

**Section 16 Planning Application for Proposed Minor Relaxation of the
Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme
("YTM-013"), Mong Kok, Kowloon**

Environmental Assessment Report
(V1.0)

June 2026

Approved By 
(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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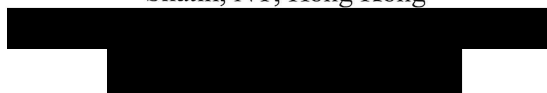


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1 INTRODUCTION

1.1 Background

- 1.1.1 The Urban Renewal Authority (URA) has proposed the Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under Section 25 of the Urban Renewal Authority Ordinance (URAO). The Chief Executive in Council (CE in C) approved the draft Development Scheme Plan (DSP) on April 8, 2025, and published this decision in the Government Gazette on 17th April 2025. The approved DSP No. S/K3/URA5/2 was exhibited for public inspection on the same day.
- 1.1.2 To optimize the utilization of the Scheme area and in view to the current unoptimistic office market sentiment with a high office vacancy rate and the Government’s directive of suspending the sales of commercial sites, the URA proposes to increase the maximum domestic Gross Floor Area (GFA) to allow flexibility for future development to meet the market needs and enhance market attractiveness of the Scheme. A Section 16 planning application (S.16 Application) is proposed to seek for minor relaxation of domestic GFA in Sub-area (1) of Site B (the whole Site B as the Application Site), zoned as “OU(MU)2” from 46,605 m² (equivalent to a Domestic Plot Ratio (DPR) 6.5) to 53,775 m² (equivalent to a DPR 7.5), while keeping the total maximum GFA of Site B unchanged. The Application Site of the current S.16 Application will only cover Site B of the approved DSP. **Figure 1-1** shows the Application Site of the current S.16 Application.
- 1.1.3 This S.16 Application is a non-scheme-based submission. The notional design is prepared based on the proposed minor relaxation of the Approved DSP parameters. Under the non-scheme-based approach, the notional design and indicative development parameters provided are only for illustrative purposes and for conducting necessary technical assessments to demonstrate the impacts of the proposed minor relaxation. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S.16 Application.
- 1.1.4 Cinotech Consultants Limited has been commissioned by the URA to conduct an Environmental Assessment (EA) to support the submission of the S.16 Application to the Town Planning Board (TPB) for consideration.

1.2 Purpose and Scope of Report

- 1.2.1 This EA is prepared to assess the potential environmental impact/ benefit associated with the implementation of the Scheme in supporting the submission of the S.16 Application to TPB’s consideration. It has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 “Environment” of the Hong Kong Planning Standards and Guidelines (HKPSG).
- 1.2.2 This EA presents the study of the potential environmental impacts of the following aspects:
- Review of Operation Phase Air Quality Impact
 - Noise Impact
 - Waste Management
- 1.2.3 Drainage Impact, Sewerage Impact and Water Supply Impact will be assessed in separate reports.

- 1.2.4 It should be noted that the conclusions for other environmental aspects in the previously approved EA report associated with the approved DSP, such as construction-phase air quality and preliminary land contamination, remain valid. Therefore, no adverse impacts are anticipated, and no reassessment of those aspects is necessary.
- 1.2.5 However, as the methodology for the operation phase air quality model has been updated since the previously approved EA report, justification shall be provided to demonstrate that the previous conclusions are still valid.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Overview of Existing Developments and Major Roads in the Surroundings

- 2.1.1 To demonstrate the complete picture of the future development in the urban context, the assessment will describe the proposed development of the whole DSP (i.e. both Site A and Site B) (the Scheme). The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m², the Scheme is divided into Site A (about 4,445m²) and Site B (about 24,870m²). The location of the Scheme is shown on **Figure 1-1**.
- 2.1.2 Site B of the Scheme (the Application Site) is currently occupied by various leisure, recreation and GIC facilities, including Boundary Sports Centre No.1 and No.2, Boundary Street Recreation Ground, Sai Yee Street Children’s Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department (“LCSD”) Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath. There is no private lot within Site B.
- 2.1.3 Site A of the Scheme (not forming the Application Site) comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.
- 2.1.4 The existing developments in the vicinity are residential, commercial, and recreational uses. There are a few open recreational areas in the vicinity such as Police Sports and Recreation Club, Tai Hang Tung Recreation Ground, and Mong Kok Stadium.
- 2.1.5 There are several major roads in the vicinity of the Scheme according to the Annual Traffic Census by Transport Department. Boundary Street (Station 3435), which is a primary distributor with AADT of 30,530 in year 2024, is located at the immediately north of Site B. Another primary distributor Prince Edward Road West (Station 4203), is located at the immediately south of Sites A1 to A5 with AADT of 43,820 in year 2024. Nathan Road (Station 3424), which is around 170m in the west of Site A1, is also a primary distributor with AADT of 29,620 in year 2024. Another two primary distributors within 500m from Scheme boundary, Lai Chi Kok Road (station 3629) and Cheung Sha Wan Road (Station 3224), are having AADT of 36,420 & 32,740 in year 2022, respectively. Due to the heavy traffic flow in the vicinity, potential air quality impact and traffic noise impact are to be assessed in the early stage of the Project.

2.2 The Proposed Development

Approved DSP and S.16 Application

- 2.2.1 According to the approved DSP of the Scheme, Site B, the Application Site, is zoned “Other Specified Uses (Mixed Uses) 2” (“OU(MU)2”), and is further divided into Sub-area (1) and Sub area (2). Sub-area (1) of Site B will be for a high-rise development with a maximum domestic gross floor area (“GFA”) of 46,605m² and a total GFA of 64,530 m², as well as a building height restriction (“BHR”) of 150mPD adopting a stepped height profile. Sub-area (2) of “OU(MU)2” zone comprises the Waterway Park and ancillary retail/ commercial uses and LCDS’s sports/ GIC facilities with a BHR of 30mPD. It has a maximum non-domestic GFA of 8,955 m².

2.2.2 Site A (not forming the Application Site) is zoned “Other Specified Uses (Mixed Use) 1” (“OU(MU)1”) and it consists of 5 Sub-areas – Sub-areas (1) to (5) (i.e. Sites A1 – A5). Site A1 will be developed for residential development cum commercial podium, with a BHR of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5.

2.2.3 Under this minor relaxation application, the maximum domestic GFA of Sub-area (1) in Site B is proposed to increase from 46,605m² to approximately 53,775m², equivalent to an increase in DPR from 6.5 to 7.5 (see **Table 2-1**). The total GFA for Sub-area (1) remains at 64,530m² (PR = 9.0). The development parameters of Sub-area (2) of Site B remain the same as the under the previously endorsed DSP.

Comparison between the Approved DSP and Current S.16 Application Proposal (Site B)

2.2.4 A comparison between the development parameters of the approved DSP and that of the S.16 Application is provided in **Table 2-1** below.

Table 2-1 Comparison between the Approved DSP and the Current S.16 Application Proposal (Site B)

Development Parameters of Site B	Approved DSP [A]			Current S.16 Application [B]			Difference [B] – [A] (% change)
Zoning	OU(MU)2			OU(MU)2			N/A
Gross Site Area (m ²)	About 24,870			About 24,870			N/A
	Sub-area (1)	Sub-area (2)	Total [A]	Sub-area (1)	Sub-area (2)	Total [B]	
Net Site Area (m²) (for PR Calculation) [1]	About 7,170	About 17,700	About 24,870	About 7,170	About 17,700	About 24,870	N/A
Maximum GFA							
-Total GFA (m ²)	64,530	8,955	73,485	64,530	8,955	73,485	N/A
-Domestic GFA (m ²)	46,605	N/A	46,605	53,775	N/A	53,775	+15.4%
Maximum Building Height (mPD)	150	30	N/A	150	30	N/A	N/A

Remark:

[1] Subject to site survey

Notional Design

2.2.5 A notional design, which is illustrated in **Figure 2-1 & Appendix 2-1**, is prepared based on the development parameters to demonstrate the proposed planning intention and development concepts of the Scheme. Compared to the notional design for the approved DSP, the current notional design for S.16 Application has only revised the design of Site B, while keeping the notional design of other parts in the DSP unchanged from the approved DSP.

2.2.6 Regarding the Application Site, under the current notional design for Sub-area (1) of Site B (the north-east corner of Site B), a development featuring 3 high-rise developments, including 2 residential towers and 1 mixed-use composite tower with residential/ hotel uses, along with retail/ recreation and GIC facilities at the podium level, is proposed. Ancillary parking and a public vehicle park (PVP) are proposed in the basement levels of Site B. An at-grade open space, named “Waterway Park,” is proposed in the Sub-area (2) of Site B. Ancillary retail facilities are planned at the ground level and the Waterway Park to enhance retail activities and vibrancy adjoining the existing Flower Market.

- 2.2.7 Compared to the approved Scheme for approved DSP, the major change is at Sub-area (1) of Site B, where the hotel/ office tower in the approved Scheme is changed to a composite tower of residential/ hotel tower, with the same height (130 mPD) in the current S.16 Application.
- 2.2.8 The notional design for Site A is the same as the approved DSP at planning stage and will be referenced for the purpose of technical assessments to support the S.16 Application. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2-A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.
- 2.2.9 The proposed development of the Scheme will be redeveloped in phases. Phased development and completion may be adopted by further sub-division of Site B, subject to liaison and agreement with relevant government departments at the implementation stage. The tentative completion year of the whole Scheme is in 2036.

