	53	53	53	53	54	54	54	54	53	52	50	49	49	48	48	48	48	49	53	61
7/F	35.6	66	49	56	56	57	58	58	58	58	58	59	58	58	56	52	51	51	49	49	49	49	50	57	64
8/F	38.7	66	51	58	59	60	60	61	61	61	61	61	61	61	58	55	54	54	50	49	50	50	52	59	65
9/F	41.9	66	55	60	61	61	62	62	62	62	63	63	62	62	60	57	56	55	52	50	51	52	53	60	65
10/F	45.0	66	57	62	62	62	62	63	63	63	63	63	63	62	61	58	57	56	53	52	53	53	55	61	65
11/F	48.2	66	58	62	63	63	63	63	63	63	63	64	63	62	61	58	58	57	55	53	54	55	57	61	66
12/F	51.3	66	59	63	63	63	63	63	64	64	64	64	63	63	61	59	58	58	56	55	56	56	58	62	66
13/F	54.5	66	60	63	63	63	64	64	64	64	64	64	63	63	62	60	59	59	57	56	57	58	59	63	66
14/F	57.6	66	60	63	63	64	64	64	64	64	64	64	64	63	62	60	60	59	58	57	58	59	60	63	66
15/F	60.8	66	60	63	63	64	64	64	64	64	64	64	64	63	62	61	60	60	59	58	59	60	61	63	67
16/F	63.9	66	60	63	63	64	64	64	64	64	64	64	64	64	63	61	61	61	60	59	60	60	61	64	67
17/F	67.1	66	60	63	63	64	64	64	64	64	64	65	64	64	63	61	61	61	60	60	60	61	62	64	67
18/F	70.4	66	60	63	63	64	64	64	64	64	65	65	64	64	63	62	61	61	61	60	61	61	62	64	67
19/F	73.5	66	60	63	64	64	64	64	64	64	65	65	64	64	63	62	61	62	61	60	61	61	62	64	67
20/F	76.7	66	60	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	61	61	61	62	63	64	67
21/F	79.8	66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	61	61	61	62	63	64	67
22/F	83.0	66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	61	61	61	62	63	64	67
23/F	86.1	66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	62	61	61	62	63	64	67
24/F	89.3	66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	62	61	61	62	63	64	67
25/F	92.4	66	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
26/F	95.6	66	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
27/F	98.7	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
28/F	101.9	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
29/F	105.0	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
30/F	108.2	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
31/F	111.3	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	62	62	62	63	64	67
Max Noise Level		66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	62	62	62	62	63	64	67
Exceedance		0				0			0			0			0			0			0			0	

Predicted Road Traffic Noise at Selected Sensitive Receivers
Base Case (AM Peak Flow)

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23	N2-24	N2-25	N2-26	N2-27	N2-28	N2-29	N2-30
3/F	23.0	52	53	55	55	55	54	54	52	52	54	54	53	53	54	54	54	54	55	56	56	55	56	56	56	57	57	58	58	59	59
4/F	26.1	54	56	57	57	57	57	56	54	54	55	55	55	55	55	55	56	56	57	57	57	57	57	57	58	58	59	59	60	60	61
5/F	29.3	57	58	59	58	58	58	57	55	55	56	56	56	56	56	56	57	57	58	58	58	58	58	59	59	59	59	60	61	61	62
6/F	32.4	59	59	59	59	58	58	58	56	56	57	57	56	56	57	57	58	58	58	58	59	59	59	59	59	60	60	61	61	62	62
7/F	35.6	59	59	59	59	59	59	58	56	56	57	57	57	57	57	58	58	58	58	59	59	59	59	60	60	60	61	61	62	62	63
8/F	38.7	60	60	60	60	59	59	58	57	57	58	58	58	58	58	58	58	59	59	59	59	59	59	60	61	62	62	62	63	63	63
9/F	41.9	62	61	61	60	60	59	59	58	57	58	58	58	58	58	58	59	59	59	59	59	60	60	61	62	62	63	63	63	64	64
10/F	45.0	62	61	61	61	60	60	59	58	58	59	59	58	58	58	59	59	59	59	59	60	60	60	61	62	63	63	63	64	64	64
11/F	48.2	63	62	61	61	61	60	60	59	58	59	59	59	59	59	59	59	59	59	59	60	60	60	61	62	63	63	64	64	64	65
12/F	51.3	63	62	62	61	61	60	60	59	59	59	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
13/F	54.5	63	62	62	61	61	61	60	59	59	60	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
14/F	57.6	63	62	62	62	61	61	60	59	59	60	60	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	63	64	64	65
15/F	60.8	63	62	62	62	61	61	60	60	59	60	60	60	59	59	59	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
16/F	63.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
17/F	67.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
18/F	70.4	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
19/F	73.5	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
20/F	76.7	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
21/F	79.8	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
22/F	83.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
23/F	86.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
24/F	89.3	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
25/F	92.4	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
26/F	95.6	63	62	62	62	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
27/F	98.7	63	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
28/F	101.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
29/F	105.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
30/F	108.2	--	--	--	--	--	--	--	--	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
31/F	111.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	60	60	60	60	61	61	62	62	63	63	63	64
Max Noise Level		63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	61	62	63	63	64	64	64	65
Exceedance		0			0			0			0			0			0			0			0			0			0		

Floor	mPD	N2-31	N2-32	N2-33	N2-34	N2-35	N2-36	N2-37	N2-38	N2-39	N2-40	N2-41	N2-42	N2-43	N2-44	N2-45	N2-46	N2-47	N2-48	N2-49	N2-50	N2-51	N2-52	N2-53	N2-54	N2-55	N2-56	N2-57	N2-58	N2-59	N2-60
3/F	23.0	60	61	61	62	63	64	64	65	66	67	69	**74**	70	**71**	68	**71**	**76**	**75**	70	70	65	66	65	62	**71**	**71**	**71**	**72**	65	66
4/F	26.1	61	62	63	63	64	65	65	66	67	68	70	**73**	**73**	**74**	**73**	**75**	**77**	**77**	**75**	**76**	**72**	**73**	**71**	69	**76**	**76**	**76**	**76**	**71**	**72**
5/F	29.3	62	63	64	64	65	65	66	66	67	68	70	**74**	**73**	**74**	**74**	**76**	**77**	**76**	**76**	**76**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
6/F	32.4	63	64	64	64	65	65	66	66	66	67	68	70	**74**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
7/F	35.6	63	64	64	64	65	65	66	66	66	67	68	70	**73**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
8/F	38.7	64	64	64	64	65	65	66	66	66	67	68	69	**73**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
9/F	41.9	64	65	65	65	65	66	66	66	66	67	68	69	**73**	**73**	**73**	**73**	**75**	**76**	**76**	**75**	**75**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
10/F	45.0	65	65	65	66	66	66	66	67	67	67	68	69	**73**	**73**	**73**	**72**	**75**	**76**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**72**	**73**
11/F	48.2	65	65	66	66	66	66	66	67	67	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**73**
12/F	51.3	65	65	66	66	66	66	67	67	67	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**73**
13/F	54.5	65	65	66	66	66	66	67	67	67	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**72**
14/F	57.6	65	65	66	66	66	66	67	67	67	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
15/F	60.8	65	65	66	66	66	66	67	67	67	68	69	**72**	**72**	**72**	**71**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
16/F	63.9	65	65	65	66	66	66	67	67	67	68	69	**72**	**72**	**72**	**71**	**74**	**75**	**75**	**74**	**74**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
17/F	67.1	65	65	65	66	66	66	66	67	67	67	68	69	**72**	**71**	**72**	**71**	**74**	**75**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**75**	**75**	**71**	**72**
18/F	70.4	65	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**74**	**71**	**71**
19/F	73.5	65	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**74**	**71**	**71**
20/F	76.7	65	65	65	65	66	66	66	66	67	67	68	69	**71**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
21/F	79.8	65	65	65	65	66	66	66	66	66	67	67	68	**71**	**71**	**72**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
22/F	83.0	65	65	65	65	66	66	66	66	66	67	67	68	**71**	**71**	**71**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
23/F	86.1	64	65	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**73**	**74**	**74**	**73**	**74**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
24/F	89.3	64	65	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**73**	**74**	**74**	**73**	**73**	**73**	**71**	**72**	**71**	70	**74**	**74**	**74**	70	**71**
25/F	92.4	64	65	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**74**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**74**	70	**71**
26/F	95.6	64	65	65	65	65	66	66	66	66	67	68	**71**	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	70
27/F	98.7	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	70
28/F	101.9	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**73**	**73**	70	70
29/F	105.0	64	64	65	65	65	66	66	66	66	67	68	70	70	**71**	69	**72**	**73**	**73**	**73**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
30/F	108.2	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
31/F	111.3	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
Max Noise Level		65	65	66	66	66	67	67	67	67	68	70	**74**	**73**	**74**	**74**	**76**	**77**	**77**	**76**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
Exceedance		0		0		0		0		0			29							28					29				29		

Floor	mPD	N2-61	N2-62	N2-63	N2-64	N2-65	N2-66	N2-67	N2-68	N2-69	N2-70	N2-71	N2-72	N2-73	N2-74	N2-75	N2-76	N2-77	N2-78	N2-79	N2-80	N2-81	N2-82	N2-83	N2-84	N2-85
3/F	23.0	61	61	**75**	**75**	**75**	**75**	70	70	69	70	67	67	67	69	**71**	**74**	**77**	64	**77**	**77**	66	67	**77**	**77**	66
4/F	26.1	69	69	**77**	**77**	**77**	**77**	**74**	**75**	**74**	**75**	**72**	**72**	**72**	**74**	**76**	**77**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
5/F	29.3	**71**	**71**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**74**	**74**	**75**	**77**	**77**	**77**	70	**77**	**77**	**72**	**72**	**77**	**77**	**72**
6/F	32.4	**72**	**72**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**74**	**74**	**74**	**75**	**76**	**77**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
7/F	35.6	**71**	**72**	**76**	**76**	**77**	**77**	**75**	**76**	**76**	**76**	**74**	**74**	**74**	**75**	**76**	**76**	**77**	70	**76**	**77**	**71**	**72**	**77**	**77**	**72**
8/F	38.7	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**76**	**76**	**74**	**74**	**74**	**75**	**76**	**76**	**76**	70	**76**	**76**	**71**	**72**	**77**	**77**	**72**
9/F	41.9	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**76**	**74**	**74**	**74**	**75**	**76**	**76**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**72**
10/F	45.0	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**75**	**76**	**76**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**71**
11/F	48.2	70	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**74**	**74**	**74**	**75**	**75**	**76**	69	**76**	**76**	**71**	**71**	**76**	**76**	**71**
12/F	51.3	70	**71**	**75**	**76**	**76**	**76**	**74**	**75**	**75**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
13/F	54.5	70	70	**75**	**75**	**75**	**75**	**74**	**75**	**75**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
14/F	57.6	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**75**	69	**75**	**75**	70	70	**76**	**76**	**71**
15/F	60.8	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**74**	**75**	**75**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
16/F	63.9	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	70
17/F	67.1	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**73**	**74**	**74**	**75**	68	**75**	**75**	70	70	**75**	**75**	70
18/F	70.4	69	69	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**75**	68	**75**	**75**	69	70	**75**	**75**	70
19/F	73.5	69	69	**74**	**74**	**74**	**75**	**73**	**74**	**74**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**75**	68	**74**	**75**	69	70	**75**	**75**	70
20/F	76.7	69	69	**74**	**74**	**74**	**74**	**73**	**73**	**74**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**74**	68	**74**	**74**	69	70	**75**	**75**	70
21/F	79.8	69	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**74**	68	**74**	**74**	69	69	**75**	**75**	70
22/F	83.0	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**73**	**74**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
23/F	86.1	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	69
24/F	89.3	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	69
25/F	92.4	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**74**	67	**74**	**74**	68	69	**74**	**74**	69
26/F	95.6	68	68	**73**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
27/F	98.7	68	68	**73**	**73**	**73**	**73**	**72**	**73**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
28/F	101.9	68	68	**73**	**73**	**73**	**73**	**72**	**72**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
29/F	105.0	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
30/F	108.2	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**71**	**71**	**71**	**71**	**72**	**73**	**73**	67	**73**	**73**	68	68	**73**	**73**	69
31/F	111.3	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**71**	**71**	--	--	--	--	--	--	--	--	--	--	--	--	--
Max Noise Level		**72**	**72**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**74**	**74**	**74**	**75**	**77**	**77**	**77**	70	**77**	**77**	**72**	**72**	**77**	**77**	**72**
Exceedance		29				29				28				28					28				28			

Total no. of Flats:	1148
Total no. of Exceedance:	298
Compliance Level:	74%
Max. Noise Level for Tower:	77

Noted:
Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise at Selected Sensitive Receivers
Base Case (PM Peak Flow)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20
3/F	23.0	**73**	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	65	65
4/F	26.1	**73**	**71**	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
5/F	29.3	**72**	**72**	70	69	69	69	69	69	70	70	70	70	70	70	70	70	70	70	70	67
6/F	32.4	**72**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
7/F	35.6	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
8/F	38.7	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	69	69	67
9/F	41.9	**71**	**71**	70	70	70	70	69	69	70	69	69	70	69	69	69	69	69	69	69	67
10/F	45.0	**71**	**71**	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	67
11/F	48.2	**71**	**71**	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
12/F	51.3	**71**	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
13/F	54.5	**71**	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
14/F	57.6	**71**	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
15/F	60.8	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
16/F	63.9	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	66
17/F	67.1	70	70	69	69	69	69	69	69	69	69	69	69	69	69	68	68	68	68	68	66
18/F	70.4	70	69	69	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	66
19/F	73.5	70	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
20/F	76.7	70	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
21/F	79.8	70	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
22/F	83.0	70	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
23/F	86.1	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
24/F	89.3	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
25/F	92.4	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	67	65
26/F	95.6	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	67	67	67	65
27/F	98.7	69	68	68	68	68	68	68	68	68	68	68	68	68	68	67	67	67	67	67	65
28/F	101.9	69	68	68	68	68	68	68	68	68	68	68	67	67	67	67	67	67	67	67	65
29/F	105.0	69	68	68	68	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	65
30/F	108.2	69	68	68	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	65
31/F	111.3	69	68	68	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	65
Max Noise Level		**73**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
Exceedance		12				0			0			0			0			0			

Floor	mPD	N1-21	N1-22	N1-23	N1-24	N1-25	N1-26	N1-27	N1-28	N1-29	N1-30	N1-31	N1-32	N1-33	N1-34	N1-35	N1-36	N1-37	N1-38	N1-39	N1-40	N1-41	N1-42	N1-43	N1-44
3/F	23.0	63	46	47	47	47	48	48	48	48	48	48	48	48	47	47	47	47	47	47	47	47	47	48	52
4/F	26.1	65	47	48	48	48	49	49	49	49	49	49	49	49	48	48	47	47	47	47	47	47	48	49	56
5/F	29.3	65	47	49	49	50	50	50	50	51	51	51	51	51	50	49	48	48	48	48	48	48	49	51	57
6/F	32.4	65	48	51	51	52	52	53	53	53	54	54	54	53	52	50	50	50	49	48	49	49	50	54	61
7/F	35.6	65	49	55	56	56	57	57	57	58	58	58	58	58	56	53	52	52	50	49	49	50	51	58	64
8/F	38.7	65	52	57	58	59	60	60	60	61	61	61	61	61	59	55	54	54	51	50	50	51	53	59	64
9/F	41.9	65	55	60	60	61	61	61	62	62	62	62	62	62	60	57	56	56	53	51	52	52	54	60	65
10/F	45.0	66	58	61	61	62	62	62	62	63	63	63	62	62	61	58	57	57	54	53	54	54	56	61	65
11/F	48.2	66	59	62	62	62	63	63	63	63	63	63	63	62	61	59	58	58	56	54	55	56	58	62	66
12/F	51.3	66	60	62	63	63	63	63	63	63	64	64	63	63	62	59	59	59	57	56	57	58	59	62	66
13/F	54.5	66	60	63	63	63	63	64	64	64	64	64	63	63	62	60	60	60	58	57	58	59	60	63	66
14/F	57.6	66	60	63	63	63	64	64	64	64	64	64	64	63	62	61	60	60	59	58	59	60	61	64	67
15/F	60.8	66	60	63	63	64	64	64	64	64	64	64	64	64	63	61	61	61	60	59	60	61	62	64	67
16/F	63.9	66	60	63	63	64	64	64	64	64	64	64	64	64	63	62	61	61	61	60	61	62	63	64	67
17/F	67.1	65	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	61	61	62	62	63	65	67
18/F	70.4	65	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	65	67
19/F	73.5	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	62	62	62	62	62	63	63	65	67
20/F	76.7	65	61	63	63	64	64	64	64	64	65	65	65	64	64	63	62	63	62	62	62	63	64	65	67
21/F	79.8	65	61	63	63	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	62	63	64	65	67
22/F	83.0	65	61	63	63	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	63	63	64	65	67
23/F	86.1	65	61	63	63	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
24/F	89.3	65	61	63	63	64	64	64	64	64	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
25/F	92.4	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
26/F	95.6	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
27/F	98.7	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
28/F	101.9	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
29/F	105.0	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
30/F	108.2	65	61	63	63	64	64	64	64	64	64	65	64	64	64	63	63	63	63	62	63	63	64	65	67
31/F	111.3	65	61	63	63	64	64	64	64	64	64	65	64	64	64	63	63	63	63	62	63	63	64	65	67
Max Noise Level		66	61	63	63	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
Exceedance		0				0			0			0			0			0			0			0	

Predicted Road Traffic Noise at Selected Sensitive Receivers
Base Case (PM Peak Flow)

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23	N2-24	N2-25	N2-26	N2-27	N2-28	N2-29	N2-30
3/F	23.0	50	52	54	54	53	53	53	51	51	53	53	53	53	53	53	54	54	54	55	55	55	55	55	56	56	56	57	58	58	59
4/F	26.1	53	54	55	56	56	55	55	53	53	54	54	54	54	54	55	55	56	56	56	56	56	56	57	57	58	58	58	59	59	60
5/F	29.3	56	56	57	57	57	56	56	54	54	55	55	55	55	55	56	56	57	57	57	57	57	58	58	59	59	59	59	60	60	61
6/F	32.4	57	57	58	57	57	57	56	55	55	56	56	56	56	56	56	57	58	58	58	58	58	58	59	59	59	60	60	61	61	62
7/F	35.6	58	58	58	58	57	57	57	55	55	56	56	56	56	57	57	58	58	58	58	58	58	59	59	60	60	60	61	61	62	63
8/F	38.7	59	59	59	58	58	58	57	56	56	57	57	57	57	57	58	58	58	58	58	59	59	59	60	61	61	61	62	62	63	63
9/F	41.9	61	59	59	59	59	58	58	57	57	58	58	57	58	58	58	58	58	58	59	59	59	59	60	61	62	62	63	63	63	64
10/F	45.0	61	60	60	60	59	59	58	57	57	58	58	58	58	58	58	59	59	59	59	59	59	60	61	61	62	63	63	63	64	64
11/F	48.2	62	61	60	60	60	59	59	58	58	58	58	58	58	58	59	59	59	59	59	59	60	60	61	61	62	63	63	63	64	64
12/F	51.3	62	61	61	60	60	60	59	58	58	59	59	59	59	59	59	59	59	59	59	59	60	60	61	62	62	63	63	63	64	64
13/F	54.5	62	62	61	61	60	60	59	59	58	59	59	59	59	59	59	59	59	59	59	59	60	60	61	61	62	63	63	63	64	64
14/F	57.6	63	62	61	61	60	60	60	59	59	59	59	59	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
15/F	60.8	63	62	61	61	60	60	60	59	59	59	59	59	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
16/F	63.9	63	62	61	61	60	60	60	59	59	60	60	59	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
17/F	67.1	63	62	61	61	61	60	60	59	59	60	60	60	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
18/F	70.4	63	62	61	61	61	60	60	59	59	60	60	60	59	59	59	59	59	59	60	60	60	60	61	61	62	62	63	63	64	64
19/F	73.5	63	62	61	61	61	60	60	59	59	60	60	60	60	59	59	59	59	59	60	60	60	60	61	61	62	62	63	63	64	64
20/F	76.7	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	59	59	59	60	60	60	60	61	61	62	62	63	63	64	64
21/F	79.8	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	63	63	64	64
22/F	83.0	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	63	63	64	64
23/F	86.1	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	63	63	64	64
24/F	89.3	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	63	63	64	64
25/F	92.4	62	62	61	61	60	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	63	63	64	64
26/F	95.6	62	62	61	61	60	60	60	59	59	60	60	60	60	59	59	60	59	59	60	60	60	60	61	61	62	62	63	63	63	63
27/F	98.7	62	62	61	61	60	60	60	59	59	60	60	60	60	59	59	59	59	59	60	60	60	60	61	61	62	62	63	63	63	63
28/F	101.9	62	62	61	61	60	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	63	63	63	63
29/F	105.0	62	62	61	61	61	60	60	59	59	59	60	60	60	60	59	59	59	59	60	60	60	60	61	61	62	62	63	63	63	63
30/F	108.2	--	--	--	--	--	--	--	--	60	60	60	60	60	60	60	60	60	59	60	60	60	60	60	61	61	62	62	63	63	63
31/F	111.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	60	60	60	60	61	61	61	62	62	63	63	63
Max Noise Level		63	62	61	61	61	60	60	59	60	60	60	60	60	60	60	60	60	60	60	60	60	60	61	62	62	63	63	63	64	64
Exceedance		0			0		0			0			0			0			0			0			0			0			

Floor	mPD	N2-31	N2-32	N2-33	N2-34	N2-35	N2-36	N2-37	N2-38	N2-39	N2-40	N2-41	N2-42	N2-43	N2-44	N2-45	N2-46	N2-47	N2-48	N2-49	N2-50	N2-51	N2-52	N2-53	N2-54	N2-55	N2-56	N2-57	N2-58	N2-59	N2-60
3/F	23.0	59	60	61	61	62	63	64	65	66	67	69	**73**	69	70	67	70	**75**	**74**	69	69	65	66	63	60	70	70	**71**	**71**	64	65
4/F	26.1	61	62	62	63	64	65	65	66	67	68	69	**73**	**72**	**73**	**72**	**74**	**76**	**76**	**74**	**75**	70	**71**	70	67	**75**	**75**	**75**	**75**	70	**71**
5/F	29.3	62	63	63	64	65	65	66	66	67	68	69	**73**	**72**	**73**	**73**	**75**	**76**	**75**	**75**	**75**	**72**	**73**	**72**	70	**75**	**75**	**75**	**76**	**71**	**72**
6/F	32.4	63	64	64	65	65	65	66	66	67	68	69	**73**	**73**	**73**	**73**	**74**	**75**	**75**	**75**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
7/F	35.6	63	64	64	65	65	65	66	66	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
8/F	38.7	63	64	64	65	65	65	66	66	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
9/F	41.9	64	64	65	65	65	66	66	66	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
10/F	45.0	64	65	65	65	66	66	66	66	67	68	69	**72**	**72**	**72**	**72**	**74**	**75**	**75**	**74**	**74**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
11/F	48.2	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**75**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**75**	**75**	**75**	**71**	**72**
12/F	51.3	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**75**	**71**	**71**
13/F	54.5	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
14/F	57.6	65	65	65	66	66	66	66	67	67	68	69	**71**	**71**	**72**	**71**	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
15/F	60.8	65	65	65	65	66	66	66	67	67	67	68	**71**	**71**	**71**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
16/F	63.9	64	65	65	65	66	66	66	66	67	67	68	**71**	**71**	**71**	70	**73**	**74**	**74**	**73**	**74**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
17/F	67.1	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**74**	**74**	**73**	**73**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	70
18/F	70.4	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**74**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**74**	**74**	70	70
19/F	73.5	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**73**	**73**	70	70
20/F	76.7	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**73**	**73**	69	70
21/F	79.8	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	69	**72**	**73**	**73**	**73**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
22/F	83.0	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
23/F	86.1	64	64	65	65	65	66	66	66	66	67	68	70	69	70	69	**72**	**73**	**73**	**72**	**73**	70	**71**	70	69	**73**	**73**	**73**	**73**	69	70
24/F	89.3	64	64	65	65	65	66	66	66	66	67	68	70	69	70	69	**71**	**73**	**73**	**72**	**73**	70	**71**	70	69	**73**	**73**	**73**	**73**	69	69
25/F	92.4	64	64	64	65	65	66	66	66	66	67	67	70	69	70	69	**71**	**73**	**73**	**72**	**72**	70	**71**	69	68	**73**	**73**	**73**	**73**	69	69
26/F	95.6	64	64	64	65	65	65	66	66	66	67	67	70	69	70	69	**71**	**73**	**72**	**72**	**72**	70	**71**	69	68	**72**	**73**	**73**	**73**	69	69
27/F	98.7	64	64	64	65	65	65	66	66	66	67	67	70	69	70	69	**71**	**73**	**72**	**72**	**72**	70	**71**	69	68	**72**	**72**	**73**	**73**	68	69
28/F	101.9	64	64	64	65	65	65	65	66	66	66	67	69	69	70	69	**71**	**72**	**72**	**72**	**72**	70	**71**	69	68	**72**	**72**	**72**	**72**	68	69
29/F	105.0	64	64	64	65	65	65	65	66	66	66	67	69	69	70	68	**71**	**72**	**72**	**72**	**72**	70	**71**	69	68	**72**	**72**	**72**	**72**	68	69
30/F	108.2	64	64	64	64	65	65	65	66	66	66	67	69	69	69	68	**71**	**72**	**72**	**72**	**72**	70	70	69	68	**72**	**72**	**72**	**72**	68	69
31/F	111.3	64	64	64	64	65	65	65	66	66	66	67	69	69	69	68	**71**	**72**	**72**	**72**	**72**	70	70	69	68	**72**	**72**	**72**	**72**	68	69
Max Noise Level		65	65	65	66	66	66	66	67	67	68	69	**73**	**73**	**73**	**73**	**75**	**76**	**76**	**75**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**76**	**72**	**72**
Exceedance		0		0		0		0		0			29							28				28				29			

Floor	mPD	N2-61	N2-62	N2-63	N2-64	N2-65	N2-66	N2-67	N2-68	N2-69	N2-70	N2-71	N2-72	N2-73	N2-74	N2-75	N2-76	N2-77	N2-78	N2-79	N2-80	N2-81	N2-82	N2-83	N2-84	N2-85
3/F	23.0	59	60	**74**	**74**	**74**	**74**	69	70	69	69	66	66	66	68	**71**	**74**	**77**	65	**76**	**77**	67	67	**77**	**77**	66
4/F	26.1	67	67	**76**	**76**	**76**	**76**	**74**	**74**	**74**	**74**	**71**	**72**	**71**	**73**	**75**	**76**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
5/F	29.3	70	70	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**72**	**74**	**76**	**76**	**77**	70	**76**	**77**	**71**	**72**	**77**	**77**	**72**
6/F	32.4	70	70	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**73**	**74**	**76**	**76**	**77**	70	**76**	**77**	**71**	**72**	**77**	**77**	**72**
7/F	35.6	70	70	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**74**	**76**	**76**	**76**	70	**76**	**76**	**71**	**72**	**77**	**77**	**72**
8/F	38.7	70	70	**75**	**75**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**72**
9/F	41.9	70	70	**75**	**75**	**75**	**75**	**74**	**75**	**75**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**72**
10/F	45.0	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**75**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**71**
11/F	48.2	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
12/F	51.3	69	69	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**74**	**75**	**76**	69	**75**	**75**	70	**71**	**76**	**76**	**71**
13/F	54.5	69	69	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**73**	**74**	**74**	**75**	69	**75**	**75**	70	**71**	**76**	**76**	**71**
14/F	57.6	69	69	**74**	**74**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**73**	**74**	**74**	**75**	69	**75**	**75**	70	**71**	**75**	**75**	**71**
15/F	60.8	68	69	**74**	**74**	**74**	**74**	**73**	**74**	**74**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
16/F	63.9	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**74**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
17/F	67.1	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**74**	**72**	**72**	**72**	**72**	**74**	**74**	**75**	69	**75**	**75**	69	70	**75**	**75**	70
18/F	70.4	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**72**	**72**	**71**	**72**	**73**	**74**	**75**	68	**74**	**75**	69	70	**75**	**75**	70
19/F	73.5	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**72**	**72**	**71**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	70	**75**	**75**	70
20/F	76.7	67	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	70	**74**	**75**	70
21/F	79.8	67	68	**73**	**73**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	70	**74**	**74**	70
22/F	83.0	67	68	**73**	**73**	**73**	**73**	**72**	**73**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
23/F	86.1	67	67	**73**	**73**	**73**	**73**	**72**	**73**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
24/F	89.3	67	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**73**	**71**	**71**	**71**	**71**	**73**	**73**	**74**	68	**74**	**74**	68	69	**74**	**74**	69
25/F	92.4	67	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**71**	**71**	70	**71**	**73**	**73**	**74**	68	**73**	**74**	68	69	**74**	**74**	69
26/F	95.6	67	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**71**	**71**	70	**71**	**72**	**72**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
27/F	98.7	66	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**71**	**71**	70	**71**	**72**	**72**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
28/F	101.9	66	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	**71**	70	**71**	**72**	**72**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
29/F	105.0	66	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	**71**	70	**71**	**72**	**72**	**73**	67	**73**	**73**	68	69	**73**	**73**	69
30/F	108.2	66	67	**72**	**72**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	70	**71**	**72**	**72**	**73**	67	**73**	**73**	68	69	**73**	**73**	69
31/F	111.3	66	66	**72**	**72**	**72**	**72**	**71**	**72**	**72**	**72**	70	70	--	--	--	--	--	--	--	--	--	--	--	--	--
Max Noise Level		70	70	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**74**	**76**	**76**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
Exceedance		29				29				28				28					28				28			

Total no. of Flats:	1148
Total no. of Exceedance:	296
Compliance Level:	74%
Max. Noise Level for Tower:	77

Noted:
Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise at Selected Sensitive Receivers
Base Case (Combined Case)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20
3/F	23.0	**73**	66	65	65	65	65	65	65	65	65	65	65	65	65	66	65	66	66	66	66
4/F	26.1	**73**	**72**	70	69	69	69	70	70	70	70	70	70	70	70	70	70	70	70	70	68
5/F	29.3	**73**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
6/F	32.4	**72**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
7/F	35.6	**72**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
8/F	38.7	**72**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
9/F	41.9	**71**	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
10/F	45.0	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
11/F	48.2	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
12/F	51.3	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
13/F	54.5	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
14/F	57.6	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	69	69	67
15/F	60.8	**71**	70	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	67
16/F	63.9	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
17/F	67.1	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
18/F	70.4	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
19/F	73.5	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
20/F	76.7	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
21/F	79.8	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
22/F	83.0	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	66
23/F	86.1	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	66
24/F	89.3	70	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	68	68	68	66
25/F	92.4	70	69	69	69	69	69	69	69	69	68	69	69	68	68	68	68	68	68	68	66
26/F	95.6	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
27/F	98.7	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
28/F	101.9	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
29/F	105.0	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
30/F	108.2	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
31/F	111.3	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
Max Noise Level		**73**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
Exceedance		13				0			0			0			0			0			

Floor	mPD	N1-21	N1-22	N1-23	N1-24	N1-25	N1-26	N1-27	N1-28	N1-29	N1-30	N1-31	N1-32	N1-33	N1-34	N1-35	N1-36	N1-37	N1-38	N1-39	N1-40	N1-41	N1-42	N1-43	N1-44
3/F	23.0	64	47	48	48	48	48	48	48	48	48	48	48	48	48	47	47	47	47	47	47	47	47	48	52
4/F	26.1	66	47	48	48	49	49	49	49	49	49	49	49	49	48	48	48	48	47	47	47	47	48	49	56
5/F	29.3	66	47	50	50	50	50	51	51	51	51	51	51	51	50	49	48	48	48	48	48	48	49	51	57
6/F	32.4	66	48	52	52	53	53	53	53	54	54	54	54	53	52	50	50	50	49	48	49	49	50	54	61
7/F	35.6	66	49	56	56	57	58	58	58	58	58	59	58	58	56	53	52	52	50	49	49	50	51	58	64
8/F	38.7	66	52	58	59	60	60	61	61	61	61	61	61	61	59	55	54	54	51	50	50	51	53	59	65
9/F	41.9	66	55	60	61	61	62	62	62	62	63	63	62	62	60	57	56	56	53	51	52	52	54	60	65
10/F	45.0	66	58	62	62	62	62	63	63	63	63	63	63	62	61	58	57	57	54	53	54	54	56	61	65
11/F	48.2	66	59	62	63	63	63	63	63	63	63	64	63	62	61	59	58	58	56	54	55	56	58	62	66
12/F	51.3	66	60	63	63	63	63	63	64	64	64	64	63	63	62	59	59	59	57	56	57	58	59	62	66
13/F	54.5	66	60	63	63	63	64	64	64	64	64	64	63	63	62	60	60	60	58	57	58	59	60	63	66
14/F	57.6	66	60	63	63	64	64	64	64	64	64	64	64	63	62	61	60	60	59	58	59	60	61	64	67
15/F	60.8	66	60	63	63	64	64	64	64	64	64	64	64	64	63	61	61	61	60	59	60	61	62	64	67
16/F	63.9	66	60	63	63	64	64	64	64	64	64	64	64	64	63	62	61	61	61	60	61	62	63	64	67
17/F	67.1	66	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	61	61	62	62	63	65	67
18/F	70.4	66	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	65	67
19/F	73.5	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	62	62	62	62	62	63	63	65	67
20/F	76.7	66	61	63	64	64	64	64	64	64	65	65	65	64	64	63	62	63	62	62	62	63	64	65	67
21/F	79.8	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	62	63	64	65	67
22/F	83.0	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	63	63	64	65	67
23/F	86.1	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
24/F	89.3	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
25/F	92.4	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
26/F	95.6	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
27/F	98.7	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
28/F	101.9	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
29/F	105.0	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
30/F	108.2	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
31/F	111.3	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
Max Noise Level		66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
Exceedance		0				0			0			0			0			0			0			0	

Predicted Road Traffic Noise at Selected Sensitive Receivers
Base Case (Combined Case)

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23	N2-24	N2-25	N2-26	N2-27	N2-28	N2-29	N2-30
3/F	23.0	52	53	55	55	55	54	54	52	52	54	54	53	53	54	54	54	54	55	56	56	55	56	56	56	57	57	58	58	59	59
4/F	26.1	54	56	57	57	57	57	56	54	54	55	55	55	55	55	55	56	56	57	57	57	57	57	57	58	58	59	59	60	60	61
5/F	29.3	57	58	59	58	58	58	57	55	55	56	56	56	56	56	56	57	57	58	58	58	58	58	59	59	59	59	60	61	61	62
6/F	32.4	59	59	59	59	58	58	58	56	56	57	57	56	56	57	57	58	58	58	58	59	59	59	59	59	60	60	61	61	62	62
7/F	35.6	59	59	59	59	59	59	58	56	56	57	57	57	57	57	58	58	58	58	59	59	59	59	60	60	60	61	61	62	62	63
8/F	38.7	60	60	60	60	59	59	58	57	57	58	58	58	58	58	58	58	59	59	59	59	59	59	60	61	62	62	62	63	63	63
9/F	41.9	62	61	61	60	60	59	59	58	57	58	58	58	58	58	58	59	59	59	59	59	60	60	61	62	62	63	63	63	64	64
10/F	45.0	62	61	61	61	60	60	59	58	58	59	59	58	58	58	59	59	59	59	59	60	60	60	61	62	63	63	63	64	64	64
11/F	48.2	63	62	61	61	61	60	60	59	58	59	59	59	59	59	59	59	59	59	59	60	60	60	61	62	63	63	64	64	64	65
12/F	51.3	63	62	62	61	61	60	60	59	59	59	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
13/F	54.5	63	62	62	61	61	61	60	59	59	60	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
14/F	57.6	63	62	62	62	61	61	60	59	59	60	60	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	63	64	64	65
15/F	60.8	63	62	62	62	61	61	60	60	59	60	60	60	59	59	59	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
16/F	63.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
17/F	67.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
18/F	70.4	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
19/F	73.5	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
20/F	76.7	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
21/F	79.8	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
22/F	83.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
23/F	86.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
24/F	89.3	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
25/F	92.4	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
26/F	95.6	63	62	62	62	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
27/F	98.7	63	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
28/F	101.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
29/F	105.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
30/F	108.2	--	--	--	--	--	--	--	--	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
31/F	111.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	60	60	60	60	61	61	62	62	63	63	63	64
Max Noise Level		63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	61	62	63	63	64	64	64	65
Exceedance		0			0		0			0			0			0			0			0			0			0			