Development Parameters of the Notional Design

- 2.2.10 The development parameters of the notional design of Site A shown in **Table 2-2** remains the same as those under the approved DSP. This assessment is prepared based on the development parameters in **Table 2-2** & **Table 2-3** of the notional design, which are subject to changes at detailed design stage.

Table 2-2 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m ²	About 268m ²	About 123m ²	About 233m ²	About 251m ²
	About 4,445m ²				
Net Site Area (subject to survey)	About 2,640m ²	About 239m ²	About 109m ²	About 202m ²	About 198m ²
	About 3,388m ²				
Zoning	OU(MU)1				
Domestic GFA [1]	23,716m ²	-	-	-	-
Non-Domestic GFA [1]	6,576m ²	-	-	100m ²	100m ²
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m ²	-	-	-	-
At-grade Open Space	About 800m ²				

Note

- [1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-3 Development Parameters of the Notion Design (Site B – Application Site)

Site B			
Gross Site Area	About 24,870m ²		
Zoning	OU(MU)2		
	Sub-area (1)	Sub-area (2)	Total
Net Site Area (subject to survey)	7,170m ²	17,700m ²	24,870m ²
Domestic GFA [1]	53,775m ²	-	53,775m ²
Non-Domestic GFA [1]	10,755m ²	8,955m ²	19,710m ²
- Retail	(5,755m ²)	(8,955m ²)	(14,710m ²)
- Hotel	(5,000m ²)	-	(5,000m ²)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m ²		
No. of Building Blocks [2]	2 residential towers and 1 composite tower with residential and hotel uses on top of GIC/ recreation/ retail podia + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (composite tower) 1 storey (retail block)		
No. of Flats [2]	About 1,080	-	About 1,080
Average Flat Size [2]	50m ²	-	50m ²
At-grade Open Space	About 8,800m ²		
Public Vehicle Park [4]	About 220 private car parking spaces + About 10 loading/unloading bays		

Note

- [1] Under the proposed “OU(MU)” zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
- [3] The actual GIC GFA is subject to liaison with Government departments. As a conservative approach, 30,000m² GIC GFA is assumed in this assessment.
- [4] Subject to liaison with Transport Department.

3 REVIEW OF OPERATION PHASE AIR QUALITY IMPACT

3.1 Introduction

- 3.1.1 In the previously approved EA report, air model results with additional 5% traffic generation induced by the Scheme as a sensitivity test show that the predicted air quality at all proposed residential flats, external façades of non-residential areas, and Scheme boundaries complies with the AQOs for RSP, FSP, and NO₂. Under the subject S.16 Application, there is no major change in the notional building layout and no change of building height of towers despite the proposed increase in domestic GFA in Site B. Therefore, no adverse air quality impact due to vehicular or marine traffic emissions is anticipated for the Scheme area.
- 3.1.2 Since then, the methodology for the air quality model has been updated. The key differences are (1) the update of the PATH background; and (2) the use of AERMOD instead of CALINE4 for the calculation of open-road traffic emission dispersion. Before adopting the previous conclusions, it is necessary to confirm that the changes in methodology will not adversely affect the model results.

3.2 Updated PATH Background

- 3.2.1 In the approved EA report of the approved DSP, background concentrations for Year 2025 from PATH v2.1 were adopted. With introduction of PATH v3.0, background concentrations for Year 2035 (the closest available year prior to population intake) are available.
- 3.2.2 The previously adopted PATH background and the PATH v3.0 background are provided in **Table 3-1** for comparison. As the PATH v3.0 background is clearly lower than the previously adopted PATH background, the updated PATH background will not adversely affect the results of the air quality model.
- 3.2.3 It should be noted that ozone (O₃) is not considered a key criteria pollutant for the Proposed Development, as it is not a primary pollutant emitted from vehicular emissions. Instead, its concentration was used as a parameter to estimate the conversion of nitrogen oxides (NO_x) to nitrogen dioxide (NO₂) in the approved EA report.

Table 3-1 Comparison between the PATH v2.1 Background in the Approved EA Report and the Current PATH v3.0

Pollutant	Averaging Time	AQOs [$\mu\text{g}/\text{m}^3$] [i]	PATH Model Concentration [$\mu\text{g}/\text{m}^3$] at Grid [40,34] - L1 (0-17m)	
			Year 2025 in PATH v2.1 (Adopted in the approved EA report) [ii]	Year 2035 in PATH v3.0 (Closest available year prior to population intake [iii])
Respirable Suspended Particulates (RSP)	10th Highest 24-hour	75 (9)	62.11	49.66
	Annual	30	27.56	19.92
Fine Suspended Particulates (FSP)	19th Highest 24-hour	37.5 (18)	31.78	28.7
	Annual	15	15.03	12.26
Nitrogen Dioxide (NO_2)	19th Highest 1-hour	200 (18)	123.89	84.98
	10th Highest 24-hour	120 (9)	--	33.44
	Annual	40	21.95	15.56
Sulphur Dioxide (SO_2)	4th Highest 10-Min	500 (3)	58.78	22.91
	4th Highest 24-hour	40 (3)	9.74	6.53
Ozone (O_3)	10th Highest 8-hour	160 (9)	188.56	170.15
	Peak season	100	--	118.11
Carbon Monoxide (CO)	1st Highest 1-hour	30000 (0)	945.47	521.79
	1st Highest 8-hour	10000 (0)	766.85	492.5
	1st Highest 24-hour	4000 (0)	--	464.39

Note:

- [i] The numbers in brackets () refer to number of exceedances allowed per calendar year.
 [ii] The pollution concentrations are obtained from the Smart Air Modelling Platform v2.0.
 [iii] The pollution concentrations are obtained from the Smart Air Modelling Platform v2.1.
 [iv] Exceedance has been highlighted in orange.

3.3 The use of AERMOD with SAMP instead of CALINE4

- 3.3.1 CALINE4 was adopted in the air quality model of the approved EA for handling the dispersion of open-road traffic emissions. AERMOD, together with traffic emission source strength from the Smart Air Modelling Platform (SAMP), is the currently accepted method for modelling open-road traffic emissions. Compared with CALINE4, AERMOD is a much newer modelling tool with many additional configuration options and functions. As both CALINE4 and AERMOD are Gaussian-based modelling tools, with identical source configuration and meteorological data, both models should provide similar results.
- 3.3.2 The traffic emission source strength in both the approved EA report and the current method relies on traffic emission factors from EMFAC-HK v4.3. Therefore, the traffic emission source strength remains the same.
- 3.3.3 It should be noted that the source locations in CALINE4 differ from those in the current method. CALINE4 models traffic emissions as a line source on the road surface, with a limitation on the height of flyovers to 10 m above ground. In contrast, the current method

(AERMOD with SAMP) models traffic emissions as a line source 0.65–4.4 m above the road surface, depending on the proportions of various vehicle types. The restriction on the elevation of flyovers also does not exist in AERMOD. Therefore, the emission heights in the current method are spread across various elevations and are generally farther from ground level.

- 3.3.4 Considering that the worst-hit level was ground level (1.5 mAG) in the approved EA report, with the same traffic emission strength but higher emission elevations and a wider vertical spread, traffic pollutants are less likely to concentrate at ground level; thus, the change in methodology will not adversely affect the worst locations.

3.4 Conclusion

- 3.4.1 With the changes in the air quality modelling methodology, the model results are not expected to be adversely affected. Therefore, the conclusions in the approved EA report remain valid, and no adverse air quality impact due to vehicular or marine traffic emissions is anticipated for the Scheme area.

4 NOISE IMPACT ASSESSMENT

4.1 Introduction

- 4.1.1 The purpose of this chapter is to assess whether the noise sensitive receivers (NSRs) of the proposed development within the Scheme comply with the noise criteria of The Hong Kong Planning Standards and Guidelines (HKPSG).
- 4.1.2 The potential noise impact from the following aspects have been assessed: (i) Construction noise - the potential noise impact generated from the construction activities of the proposed development to the surroundings; (ii) Fixed noise - the potential fixed noise impact generated from the surrounding fixed noise sources to the proposed development and potential fixed noise impact arising from the proposed development to the surrounding developments; (iii) Traffic noise - the potential noise impact generated from the nearby road networks to the proposed development during operation phase; (iv) Railway noise - the potential noise impact generated from the East Rail Line to the proposed development; (v) Stadium noise – the potential noise impact generated by the events in Mong Kok Stadium.
- 4.1.3 Effective mitigation measures and recommendations are proposed to mitigate the excessive noise level to achieve an acceptable compliance level under the current notional design.

4.2 Standards, Guidelines and Criteria

Construction Noise

- 4.2.1 Construction noise is governed by the Noise Control Ordinance (NCO) (Cap. 400) which prohibits the use of PME during the restricted hours (7 p.m. to 7 a.m. on Monday to Saturday and any time on a general holiday, including Sunday) without a valid Construction Noise Permit (CNP) issued by the Authority. The criteria and procedures for issuing the permit are specified in the “Technical Memorandum on Noise from Construction Works Other than Percussive Piling” - (GW-TM).
- 4.2.2 For construction works other than percussive piling, although GW-TM does not provide control over non-restricted hours (7:00 a.m. to 7:00 p.m., Monday to Saturday not being a public holiday including Sunday) daytime construction activities, the noise limits are set out in the “Practice Note for Professional Persons Environmental Consultative Committee” (ProPECC) “Minimizing Noise from Construction Activities” (PN1/24).

Fixed Plant Noise

- 4.2.3 Fixed noise sources, such as the building services system, ventilation system, and the operation of the Project is controlled under the NCO and “Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites” (IND-TM). According to the IND-TM, the Acceptable Noise Level (ANL) for a Noise Sensitive Receiver (NSR) is determined by the Area Sensitive Ratings (ASR); which classify a NSR based on the type of the area within, and the degree of the effect on the NSR of particular Influencing Factors (IFs). The different types of area containing the NSR are categorized into the rural area, low density residential area, urban area and other areas, with reference to Table 1 of the IND-TM. While the Ifs, defined as industrial areas or area containing a number of factories or major road with an annual average daily traffic flow (AADT) in excess of 30,000, should be assessed for their influence on the

NSR according to the degree of influence (“not affected”, “indirectly affected” and “directly affected”).

- 4.2.4 The HKPSG states that all planned fixed noise sources should be located and designed so that when assessed in accordance with the IND-TM, the level of the intruding noise at the façade of the nearest sensitive use should be at least 5 dB(A) below the appropriate ANL shown in Table 2 of the IND-TM or the background noise level, whichever is lower. When the prevailing background noise levels would be adopted as the assessment criteria, the prevailing background noise levels, at the relevant NSRs shall be measured during the typical operation hours of the fixed plant within daytime, evening and night times. The Acceptable Noise Levels (ANLs) for different Area Sensitivity Ratings (ASRs) are given in **Table 4-2**.

Table 4-1 Acceptable Noise Levels for different Area Sensitivity Rating (ASRs), dB(A), L_{eq} , (30mins)

Time Period	Acceptable Noise Levels, L_{eq} , 30mins		
	ASR A	ASR B	ASR C
Day (0700 to 1900 hours)	60 (55)*	65 (60)*	70 (65)*
Evening (1900 to 2300 hours)			
Night (2300 to 0700 hours)	50 (45)*	55 (50)*	65 (55)*

* Numbers in () limit indicates the ANL-5dB(A) limit for planned fixed plant.

- 4.2.5 The Scheme is located in the urban area of Mong Kok. According to TD’s Annual Traffic Census (ATC2024), Boundary Street (Station 3435), which is a primary distributor with AADT of 30,530 in year 2024, is located at the immediately north of Site B. Another primary distributor Prince Edward Road West (Station 4203), is located at the immediately south of Sites A1 to A5 with AADT of 43,820 in year 2024. Therefore, the Scheme and its surroundings are considered either directly affected or indirectly affected by Influencing Factor (IF); the ASR of the site would be classified as “C”.
- 4.2.6 As the site is subject to traffic noise impact from the nearby primary distributor roads, it is expected that the prevailing background noise level would be higher than ANL-5dB for both daytime and night-time, thus ANL-5 dB would be adopted as the planned fixed noise sources criterion. The planning criteria would be 65 dB(A) for day and evening time and 55 dB(A) for night time.

Road Traffic Noise

- 4.2.7 HKPSG provides guidance on acceptable road traffic noise levels at the openable windows of various types of noise sensitive buildings. The relevant criteria are shown in **Table 4-2**.

Table 4-2 HKPSG Road Traffic Noise Planning Criteria

Uses	Road Traffic Noise L ₁₀ , (1hr) dB(A)
Domestic Premises	70
Hotel and Hostels	70
Offices	70
Educational institutions	65
Hospital & Clinics	55
Places of public worship and courts of law	65

Note: The above criteria apply to noise sensitive uses which rely on opened window for ventilation.

4.2.8 The following Practise Notes provide guideline to facilitate the project planning and design against road traffic noise impact.

- “ProPECC PN3/23 Application of Sound Insulation in Residential Buildings to Reduce Noise Transmission Between Units” provides technical information on the design and application of sound insulation on partition walls and floors between residential units for better privacy protection and indoor sound environment.
- “ProPECC PN4/23 Practice Note for the Planning of Residential Developments against Road Traffic Noise” recommends mitigation measures against road traffic noise in planning stage and promulgates self-assessment procedures to facilitate the planning approval
- “ProPECC PN5/23 Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact” provides guidance on technical information for innovative mitigation measures (Acoustic Window and Enhanced Acoustic Balcony) against road traffic noise.

Railway Noise

4.2.9 Railway noise is governed by the Noise Control Ordinance (NCO). The proposed development is classified as ASR C (**Section 4.2.5**) and the ANLs of ASR C stipulated in the IND-TM shall be complied. Moreover, HKPSG provide guidance on acceptable railway noise levels at the openable windows of various types of noise sensitive buildings. An averaged 24 hours noise level of 65 dB(A) and a L_{max} (2300-0700) of 85 dB(A) are recommended. The railway noise criteria are summarised in **Table 4-3**.

4.2.10 HKPSG also provides guidance on the necessary horizontal distance from the railway to noise sensitive buildings to avoid potential noise impact.

Table 4-3 Railway Noise Criteria

Time period	Noise Criteria, dB(A)	
Day (0700 to 1900 hours) & Evening (1900 to 2300 hours)	$L_{eq,30min}$	70 ^[1]
Night (2300 to 0700 hours)	$L_{eq,30min}$	60 ^[1]
	$L_{max, (2300 to 0700)}$	85 ^[2]
All Day	$L_{eq, (24hrs)}$	65 ^[2]

Noted

[1] Criteria for Fixed Noise Sources stipulated in the IND-TM.

[2] Recommendations from HKPSG Chapter 9

Stadium Noise

4.2.11 The noise arising from the operation of Mong Kok Stadium is regulated under the Noise Control Ordinance (NCO) and IND-TM. The proposed development is classified as “ASR C” (**Section 4.2.5**) and ANL of ASR C shall be applied as the noise criteria against stadium noise. Therefore, the noise criterion for the proposed development is 70dB(A) for daytime and evening time. The night-time criterion is not applicable as the stadium is not expected to be operated during night-time.

4.3 Noise Sensitive Receivers and Noise Assessment Points

4.3.1 NSRs within 300m assessment area from Scheme boundary have been reviewed. The assessment boundary is illustrated in **Figure 4-1**. Sites A1 and B consists of residential flats that rely on openable windows for ventilation, while Sites A2 – A5 will be either open space or 1-storey retail shops. Therefore, NSR is not anticipated at Sites A2 – A5. The NSRs at Sites A1 and B will be further assessed.

Representative Noise Sensitive Receivers for Construction Noise

4.3.2 The proposed development is located in a densely populated urban area surrounded by various types of developments, including residential developments, commercial developments, G/IC facilities, and schools. Given the small scale of Sites A2 to A5 and that only light structures will be provided, no significant construction noise impact is anticipated from these Sites. The representative noise sensitive receivers (NSRs) for the construction of Proposed Development are illustrated in **Figure 4-2** and summarized in **Table 4-4**.

Table 4-4 Representative Noise Sensitive Receivers for Construction Noise

NSR ID	Description	Type	Nearest Horizontal Distance to Scheme Boundary, m	
			Site A1	Site B
NSR01	Mandarin Court	Domestic Premises	113	14
NSR02	Flower Vila	Domestic Premises	40	14
NSR03	Mong Kok City Building	Domestic Premises	18	29
NSR04	Merlin Building	Domestic Premises	28	90
NSR05	Fa Yuen Mansion	Domestic Premises	16	76
NSR06	Oscar Court	Domestic Premises	7	50
NSR07	Circle Garden	Domestic Premises	<5	25
NSR08	Heung To College of Professional Studies	Domestic Premises	48	12
NSR09	Jenny's Court	Domestic Premises	100	12
NSR10	Chan's Creative School	Educational institutions	284	33

Representative Noise Sensitive Receivers for Planned Fixed Noise Sources

- 4.3.3 Large building service equipment for Podium of Site A1, Podiums & Hotel of Site B are the potential fixed noise sources during operation phase of the Scheme. For Sites A2, A3, A4 & A5, no large building service equipment is anticipated due to the type and scale of the Sites.
- 4.3.4 The surrounding and planned NSRs with direct line-of-sight to the podium of Sites A1 & B and the Hotel are considered as the representative NSRs against planned fixed noise sources. The representative NSRs are summarized in **Table 4-5** and illustrated in **Figure 4-3a**. The NSRs in the east of the Site B are relatively far thus those NSRs are not considered as representative NSRs.
- 4.3.5 The potential fixed noise sources are not expected to be visible to the same building (e.g. the noise sources of podium of Site A1 shall not be visible from Towers 1 & 2 aloft). In addition, since the podium of Site A1 is located at close proximity to the surrounding residential building, no fixed noise sources or ventilation exhausts shall be provided at north façade of the Podium as marked in **Figure 4-3b**.