Floor	mPD	N2-31	N2-32	N2-33	N2-34	N2-35	N2-36	N2-37	N2-38	N2-39	N2-40	N2-41	N2-42	N2-43	N2-44	N2-45	N2-46	N2-47	N2-48	N2-49	N2-50	N2-51	N2-52	N2-53	N2-54	N2-55	N2-56	N2-57	N2-58	N2-59	N2-60
3/F	23.0	60	61	61	62	63	64	64	65	66	67	69	**74**	70	**71**	68	**71**	**76**	**75**	70	70	65	66	65	62	**71**	**71**	**71**	**72**	65	66
4/F	26.1	61	62	63	63	64	65	65	66	67	68	70	**73**	**73**	**74**	**73**	**75**	**77**	**77**	**75**	**76**	**72**	**73**	**71**	69	**76**	**76**	**76**	**76**	**71**	**72**
5/F	29.3	62	63	64	64	65	65	66	66	67	68	70	**74**	**73**	**74**	**74**	**76**	**77**	**76**	**76**	**76**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
6/F	32.4	63	64	64	65	65	66	66	66	67	68	70	**74**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
7/F	35.6	63	64	64	65	65	66	66	66	67	68	70	**73**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
8/F	38.7	64	64	64	65	65	66	66	66	67	68	69	**73**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
9/F	41.9	64	65	65	65	66	66	66	66	67	68	69	**73**	**73**	**73**	**73**	**75**	**76**	**76**	**75**	**75**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
10/F	45.0	65	65	65	66	66	66	66	67	67	67	68	**73**	**73**	**73**	**72**	**75**	**76**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**72**	**73**
11/F	48.2	65	65	66	66	66	66	67	67	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**73**
12/F	51.3	65	65	66	66	66	66	67	67	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**73**
13/F	54.5	65	65	66	66	66	66	67	67	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**72**
14/F	57.6	65	65	66	66	66	66	67	67	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
15/F	60.8	65	65	66	66	66	66	67	67	67	68	69	**72**	**72**	**72**	**71**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
16/F	63.9	65	65	65	66	66	66	67	67	67	68	69	**72**	**72**	**72**	**71**	**74**	**75**	**75**	**74**	**74**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
17/F	67.1	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**74**	**75**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**75**	**75**	**71**	**72**
18/F	70.4	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**74**	**71**	**71**
19/F	73.5	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**74**	**71**	**71**
20/F	76.7	65	65	65	66	66	66	66	67	67	68	69	**71**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
21/F	79.8	65	65	65	66	66	66	66	66	67	67	68	**71**	**71**	**72**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
22/F	83.0	65	65	65	65	66	66	66	66	67	67	68	**71**	**71**	**71**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
23/F	86.1	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**73**	**74**	**74**	**73**	**74**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
24/F	89.3	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**73**	**74**	**74**	**73**	**73**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
25/F	92.4	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**74**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**74**	70	**71**
26/F	95.6	64	65	65	65	65	66	66	66	66	67	68	**71**	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	70
27/F	98.7	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	70
28/F	101.9	64	65	65	65	66	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**73**	**73**	70	70
29/F	105.0	64	64	65	65	65	66	66	66	66	67	68	70	70	**71**	69	**72**	**73**	**73**	**73**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
30/F	108.2	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
31/F	111.3	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
Max Noise Level		65	65	66	66	66	67	67	67	67	68	70	**74**	**73**	**74**	**74**	**76**	**77**	**77**	**76**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
Exceedance		0		0		0		0		0			29				28			29			29								

Floor	mPD	N2-61	N2-62	N2-63	N2-64	N2-65	N2-66	N2-67	N2-68	N2-69	N2-70	N2-71	N2-72	N2-73	N2-74	N2-75	N2-76	N2-77	N2-78	N2-79	N2-80	N2-81	N2-82	N2-83	N2-84	N2-85
3/F	23.0	61	61	**75**	**75**	**75**	**75**	70	70	69	70	67	67	67	69	**71**	**74**	**77**	65	**77**	**77**	67	67	**77**	**77**	66
4/F	26.1	69	69	**77**	**77**	**77**	**77**	**74**	**75**	**74**	**75**	**72**	**72**	**72**	**74**	**76**	**77**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
5/F	29.3	**71**	**71**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**74**	**74**	**75**	**77**	**77**	**77**	70	**77**	**77**	**72**	**72**	**77**	**77**	**72**
6/F	32.4	**72**	**72**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**74**	**74**	**74**	**75**	**76**	**77**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
7/F	35.6	**71**	**72**	**76**	**76**	**77**	**77**	**75**	**76**	**76**	**76**	**74**	**74**	**74**	**75**	**76**	**76**	**77**	70	**76**	**77**	**71**	**72**	**77**	**77**	**72**
8/F	38.7	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**76**	**76**	**74**	**74**	**74**	**75**	**76**	**76**	**76**	70	**76**	**76**	**71**	**72**	**77**	**77**	**72**
9/F	41.9	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**76**	**74**	**74**	**74**	**75**	**76**	**76**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**72**
10/F	45.0	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**75**	**76**	**76**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**71**
11/F	48.2	70	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**74**	**74**	**74**	**75**	**75**	**76**	69	**76**	**76**	**71**	**71**	**76**	**76**	**71**
12/F	51.3	70	**71**	**75**	**76**	**76**	**76**	**74**	**75**	**75**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
13/F	54.5	70	70	**75**	**75**	**75**	**75**	**74**	**75**	**75**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
14/F	57.6	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**75**	**73**	**73**	**73**	**74**	**75**	**75**	**75**	69	**75**	**75**	70	**71**	**76**	**76**	**71**
15/F	60.8	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**74**	**75**	**75**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
16/F	63.9	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
17/F	67.1	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**73**	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	70
18/F	70.4	69	69	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**75**	68	**75**	**75**	69	70	**75**	**75**	70
19/F	73.5	69	69	**74**	**74**	**74**	**75**	**73**	**74**	**74**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**75**	68	**74**	**75**	69	70	**75**	**75**	70
20/F	76.7	69	69	**74**	**74**	**74**	**74**	**73**	**73**	**74**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**74**	68	**74**	**74**	69	70	**75**	**75**	70
21/F	79.8	69	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**74**	**72**	**72**	**72**	**73**	**74**	**74**	**74**	68	**74**	**74**	69	70	**75**	**75**	70
22/F	83.0	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**73**	**74**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
23/F	86.1	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
24/F	89.3	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	**72**	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	69
25/F	92.4	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**74**	68	**74**	**74**	68	69	**74**	**74**	69
26/F	95.6	68	68	**73**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
27/F	98.7	68	68	**73**	**73**	**73**	**73**	**72**	**73**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
28/F	101.9	68	68	**73**	**73**	**73**	**73**	**72**	**72**	**73**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
29/F	105.0	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**73**	**71**	**71**	**71**	**72**	**73**	**73**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
30/F	108.2	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**71**	**71**	**71**	**71**	**72**	**73**	**73**	67	**73**	**73**	68	69	**73**	**73**	69
31/F	111.3	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	**71**	**71**	--	--	--	--	--	--	--	--	--	--	--	--	--
Max Noise Level		**72**	**72**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**74**	**74**	**74**	**75**	**77**	**77**	**77**	70	**77**	**77**	**72**	**72**	**77**	**77**	**72**
Exceedance		29				29				28				28					28				28			

Total no. of Flats:	1148
Total no. of Exceedance:	298
Compliance Level:	74%
Max. Noise Level for Tower:	77

Noted:

Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (AM Peak Flow)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20
3/F	23.0	**73**	66	65	65	65	65	65	65	65	65	65	65	65	65	66	65	66	66	66	66
4/F	26.1	**73**	**72**	70	69	69	69	70	70	70	70	70	70	70	70	70	70	70	70	70	68
5/F	29.3	**73**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
6/F	32.4	**72**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
7/F	35.6	**72**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
8/F	38.7	**72**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
9/F	41.9	**71**	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
10/F	45.0	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
11/F	48.2	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
12/F	51.3	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
13/F	54.5	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
14/F	57.6	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	69	69	67
15/F	60.8	**71**	70	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	67
16/F	63.9	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
17/F	67.1	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
18/F	70.4	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
19/F	73.5	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
20/F	76.7	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
21/F	79.8	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
22/F	83.0	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	66
23/F	86.1	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	66
24/F	89.3	70	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	68	68	68	66
25/F	92.4	70	69	69	69	69	69	69	69	69	68	69	69	68	68	68	68	68	68	68	66
26/F	95.6	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
27/F	98.7	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
28/F	101.9	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
29/F	105.0	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
30/F	108.2	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
31/F	111.3	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
Max Noise Level		**73**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
Exceedance		13				0			0			0			0			0			

Floor	mPD	N1-21	N1-22	N1-23	N1-24	N1-25	N1-26	N1-27	N1-28	N1-29	N1-30	N1-31	N1-32	N1-33	N1-34	N1-35	N1-36	N1-37	N1-38	N1-39	N1-40	N1-41	N1-42	N1-43	N1-44
3/F	23.0	64	47	48	48	48	48	48	48	48	48	48	48	48	48	47	47	47	47	47	47	47	47	48	52
4/F	26.1	66	47	48	48	49	49	49	49	49	49	49	49	49	48	48	48	48	47	47	47	47	48	49	55
5/F	29.3	66	47	50	50	50	50	51	51	51	51	51	51	51	50	48	48	48	48	47	48	48	48	50	57
6/F	32.4	66	48	52	52	53	53	53	53	54	54	54	54	53	52	50	49	49	48	48	48	48	49	53	61
7/F	35.6	66	49	56	56	57	58	58	58	58	58	59	58	58	56	52	51	51	49	49	49	49	50	57	64
8/F	38.7	66	51	58	59	60	60	61	61	61	61	61	61	61	58	55	54	54	50	49	50	50	52	59	65
9/F	41.9	66	55	60	61	61	62	62	62	62	63	63	62	62	60	57	56	55	52	50	51	52	53	60	65
10/F	45.0	66	57	62	62	62	62	63	63	63	63	63	63	62	61	58	57	56	53	52	53	53	55	61	65
11/F	48.2	66	58	62	63	63	63	63	63	63	63	64	63	62	61	58	58	57	55	53	54	55	57	61	66
12/F	51.3	66	59	63	63	63	63	63	64	64	64	64	63	63	61	59	58	58	56	55	56	56	58	62	66
13/F	54.5	66	60	63	63	63	64	64	64	64	64	64	63	63	62	60	59	59	57	56	57	58	59	63	66
14/F	57.6	66	60	63	63	64	64	64	64	64	64	64	64	63	62	60	60	59	58	57	58	59	60	63	66
15/F	60.8	66	60	63	63	64	64	64	64	64	64	64	64	63	62	61	60	60	59	58	59	60	61	63	67
16/F	63.9	66	60	63	63	64	64	64	64	64	64	64	64	64	63	61	61	61	60	59	60	60	61	64	67
17/F	67.1	66	60	63	63	64	64	64	64	64	64	65	64	64	63	61	61	61	60	60	60	61	62	64	67
18/F	70.4	66	60	63	63	64	64	64	64	64	65	65	64	64	63	62	61	61	61	60	61	61	62	64	67
19/F	73.5	66	60	63	64	64	64	64	64	64	65	65	64	64	63	62	61	62	61	60	61	61	62	64	67
20/F	76.7	66	60	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	61	61	61	62	63	64	67
21/F	79.8	66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	61	61	61	62	63	64	67
22/F	83.0	66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	61	61	61	62	63	64	67
23/F	86.1	66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	62	61	61	62	63	64	67
24/F	89.3	66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	62	61	61	62	63	64	67
25/F	92.4	66	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
26/F	95.6	66	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
27/F	98.7	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
28/F	101.9	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
29/F	105.0	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
30/F	108.2	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	64	67
31/F	111.3	65	61	63	64	64	64	64	64	64	65	65	64	64	63	62	62	62	62	62	62	62	63	64	67
Max Noise Level		66	61	63	64	64	64	64	64	65	65	65	64	64	63	62	62	62	62	62	62	62	63	64	67
Exceedance		0				0			0			0			0			0			0			0	

Predicted Road Traffic Noise at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (AM Peak Flow)

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23	N2-24	N2-25	N2-26	N2-27	N2-28	N2-29	N2-30
3/F	23.0	52	53	55	55	55	54	54	52	52	54	54	53	53	54	54	54	54	55	56	56	55	56	56	56	57	57	58	58	59	59
4/F	26.1	54	56	57	57	57	57	56	54	54	55	55	55	55	55	55	56	56	57	57	57	57	57	57	58	58	59	59	60	60	61
5/F	29.3	57	58	59	58	58	58	57	55	55	56	56	56	56	56	56	57	57	58	58	58	58	58	59	59	59	59	60	61	61	62
6/F	32.4	59	59	59	59	58	58	58	56	56	57	57	56	56	57	57	58	58	58	58	59	59	59	59	59	60	60	61	61	62	62
7/F	35.6	59	59	59	59	59	59	58	56	56	57	57	57	57	57	58	58	58	58	59	59	59	59	60	60	60	61	61	62	62	63
8/F	38.7	60	60	60	60	59	59	58	57	57	58	58	58	58	58	58	58	59	59	59	59	59	59	60	61	62	62	62	63	63	63
9/F	41.9	62	61	61	60	60	59	59	58	57	58	58	58	58	58	58	59	59	59	59	59	60	60	61	62	62	63	63	63	64	64
10/F	45.0	62	61	61	61	60	60	59	58	58	59	59	58	58	58	59	59	59	59	59	60	60	60	61	62	63	63	63	64	64	64
11/F	48.2	63	62	61	61	61	60	60	59	58	59	59	59	59	59	59	59	59	59	59	60	60	60	61	62	63	63	64	64	64	65
12/F	51.3	63	62	62	61	61	60	60	59	59	59	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
13/F	54.5	63	62	62	61	61	61	60	59	59	60	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
14/F	57.6	63	62	62	62	61	61	60	59	59	60	60	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	63	64	64	65
15/F	60.8	63	62	62	62	61	61	60	60	59	60	60	60	59	59	59	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
16/F	63.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
17/F	67.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
18/F	70.4	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
19/F	73.5	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
20/F	76.7	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
21/F	79.8	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
22/F	83.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
23/F	86.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
24/F	89.3	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
25/F	92.4	63	62	62	62	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
26/F	95.6	63	62	62	62	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
27/F	98.7	63	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
28/F	101.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
29/F	105.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
30/F	108.2	--	--	--	--	--	--	--	--	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
31/F	111.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	60	60	60	60	61	61	62	62	63	63	63	64
Max Noise Level		63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	61	62	63	63	64	64	64	65
Exceedance		0			0		0			0			0			0			0			0			0			0			

Floor	mPD	N2-31	N2-32	N2-33	N2-34	N2-35	N2-36	N2-37	N2-38	N2-39	N2-40	N2-41	N2-42	N2-43	N2-44	N2-45	N2-46	N2-47	N2-48	N2-49	N2-50	N2-51	N2-52	N2-53	N2-54	N2-55	N2-56	N2-57	N2-58	N2-59	N2-60
3/F	23.0	60	61	61	62	63	64	64	65	66	67	69	**74**	70	**71**	68	**71**	**76**	**75**	70	70	65	66	65	62	**71**	**71**	**71**	**72**	65	66
4/F	26.1	61	62	63	63	64	65	65	66	67	68	70	**73**	**73**	**74**	**73**	**75**	**77**	**77**	**75**	**76**	**72**	**73**	**71**	69	**76**	**76**	**76**	**76**	**71**	**72**
5/F	29.3	62	63	64	64	65	65	66	66	67	68	70	**74**	**73**	**74**	**74**	**76**	**77**	**76**	**76**	**76**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
6/F	32.4	63	64	64	65	65	66	66	66	67	68	70	**74**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
7/F	35.6	63	64	64	65	65	66	66	66	67	68	70	**73**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
8/F	38.7	64	64	64	65	65	66	66	66	67	68	69	**73**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
9/F	41.9	64	65	65	65	66	66	66	66	67	68	69	**73**	**73**	**73**	**73**	**75**	**76**	**76**	**75**	**75**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
10/F	45.0	65	65	65	66	66	66	66	67	67	67	68	**73**	**73**	**73**	**72**	**75**	**76**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**76**	**76**	**76**	**72**	**73**
11/F	48.2	65	65	66	66	66	66	67	67	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**73**
12/F	51.3	65	65	66	66	66	67	67	67	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**73**
13/F	54.5	65	65	66	66	66	67	67	67	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**72**
14/F	57.6	65	65	66	66	66	66	67	67	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
15/F	60.8	65	65	66	66	66	66	67	67	67	68	69	**72**	**72**	**72**	**71**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
16/F	63.9	65	65	65	66	66	66	67	67	67	68	69	**72**	**72**	**72**	**71**	**74**	**75**	**75**	**74**	**74**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
17/F	67.1	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**74**	**75**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**75**	**71**	**72**
18/F	70.4	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**74**	**71**	**71**
19/F	73.5	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**74**	**71**	**71**
20/F	76.7	65	65	65	66	66	66	66	67	67	68	69	**71**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
21/F	79.8	65	65	65	66	66	66	66	66	67	67	68	**71**	**71**	**72**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
22/F	83.0	65	65	65	65	66	66	66	66	67	67	68	**71**	**71**	**71**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
23/F	86.1	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**73**	**74**	**74**	**73**	**73**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
24/F	89.3	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**73**	**74**	**74**	**73**	**73**	**71**	**72**	**71**	70	**73**	**74**	**74**	**74**	70	**71**
25/F	92.4	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**74**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	**71**
26/F	95.6	64	65	65	65	65	66	66	66	66	67	68	**71**	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	70
27/F	98.7	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	70
28/F	101.9	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**73**	**73**	70	70
29/F	105.0	64	64	65	65	65	66	66	66	66	67	68	70	70	**71**	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
30/F	108.2	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
31/F	111.3	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
Max Noise Level		65	65	66	66	66	67	67	67	67	68	70	**74**	**73**	**74**	**74**	**76**	**77**	**77**	**76**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
Exceedance		0		0		0		0		0			29				28				29				29						

Floor	mPD	N2-61	N2-62	N2-63	N2-64	N2-65	N2-66	N2-67	N2-68	N2-69	N2-70	N2-71	N2-72	N2-73	N2-74	N2-75	N2-76	N2-77	N2-78	N2-79	N2-80	N2-81	N2-82	N2-83	N2-84	N2-85
3/F	23.0	61	61	**75**	**75**	**75**	**75**	70	70	69	70	66	67	66	67	**71**	**74**	**77**	64	**77**	**77**	66	67	**77**	**77**	66
4/F	26.1	69	69	**77**	**77**	**77**	**77**	**74**	**75**	**74**	**75**	**72**	**72**	**71**	**72**	**76**	**77**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
5/F	29.3	**71**	**71**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**73**	**72**	**73**	**77**	**77**	**77**	70	**77**	**77**	**72**	**72**	**77**	**77**	**72**
6/F	32.4	**72**	**72**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**74**	**73**	**74**	**76**	**76**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
7/F	35.6	**71**	**72**	**76**	**76**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**74**	**73**	**73**	**76**	**76**	**77**	70	**76**	**77**	**71**	**72**	**77**	**77**	**72**
8/F	38.7	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**76**	**73**	**74**	**73**	**73**	**76**	**76**	**76**	70	**76**	**76**	**71**	**72**	**77**	**77**	**72**
9/F	41.9	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**73**	**73**	**76**	**76**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**72**
10/F	45.0	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**73**	**73**	**76**	**75**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**71**
11/F	48.2	70	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**72**	**72**	**75**	**75**	**76**	69	**76**	**76**	**71**	**71**	**76**	**76**	**71**
12/F	51.3	70	**71**	**75**	**76**	**76**	**76**	**74**	**75**	**75**	**75**	**73**	**73**	**72**	**72**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
13/F	54.5	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**75**	**72**	**73**	**72**	**72**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
14/F	57.6	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**72**	**75**	**75**	**75**	69	**75**	**75**	70	70	**76**	**76**	**71**
15/F	60.8	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**72**	**72**	**75**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
16/F	63.9	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	70
17/F	67.1	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**75**	68	**75**	**75**	70	70	**75**	**75**	70
18/F	70.4	69	69	**75**	**75**	**75**	**75**	**73**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**75**	68	**75**	**75**	69	70	**75**	**75**	70
19/F	73.5	69	69	**74**	**74**	**74**	**74**	**73**	**74**	**74**	**74**	**71**	**72**	**71**	**71**	**74**	**74**	**75**	68	**74**	**75**	69	70	**75**	**75**	70
20/F	76.7	69	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	**71**	**74**	**74**	**74**	68	**74**	**74**	69	70	**75**	**75**	70
21/F	79.8	69	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	**71**	**71**	**74**	**73**	**74**	68	**74**	**74**	69	69	**75**	**75**	70
22/F	83.0	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
23/F	86.1	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	69
24/F	89.3	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	69
25/F	92.4	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	67	**74**	**74**	68	69	**74**	**74**	69
26/F	95.6	68	68	**73**	**74**	**74**	**74**	**72**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
27/F	98.7	68	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**73**	70	**71**	70	70	**73**	**73**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
28/F	101.9	68	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	**71**	70	70	**73**	**73**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
29/F	105.0	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	70	69	**73**	**72**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
30/F	108.2	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	69	69	**72**	**72**	**73**	67	**73**	**73**	68	68	**73**	**73**	69
31/F	111.3	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	--	--	--	--	--	--	--	--	--	--	--	--	--
Max Noise Level		**72**	**72**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**74**	**73**	**74**	**77**	**77**	**77**	70	**77**	**77**	**72**	**72**	**77**	**77**	**72**
Exceedance		29				29				28				28					28				28			

Total no. of Flats:	1148
Total no. of Exceedance:	298
Compliance Level:	74%
Max. Noise Level for Tower:	77

Noted:

Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (PM Peak Flow)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20
3/F	23.0	**73**	65	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	65	65
4/F	26.1	**73**	**71**	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
5/F	29.3	**72**	**72**	70	69	69	69	69	69	70	70	70	70	70	70	70	70	70	70	70	67
6/F	32.4	**72**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
7/F	35.6	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
8/F	38.7	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	69	69	67
9/F	41.9	**71**	**71**	70	70	70	70	69	69	70	69	69	70	69	69	69	69	69	69	69	67
10/F	45.0	**71**	**71**	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	67
11/F	48.2	**71**	**71**	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
12/F	51.3	**71**	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
13/F	54.5	**71**	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
14/F	57.6	**71**	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
15/F	60.8	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
16/F	63.9	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	66
17/F	67.1	70	70	69	69	69	69	69	69	69	69	69	69	69	69	68	68	68	68	68	66
18/F	70.4	70	69	69	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	66
19/F	73.5	70	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
20/F	76.7	70	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
21/F	79.8	70	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
22/F	83.0	70	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
23/F	86.1	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
24/F	89.3	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
25/F	92.4	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	67	65
26/F	95.6	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	67	67	67	65
27/F	98.7	69	68	68	68	68	68	68	68	68	68	68	68	68	68	67	67	67	67	67	65
28/F	101.9	69	68	68	68	68	68	68	68	68	68	68	67	67	67	67	67	67	67	67	65
29/F	105.0	69	68	68	68	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	65
30/F	108.2	69	68	68	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	65
31/F	111.3	69	68	68	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	65
Max Noise Level		**73**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
Exceedance		12				0			0			0			0			0			

Floor	mPD	N1-21	N1-22	N1-23	N1-24	N1-25	N1-26	N1-27	N1-28	N1-29	N1-30	N1-31	N1-32	N1-33	N1-34	N1-35	N1-36	N1-37	N1-38	N1-39	N1-40	N1-41	N1-42	N1-43	N1-44
3/F	23.0	63	46	47	47	47	48	48	48	48	48	48	48	48	47	47	47	47	47	47	47	47	47	48	52
4/F	26.1	65	47	48	48	48	49	49	49	49	49	49	49	49	48	48	47	47	47	47	47	47	48	49	56
5/F	29.3	65	47	49	49	50	50	50	50	51	51	51	51	51	50	49	48	48	48	48	48	48	49	51	57
6/F	32.4	65	48	51	51	52	52	53	53	53	54	54	54	53	52	50	50	50	49	48	49	49	50	54	61
7/F	35.6	65	49	55	56	56	57	57	57	58	58	58	58	58	56	53	52	52	50	49	49	50	51	58	64
8/F	38.7	65	52	57	58	59	60	60	60	61	61	61	61	61	59	55	54	54	51	50	50	51	53	59	64
9/F	41.9	65	55	60	60	61	61	61	62	62	62	62	62	62	60	57	56	56	53	51	52	52	54	60	65
10/F	45.0	66	58	61	61	62	62	62	62	63	63	63	62	62	61	58	57	57	54	53	54	54	56	61	65
11/F	48.2	66	59	62	62	62	63	63	63	63	63	63	63	62	61	59	58	58	56	54	55	56	58	62	66
12/F	51.3	66	60	62	63	63	63	63	63	63	64	64	63	63	62	59	59	59	57	56	57	58	59	62	66
13/F	54.5	66	60	63	63	63	63	64	64	64	64	64	63	63	62	60	60	60	58	57	58	59	60	63	66
14/F	57.6	66	60	63	63	63	64	64	64	64	64	64	64	63	62	61	60	60	59	58	59	60	61	64	67
15/F	60.8	66	60	63	63	64	64	64	64	64	64	64	64	64	63	61	61	61	60	59	60	61	62	64	67
16/F	63.9	66	60	63	63	64	64	64	64	64	64	64	64	64	63	62	61	61	61	60	61	62	63	64	67
17/F	67.1	65	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	61	61	62	62	63	65	67
18/F	70.4	65	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	65	67
19/F	73.5	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	62	62	62	62	62	63	63	65	67
20/F	76.7	65	61	63	63	64	64	64	64	64	65	65	65	64	64	63	62	63	62	62	62	63	64	65	67
21/F	79.8	65	61	63	63	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	62	63	64	65	67
22/F	83.0	65	61	63	63	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	63	63	64	65	67
23/F	86.1	65	61	63	63	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
24/F	89.3	65	61	63	63	64	64	64	64	64	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
25/F	92.4	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
26/F	95.6	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
27/F	98.7	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
28/F	101.9	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
29/F	105.0	65	61	63	63	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
30/F	108.2	65	61	63	63	64	64	64	64	64	64	65	64	64	64	63	63	63	63	62	63	63	64	65	67
31/F	111.3	65	61	63	63	64	64	64	64	64	64	65	64	64	64	63	63	63	63	62	63	63	64	65	67
Max Noise Level		66	61	63	63	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
Exceedance		0				0			0			0			0			0			0			0	

Predicted Road Traffic Noise at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (PM Peak Flow)

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23	N2-24	N2-25	N2-26	N2-27	N2-28	N2-29	N2-30
3/F	23.0	50	52	54	54	53	53	53	51	51	53	53	53	53	53	53	54	54	54	55	55	55	55	55	56	56	56	57	58	58	59
4/F	26.1	53	54	55	56	56	55	55	53	53	54	54	54	54	54	55	55	56	56	56	56	56	56	57	57	58	58	58	59	59	60
5/F	29.3	56	56	57	57	57	56	56	54	54	55	55	55	55	55	56	56	57	57	57	57	57	58	58	59	59	59	59	60	60	61
6/F	32.4	57	57	58	57	57	57	56	55	55	56	56	56	56	56	56	57	58	58	58	58	58	58	59	59	59	60	60	61	61	62
7/F	35.6	58	58	58	58	57	57	57	55	55	56	56	56	56	57	57	58	58	58	58	58	58	59	59	60	60	60	61	61	62	63
8/F	38.7	59	59	59	58	58	58	57	56	56	57	57	57	57	57	58	58	58	58	58	59	59	59	60	61	61	61	62	62	63	63
9/F	41.9	61	59	59	59	59	58	58	57	57	58	58	57	58	58	58	58	58	58	59	59	59	59	60	61	62	62	63	63	63	64
10/F	45.0	61	60	60	60	59	59	58	57	57	58	58	58	58	58	58	59	59	59	59	59	59	60	61	61	62	63	63	63	64	64
11/F	48.2	62	61	60	60	60	59	59	58	58	58	58	58	58	58	59	59	59	59	59	59	60	60	61	61	62	63	63	63	64	64
12/F	51.3	62	61	61	60	60	60	59	58	58	59	59	59	59	59	59	59	59	59	59	59	60	60	61	62	62	63	63	63	64	64
13/F	54.5	62	62	61	61	60	60	59	59	58	59	59	59	59	59	59	59	59	59	59	59	60	60	61	61	62	63	63	63	64	64
14/F	57.6	63	62	61	61	60	60	60	59	59	59	59	59	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
15/F	60.8	63	62	61	61	60	60	60	59	59	59	59	59	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
16/F	63.9	63	62	61	61	60	60	60	59	59	60	60	59	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
17/F	67.1	63	62	61	61	61	60	60	59	59	60	60	60	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
18/F	70.4	63	62	61	61	61	60	60	59	59	60	60	60	59	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
19/F	73.5	63	62	61	61	61	60	60	59	59	60	60	60	60	59	59	59	59	59	59	60	60	60	61	61	62	62	63	63	64	64
20/F	76.7	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	59	59	59	59	60	60	60	61	61	62	62	63	63	63	64
21/F	79.8	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	63	63	63	64
22/F	83.0	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	62	63	63	64
23/F	86.1	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	62	63	63	64
24/F	89.3	63	62	61	61	61	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	62	63	63	64
25/F	92.4	62	62	61	61	60	60	60	59	59	60	60	60	60	60	60	60	59	59	60	60	60	60	61	61	62	62	62	63	63	64
26/F	95.6	62	62	61	61	60	60	60	59	59	60	60	60	60	59	59	60	59	59	60	60	60	60	61	61	62	62	62	63	63	63
27/F	98.7	62	62	61	61	60	60	60	59	59	60	60	60	60	59	59	59	59	59	60	60	60	60	61	61	62	62	62	63	63	63
28/F	101.9	62	62	61	61	60	60	60	59	59	60	60	60	60	59	59	59	59	59	60	60	60	60	61	61	62	62	62	63	63	63
29/F	105.0	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
30/F	108.2	--	--	--	--	--	--	--	--	60	60	60	60	60	60	60	60	60	59	60	60	60	60	60	61	61	62	62	63	63	63
31/F	111.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	60	60	60	60	61	61	61	62	62	63	63	63
Max Noise Level		63	62	61	61	61	60	60	59	60	60	60	60	60	60	60	60	60	60	60	60	60	60	61	62	62	63	63	63	64	64
Exceedance		0			0		0			0			0			0			0			0			0			0			

Floor	mPD	N2-31	N2-32	N2-33	N2-34	N2-35	N2-36	N2-37	N2-38	N2-39	N2-40	N2-41	N2-42	N2-43	N2-44	N2-45	N2-46	N2-47	N2-48	N2-49	N2-50	N2-51	N2-52	N2-53	N2-54	N2-55	N2-56	N2-57	N2-58	N2-59	N2-60
3/F	23.0	59	60	61	61	62	63	64	65	66	67	69	**73**	69	70	67	70	**75**	**74**	69	69	65	66	63	60	70	70	**71**	**71**	64	65
4/F	26.1	61	62	62	63	64	65	65	66	67	68	69	**73**	**72**	**73**	**72**	**74**	**76**	**76**	**74**	**75**	70	**71**	70	67	**75**	**75**	**75**	**75**	70	**71**
5/F	29.3	62	63	63	64	65	65	66	66	67	68	69	**73**	**72**	**73**	**73**	**75**	**76**	**75**	**75**	**75**	**72**	**73**	**72**	70	**75**	**75**	**75**	**76**	**71**	**72**
6/F	32.4	63	64	64	65	65	65	66	66	67	68	69	**73**	**73**	**73**	**73**	**74**	**75**	**75**	**75**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
7/F	35.6	63	64	64	65	65	65	66	66	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
8/F	38.7	63	64	64	65	65	65	66	66	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
9/F	41.9	64	64	65	65	65	66	66	66	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
10/F	45.0	64	65	65	65	66	66	66	66	67	68	69	**72**	**72**	**72**	**72**	**74**	**75**	**75**	**74**	**74**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
11/F	48.2	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**75**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**75**	**75**	**75**	**71**	**72**
12/F	51.3	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**75**	**71**	**71**
13/F	54.5	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
14/F	57.6	65	65	65	66	66	66	66	67	67	68	69	**71**	**71**	**72**	**71**	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
15/F	60.8	65	65	65	65	66	66	66	67	67	67	68	**71**	**71**	**71**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
16/F	63.9	64	65	65	65	66	66	66	66	67	67	68	**71**	**71**	**71**	70	**73**	**74**	**74**	**73**	**74**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
17/F	67.1	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**74**	**74**	**73**	**73**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	70
18/F	70.4	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**74**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**74**	**74**	70	70
19/F	73.5	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**73**	**73**	70	70
20/F	76.7	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**73**	**73**	69	70
21/F	79.8	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	69	**72**	**73**	**73**	**73**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
22/F	83.0	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
23/F	86.1	64	64	65	65	65	66	66	66	66	67	68	70	69	70	69	**72**	**73**	**73**	**72**	**73**	70	**71**	70	69	**73**	**73**	**73**	**73**	69	70
24/F	89.3	64	64	65	65	65	66	66	66	66	67	68	70	69	70	69	**71**	**73**	**73**	**72**	**73**	70	**71**	70	69	**73**	**73**	**73**	**73**	69	69
25/F	92.4	64	64	64	65	65	66	66	66	66	67	67	70	69	70	69	**71**	**73**	**73**	**72**	**72**	70	**71**	69	68	**73**	**73**	**73**	**73**	69	69
26/F	95.6	64	64	64	65	65	65	66	66	66	67	67	70	69	70	69	**71**	**73**	**72**	**72**	**72**	70	**71**	69	68	**72**	**73**	**73**	**73**	69	69
27/F	98.7	64	64	64	65	65	65	66	66	66	67	67	70	69	70	69	**71**	**73**	**72**	**72**	**72**	70	**71**	69	68	**72**	**72**	**73**	**73**	68	69
28/F	101.9	64	64	64	65	65	65	65	66	66	66	67	69	69	70	69	**71**	**72**	**72**	**72**	**72**	70	**71**	69	68	**72**	**72**	**72**	**72**	68	69
29/F	105.0	64	64	64	65	65	65	66	66	66	66	67	69	69	70	68	**71**	**72**	**72**	**72**	**72**	70	**71**	69	68	**72**	**72**	**72**	**72**	68	69
30/F	108.2	64	64	64	64	65	65	65	66	66	66	67	69	69	69	68	**71**	**72**	**72**	**72**	**72**	70	70	69	68	**72**	**72**	**72**	**72**	68	69
31/F	111.3	64	64	64	64	65	65	65	66	66	66	67	69	69	69	68	**71**	**72**	**72**	**72**	**72**	70	70	69	68	**72**	**72**	**72**	**72**	68	69
Max Noise Level		65	65	65	66	66	66	66	67	67	68	69	**73**	**73**	**73**	**73**	**75**	**76**	**76**	**75**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**76**	**72**	**72**
Exceedance		0		0		0		0		0			29						28					28				29			

Floor	mPD	N2-61	N2-62	N2-63	N2-64	N2-65	N2-66	N2-67	N2-68	N2-69	N2-70	N2-71	N2-72	N2-73	N2-74	N2-75	N2-76	N2-77	N2-78	N2-79	N2-80	N2-81	N2-82	N2-83	N2-84	N2-85
3/F	23.0	59	60	**74**	**74**	**74**	**74**	69	70	69	69	65	66	64	65	**71**	**74**	**77**	65	**76**	**77**	67	67	**77**	**77**	66
4/F	26.1	67	67	**76**	**76**	**76**	**76**	**74**	**74**	**73**	**74**	**71**	**71**	69	70	**75**	**76**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
5/F	29.3	70	70	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**72**	**72**	**71**	**72**	**76**	**76**	**77**	70	**76**	**77**	**71**	**72**	**77**	**77**	**72**
6/F	32.4	70	70	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**72**	**73**	**72**	**72**	**76**	**76**	**77**	70	**76**	**77**	**71**	**72**	**77**	**77**	**72**
7/F	35.6	70	70	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**72**	**72**	**76**	**75**	**76**	70	**76**	**76**	**71**	**72**	**77**	**77**	**72**
8/F	38.7	70	70	**75**	**75**	**76**	**76**	**74**	**75**	**75**	**75**	**73**	**73**	**72**	**72**	**75**	**75**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**72**
9/F	41.9	70	70	**75**	**75**	**75**	**75**	**74**	**75**	**75**	**75**	**72**	**73**	**72**	**72**	**75**	**75**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**72**
10/F	45.0	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**75**	**75**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**71**
11/F	48.2	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
12/F	51.3	69	69	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**76**	69	**75**	**75**	70	**71**	**76**	**76**	**71**
13/F	54.5	69	69	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**75**	69	**75**	**75**	70	**71**	**76**	**76**	**71**
14/F	57.6	69	69	**74**	**74**	**75**	**75**	**73**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**75**	69	**75**	**75**	70	**71**	**75**	**75**	**71**
15/F	60.8	68	69	**74**	**74**	**74**	**74**	**73**	**74**	**74**	**74**	**71**	**72**	70	70	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
16/F	63.9	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**72**	70	70	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
17/F	67.1	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**74**	**74**	**75**	69	**75**	**75**	69	70	**75**	**75**	70
18/F	70.4	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**75**	68	**74**	**75**	69	70	**75**	**75**	70
19/F	73.5	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	68	**74**	**74**	69	70	**75**	**75**	70
20/F	76.7	67	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	69	**73**	**73**	**74**	68	**74**	**74**	69	70	**74**	**75**	70
21/F	79.8	67	68	**73**	**73**	**74**	**74**	**72**	**73**	**73**	**73**	70	**71**	69	69	**73**	**73**	**74**	68	**74**	**74**	69	70	**74**	**74**	70
22/F	83.0	67	68	**73**	**73**	**73**	**73**	**72**	**73**	**73**	**73**	70	**71**	69	69	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
23/F	86.1	67	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	**71**	69	69	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
24/F	89.3	67	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	69	69	**73**	**73**	**74**	68	**74**	**74**	68	69	**74**	**74**	69
25/F	92.4	67	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	69	69	**73**	**72**	**74**	68	**73**	**74**	68	69	**74**	**74**	69
26/F	95.6	67	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	69	69	**72**	**72**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
27/F	98.7	66	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	69	68	**72**	**72**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
28/F	101.9	66	67	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	68	68	**72**	**72**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
29/F	105.0	66	67	**72**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	69	70	68	68	**72**	**72**	**73**	67	**73**	**73**	68	69	**73**	**73**	69
30/F	108.2	66	67	**72**	**72**	**73**	**73**	**71**	**72**	**72**	**72**	69	70	68	68	**72**	**72**	**73**	67	**73**	**73**	68	69	**73**	**73**	69
31/F	111.3	66	66	**72**	**72**	**72**	**72**	**71**	**72**	**71**	**72**	69	70	--	--	--	--	--	--	--	--	--	--	--	--	--
Max Noise Level		70	70	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**72**	**72**	**76**	**76**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
Exceedance		29				29				28				28					28				28			

Total no. of Flats:	1148
Total no. of Exceedance:	296
Compliance Level:	74%
Max. Noise Level for Tower:	77