Table 4-5 Representative Noise Sensitive Receivers for Fixed Noise

NSR ID	Description	Nearest Horizontal Distance, m		
		Podium of Site A1	Podium of Site B (Towers 1 and 2)	Non-residential Portion of Site B (Tower 3)
NSR01	Mandarin Court	122	70	129
NSR02	Flower Vila	49	67	165
NSR03	Mong Kok City Building	26	85	193
NSR04	Merlin Building	46	146	261
NSR05	Fa Yuen Mansion	19	97	243
NSR06	Oscar Court	13	66	212
NSR07	Circle Garden	12	46	189
NSR08	Heung To College of Professional Studies	59	17	159
NSR09	Jenny's Court	111	25	148
NSR10	Chan's Creative School	294	118	68
NSR11	Tower 2 in Site B	181	N/A	15
NSR12	Tower 3 in Site B (Residential Portion)	196	15	N/A

Note:

- [1] The nearest Representative Noise Sensitive Receivers for each corresponding source are **bold underlined**
- [2] Location for fixed noise sources (northern side of the podium) is restricted at Site A1.

Noise Assessment Points for Traffic Noise

- 4.3.6 Noise sensitive receivers are identified at residential towers at Sites A1 and B, while no noise sensitive receivers are identified at Sites A2 – A5. All living rooms and bedrooms of the residential flats were identified as NSRs according to the nature of use. The noise assessment points (NAPs) were assigned at 1.2m above the slab level and 1m away from the façade. All potential windows locations of all residential flats are covered.
- 4.3.7 Commercial, hotel, clubhouse and GIC facilities are assumed to be equipped with air-conditioning system and will not rely on openable windows for ventilation, and thus the noise standard is not applicable.
- 4.3.8 There are a total of 1,554 residential flats based on the notional layout of the typical floor. Towers 1 and 2 at Site A1 each consist of a low zone and a high zone, separated by a refuge floor.
- 4.3.9 For assessment purpose, the traffic noise level at all 1,554 flats have been assessed. The assessment points are summarized in **Table 4-6** and their locations are illustrated in **Figures 4-4a to 4-4g**. It should be noted that the notional layout of the Scheme is for assessment purpose only and subject to change in detailed design stage.

Table 4-6 Summary of Representative Noise Sensitive Receivers and Assessment Points for Traffic Noise Impact Assessment

Location	NSR ID ^[1,2]	Number of Flat	Total Number of Flat	Elevation of the Assessment Point ^[3]
Tower 1 – Low Zone (Site A1)	AT1-LZ-F01-O01 to AT1-LZ-F07-O22	7 flats per floor (Low Zone: 1/F to 19/F)	252	30.7mPD for 1/F, +3.15m for each floor
Tower 1 – High Zone (Site A1)	AT1-HZ-F01-O01 to T1-HZ-F07-O22	7 flats per floor (High Zone: 22/F to 38/F)		96.85mPD for 22/F, +3.15m for each floor
Tower 2 – Low Zone (Site A1)	AT2-LZ-F01-O01 to T2-LZ-F06-O22	6 flats per floor (Low Zone: 1/F to 19/F)	222	30.7mPD for 1/F, +3.15 for each floor
Tower 2 – High Zone (Site A1)	AT2-HZ-F01-O01 to AT2-HZ-F06-O22	6 flats per floor (High Zone: 21/F to 38/F)		93.70mPD for 21/F, +3.15m for each floor
Tower 1 (Site B)	BT1-F01-O01 to BT1-F15-O39	15 flats per floor (1/F to 35/F)	525	40.6mPD for 1/F, +3.15 for each floor
Tower 2 (Site B)	BT2-F01-O01 to BT2-F12-O30	12 flats per floor (1/F to 35/F)	420	40.6mPD for 1/F, +3.15 for each floor
Tower 3 (Site B)	BT1-F01-O01 to BT1-F09-O24	9 flats per floor (Residential Floor: 1/F to 15/F)	135	83.6mPD for 15/F, +3.15 for each floor
Total			1,554	

Note:

- [1] NSR ID for Tower 1 & 2 at Site A1 is in the form of ATT-XX-FFF-ZZZ, where "A" represents the Site A (Site A1), "TT" is tower identity = T1/T2, "XX" is the zone = LZ/HZ, "FFF" is the number of flats; "ZZZ" is the number of openings.
- [2] NSR ID for Tower 1, 2 & 3 at Site B is in the form of BTT-FFF-ZZZ, where "B" represents the Site B, "TT" is tower identity = T1/T2/T3, "FFF" is the number of flats; "ZZZ" is the number of openings.
- [3] The notional design including the elevation is subject to change.

Representative Noise Assessment Points for Stadium Noise

4.3.10 The NSRs that rely on openable windows for ventilation are the residential flats in the Residential Towers of Sites A1 and B. As Site A1 is relatively far from Mong Kok Stadium, with a horizontal distance of approximately 200 meters, it is unlikely to be adversely affected by noise from the stadium. Therefore, only representative NSRs in Site B are assessed.

4.3.11 Representative noise assessment points are assigned at 1.2m above the slab and 1m away from the facades of Towers 1, 2 and 3 of Site B. Four additional noise assessment points, designated as A to D, are assigned within or near Mong Kok Stadium for validation purposes.

4.3.12 The representative noise assessment points representing the are listed in **Table 4-7** and illustrated in **Figure 4-5**.

Table 4-7 Representative Noise Assessment Points for Stadium Noise

Location	NAP ID	Floor	Assessment Height ^[1]
Tower 1 (Site B)	BT1-F07-O17 BT1-F08-O18 BT1-F08-O19 [2] BT1-F09-O23 BT1-F11-O28 BT1-F13-O32 BT1-F14-O35 BT1-F15-O39	1/F to 35/F	1 st Residential Floor = 40.6mPD +3.15m for each subsequent floor
Tower 2 (Site B)	BT1-F06-O15 BT1-F07-O16		
Tower 3 (Site B)	BT3-F05-O12 BT3-F06-O13 BT3-F06-O16 BT3-F07-O17 BT3-F08-O21 BT3-F08-O22	1/F to 15/F	1 st Residential Floor = 83.6mPD +3.15m for each subsequent floor
Mong Kok Stadium	A, B, C & D	--	A: 1.5m above the stand B: 3.0m above the roof C: 3.5m above the roof D: 3.0m above the ground outside of the Stadium

Note:

[1] The notional design including the elevation is subject to change.

[2] The worst affected location identified in preliminary study.

4.4 Construction Noise Impact Assessment

4.4.1 The use of powered mechanical equipment (PME) will generate construction noise impact to the nearby NSRs. The major noise emitting activities will be the demolition of existing structures and foundation works of future development.

4.4.2 As the site is situated in a well-developed urban area, the number of PME that it can accommodate is limited, however, the noise from construction activities may still be an impact if the construction works are not planned and arranged properly.

4.4.3 ProPECC PN1/24 "Minimizing Noise from Construction Activities" provides construction noise requirements and recommendations on practices such as quieter construction methods and equipment to minimize construction noise. Subject to detailed site works arrangement, the contractor shall consider the following noise mitigation measures, if necessary and applicable:

- Use non-percussive equipment such as hydraulic crusher, sawing, coring machines for demolishing existing building and structure
- Use non-percussive piling driving method such as hydraulic press-in method, vibration or jacking method for foundation work
- Use Quality Powered Mechanical Equipment (QPME) recognized by the Environmental Protection Department (EPD). The QPME shall be registered with EPD, and valid label issued by EPD shall be affixed on the QPME all times.

- Use Quieter Construction Methods¹ as far as practicable
- Schedule work to minimize concurrent activity and duration of impact
- Regular maintenance of equipment to prevent noise emission due to impairment
- Adopt good site practice, such as throttle down or switch off equipment unused or intermittently used between works
- Position mobile noisy equipment in locations away from nearby NSRs and point the noise sources to directions away from NSRs
- Make good use of other structures for noise screening

4.4.4 Construction activities under the current Scheme involves concrete removal works, demolition works, site formation/excavation works and superstructure works. Subject to detailed site works arrangement, the contractor shall consider the following mitigation measures, if necessary and applicable:

Concrete Removal Works / Demolition Works:

- Use of high pressure water jetting instead of traditional jackhammers and drill hammers;
- Use of quieter type wire saws or diamond wire saws for cutting large areas and heavily reinforced concrete;
- Use of quieter type blade saws utilizing diamond blades with higher speeds and smoother blades reduces excitation of vibration;
- Use of hydraulic crushers for concrete breaking instead of traditional excavator-mounted breakers;
- Use of handheld concrete crushers instead of traditional jackhammers;
- Use of hydraulic splitters instead of traditional jackhammers and breakers.

Site Formation / Excavation Works:

- Use of silent piling by press-in method instead of traditional massive augering and piling machines or drop hammer for sheet piling / channel planking installation work;
- Use of a sheet piling noise reducer such as a suitable shock absorber to reduce collisions between sheet pile / channel planking and holding parts;
- Use of pile driving impact cushions to reduce noise generated by piling impact;
- Pre-augering/pre-trench/boring pile holes to remove underground obstruction for avoiding hard driving / soften the ground;
- Use of crack inducers instead of traditional percussive breakers.

Superstructure Works:

- Use of prefabricated structure / sections to replace in-situ construction to reduce the amount of mechanical equipment used on site;
- Use of self-compacting concrete (without the aid of a vibrator e.g. poker for compaction) for in-situ concreting;

¹ Quieter Construction Methods: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

- Use of crack inducers instead of traditional percussive breakers.

4.4.5 With proper noise mitigation measures implemented during the construction phase, no adverse noise impact arising from the construction activities is expected.

4.5 Operation Noise Impact Assessment

Planned Fixed Noise Sources of the Scheme

4.5.1 The Scheme will provide central air ventilation for commercial & retail area, clubhouse, GIC facilities, hotel, and basement carpark. The associated HVAC system may cause noise impact to surrounding or planned NSRs. Although the large exhaust fans are usually located indoor enclosed within the air ducts, the fan noise will transmit via the ventilation pipe and emit at the duct exhaust. Therefore, the potential planned fixed noise sources of the Scheme are the large exhaust fans and the outdoor units of air conditioner. Other equipment such as water pumps and lift motors will be located in enclosed rooms thus no adverse noise impact to the surrounding is anticipated.

Site A1

4.5.2 The facilities in the podium will be closed outside operation hours and the associated HVAC system are expected to stop during night time. Besides, the expected ventilation requirement of the basement carpark during night-time is expected to be very low thus the primary exhaust fan is unlikely required. Due to the relatively small size of the served zones, Variable Refrigerant Volume (VRV) system is preferred over chiller plants and/or water-cooling tower as VRV provide flexible cooling capacity with high efficiency over large range of loading. To avoid the noise from fixed plants affecting the residential portions, the large plants and large ventilation exhaust pipes are planned to be located at semi-confined areas such as plant rooms and/or entrance/exit of the carpark, with acoustic louvers if necessary. The ventilation pipes will be equipped with silencer to reduce the in-duct noise level. As there is no direct line of sight between the fixed noise sources of Site A1 and the residential flats of Site A1, no adverse noise impact from the fixed noise sources of Site A1 to the residential flats of Site A1 is anticipated. As the fixed noise source of Site A1, including the louvers serving the fixed noise sources, may be visible from the NSRs in the surrounding, maximum allowable sound power levels will be recommended.

4.5.3 Since existing residential buildings are in close proximity to the Site A1, fixed noise source or ventilation exhausts shall be avoided to be provided at the north facing facades of the podium of Site A1, as marked in **Figure 4-3b**.

Site B (Podium of Towers 1 and 2)

4.5.4 For Podium of Residential Portion of Site B, chiller plants and large ventilation exhaust pipes are also planned to be located at semi-confined areas. The ventilation pipes will also be equipped with in-line silencer to reduce the in-duct noise level. Same as Site A1, there is no direct line of sight between the fixed noise sources of Podium and the residential flats aloft. However, the fixed noise source at the podium of Towers 1 and 2 may be visible to the residential flats at the Tower 3 and the NSRs in surrounding, the maximum allowable sound power levels at the podium of Tower 1 and 2 will be recommended.

Site B (Non-residential Portion of Tower 3)

- 4.5.5 For the non-residential portion of Tower 3 in Site B, chiller plants and large ventilation exhaust pipes are also planned to be located at semi-confined areas. The ventilation pipes will also be equipped with in-line silencer to reduce the in-duct noise level. As the fixed noise source, or the louvers connected to the fixed noise sources of the non-residential portion may be visible to Towers 1 & 2 of Site B and the NSRs in the surrounding. Since the western side of Tower 3 directly faces Towers 1 and 2 of Site B, it is recommended to place the noisy plants on the opposite side to avoid direct impact. Maximum allowable sound power levels will be recommended.

Maximum Allowable Sound Power Levels (SWL)

- 4.5.6 The maximum allowable SWL for the planned fixed noise sources are present in **Table 4-8** and detailed in **Appendix 4-1**.
- 4.5.7 According to the calculation based on the horizontal distance of the nearest NSRs for each corresponding source, the cumulative SWL of the building service equipment at podium of Site A should not exceed 86 dB(A) during day and evening time, and should not exceed 76 dB(A) during night time. For the podium of Towers 1 and 2 of Site B, the limits of the cumulative SWL are 88 dB(A) during day and evening time, and 78 dB(A) during night time. For the non-residential portion of Site B, the limits of the cumulative SWL are 88 dB(A) during day and evening time, and 78 dB(A) during night time.
- 4.5.8 It should be noted that a 6 dB correction has been adopted accounting for the tonality, intermittency and impulsiveness characteristics for assessment purpose. In case the noise exhibits tonality, intermittency and impulsiveness characteristics during the operation, the maximum allowable SWLs of the fixed plants should be corrected based on the recommendation given in Section 3.3 of the IND-TM.

Maximum Sound Pressure Levels (SWL) at Receivers

- 4.5.9 Based on the maximum allowable SWLs, the cumulative noise levels at NSRs from the planned fixed noise sources of the Scheme has been calculated and the results show that cumulative noise levels will comply with the criteria when the maximum allowable SWLs has been implemented properly. The results are present in **Table 4-9** and detailed in **Appendix 4-1**.
- 4.5.10 Although the Scheme is still in early stage thus no detailed design including the location of the noisy plants is available, no adverse fixed noise impact to the NSRs with the proposed increase in domestic GFA in Site B is anticipated if the choice of equipment, installation locations, installation and mitigations are properly designed.

Table 4-8 Allowable Sound Power Level for the Building Service Equipment of the Proposed Development

Time Period	Maximum Allowable SPL at NSR, dB(A)	Maximum Allowable Sound Power Level at Source, dB(A) ^{[1][2]}
Site A1		
Day and Evening Time (07:00-23:00)	65	86
Night Time (23:00 – 07:00)	55	76
Site B (Podium of Residential Portion)		
Day and Evening Time (07:00-23:00)	65	88
Night Time (23:00 – 07:00)	55	78
Site B (Hotel and Podium Portion of Tower 3)		
Day and Evening Time (07:00-23:00)	65	88
Night Time (23:00 – 07:00)	55	78

[1] For assessment purpose, a 6 dB of tonality, intermittency & impulsiveness correction has been adopted.

[2] The Maximum Allowable Sound Power Level at Source should be corrected by the tonality, intermittency, & impulsiveness correction of the selected equipment, according to Section 3.3 of the IND-TM.

Table 4-9 Cumulative Noise level form the Planned the Building Service Equipment of the Proposed Development

NSR ID	Description	SPL at NSR, dB(A)			
		Day and Evening Time (07:00-23:00)		Night Time (23:00 – 07:00)	
		Cumulative	Criteria	Cumulative	Criteria
NSR01	Mandarin Court	53	65	43	55
NSR02	Flower Vila	56		46	
NSR03	Mong Kok City Building	59		49	
NSR04	Merlin Building	54		44	
NSR05	Fa Yuen Mansion	61		51	
NSR06	Oscar Court	65		55	
NSR07	Circle Garden	65		55	
NSR08	Heung To College of Professional Studies	64		54	
NSR09	Jenny's Court	61		51	
NSR10	Chan's Creative School	53		43	
NSR11	Tower 2 in Site B	65		55	
NSR12	Tower 3 in Site B (Residential Portion)	65		55	

Existing Fixed Noise Sources in the Surroundings

Site A1

- 4.5.11 Site A1 is surrounded by residential developments and therefore, major fixed noisy plants is not anticipated in the residential development. However, there are exposed chillers or outdoor units identified on the rooftop of the Grand Century Place Tower I and Grand Century Place Tower II, where located at approximately 180m and 250m respectively. Given the considerable distance from Site A1 to the Grand Century Place Tower I and Grand Century Place Tower II, fixed noise impact is not anticipated.
- 4.5.12 For the near-by non-residential developments, no exposed large chiller plant is identified thus the potential noise impact shall be limited. Compared with the traffic noise from the Prince Edward Road West, which is directly or indirectly affecting the Site A1, the potential fixed noise in the surrounding shall be insignificant.
- 4.5.13 Site visit is conducted in March 2026 to identify the changes since the previous site audit (Feb 2024) conducted for the environmental assessment in the approved DSP. It is observed that the environment of Site A1 is similar to previous site audit and no noticeable noise is perceived during the site audit. Therefore, adverse fixed noise impact on Site A1 is not anticipated.

Site A2 – A5

- 4.5.14 Since no NSRs have been identified in Site A2 to A5, no noise assessment point is assigned to Site A2 to A5 for further assessment.

Site B

- 4.5.15 For the Boundary Street Sports Ground Substation in Site B, no noticeable noise was perceived during site visit.
- 4.5.16 Site B is currently occupied by public open space. Similar to that of Site A1, Site B is close to residential developments thus no major fixed noise source in the vicinity is anticipated. Comparing with the traffic noise from the Boundary Street, which is directly or indirectly affecting the Site B, the potential fixed noise in the surrounding shall be insignificant. Therefore, no adverse impact from existing fixed noise source to NSRs of Site B (the residential flats) is anticipated.

Road Traffic Noise

Assessment Methodology

- 4.5.17 A computational noise model “CadnaA” developed by DataKustik was used to predict the traffic noise levels arising from the road network. Calculation of Road Traffic Noise (CRTN) 1988 has been adopted in the noise model. Road traffic noise levels are presented in terms of noise levels exceeded for 10% of the one-hour period for the hour having the peak traffic flow [L_{10} (1-hour) dB(A)].
- 4.5.18 The assessment was based on the projected peak hour flows for the worst year within 15 years after completion of the Project in Year 2036. Based on the traffic forecast provided by

the traffic consultant, the peak hour flows in Year 2051 will generate the highest road traffic noise within 15 years from the completion of the Scheme. The major roads within 300m from the boundary of the Scheme have been included in the assessment and are shown in **Appendix 4-2**.