Noted:
Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (Combined Case)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20
3/F	23.0	**73**	66	65	65	65	65	65	65	65	65	65	65	65	65	66	65	66	66	66	66
4/F	26.1	**73**	**72**	70	69	69	69	70	70	70	70	70	70	70	70	70	70	70	70	70	68
5/F	29.3	**73**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
6/F	32.4	**72**	**72**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
7/F	35.6	**72**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
8/F	38.7	**72**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
9/F	41.9	**71**	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
10/F	45.0	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
11/F	48.2	**71**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
12/F	51.3	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
13/F	54.5	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
14/F	57.6	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	69	69	67
15/F	60.8	**71**	70	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	67
16/F	63.9	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
17/F	67.1	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
18/F	70.4	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
19/F	73.5	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
20/F	76.7	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
21/F	79.8	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
22/F	83.0	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	66
23/F	86.1	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	66
24/F	89.3	70	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	68	68	68	66
25/F	92.4	70	69	69	69	69	69	69	69	69	68	69	69	68	68	68	68	68	68	68	66
26/F	95.6	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
27/F	98.7	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
28/F	101.9	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
29/F	105.0	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
30/F	108.2	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
31/F	111.3	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
Max Noise Level		**73**	**72**	**71**	**71**	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
Exceedance		13				0			0			0			0			0			

Floor	mPD	N1-21	N1-22	N1-23	N1-24	N1-25	N1-26	N1-27	N1-28	N1-29	N1-30	N1-31	N1-32	N1-33	N1-34	N1-35	N1-36	N1-37	N1-38	N1-39	N1-40	N1-41	N1-42	N1-43	N1-44
3/F	23.0	64	47	48	48	48	48	48	48	48	48	48	48	48	48	47	47	47	47	47	47	47	47	48	52
4/F	26.1	66	47	48	48	49	49	49	49	49	49	49	49	49	48	48	48	48	47	47	47	47	48	49	56
5/F	29.3	66	47	50	50	50	50	51	51	51	51	51	51	51	50	49	48	48	48	48	48	48	49	51	57
6/F	32.4	66	48	52	52	53	53	53	53	54	54	54	54	53	52	50	50	50	49	48	49	49	50	54	61
7/F	35.6	66	49	56	56	57	58	58	58	58	58	59	58	58	56	53	52	52	50	49	49	50	51	58	64
8/F	38.7	66	52	58	59	60	60	61	61	61	61	61	61	61	59	55	54	54	51	50	50	51	53	59	65
9/F	41.9	66	55	60	61	61	62	62	62	62	63	63	62	62	60	57	56	56	53	51	52	52	54	60	65
10/F	45.0	66	58	62	62	62	62	63	63	63	63	63	63	62	61	58	57	57	54	53	54	54	56	61	65
11/F	48.2	66	59	62	63	63	63	63	63	63	63	64	63	62	61	59	58	58	56	54	55	56	58	62	66
12/F	51.3	66	60	63	63	63	63	63	64	64	64	64	63	63	62	59	59	59	57	56	57	58	59	62	66
13/F	54.5	66	60	63	63	63	64	64	64	64	64	64	63	63	62	60	60	60	58	57	58	59	60	63	66
14/F	57.6	66	60	63	63	64	64	64	64	64	64	64	64	63	62	61	60	60	59	58	59	60	61	64	67
15/F	60.8	66	60	63	63	64	64	64	64	64	64	64	64	64	63	61	61	61	60	59	60	61	62	64	67
16/F	63.9	66	60	63	63	64	64	64	64	64	64	64	64	64	63	62	61	61	61	60	61	62	63	64	67
17/F	67.1	66	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	61	61	62	62	63	65	67
18/F	70.4	66	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	65	67
19/F	73.5	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	62	62	62	62	62	63	63	65	67
20/F	76.7	66	61	63	64	64	64	64	64	64	65	65	65	64	64	63	62	63	62	62	62	63	64	65	67
21/F	79.8	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	62	63	64	65	67
22/F	83.0	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	63	63	64	65	67
23/F	86.1	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
24/F	89.3	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
25/F	92.4	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
26/F	95.6	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
27/F	98.7	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
28/F	101.9	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
29/F	105.0	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
30/F	108.2	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
31/F	111.3	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
Max Noise Level		66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
Exceedance		0				0			0			0			0			0			0			0	

Predicted Road Traffic Noise at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (Combined Case)

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23	N2-24	N2-25	N2-26	N2-27	N2-28	N2-29	N2-30
3/F	23.0	52	53	55	55	55	54	54	52	52	54	54	53	53	54	54	54	54	55	56	56	55	56	56	56	57	57	58	58	59	59
4/F	26.1	54	56	57	57	57	57	56	54	54	55	55	55	55	55	55	56	56	57	57	57	57	57	57	58	58	59	59	60	60	61
5/F	29.3	57	58	59	58	58	58	57	55	55	56	56	56	56	56	56	57	57	58	58	58	58	58	59	59	59	59	60	61	61	62
6/F	32.4	59	59	59	59	58	58	58	56	56	57	57	56	56	57	57	58	58	58	58	59	59	59	59	59	60	60	61	61	62	62
7/F	35.6	59	59	59	59	59	59	58	56	56	57	57	57	57	57	58	58	58	58	59	59	59	59	60	60	60	61	61	62	62	63
8/F	38.7	60	60	60	60	59	59	58	57	57	58	58	58	58	58	58	58	59	59	59	59	59	59	60	61	62	62	62	63	63	63
9/F	41.9	62	61	61	60	60	59	59	58	57	58	58	58	58	58	58	59	59	59	59	59	60	60	61	62	62	63	63	63	64	64
10/F	45.0	62	61	61	61	60	60	59	58	58	59	59	58	58	58	59	59	59	59	59	60	60	60	61	62	63	63	63	64	64	64
11/F	48.2	63	62	61	61	61	60	60	59	58	59	59	59	59	59	59	59	59	59	59	60	60	60	61	62	63	63	64	64	64	65
12/F	51.3	63	62	62	61	61	60	60	59	59	59	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
13/F	54.5	63	62	62	61	61	61	60	59	59	60	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
14/F	57.6	63	62	62	62	61	61	60	59	59	60	60	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	63	64	64	65
15/F	60.8	63	62	62	62	61	61	60	60	59	60	60	60	59	59	59	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
16/F	63.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
17/F	67.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
18/F	70.4	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
19/F	73.5	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
20/F	76.7	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
21/F	79.8	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
22/F	83.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
23/F	86.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
24/F	89.3	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
25/F	92.4	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
26/F	95.6	63	62	62	62	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
27/F	98.7	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
28/F	101.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
29/F	105.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
30/F	108.2	--	--	--	--	--	--	--	--	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
31/F	111.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	60	60	60	60	61	61	62	62	63	63	63	64
Max Noise Level		63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	61	62	63	63	64	64	64	65
Exceedance		0			0			0			0			0			0			0			0			0			0		

Floor	mPD	N2-31	N2-32	N2-33	N2-34	N2-35	N2-36	N2-37	N2-38	N2-39	N2-40	N2-41	N2-42	N2-43	N2-44	N2-45	N2-46	N2-47	N2-48	N2-49	N2-50	N2-51	N2-52	N2-53	N2-54	N2-55	N2-56	N2-57	N2-58	N2-59	N2-60
3/F	23.0	60	61	61	62	63	64	64	65	66	67	69	**74**	70	**71**	68	**71**	**76**	**75**	70	70	65	66	65	62	**71**	**71**	**71**	**72**	65	66
4/F	26.1	61	62	63	63	64	65	65	66	67	68	70	**73**	**73**	**74**	**73**	**75**	**77**	**77**	**75**	**76**	**72**	**73**	**71**	69	**76**	**76**	**76**	**76**	**71**	**72**
5/F	29.3	62	63	64	64	65	65	66	66	67	68	70	**74**	**73**	**74**	**74**	**76**	**77**	**76**	**76**	**76**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
6/F	32.4	63	64	64	65	65	66	66	66	67	68	70	**74**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
7/F	35.6	63	64	64	65	65	66	66	66	67	68	70	**73**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
8/F	38.7	64	64	64	65	65	66	66	66	67	68	69	**73**	**73**	**74**	**73**	**75**	**76**	**76**	**75**	**76**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
9/F	41.9	64	65	65	65	66	66	66	66	67	68	69	**73**	**73**	**73**	**73**	**75**	**76**	**76**	**75**	**75**	**73**	**74**	**73**	**72**	**76**	**76**	**76**	**76**	**73**	**73**
10/F	45.0	65	65	65	66	66	66	66	67	67	67	68	**73**	**73**	**73**	**72**	**75**	**76**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**76**	**76**	**76**	**72**	**73**
11/F	48.2	65	65	66	66	66	66	66	67	67	67	68	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**73**
12/F	51.3	65	65	66	66	66	67	67	67	67	68	69	**73**	**72**	**73**	**72**	**74**	**75**	**75**	**75**	**75**	**73**	**74**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**73**
13/F	54.5	65	65	66	66	66	67	67	67	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**73**	**72**	**75**	**75**	**75**	**75**	**72**	**72**
14/F	57.6	65	65	66	66	66	66	67	67	67	68	69	**72**	**72**	**73**	**72**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**72**	**72**
15/F	60.8	65	65	66	66	66	66	67	67	67	68	69	**72**	**72**	**72**	**71**	**74**	**75**	**75**	**74**	**75**	**73**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
16/F	63.9	65	65	65	66	66	66	67	67	67	68	69	**72**	**72**	**72**	**71**	**74**	**75**	**75**	**74**	**74**	**72**	**73**	**72**	**71**	**75**	**75**	**75**	**75**	**71**	**72**
17/F	67.1	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**74**	**75**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**75**	**71**	**72**
18/F	70.4	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**74**	**71**	**71**
19/F	73.5	65	65	65	66	66	66	66	67	67	68	69	**72**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**71**	**74**	**74**	**74**	**74**	**71**	**71**
20/F	76.7	65	65	65	66	66	66	66	67	67	68	69	**71**	**71**	**72**	**71**	**73**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
21/F	79.8	65	65	65	66	66	66	66	66	67	67	68	**71**	**71**	**72**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	**71**	**71**
22/F	83.0	65	65	65	65	66	66	66	66	67	67	68	**71**	**71**	**71**	70	**73**	**74**	**74**	**73**	**74**	**72**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
23/F	86.1	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**73**	**74**	**74**	**73**	**73**	**71**	**72**	**71**	70	**74**	**74**	**74**	**74**	70	**71**
24/F	89.3	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**73**	**74**	**74**	**73**	**73**	**71**	**72**	**71**	70	**73**	**74**	**74**	**74**	70	**71**
25/F	92.4	64	65	65	65	66	66	66	66	67	67	68	**71**	70	**71**	70	**72**	**74**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	**71**
26/F	95.6	64	65	65	65	65	66	66	66	66	67	68	**71**	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	70
27/F	98.7	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	70	**73**	**73**	**73**	**73**	70	70
28/F	101.9	64	65	65	65	65	66	66	66	66	67	68	70	70	**71**	70	**72**	**73**	**73**	**73**	**73**	**71**	**72**	70	69	**73**	**73**	**73**	**73**	70	70
29/F	105.0	64	64	65	65	65	66	66	66	66	67	68	70	70	**71**	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
30/F	108.2	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
31/F	111.3	64	64	65	65	65	66	66	66	66	67	68	70	70	70	69	**72**	**73**	**73**	**72**	**73**	**71**	**71**	70	69	**73**	**73**	**73**	**73**	69	70
Max Noise Level		65	65	66	66	66	67	67	67	67	68	70	**74**	**73**	**74**	**74**	**76**	**77**	**77**	**76**	**76**	**74**	**74**	**74**	**72**	**76**	**76**	**76**	**76**	**73**	**74**
Exceedance		0		0		0		0		0			29				28				29				29						

Floor	mPD	N2-61	N2-62	N2-63	N2-64	N2-65	N2-66	N2-67	N2-68	N2-69	N2-70	N2-71	N2-72	N2-73	N2-74	N2-75	N2-76	N2-77	N2-78	N2-79	N2-80	N2-81	N2-82	N2-83	N2-84	N2-85
3/F	23.0	61	61	**75**	**75**	**75**	**75**	70	70	69	70	66	67	66	67	**71**	**74**	**77**	65	**77**	**77**	67	67	**77**	**77**	66
4/F	26.1	69	69	**77**	**77**	**77**	**77**	**74**	**75**	**74**	**75**	**72**	**72**	**71**	**72**	**76**	**77**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
5/F	29.3	**71**	**71**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**73**	**72**	**73**	**77**	**77**	**77**	70	**77**	**77**	**72**	**72**	**77**	**77**	**72**
6/F	32.4	**72**	**72**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**74**	**73**	**74**	**76**	**76**	**77**	70	**77**	**77**	**71**	**72**	**77**	**77**	**72**
7/F	35.6	**71**	**72**	**76**	**76**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**74**	**73**	**73**	**76**	**76**	**77**	70	**76**	**77**	**71**	**72**	**77**	**77**	**72**
8/F	38.7	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**76**	**73**	**74**	**73**	**73**	**76**	**76**	**76**	70	**76**	**76**	**71**	**72**	**77**	**77**	**72**
9/F	41.9	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**73**	**73**	**76**	**76**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**72**
10/F	45.0	**71**	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**73**	**73**	**76**	**75**	**76**	70	**76**	**76**	**71**	**71**	**76**	**76**	**71**
11/F	48.2	70	**71**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**73**	**73**	**72**	**72**	**75**	**75**	**76**	69	**76**	**76**	**71**	**71**	**76**	**76**	**71**
12/F	51.3	70	**71**	**75**	**76**	**76**	**76**	**74**	**75**	**75**	**75**	**73**	**73**	**72**	**72**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
13/F	54.5	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**75**	**72**	**73**	**72**	**72**	**75**	**75**	**76**	69	**75**	**76**	70	**71**	**76**	**76**	**71**
14/F	57.6	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**73**	**72**	**72**	**75**	**75**	**75**	69	**75**	**75**	70	**71**	**76**	**76**	**71**
15/F	60.8	70	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**72**	**72**	**75**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
16/F	63.9	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	**71**
17/F	67.1	69	70	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**75**	69	**75**	**75**	70	70	**75**	**75**	70
18/F	70.4	69	69	**75**	**75**	**75**	**75**	**73**	**74**	**74**	**74**	**72**	**72**	**71**	**71**	**74**	**74**	**75**	68	**75**	**75**	69	70	**75**	**75**	70
19/F	73.5	69	69	**74**	**74**	**74**	**74**	**73**	**74**	**74**	**74**	**71**	**72**	**71**	**71**	**74**	**74**	**75**	68	**74**	**75**	69	70	**75**	**75**	70
20/F	76.7	69	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**72**	**71**	**71**	**74**	**74**	**74**	68	**74**	**74**	69	70	**75**	**75**	70
21/F	79.8	69	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	**71**	**71**	**74**	**73**	**74**	68	**74**	**74**	69	70	**75**	**75**	70
22/F	83.0	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
23/F	86.1	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	70
24/F	89.3	68	69	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	68	**74**	**74**	69	69	**74**	**74**	69
25/F	92.4	68	68	**74**	**74**	**74**	**74**	**73**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	68	**74**	**74**	68	69	**74**	**74**	69
26/F	95.6	68	68	**73**	**74**	**74**	**74**	**72**	**73**	**73**	**73**	**71**	**71**	70	70	**73**	**73**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
27/F	98.7	68	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**73**	70	**71**	70	70	**73**	**73**	**74**	67	**73**	**74**	68	69	**74**	**74**	69
28/F	101.9	68	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	**71**	70	70	**73**	**73**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
29/F	105.0	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	70	69	**73**	**72**	**73**	67	**73**	**73**	68	69	**74**	**74**	69
30/F	108.2	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	69	69	**72**	**72**	**73**	67	**73**	**73**	68	69	**73**	**73**	69
31/F	111.3	67	68	**73**	**73**	**73**	**73**	**72**	**72**	**72**	**72**	70	70	--	--	--	--	--	--	--	--	--	--	--	--	--
Max Noise Level		**72**	**72**	**77**	**77**	**77**	**77**	**75**	**76**	**76**	**76**	**73**	**74**	**73**	**74**	**77**	**77**	**77**	70	**77**	**77**	**72**	**72**	**77**	**77**	**72**
Exceedance		29				29				28				28					28				28			

Total no. of Flats:	1148
Total no. of Exceedance:	298
Compliance Level:	74%
Max. Noise Level for Tower:	77

Noted:
Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise at Selected Sensitive Receivers
Mitigated Case (Acoustic Window (Baffle Type), Enhanced Acoustic Balcony (Baffle Type), Fixed Glazing with or without Maintenance Window, Door with Auto-Closing Mechanism, Acoustic Fin()

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20
3/F	23.0	-	66	65	65	65	65	65	65	65	65	65	65	65	65	66	65	66	66	66	66
4/F	26.1	-	67	70	69	69	69	70	70	70	70	70	70	70	70	70	70	70	70	70	68
5/F	29.3	-	68	67	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
6/F	32.4	-	67	67	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
7/F	35.6	-	67	67	59	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
8/F	38.7	-	67	67	59	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
9/F	41.9	-	67	67	59	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
10/F	45.0	-	67	67	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
11/F	48.2	-	66	66	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
12/F	51.3	-	66	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
13/F	54.5	-	66	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	67
14/F	57.6	-	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	69	69	67
15/F	60.8	-	70	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	67
16/F	63.9	70	70	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
17/F	67.1	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
18/F	70.4	70	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
19/F	73.5	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
20/F	76.7	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	67
21/F	79.8	70	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	66
22/F	83.0	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	66
23/F	86.1	70	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	66
24/F	89.3	70	69	69	69	69	69	69	69	69	69	69	69	69	69	68	68	68	68	68	66
25/F	92.4	70	69	69	69	69	69	69	69	69	68	69	69	68	68	68	68	68	68	68	66
26/F	95.6	69	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
27/F	98.7	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
28/F	101.9	69	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
29/F	105.0	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
30/F	108.2	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	66
31/F	111.3	69	69	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	65
Max Noise Level		70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	68
Exceedance		0				0			0			0			0			0			

Floor	mPD	N1-21	N1-22	N1-23	N1-24	N1-25	N1-26	N1-27	N1-28	N1-29	N1-30	N1-31	N1-32	N1-33	N1-34	N1-35	N1-36	N1-37	N1-38	N1-39	N1-40	N1-41	N1-42	N1-43	N1-44
3/F	23.0	64	47	48	48	48	48	48	48	48	48	48	48	48	48	47	47	47	47	47	47	47	47	48	52
4/F	26.1	66	47	48	48	49	49	49	49	49	49	49	49	49	48	48	48	48	47	47	47	47	48	49	56
5/F	29.3	66	47	50	50	50	50	51	51	51	51	51	51	51	50	49	48	48	48	48	48	48	49	51	57
6/F	32.4	66	48	52	52	53	53	53	53	54	54	54	54	53	52	50	50	50	49	48	49	49	50	54	61
7/F	35.6	66	49	56	56	57	58	58	58	58	58	59	58	58	56	53	52	52	50	49	49	50	51	58	64
8/F	38.7	66	52	58	59	60	60	61	61	61	61	61	61	61	59	55	54	54	51	50	50	51	53	59	65
9/F	41.9	66	55	60	61	61	62	62	62	62	63	63	62	62	60	57	56	56	53	51	52	52	54	60	65
10/F	45.0	66	58	62	62	62	62	63	63	63	63	63	63	62	61	58	57	57	54	53	54	54	56	61	65
11/F	48.2	66	59	62	63	63	63	63	63	63	63	64	63	62	61	59	58	58	56	54	55	56	58	62	66
12/F	51.3	66	60	63	63	63	63	63	64	64	64	64	63	63	62	59	59	59	57	56	57	58	59	62	66
13/F	54.5	66	60	63	63	63	64	64	64	64	64	64	63	63	62	60	60	60	58	57	58	59	60	63	66
14/F	57.6	66	60	63	63	64	64	64	64	64	64	64	64	63	62	61	60	60	59	58	59	60	61	64	67
15/F	60.8	66	60	63	63	64	64	64	64	64	64	64	64	64	63	61	61	61	60	59	60	61	62	64	67
16/F	63.9	66	60	63	63	64	64	64	64	64	64	64	64	64	63	62	61	61	61	60	61	62	63	64	67
17/F	67.1	66	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	61	61	62	62	63	65	67
18/F	70.4	66	61	63	63	64	64	64	64	64	65	65	64	64	63	62	62	62	62	61	62	62	63	65	67
19/F	73.5	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	62	62	62	62	62	63	63	65	67
20/F	76.7	66	61	63	64	64	64	64	64	64	65	65	65	64	64	63	62	63	62	62	62	63	64	65	67
21/F	79.8	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	62	63	64	65	67
22/F	83.0	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	62	62	63	63	64	65	67
23/F	86.1	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
24/F	89.3	66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
25/F	92.4	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
26/F	95.6	66	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
27/F	98.7	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
28/F	101.9	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
29/F	105.0	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
30/F	108.2	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
31/F	111.3	65	61	63	64	64	64	64	64	64	65	65	64	64	64	63	63	63	63	62	63	63	64	65	67
Max Noise Level		66	61	63	64	64	64	64	64	65	65	65	65	64	64	63	63	63	63	62	63	63	64	65	67
Exceedance		0				0			0			0			0			0			0			0	

Predicted Road Traffic Noise at Selected Sensitive Receivers
Mitigated Case (Acoustic Window (Baffle Type), Enhanced Acoustic Balcony (Baffle Type), Fixed Glazing with or without Maintenance Window, Door with Auto-Closing Mechanism, Acoustic Fin()

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23	N2-24	N2-25	N2-26	N2-27	N2-28	N2-29	N2-30
3/F	23.0	52	53	55	55	55	54	54	52	52	54	54	53	53	54	54	54	54	55	56	56	55	56	56	56	57	57	58	58	59	59
4/F	26.1	54	56	57	57	57	57	56	54	54	55	55	55	55	55	55	56	56	57	57	57	57	57	57	58	58	59	59	60	60	61
5/F	29.3	57	58	59	58	58	58	57	55	55	56	56	56	56	56	56	57	57	58	58	58	58	58	59	59	59	59	60	61	61	62
6/F	32.4	59	59	59	59	58	58	58	56	56	57	57	56	56	57	57	58	58	58	58	59	59	59	59	59	60	60	61	61	62	62
7/F	35.6	59	59	59	59	59	59	58	56	56	57	57	57	57	57	58	58	58	58	59	59	59	59	60	60	60	61	61	62	62	63
8/F	38.7	60	60	60	60	59	59	58	57	57	58	58	58	58	58	58	58	59	59	59	59	59	59	60	61	62	62	62	63	63	63
9/F	41.9	62	61	61	60	60	59	59	58	57	58	58	58	58	58	58	59	59	59	59	59	60	60	61	62	62	63	63	63	64	64
10/F	45.0	62	61	61	61	60	60	59	58	58	59	59	58	58	58	59	59	59	59	59	59	60	60	60	61	62	63	63	63	64	64
11/F	48.2	63	62	61	61	61	60	60	59	58	59	59	59	59	59	59	59	59	59	59	60	60	60	61	62	63	63	64	64	64	65
12/F	51.3	63	62	62	61	61	60	60	59	59	59	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
13/F	54.5	63	62	62	61	61	61	60	59	59	60	59	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	64	64	64	65
14/F	57.6	63	62	62	62	61	61	60	59	59	60	60	59	59	59	59	59	59	59	60	60	60	60	61	62	63	63	63	64	64	65
15/F	60.8	63	62	62	62	61	61	60	60	59	60	60	60	59	59	59	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
16/F	63.9	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
17/F	67.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	65
18/F	70.4	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
19/F	73.5	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
20/F	76.7	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
21/F	79.8	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
22/F	83.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	62	62	63	63	64	64	64
23/F	86.1	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
24/F	89.3	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
25/F	92.4	63	62	62	62	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	64	64
26/F	95.6	63	62	62	62	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
27/F	98.7	63	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
28/F	101.9	63	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
29/F	105.0	63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
30/F	108.2	--	--	--	--	--	--	--	--	60	60	60	60	60	60	60	60	60	59	60	60	60	60	61	61	62	62	63	63	63	64
31/F	111.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	60	60	60	60	61	61	62	62	63	63	63	64
Max Noise Level		63	62	62	62	61	61	61	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	61	62	63	63	64	64	64	65
Exceedance		0			0		0			0			0			0			0			0			0			0			

Floor	mPD	N2-31	N2-32	N2-33	N2-34	N2-35	N2-36	N2-37	N2-38	N2-39	N2-40	N2-41	N2-42	N2-43	N2-44	N2-45	N2-46	N2-47	N2-48	N2-49	N2-50	N2-51	N2-52	N2-53	N2-54	N2-55	N2-56	N2-57	N2-58	N2-59	N2-60
3/F	23.0	60	61	61	62	63	64	64	65	66	67	69	69	-	65	-	66	-	67	70	70	65	66	65	62	-	62	63	-	65	66
4/F	26.1	61	62	63	63	64	65	65	66	67	68	70	69	-	68	-	70	-	68	67	-	66	69	67	69	-	68	68	-	65	68
5/F	29.3	62	63	64	64	65	65	66	66	67	68	70	69	-	68	-	70	-	68	67	-	67	70	69	66	-	68	68	-	67	69
6/F	32.4	63	64	64	65	65	66	66	66	67	68	70	69	-	68	-	70	-	68	67	-	68	70	70	66	-	68	68	-	67	70
7/F	35.6	63	64	64	65	65	66	66	66	67	68	70	69	-	68	-	70	-	68	67	-	68	70	70	66	-	68	68	-	67	70
8/F	38.7	64	64	64	65	65	66	66	66	67	68	69	69	-	68	-	70	-	67	67	-	67	70	69	66	-	68	68	-	67	69
9/F	41.9	64	65	65	65	66	66	66	66	67	68	69	69	-	68	-	69	-	67	67	-	67	70	69	66	-	67	67	-	67	69
10/F	45.0	65	65	65	66	66	66	66	67	67	68	69	68	-	67	-	69	-	67	67	-	67	70	69	66	-	67	67	-	66	69
11/F	48.2	65	65	66	66	66	66	67	67	67	68	69	68	-	67	-	69	-	67	67	-	67	70	69	66	-	67	67	-	66	69
12/F	51.3	65	65	66	66	66	67	67	67	67	68	69	68	-	67	-	69	-	67	66	-	67	70	69	66	-	67	67	-	66	69
13/F	54.5	65	65	66	66	66	67	67	67	67	68	69	68	-	67	-	69	-	67	66	-	67	69	69	66	-	67	67	-	66	68
14/F	57.6	65	65	66	66	66	66	67	67	67	68	69	68	-	67	-	69	-	66	66	-	67	69	68	65	-	67	67	-	66	68
15/F	60.8	65	65	66	66	66	66	67	67	67	68	69	68	-	67	-	69	-	66	66	-	67	69	68	65	-	67	66	-	65	68
16/F	63.9	65	65	65	66	66	66	67	67	67	68	69	67	-	66	-	68	-	66	66	-	66	69	68	65	-	66	66	-	65	68
17/F	67.1	65	65	65	66	66	66	66	67	67	68	69	67	-	66	-	68	-	66	66	-	66	69	68	65	-	66	66	-	65	67
18/F	70.4	65	65	65	66	66	66	66	67	67	68	69	67	-	66	-	68	-	66	66	-	66	69	68	65	-	66	66	-	65	67
19/F	73.5	65	65	65	66	66	66	66	67	67	68	69	67	-	66	-	68	-	66	65	-	66	69	68	65	-	66	66	-	65	67
20/F	76.7	65	65	65	66	66	66	66	67	67	68	69	67	-	66	-	68	-	66	65	-	66	68	67	70	-	66	66	-	65	67
21/F	79.8	65	65	65	66	66	66	66	66	67	67	68	67	-	66	-	68	-	65	65	-	66	68	67	70	-	66	66	-	65	67
22/F	83.0	65	65	65	65	66	66	66	66	67	67	68	66	-	66	-	67	-	65	65	-	66	68	67	70	-	66	65	-	70	67
23/F	86.1	64	65	65	65	66	66	66	66	67	67	68	66	-	65	-	67	-	65	65	-	65	68	67	70	-	65	65	-	70	67
24/F	89.3	64	65	65	65	66	66	66	66	67	67	68	66	-	65	-	67	-	65	65	-	65	68	67	70	-	65	65	-	70	67
25/F	92.4	64	65	65	65	66	66	66	66	67	67	68	66	-	65	-	67	-	65	65	-	65	68	67	70	-	65	65	-	70	67
26/F	95.6	64	65	65	65	65	66	66	66	67	67	68	66	-	65	-	67	-	65	65	-	65	68	67	70	-	65	65	-	70	70
27/F	98.7	64	65	65	65	65	66	66	66	66	67	68	70	70	65	-	67	-	65	65	-	65	68	67	70	-	65	65	-	70	70
28/F	101.9	64	65	65	65	65	66	66	66	67	67	68	70	70	65	-	67	-	65	64	-	65	68	70	69	-	65	65	-	70	70
29/F	105.0	64	64	65	65	65	66	66	66	66	67	68	70	70	65	-	67	-	65	64	-	65	67	70	69	-	65	65	-	69	70
30/F	108.2	64	64	65	65	65	66	66	66	67	67	68	70	70	70	69	67	-	65	64	-	65	67	70	69	-	65	65	-	69	70
31/F	111.3	64	64	65	65	65	66	66	66	66	67	68	70	70	70	70	69	67	-	64	64	-	65	67	70	69	-	65	64	-	69	70
Max Noise Level		65	65	66	66	66	67	67	67	67	68	70	70	70	70	69	70	0	68	70	70	68	70	70	70	0	68	68	0	70	70
Exceedance		0			0		0			0			0			0			0			0			0			0			

Floor	mPD	N2-61	N2-62	N2-63	N2-64	N2-65	N2-66	N2-67	N2-68	N2-69	N2-70	N2-71	N2-72	N2-73	N2-74	N2-75	N2-76	N2-77	N2-78	N2-79	N2-80	N2-81	N2-82	N2-83	N2-84	N2-85
3/F	23.0	61	61	-	66	66	-	70	70	69	70	66	67	66	67	64	-	69	65	-	-	67	67	-	-	66
4/F	26.1	69	69	-	68	68	-	69	69	66	-	68	66	61	68	68	-	69	70	-	-	66	66	-	-	66
5/F	29.3	68	65	-	68	68	-	70	70	67	-	70	67	62	69	69	-	69	70	-	-	66	67	-	-	66
6/F	32.4	68	65	-	68	68	-	70	70	67	-	70	68	63	69	69	-	69	70	-	-	66	66	-	-	66
7/F	35.6	68	65	-	68	68	-	70	70	67	-	70	68	63	69	68	-	68	70	-	-	66	66	-	-	66
8/F	38.7	68	65	-	68	68	-	70	70	67	-	70	68	63	69	68	-	68	70	-	-	66	66	-	-	66
9/F	41.9	68	65	-	67	68	-	70	70	66	-	70	68	63	69	68	-	68	70	-	-	65	66	-	-	66
10/F	45.0	67	65	-	67	67	-	70	69	66	-	70	67	63	68	68	-	68	70	-	-	65	66	-	-	65
11/F	48.2	70	64	-	67	67	-	70	69	66	-	70	67	62	68	68	-	68	69	-	-	65	65	-	-	65
12/F	51.3	70	64	-	67	67	-	69	69	66	-	69	67	62	68	67	-	67	69	-	-	70	65	-	-	65
13/F	54.5	70	70	-	67	67	-	69	69	66	-	69	67	62	68	67	-	67	69	-	-	70	65	-	-	65
14/F	57.6	70	70	-	66	67	-	69	69	66	-	69	67	62	68	67	-	67	69	-	-	70	65	-	-	65
15/F	60.8	70	70	-	66	67	-	69	69	65	-	69	66	62	67	67	-	67	69	-	-	70	70	-	-	65
16/F	63.9	69	70	-	66	66	-	69	68	65	-	69	66	61	67	67	-	67	69	-	-	70	70	-	-	64
17/F	67.1	69	70	-	66	66	-	69	68	65	-	68	66	61	67	67	-	67	69	-	-	70	70	-	-	70
18/F	70.4	69	69	-	66	66	-	68	68	65	-	68	66	61	67	66	-	66	68	-	-	69	70	-	-	70
19/F	73.5	69	69	-	66	66	-	68	68	65	-	68	66	61	67	66	-	66	68	-	-	69	70	-	-	70
20/F	76.7	69	69	-	66	66	-	68	68	65	-	68	66	61	66	66	-	66	68	-	-	69	70	-	-	70
21/F	79.8	69	69	-	65	66	-	68	68	64	-	68	66	61	66	66	-	66	68	-	-	69	70	-	-	70
22/F	83.0	68	69	-	65	66	-	68	68	64	-	68	65	70	70	66	-	66	68	-	-	69	69	-	-	70
23/F	86.1	68	69	-	65	65	-	68	67	64	-	68	65	70	70	66	-	66	68	-	-	69	69	-	-	70
24/F	89.3	68	69	-	65	65	-	68	67	64	-	67	65	70	70	65	-	66	68	-	-	69	69	-	-	69
25/F	92.4	68	68	-	65	65	-	68	67	64	-	67	65	70	70	65	-	66	68	-	-	68	69	-	-	69
26/F	95.6	68	68	-	65	65	-	67	67	64	-	67	65	70	70	65	-	65	67	-	-	68	69	-	-	69
27/F	98.7	68	68	-	65	65	-	67	67	64	-	70	65	70	70	65	-	65	67	-	-	68	69	-	-	69
28/F	101.9	68	68	-	65	65	-	67	67	64	-	70	65	70	70	65	-	65	67	-	-	68	69	-	-	69
29/F	105.0	67	68	-	64	65	-	67	67	63	-	70	70	70	69	65	-	65	67	-	-	68	69	-	-	69
30/F	108.2	67	68	-	64	65	-	67	67	63	-	70	70	69	69	65	-	65	67	-	-	68	69	-	-	69
31/F	111.3	67	68	-	64	65	-	67	67	63	-	70	70	--	--	--	--	--	--	--	--	--	--	--	--	--
Max Noise Level		70	70	0	68	68	0	70	70	69	70	70	70	70	70	69	0	69	70	0	0	70	70	0	0	70
Exceedance		0				0				0				0					0				0			

Total no. of Flats:	1148
Total no. of Exceedance:	0
Compliance Level:	100%
Max. Noise Level for Tower:	70

Noted:

71	Noise level exceed stardand of 70 dB(A)
	Acoustic Window (Baffle Type)
	Enhanced Acoustic Balcony (Baffle Type)
-	Fixed Glazing with or without Maintenance Window
-	Door with Auto-Closing Mechanism

Appendix 3.3 Estimation of Road Traffic Sound Attenuation of Acoustic Window (Baffle Type) and Enhanced Acoustic Balcony (Baffle Type)

Road Traffic Noise Impact Assessment

Acoustic Window (Baffle Type) and Enhanced Acoustic Balcony (Baffle Type) for Residential Tower

Summary Table of Major Parameters of Reference Case and Maximum Sound Attenuation Available

Name	Outer opening width, mm	Outer opening height, mm	Outer opening area, m^2	Air gap, mm	Overlapping length, mm	MPA Applied	Solid Parapet Applied	Acoustic Ceiling Applied	Additional SAM	Room Area, m^2	Maximum Noise Reduction Available, dB(A)
Acoustic Window (Baffle Type)											
AW1-PN	600	870	0.5	100	100	No	-	-	No	8.0	6.0
AW2-PN	750	1500	1.1	100	100	No	-	-	No	18.0	7.0
Enhanced Acoustic Balcony (Baffle Type)											
EAB1-PN	1150	2210	2.5	100	100	No	Yes	Yes	No	14.0	8.0
EAB2-PN	1150	2210	2.5	100	100	No	Yes	Yes	No	18.0	9.0

Note:

MPA: Micro Perforated Absorber

Solid Parapet: Minimum 1440mm (W) x 1450mm (H) for room area of 14m^2 or minimum 2055mm (W) x 1450mm (H) for room area of 18m^2 parallel to door opening

SAM: Sound Absoptive Material

Acoustic Ceiling: Balcony ceiling to be covered by SAM

Road Traffic Noise Impact Assessment

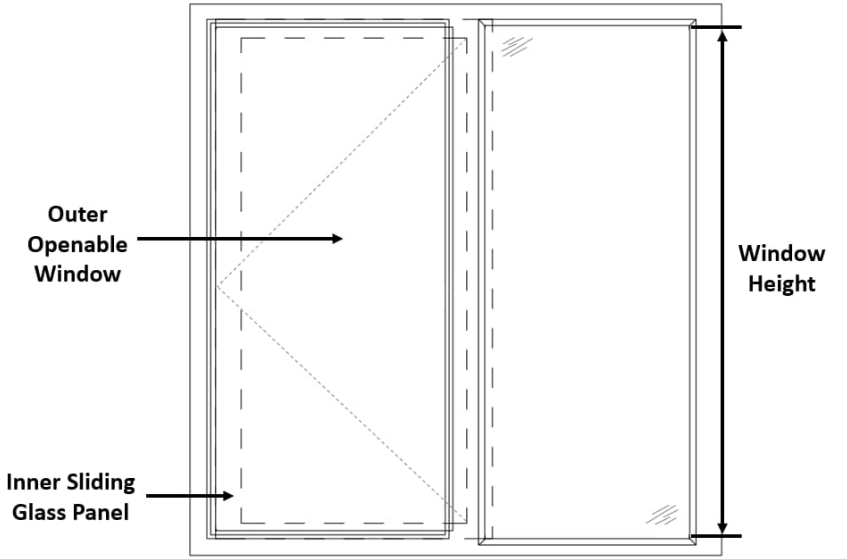
Acoustic Window (Baffle Type) and Enhanced Acoustic Balcony (Baffle Type) for Residential Tower

Table of Major Parameters, Room Size and Sound Attenuation Adjustment of "Proposed Case for Proposed Development" and "Corresponding Reference Case"

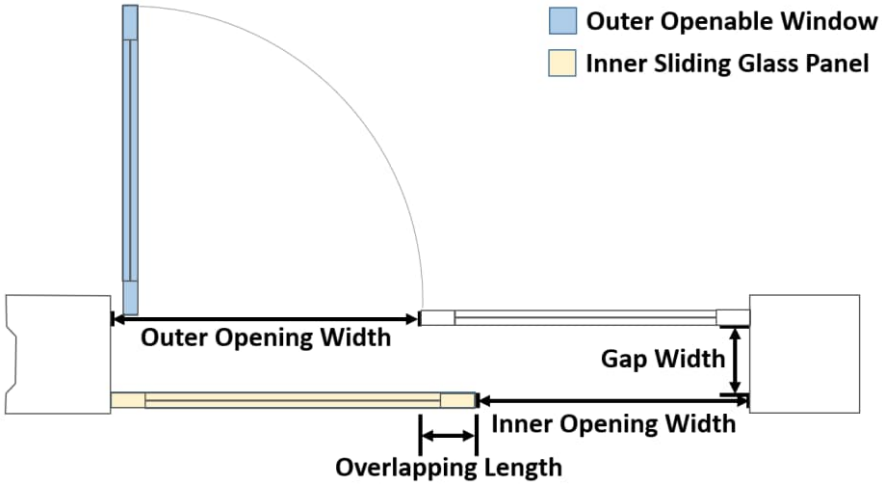
					Proposed Development						Reference Case															
Tower	Room	Opening	NSRs	Case	Outer opening area, m^2	Air gap, mm	Overlapping length, mm	MPA applied?	SAM applied	Room area (RA), m^2	Outer opening width, mm	Outer opening height, mm	Outer opening area, m^2	Air gap, mm	Overlapping length, mm	MPA applied?	Room area (RAref), m^2	Ref. sound attenuation, dB(A)	Room Size Adjustment: 10xlog(RA / RAref) (adjust downward only), dB(A)	Adjusted sound attenuation, dB(A)	Incident angle, deg	Window / Door: Extra sound attenuation from incident angle, dB(A)	Window / Door: Extra sound attenuation with SAM, dB(A)	Window: 1.5m Fin	Window: Extra sound attenuation with 1.5m Fin, dB(A)	Relative Noise Reduction, dB(A)	Noise Reduction Required, dB(A)
1	BR	W	N1-02	AW2-PN	**1.1**	100	100	No	Yes	8.2	750	1500	**1.1**	100	100	No	18.00	7.0	-3.4	3.6	90.0	1.0	0	No	0	4.6	**1.7**
1	BR	W	N1-03	AW1-PN	**0.5**	100	100	No	Yes	4.2	600	870	**0.5**	100	100	No	8.00	6.0	-2.8	3.2	90.0	1.0	0	No	0	4.2	**0.9**
1	LIV	D	N1-04	EAB2-PN	**2.5**	100	100	No	Yes	14.9	1150	2210	**2.5**	100	100	No	18.00	9.0	-0.8	8.2	90.0	3.0	0	No	0	11.2	**0.2**
2	BR	W	N2-42	AW2-PN	**1.1**	100	100	No	Yes	8.2	750	1500	**1.1**	100	100	No	18.00	7.0	-3.4	3.6	90.0	1.0	0	No	0	4.6	**3.2**
2	BR	W	N2-44	AW1-PN	**0.5**	100	100	No	Yes	6.1	600	870	**0.5**	100	100	No	8.00	6.0	-1.2	4.8	90.0	1.0	0	No	0	5.8	**3.7**
2	BR	W	N2-46	AW1-PN	**0.5**	100	100	No	Yes	5.4	600	870	**0.5**	100	100	No	8.00	6.0	-1.7	4.3	90.0	1.0	0	No	0	5.3	**5.1**
2	LIV	D	N2-48	EAB2-PN	**2.5**	100	100	No	Yes	15.6	1150	2210	**2.5**	100	100	No	18.00	9.0	-0.6	8.4	0.0	0.0	0	No	0	8.4	**6.1**
2	LIV	D	N2-49	EAB2-PN	**2.5**	100	100	No	Yes	15.1	1150	2210	**2.5**	100	100	No	18.00	9.0	-0.8	8.2	0.0	0.0	0	No	0	8.2	**5.1**
2	BR	W	N2-51	AW1-PN	**0.5**	100	100	No	Yes	6.3	600	870	**0.5**	100	100	No	8.00	6.0	-1.0	5.0	90.0	1.0	0	No	0	6.0	**3.2**
2	BR	W	N2-52	AW1-PN	**0.5**	100	100	No	Yes	5.0	600	870	**0.5**	100	100	No	8.00	6.0	-2.0	4.0	0.0	0.0	0	No	0	4.0	**3.9**
2	BR	W	N2-53	AW1-PN	**0.5**	100	100	No	Yes	5.0	600	870	**0.5**	100	100	No	8.00	6.0	-2.0	4.0	0.0	0.0	0	No	0	4.0	**3.2**
2	BR	W	N2-54	AW1-PN	**0.5**	100	100	No	Yes	6.3	600	870	**0.5**	100	100	No	8.00	6.0	-1.0	5.0	90.0	1.0	0	No	0	6.0	**2.0**
2	LIV	D	N2-56	EAB2-PN	**2.5**	100	100	No	Yes	14.9	1150	2210	**2.5**	100	100	No	18.00	9.0	-0.8	8.2	0.0	0.0	0	No	0	8.2	**5.7**
2	LIV	D	N2-57	EAB2-PN	**2.5**	100	100	No	Yes	15.5	1150	2210	**2.5**	100	100	No	18.00	9.0	-0.6	8.4	0.0	0.0	0	No	0	8.4	**5.8**
2	BR	W	N2-59	AW1-PN	**0.5**	100	100	No	Yes	6.3	600	870	**0.5**	100	100	No	8.00	6.0	-1.0	5.0	90.0	1.0	0	No	0	6.0	**2.5**
2	BR	W	N2-60	AW1-PN	**0.5**	100	100	No	Yes	5.0	600	870	**0.5**	100	100	No	8.00	6.0	-2.0	4.0	0.0	0.0	0	No	0	4.0	**3.1**
2	BR	W	N2-61	AW1-PN	**0.5**	100	100	No	Yes	4.3	600	870	**0.5**	100	100	No	8.00	6.0	-2.7	3.3	0.0	0.0	0	No	0	3.3	**1.1**
2	BR	W	N2-62	AW1-PN	**0.5**	100	100	No	Yes	6.8	600	870	**0.5**	100	100	No	8.00	6.0	-0.7	5.3	90.0	1.0	0	No	0	6.3	**1.2**
2	LIV	D	N2-64	EAB2-PN	**2.5**	100	100	No	Yes	16.8	1150	2210	**2.5**	100	100	No	18.00	9.0	-0.3	8.7	0.0	0.0	0	No	0	8.7	**6.3**
2	LIV	D	N2-65	EAB2-PN	**2.5**	100	100	No	Yes	15.9	1150	2210	**2.5**	100	100	No	18.00	9.0	-0.5	8.5	0.0	0.0	0	No	0	8.5	**6.5**
2	BR	W	N2-67	AW1-PN	**0.5**	100	100	No	Yes	6.3	600	870	**0.5**	100	100	No	8.00	6.0	-1.0	5.0	0.0	0.0	0	No	0	5.0	**4.9**
2	BR	W	N2-68	AW1-PN	**0.5**	100	100	No	Yes	5.6	600	870	**0.5**	100	100	No	8.00	6.0	-1.5	4.5	90.0	1.0	0	No	0	5.5	**5.2**
2	LIV	D	N2-69	EAB1-PN	**2.5**	100	100	No	Yes	13.5	1150	2210	**2.5**	100	100	No	14.00	8.0	-0.2	7.8	90.0	1.0	0	No	0	8.8	**5.3**
2	BR	W	N2-71	AW1-PN	**0.5**	100	100	No	Yes	4.3	600	870	**0.5**	100	100	No	8.00	6.0	-2.7	3.3	0.0	0.0	0	No	0	3.3	**3.0**
2	BR	W	N2-72	AW1-PN	**0.5**	100	100	No	Yes	6.2	600	870	**0.5**	100	100	No	8.00	6.0	-1.1	4.9	75.0	1.0	0	No	0	5.9	**3.3**
2	LIV	D	N2-73	EAB2-PN	**2.5**	100	100	No	Yes	18.3	1150	2210	**2.5**	100	100	No	18.00	9.0	0.0	9.0	90.0	1.0	0	No	0	10.0	**2.7**
2	BR	W	N2-74	AW1-PN	**0.5**	100	100	No	Yes	4.2	600	870	**0.5**	100	100	No	8.00	6.0	-2.8	3.2	90.0	1.0	0	No	0	4.2	**3.1**
2	BR	W	N2-75	AW1-PN	**0.5**	100	100	No	Yes	4.2	600	870	**0.5**	100	100	No	8.00	6.0	-2.8	3.2	90.0	1.0	1.5	Yes	2.0	7.7	**6.1**
2	BR	W	N2-77	AW1-PN	**0.5**	100	100	No	Yes	7.7	600	870	**0.5**	100	100	No	8.00	6.0	-0.2	5.8	53.0	1.0	1.5	No	0	8.3	**7.0**
2	BR	W	N2-81	AW1-PN	**0.5**	100	100	No	Yes	5.6	600	870	**0.5**	100	100	No	8.00	6.0	-1.5	4.5	90.0	1.0	0	No	0	5.5	**1.1**
2	BR	W	N2-82	AW1-PN	**0.5**	100	100	No	Yes	5.6	600	870	**0.5**	100	100	No	8.00	6.0	-1.5	4.5	90.0	1.0	0	No	0	5.5	**1.6**
2	LIV	W	N2-85	AW2-PN	**1.1**	100	100	No	Yes	11.7	750	1500	**1.1**	100	100	No	18.00	7.0	-1.9	5.1	90.0	1.0	0	No	0	6.1	**1.9**

Appendix 3.4 Indicative Design of Acoustic Window and Enhanced Acoustic Balcony (Baffle Type) for Proposed Development

(I) Possible design of "Acoustic Window (Baffle Type)" for 8m² and 18m² habitable rooms (i.e. dining room, living room or bedroom)



INTERNAL VIEW (NOT TO SCALE)



PLAN (NOT TO SCALE)

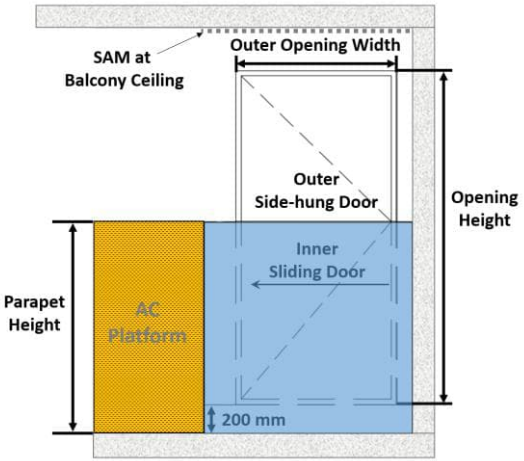
Possible Designs of "Acoustic Window (Baffle Type)" for 8m² and 18m² rooms					
Room Size (m^2)	**Room Dimensions (mm^3)**	**Inner Window Opening (mm^2)**	**Outer Window Opening (mm^2)**	**Overlapping Length (mm)**	**Gap Width (mm)**
8	**3200 (W) x 2500 (D) x 3400 (H)**	**580 (W) x 870 (H)**	**600 (W) x 870 (H)**	**≥ 100**	**100 to 175**
18	**5300 (W) x 3390 (D) x 3400 (H)**	**750 (W) x 1500 (H)**	**750 (W) x 1500 (H)**	**≥ 100**	**100 to 175**

Notes:

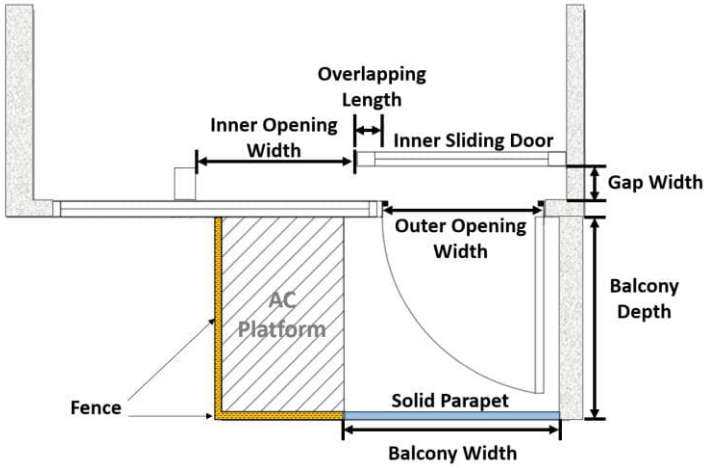
a. These are feasible designs of AW(BT) for 8m² and 18m² rooms.

b. For optimum performance of noise reduction, the air gap should have a pane-to-pane overlapping length of ≥ 100mm and a gap width between 100mm and 175mm, with the inner sliding glass panel in a closed position. The window pane shall be ≥ 6mm in thickness.

(II) Possible designs of "Enhanced Acoustic Balcony (Baffle Type)" in 14m^2 and 18m^2 habitable rooms (i.e. dining room, living room or bedroom)



EXTERNAL VIEW (NOT TO SCALE)



PLAN (NOT TO SCALE)

Fence (≥ 70% Permeability) Solid Parapet

Possible Designs of "Enhanced Acoustic Balcony (Baffle Type)" for 14m^2 and 18m^2 rooms								
Room size (m^2)	**Room Dimensions (mm^3)**	**Balcony Width (mm)**	**Balcony Depth (mm)**	**Parapet Height (mm)**	**Inner Opening (mm^2)**	**Outer Opening (mm^2)**	**Overlapping Length (mm)**	**Gap Width (mm)**
14	**3400 (W) x 4100 (D) x 3100 (H)**	**≥ 1440**	**≥ 1300**	**≥ 1450**	**1025 (W) x 2210 (H)**	**1150 (W) x 2210 (H)**	**≥ 100**	**100**
18	**5300 (W) x 3390 (D) x 3400 (H)**	**≥ 2055**	**≥ 1300**	**≥ 1450**	**1150 (W) x 2210 (H)**	**1150 (W) x 2210 (H)**	**≥ 100**	**100**

Notes:
1. These are feasible designs of EAB for 14m^2 and 18m^2 rooms. The room with EAB should meet the natural lighting and ventilation requirements in regulations 30 & 31 of the Building (Planning) Regulations (B(P)R). The AC platform should comply with the requirements under Appendix B of Code of Practice on Access for External Maintenance 2021 (AfEM Code), and balconies for residential buildings should comply with the criteria and conditions set out in Joint Practice Note (JPN) 1 for application of exemption from gross floor area and/or site coverage under the B(P)R.
2. SAM at balcony ceiling refers to sound absorptive material of noise reduction coefficient ≥ 0.7. It is an essential feature to attain the basic noise reduction performance in Annex B.
3. Comparable noise performance is anticipated should the AC platform be replaced by balcony with solid parapet.

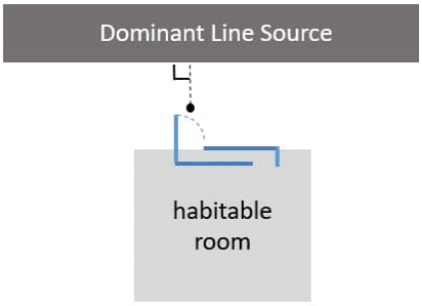
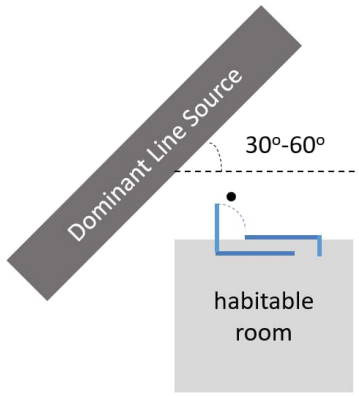
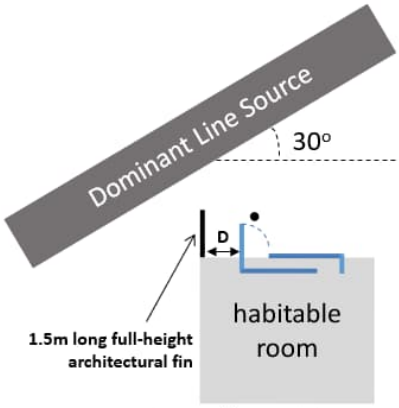
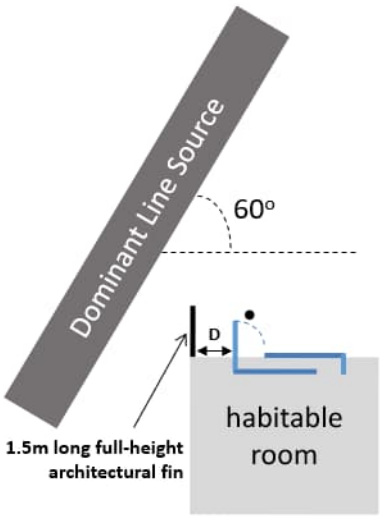
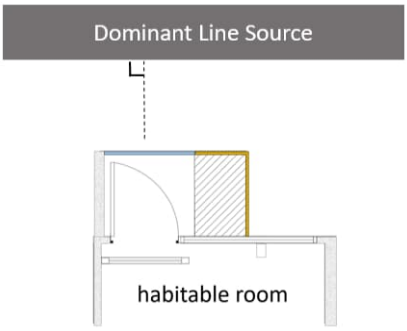
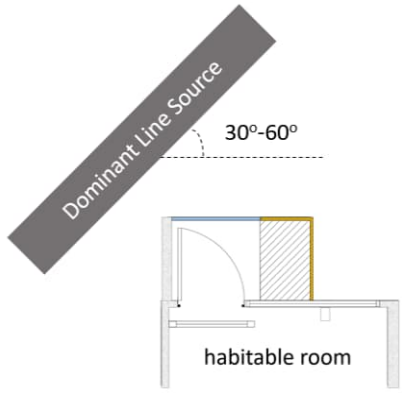
Table 1: Summary on RNR of Acoustic Window (Baffle Type) (for use in NIA) *Plan not to scale		Correction dB(A) L10(1hr)	
		8m²	18m²
	**(a) Provision of AW(BT) parallel to dominant line source** (whichever side the outer side-hung window is)	- **6.0** - **7.5 (added SAM[1])**	- **7.0** - **8.5 (added SAM[1])**
	**(b) Tilting the AW(BT) in (a) above to 30° - 60° horizontal incident angle to dominant line source** (whichever side the outer side-hung window is)	- **7.0** - **8.5 (added SAM[1])**	- **8.0** - **9.5 (added SAM[1])**
 D = Distance from architectural fin to nearest window frame should be at most 900mm.	**(b1) If tilted AW(BT) is at 30° horizontal incident angle to dominant line source** **+ 1.5m long full-height architectural fin[2]** *** AW(BT) + architectural fin should be considered as ONE package of noise mitigation measures. Outer side-hung window of AW(BT) and architectural fin should be installed at the side nearer to dominant line source.**	- **8.0** - **9.5 (added SAM[1])**	- **9.0** - **10.5 (added SAM[1])**

Table 1: Summary on RNR of Acoustic Window (Baffle Type) (for use in NIA) *Plan not to scale		Correction dB(A) L10(1hr)	
		8m^2	18m^2
 D = Distance from architectural fin to nearest window frame should be at most 900mm.	**(b2) If tilted AW(BT) is at 60° horizontal incident angle to dominant line source** **+ 1.5m long full-height architectural fin[2]** *** AW(BT) + architectural fin should be considered as ONE package of noise mitigation measures. Outer side-hung window of AW(BT) and architectural fin should be installed at the side nearer to dominant line source.**	**- 9.0** **- 10.5 (added SAM[1])**	**- 10.0** **- 11.5 (added SAM[1])**

Note 1: The additional Sound Absorptive Material (SAM) shall be of Noise Reduction Coefficient ≥ 0.7 and applied at top and outer opening side of mullion. The material of SAM is subject to the requirements of section 3 of Building (Construction) Regulation.

Note 2: The 1.5m long full-height architectural fin may be subject to the requirements for natural lighting and ventilation, gross floor area and site coverage under the B(P)R.

Table 2: Summary on RNR of Enhanced Acoustic Balcony (Baffle Type) (for use in NIA) *Plan not to scale		Correction dB(A) L10(1hr)	
		14m²	18m²
	**(a) Provision of EAB(BT) parallel to dominant line source**	- **8.0** - **9.5 (added SAM[1])**	- **9.0** - **10.5 (added SAM[1])**
	**(b) Tilting the EAB(BT) in (a) above to 30° - 60° horizontal incident angle to dominant line source**	- **11.0** - **12.5 (added SAM[1])**	- **11.0** - **12.5 (added SAM[1])**
Note 1: The additional Sound Absorptive Material (SAM) shall be of Noise Reduction Coefficient ≥ 0.7 and applied at top and outer opening side of the mullion. The material of SAM is subject to the requirements of section 3 of Building (Construction) Regulation.			

[i] *Should there be any variation on the proposed INMD, or practitioners and professionals consider that a higher RNR value should be adopted, justifications together with technical documents, e.g. corrections based on acoustic principles, laboratory testing reports, in-situ measurement reports, etc. should be submitted to the EPD for consideration. For requirements of laboratory measurement or in-situ measurement requirements, practitioners and professionals may contact the EPD for further details. As RNR varies with room size, practitioners and professionals may like to propose the preferred RNR to the EPD for consideration if different room size is encountered in the NIA study. Having said that, information indicates that for* ***Tables 1 and 2****:*

- *Variations of room size within +/- 10% would not affect the RNR;*
- *Variations of floor-to-ceiling height within +/- 5% would not affect the RNR; and*
- *Variations of window / door opening size within +/- 5% would not affect the RNR.*

Appendix 4.1 Correspondence from MTRC

MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk

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

Our ref: T&ESD/E&IC/ES/EnvE/L1123

Date: 26 APR 2022

Attention: Mr. Calvin Chiu

By Post and Fax
(Fax no.: 3465 2899)

Dear Mr. Chiu,

Re: Section 16 Planning Application for Redevelopment of Lai Sun Yuen Long Centre at No. 27 Wang Yip Street East, Yuen Long – Request for Operation Mode and Conditions of Tuen Ma Line (TML)

We refer to your letter (ref.: GYUSYLCEI00_0_0003L.21) dated 16 February 2022 (received on 6 April 2022) requesting operational information regarding Tuen Ma Line (TML).

Operational Information

- The daily operating hours of TML are from approximately 05:00 to 01:20 hours.
- Please note that there are currently 8 cars per train for the operating condition of the Tuen Ma Line. However, according to the latest Environmental Permit (EP) for West Rail, the ultimate maximum train cars would be 9 cars.
- The future ultimate daily peak operating train frequency during the period of 07:00-23:00 hours is about 28 trains per hour per direction. For the future ultimate daily peak operating train frequency during the period of 23:00-07:00 hours, please refer to the latest EP for West Rail available via EPD website.

Train Noise Data

We suggest that your organization conduct its own survey or noise measurements to collect specific and representative on-site noise source data to suit the individual needs of your study.

Datum Level and Locations of Rail Crossing

We suggest that your organisation contact us to arrange the checking of the respective drawings on the requested information suitable for your study. Please note that there are no rail crossing along the concerned track section of TML. However, we wish to caution that the proposed development can be sensitive to the air-borne noise emitted from the nearby curved tracks of TML, which may cause potential adverse noise impacts to the future occupants.

Trackform

The concerned track section of TML is in floating slab trackform.

MTR Headquarters Building, Telford Plaza, Kowloon Bay,
Kowloon, Hong Kong. GPO Box 9916, Hong Kong
Tel (852) 2993 2111 Fax (852) 2798 8822

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MTR Corporation Limited
香港鐵路有限公司
www.mtr.com.hk

Our ref: T&ESD/E&IC/ES/EnvE/L1123
Date: 26 APR 2022

Speed Profile
The current maximum train speed for the track section between Yuen Long Station and Long Ping Station is about 70km/h for both directions.

Noise Mitigation Measures
There are no trackside noise barriers or enclosures along the concerned track section of TML. Also, the Corporation does not have any plan on providing additional trackside noise barriers or enclosures along the concerned track sections of TML.

Please be reminded that any information that may come to your knowledge or come into your possession from MTR Corporation Limited shall only be used solely as reference for this captioned project. Further distribution and/or publication of the above information for purposes not connected with the captioned project are strictly prohibited without the prior consent of MTR Corporation Limited. Please also note that any such information is subject to change without prior notification.

Should you have any additional enquiries, please feel free to contact our Acting Lead Environmental Manager, Ms. Catherine Leung at 2993 4127.

Yours sincerely,

HK Chan
General Manager – Engineering & Innovation Centre

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Appendix 4.2 Results of Railway Noise Impact Assessment

Predicted Railway Noise Impact - Overall Day&Evening Time (0700-2300) Leq(30min) in dB(A)

Overall Noise Level

Floor	mPD	R1-44	R2-49	R2-56	R2-57	R2-59	R2-62	R2-64	R2-65	R2-67	R2-68	R2-69	R2-72	R2-73	R2-74	R2-77	R2-78	R2-81	R2-82	R2-85
3/F	23.0	45	46	46	45	41	36	45	45	44	44	45	45	44	42	44	42	44	44	44
4/F	26.1	45	46	46	45	42	38	45	45	45	45	46	45	45	43	44	43	45	44	44
5/F	29.3	45	46	47	46	43	39	46	46	46	46	46	46	46	44	45	44	46	45	45
6/F	32.4	45	47	47	47	44	40	47	47	46	47	47	47	46	47	46	44	46	46	46
7/F	35.6	46	48	48	47	45	40	47	47	49	49	49	49	48	47	47	45	47	46	46
8/F	38.7	46	48	48	47	46	41	50	50	49	49	49	49	48	47	47	45	48	47	47
9/F	41.9	46	48	50	50	48	45	50	50	49	49	50	49	49	48	48	46	48	48	48
10/F	45.0	47	51	51	50	48	45	50	50	50	50	50	50	49	48	49	47	49	48	48
11/F	48.2	47	51	51	50	49	45	50	50	50	50	50	50	49	48	50	47	50	49	49
12/F	51.3	48	51	51	50	49	45	50	51	50	50	50	50	50	49	50	48	50	50	50
13/F	54.5	48	51	51	51	49	45	51	51	50	51	51	51	50	49	51	49	51	50	51
14/F	57.6	48	51	51	51	49	45	51	51	51	51	51	51	50	49	52	49	51	51	51
15/F	60.8	49	51	52	51	49	45	51	51	51	51	52	52	51	50	52	50	52	51	51
16/F	63.9	49	51	52	51	49	45	51	52	51	52	52	52	51	50	54	50	52	52	54
17/F	67.2	50	52	52	51	49	45	52	52	51	52	52	52	52	51	55	50	55	54	54
18/F	70.3	50	52	52	52	49	45	52	52	52	52	53	53	52	51	55	50	55	55	54
19/F	73.5	50	52	52	52	49	45	52	52	52	52	53	53	52	53	56	53	55	54	55
20/F	76.6	51	52	53	52	49	45	52	53	53	52	54	53	54	53	56	53	56	55	56
21/F	79.8	51	52	53	52	50	45	53	53	53	53	54	55	55	53	56	54	57	56	56
22/F	82.9	51	53	53	52	50	45	53	54	54	55	55	55	56	53	56	55	57	56	56
23/F	86.1	52	53	53	53	50	45	53	54	55	55	56	56	56	53	56	55	56	56	56
24/F	89.2	52	53	53	53	50	46	54	55	56	55	57	57	55	53	56	55	56	56	56
25/F	92.4	52	53	53	53	50	45	54	56	56	56	57	57	55	53	55	55	56	56	55
26/F	95.5	52	53	54	53	51	45	55	57	56	56	57	56	55	53	55	54	56	56	55
27/F	98.7	53	53	54	54	51	45	55	57	56	56	57	56	55	53	55	54	56	55	55
28/F	101.8	53	53	55	55	51	46	57	57	56	56	56	56	55	52	55	54	56	55	55
29/F	105.0	53	54	55	55	52	46	57	56	56	56	56	56	55	52	55	54	56	55	55
30/F	108.1	54	54	56	56	52	46	56	56	56	56	56	56	55	52	55	54	55	55	55
31/F	111.3	54	54	56	57	52	46	56	56	55	56	56	56	-	-	-	-	-	-	-
Maximum		54	54	56	56	52	46	57	57	56	56	57	57	56	53	56	55	57	56	56

66	NSRs with Noise Level exceeeding the Acceptable Noise Level
-	Not available at this storey

Predicted Railway Noise Impact - Overall Night-time (2300-0700) Leq(30min) in dB(A)

Overall Noise Level

Floor	mPD	R1-44	R2-49	R2-56	R2-57	R2-59	R2-62	R2-64	R2-65	R2-67	R2-68	R2-69	R2-72	R2-73	R2-74	R2-77	R2-78	R2-81	R2-82	R2-85
3/F	23.0	43	44	44	44	40	35	43	43	43	43	44	43	42	41	42	41	43	42	42
4/F	26.1	43	45	45	44	41	36	44	44	44	44	44	44	43	42	43	42	44	43	43
5/F	29.3	44	45	45	45	42	37	45	45	44	45	45	45	44	43	44	42	44	44	44
6/F	32.4	44	46	46	45	43	38	45	46	45	45	45	45	45	46	45	43	45	44	44
7/F	35.6	44	46	46	46	43	39	46	46	48	48	48	48	47	46	45	44	46	45	45
8/F	38.7	45	47	47	46	44	39	48	48	48	48	48	48	47	46	46	44	46	46	46
9/F	41.9	45	47	49	49	47	43	49	48	48	48	48	48	47	46	47	45	47	46	47
10/F	45.0	45	49	49	49	47	43	49	49	48	48	49	48	48	47	48	45	48	47	47
11/F	48.2	46	49	49	49	47	43	49	49	48	49	49	49	48	47	48	46	49	48	48
12/F	51.3	46	50	50	49	47	43	49	49	49	49	49	49	48	47	49	47	49	48	49
13/F	54.5	47	50	50	49	47	43	49	49	49	49	50	50	49	48	50	47	50	49	49
14/F	57.6	47	50	50	49	47	43	50	50	49	50	50	50	49	48	50	48	50	50	50
15/F	60.8	47	50	50	50	48	43	50	50	50	50	50	50	50	48	51	48	51	50	50
16/F	63.9	48	50	50	50	48	43	50	50	50	50	51	51	50	49	52	49	51	50	52
17/F	67.2	48	50	51	50	48	43	50	51	50	50	51	51	51	50	54	49	54	53	53
18/F	70.3	49	51	51	50	48	43	51	51	50	51	51	51	51	50	54	49	54	53	53
19/F	73.5	49	51	51	51	48	43	51	51	51	51	51	52	51	52	55	52	54	53	53
20/F	76.6	49	51	51	51	48	43	51	51	52	51	52	52	53	52	55	52	55	54	55
21/F	79.8	50	51	52	51	48	43	51	52	52	52	52	54	53	52	55	53	55	55	55
22/F	82.9	50	51	52	51	48	43	51	52	53	54	54	54	54	52	54	54	55	55	55
23/F	86.1	50	52	52	51	48	43	52	52	54	54	54	55	54	52	54	54	55	55	54
24/F	89.2	51	52	52	51	49	44	53	54	55	54	55	55	54	52	54	53	55	55	54
25/F	92.4	51	52	52	52	49	44	52	54	55	55	55	55	54	52	54	53	55	54	54
26/F	95.5	51	52	52	52	50	44	54	55	55	55	55	55	54	51	54	53	55	54	54
27/F	98.7	52	52	53	52	50	44	54	55	55	55	55	55	54	51	54	53	55	54	54
28/F	101.8	51	52	53	54	50	44	55	55	54	55	55	55	54	51	54	53	54	54	54
29/F	105.0	52	52	53	54	51	44	55	55	54	55	55	55	54	51	53	53	54	54	54
30/F	108.1	52	53	55	54	51	44	55	55	54	55	55	55	53	51	53	53	54	54	53
31/F	111.3	53	53	55	55	51	44	55	55	54	54	55	55	-	-	-	-	-	-	-
Maximum		52	53	55	54	51	44	55	55	55	55	55	55	54	52	55	54	55	55	55

56	NSRs with Noise Level exceeeding the Acceptable Noise Level
-	Not available at this storey

Predicted Railway Noise Impact - Overall Leq(24hr) in dB(A)

Overall Noise Level

Floor	mPD	R1-44	R2-49	R2-56	R2-57	R2-59	R2-62	R2-64	R2-65	R2-67	R2-68	R2-69	R2-72	R2-73	R2-74	R2-77	R2-78	R2-81	R2-82	R2-85
3/F	23.0	44	45	45	45	41	36	44	44	44	44	45	44	43	42	43	42	44	43	43
4/F	26.1	44	46	46	45	42	37	45	45	45	45	45	45	44	43	44	43	45	44	44
5/F	29.3	45	46	46	46	43	38	46	46	45	46	46	46	45	44	45	43	45	45	45
6/F	32.4	45	47	47	46	44	39	46	47	46	46	46	46	46	47	46	44	46	45	45
7/F	35.6	45	47	47	47	44	40	47	47	49	49	49	49	48	47	46	45	47	46	46
8/F	38.7	46	48	48	47	45	40	49	49	49	49	49	49	48	47	47	45	47	47	47
9/F	41.9	46	48	50	50	48	44	50	49	49	49	49	49	48	47	48	46	48	47	48
10/F	45.0	46	50	50	50	48	44	50	50	49	49	50	49	49	48	49	46	49	48	48
11/F	48.2	47	50	50	50	48	44	50	50	49	50	50	50	49	48	49	47	50	49	49
12/F	51.3	47	51	51	50	48	44	50	50	50	50	50	50	49	48	50	48	50	49	50
13/F	54.5	48	51	51	50	48	44	50	50	50	50	51	51	50	49	51	48	51	50	50
14/F	57.6	48	51	51	50	48	44	51	51	50	51	51	51	50	49	51	49	51	51	51
15/F	60.8	48	51	51	51	49	44	51	51	51	51	51	51	51	49	52	49	52	51	51
16/F	63.9	49	51	51	51	49	44	51	51	51	51	52	52	51	50	53	50	52	51	53
17/F	67.2	49	51	52	51	49	44	51	52	51	51	52	52	52	51	55	50	55	54	54
18/F	70.3	50	52	52	51	49	44	52	52	51	52	52	52	52	51	55	50	55	54	54
19/F	73.5	50	52	52	52	49	44	52	52	52	52	52	53	52	53	56	53	55	54	54
20/F	76.6	50	52	52	52	49	44	52	52	53	52	53	53	54	53	56	53	56	55	56
21/F	79.8	51	52	53	52	49	44	52	53	53	53	53	55	54	53	56	54	56	56	56
22/F	82.9	51	52	53	52	49	44	52	53	54	55	55	55	55	53	55	55	56	56	56
23/F	86.1	51	53	53	52	49	44	53	53	55	55	55	56	55	53	55	55	56	56	55
24/F	89.2	52	53	53	52	50	45	54	55	56	55	56	56	55	53	55	54	56	56	55
25/F	92.4	52	53	53	53	50	45	53	55	56	56	56	56	55	53	55	54	56	55	55
26/F	95.5	52	53	53	53	51	45	55	56	56	56	56	56	55	52	55	54	56	55	55
27/F	98.7	53	53	54	53	51	45	55	56	56	56	56	56	55	52	55	54	56	55	55
28/F	101.8	52	53	54	55	51	45	56	56	55	56	56	56	55	52	55	54	55	55	55
29/F	105.0	53	53	54	55	52	45	56	56	55	56	56	56	55	52	54	54	55	55	55
30/F	108.1	53	54	56	55	52	45	56	56	55	56	56	56	54	52	54	54	55	55	54
31/F	111.3	54	54	56	56	52	45	56	56	55	55	56	56	-	-	-	-	-	-	-
Maximum		53	54	56	55	52	45	56	56	56	56	56	56	55	53	56	55	56	56	56

66	NSRs with Noise Level exceeeding the Acceptable Noise Level
-	Not available at this storey

Predicted Railway Noise Impact - Overall Lmax in dB(A)

Overall Noise Level

Floor	mPD	R1-44	R2-49	R2-56	R2-57	R2-59	R2-62	R2-64	R2-65	R2-67	R2-68	R2-69	R2-72	R2-73	R2-74	R2-77	R2-78	R2-81	R2-82	R2-85
3/F	23.0	63	62	63	63	63	63	64	64	65	65	65	65	65	66	68	65	66	65	65
4/F	26.1	63	62	63	63	63	63	64	64	65	65	65	65	65	66	68	65	66	65	65
5/F	29.3	63	62	63	63	63	63	64	64	65	64	65	65	65	65	68	65	66	65	65
6/F	32.4	63	62	63	63	63	63	64	64	65	64	65	65	65	65	68	65	65	65	65
7/F	35.6	63	62	63	63	63	63	64	64	64	64	65	65	65	65	67	65	65	65	65
8/F	38.7	62	62	63	63	63	63	64	64	64	64	64	65	65	65	67	64	65	65	65
9/F	41.9	62	62	63	63	63	63	63	64	64	64	64	65	65	65	67	64	65	65	65
10/F	45.0	62	62	63	63	63	63	63	64	64	64	64	65	65	65	67	64	65	65	65
11/F	48.2	62	62	63	63	63	63	63	64	64	64	64	64	65	65	66	64	65	65	65
12/F	51.3	62	62	63	63	63	63	63	64	64	64	64	64	65	65	66	64	65	64	65
13/F	54.5	62	62	62	63	63	63	63	64	64	64	64	64	64	65	66	64	65	64	65
14/F	57.6	62	62	62	63	63	63	63	63	64	64	64	64	64	64	66	64	65	64	64
15/F	60.8	62	62	62	63	63	63	63	63	64	64	64	64	64	64	65	64	64	64	64
16/F	63.9	62	62	62	62	63	63	63	63	64	64	64	64	64	64	65	64	64	64	64
17/F	67.2	62	62	62	62	63	63	63	63	63	63	63	64	64	64	65	64	64	64	64
18/F	70.3	62	62	62	62	62	63	63	63	63	63	63	64	64	64	65	63	64	64	64
19/F	73.5	62	62	62	62	62	62	63	63	63	63	63	63	64	64	65	63	64	64	64
20/F	76.6	62	61	62	62	62	62	63	63	63	63	63	63	63	64	64	63	64	63	64
21/F	79.8	62	61	62	62	62	62	62	63	63	63	63	63	63	63	64	63	63	63	63
22/F	82.9	62	61	62	62	62	62	62	63	63	63	63	63	63	63	64	63	63	63	63
23/F	86.1	61	61	62	62	62	62	62	62	63	63	63	63	63	63	64	63	63	63	63
24/F	89.2	61	61	62	62	62	62	62	62	63	63	63	63	63	63	64	63	63	63	63
25/F	92.4	61	61	62	62	62	62	62	62	62	62	62	63	63	63	63	63	63	63	63
26/F	95.5	61	61	61	62	62	62	62	62	62	62	62	63	63	63	63	62	63	63	63
27/F	98.7	61	61	61	61	62	62	62	62	62	62	62	62	62	63	63	62	63	62	63
28/F	101.8	61	61	61	61	62	62	62	62	62	62	62	62	62	62	63	62	62	62	62
29/F	105.0	61	61	61	61	61	61	62	62	62	62	62	62	62	62	63	62	62	62	62
30/F	108.1	61	61	61	61	61	61	61	62	62	62	62	62	62	62	63	62	62	62	62
31/F	111.3	61	61	61	61	61	61	61	62	62	62	62	62	-	-	-	-	-	-	-
Maximum		63	62	63	63	63	63	64	64	65	65	65	65	65	66	68	65	66	65	65