- 4.5.19 The peak hour traffic flow of individual roads in the assessment year (Year 2051) is listed in **Appendix 4-2**. The traffic forecast, with additional 5% traffic generation by the Scheme as a sensitivity test, has been submitted to the Transport Department for their endorsement. The traffic noise levels for Year 2051 during both the AM Peak and PM Peak periods will be assessed to identify the highest noise level for each assessment point among the AM Peak and PM Peak. The mitigation measures based on the highest noise level will be further proposed, if necessary and applicable.

Architectural Design

- 4.5.20 To minimize the traffic noise impact to the Scheme, the following architectural design consideration has been adopted:

- The orientations of towers have been designed in a way such that most of the NSRs will not be severely affected by the major noise source.
- The orientation of the Tower 2 at Site B has been designed to block the view of the road traffic for Tower 1 at Site B.
- The podium of Site B has been designed to block the view to the road traffic for lower floor of Tower 2.

- 4.5.21 Two scenarios have been considered in the traffic noise impact assessment. The first one is a (A) Base Scenario which only considered architectural design and location of the openable windows; the second scenario is a (B) Mitigated Scenario with adopted the Receiver-End Noise Mitigated Measure (NMM) like Acoustic Windows, Acoustic Balcony and Fixed Glazing.

Impact Identification and Assessment

a) Base Scenario: Careful Design on Buildings Disposition & Windows Locations

- 4.5.22 In the Base Scenario, the residential towers have been carefully designed to avoid adverse traffic noise impact. View angle of the major road has been minimized by the architectural design like building disposition, building orientation, architectural fins and window locations. Without the design, the traffic noise level in Base Scenario is expected to be much higher.
- 4.5.23 The traffic noise results under Base Scenario are presented in **Appendix 4-3** and the traffic noise exceedances are depicted in **Figures 4-6a to 4-6d**. The results show that about 96.7% of flats complying with the noise criteria of 70dB(A). The maximum predicted traffic noise level, ~75dB(A), is found at 1/F of Flat 07 of Tower 1 in Site A1 (AT1-LZ-F07-O19), which has direct line-of-sight to Prince Edward Road West.

b) Mitigated Scenario: With Acoustic Windows, Acoustic Balcony and Fixed Glazing

- 4.5.24 Practicable mitigation measures such as acoustic window and acoustic balcony will be adopted to provide at-receiver mitigation measures to further minimize the traffic noise impact on the noise exceedance of the proposed development. Fixed Glazing shall also be adopted to mitigate excessive traffic noise and ensure the performance of the acoustic

windows and acoustic balcony. The locations of the predicted noise exceedance are illustrated in **Figures 4-6a to 4-6d**.

4.5.25 Subject to detailed design, mitigation measures are proposed in this mitigated scenario:

- Baffle Type Acoustic Window² (Noise Reduction: -4.0 dB(A))

The baffle type acoustic windows consist of two layers, i.e. an openable window with fixed side (the fixed glazing / maintenance window) at the outer layer and a sliding window at the inner side. The two-window-layer design can create an air gap for the supply of fresh air with noise mitigation effect. This type of acoustic windows has been proven that both traffic noise mitigation and air ventilation could be achieved. The design of the proposed acoustic window can meet the relevant ventilation requirement under the Building (Planning) Regulations. According to the Practice Note on Lighting and Ventilation Requirements - Performance-based Approach (APP-130) issued by Buildings Department, for optimum performance with the inner sliding glass panel in a closed position, the air gap should have a length of not less than 100mm and a width between 100mm and 175mm. The length and width of the air gap of the acoustic window also meet these conditions.

- Acoustic Balcony (Noise Reduction: -2.0 dB(A))

Acoustic Balcony with 1.2m high of solid parapet and ceiling lined with sound absorptive for shielding noise and absorbing noise respectively, can effectively reduce the traffic noise entering the premises. The depth of the balcony should be more than 1m and noise reduction of noise 2.0 dB(A)³ has been adopted in the calculation.

- Fixed Glazing (Noise Criteria not applicable)

To ensure the performance of the acoustic windows in rooms with planned acoustic windows (e.g., AT1-LZ-F07-O18), Fixed Glazing should be used for the side windows. Fixed glazing refers to windows that are not intended for ventilation purposes, and therefore, the traffic noise criteria are not applicable to them. During the operation phase, the fixed glazing should only be opened using an Allen key for cleansing and maintenance purposes. According to the Hong Kong Planning Standards and Guidelines (HKPSG), a 6mm window pane is considered sufficient to insulate traffic noise by 10 dB(A). Therefore, a minimum of 6mm window pane should be adopted for the proposed fixed glazing from a noise perspective.

4.5.26 The Baffle Type Acoustic Windows, which can typically provide 4 – 8 dB of traffic noise attenuation, have been broadly adopted in residential developments in recent years. According to the ProPECC PN5/23 Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact², a reference design can provide 6 dB(A) of traffic noise attenuation. Another 1.5 dB(A) of reduction can

² Baffle Type Acoustic Window: <https://www.epd.gov.hk/epd/Innovative/greeny/eng/innovation/baffle-type.html>

³ Acoustic Balcony - https://www.epd.gov.hk/epd/Innovative/greeny/eng/balcony_soild.html

be achieved by providing Sound Absorptive Material (SAM) at top and both side of window frame. Further noise reduction can be achieved by orientation (1 dB(A)) and effective acoustic fin (1 dB(A)). The noise reduction effectiveness and ventilation performance of baffle type acoustic windows are highly dependent on the detailed design. As the flat design may change significantly in the later stage, it is hard to estimate whether any combination of windows design can provide sufficient natural daylight and natural ventilation while providing the maximized acoustic performance. Typical design of Baffle Type Acoustic Windows is illustrated in **Figure 4-7**.

4.5.27 Since the notional layout is conceptual and indicative for assessment purposes under the subject non-scheme-based S.16 Application, both the layout and predicted traffic noise levels are subject to change during the detailed design stage. Based on the traffic noise predictions, the architectural design will be further optimized during the detailed design stage to minimize traffic noise impact. Consequently, noise exceedances that only marginally surpass the criteria can be addressed through this optimization. Noise mitigation measures will currently only be applied to locations with predicted noise levels exceeding 71 dB(A). An exception is made for the fixed glazing at AT1-F07-O18 (13/F) in Site A1, which is intended to ensure the effectiveness of the acoustic window at AT1-LZ-F07-O19 (13/F) in Site A1. The locations of the proposed mitigation measures are illustrated in **Figures 4-8a to 4-8d** and listed in **Appendix 4-4**.

4.5.28 The detailed predicted noise levels with mitigation measures are presented in **Appendix 4-4**. Given specific noise reduction measures at different assessment points, the compliance rate by flat of this notional layout has been increased to 97.8%. The maximum noise level under mitigated scenario is ~71dB(A). Detailed result of each assessment points of the flat under mitigated scenario is shown in **Appendix 4-4** and summarized in **Table 4-10**.

Table 4-10 Summary of Traffic Noise Impact Assessment

	Number of Flat	Base Scenario		Mitigated Scenario	
		Complied Flat	Compliance Rate	Complied Flat	Compliance Rate
Tower 1 (Site A1)	252	221	87.7%	234	92.9%
Tower 2 (Site A1)	222	222	100%	222	100%
Tower 1 (Site B)	525	525	100%	525	100%
Tower 2 (Site B)	420	405	96.4%	409	97.4%
Tower 3 (Site B)	135	130	96.3%	130	96.3%
Total	1,554	1,503	96.7%	1,520	97.8%

4.5.29 The traffic noise impact assessment and proposed mitigation measures will be revisited based on the finalized layout to ensure full compliance. Through architectural design optimization, the adoption of additional and suitable mitigation measures, or the enhancement of proposed mitigation measures during detailed design stage, the traffic noise impact can be addressed.

Railway Noise

- 4.5.30 The East Rail line is situated to the east of Site B (**Figure 4-9**). Section of railway within the Mong Kok East Station and in the immediately north of the station are enclosed by the station itself and the Grand Century Place. However, the railway section located ~200m from the residential portion of the Site B (Sub-area (1)) to the north of Grand Century Place remains uncovered.
- 4.5.31 Although the recommended 85m buffer distance, as per HKPSG, is met (**Figure 4-9**), part of the residential flats in Sites A1 & B (Sub-area (1)) facing the eastern side may have direct line-of-sight to the railway. Therefore, the railway is considered as a potential noise source to the residential flats.
- 4.5.32 A simplified railway noise calculation based on the methodology of approved EIA report (Shatin to Central Link - Mong Kok East to Hung Hom Section - AEIAR-165/2012) and conservative assumptions has been performed at the nearest point of the proposed development to the railway. The key information and assumptions of the railway noise calculation are as follows:
- The methodology of railway noise calculation of the approved EIA Report (AEIAR-165/2012);
 - The Reference L_{max} and Reference SEL of a single train event have been made reference to the approved EIA report (AEIAR-165/2012);
 - Ultimate train frequency of East Rail Line (ERL) has been referenced to approved EIA Report (AEIAR-165/2012) & Environmental Permit EP-437/2012/A;
 - 0700 to 2300: 30 trains / hour / direction
 - 2300 to 0700: 24 trains / hour / direction
 - 850 trains / hour / both directions
 - No barrier correction has been adopted;
 - No view angle correction has been adopted (i.e. assume 180 degree view);
 - Horizontal distance has been used instead of slant distance;
 - Train Speed
 - Based on site-observation in March 2026, the average velocity of ERL trains within the 300m assessment area are approximately 60 - 80 kph, due to the vicinity to station. The average train speed for ERL is assumed to be 80 kph in the calculation for conservative assessment.
- 4.5.33 The railway noise levels at Site B (Sub-area (1)) are summarized in **Table 4-11** and detailed in **Appendix 4-5**. The calculation shows that, with conservative assumption, the railway noise levels have complied with the relevant criteria. Therefore, the railway noise should not impose adverse impact on the proposed development with the proposed increase in domestic GFA in Site B.