86	NSRs with Noise Level exceeeding the Acceptable Noise Level
-	Not available at this storey

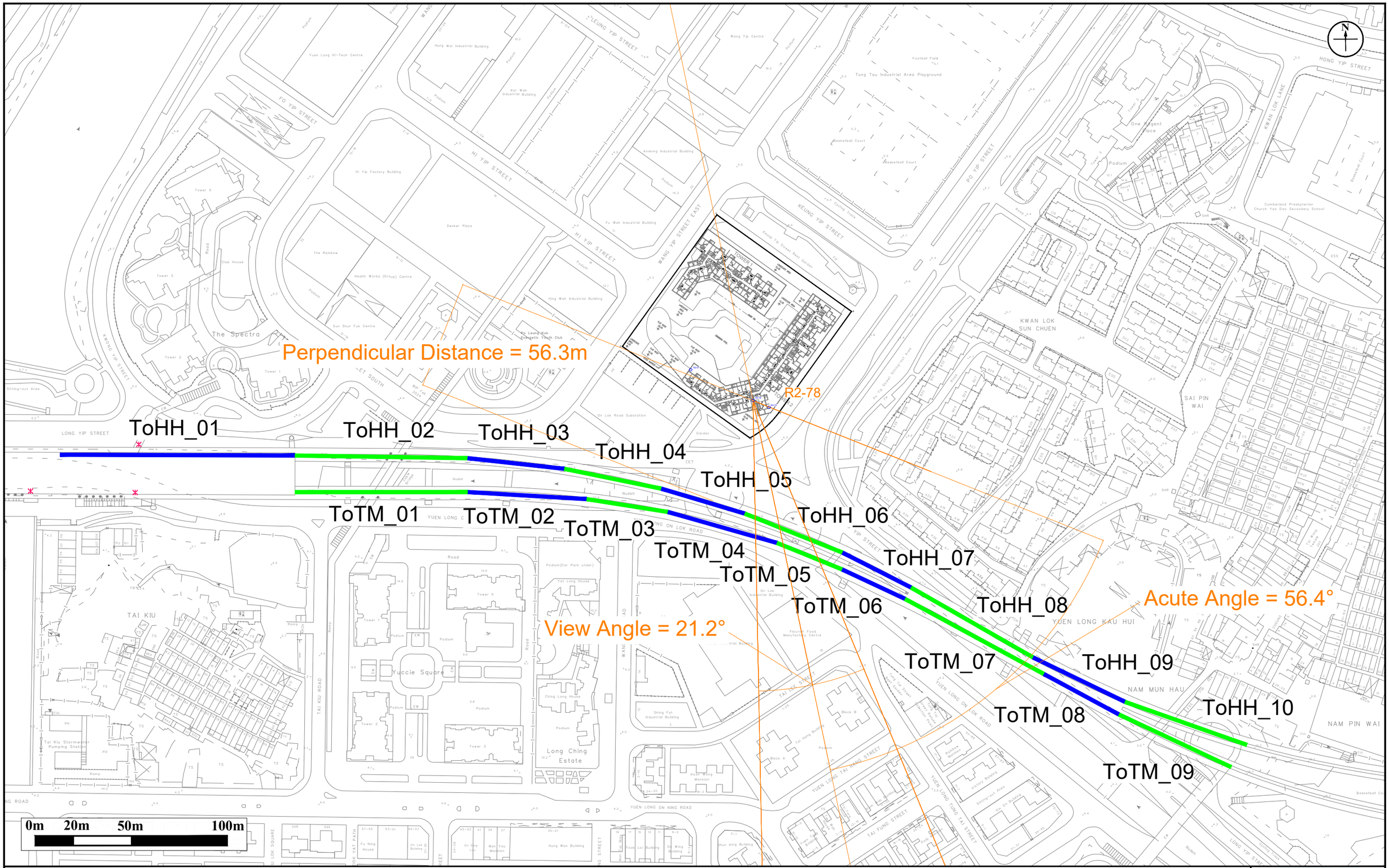
Appendix 4.3 Sample Calculation of Railway Noise Impact Assessment

	Area Sensitivity Rating (ASR)	B																			
	Time Period	Night-time																			
	Noise Criterion, dB(A)	55.4	52.5																		
	DETAILED CALCULATIONS																				
R_ID	Noise Sensitive Receiver (NSR) ID	R2-78																			
R_x	NSR (x)	821108.5																			
R_y	NSR (y)	834291.9																			
R_z	NSR (z)	112.5																			
R_Type	Receptor Type	T2	52.5																		
			1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	19.0	20.0	21.0	22.0
	TRACK SEGMENTATION																				
	Track ID		ToTM_01	ToTM_02	ToTM_03	ToTM_04	ToTM_05	ToTM_06	ToTM_07	ToTM_08	ToTM_09	ToHH_01	ToHH_02	ToHH_03	ToHH_04	ToHH_05	ToHH_06	ToHH_07	ToHH_08	ToHH_09	ToHH_10
	Type		EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU	EMU
	Track On/Off Toggle		Off	Off	Off	On	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	On	Off	Off	Off	Off
	Predefined Track Start Point (x)	Coord	820869.6	820959.9	821021.8	821064.2	821121.1	821155.1	821187.9	821260.3	821299.5	820747.0	820869.7	820959.7	821010.2	821060.8	821104.3	821155.3	821191.0	821254.7	821302.6
	Predefined Track Start Point (y)	Coord	834244.2	834244.2	834240.6	834233.9	834217.7	834203.8	834188.5	834149.3	834128.2	834263.7	834263.3	834261.9	834256.3	834246.0	834233.0	834212.6	834194.4	834158.0	834134.8
	Predefined Track Start Point (z)	Coord	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	Predefined Track End Point (x)	Coord	820959.9	821021.8	821064.2	821121.1	821155.1	821187.9	821260.3	821299.5	821358.0	820869.7	820959.7	821010.2	821060.8	821104.3	821155.3	821191.0	821254.7	821302.6	821366.2
	Predefined Track End Point (y)	Coord	834244.2	834240.6	834233.9	834217.7	834203.8	834188.5	834149.4	834128.2	834100.8	834263.3	834261.9	834256.3	834246.0	834233.0	834212.6	834194.4	834158.0	834134.8	834112.4
	Predefined Track End Point (z)	Coord	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	ROLLING NOISE																				
	Rolling Stock																				
	Train Frequency Per 30 Minutes (Daytime & Evening) (Ultimate)		15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
	Train Frequency Per 30 Minutes (Night-time) (Ultimate)		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	No. of Cars Per Train (Existing)		8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
	No. of Cars Per Train (Ultimate)		9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
	Source Strength																				
	Measured Sound Exposure Level (SEL)		76.2	76.2	76.2	76.2	76.2	76.2	76.2	76.2	76.2	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4	75.4
	Reference Distance of Measurement	m	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.0	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2
	Measurement View Angle	Degree	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	123.7	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5
	Measurement Acute Angle	Degree	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.5	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
SEL	[a] $SEL_{Reference}$ at 25 m & 180 degree & 9 cars per train		81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3	80.3
S_z	Height of Notional Noise Source (Source)	mPD	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	Barrier (Viaduct)	Barrier (Viaduct) Toggle	Single	Single	Single	Single	Single	Single	Twin (Far)	Twin (Far)	Single	Single	Single	Single	Single	Single	Single	Single	Twin (Near)	Twin (Near)	Single
Barrier_zp	Effective Barrier Height (z)	mPD	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
	Geometry																				
SB_dH	Horizontal Distance between Source and Barrier	m	1.3	1.3	1.3	1.3	1.3	1.3	5.0	5.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
BR_dH	Horizontal Distance between Barrier and Receiver	m	46.4	55.1	63.0	66.7	62.7	58.8	48.2	48.6	65.9	28.1	31.0	44.8	53.3	56.4	55.0	48.2	42.3	55.8	82.2
SR_dH	Horizontal Distance between Source and Receiver	m	47.7	56.4	64.3	68.0	64.0	60.1	53.2	53.6	67.2	29.4	32.3	46.1	54.6	57.7	56.3	49.5	43.6	57.1	83.5
VA	View Angle	Degree	6.5	12.9	22.0	8.4	12.8	9.6	9.3	2.6	3.2	2.4	4.6	8.5	24.0	42.0	21.2	9.7	7.3	3.5	4.1
AA	Acute Angle	Degree	14.5	27.6	50.6	68.8	51.8	32.3	19.5	13.6	13.9	5.9	10.0	21.9	43.5	81.5	56.4	27.6	16.3	15.0	17.5
SB_dS	Slant Distance between Source and Barrier	m	1.8	1.8	1.8	1.8	1.8	1.8	5.1	5.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
BR_dS	Slant Distance between Barrier and Receiver	m	102.4	106.6	110.9	113.0	110.8	108.6	103.2	103.4	112.6	95.5	96.4	101.7	105.7	107.3	106.6	103.2	100.6	107.0	122.8
SR_dS	Slant Distance between Source and Receiver	m	104.0	108.3	112.6	114.8	112.5	110.3	106.7	106.9	114.3	97.0	98.0	103.3	107.4	109.0	108.3	104.9	102.3	108.7	124.6
PLD	Path Length Difference	m	0.1	0.1	0.0	0.0	0.0	0.0	1.7	1.7	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Angle_SB	Angle SB	Degree	42.7	42.7	42.7	42.7	42.7	42.7	13.5	13.5	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7
Angle_SR	Angle SR	Degree	62.7	58.6	55.2	53.7	55.3	57.0	60.1	59.9	54.0	72.3	70.7	63.5	59.4	58.0	58.7	61.9	64.7	58.3	47.9
	Shadow Zone (TRUE) / Illuminated Zone (FALSE)	Boolean	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	Propagation																				
Corr_Bar_1	[b1] Barrier Correction (MaeKawa)	dB(A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corr_Dist	[c] Distance Correction	dB(A)	-6.2	-6.4	-6.5	-6.6	-6.5	-6.4	-6.3	-6.3	-6.6	-5.9	-5.9	-6.2	-6.3	-6.4	-6.4	-6.2	-6.1	-6.4	-7.0
Corr_VA	[d] View Angle Correction	dB(A)	-23.4	-15.1	-8.4	-11.0	-10.6	-15.2	-19.4	-28.0	-26.9	-35.6	-28.1	-18.8	-9.0	-3.6	-7.9	-16.3	-21.9	-25.9	-23.9
Corr_TD	[e] Track Deterioration Correction	dB(A)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Corr_Freq	[f] Train Frequency Correction	dB(A)	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1
Corr_Façade	[g] Façade Correction	dB(A)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Corr_AAb	[j] Air Absorption Correction	dB(A)	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.6	-0.6	-0.7	-0.8
	L_{Aeq} ([a] + [b1] + [c] + [d] + [e] + [f] + [g] + [j])	dB(A)	0.0	0.0	0.0	46.9	47.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.7	0.0	0.0	0.0	0.0
	Rolling Noise Overall L_{Aeq}	dB(A)	52.5																		
	TRACK COORDINATES																				
Track_x1	Track Start Point (x)	Coord	820869.6	820959.9	821021.8	821110.0	821121.1	821155.1	821187.9	821260.3	821299.5	820747.0	820869.7	820959.7	821010.2	821060.8	821109.8	821155.3	821191.0	821254.7	821302.6
Track_y1	Track Start Point (y)	Coord	834244.2	834244.2	834240.6	834220.8	834217.7	834203.8	834188.5	834149.3	834128.2	834263.7	834263.3	834261.9	834256.3	834246.0	834230.8	834212.6	834194.4	834158.0	834134.8
Track_z1	Track Start Point (z)	Coord	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Track_x2	Track End Point (x)	Coord	820959.9	821021.8	821064.2	821121.1	821142.8	821187.9	821260.3	821299.5	821358.0	820869.7	820959.7	821010.2	821060.8	821104.3	821138.5	821191.0	821254.7	821302.6	821366.2
Track_y2	Track End Point (y)	Coord	834244.2	834240.6	834233.9	834217.7	834208.8	834188.5	834149.4	834128.2	834100.8	834263.3	834261.9	834256.3	834246.0	834233.0	834219.3	834194.4	834158.0	834134.8	834112.4
Track_z2	Track End Point (z)	Coord	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	PROJECTIONS OF d, θ, α																				
Track_m	Track Slope		0.0	-0.1	-0.2	-0.3	-0.4	-0.5	-0.5	-0.5	-0.5	0.0	0.0	-0.1	-0.2	-0.3	-0.4	-0.5	-0.6	-0.5	-0.4
	-1 / m		-5014.3	16.9	6.3	3.5	2.5	2.1	1.8	1.9	2.1	305.2	64.9	9.1	4.9	3.3	2.5	2.0	1.7	2.1	2.8
	Projection Track Points																				
Track_xp	Track Projection Point (x)	Coord	821108.5	821105.2	821098.5	821090.0	821084.4	821083.1	821083.2	821083.1	821080.0	821108.4	821108.0	821103.5	821097.6	821092.0	821087.7	821086.1	821086.9	821083.7	821080.7
Track_yp	Track Projection Point (y)	Coord	834244.2	834235.6	834228.4	834226.5	834232.6	834237.5	834245.1	834244.8	834231.1	834262.5	834259.6	834246.1	834238.4	834236.6	834239.6	834247.9	834254.1	834240.6	834213.2
Track_zp	Track Projection Point (z)	mPD	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	Horizontal Perpendicular Distance between R and S																				
SR_dH	d	m	47.7	56.4	64.3	68.0	64.0	60.1	53.2	53.6	67.2	29.4	32.3	46.1	54.6	57.7	56.3	49.5	43.6	57.1	83.5
	View Angle and Acute Angle																				
	DISTANCE																				
b	NA	m	243.7	156.2	100.8	71.1	75.3	99.7	130.4	208.3	251.5	362.6	240.6	151.8	104.6	66.3	61.2	92.1	127.7	198.2	249.7
a	NB	m	156.2	100.8	73.1	75.3	89.9	130.4	208.2	251.5	314.3	240.6	151.8	104.6	66.3	59.1	78.6	127.7	198.2	249.7	314.0
n	AB	m	90.3	62.1	42.9	11.5	23.5	36.2	82.3	44.5	64.6	122.6	90.1	50.8	51.6	45.4	30.9	40.1	73.3	53.3	67.4
	ANGLES																				
	View Angle ∠ANB	Degree	6.5	12.9	22.0	8.4	12.8	9.6	9.3	2.6	3.2	2.4	4.6	8.5	24.0	42.0	21.2	9.7	7.3	3.5	4.1
	∠NAB	Degree	11.3	21.2	39.6	107.1	121.7	142.9	155.9	165.1	164.5	4.7	7.7	17.7	31.5	60.5	113.0	147.5	160.0	163.3	160.5
	∠NBA	Degree	162.2	146.0	118.4	64.6	45.4	27.4	14.8	12.3	12.3	173.0	167.7	153.8	124.5	77.5	45.8	22.8	12.7	13.2	15.4
	Acute Angle	Degree	14.5	27.6	50.6	68.8	51.8	32.3	19.5	13.6	13.9	5.9	10.0	21.9	43.5	81.5	56.4	27.6	16.3	15.0	17.5

PREDICTED NOISE LEVEL

Floor	mPD	Overall L_{Aeq}	
3/F	24.2	41.1	53.7 84.1 mPD at 22/F
4/F	27.3	41.7	
5/F	30.5	42.2	
6/F	33.6	42.8	
7/F	36.8	43.5	
8/F	39.9	44.1	
9/F	43.1	44.7	
10/F	46.2	45.3	
11/F	49.4	46.0	
12/F	52.5	46.6	
13/F	55.7	47.3	
14/F	58.8	47.8	
15/F	62.0	48.2	
16/F	65.1	48.5	
17/F	68.4	48.9	
18/F	71.5	48.8	
19/F	74.7	51.7	
20/F	77.8	51.9	
21/F	81.0	52.9	
22/F	84.1	53.7	
23/F	87.3	53.5	
24/F	90.4	53.4	
25/F	93.6	53.3	
26/F	96.7	53.1	
27/F	99.9	53.0	
28/F	103.0	52.9	
29/F	106.2	52.8	
30/F	109.3	52.6	
31/F	112.5	52.5	

Note:

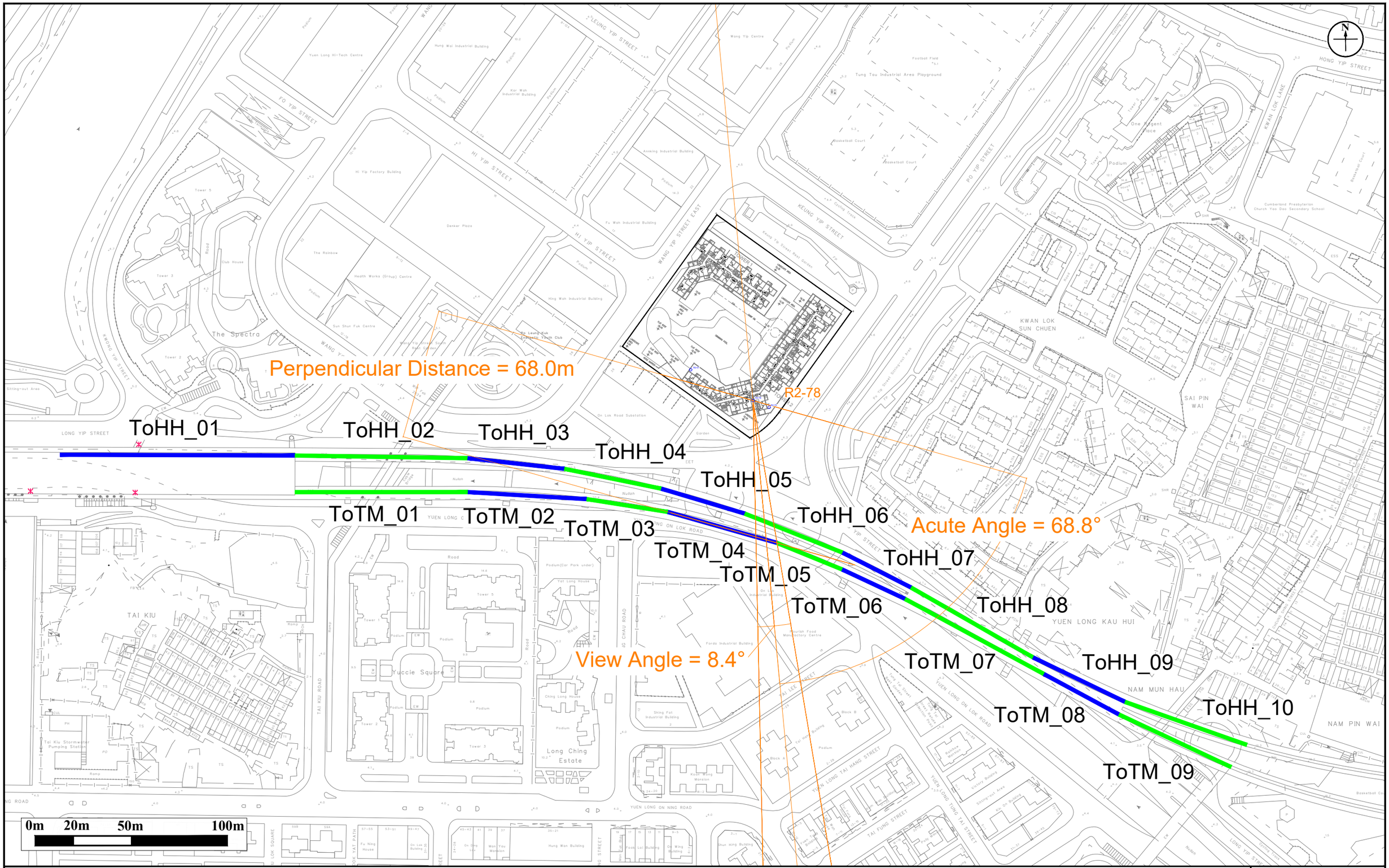


Appendix:	4.3a
Title:	Determination of View Angle, Acute Angle and Perpendicular Distance to Track "ToHH_06" for R2-78
Project:	Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	4.0
Date:	Apr 2026

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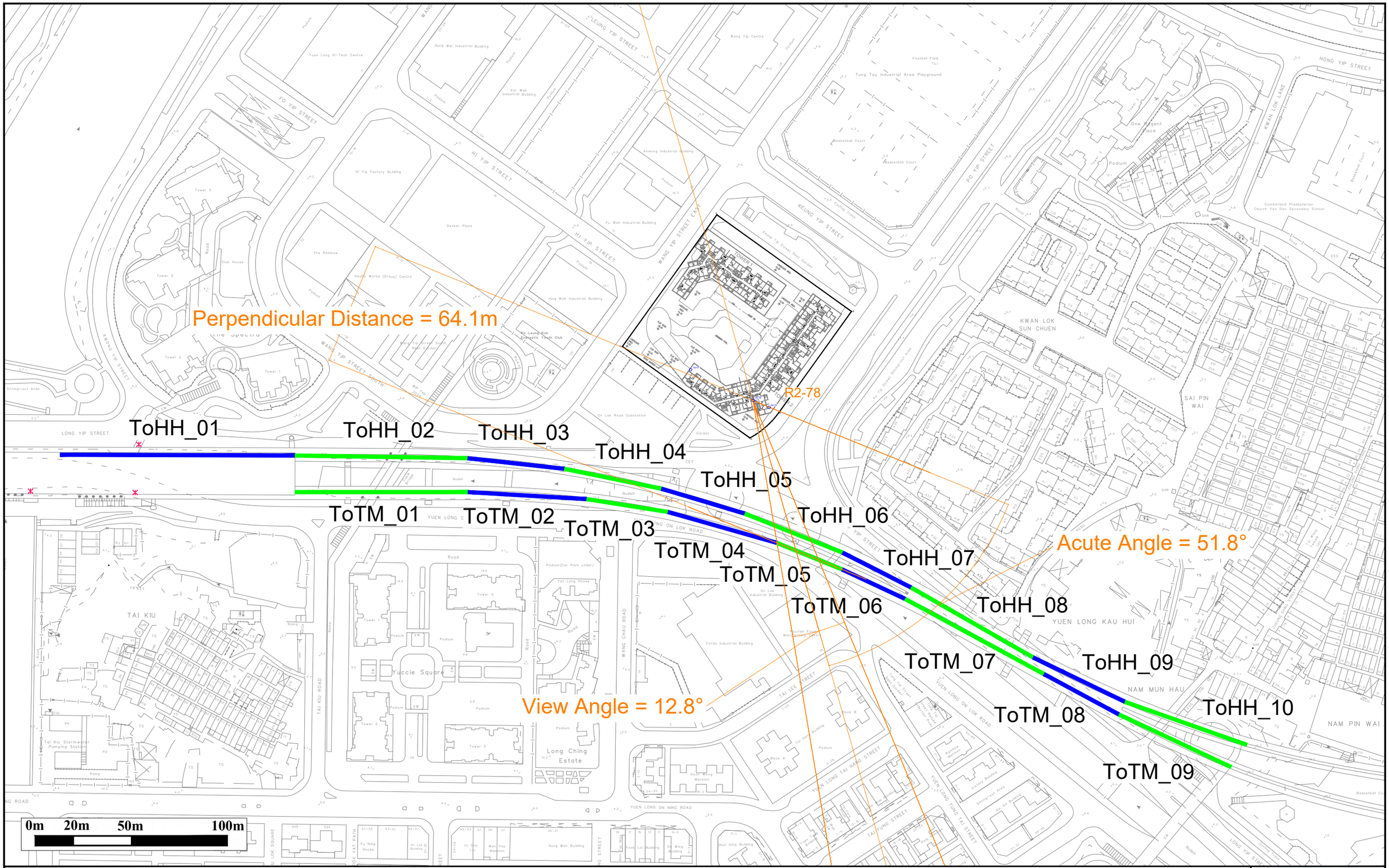


Appendix:	4.3b
Title:	Determination of View Angle, Acute Angle and Perpendicular Distance to Track "ToTM_04" for R2-78
Project:	Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

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Rev.:	4.0
Date:	Apr 2026

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Appendix:	4.3c
Title:	Determination of View Angle, Acute Angle and Perpendicular Distance to Track "ToTM_05" for R2-78
Project:	Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	4.0
Date:	Apr 2026

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Appendix 4.4 Details of Railway Noise Measurement



Subject Site

Noise Measurement Point

ToHH_01 ToHH_02 ToHH_03 ToHH_04 ToHH_05 ToHH_06 ToHH_07 ToHH_08 ToHH_09 ToHH_10

ToTM_01 ToTM_02 ToTM_03 ToTM_04 ToTM_05 ToTM_06 ToTM_07 ToTM_08 ToTM_09

0m 50m 100m 200m

Appendix: 4.4	RAMBOLL
Title: Location of on-site Railway Noise Measurement	Drawn by: JK Checked by: CC
Project: Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362	Rev.: 1.0 Date: Jul 2020

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Calculation of Reference SEL based on onsite measurement at the rooftop of Lai Sun Yuen Long Centre

	Train ID	Train Direction/Track	Date of Measuremnt	Time (Start)	Time (End)	Sound Exposure Level (SEL)	Duration	Min $L_{A,eq}$	SEL w/o Background	Lmax	Number of cars
EMU	NB1	Hung Hom (NB)	12/23/2019	23:08:28	23:08:52	77.9	24	61.1	75.2	67.3	8
	NB2	Hung Hom (NB)	12/23/2019	23:13:44	23:14:09	77.5	25	62.3	72.7	67.4	8
	NB3	Hung Hom (NB)	12/23/2019	23:19:33	23:19:56	77.7	23	62.0	73.8	66.4	8
	NB4	Hung Hom (NB)	12/23/2019	23:24:45	23:25:09	78.2	24	62.7	74.0	68.7	8
	NB5	Hung Hom (NB)	12/23/2019	23:30:49	23:31:07	79.6	18	63.3	76.4	69.6	8
	NB6	Hung Hom (NB)	12/23/2019	23:36:54	23:37:15	79.9	21	64.4	75.6	68.4	8
	NB7	Hung Hom (NB)	12/23/2019	23:42:55	23:43:15	80.4	20	63.6	77.8	69.8	8
								Log Average	**75.4**	**68.4**	

	Train ID	Train Direction/Track	Date of Measuremnt	Time (Start)	Time (End)	Sound Exposure Level (SEL)	Duration	Min $L_{A,eq}$	SEL w/o Background	Lmax	Number of cars
EMU	SB1	Tuen Mun(SB)	12/23/2019	23:05:26	23:05:59	79.3	33	61.9	75.9	66.8	8
	SB2	Tuen Mun(SB)	12/23/2019	23:10:54	23:11:29	78.7	35	61.3	75.3	65.8	8
	SB3	Tuen Mun(SB)	12/23/2019	23:16:34	23:17:05	80.1	31	61.8	77.5	68.8	8
	SB4	Tuen Mun(SB)	12/23/2019	23:27:27	23:27:57	80.7	30	62.8	77.8	69.4	8
	SB5	Tuen Mun(SB)	12/23/2019	11:33:03	23:33:31	79.8	28	62.2	76.5	69.4	8
	SB6	Tuen Mun(SB)	12/23/2019	23:38:26	23:38:56	78.5	30	60.9	75.3	66.5	8
	SB7	Tuen Mun(SB)	12/23/2019	23:44:07	23:44:34	78.3	27	61.5	74.1	68.4	8
								Log Average	**76.2**	**68.1**	

Note:
Measurement point at the railing (the SEL is considered to be free-field, such that no façade correction is accounted)
SEL and L_{max} are measured for the period when noise from railway operation is audible
Duration represents the length of the period measured; Passby Duration is the length of the train to pass thorugh the measurement point
Min LA,eq is the minimum noise level measured within the period

Measurement Results:	**Calculation of Reference SEL**		**Calculation of Reference Lmax**	
	NB EMU	SB EMU	NB EMU	SB EMU
Measured SEL with background correction (dBA) =	75.4	76.2	68.4	68.1
Measurement point distance from track (m) =	66.2	76.0	66.19	75.95
View angle, θ (°) =	129.52	123.68	129.52	123.68
Acute angle, α (°) (refer to CRN for definition of acute angle) =	89.92	89.48	89.92	89.48
Number of car per train =	8	8	8	8
Application of view angle and number-of-car correction				
Expected number of car per train upcon completion of development =	9	9	9	9
Distance Correction	4.23	4.83	4.23	4.83
Correction for 9-car train, 10xlog(B/A) =	0.51	0.51	0.51	0.51
View angle correction (refer to CRN) =	0.18	0.24	Not Accounted	Not Accounted
Reference SEL (with 12-car-train and view angle correction) (dBA) =	80.3	81.8	73.1	73.4

Appendix 4.5 Line of Sight from R2-01 and R2-75

R2-01

1.6m

ToHH_01
ToHH_02
ToHH_03
ToHH_04
ToHH_05
ToHH_06
ToHH_07
ToHH_08
ToHH_09
ToHH_10

ToTM_01
ToTM_02
ToTM_03
ToTM_04
ToTM_05
ToTM_06
ToTM_07
ToTM_08
ToTM_09

Legend:

300m Assessment Area

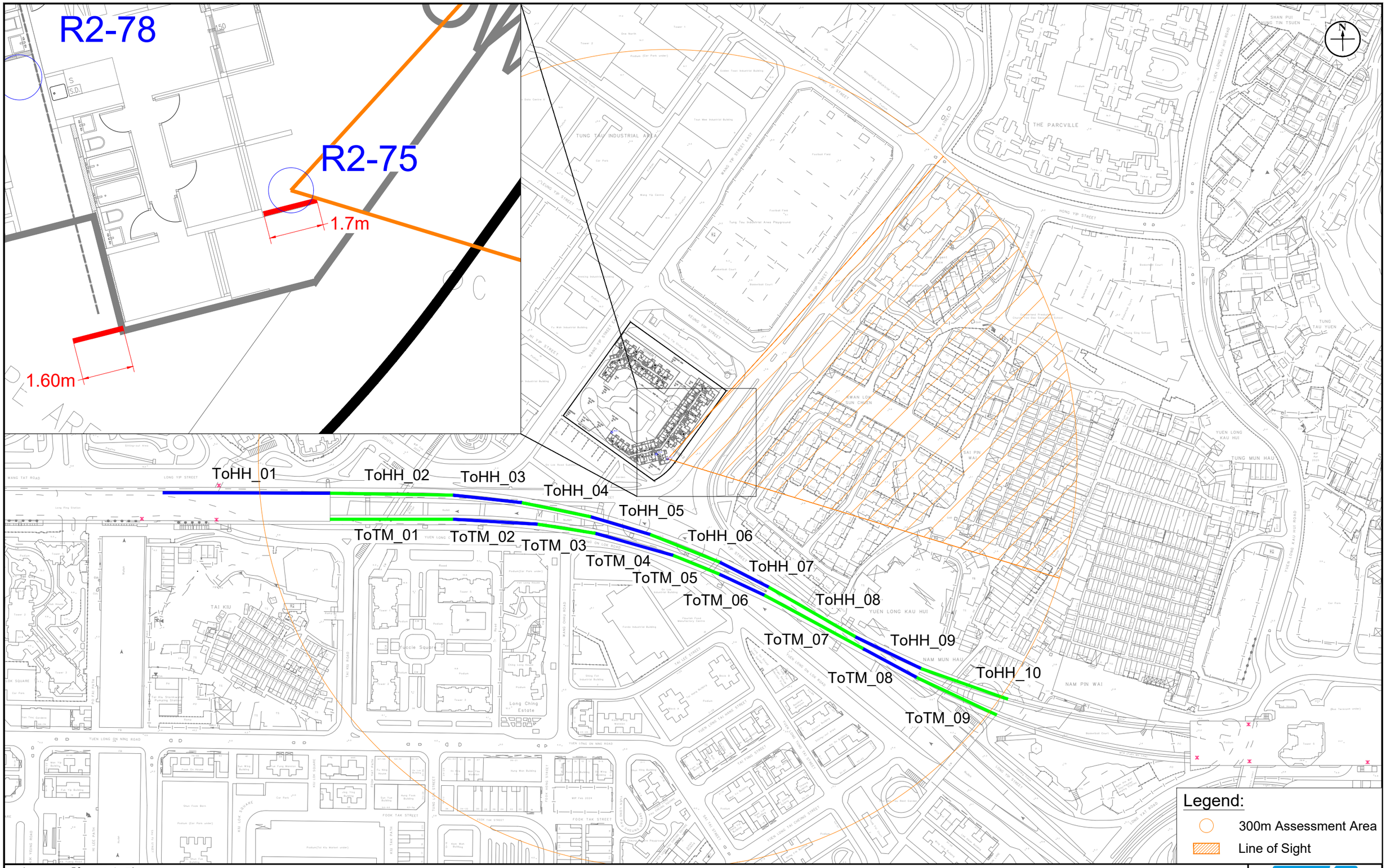
Line of Sight

Appendix:	4.5a
Title:	Line of Sight from NSR N2-01
Project:	Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	4.0
Date:	Apr 2026

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Appendix:	4.5b
Title:	Line of Sight from NSR R2-75
Project:	Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362

RAMBOLL

Drawn by:	MW
Checked by:	CC
Rev.:	4.0
Date:	Apr 2026

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Appendix 5.1 Details of Site Survey

Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362
Fixed Noise Sources at 300m area

Source ID	Source	Photo	Description	Measured SPL, dB(A)			Measurement Distance, m	Measured SWL, dB(A)			SWL adopted in NIA1		Adopted SWL, dB(A)	
				9-Dec-2019	9-Jan-2020	23-Dec-2019		9-Dec-2019	9-Jan-2020	23-Dec-2019				
				Day and Evening Time	Day and Evening Time	Night time		Day and Evening Time	Day and Evening Time	Night time	Day and Evening Time	Night time	Day and Evening Time	Night time
S1a	On Lok Road Substation		6 Transformers at Electrical Substation	64.7	65.2	63.7	7	88.0	88.1	84.6	88.1	84.6	88.1	84.6
S1b				64.7	65.2	63.7	7	88.0	88.1	84.6	88.1	84.6	88.1	84.6
S1c				64.7	65.2	63.7	7	88.0	88.1	84.6	88.1	84.6	88.1	84.6
S1d				64.7	65.2	63.7	7	88.0	88.1	84.6	88.1	84.6	88.1	84.6
S1e				64.7	65.2	63.7	7	88.0	88.1	84.6	88.1	84.6	88.1	84.6
S1f				64.7	65.2	63.7	7	88.0	88.1	84.6	88.1	84.6	88.1	84.6
S1			Background	59.6	61.0	61.5	--	--	--	--	--	--	--	--
S2	Sum Kee Metal Company Limited		Metal processing take place, including cutting and compressing metal sheets by machine	(Measurement was not conducted)	64.8	No Night-time operation	15.5	--	93.1	--	93.1	--	93.1	--
			Background	--	62.2	--	--	--	--	--	--	--	--	--
S3*	健記汽車冷氣電器		Garage without tyre replacement	(Measurement was not conducted)							91.0	--	91.0	--

Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362
Fixed Noise Sources at 300m area

Source ID	Source	Photo	Description	Measured SPL, dB(A)			Measurement Distance, m	Measured SWL, dB(A)			SWL adopted in NIA1		Adopted SWL, dB(A)	
				9-Dec-2019	9-Jan-2020	23-Dec-2019		9-Dec-2019	9-Jan-2020	23-Dec-2019				
				Day and Evening Time	Day and Evening Time	Night time		Day and Evening Time	Day and Evening Time	Night time	Day and Evening Time	Night time	Day and Evening Time	Night time
S4*	裕記膠輪電池		Garage with tyre replacement	(Measurement was not conducted)							97.0	--	97.0	--
S5	珠江車房		Minibus maintenance workshop with tyre replacement works	67.9	65.0	No Night-time operation	13.5	97.8	93.3	--	97.8	--	97.8	--
			Background	59.6	61.0	--	--	--	--	--	--	--	--	--
S6	元朗膠輪電池有限公司		Minibus maintenance workshop with tyre replacement works	(Measurement was not conducted)	71.3	No Night-time operation	12.5	--	100.8	--	100.8	--	100.8	--
			Background	--	61.0	--	--	--	--	--	--	--	--	--
S7*	新界車房		Garage without tyre replacement	(Measurement was not conducted)							91.0	--	91.0	--

Source ID	Source	Photo	Description	Measured SPL, dB(A)			Measurement Distance, m	Measured SWL, dB(A)			SWL adopted in NIA1		Adopted SWL, dB(A)	
				9-Dec-2019	9-Jan-2020	23-Dec-2019		9-Dec-2019	9-Jan-2020	23-Dec-2019				
				Day and Evening Time	Day and Evening Time	Night time		Day and Evening Time	Day and Evening Time	Night time	Day and Evening Time	Night time	Day and Evening Time	Night time
S8	Keeper 日本專業汽車美容連鎖		Car Washing Workshop	61.2	(Measurement was not conducted)	No Night-time operation	23	87.9	--	--	87.9	--	87.9	--
			Background	60.6	--	--	--	--	--	--	--	--	--	--
S9*	長城汽車維修公司		Garage without tyre replacement	(Measurement was not conducted)							91.0	--	91.0	--
S11*	合興汽車電器工程		Garage without tyre replacement	(Measurement was not conducted)							97.0	--	97.0	--
S12*	Good Year Autocare (輪胎電池服務中心)		Garage with tyre replacement	(Measurement was not conducted)							97.0	--	97.0	--

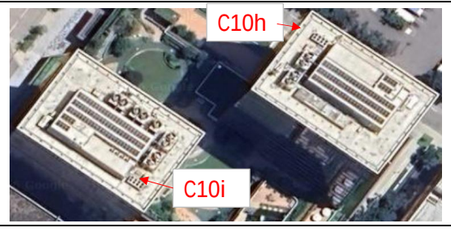
Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362
Fixed Noise Sources at 300m area

Source ID	Source	Photo	Description	Measured SPL, dB(A)			Measurement Distance, m	Measured SWL, dB(A)			SWL adopted in NIA1		Adopted SWL, dB(A)	
				9-Dec-2019	9-Jan-2020	23-Dec-2019		9-Dec-2019	9-Jan-2020	23-Dec-2019				
				Day and Evening Time	Day and Evening Time	Night time		Day and Evening Time	Day and Evening Time	Night time	Day and Evening Time	Night time	Day and Evening Time	Night time
S13*	新興汽車服務中心		Garage with tyre replacement	(Measurement was not conducted)							97.0	--	97.0	--
S14	Wai Kee Service Ltd. (偉基汽車有限公司)		Garage without tyre replacement	69.93189916	(Measurement was not conducted)	No Night-time operation	13	99.4	(Measurement was not conducted)	--	99.4	--	99.4	--
			Background	62.1	--	--	--	--	--	--	--	--	--	--
S15	Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)		Vehicle Testing Centre	66.7	(Measurement was not conducted)	--	13	95.1	(Measurement was not conducted)	--	95.1	--	95.1	--
			Background	62.1	--	--	--	--	--	--	--	--	--	--
S16***	進步膠輪電池有限公司		Garage with tyre replacement	(Measurement was not conducted)							96.1	--	96.1	--

Source ID	Source	Photo	Description	Measured SPL, dB(A)			Measurement Distance, m	Measured SWL, dB(A)			SWL adopted in NIA1		Adopted SWL, dB(A)	
				9-Dec-2019	9-Jan-2020	23-Dec-2019		9-Dec-2019	9-Jan-2020	23-Dec-2019				
				Day and Evening Time	Day and Evening Time	Night time		Day and Evening Time	Day and Evening Time	Night time	Day and Evening Time	Night time	Day and Evening Time	Night time
S17***	高加達精密機械工程有限公司		Garage without tyre replacement	(Measurement was not conducted)							88.0	--	88.0	--
S18***	力高汽車維修		Garage without tyre replacement	(Measurement was not conducted)							88.0	--	88.0	--
C1***	Fu Wah Industrial Building (富華工業大廈)		Cooling Tower	No longer exists										
C2***	Tsun Mee Industrial Building (晉美工業大廈)		Cooling Tower	No longer exists										
C3***			Cooling Tower											
C4***			Cooling Tower											
C5***			Cooling Tower											

Source ID	Source	Photo	Description	Measured SPL, dB(A)			Measurement Distance, m	Measured SWL, dB(A)			SWL adopted in NIA1		Adopted SWL, dB(A)	
				9-Dec-2019	9-Jan-2020	23-Dec-2019		9-Dec-2019	9-Jan-2020	23-Dec-2019				
				Day and Evening Time	Day and Evening Time	Night time		Day and Evening Time	Day and Evening Time	Night time	Day and Evening Time	Night time	Day and Evening Time	Night time
C6	Golden Town Industrial Building (錦城工業大廈)		Cooling Tower	(Measurement was not conducted, Reference is made to Product Catalogue)							77.6	77.6	77.6	77.6
C7			Cooling Tower								77.6	77.6	77.6	77.6
C8a	Flourish Food Manufactory Centre (榮華中心工業大廈)		Cooling Tower	(Measurement was not conducted, Reference is made to Product Catalogue)							80.1	80.1	80.1	80.1
C8b			Cooling Tower								80.1	80.1	80.1	80.1
C8c			Cooling Tower								80.1	80.1	80.1	80.1
C8d			Cooling Tower								80.1	80.1	80.1	80.1
C8e			Cooling Tower								80.1	80.1	80.1	80.1
C8f			Cooling Tower								80.1	80.1	80.1	80.1
C8g			Cooling Tower								79.1	79.1	79.1	79.1
C9a	The Rainbow (虹方)		Chiller	(Measurement was not conducted, Reference is made to Product Catalogue)							92.0	92.0	92.0	92.0
C9b			Chiller								92.0	92.0	92.0	92.0

Redevelopment of Lai Sun Yuen Long Centre at Nos. 21-35 Wang Yip Street East, YLTL 362
Fixed Noise Sources at 300m area

Source ID	Source	Photo	Description	Measured SPL, dB(A)			Measurement Distance, m	Measured SWL, dB(A)			SWL adopted in NIA1		Adopted SWL, dB(A)	
				9-Dec-2019	9-Jan-2020	23-Dec-2019		9-Dec-2019	9-Jan-2020	23-Dec-2019				
				Day and Evening Time	Day and Evening Time	Night time		Day and Evening Time	Day and Evening Time	Night time	Day and Evening Time	Night time	Day and Evening Time	Night time
C10a	One North (朗壹廣場)		Cooling Tower	(Measurement was not conducted, Reference is made to Product Catalogue)							92.7	0.0	92.7	0.0
C10b			Cooling Tower								92.7	92.7	92.7	92.7
C10c			Cooling Tower								92.7	92.7	92.7	92.7
C10d			Cooling Tower								92.7	92.7	92.7	92.7
C10e			Cooling Tower								86.6	0.0	86.6	0.0
C10f			Cooling Tower								92.7	92.7	92.7	92.7
C10g			Cooling Tower								92.7	92.7	92.7	92.7
C10h			Chiller								90.0	0.0	90.0	0.0
C10i			Chiller								90.0	0.0	90.0	0.0

Source ID	Source	Photo	Description	Measured SPL, dB(A)			Measurement Distance, m	Measured SWL, dB(A)			SWL adopted in NIA1		Adopted SWL, dB(A)	
				9-Dec-2019	9-Jan-2020	23-Dec-2019		9-Dec-2019	9-Jan-2020	23-Dec-2019				
				Day and Evening Time	Day and Evening Time	Night time		Day and Evening Time	Day and Evening Time	Night time	Day and Evening Time	Night time	Day and Evening Time	Night time
V1***	Fu Wah Industrial Building (富華工業大廈)	From NIA1 	VRV	No longer exists										

Remarks

(*) Asterisk denotes that for the fixed noise source where no noisy operation and onsite measurement was conducted, the Adopted Sound Power Level (SWL) for this assessment is retrieved from the previous Environmental Assessment Report named "*Environmental Assessment for Redevelopment of Lai Sun Yuen Long Centre at No. 27 Wang Yip Street East, Yuen Long*" by ENVIRON Hong Kong Limited dated October 2013

(***) Asterisk denotes that for the fixed noise source is not found in NIA1, or where no noisy operation and onsite measurement was conducted thus the Adopted Sound Power Level (SWL) for this assessment is retrieved from NIA1

Appendix 5.2 Detailed Calculation of Fixed Source Noise Impact Assessment

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y											
F1-02	821083.8	834377.3											

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	79	-46	6	-10	3	41.2	37.7
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	81	-46	6	-10	3	40.9	37.4
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	84	-46	6	-10	3	40.6	37.1
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	87	-47	6	-10	3	40.3	36.8
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	90	-47	6	-10	3	40.0	36.5
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	64	-44	0	-10	3	42.0	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	53	-43	0	-10	3	41.5	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	59	-43	0	-10	3	46.5	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	58	-43	0	-10	3	47.5	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	20	-34	0	-10	3	59.6	0.0
新界車房	S7	821080	834404	91.0	0.0	0	27	-37	0	0	3	57.2	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	0	39	-40	0	0	3	51.1	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	0	49	-42	0	0	3	52.2	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	0	99	-48	0	0	3	52.1	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	0	126	-50	0	0	3	50.0	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	0	203	-54	0	0	3	45.8	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	0	224	-55	0	0	3	47.4	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	0	253	-56	0	0	3	42.0	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	0	126	-50	0	0	3	49.1	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	0	21	-34	0	0	3	56.5	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	19	-34	0	-10	3	47.3	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	0	205	-54	0	0	3	26.3	26.3
	C7	821181	834561	77.6	77.6	0	208	-54	0	0	3	26.2	26.2
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	218	-55	0	-10	3	18.3	18.3
	C8b	821154	834168	80.1	80.1	1	221	-55	0	-10	3	18.2	18.2
	C8c	821152	834166	80.1	80.1	1	222	-55	0	-10	3	18.2	18.2
	C8d	821149	834164	80.1	80.1	1	223	-55	0	-10	3	18.1	18.1
	C8e	821147	834167	80.1	80.1	1	220	-55	0	-10	3	18.2	18.2
	C8f	821145	834170	80.1	80.1	1	217	-55	0	-10	3	18.4	18.4
	C8g	821149	834170	79.1	79.1	1	217	-55	0	-10	3	17.4	17.4
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	190	-54	6	-10	3	37.4	37.4
	C9b	820889	834362	92.0	92.0	1	196	-54	6	-10	3	37.2	37.2
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	0	244	-56	0	0	3	39.9	0.0
	C10b	821108	834616	92.7	92.7	0	240	-56	0	0	3	40.1	40.1
	C10c	821060	834608	92.7	92.7	0	232	-55	0	0	3	40.4	40.4
	C10d	821065	834604	92.7	92.7	0	228	-55	0	0	3	40.5	40.5
	C10e	821070	834601	86.6	0.0	0	224	-55	0	0	3	34.6	0.0
	C10f	821079	834590	92.7	92.7	0	213	-55	0	0	3	41.1	41.1
	C10g	821076	834585	92.7	92.7	0	208	-54	0	0	3	41.3	41.3
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	0	250	-56	6	0	3	43.0	0.0
	C10i	821072	834581	90.0	0.0	0	204	-54	6	0	3	44.8	0.0
											Predicted SPL, dB(A)	65	50

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y											
F1-03	821085.2	834376.2											

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	79	-46	6	-10	3	41.2	37.7
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	81	-46	6	-10	3	41.0	37.5
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	83	-46	6	-10	3	40.7	37.2
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	86	-47	6	-10	3	40.4	36.9
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	89	-47	6	-10	3	40.1	36.6
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	65	-44	0	-10	3	41.9	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	54	-43	0	-10	3	41.3	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	61	-44	0	-10	3	46.3	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	60	-44	0	-10	3	47.2	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	22	-35	0	-10	3	59.0	0.0
新界車房	S7	821080	834404	91.0	0.0	0	29	-37	0	0	3	56.8	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	0	40	-40	0	0	3	50.8	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	0	50	-42	0	0	3	52.0	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	0	99	-48	0	0	3	52.1	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	0	126	-50	0	0	3	50.0	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	0	204	-54	0	0	3	45.8	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	0	224	-55	0	0	3	47.4	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	0	252	-56	0	0	3	42.1	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	0	127	-50	0	0	3	49.0	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	0	23	-35	0	0	3	55.9	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	0	21	-34	0	0	3	56.5	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	0	205	-54	0	0	3	26.3	26.3
	C7	821181	834561	77.6	77.6	0	208	-54	0	0	3	26.2	26.2
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	217	-55	0	-10	3	18.4	18.4
	C8b	821154	834168	80.1	80.1	1	219	-55	0	-10	3	18.3	18.3
	C8c	821152	834166	80.1	80.1	1	220	-55	0	-10	3	18.2	18.2
	C8d	821149	834164	80.1	80.1	1	221	-55	0	-10	3	18.2	18.2
	C8e	821147	834167	80.1	80.1	1	218	-55	0	-10	3	18.3	18.3
	C8f	821145	834170	80.1	80.1	1	215	-55	0	-10	3	18.4	18.4
	C8g	821149	834170	79.1	79.1	1	216	-55	0	-10	3	17.4	17.4
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	192	-54	6	-10	3	37.3	37.3
	C9b	820889	834362	92.0	92.0	1	197	-54	6	-10	3	37.1	37.1
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	0	245	-56	0	0	3	39.9	0.0
	C10b	821108	834616	92.7	92.7	0	241	-56	0	0	3	40.1	40.1
	C10c	821060	834608	92.7	92.7	0	233	-55	0	0	3	40.3	40.3
	C10d	821065	834604	92.7	92.7	0	229	-55	0	0	3	40.5	40.5
	C10e	821070	834601	86.6	0.0	0	225	-55	0	0	3	34.5	0.0
	C10f	821079	834590	92.7	92.7	0	214	-55	0	0	3	41.1	41.1
	C10g	821076	834585	92.7	92.7	0	209	-54	0	0	3	41.3	41.3
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	0	251	-56	6	0	3	43.0	0.0
	C10i	821072	834581	90.0	0.0	0	205	-54	6	0	3	44.8	0.0
											Predicted SPL, dB(A)	65	50

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-07	821093.0	834370.6

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	79	-46	6	-10	3	41.2	37.7
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	81	-46	6	-10	3	41.0	37.5
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	83	-46	6	-10	3	40.8	37.3
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	85	-47	6	-10	3	40.5	37.0
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	68	-45	0	-10	3	41.4	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	59	-43	0	-10	3	40.6	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	68	-45	0	-10	3	45.4	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	69	-45	0	-10	3	46.1	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	31	-38	0	-10	3	56.1	0.0
新界車房	S7	821080	834404	91.0	0.0	0	36	-39	0	0	3	54.8	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	0	47	-41	0	0	3	49.5	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	0	57	-43	0	0	3	50.8	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	0	101	-48	0	0	3	51.9	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	0	128	-50	0	0	3	49.8	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	0	205	-54	0	0	3	45.8	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	0	225	-55	0	0	3	47.4	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	0	251	-56	0	0	3	42.1	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	0	129	-50	0	0	3	48.9	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	0	32	-38	0	0	3	53.0	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	0	31	-38	0	0	3	53.3	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	0	207	-54	0	0	3	26.3	26.3
	C7	821181	834561	77.6	77.6	0	210	-54	0	0	3	26.1	26.1
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	209	-54	0	-10	3	18.7	18.7
	C8b	821154	834168	80.1	80.1	1	212	-55	0	-10	3	18.6	18.6
	C8c	821152	834166	80.1	80.1	1	213	-55	0	-10	3	18.5	18.5
	C8d	821149	834164	80.1	80.1	1	214	-55	0	-10	3	18.5	18.5
	C8e	821147	834167	80.1	80.1	1	211	-54	0	-10	3	18.6	18.6
	C8f	821145	834170	80.1	80.1	1	208	-54	0	-10	3	18.7	18.7
	C8g	821149	834170	79.1	79.1	1	208	-54	0	-10	3	17.7	17.7
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	199	-54	6	-10	3	37.0	37.0
	C9b	820889	834362	92.0	92.0	1	205	-54	6	-10	3	36.8	36.8
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	0	250	-56	0	0	3	39.7	0.0
	C10b	821108	834616	92.7	92.7	0	246	-56	0	0	3	39.9	39.9
	C10c	821060	834608	92.7	92.7	0	240	-56	0	0	3	40.1	40.1
	C10d	821065	834604	92.7	92.7	0	236	-55	0	0	3	40.3	40.3
	C10e	821070	834601	86.6	0.0	0	232	-55	0	0	3	34.3	0.0
	C10f	821079	834590	92.7	92.7	0	220	-55	0	0	3	40.9	40.9
	C10g	821076	834585	92.7	92.7	0	215	-55	0	0	3	41.0	41.0
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	0	256	-56	6	0	3	42.8	0.0
	C10i	821072	834581	90.0	0.0	0	211	-54	6	0	3	44.5	0.0
											Predicted SPL, dB(A)	63	50

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y											
F1-09	821099.9	834365.6											

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	81	-46	6	-10	3	41.0	37.5
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	79	-46	6	-10	3	41.2	37.7
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	80	-46	6	-10	3	41.0	37.5
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	82	-46	6	-10	3	40.8	37.3
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	73	-45	0	-10	3	40.9	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	64	-44	0	-10	3	39.8	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	75	-45	0	-10	3	44.5	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	77	-46	0	-10	3	45.1	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	39	-40	0	-10	3	54.0	0.0
新界車房	S7	821080	834404	91.0	0.0	0	44	-41	0	0	3	53.2	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	0	53	-42	0	0	3	48.4	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	0	64	-44	0	0	3	49.8	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	0	104	-48	0	0	3	51.6	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	0	131	-50	0	0	3	49.7	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	0	207	-54	0	0	3	45.7	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	0	226	-55	0	0	3	47.3	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	0	249	-56	0	0	3	42.2	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	0	131	-50	0	0	3	48.8	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	0	40	-40	0	0	3	51.0	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	0	39	-40	0	0	3	51.2	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	0	209	-54	0	0	3	26.2	26.2
	C7	821181	834561	77.6	77.6	0	212	-55	0	0	3	26.1	26.1
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	202	-54	0	-10	3	19.0	19.0
	C8b	821154	834168	80.1	80.1	1	205	-54	0	-10	3	18.8	18.8
	C8c	821152	834166	80.1	80.1	1	206	-54	0	-10	3	18.8	18.8
	C8d	821149	834164	80.1	80.1	1	207	-54	0	-10	3	18.8	18.8
	C8e	821147	834167	80.1	80.1	1	204	-54	0	-10	3	18.9	18.9
	C8f	821145	834170	80.1	80.1	1	201	-54	0	-10	3	19.0	19.0
	C8g	821149	834170	79.1	79.1	1	201	-54	0	-10	3	18.0	18.0
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	206	-54	6	-10	3	36.7	36.7
	C9b	820889	834362	92.0	92.0	1	211	-54	6	-10	3	36.5	36.5
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	0	255	-56	0	0	3	39.6	0.0
	C10b	821108	834616	92.7	92.7	0	251	-56	0	0	3	39.7	39.7
	C10c	821060	834608	92.7	92.7	0	246	-56	0	0	3	39.9	39.9
	C10d	821065	834604	92.7	92.7	0	241	-56	0	0	3	40.0	40.0
	C10e	821070	834601	86.6	0.0	0	237	-56	0	0	3	34.1	0.0
	C10f	821079	834590	92.7	92.7	0	225	-55	0	0	3	40.6	40.6
	C10g	821076	834585	92.7	92.7	0	221	-55	0	0	3	40.8	40.8
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	0	260	-56	6	0	3	42.7	0.0
	C10i	821072	834581	90.0	0.0	0	217	-55	6	0	3	44.3	0.0
										Predicted SPL, dB(A)		62	50

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-12	821104.6	834362.3

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	82	-46	6	-10	3	40.8	37.3
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	80	-46	6	-10	3	41.0	37.5
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	79	-46	6	-10	3	41.2	37.7
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	80	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	81	-46	6	-10	3	40.9	37.5
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	76	-46	0	-10	3	40.5	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	68	-45	0	-10	3	39.3	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	79	-46	0	-10	3	44.0	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	82	-46	0	-10	3	44.5	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	44	-41	0	-10	3	52.9	0.0
新界車房	S7	821080	834404	91.0	0.0	0	49	-42	0	0	3	52.2	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	0	58	-43	0	0	3	47.7	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	0	69	-45	0	0	3	49.2	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	0	107	-49	0	0	3	51.4	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	0	132	-50	0	0	3	49.6	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	0	208	-54	0	0	3	45.6	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	0	227	-55	0	0	3	47.3	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	0	249	-56	0	0	3	42.2	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	0	133	-50	0	0	3	48.6	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	0	46	-41	0	0	3	49.8	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	0	45	-41	0	0	3	50.0	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	0	210	-54	0	0	3	26.1	26.1
	C7	821181	834561	77.6	77.6	0	213	-55	0	0	3	26.0	26.0
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	198	-54	0	-10	3	19.2	19.2
	C8b	821154	834168	80.1	80.1	1	201	-54	0	-10	3	19.0	19.0
	C8c	821152	834166	80.1	80.1	1	202	-54	0	-10	3	19.0	19.0
	C8d	821149	834164	80.1	80.1	1	203	-54	0	-10	3	18.9	18.9
	C8e	821147	834167	80.1	80.1	1	200	-54	0	-10	3	19.1	19.1
	C8f	821145	834170	80.1	80.1	1	197	-54	0	-10	3	19.2	19.2
	C8g	821149	834170	79.1	79.1	1	197	-54	0	-10	3	18.2	18.2
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	211	-54	6	-10	3	36.5	36.5
	C9b	820889	834362	92.0	92.0	1	216	-55	6	-10	3	36.3	36.3
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	0	258	-56	0	0	3	39.5	0.0
	C10b	821108	834616	92.7	92.7	0	254	-56	0	0	3	39.6	39.6
	C10c	821060	834608	92.7	92.7	0	250	-56	0	0	3	39.7	39.7
	C10d	821065	834604	92.7	92.7	0	245	-56	0	0	3	39.9	39.9
	C10e	821070	834601	86.6	0.0	0	241	-56	0	0	3	33.9	0.0
	C10f	821079	834590	92.7	92.7	0	229	-55	0	0	3	40.5	40.5
	C10g	821076	834585	92.7	92.7	0	225	-55	0	0	3	40.7	40.7
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	0	263	-56	6	0	3	42.6	0.0
	C10i	821072	834581	90.0	0.0	0	221	-55	6	0	3	44.1	0.0
											Predicted SPL, dB(A)	61	50

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-14	821111.5	834357.3

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	85	-47	6	-10	3	40.5	37.0
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	82	-46	6	-10	3	40.8	37.3
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	80	-46	6	-10	3	41.0	37.5
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	79	-46	6	-10	3	41.2	37.7
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	81	-46	0	-10	3	39.9	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	75	-45	0	-10	3	38.5	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	87	-47	0	-10	3	43.3	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	90	-47	0	-10	3	43.7	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	53	-42	0	-10	3	51.4	0.0
新界車房	S7	821080	834404	91.0	0.0	0	57	-43	0	0	3	50.9	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	0	65	-44	0	0	3	46.6	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	0	77	-46	0	0	3	48.3	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	0	110	-49	0	0	3	51.1	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	0	136	-51	0	0	3	49.4	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	0	210	-54	0	0	3	45.6	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	0	229	-55	0	0	3	47.2	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	0	248	-56	0	0	3	42.2	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	0	136	-51	0	0	3	48.4	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	0	54	-43	0	0	3	48.4	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	0	53	-43	0	0	3	48.5	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	0	213	-55	0	0	3	26.0	26.0
	C7	821181	834561	77.6	77.6	0	215	-55	0	0	3	25.9	25.9
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	191	-54	0	-10	3	19.5	19.5
	C8b	821154	834168	80.1	80.1	1	194	-54	0	-10	3	19.3	19.3
	C8c	821152	834166	80.1	80.1	1	195	-54	0	-10	3	19.3	19.3
	C8d	821149	834164	80.1	80.1	1	197	-54	0	-10	3	19.2	19.2
	C8e	821147	834167	80.1	80.1	1	194	-54	0	-10	3	19.3	19.3
	C8f	821145	834170	80.1	80.1	1	191	-54	0	-10	3	19.5	19.5
	C8g	821149	834170	79.1	79.1	1	191	-54	0	-10	3	18.5	18.5
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	218	-55	6	-10	3	36.2	36.2
	C9b	820889	834362	92.0	92.0	1	223	-55	6	-10	3	36.0	36.0
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	0	263	-56	0	0	3	39.3	0.0
	C10b	821108	834616	92.7	92.7	0	259	-56	0	0	3	39.4	39.4
	C10c	821060	834608	92.7	92.7	0	256	-56	0	0	3	39.5	39.5
	C10d	821065	834604	92.7	92.7	0	251	-56	0	0	3	39.7	39.7
	C10e	821070	834601	86.6	0.0	0	247	-56	0	0	3	33.7	0.0
	C10f	821079	834590	92.7	92.7	0	235	-55	0	0	3	40.3	40.3
	C10g	821076	834585	92.7	92.7	0	231	-55	0	0	3	40.4	40.4
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	0	268	-57	6	0	3	42.4	0.0
	C10i	821072	834581	90.0	0.0	0	227	-55	6	0	3	43.9	0.0
											Predicted SPL, dB(A)	61	50

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-16	821115.2	834354.6

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	87	-47	6	-10	3	40.3	36.8
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	84	-46	6	-10	3	40.6	37.1
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	81	-46	6	-10	3	40.9	37.4
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	80	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	79	-46	6	-10	3	41.2	37.7
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	79	-46	6	-10	3	41.1	37.7
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	84	-47	0	-10	3	39.6	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	78	-46	0	-10	3	38.1	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	91	-47	0	-10	3	42.9	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	94	-47	0	-10	3	43.3	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	57	-43	0	-10	3	50.7	0.0
新界車房	S7	821080	834404	91.0	0.0	0	61	-44	0	0	3	50.3	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	0	69	-45	0	0	3	46.1	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	0	81	-46	0	0	3	47.8	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	0	113	-49	0	0	3	51.0	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	0	137	-51	0	0	3	49.2	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	0	211	-54	0	0	3	45.5	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	0	230	-55	0	0	3	47.2	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	0	248	-56	0	0	3	42.2	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	0	138	-51	0	0	3	48.3	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	0	58	-43	0	0	3	47.7	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	0	58	-43	0	0	3	47.8	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	0	214	-55	0	0	3	26.0	26.0
	C7	821181	834561	77.6	77.6	0	217	-55	0	0	3	25.9	25.9
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	188	-53	0	-10	3	19.6	19.6
	C8b	821154	834168	80.1	80.1	1	191	-54	0	-10	3	19.5	19.5
	C8c	821152	834166	80.1	80.1	1	192	-54	0	-10	3	19.4	19.4
	C8d	821149	834164	80.1	80.1	1	193	-54	0	-10	3	19.4	19.4
	C8e	821147	834167	80.1	80.1	1	190	-54	0	-10	3	19.5	19.5
	C8f	821145	834170	80.1	80.1	1	187	-53	0	-10	3	19.6	19.6
	C8g	821149	834170	79.1	79.1	1	187	-53	0	-10	3	18.6	18.6
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	222	-55	6	-10	3	36.1	36.1
	C9b	820889	834362	92.0	92.0	1	227	-55	6	-10	3	35.9	35.9
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	0	265	-56	0	0	3	39.2	0.0
	C10b	821108	834616	92.7	92.7	0	262	-56	0	0	3	39.3	39.3
	C10c	821060	834608	92.7	92.7	0	259	-56	0	0	3	39.4	39.4
	C10d	821065	834604	92.7	92.7	0	255	-56	0	0	3	39.6	39.6
	C10e	821070	834601	86.6	0.0	0	251	-56	0	0	3	33.6	0.0
	C10f	821079	834590	92.7	92.7	0	238	-56	0	0	3	40.2	40.2
	C10g	821076	834585	92.7	92.7	0	234	-55	0	0	3	40.3	40.3
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	0	271	-57	6	0	3	42.3	0.0
	C10i	821072	834581	90.0	0.0	0	230	-55	6	0	3	43.8	0.0
											Predicted SPL, dB(A)	60	50

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y											
F1-19	821120.8	834350.6											

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	90	-47	6	-10	3	40.0	36.5
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	86	-47	6	-10	3	40.4	36.9
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	83	-46	6	-10	3	40.7	37.2
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	81	-46	6	-10	3	41.0	37.5
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	79	-46	6	-10	3	41.1	37.6
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	79	-46	6	-10	3	41.2	37.7
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	89	-47	0	-10	3	39.1	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	84	-46	0	-10	3	37.5	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	97	-48	0	-10	3	42.3	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	101	-48	0	-10	3	42.7	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	64	-44	0	-10	3	49.7	0.0
新界車房	S7	821080	834404	91.0	0.0	0	68	-45	0	0	3	49.4	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	0	75	-46	0	0	3	45.4	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	0	87	-47	0	0	3	47.2	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	0	116	-49	0	0	3	50.7	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	0	140	-51	0	0	3	49.1	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	0	213	-55	0	0	3	45.4	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	0	232	-55	0	0	3	47.1	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	0	247	-56	0	0	3	42.2	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	0	141	-51	0	0	3	48.1	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	0	65	-44	0	0	3	46.7	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	0	65	-44	0	0	3	46.8	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	0	216	-55	0	0	3	25.9	25.9
	C7	821181	834561	77.6	77.6	0	219	-55	0	0	3	25.8	25.8
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	183	-53	0	-10	3	19.9	19.9
	C8b	821154	834168	80.1	80.1	1	186	-53	0	-10	3	19.7	19.7
	C8c	821152	834166	80.1	80.1	1	187	-53	0	-10	3	19.7	19.7
	C8d	821149	834164	80.1	80.1	1	188	-54	0	-10	3	19.6	19.6
	C8e	821147	834167	80.1	80.1	1	186	-53	0	-10	3	19.7	19.7
	C8f	821145	834170	80.1	80.1	1	183	-53	0	-10	3	19.8	19.8
	C8g	821149	834170	79.1	79.1	1	183	-53	0	-10	3	18.9	18.9
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	228	-55	6	-10	3	35.8	35.8
	C9b	820889	834362	92.0	92.0	1	232	-55	6	-10	3	35.7	35.7
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	0	269	-57	0	0	3	39.1	0.0
	C10b	821108	834616	92.7	92.7	0	266	-56	0	0	3	39.2	39.2
	C10c	821060	834608	92.7	92.7	0	265	-56	0	0	3	39.2	39.2
	C10d	821065	834604	92.7	92.7	0	260	-56	0	0	3	39.4	39.4
	C10e	821070	834601	86.6	0.0	0	256	-56	0	0	3	33.4	0.0
	C10f	821079	834590	92.7	92.7	0	243	-56	0	0	3	40.0	40.0
	C10g	821076	834585	92.7	92.7	0	239	-56	0	0	3	40.1	40.1
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	0	275	-57	6	0	3	42.2	0.0
	C10i	821072	834581	90.0	0.0	0	235	-55	6	0	3	43.6	0.0
										Predicted SPL, dB(A)		60	49

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-23	821111.4	834339.4

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	77	-46	6	0	3	51.4	47.9
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	73	-45	6	-10	3	41.8	38.4
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	69	-45	6	-10	3	42.3	38.8
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	66	-44	6	-10	3	42.7	39.2
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	65	-44	6	-10	3	42.9	39.4
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	64	-44	6	-10	3	42.9	39.5
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	79	-46	0	0	3	50.2	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	75	-46	0	-10	3	38.5	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	90	-47	0	-10	3	42.9	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	97	-48	0	-10	3	43.1	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	62	-44	0	-10	3	49.9	0.0
新界車房	S7	821080	834404	91.0	0.0	1	72	-45	0	-10	3	38.8	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	82	-46	0	-10	3	34.7	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	93	-47	0	-10	3	36.6	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	128	-50	0	-10	3	39.8	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	153	-52	0	-10	3	38.3	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	227	-55	0	-10	3	34.9	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	246	-56	0	-10	3	36.6	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	262	-56	0	-10	3	31.7	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	154	-52	0	-10	3	37.4	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	68	-45	0	-10	3	36.4	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	64	-44	0	-10	3	36.8	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	230	-55	0	-10	3	15.4	15.4
	C7	821181	834561	77.6	77.6	1	232	-55	0	-10	3	15.3	15.3
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	174	-53	0	-10	3	20.3	20.3
	C8b	821154	834168	80.1	80.1	1	177	-53	0	-10	3	20.1	20.1
	C8c	821152	834166	80.1	80.1	1	178	-53	0	-10	3	20.1	20.1
	C8d	821149	834164	80.1	80.1	1	179	-53	0	-10	3	20.0	20.0
	C8e	821147	834167	80.1	80.1	1	176	-53	0	-10	3	20.2	20.2
	C8f	821145	834170	80.1	80.1	1	173	-53	0	-10	3	20.3	20.3
	C8g	821149	834170	79.1	79.1	1	173	-53	0	-10	3	19.3	19.3
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	0	220	-55	6	0	3	46.2	46.2
	C9b	820889	834362	92.0	92.0	0	224	-55	6	0	3	46.0	46.0
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	281	-57	0	-10	3	28.7	0.0
	C10b	821108	834616	92.7	92.7	1	277	-57	0	-10	3	28.9	28.9
	C10c	821060	834608	92.7	92.7	1	274	-57	0	-10	3	29.0	29.0
	C10d	821065	834604	92.7	92.7	1	269	-57	0	-10	3	29.1	29.1
	C10e	821070	834601	86.6	0.0	1	265	-56	0	-10	3	23.1	0.0
	C10f	821079	834590	92.7	92.7	1	253	-56	0	-10	3	29.6	29.6
	C10g	821076	834585	92.7	92.7	1	249	-56	0	-10	3	29.8	29.8
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	286	-57	6	-10	3	31.9	0.0
	C10i	821072	834581	90.0	0.0	1	244	-56	6	-10	3	33.2	0.0
										Predicted SPL, dB(A)		58	53

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-25	821105.7	834342.9

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	73	-45	6	0	3	51.8	48.3
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	70	-45	6	-10	3	42.2	38.7
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	66	-44	6	-10	3	42.6	39.1
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	65	-44	6	-10	3	42.9	39.4
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	73	-45	0	0	3	50.8	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	69	-45	0	-10	3	39.2	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	84	-46	0	-10	3	43.5	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	90	-47	0	-10	3	43.7	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	55	-43	0	-10	3	50.9	0.0
新界車房	S7	821080	834404	91.0	0.0	1	67	-44	0	-10	3	39.5	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	76	-46	0	-10	3	35.2	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	88	-47	0	-10	3	37.1	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	125	-50	0	-10	3	40.0	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	151	-52	0	-10	3	38.4	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	225	-55	0	-10	3	34.9	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	245	-56	0	-10	3	36.6	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	263	-56	0	-10	3	31.7	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	151	-52	0	-10	3	37.5	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	62	-44	0	-10	3	37.2	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	58	-43	0	-10	3	37.8	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	228	-55	0	-10	3	15.4	15.4
	C7	821181	834561	77.6	77.6	1	231	-55	0	-10	3	15.3	15.3
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	179	-53	0	-10	3	20.0	20.0
	C8b	821154	834168	80.1	80.1	1	182	-53	0	-10	3	19.9	19.9
	C8c	821152	834166	80.1	80.1	1	182	-53	0	-10	3	19.9	19.9
	C8d	821149	834164	80.1	80.1	1	184	-53	0	-10	3	19.8	19.8
	C8e	821147	834167	80.1	80.1	1	181	-53	0	-10	3	19.9	19.9
	C8f	821145	834170	80.1	80.1	1	178	-53	0	-10	3	20.1	20.1
	C8g	821149	834170	79.1	79.1	1	178	-53	0	-10	3	19.1	19.1
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	214	-55	6	-10	3	36.4	36.4
	C9b	820889	834362	92.0	92.0	1	218	-55	6	-10	3	36.2	36.2
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	277	-57	0	-10	3	28.9	0.0
	C10b	821108	834616	92.7	92.7	1	273	-57	0	-10	3	29.0	29.0
	C10c	821060	834608	92.7	92.7	1	269	-57	0	-10	3	29.1	29.1
	C10d	821065	834604	92.7	92.7	1	265	-56	0	-10	3	29.2	29.2
	C10e	821070	834601	86.6	0.0	1	261	-56	0	-10	3	23.3	0.0
	C10f	821079	834590	92.7	92.7	1	249	-56	0	-10	3	29.8	29.8
	C10g	821076	834585	92.7	92.7	1	244	-56	0	-10	3	29.9	29.9
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	283	-57	6	-10	3	32.0	0.0
	C10i	821072	834581	90.0	0.0	1	240	-56	6	-10	3	33.4	0.0
											Predicted SPL, dB(A)	58	51

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-27	821102.0	834345.6

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	71	-45	6	0	3	52.1	48.6
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	68	-45	6	0	3	52.5	49.0
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	65	-44	6	-10	3	42.8	39.3
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	65	-44	6	-10	3	42.9	39.4
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	70	-45	0	0	3	51.2	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	65	-44	0	-10	3	39.7	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	79	-46	0	-10	3	44.0	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	86	-47	0	-10	3	44.2	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	51	-42	0	-10	3	51.7	0.0
新界車房	S7	821080	834404	91.0	0.0	1	63	-44	0	-10	3	40.0	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	73	-45	0	-10	3	35.6	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	84	-46	0	-10	3	37.5	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	123	-50	0	-10	3	40.2	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	149	-51	0	-10	3	38.5	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	224	-55	0	-10	3	35.0	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	244	-56	0	-10	3	36.7	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	263	-56	0	-10	3	31.7	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	150	-51	0	-10	3	37.6	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	58	-43	0	-10	3	37.8	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	53	-43	0	-10	3	38.5	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	227	-55	0	-10	3	15.5	15.5
	C7	821181	834561	77.6	77.6	1	230	-55	0	-10	3	15.4	15.4
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	182	-53	0	-10	3	19.9	19.9
	C8b	821154	834168	80.1	80.1	1	185	-53	0	-10	3	19.7	19.7
	C8c	821152	834166	80.1	80.1	1	186	-53	0	-10	3	19.7	19.7
	C8d	821149	834164	80.1	80.1	1	187	-53	0	-10	3	19.6	19.6
	C8e	821147	834167	80.1	80.1	1	184	-53	0	-10	3	19.8	19.8
	C8f	821145	834170	80.1	80.1	1	181	-53	0	-10	3	19.9	19.9
	C8g	821149	834170	79.1	79.1	1	181	-53	0	-10	3	18.9	18.9
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	210	-54	6	-10	3	36.6	36.6
	C9b	820889	834362	92.0	92.0	1	214	-55	6	-10	3	36.4	36.4
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	274	-57	0	-10	3	28.9	0.0
	C10b	821108	834616	92.7	92.7	1	271	-57	0	-10	3	29.1	29.1
	C10c	821060	834608	92.7	92.7	1	266	-56	0	-10	3	29.2	29.2
	C10d	821065	834604	92.7	92.7	1	261	-56	0	-10	3	29.4	29.4
	C10e	821070	834601	86.6	0.0	1	257	-56	0	-10	3	23.4	0.0
	C10f	821079	834590	92.7	92.7	1	246	-56	0	-10	3	29.9	29.9
	C10g	821076	834585	92.7	92.7	1	241	-56	0	-10	3	30.1	30.1
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	280	-57	6	-10	3	32.1	0.0
	C10i	821072	834581	90.0	0.0	1	237	-55	6	-10	3	33.5	0.0
											Predicted SPL, dB(A)	59	53