Table 4-11 Summary of Predicted Railway Noise

Time Period	Criteria, dB(A)		Predicted Noise Level, dB(A)
Day (0700 to 1900 hours) & Evening (1900 to 2300 hours)	$L_{eq,30min}$	70 ^[1]	59
Night (2300 to 0700 hours)	$L_{eq,30min}$	60 ^[1]	58
	$L_{max, (2300 to 0700)}$	85 ^[2]	72
All Day	$L_{eq, (24hrs)}$	65 ^[2]	56

Noted

[1] Criteria for Fixed Noise Sources stipulated in the IND-TM.

[2] Recommendations from HKPSG

Stadium Noise

Assessment Methodology

4.5.34 Computational ray-tracing model, Odeon, has been adopted to assess the stadium noise impact. This acoustic model employs the ray-tracing method for sound reflections. Thousands of sound rays are emitted in different directions from each source. These rays reflect off the model surfaces in various directions due to scattering, losing energy due to sound absorption. A secondary source is assumed at each reflection point. When a ray hits a surface that allows sound transmission, the penetrated ray carries reduced energy, dependent on the transmission loss assigned to that surface.

Model Assumption

Human Voice Spectrum

4.5.35 Typical sound spectrums for the human voice, referenced to the American National Standards Institute (ANSI) 3.5, are applied in the Odeon noise model. Refer to the stadium noise simulations in the approved Environmental Impact Assessment (the approved EIA) for the "Kai Tak Multi-purpose Sports Complex" (Register No.: AEIAR-204/2017), the "Loud" vocal profile has been adopted, as illustrated in **Table 4-12**. The same human voice spectrum has been applied for this assessment.

Table 4-12 Typical Sound Spectrum for Human Voice

		Spectra, dB re 1pW								
Frequency, Hz		63	125	250	500	1000	2000	4000	8000	A-weighted
Typical	Normal	45.0	55.0	65.3	69.0	63.0	55.8	49.8	44.5	68.4
	Raised	48.0	59.0	69.5	74.9	71.9	63.8	57.3	48.4	75.5
	Loud	52.0	63.0	72.1	79.6	80.2	72.9	65.9	54.8	82.6
	Shouted	52.0	63.0	73.1	84.0	89.3	82.4	74.9	64.1	91.0

Note:

[1] The reference spectrum for human voice can be found in Table 1 of the following document:

http://www.odeon.dk/pdf/Application_Note_SpeechTransmissionIndex.pdf

Source Strength of the Spectator Noise

4.5.36 By the time the Kai Tak Sports Park officially starts operations in March 2025, it is anticipated that international sporting events will likely be held at Kai Tak, while the Mong Kok Stadium will focus mainly on local events. Given this updated situation, the assessment

approach used in the approved EIA appears to be overly conservative for local sports events. Therefore, the A-weighted sound power level (SWL) for the "Loud" vocal profile has been adopted for model validation.

4.5.37 In the simulation, the noise generated by the spectators are represented by 87 point sources located on the spectator stands in the Model, simulating a full-house event scenario, as shown in **Drawing 3 of Appendix 4-6**. In particular, there are 22 point sources assigned for North Stand, 19 points for East Stand, 27 points for South Stand, and 19 points for West Stand based on the seat distribution.

4.5.38 Each point source at the East Stand and West Stand represents 82 spectators, while each point source at the North Stand and South Stand represents 68 spectators. The adopted spectrums and noise levels for each point source are summarised in **Table 4-13**.

Table 4-13 Adopted Sound Spectrum for Spectator Noise

		Spectra, dB re 1pW							
Frequency, Hz		63	125	250	500	1000	2000	4000	8000
Per spectator	"Loud" Spectrum	52.0	63.0	72.1	79.6	80.2	72.9	65.9	54.8
Per point Source	West/East Stand	71.1	82.1	91.2	98.7	99.3	92.0	85.0	73.9
	South/North Stand	70.3	81.3	90.4	97.9	98.5	91.2	84.2	73.1

Source Strength for the PA System Noise

4.5.39 The public address (PA) system of Mong Kok Stadium has been incorporated into the simulation.

4.5.40 There are total of 36 loudspeakers in Mong Kok Stadium. According to the available information⁴, these loudspeakers belong to the "JBL" CBT Series. For the simulation, the sound profile of the loudspeaker model JBL CBT100LA (Speech mode – wide) has been adopted.

4.5.41 The model input for the loudspeaker in Common Loudspeaker Format (CLF), including directivity and sound power, can be downloaded from the manufacturer's website⁵.

4.5.42 The loudspeakers in Mong Kok Stadium are utilized solely for announcement purposes during sport events. As a conservative assumption, an operational time of 20% has been assumed in this assessment.

⁴ Project Description for Improvement of PA System in Mong Kok Stadium:

<https://www.ops-tec.com/project-details/mongkok-stadium/>

⁵ Download Library of Product of JBL: https://jblpro.com/en/support_downloads

Table 4-14 Parameter of the Loudspeaker (JBL CBT100LA)

Frequency, Hz	Spectra, dB re 1pW						
	125	250	500	1000	2000	4000	8000
Loudspeaker	99.3	100.3	86.8	94.7	94.3	92.9	88.3
Correction due to Operation Time	-7.0						
Loudspeaker (Adopted in the Model)	92.3	93.3	89.8	87.7	87.3	85.9	81.3

Note:

[1] Correction due to operation time of 7.0 dB, assuming the operation time of loudspeaker to be 20% during sporting events, is adopted.

Model Validation

4.5.43 The 2018 FIFA World Cup Qualifier: Hong Kong vs. Qatar, conducted on 8th September, 2015, has been adopted for noise model validation. This event had an attendance of 6,396 out of 6,664 available seats, which can be considered as full-house event. Additionally, since the Hong Kong football team was participating, the encouraging noise from local spectators was significant. Therefore, this event can be considered as worst-case scenario.

4.5.44 To ensure that the model results are reliable and provide reasonable conservative outcomes, a comparison between the model results and on-site measurements has been conducted. The building structures of the Proposed Development are not incorporated into the model validation to ensure consistency with the environment during on-site measurements. The comparison of model results at the same on-site measurement locations A to D are summarized in **Table 4-15**.

Table 4-15 Comparison of Model Result and On-site Measurement

Noise Assessment Point	Sound Pressure Level, dB(A)	
	On-site Measurement [1]	Noise Model Result (without YTM-013 Development)
A	83.0	83.1
B	71.5	74.8
C	71.0	75.3
D	60.4	62.9

Note:

[1] Refer to the EIA “Kai Tak Multi-purpose Sports Complex” measurement data for 2018 FIFA World Cup Qualifier: Hong Kong vs Qatar at Mong Kok Stadium on 8th September 2015.

4.5.45 The computational results from the Odeon noise model were found comparable to the on-site noise measurement results. None of the model results are lower than the on-site measurement noise level, therefore, the noise model does not underestimate the actual situation. Through this model validation, the adoption of A-weighted sound power level for the “Loud” vocal profile is considered reasonable.

4.5.46 The Key assumption for the stadium noise model is summarized in **Table 4-16**.

Table 4-16 Key Assumption Adopted for the Stadium Noise Model

Assumption	Description
Source Strength and Spectator Vocal Spectrum	The "Loud" vocal spectrum and A-weighted SWL of 82.6 dB(A) has been adopted for each spectator in the noise model
Source Strength of PA System	The sound profile of the loudspeaker JBL CBT100LA has been adopted, with 20% operational time.
On-site noise measurement for model validation	The 2018 FIFA World Cup Qualifier: Hong Kong vs Qatar at Mong Kok Stadium, dated 8th September 2015.

Results and Evaluations

4.5.47 The predicted noise exceedances have been identified at the openable windows and balconies along the façade of Tower 1 and Tower 3 with a direct view of the Mong Kok Stadium (see **Appendix 4-7**). No noise exceedances are identified at Tower 2, as Tower 1 and Tower 3 is designed carefully to block the view from Mong Kok Stadium. With only considered the architectural design of the building, the maximum noise level is ~72dB(A) identified in Tower 1, under full-house event. The remaining noise assessment points with exceedances are approximately ~71dB(A). The sound pressure level at the representative noise assessment shows that the highest sound pressure level at the residential flat at Site B is ~72dB(A), based on the notional plan.

Mitigation Measures

4.5.48 Acoustic Window (AW) and Acoustic Balcony (AB) are proposed as “specially provided glazing” for stadium noise reduction. These designs offer noise scattering and absorption while allowing for natural ventilation. AW and AB are designed to reduce external noise by partially reflecting noise to prevent it from entering the room, as well as partially dissipating noise when it passes through the gaps. Since they can reduce noise levels through physical means, AW and AB should be able to provide noise reduction against stadium noise as well. Nevertheless, the effectiveness and noise attenuation of AW and AB against stadium noise cannot be ascertained at the current stage.