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-28	821100.1	834347.0

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	70	-45	6	0	3	52.2	48.7
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	67	-45	6	0	3	52.6	49.1
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	65	-44	6	-10	3	42.9	39.4
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	65	-44	6	-10	3	42.8	39.3
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	68	-45	0	0	3	51.4	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	63	-44	0	-10	3	40.0	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	77	-46	0	-10	3	44.3	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	83	-46	0	-10	3	44.4	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	49	-42	0	-10	3	52.1	0.0
新界車房	S7	821080	834404	91.0	0.0	1	61	-44	0	-10	3	40.3	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	71	-45	0	-10	3	35.9	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	82	-46	0	-10	3	37.7	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	122	-50	0	-10	3	40.2	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	148	-51	0	-10	3	38.6	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	224	-55	0	-10	3	35.0	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	243	-56	0	-10	3	36.7	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	263	-56	0	-10	3	31.7	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	149	-51	0	-10	3	37.7	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	56	-43	0	-10	3	38.1	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	51	-42	0	-10	3	38.8	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	226	-55	0	-10	3	15.5	15.5
	C7	821181	834561	77.6	77.6	1	229	-55	0	-10	3	15.4	15.4
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	184	-53	0	-10	3	19.8	19.8
	C8b	821154	834168	80.1	80.1	1	187	-53	0	-10	3	19.6	19.6
	C8c	821152	834166	80.1	80.1	1	188	-53	0	-10	3	19.6	19.6
	C8d	821149	834164	80.1	80.1	1	189	-54	0	-10	3	19.5	19.5
	C8e	821147	834167	80.1	80.1	1	186	-53	0	-10	3	19.7	19.7
	C8f	821145	834170	80.1	80.1	1	183	-53	0	-10	3	19.8	19.8
	C8g	821149	834170	79.1	79.1	1	183	-53	0	-10	3	18.8	18.8
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	208	-54	6	-10	3	36.7	36.7
	C9b	820889	834362	92.0	92.0	1	212	-55	6	-10	3	36.5	36.5
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	273	-57	0	-10	3	29.0	0.0
	C10b	821108	834616	92.7	92.7	1	269	-57	0	-10	3	29.1	29.1
	C10c	821060	834608	92.7	92.7	1	264	-56	0	-10	3	29.3	29.3
	C10d	821065	834604	92.7	92.7	1	260	-56	0	-10	3	29.4	29.4
	C10e	821070	834601	86.6	0.0	1	256	-56	0	-10	3	23.4	0.0
	C10f	821079	834590	92.7	92.7	1	244	-56	0	-10	3	30.0	30.0
	C10g	821076	834585	92.7	92.7	1	240	-56	0	-10	3	30.1	30.1
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	279	-57	6	-10	3	32.1	0.0
	C10i	821072	834581	90.0	0.0	1	235	-55	6	-10	3	33.6	0.0
										Predicted SPL, dB(A)		59	53

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y											
F1-30	821096.4	834349.7											

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	68	-45	6	0	3	52.4	48.9
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	66	-44	6	0	3	52.7	49.2
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	65	-44	6	-10	3	42.9	39.4
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	66	-44	6	-10	3	42.7	39.2
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	65	-44	0	0	3	51.9	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	59	-43	0	-10	3	40.5	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	73	-45	0	-10	3	44.7	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	79	-46	0	-10	3	44.9	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	44	-41	0	-10	3	52.9	0.0
新界車房	S7	821080	834404	91.0	0.0	1	57	-43	0	-10	3	40.8	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	68	-45	0	-10	3	36.3	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	78	-46	0	-10	3	38.1	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	121	-50	0	-10	3	40.4	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	147	-51	0	-10	3	38.7	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	223	-55	0	-10	3	35.1	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	242	-56	0	-10	3	36.7	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	264	-56	0	-10	3	31.7	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	147	-51	0	-10	3	37.7	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	51	-42	0	-10	3	38.8	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	47	-41	0	-10	3	39.6	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	225	-55	0	-10	3	15.5	15.5
	C7	821181	834561	77.6	77.6	1	228	-55	0	-10	3	15.4	15.4
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	188	-53	0	-10	3	19.6	19.6
	C8b	821154	834168	80.1	80.1	1	191	-54	0	-10	3	19.5	19.5
	C8c	821152	834166	80.1	80.1	1	191	-54	0	-10	3	19.4	19.4
	C8d	821149	834164	80.1	80.1	1	193	-54	0	-10	3	19.4	19.4
	C8e	821147	834167	80.1	80.1	1	190	-54	0	-10	3	19.5	19.5
	C8f	821145	834170	80.1	80.1	1	187	-53	0	-10	3	19.7	19.7
	C8g	821149	834170	79.1	79.1	1	187	-53	0	-10	3	18.7	18.7
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	204	-54	6	-10	3	36.8	36.8
	C9b	820889	834362	92.0	92.0	1	208	-54	6	-10	3	36.6	36.6
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	271	-57	0	-10	3	29.1	0.0
	C10b	821108	834616	92.7	92.7	1	267	-57	0	-10	3	29.2	29.2
	C10c	821060	834608	92.7	92.7	1	261	-56	0	-10	3	29.4	29.4
	C10d	821065	834604	92.7	92.7	1	257	-56	0	-10	3	29.5	29.5
	C10e	821070	834601	86.6	0.0	1	253	-56	0	-10	3	23.5	0.0
	C10f	821079	834590	92.7	92.7	1	241	-56	0	-10	3	30.1	30.1
	C10g	821076	834585	92.7	92.7	1	237	-55	0	-10	3	30.2	30.2
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	276	-57	6	-10	3	32.2	0.0
	C10i	821072	834581	90.0	0.0	1	232	-55	6	-10	3	33.7	0.0
										Predicted SPL, dB(A)		60	53

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-31	821094.6	834351.0

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	68	-45	6	0	3	52.5	49.0
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	65	-44	6	0	3	52.8	49.3
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	65	-44	6	-10	3	42.9	39.4
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	67	-44	6	-10	3	42.6	39.1
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	63	-44	0	0	3	52.1	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	57	-43	0	-10	3	40.8	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	71	-45	0	-10	3	45.0	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	77	-46	0	-10	3	45.1	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	42	-40	0	-10	3	53.4	0.0
新界車房	S7	821080	834404	91.0	0.0	1	56	-43	0	-10	3	41.1	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	66	-44	0	-10	3	36.5	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	77	-46	0	-10	3	38.3	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	120	-50	0	-10	3	40.4	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	146	-51	0	-10	3	38.7	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	222	-55	0	-10	3	35.1	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	242	-56	0	-10	3	36.7	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	264	-56	0	-10	3	31.7	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	147	-51	0	-10	3	37.8	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	50	-42	0	-10	3	39.1	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	44	-41	0	-10	3	40.0	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	224	-55	0	-10	3	15.6	15.6
	C7	821181	834561	77.6	77.6	1	227	-55	0	-10	3	15.5	15.5
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	190	-54	0	-10	3	19.5	19.5
	C8b	821154	834168	80.1	80.1	1	193	-54	0	-10	3	19.4	19.4
	C8c	821152	834166	80.1	80.1	1	193	-54	0	-10	3	19.4	19.4
	C8d	821149	834164	80.1	80.1	1	194	-54	0	-10	3	19.3	19.3
	C8e	821147	834167	80.1	80.1	1	191	-54	0	-10	3	19.4	19.4
	C8f	821145	834170	80.1	80.1	1	188	-53	0	-10	3	19.6	19.6
	C8g	821149	834170	79.1	79.1	1	189	-54	0	-10	3	18.6	18.6
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	202	-54	6	-10	3	36.9	36.9
	C9b	820889	834362	92.0	92.0	1	206	-54	6	-10	3	36.7	36.7
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	269	-57	0	-10	3	29.1	0.0
	C10b	821108	834616	92.7	92.7	1	266	-56	0	-10	3	29.2	29.2
	C10c	821060	834608	92.7	92.7	1	259	-56	0	-10	3	29.4	29.4
	C10d	821065	834604	92.7	92.7	1	255	-56	0	-10	3	29.6	29.6
	C10e	821070	834601	86.6	0.0	1	251	-56	0	-10	3	23.6	0.0
	C10f	821079	834590	92.7	92.7	1	240	-56	0	-10	3	30.1	30.1
	C10g	821076	834585	92.7	92.7	1	235	-55	0	-10	3	30.3	30.3
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	275	-57	6	-10	3	32.2	0.0
	C10i	821072	834581	90.0	0.0	1	231	-55	6	-10	3	33.7	0.0
											Predicted SPL, dB(A)	60	53

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-33	821090.9	834353.6

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	66	-44	6	0	3	52.7	49.2
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	64	-44	6	0	3	52.9	49.4
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	64	-44	6	-10	3	42.9	39.4
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	66	-44	6	-10	3	42.7	39.2
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	68	-45	6	-10	3	42.4	38.9
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	60	-44	0	0	3	52.5	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	54	-43	0	-10	3	41.4	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	67	-44	0	-10	3	45.5	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	72	-45	0	-10	3	45.6	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	37	-39	0	-10	3	54.4	0.0
新界車房	S7	821080	834404	91.0	0.0	1	52	-42	0	-10	3	41.7	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	63	-44	0	-10	3	36.9	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	73	-45	0	-10	3	38.7	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	118	-49	0	-10	3	40.5	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	145	-51	0	-10	3	38.8	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	221	-55	0	-10	3	35.1	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	241	-56	0	-10	3	36.8	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	264	-56	0	-10	3	31.7	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	145	-51	0	-10	3	37.9	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	46	-41	0	-10	3	39.8	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	40	-40	0	-10	3	41.0	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	223	-55	0	-10	3	15.6	15.6
	C7	821181	834561	77.6	77.6	1	226	-55	0	-10	3	15.5	15.5
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	193	-54	0	-10	3	19.4	19.4
	C8b	821154	834168	80.1	80.1	1	196	-54	0	-10	3	19.2	19.2
	C8c	821152	834166	80.1	80.1	1	197	-54	0	-10	3	19.2	19.2
	C8d	821149	834164	80.1	80.1	1	198	-54	0	-10	3	19.1	19.1
	C8e	821147	834167	80.1	80.1	1	195	-54	0	-10	3	19.3	19.3
	C8f	821145	834170	80.1	80.1	1	192	-54	0	-10	3	19.4	19.4
	C8g	821149	834170	79.1	79.1	1	192	-54	0	-10	3	18.4	18.4
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	198	-54	6	-10	3	37.1	37.1
	C9b	820889	834362	92.0	92.0	1	202	-54	6	-10	3	36.9	36.9
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	267	-57	0	-10	3	29.2	0.0
	C10b	821108	834616	92.7	92.7	1	263	-56	0	-10	3	29.3	29.3
	C10c	821060	834608	92.7	92.7	1	256	-56	0	-10	3	29.5	29.5
	C10d	821065	834604	92.7	92.7	1	252	-56	0	-10	3	29.7	29.7
	C10e	821070	834601	86.6	0.0	1	248	-56	0	-10	3	23.7	0.0
	C10f	821079	834590	92.7	92.7	1	237	-55	0	-10	3	30.2	30.2
	C10g	821076	834585	92.7	92.7	1	232	-55	0	-10	3	30.4	30.4
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	273	-57	6	-10	3	32.3	0.0
	C10i	821072	834581	90.0	0.0	1	228	-55	6	-10	3	33.9	0.0
											Predicted SPL, dB(A)	60	53

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-39	821080.1	834355.3

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	59	-43	6	0	3	53.6	50.1
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	59	-43	6	0	3	53.7	50.2
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	60	-43	6	-10	3	43.6	40.1
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	62	-44	6	-10	3	43.3	39.8
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	65	-44	6	-10	3	42.9	39.4
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	68	-45	6	-10	3	42.5	39.0
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	50	-42	0	-10	3	44.1	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	43	-41	0	-10	3	43.3	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	56	-43	0	-10	3	47.1	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	62	-44	0	-10	3	47.0	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	29	-37	0	-10	3	56.6	0.0
新界車房	S7	821080	834404	91.0	0.0	1	49	-42	0	-10	3	42.2	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	61	-44	0	-10	3	37.2	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	70	-45	0	-10	3	39.1	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	120	-50	0	-10	3	40.4	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	147	-51	0	-10	3	38.6	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	224	-55	0	-10	3	35.0	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	244	-56	0	-10	3	36.6	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	271	-57	0	-10	3	31.5	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	148	-51	0	-10	3	37.7	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	41	-40	0	-10	3	40.7	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	33	-38	0	-10	3	42.7	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	226	-55	0	-10	3	15.5	15.5
	C7	821181	834561	77.6	77.6	1	229	-55	0	-10	3	15.4	15.4
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	199	-54	0	-10	3	19.1	19.1
	C8b	821154	834168	80.1	80.1	1	202	-54	0	-10	3	19.0	19.0
	C8c	821152	834166	80.1	80.1	1	202	-54	0	-10	3	19.0	19.0
	C8d	821149	834164	80.1	80.1	1	203	-54	0	-10	3	18.9	18.9
	C8e	821147	834167	80.1	80.1	1	200	-54	0	-10	3	19.1	19.1
	C8f	821145	834170	80.1	80.1	1	197	-54	0	-10	3	19.2	19.2
	C8g	821149	834170	79.1	79.1	1	197	-54	0	-10	3	18.2	18.2
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	187	-53	6	-10	3	37.6	37.6
	C9b	820889	834362	92.0	92.0	1	192	-54	6	-10	3	37.4	37.4
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	266	-57	0	-10	3	29.2	0.0
	C10b	821108	834616	92.7	92.7	1	262	-56	0	-10	3	29.3	29.3
	C10c	821060	834608	92.7	92.7	1	254	-56	0	-10	3	29.6	29.6
	C10d	821065	834604	92.7	92.7	1	250	-56	0	-10	3	29.8	29.8
	C10e	821070	834601	86.6	0.0	1	246	-56	0	-10	3	23.8	0.0
	C10f	821079	834590	92.7	92.7	1	235	-55	0	-10	3	30.3	30.3
	C10g	821076	834585	92.7	92.7	1	230	-55	0	-10	3	30.5	30.5
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	272	-57	6	-10	3	32.3	0.0
	C10i	821072	834581	90.0	0.0	1	225	-55	6	-10	3	33.9	0.0
											Predicted SPL, dB(A)	61	54

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-44	821073.4	834353.1

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	53	-43	6	0	3	54.6	51.1
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	53	-43	6	0	3	54.6	51.1
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	55	-43	6	-10	3	44.3	40.8
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	58	-43	6	-10	3	43.9	40.4
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	61	-44	6	-10	3	43.4	39.9
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	65	-44	6	-10	3	42.8	39.3
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	43	-41	0	-10	3	45.4	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	36	-39	0	-10	3	44.8	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	50	-42	0	-10	3	48.1	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	57	-43	0	-10	3	47.7	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	28	-37	0	-10	3	57.0	0.0
新界車房	S7	821080	834404	91.0	0.0	1	52	-42	0	-10	3	41.7	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	64	-44	0	-10	3	36.8	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	72	-45	0	-10	3	38.8	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	125	-50	0	-10	3	40.1	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	152	-52	0	-10	3	38.3	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	230	-55	0	-10	3	34.8	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	250	-56	0	-10	3	36.5	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	277	-57	0	-10	3	31.3	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	153	-52	0	-10	3	37.4	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	43	-41	0	-10	3	40.3	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	33	-38	0	-10	3	42.7	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	231	-55	0	-10	3	15.3	15.3
	C7	821181	834561	77.6	77.6	1	234	-55	0	-10	3	15.2	15.2
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	199	-54	0	-10	3	19.1	19.1
	C8b	821154	834168	80.1	80.1	1	202	-54	0	-10	3	19.0	19.0
	C8c	821152	834166	80.1	80.1	1	203	-54	0	-10	3	19.0	19.0
	C8d	821149	834164	80.1	80.1	1	203	-54	0	-10	3	18.9	18.9
	C8e	821147	834167	80.1	80.1	1	200	-54	0	-10	3	19.0	19.0
	C8f	821145	834170	80.1	80.1	1	197	-54	0	-10	3	19.2	19.2
	C8g	821149	834170	79.1	79.1	1	198	-54	0	-10	3	18.2	18.2
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	180	-53	6	-10	3	37.9	37.9
	C9b	820889	834362	92.0	92.0	1	185	-53	6	-10	3	37.7	37.7
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	269	-57	0	-10	3	29.1	0.0
	C10b	821108	834616	92.7	92.7	1	265	-56	0	-10	3	29.2	29.2
	C10c	821060	834608	92.7	92.7	1	255	-56	0	-10	3	29.6	29.6
	C10d	821065	834604	92.7	92.7	1	252	-56	0	-10	3	29.7	29.7
	C10e	821070	834601	86.6	0.0	1	248	-56	0	-10	3	23.7	0.0
	C10f	821079	834590	92.7	92.7	1	237	-56	0	-10	3	30.2	30.2
	C10g	821076	834585	92.7	92.7	1	232	-55	0	-10	3	30.4	30.4
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	275	-57	6	-10	3	32.2	0.0
	C10i	821072	834581	90.0	0.0	1	227	-55	6	-10	3	33.9	0.0
										Predicted SPL, dB(A)		62	55

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F1-44	821076.1	834349.8

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	53	-42	6	0	3	54.7	51.2
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	52	-42	6	0	3	54.8	51.3
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	53	-42	6	-10	3	44.6	41.1
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	55	-43	6	-10	3	44.3	40.8
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	58	-43	6	-10	3	43.8	40.3
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	62	-44	6	-10	3	43.2	39.7
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	45	-41	0	-10	3	45.1	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	39	-40	0	-10	3	44.2	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	53	-43	0	-10	3	47.5	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	61	-44	0	-10	3	47.1	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	32	-38	0	-10	3	55.8	0.0
新界車房	S7	821080	834404	91.0	0.0	1	55	-43	0	-10	3	41.2	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	67	-45	0	-10	3	36.4	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	76	-46	0	-10	3	38.4	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	127	-50	0	-10	3	39.9	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	154	-52	0	-10	3	38.2	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	231	-55	0	-10	3	34.7	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	251	-56	0	-10	3	36.4	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	277	-57	0	-10	3	31.2	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	154	-52	0	-10	3	37.3	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	46	-41	0	-10	3	39.7	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	37	-39	0	-10	3	41.7	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	233	-55	0	-10	3	15.2	15.2
	C7	821181	834561	77.6	77.6	1	236	-55	0	-10	3	15.1	15.1
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	195	-54	0	-10	3	19.3	19.3
	C8b	821154	834168	80.1	80.1	1	198	-54	0	-10	3	19.2	19.2
	C8c	821152	834166	80.1	80.1	1	198	-54	0	-10	3	19.1	19.1
	C8d	821149	834164	80.1	80.1	1	199	-54	0	-10	3	19.1	19.1
	C8e	821147	834167	80.1	80.1	1	196	-54	0	-10	3	19.2	19.2
	C8f	821145	834170	80.1	80.1	1	193	-54	0	-10	3	19.4	19.4
	C8g	821149	834170	79.1	79.1	1	194	-54	0	-10	3	18.3	18.3
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	183	-53	6	-10	3	37.7	37.7
	C9b	820889	834362	92.0	92.0	1	188	-53	6	-10	3	37.5	37.5
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	272	-57	0	-10	3	29.0	0.0
	C10b	821108	834616	92.7	92.7	1	268	-57	0	-10	3	29.1	29.1
	C10c	821060	834608	92.7	92.7	1	259	-56	0	-10	3	29.4	29.4
	C10d	821065	834604	92.7	92.7	1	255	-56	0	-10	3	29.6	29.6
	C10e	821070	834601	86.6	0.0	1	251	-56	0	-10	3	23.6	0.0
	C10f	821079	834590	92.7	92.7	1	240	-56	0	-10	3	30.1	30.1
	C10g	821076	834585	92.7	92.7	1	236	-55	0	-10	3	30.3	30.3
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	278	-57	6	-10	3	32.1	0.0
	C10i	821072	834581	90.0	0.0	1	231	-55	6	-10	3	33.7	0.0
											Predicted SPL, dB(A)	61	55

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F2-07	821087.6	834299.4

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	50	-42	6	-10	3	45.1	41.6
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	43	-41	6	-10	3	46.5	43.0
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	34	-39	6	-10	3	48.3	44.8
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	27	-37	6	-10	3	50.4	46.9
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	22	-35	6	-10	3	52.4	48.9
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	19	-33	6	-10	3	53.7	50.2
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	68	-45	0	0	3	51.5	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	0	73	-45	0	0	3	48.8	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	0	91	-47	0	0	3	52.8	0.0
珠江車房	S5	821026	834385	97.8	0.0	0	105	-48	0	0	3	52.4	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	83	-46	0	-10	3	47.4	0.0
新界車房	S7	821080	834404	91.0	0.0	1	105	-48	0	-10	3	35.6	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	117	-49	0	-10	3	31.5	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	127	-50	0	-10	3	34.0	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	172	-53	0	-10	3	37.3	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	198	-54	0	-10	3	36.1	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	272	-57	0	-10	3	33.3	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	292	-57	0	-10	3	35.1	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	308	-58	0	-10	3	30.3	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	198	-54	0	-10	3	35.2	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	98	-48	0	-10	3	33.2	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	88	-47	0	-10	3	34.1	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	275	-57	0	-10	3	13.8	13.8
	C7	821181	834561	77.6	77.6	1	278	-57	0	-10	3	13.7	13.7
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	145	-51	0	-10	3	21.9	21.9
	C8b	821154	834168	80.1	80.1	1	147	-51	0	-10	3	21.7	21.7
	C8c	821152	834166	80.1	80.1	1	148	-51	0	-10	3	21.7	21.7
	C8d	821149	834164	80.1	80.1	1	148	-51	0	-10	3	21.7	21.7
	C8e	821147	834167	80.1	80.1	1	145	-51	0	-10	3	21.8	21.8
	C8f	821145	834170	80.1	80.1	1	142	-51	0	-10	3	22.0	22.0
	C8g	821149	834170	79.1	79.1	1	143	-51	0	-10	3	21.0	21.0
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	206	-54	6	-10	3	36.7	36.7
	C9b	820889	834362	92.0	92.0	1	209	-54	6	-10	3	36.6	36.6
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	321	-58	0	-10	3	27.6	0.0
	C10b	821108	834616	92.7	92.7	1	317	-58	0	-10	3	27.7	27.7
	C10c	821060	834608	92.7	92.7	1	310	-58	0	-10	3	27.9	27.9
	C10d	821065	834604	92.7	92.7	1	306	-58	0	-10	3	28.0	28.0
	C10e	821070	834601	86.6	0.0	1	302	-58	0	-10	3	22.0	0.0
	C10f	821079	834590	92.7	92.7	1	291	-57	0	-10	3	28.4	28.4
	C10g	821076	834585	92.7	92.7	1	286	-57	0	-10	3	28.6	28.6
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	327	-58	6	-10	3	30.7	0.0
	C10i	821072	834581	90.0	0.0	1	282	-57	6	-10	3	32.0	0.0
										Predicted SPL, dB(A)		61	55

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F2-10	821092.4	834298.4

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	55	-43	6	-10	3	44.3	40.8
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	47	-42	6	-10	3	45.6	42.1
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	39	-40	6	-10	3	47.2	43.7
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	32	-38	6	-10	3	49.0	45.5
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	26	-36	6	-10	3	50.8	47.3
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	22	-35	6	-10	3	52.2	48.7
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	72	-45	0	0	3	50.9	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	0	77	-46	0	0	3	48.3	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	0	95	-48	0	0	3	52.4	0.0
珠江車房	S5	821026	834385	97.8	0.0	0	109	-49	0	0	3	52.1	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	86	-47	0	-10	3	47.2	0.0
新界車房	S7	821080	834404	91.0	0.0	1	107	-49	0	-10	3	35.4	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	118	-49	0	-10	3	31.5	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	128	-50	0	-10	3	33.9	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	172	-53	0	-10	3	37.3	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	197	-54	0	-10	3	36.1	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	272	-57	0	-10	3	33.3	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	291	-57	0	-10	3	35.1	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	306	-58	0	-10	3	30.4	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	198	-54	0	-10	3	35.2	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	99	-48	0	-10	3	33.1	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	91	-47	0	-10	3	33.9	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	274	-57	0	-10	3	13.8	13.8
	C7	821181	834561	77.6	77.6	1	277	-57	0	-10	3	13.7	13.7
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	142	-51	0	-10	3	22.1	22.1
	C8b	821154	834168	80.1	80.1	1	144	-51	0	-10	3	21.9	21.9
	C8c	821152	834166	80.1	80.1	1	145	-51	0	-10	3	21.9	21.9
	C8d	821149	834164	80.1	80.1	1	146	-51	0	-10	3	21.8	21.8
	C8e	821147	834167	80.1	80.1	1	143	-51	0	-10	3	22.0	22.0
	C8f	821145	834170	80.1	80.1	1	139	-51	0	-10	3	22.2	22.2
	C8g	821149	834170	79.1	79.1	1	140	-51	0	-10	3	21.2	21.2
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	211	-54	6	-10	3	36.5	36.5
	C9b	820889	834362	92.0	92.0	1	214	-55	6	-10	3	36.4	36.4
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	322	-58	0	-10	3	27.5	0.0
	C10b	821108	834616	92.7	92.7	1	318	-58	0	-10	3	27.6	27.6
	C10c	821060	834608	92.7	92.7	1	311	-58	0	-10	3	27.8	27.8
	C10d	821065	834604	92.7	92.7	1	307	-58	0	-10	3	28.0	28.0
	C10e	821070	834601	86.6	0.0	1	303	-58	0	-10	3	22.0	0.0
	C10f	821079	834590	92.7	92.7	1	292	-57	0	-10	3	28.4	28.4
	C10g	821076	834585	92.7	92.7	1	287	-57	0	-10	3	28.5	28.5
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	328	-58	6	-10	3	30.7	0.0
	C10i	821072	834581	90.0	0.0	1	283	-57	6	-10	3	32.0	0.0
											Predicted SPL, dB(A)	60	54

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F2-19	821109.9	834305.2

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	71	-45	6	0	3	52.1	48.6
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	57	-43	6	-10	3	44.0	40.5
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	50	-42	6	-10	3	45.1	41.6
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	45	-41	6	-10	3	46.1	42.6
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	41	-40	6	-10	3	46.9	43.4
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	84	-47	0	0	3	49.6	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	0	86	-47	0	0	3	47.3	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	0	104	-48	0	0	3	51.6	0.0
珠江車房	S5	821026	834385	97.8	0.0	0	116	-49	0	0	3	51.5	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	87	-47	0	-10	3	47.0	0.0
新界車房	S7	821080	834404	91.0	0.0	1	104	-48	0	-10	3	35.7	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	114	-49	0	-10	3	31.8	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	125	-50	0	-10	3	34.1	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	162	-52	0	-10	3	37.8	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	187	-53	0	-10	3	36.6	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	260	-56	0	-10	3	33.7	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	279	-57	0	-10	3	35.5	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	291	-57	0	-10	3	30.8	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	187	-53	0	-10	3	35.6	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	98	-48	0	-10	3	33.2	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	91	-47	0	-10	3	33.8	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	263	-56	0	-10	3	14.2	14.2
	C7	821181	834561	77.6	77.6	1	266	-56	0	-10	3	14.1	14.1
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	141	-51	0	-10	3	22.1	22.1
	C8b	821154	834168	80.1	80.1	1	144	-51	0	-10	3	21.9	21.9
	C8c	821152	834166	80.1	80.1	1	145	-51	0	-10	3	21.9	21.9
	C8d	821149	834164	80.1	80.1	1	146	-51	0	-10	3	21.8	21.8
	C8e	821147	834167	80.1	80.1	1	143	-51	0	-10	3	22.0	22.0
	C8f	821145	834170	80.1	80.1	1	140	-51	0	-10	3	22.1	22.1
	C8g	821149	834170	79.1	79.1	1	140	-51	0	-10	3	21.1	21.1
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	0	226	-55	6	0	3	45.9	45.9
	C9b	820889	834362	92.0	92.0	0	229	-55	6	0	3	45.8	45.8
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	315	-58	0	-10	3	27.7	0.0
	C10b	821108	834616	92.7	92.7	1	311	-58	0	-10	3	27.8	27.8
	C10c	821060	834608	92.7	92.7	1	307	-58	0	-10	3	28.0	28.0
	C10d	821065	834604	92.7	92.7	1	303	-58	0	-10	3	28.1	28.1
	C10e	821070	834601	86.6	0.0	1	299	-58	0	-10	3	22.1	0.0
	C10f	821079	834590	92.7	92.7	1	287	-57	0	-10	3	28.6	28.6
	C10g	821076	834585	92.7	92.7	1	282	-57	0	-10	3	28.7	28.7
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	320	-58	6	-10	3	30.9	0.0
	C10i	821072	834581	90.0	0.0	1	278	-57	6	-10	3	32.1	0.0
											Predicted SPL, dB(A)	60	54

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F2-23	821115.1	834312.5

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	76	-46	6	0	3	51.5	48.0
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	70	-45	6	0	3	52.3	48.8
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	63	-44	6	-10	3	43.1	39.6
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	57	-43	6	-10	3	44.0	40.5
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	52	-42	6	-10	3	44.8	41.3
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	49	-42	6	-10	3	45.3	41.8
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	87	-47	0	0	3	49.3	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	0	87	-47	0	0	3	47.2	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	0	105	-48	0	0	3	51.6	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	115	-49	0	-10	3	41.6	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	84	-47	0	-10	3	47.3	0.0
新界車房	S7	821080	834404	91.0	0.0	1	99	-48	0	-10	3	36.1	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	108	-49	0	-10	3	32.2	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	119	-50	0	-10	3	34.5	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	155	-52	0	-10	3	38.2	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	179	-53	0	-10	3	36.9	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	251	-56	0	-10	3	34.0	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	270	-57	0	-10	3	35.8	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	282	-57	0	-10	3	31.1	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	179	-53	0	-10	3	36.0	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	93	-47	0	-10	3	33.6	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	88	-47	0	-10	3	34.1	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	254	-56	0	-10	3	14.5	14.5
	C7	821181	834561	77.6	77.6	1	257	-56	0	-10	3	14.4	14.4
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	147	-51	0	-10	3	21.8	21.8
	C8b	821154	834168	80.1	80.1	1	150	-52	0	-10	3	21.6	21.6
	C8c	821152	834166	80.1	80.1	1	151	-52	0	-10	3	21.5	21.5
	C8d	821149	834164	80.1	80.1	1	152	-52	0	-10	3	21.4	21.4
	C8e	821147	834167	80.1	80.1	1	149	-51	0	-10	3	21.6	21.6
	C8f	821145	834170	80.1	80.1	1	146	-51	0	-10	3	21.8	21.8
	C8g	821149	834170	79.1	79.1	1	146	-51	0	-10	3	20.8	20.8
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	0	229	-55	6	0	3	45.8	45.8
	C9b	820889	834362	92.0	92.0	0	232	-55	6	0	3	45.7	45.7
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	307	-58	0	-10	3	27.9	0.0
	C10b	821108	834616	92.7	92.7	1	304	-58	0	-10	3	28.0	28.0
	C10c	821060	834608	92.7	92.7	1	301	-58	0	-10	3	28.1	28.1
	C10d	821065	834604	92.7	92.7	1	296	-57	0	-10	3	28.3	28.3
	C10e	821070	834601	86.6	0.0	1	292	-57	0	-10	3	22.3	0.0
	C10f	821079	834590	92.7	92.7	1	280	-57	0	-10	3	28.8	28.8
	C10g	821076	834585	92.7	92.7	1	276	-57	0	-10	3	28.9	28.9
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	313	-58	6	-10	3	31.1	0.0
	C10i	821072	834581	90.0	0.0	1	271	-57	6	-10	3	32.3	0.0
											Predicted SPL, dB(A)	59	54

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F2-25	821118.0	834316.5

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	79	-46	6	0	3	51.2	47.7
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	73	-45	6	0	3	51.9	48.4
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	66	-44	6	-10	3	42.7	39.2
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	61	-44	6	-10	3	43.4	39.9
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	56	-43	6	-10	3	44.1	40.6
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	53	-43	6	-10	3	44.6	41.1
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	88	-47	0	0	3	49.2	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	0	88	-47	0	0	3	47.1	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	0	105	-48	0	0	3	51.6	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	115	-49	0	-10	3	41.6	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	83	-46	0	-10	3	47.4	0.0
新界車房	S7	821080	834404	91.0	0.0	1	96	-48	0	-10	3	36.4	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	105	-48	0	-10	3	32.4	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	117	-49	0	-10	3	34.7	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	151	-52	0	-10	3	38.4	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	175	-53	0	-10	3	37.2	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	247	-56	0	-10	3	34.2	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	265	-56	0	-10	3	35.9	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	277	-57	0	-10	3	31.3	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	175	-53	0	-10	3	36.2	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	91	-47	0	-10	3	33.8	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	86	-47	0	-10	3	34.3	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	250	-56	0	-10	3	14.6	14.6
	C7	821181	834561	77.6	77.6	1	253	-56	0	-10	3	14.5	14.5
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	150	-52	0	-10	3	21.6	21.6
	C8b	821154	834168	80.1	80.1	1	153	-52	0	-10	3	21.4	21.4
	C8c	821152	834166	80.1	80.1	1	154	-52	0	-10	3	21.3	21.3
	C8d	821149	834164	80.1	80.1	1	155	-52	0	-10	3	21.3	21.3
	C8e	821147	834167	80.1	80.1	1	152	-52	0	-10	3	21.4	21.4
	C8f	821145	834170	80.1	80.1	1	149	-51	0	-10	3	21.6	21.6
	C8g	821149	834170	79.1	79.1	1	149	-51	0	-10	3	20.6	20.6
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	0	230	-55	6	0	3	45.7	45.7
	C9b	820889	834362	92.0	92.0	0	234	-55	6	0	3	45.6	45.6
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	304	-58	0	-10	3	28.1	0.0
	C10b	821108	834616	92.7	92.7	1	300	-58	0	-10	3	28.2	28.2
	C10c	821060	834608	92.7	92.7	1	297	-57	0	-10	3	28.2	28.2
	C10d	821065	834604	92.7	92.7	1	293	-57	0	-10	3	28.4	28.4
	C10e	821070	834601	86.6	0.0	1	289	-57	0	-10	3	22.4	0.0
	C10f	821079	834590	92.7	92.7	1	276	-57	0	-10	3	28.9	28.9
	C10g	821076	834585	92.7	92.7	1	272	-57	0	-10	3	29.0	29.0
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	309	-58	6	-10	3	31.2	0.0
	C10i	821072	834581	90.0	0.0	1	268	-57	6	-10	3	32.4	0.0
										Predicted SPL, dB(A)		59	54

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F2-26	821119.1	834318.0

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	80	-46	6	0	3	51.0	47.5
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	74	-45	6	0	3	51.7	48.2
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	68	-45	6	-10	3	42.5	39.0
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	62	-44	6	-10	3	43.2	39.7
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	58	-43	6	-10	3	43.8	40.3
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	55	-43	6	-10	3	44.3	40.8
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	89	-47	0	0	3	49.1	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	0	89	-47	0	0	3	47.0	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	0	105	-48	0	0	3	51.5	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	115	-49	0	-10	3	41.6	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	82	-46	0	-10	3	47.5	0.0
新界車房	S7	821080	834404	91.0	0.0	1	95	-48	0	-10	3	36.4	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	104	-48	0	-10	3	32.5	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	116	-49	0	-10	3	34.7	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	149	-51	0	-10	3	38.5	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	173	-53	0	-10	3	37.2	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	245	-56	0	-10	3	34.2	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	264	-56	0	-10	3	36.0	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	275	-57	0	-10	3	31.3	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	173	-53	0	-10	3	36.3	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	90	-47	0	-10	3	33.9	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	85	-47	0	-10	3	34.4	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	248	-56	0	-10	3	14.7	14.7
	C7	821181	834561	77.6	77.6	1	251	-56	0	-10	3	14.6	14.6
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	151	-52	0	-10	3	21.5	21.5
	C8b	821154	834168	80.1	80.1	1	154	-52	0	-10	3	21.3	21.3
	C8c	821152	834166	80.1	80.1	1	155	-52	0	-10	3	21.3	21.3
	C8d	821149	834164	80.1	80.1	1	157	-52	0	-10	3	21.2	21.2
	C8e	821147	834167	80.1	80.1	1	154	-52	0	-10	3	21.3	21.3
	C8f	821145	834170	80.1	80.1	1	151	-52	0	-10	3	21.5	21.5
	C8g	821149	834170	79.1	79.1	1	151	-52	0	-10	3	20.5	20.5
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	0	231	-55	6	0	3	45.7	45.7
	C9b	820889	834362	92.0	92.0	0	235	-55	6	0	3	45.6	45.6
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	302	-58	0	-10	3	28.1	0.0
	C10b	821108	834616	92.7	92.7	1	298	-57	0	-10	3	28.2	28.2
	C10c	821060	834608	92.7	92.7	1	296	-57	0	-10	3	28.3	28.3
	C10d	821065	834604	92.7	92.7	1	292	-57	0	-10	3	28.4	28.4
	C10e	821070	834601	86.6	0.0	1	287	-57	0	-10	3	22.4	0.0
	C10f	821079	834590	92.7	92.7	1	275	-57	0	-10	3	28.9	28.9
	C10g	821076	834585	92.7	92.7	1	271	-57	0	-10	3	29.0	29.0
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	308	-58	6	-10	3	31.2	0.0
	C10i	821072	834581	90.0	0.0	1	267	-57	6	-10	3	32.5	0.0
											Predicted SPL, dB(A)	59	54

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F2-30	821124.6	834325.6

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	0	86	-47	6	0	3	50.4	46.9
On Lok Road Substation	S1b	821046	834308	88.1	84.6	0	81	-46	6	0	3	50.9	47.5
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	75	-46	6	-10	3	41.6	38.1
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	70	-45	6	-10	3	42.2	38.7
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	66	-44	6	-10	3	42.6	39.2
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	64	-44	6	-10	3	43.0	39.5
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	0	93	-47	0	0	3	48.7	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	0	91	-47	0	0	3	46.8	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	107	-49	0	-10	3	41.4	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	115	-49	0	-10	3	41.6	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	81	-46	0	-10	3	47.6	0.0
新界車房	S7	821080	834404	91.0	0.0	1	91	-47	0	-10	3	36.8	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	99	-48	0	-10	3	33.0	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	111	-49	0	-10	3	35.1	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	141	-51	0	-10	3	39.0	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	165	-52	0	-10	3	37.7	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	236	-55	0	-10	3	34.5	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	255	-56	0	-10	3	36.3	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	266	-56	0	-10	3	31.6	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	165	-52	0	-10	3	36.7	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	87	-47	0	-10	3	34.2	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	83	-46	0	-10	3	34.6	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	239	-56	0	-10	3	15.0	15.0
	C7	821181	834561	77.6	77.6	1	242	-56	0	-10	3	14.9	14.9
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	1	157	-52	0	-10	3	21.1	21.1
	C8b	821154	834168	80.1	80.1	1	160	-52	0	-10	3	21.0	21.0
	C8c	821152	834166	80.1	80.1	1	162	-52	0	-10	3	20.9	20.9
	C8d	821149	834164	80.1	80.1	1	163	-52	0	-10	3	20.8	20.8
	C8e	821147	834167	80.1	80.1	1	160	-52	0	-10	3	21.0	21.0
	C8f	821145	834170	80.1	80.1	1	157	-52	0	-10	3	21.1	21.1
	C8g	821149	834170	79.1	79.1	1	157	-52	0	-10	3	20.2	20.2
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	0	235	-55	6	0	3	45.6	45.6
	C9b	820889	834362	92.0	92.0	0	239	-56	6	0	3	45.4	45.4
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	295	-57	0	-10	3	28.3	0.0
	C10b	821108	834616	92.7	92.7	1	291	-57	0	-10	3	28.4	28.4
	C10c	821060	834608	92.7	92.7	1	290	-57	0	-10	3	28.5	28.5
	C10d	821065	834604	92.7	92.7	1	285	-57	0	-10	3	28.6	28.6
	C10e	821070	834601	86.6	0.0	1	281	-57	0	-10	3	22.6	0.0
	C10f	821079	834590	92.7	92.7	1	268	-57	0	-10	3	29.1	29.1
	C10g	821076	834585	92.7	92.7	1	264	-56	0	-10	3	29.3	29.3
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	300	-58	6	-10	3	31.5	0.0
	C10i	821072	834581	90.0	0.0	1	260	-56	6	-10	3	32.7	0.0
											Predicted SPL, dB(A)	58	53

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Proposed Residential Development at Lai Sun Yuen Long Centre at No. 27 Wang Yip Steet East, Yuen Long
Detailed Calculation of Fixed Source Noise Impact Assessment
With Noise Barrier on top of clubhouse

NSR	x	y
F2-77	821110.7	834284.3

0 - Non screen
1 - Screen

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Night Time SWL, dB(A)	Screening	Shortest Horizontal Distance, m	Distance Attenuation, dB(A)	Tonality Correction, dB(A)	Screening Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)	Night Time SPL, Leq (30min) dB(A)
On Lok Road Substation	S1a	821039	834312	88.1	84.6	1	77	-46	6	-10	3	41.4	37.9
On Lok Road Substation	S1b	821046	834308	88.1	84.6	1	69	-45	6	-10	3	42.3	38.8
On Lok Road Substation	S1c	821053	834302	88.1	84.6	1	60	-44	6	-10	3	43.5	40.0
On Lok Road Substation	S1d	821061	834297	88.1	84.6	1	52	-42	6	-10	3	44.8	41.3
On Lok Road Substation	S1e	821067	834292	88.1	84.6	1	44	-41	6	-10	3	46.2	42.7
On Lok Road Substation	S1f	821073	834288	88.1	84.6	1	38	-40	6	-10	3	47.5	44.0
Sum Kee Metal Company Limited	S2	821033	834339	93.1	0.0	1	95	-48	0	-10	3	38.5	0.0
健記汽車服冷氣電器	S3	821037	834352	91.0	0.0	1	100	-48	0	-10	3	36.0	0.0
裕記膠輪電池	S4	821025	834366	97.0	0.0	1	118	-49	0	-10	3	40.5	0.0
珠江車房	S5	821026	834385	97.8	0.0	1	131	-50	0	-10	3	40.4	0.0
元朗膠輪電池有限公司	S6	821063	834379	100.8	0.0	1	106	-48	0	-10	3	45.3	0.0
新界車房	S7	821080	834404	91.0	0.0	1	124	-50	0	-10	3	34.1	0.0
Keeper 日本專業汽車美容連鎖	S8	821084	834416	87.9	0.0	1	135	-51	0	-10	3	30.3	0.0
長城汽車維修公司	S9	821076	834425	91.0	0.0	1	145	-51	0	-10	3	32.8	0.0
合興汽車電器工程	S11	821125	834467	97.0	0.0	1	183	-53	0	-10	3	36.7	0.0
Good Year Autocare 輪胎電池服務中心	S12	821141	834490	97.0	0.0	1	207	-54	0	-10	3	35.7	0.0
新興汽車服務中心	S13	821184	834554	97.0	0.0	1	280	-57	0	-10	3	33.1	0.0
偉基汽車有限公司	S14	821198	834570	99.4	0.0	1	298	-57	0	-10	3	34.9	0.0
Transport Department Designated Car Testing Centre (運輸署指定車輛測試中心)	S15	821270	834548	95.1	0.0	1	308	-58	0	-10	3	30.3	0.0
進步膠輪電池有限公司	S16	821141	834490	96.1	0.0	1	208	-54	0	-10	3	34.7	0.0
高加達精密機械工程有限公司	S17	821074	834396	88.0	0.0	1	118	-49	0	-10	3	31.6	0.0
力高汽車維修	S18	821066	834385	88.0	0.0	1	110	-49	0	-10	3	32.2	0.0
Golden Town Industrial Building (錦城工業大廈) - Cooling Tower	C6	821180	834559	77.6	77.6	1	283	-57	0	-10	3	13.6	13.6
	C7	821181	834561	77.6	77.6	1	286	-57	0	-10	3	13.5	13.5
Flourish Food Manufactory Centre (榮華中心工業大廈) - Cooling Tower	C8a	821155	834171	80.1	80.1	0	121	-50	0	0	3	33.4	33.4
	C8b	821154	834168	80.1	80.1	0	124	-50	0	0	3	33.2	33.2
	C8c	821152	834166	80.1	80.1	0	125	-50	0	0	3	33.1	33.1
	C8d	821149	834164	80.1	80.1	0	126	-50	0	0	3	33.1	33.1
	C8e	821147	834167	80.1	80.1	0	123	-50	0	0	3	33.3	33.3
	C8f	821145	834170	80.1	80.1	0	120	-50	0	0	3	33.5	33.5
	C8g	821149	834170	79.1	79.1	0	120	-50	0	0	3	32.5	32.5
The Rainbow (虹方) - Cooling Tower	C9a	820894	834369	92.0	92.0	1	233	-55	6	-10	3	35.6	35.6
	C9b	820889	834362	92.0	92.0	1	235	-55	6	-10	3	35.6	35.6
One North (朗壹廣場) - Cooling Tower	C10a	821111	834620	92.7	0.0	1	336	-59	0	-10	3	27.2	0.0
	C10b	821108	834616	92.7	92.7	1	332	-58	0	-10	3	27.3	27.3
	C10c	821060	834608	92.7	92.7	1	328	-58	0	-10	3	27.4	27.4
	C10d	821065	834604	92.7	92.7	1	323	-58	0	-10	3	27.5	27.5
	C10e	821070	834601	86.6	0.0	1	319	-58	0	-10	3	21.5	0.0
	C10f	821079	834590	92.7	92.7	1	307	-58	0	-10	3	27.9	27.9
	C10g	821076	834585	92.7	92.7	1	303	-58	0	-10	3	28.1	28.1
One North (朗壹廣場) - Chiller	C10h	821113	834626	90.0	0.0	1	341	-59	6	-10	3	30.3	0.0
	C10i	821072	834581	90.0	0.0	1	299	-58	6	-10	3	31.5	0.0
										Predicted SPL, dB(A)		55	50

Note: (1) Horizontal distance has been applied for existing industrial buildings for a conservative approach.

Appendix 5.3 Referenced Noise Levels of the Fixed Noise Sources

SPECIFICATION FOR FT SERIES

SPECIFICATION FOR FT SERIES

ITEM	MODEL			FT-8	FT-10	FT-15	FT-20	FT-25	FT-30	FT-40	FT-50	FT-60	FT-80	FT-100	FT-125	FT-150	FT-175	FT-200	FT-225	FT-250	FT-300	FT-350	FT-400	FT-500	FT-600	FT-700	FT-800	FT-1000
Capacity	27 ºC WB	Circulating water flow rate	m^3/ hr	6.2	7.8	11.7	15.6	19.5	23.4	31.2	39.1	46.9	62.5	78.1	97.7	117.2	136.7	156.2	175.8	195.3	234.4	273.4	312.5	390.6	468.7	546.8	625.0	781.2
		Make-up water (Approx.)	m^3/ hr	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.6	0.7	0.9	1.1	1.4	1.7	2.0	2.2	2.5	2.8	3.4	3.9	4.5	5.6	6.7	7.8	8.9	11.2
	28 ºC WB	Circulating water flow rate	m^3/ hr	5.6	7.4	10.6	14.4	17.8	21.5	28.7	36.3	42.5	58.8	70.6	88.2	107.5	125.0	142.5	160.0	176.2	212.5	250.0	287.5	337.5	431.2	512.4	575.0	718.7
		Make-up water (Approx.)	m^3/ hr	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.5	3.0	3.6	4.1	4.8	6.2	7.3	8.2	10.3
	Air flow rate (Approx.)		m^3/ min	70	85	140	160	230	280	330	420	450	700	830	950	1150	1200	1250	1600	1750	2000	2200	2450	2700	3500	3750	5000	5400
	Hot water temperature		ºC	37																								
	Cold water temperature		ºC	32																								
Overall Dimension	Diameter (ϕ)		mm	920	920	1160	1160	1490	1660	1660	1890	2100	2100	2900	2900	2900	3310	3310	3960	3960	4360	4760	4760	5600	6600	6600	7600	7600
	Height (H)		mm	1560	1700	1585	1835	1945	1885	2035	2110	2300	2475	2910	3110	3110	3300	3450	3920	3920	3990	4195	4255	4590	5310	5510	5660	5860
	Height (w/o motor) (m)		mm	1390	1530	1395	1645	1760	1720	1785	1860	1980	2155	2590	2790	2790	2880	3030	3300	3300	3290	3495	3495	3830	4470	4670	4720	4940
Material	Air inlet mesh			PVC																								
	Basin			FRP																								
	Casing			FRP																								
	Eliminator			FRP																								
	Fan			ABS Plastic									FRP				Aluminium alloy								FRP			
	Filler			PVC																								
	Motor support			Steel (Hot-dip galvanized)																								
	Sprinkler head			ABS Plastic											Aluminium alloy													
	Sprinkler pipe			PVC pipe																								
	Stand pipe			PVC pipe																								
	Structure			Steel (Hot-dip galvanized)																								
Fan	TYPE			Axial-flow																								
	Diameter		mm	550	640		770			930		1200		1500			1800		2400			3000		3400		3700		
	Speed		rpm	970								750					600		450			375		314				
	Driven type			Direct driven															Belt driven					Gear driven				
Motor	TYPE			Totally enclosed fan cooled outdoor 3 phase induction motor																								
	Power source			380V / 3 / 50Hz																								
	Rated output		kw	0.18		0.37		0.75		1.5				2.2			3.7		5.5		7.5		11		15		22	
	No of pole		Pole	6								8					10		4									
Distribution System	TYPE			Automatic sprinkler system																								
	Inlet dia		mm	40		50		80				100		125		150			200					250			300	
	Outlet dia			15		20		40						65					75					100	75		100	
	No of outlet			4								6		4					6						8		10	
Piping	Inlet		mm	40		50		80				100		125		150			200					250			300	
	Outlet		mm	40		50		80				100		125		150			200					250			300	
	Drain		mm	25										50					80					100				
	Overflow		mm	25										50					80					100				
	Float valve		mm	15								20					25		32					50			80	
	Manual make-up		mm	15										20			25		32					50			80	
Weight	Dry weight		Kg	56	65	75	85	105	130	150	180	250	270	500	540	580	870	900	1300	1350	1550	1720	2050	2450	3950	4050	4700	4900
	Operating weight		Kg	140	150	200	210	290	370	390	550	840	860	1600	1640	1680	2170	2200	2700	2750	3350	3720	3950	6150	9350	9450	11900	12100
Noise Level	Sound pressure level		dBA	45.5	47	48	50	52	54	58	59	58	59	61	61.5	62	62	62	63	63	64	64.5	61.5	62	65	66	73	74

Fixed Noise Source C6, C7

Fixed Noise Source C8a-f

Fixed Noise Source C8g

NOTE : Nominal cooling capacity is based on 13 ℓ / min / RT (1 RT=3,900 Kcal / hr) at 37ºC inlet water tpmperature, 32ºC outlet water temperature and 27ºC ambient wet bulb temperature.

The SPLs are measured 16m horizontally from the edge of the tower at 1.5m above the foundation level.

Pump head is obtained by adding resistance of piping/condenser and the tower height(H).

The unit dimension in this catalogue is metric. Specifications listed in this catalogue are subject to change without further noticefor technical improvement of our products.

PHYSICAL DATA, SIZES 30XB-850 TO 1700

30XB				850	900	1000	1100	1200	1300	1400	1500	1550	1700
Cooling													
Standard unit		Nominal capacity	kW	828	890	965	1126	1244	1332	1440	1492	1532	1689
Full load performances*	CA1	EER	kW/kW	3,13	3,13	2,97	3,08	3,1	3,18	3,08	3,12	3,23	3,25
		Eurovent class		A	A	B	B	A	A	B	A	-	-
Seasonal energy efficiency		**SEER $_{12/7°c}$ Comfort low temp.**	**kWh/kWh**	NA	**4,09**	NA	NA	**4,16**	NA	NA	NA	**4,15**	NA
		ηs cool $_{12/7°c}$	**%**	NA	**161**	NA	NA	**164**	NA	NA	NA	**163**	NA
		SEPR $_{12/7°c}$ Process high temp.	**kWh/kWh**	**5,17**	**5,08**	**5,13**	**5,31**	**5,46**	**5,33**	**5,43**	**5,11**	**5,31**	**5,24**
		SEPR $_{-2/-8°c}$ Process medium temp.**	**kWh/kWh**	**3,11**	**3,08**	**3,40**	**3,21**	**3,62**	**3,49**	**3,67**	**3,11**	**3,46**	**3,50**
Unit with option 15LS (+)		Nominal capacity	kW	775	859	929	1111	1211	1298	1391	1418	1457	1627
Full load performances*	CA1	EER	kW/kW	2,8	2,97	2,96	2,9	3,03	2,9	2,77	2,94	2,96	3,1
		Eurovent class		C	B	B	B	B	B	C	B	-	-
Seasonal energy efficiency		**SEER $_{12/7°c}$ Comfort low temp.**	**kWh/kWh**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		ηs cool $_{12/7°c}$	**%**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		SEPR $_{12/7°c}$ Process high temp.	**kWh/kWh**	**5,23**	**5,37**	**5,31**	**5,10**	**5,34**	**4,98**	**4,93**	**4,93**	**5,39**	**5,23**
		SEPR $_{-2/-8°c}$ Process medium temp.**	**kWh/kWh**	**3,13**	**3,08**	**3,75**	**3,14**	**3,60**	**3,57**	**3,66**	**3,13**	**3,61**	**3,71**
Sound levels													
Standard unit													
Sound power(1)			dB(A)	101	104	102	103	102	104	104	104	104	104
Sound pressure at 10 m(2)			dB(A)	70	71	69	70	69	71	71	71	71	70
Unit + option 15(3)													
Sound power(1)			dB(A)	97	99	98	98	98	100	99	99	100	100
Sound pressure at 10 m(2)			dB(A)	65	66	65	65	65	67	65	65	67	66
Unit + option 15LS(3)													
Sound power(1)			dB(A)	94	95	94	94	94	99	95	96	96	96
Sound pressure at 10 m(2)			dB(A)	60	62	65	65	61	65	61	-1	61	61
Unit + option 15LS+(3)													
Sound power(1)			dB(A)	91	93	92	93	93	97	94	95	93	93
Sound pressure at 10 m(2)			dB(A)	58	60	59	60	60	66	61	62	60	60
Dimensions													
Standard unit													
Length			mm	7186	7186	8380	9574	10770	11962	11962	13157	9574/ 4798	8380/ 8380
Width			mm	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height			mm	2297	2297	2297	2297	2297	2297	2297	2297	2297	2297
Operating weight(4)													
Standard unit			kg	5570	5848	6318	7292	7755	8625	8702	9016	3422/ 6714	5957/ 5957
Unit + option 15(3)			kg	5901	6179	6649	7663	8126	8997	9074	9388	3588/ 7046	6288/ 6288
Unit + option 118(3)			kg	6004	6302	6771	-	-	-	-	-	-	-
Unit + option 50(3)			kg	6430	6805	7272	-	-	-	-	-	-	-

Fixed Noise Source C9

* In accordance with standard EN14511-3:2013.

** With option 6 Low temperature brine solution

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fooling factor 0 m².K/W

ηs cool $_{12/7°c}$ & SEPR Réglementation Ecodesign applicable (UE) No 2016/2281

(1) In dB ref=10^{-12} W, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.

(2) In dB ref 20µPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). For information, calculated from the sound power Lw(A).

(3) Options : 15 = Low noise, 15LS = Very Low noise, 118a = Dx freecooling option, 50= heat recovery.

(4) Values are guidelines only. Refer to the unit name plate.

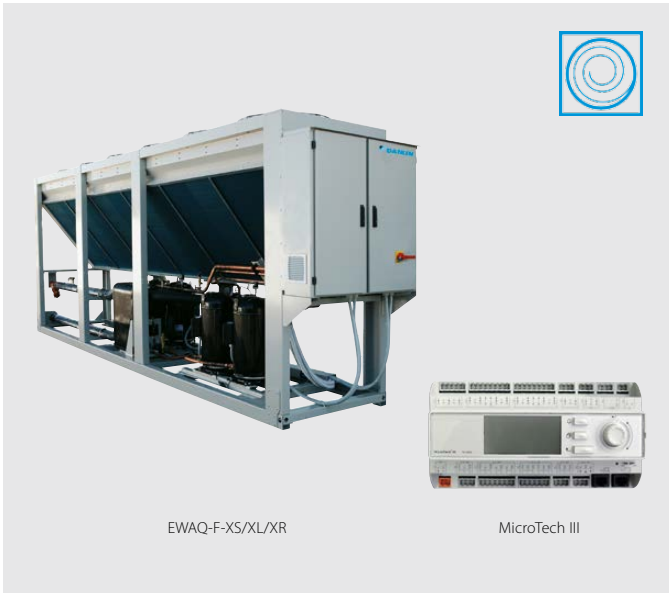
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Valeurs certifiées Eurovent

Air cooled multi-scroll chiller

High efficiency

Reduced sound



EWAQ-F-XS/XL/XR MicroTech III

Fixed Noise Source C10-h, C10-i

Cooling only				EWAQ-F-XR	170	190	210	240	300	310	330	340	390	410	430	500	580	650
Cooling capacity	Nom.			kW	165	188	211	236	304		340		385	407	433	502	579	645
Power input	Cooling	Nom.		kW	53.0	61.2	68.7	77.3	101		117		128	136	146	170	200	219
Capacity control	Method				Step													
	Minimum capacity			%	25.0	21.0	25.0	22.0	23.0		25.0		21.0	20.0	25.0	17.0	14.0	17.0
EER					3.12	3.07	3.08	3.05	3.00		2.92		3.01	2.99	2.96		2.90	2.95
ESEER					4.53	4.64	4.51	4.60	4.53	4.68	4.44	4.63	4.68	4.64	4.54	4.82	4.69	4.65
Dimensions	Unit	Height		mm	2,271					2,221	2,271		2,221					
		Width		mm	1,224					2,258	1,224		2,258					
		Depth		mm	4,413		5,313		6,213	3,210	6,213	3,210	4,110			5,010		5,910
Weight	Unit			kg	2,004	2,303	2,580	2,722	2,900	3,000	3,045	3,145	3,168	3,280	3,298	4,120	4,228	4,655
	Operation weight			kg	2,017	2,317	2,594	2,736	2,914	3,014	3,085	3,185	3,208	3,326	3,344	4,166	4,288	4,716
Water heat exchanger	Type				Plate heat exchanger													
	Water volume			l	12			14			40			46			60	
	Water flow rate	Cooling	Nom.	l/s	7.9	9.0	10.1	11.3	14.5		16.3		18.4	19.5	20.7	24.0	27.7	30.9
	Water pressure drop	Cooling	Nom.	kPa	24	25	31	39	21				28	26	27	38	40	51
Air heat exchanger	Type				High efficiency fin and tube type with integral subcooler													
Compressor	Type				Scroll compressor													
	Quantity				4												6	
Fan	Type				Direct propeller													
	Quantity				4		5		6				8			10		12
	Air flow rate	Nom.		l/s	16,743	16,285	20,618	19,522	24,428		23,426		32,570	31,235		39,044		46,852
	Speed			rpm	705													
Sound power level	Cooling	Nom.		dBA	83	84	85	86	87				89		90	89	90	92
Sound pressure level	Cooling	Nom.		dBA	64	65	66	67		68	67	68	69	70		69	70	71
Operation range	Water side	Cooling	Min.~Max.	°CDB	-13~18													
	Air side	Cooling	Min.~Max.	°CDB	-18~52													
Refrigerant	Type / GWP				R-410A / 2,087.5													
	Circuits	Quantity			2													
Refrigerant charge	Per circuit			kg/TCO$_2$Eq	14.0 / 29.2	15.5 / 32.4	16.5 / 34.4	20.0 / 41.8	24.0 / 50.1		26.0 / 54.3		31.0 / 64.7			35.0 / 73.1	36.0 / 75.2	41.5 / 86.6
Piping connections	Evaporator water inlet/outlet (OD)				3"													
Unit	Maximum starting current			A	276	332	346	401	472		501		618	632	646	628	754	801
	Nominal running current (RLA)	Cooling		A	107	116	125	139	180		204		226	239	255	300	347	380
	Maximum running current			A	132	143	157	173	220		249		283	296	310	377	419	465
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400													

SPECIFICATION

ITEM	MODER			ONE CELL							TWO CELLS					THREE CELLS			FOUR CELLS		
				FC-100	FC-125	FC-150	FC-175	FC-200	FC-225	FC-250	FC-300	FC-350	FC-400	FC-450	FC-500	FC-600	FC-675	FC-750	FC-800	FC-900	FC-1000
CAPACITY	27°C WB	circulating water flow rate	m^3/hr	78.0	97.5	117.0	136.5	156.0	175.5	195.0	234.0	273.0	312.0	351.0	390.0	468.0	526.5	585.0	624.0	702.0	780.0
		make-up water(approx.)	m^3/hr	1.1	1.4	1.7	2.0	2.2	2.5	2.8	3.3	3.9	4.5	5.0	5.6	6.7	7.5	8.4	8.9	10.0	11.2
	28°C WB	circulating water flow rate	m^3/hr	70	88	105	123	140	158	175	210	245	280	315	350	420	473	525	560	630	700
		make-up water(approx.)	m^3/hr	1.0	1.3	1.5	1.8	2.0	2.3	2.5	3.0	3.5	4.0	4.5	5.0	6.0	6.8	7.5	8.0	9.0	10.0
	Air flow rate(Approx.)		m^3/min	630	800	960	1135	1285	1460	1660	1920	2270	2570	2920	3320	3855	4380	4950	5140	5840	6640
	Hot water temperature		℃	37																	
	Cold water temperature		℃	32																	
OVERALL DIMENSION	Width		mm	1650		2000		2300	2600		4000		4600	5200		6900		7800	9200	10400	
	Length		mm	3650		4000		4300	4400		4000		4300	4400		4300		4400	4300	4400	
	Height		mm	3400																	
MATERIAL	Casing			FRP																	
	Steel structure			Steel (hot-dip galvanized)																	
	Filler			PVC																	
	Distribution tray			FRP																	
	Cold water basin			FRP																	
	Sump tank			FRP																	
	Fan			Blade : FRP , Hub : Aluminum Cast alloy																	
	Fan stack			FRP																	
FAN ASSEMBLY	Fan	TYPE		Axial-flow																	
		Diameter X Nos.	∅ mm	1400 x 1		1600 x 1		1800 X1	2000 x 1		1600 x 2	1800 X1	2000 x 2			1800 X3	2000 x 3		1800 X4	2000 x 4	
		Number of blades		4																	
		Fan speed(Approx.)	rpm	470	540	375	420	420	335	370	375	420	420	335	370	420	335	370	420	335	370
		Drive system		V-belt drive																	
	Motor	TYPE		Totally enclosed fan cooled outdoor 3 phase induction motor 4 poles																	
		Power source		380V / 3 / 50Hz																	
		Rated output	Kw	2.2 x 1	3.7 x 1		5.5 x 1		7.5 x 1	3.7 x 2	5.5 x 2				7.5 x 2	5.5 x 3		7.5 x 3	5.5 x 4		7.5 x 4
		Quantity		1							2					3			4		
DISTRIBUTION SYSTEM				Open gravity + redistribution layer																	
PIPING DIMENSION	Hot water inlet pipe		mm	∅100 x 2			∅125 x 2		∅100 x 4		∅125 x 4			∅125 x 6			∅125 x 8				
	Cold water outlet pipe		mm	∅125 x 1		∅150 x 1			∅200 x 1			∅250 x 1			∅200 x 2			∅250 x 2		
	Drain pipe		mm	∅50 x 1		∅ 50 x 1			∅ 50 x 1						∅50 x 2						
	Overflow pipe		mm	∅50 x 1		∅ 50 x 1			∅80 x 1						∅80 x 2						
	Float valve		mm	∅25 x 1				∅40 x 1			∅ 40 x 1			∅40 x 2			∅ 40 x 2			
	Manual make-up		mm	∅25 x 1				∅40 x 1			∅ 40 x 1			∅40 x 2			∅ 40 x 2			
MAKE-UP	Evaporation loss(Approx.)		%	Approx 0.83																	
	Drift loss		%	Less than 0.005																	
WEIGHT	Net weight		kg	970	985	1160	1205	1345	1390	1450	2270	2360	2640	2730	2850	3985	4120	4300	5280	5460	5700
	Operating weight		kg	2475	2490	2975	3020	3450	3750	3810	5455	5545	6400	7000	7120	9850	10755	10935	12800	14005	14245
NOISE LEVEL	Measuring point D=1.13$\sqrt{L \times W}$		dBA	64	65	65	66	66	66	67	67	68	68	69	70	70	71	71	72	73	73

ITEM	MODER			ONE CELL					TWO CELLS						THREE CELLS						FOUR CELLS			FIVE CELLS	
				FC/LN-100	FC/LN-125	FC/LN-150	FC/LN-175	FC/LN-200	FC/LN-250	FC/LN-300	FC/LN-350	FC/LN-400	FC/LN-450	FC/LN-500	FC/LN-600	FC/LN-700	FC/LN-800	FC/LN-900	FC/LN-1000
CAPACITY	27°C WB	circulating water flow rate	m^3/hr	78.0	97.5	117.0	136.5	156.0	195.0	234.0	273.0	312.0	351.0	390.0	468.0	546.0	624.0	702.0	780.0
		make-up water(approx.)	m^3/hr	1.1	1.4	1.7	2.0	2.2	2.8	3.3	3.9	4.5	5.0	5.6	6.7	7.8	8.9	10.0	11.2
	28°C WB	circulating water flow rate	m^3/hr	70	88	105	123	140	175	210	245	280	315	350	420	490	560	630	700
		make-up water(approx.)	m^3/hr	1.0	1.3	1.5	1.8	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0
	Air flow rate(Approx.)		m^3/min	530	680	830	980	1100	1360	1660	1960	2200	2490	2940	3300	3920	4400	4900	5500
	Hot water temperature		℃	37															
	Cold water temperature		℃	32															
OVERALL DIMENSION	Width		mm	2000		2300		2600	4000		4600	5200	6900		7800	9200	10400	11500	13000
	Length		mm	4000		4300		4400	4000		4300	4400	4300		4400	4300	4400	4300	4400
	Height		mm	3700															
MATERIAL	Casing			FRP															
	Steel structure			Steel (hot-dip galvanized)															
	Filler			PVC															
	Distribution tray			FRP															
	Cold water basin			FRP															
	Sump tank			FRP															
	Fan			Blade : FRP , Hub : Aluminum Cast alloy															
	Fan stack			FRP															
FAN ASSEMBLY	Fan	TYPE		Axial-flow															
		Diameter X Nos.	∅ mm	1600 x 1		1800 x 1		2000 x 1	1600 x 2		1800 x 2	2000 x 2	1800 x 3		2000 x 3	1800 x 4	2000 x 4	1800 x 5	2000 x 5
		Number of blades		4															
		Fan speed(Approx.)	rpm	270	340	300	360	310	340	300	360	310	300	360	310	360	310	360	310
		Drive system		V-belt drive															
	Motor	TYPE		Totally enclosed fan cooled outdoor 3 phase induction motor 4 poles															
		Power source		380V / 3 / 50Hz															
		Rated output	Kw	1.5 x 1	2.2 x 1		3.7 x 1		2.2 x 2		3.7 x 2	2.2 x 3	3.7 x 3			3.7 x 4		3.7 x 5	
		Quantity		1					2			3				4		5	
DISTRIBUTION SYSTEM				Open gravity + redistribution layer															
PIPING DIMENSION	Hot water inlet pipe		mm	∅100 x 2				∅125 x 2	∅100 x 4		∅125 x 4	∅100 x 6		∅125 x 6	∅100 x 8	∅125 x 8		∅125 x 10	
	Cold water outlet pipe		mm	∅125 x 1		∅150 x 1			∅200 x 1		∅250 x 1		∅200 x 2			∅250 x 2		∅200 x 3	
	Drain pipe		mm	∅50 x 1		∅ 50 x 1			∅50 x 1			∅50 x 2							
	Overflow pipe		mm	∅50 x 1		∅ 50 x 1			∅80 x 1			∅80 x 2							
	Float valve		mm	∅25 x 1					∅40 x 1			∅40 x 2					∅ 40 x 2		
	Manual make-up		mm	∅25 x 1					∅40 x 1			∅40 x 2					∅ 40 x 2		
MAKE-UP	Evaporation loss(Approx.)		%	Approx 0.83															
	Drift loss		%	Less than 0.005															
WEIGHT	Net weight		kg	1080	1120	1240	1260	1530	2230	2450	2470	2880	3700	3800	4550	5000	6050	6100	7550
	Operating weight		kg	2250	2340	2640	2730	3170	4340	4920	5090	5910	7560	7820	9080	10180	11820	12910	14990
NOISE LEVEL	Measuring point D=1.13$\sqrt{L \times W}$		dBA	60	61	62	63	64	65	65	66	66	67	68	68	69	70	71	71

Note: Nominal cooling capacity is based on 131 / min/ RT(1RT=3,900 Kcal /hr) at 37 °C hot water in, 32°C cold water out 27°C ambient wet bulb. The SPLs are measured 1.13$\sqrt{W \times L}$ horizontally away from air intake side of the tower at 1.5m above the foundation level. Pump head of the cooling tower is approximate equal to the height of tower(H). Dimension shown in this catalogue is metric sized and specifications are subject to change without further notice for technical improvement of our products.

GUARANTEE:

All components are guaranteed against defective material for a period of one(1) year. When return to RYOWO with transportation prepaid, all parts found by factory inspection to be defective will be repaired or replaced without charge, FOB Hong Kong or FOB ShenZhen, PRC. No liability will be assumed for loss or damage resulting form misuse of our products.

Fixed Noise Source
C10e

Fixed Noise Source
C10a, b, c, d, f, g

Appendix 7.1 Proposed Overall Noise Mitigation Measures Schedule

Proposed Overall Noise Mitigation Measures Schedule

Tower 1

Tower	NSR	Room	Floor	Noise Mitigation Measures
1	N1-01	BR	3/F-31/F	Fixed Glazing with or without Maintenance Window
	N1-02	BR	-	1.2m Full Height Vertical Acoustic Fin with Sound Absorptive Material
			4/F-13/F	Acoustic Window (Baffle Type)
	N1-03	BR	5/F-11/F	Acoustic Window (Baffle Type)
	N1-04	LIV/DIN	7/F-9/F	Enhanced Acoustic Balcony (Baffle Type)
	N1-44	BR	-	1.6m Full Height Vertical Acoustic Fin with Sound Absorptive Material

Proposed Overall Noise Mitigation Measures Schedule

Tower 2

Tower	NSR	Room	Floor	Noise Mitigation Measures
2	N2-42	BR	3/F-26/F	Acoustic Window (Baffle Type)
	N2-43	BR	3/F-26/F	Fixed Glazing with or without Maintenance Window
	N2-44	BR	3/F-31/F	Acoustic Window (Baffle Type)
	N2-45	BR	3/F-31/F	Fixed Glazing with or without Maintenance Window
	N2-46	BR	3/F-31/F	Acoustic Window (Baffle Type)
	N2-47	BR	3/F-31/F	Fixed Glazing with or without Maintenance Window
	N2-48	LIV/DIN	3/F-31/F	Enhanced Acoustic Balcony (Baffle Type)
	N2-49	LIV/DIN	4/F-31/F	Enhanced Acoustic Balcony (Baffle Type)
	N2-50	BR	3/F-31/F	Fixed Glazing with or without Maintenance Window
	N2-51	BR	4/F-31/F	Acoustic Window (Baffle Type)
	N2-52	BR	4/F-31/F	Acoustic Window (Baffle Type)
	N2-53	BR	4/F-27/F	Acoustic Window (Baffle Type)
	N2-54	BR	5/F-19/F	Acoustic Window (Baffle Type)
	N2-55	BR	3/F-31/F	Fixed Glazing with or without Maintenance Window
	N2-56	LIV/DIN	3/F-31/F	Enhanced Acoustic Balcony (Baffle Type)
	N2-57	LIV/DIN	3/F-31/F	Enhanced Acoustic Balcony (Baffle Type)
			-	1.6m Full Height Vertical Acoustic Fin with Sound Absorptive Material
	N2-58	BR	3/F-31/F	Fixed Glazing with or without Maintenance Window
	N2-59	BR	4/F-21/F	Acoustic Window (Baffle Type)
	N2-60	BR	4/F-25/F	Acoustic Window (Baffle Type)
	N2-61	BR	5/F-10/F	Acoustic Window (Baffle Type)
	N2-62	BR	5/F-12/F	Acoustic Window (Baffle Type)
	N2-63	BR	3/F-31/F	Fixed Glazing with or without Maintenance Window
	N2-64	LIV/DIN	3/F-31/F	Enhanced Acoustic Balcony (Baffle Type)
			-	1.6m Full Height Vertical Acoustic Fin with Sound Absorptive Material
	N2-65	LIV/DIN	3/F-31/F	Enhanced Acoustic Balcony (Baffle Type)
			-	1.7m Full Height Vertical Acoustic Fin with Sound Absorptive Material
	N2-66	BR	3/F-31/F	Fixed Glazing with or without Maintenance Window
	N2-67	BR	4/F-31/F	Acoustic Window (Baffle Type)

Proposed Overall Noise Mitigation Measures Schedule

	N2-68	BR	4/F-31/F	Acoustic Window (Baffle Type)
			-	1.3m Full Height Vertical Acoustic Fin with Sound Absorptive Material
	N2-69	LIV/DIN	4/F-31/F	Enhanced Acoustic Balcony (Baffle Type)
	N2-70	BR	-	1.9m Full Height Vertical Acoustic Fin with Sound Absorptive Material
			3/F-31/F	Fixed Glazing with or without Maintenance Window
	N2-71	BR	4/F-26/F	Acoustic Window (Baffle Type)
	N2-72	BR	4/F-28/F	Acoustic Window (Baffle Type)
	N2-73	LIV/DIN	4/F-21/F	Enhanced Acoustic Balcony (Baffle Type)
	N2-74	BR	4/F-21/F	Acoustic Window (Baffle Type)
	N2-75	BR	3/F-30/F	Acoustic Window (Baffle Type)
			-	1.7m Full Height Vertical Acoustic Fin with Sound Absorptive Material
	N2-76	BR	3/F-30/F	Fixed Glazing with or without Maintenance Window
	N2-77	BR	-	1.6m Full Height Vertical Acoustic Fin with Sound Absorptive Material
			3/F-30/F	Acoustic Window (Baffle Type)
	N2-79	LIV/DIN	3/F-30/F	Door with Auto-Closing Mechanism
	N2-80	BR	3/F-30/F	Fixed Glazing with or without Maintenance Window
			-	1.0m Full Height Vertical Acoustic Fin with Sound Absorptive Material
	N2-81	BR	4/F-11/F	Acoustic Window (Baffle Type)
	N2-82	BR	4/F-14/F	Acoustic Window (Baffle Type)
	N2-83	BR	-	1.0m Full Height Vertical Acoustic Fin with Sound Absorptive Material
			3/F-30/F	Fixed Glazing with or without Maintenance Window
	N2-84	LIV/DIN	3/F-30/F	Door with Auto-Closing Mechanism
	N2-85	LIV/DIN	4/F-16/F	Acoustic Window (Baffle Type)
	-	-	-	1.0m Full Height Vertical Acoustic Fin with Sound Absorptive Material

Remark:
Please refer to **Figure 7.1** for the location of Sound Absorptive Materials on the building façade and Noise Barrier (Top Height: 39.3mPD).