4.5.49 Although the noise attenuation of AW and AB against stadium noise cannot be confirmed, given that the maximum exceedance is only ~ 2 dB(A) at Tower 1, AW and AB should be able to provide a noise reduction of at least 12 dB(A) between the façade noise level and the indoor noise level for the room (see **Section 4.5.52**). To ensure the effectiveness of the noise reduction of AW and AB, a detail stadium noise impact assessment for all the NAPs and mock-up test based on the finalized layout shall be conducted in the later detailed design stage.

Mock-up Test for Effectiveness of the Mitigation Measures

4.5.50 The mock-up flats shall be designed in accordance with the finalized layout to accurately reflect the actual noise reduction levels from the mitigation measures (i.e., AW and EAB) against noise from Mong Kok Stadium. Individual mock-up flats with AW and EAB for different room configuration shall be tested.

4.5.51 Noise measurements should follow the IND-TM. Since the noise is transmitted to the NSR through specially provided glazing at the façade (AW and AB), assessment points should be established both at the façade and at specific internal locations to measure the effectiveness of AW and AB for each room configuration, subject to further agreement with EPD.

- 4.5.52 The noise reduction level for each room configuration should be determined by the deviation between measured indoor and outdoor noise levels. According to IND-TM, the ANL within a building is 10 dB(A) lower than that at the façade. With a maximum noise exceedance of 2 dB(A), the indoor noise level must be at least 12 dB(A) lower than the outdoor noise level for the corresponding room configurations. The maximum noise exceedance level shall be further confirmed by the noise model based on the finalized layout plan. Details of the mock-up test will be confirmed at a later design stage based on the finalized layout.

4.6 Conclusion

- 4.6.1 The noise impact during the construction phase is considered insignificant. Subject to detailed site works arrangement, mitigation measures shall be implemented if necessary and applicable in accordance with ProPECC PN 1/24 during construction to minimize construction noise impact on the nearby NSRs.
- 4.6.2 A preliminary study of fixed noise sources based on the existing situation and the available information for planned developments show that no adverse fixed noise impact to the Scheme is anticipated. The planned fixed noise source from the proposed Scheme should not induce any adverse noise impact when the maximum allowable SWLs has been implemented properly.
- 4.6.3 Traffic noise impact has been taken into consideration when designing the notional layout of the residential development. The view angle from the windows to the road traffic has been minimized by buildings disposition, buildings orientation, architectural fins and windows locations. In the base scenario, ~96.7% of flats comply with the 70 dB(A) traffic noise assessment criterion as demonstrated. In the mitigated scenario where acoustic window, acoustic balcony and fixed glazing are incorporated into the proposed development, the compliance rate by flat has been increased to ~97.8%. The notional design is for technical assessment of the subject non-scheme-based application and will be subject to change at the detailed design stage upon approval of the subject S.16 Application. The current assessment is based on a notional design and its anticipated result, of which baffle type acoustic window, acoustic balcony and fixed glazing have been adopted to achieve the noise compliance level. The detailed layout in the future proposed development will be subject to detailed design, site constraints and feasibility.
- 4.6.4 The maximum stadium noise is found to be ~72dB(A) in Tower 1 of Site B at the representative noise assessment points based on the notional layout plan. Given the stadium noise is marginally above the criteria, the adoption of acoustic window and acoustic balcony is considered as feasible mitigation measures to address the excessive stadium noise, subject to the detailed design. Mock-up test, based on the finalised layout, will be conducted in the later detailed design stage, if required, to ensure the acoustic performance of the acoustic windows and acoustic balconies against stadium noise. With careful design and the proper implementation of the proposed mitigation measures, no adverse noise impact from Mong Kok Stadium on the proposed development is anticipated.
- 4.6.5 Based on a simplified railway noise calculation, it is expected that the railway noise level at the noise sensitive receivers of the Site will comply with the relevant criteria. Therefore, no adverse noise impact is anticipated from the East Rail Line.

5 WASTE MANAGEMENT CONSIDERATION

5.1 Introduction

Background

- 5.1.1 In general, sustainable approaches to waste management should be adopted to produce less waste and reuse or recover materials from waste stream. This section identifies the quality and quantity of waste generated from construction and operation phase of the Project, and evaluates the potential waste management implications that may result from waste generated during these phases.

Legislations, Standards, and Criteria

- 5.1.2 The assessment has been conducted with reference to the following legislations/guidelines that are related to the handling, treatment and disposal of waste in Hong Kong, and applicable to the Project:

- Waste Disposal Ordinance (Cap. 354) (WDO)
- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)
- Land (Miscellaneous Provisions) Ordinance (Cap. 28)
- Air Pollution Control Ordinance (Control of Asbestos (sections 51 to 84))
- ADV-19 – Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers – Construction and Demolition Waste
- Code of Practice on the Packaging, Labelling and Storage of Chemical Waste
- Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes
- DEVB TCW No. 9/2011, Enhanced Control Measures for Management of Public Fill
- Guide to the Chemical Waste Control Scheme
- Monitoring of Solid Waste in Hong Kong - Waste Statistics for 2024
- ProPECC PN2/25 Handling of Asbestos Containing Materials in Buildings
- Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK)

- 5.1.3 Waste collection and disposal is covered by the Waste Disposal Ordinance (Cap. 354) (WDO). This provides a licensing system for the disposal of certain wastes and for the control of certain wastes by regulation. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines.

- 5.1.4 Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) outlines the requirement for chemical waste handling and disposal.

- 5.1.5 Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N), construction waste delivered to a landfill for disposal must not contain more than 50% by weight of inert materials. Construction waste delivered to a sorting facility for

disposal must contain more than 50% by weight of inert materials, and construction waste delivered to a public fill reception facility for disposal must consist entirely of inert materials.

- 5.1.6 Land (Miscellaneous Provisions) Ordinance (Cap. 28) provides control over placing and maintaining of C&D materials on unleased land. If the occupier does not hold the relevant license, the Department of Lands will take action accordingly.
- 5.1.7 Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (ADV-19) provides mitigation measures on waste generation and management during the planning stage of a building development to minimise waste disposals at landfills.

5.2 Assessment Methodology for Waste Management Implications

- 5.2.1 The waste management implications during the construction and operational phases shall be assessed. The objectives and methods shall include, but not limited to, the following:
- (i) Identification/estimation of the types and quantities of waste arising from the Project;
 - (ii) addressing impacts caused by handling (including stockpiling, labelling, packaging and storage), collection, transportation and reuse/disposal of wastes in detail and propose appropriate mitigation measures;
 - (iii) adoption of waste management hierarchy with priorities towards waste reduction, on-site or off-site reuse and recycling;
 - (iv) estimation of the types and quantities of wastes required to be disposed of and their disposal method; and
 - (v) assessment of the impacts on the capacity of waste collection, transfer and disposal facilities.

5.3 Waste Management for Construction Phase

Waste Types

- 5.3.1 The site clearance, demolition of existing buildings, excavation, and superstructure construction activities to be carried out for the proposed development would generate a variety of waste that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:

- Construction and demolition (C&D) materials, comprising inert and non-inert materials, from the demolition and construction works;
- Potential asbestos containing materials;
- Chemical waste from any maintenance of construction plant and equipment; and
- General refuse from the workforce

Inert and non-inert C&D Materials

- 5.3.2 Inert C&D Material (or public fills) includes construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fill reception facilities. Non-inert C&D Material (or C&D waste) includes metal from the existing structures, wood from formwork, timber and woody materials from existing trees, equipment

parts, and materials and equipment wrappings, etc., should be re-used or recycled as far as possible.

- 5.3.3 With reference to Proposed Development, as the Scheme involves demolition of existing buildings and construction of high-rise residential towers and/or residential/hotel towers for Sites A1 & B and 1-storey retail blocks for Sites A4 & A5, there will be generation of inert and non-inert C&D materials during demolition and construction. It is estimated that about 13,000 m³ C&D materials, including both inert and non-inert C&D materials, will be generated during the demolition work.
- 5.3.4 Since excavation works shall not encroach into the nullah and its vicinity, a buffer zone of 3m is set for nullah for prohibition of any excavation work. Buffer zone and exceptional area are illustrated in **Figure 5-1**. Since no excavation work is carried out in nullah, no excavation materials will be generated from nullah and thus disposal of sediments is not required. For other area, it is estimated that about 167,000 m³ excavated materials⁶ would be generated and about 41,800 m³ would be suitable for backfilling during site formation stage.
- 5.3.5 In order to account for the quantity of both inert and non-inert C&D materials to be generated from construction of the new building, both inert and non-inert C&D materials generation rate of 0.19 m³ per m² of GFA constructed is adopted⁷, with reference to the actual volume of C&D waste generated from the superstructure stage of projects of similar scale. In the Scheme, construction of new building occurs at Sites A1, A4 & A5 and Site B. Hence, the total GFA of the proposed development will be around 134,000 m² (30,492 + 103,485 = 133,977 ≈ 134,000 m²). The inert and non-inert C&D materials generated from superstructure construction is estimated to be approximately 25,460 m³ (134,000 m² x 0.19 m³/m² = 25,460 m³).
- 5.3.6 The total amount of inert C&D materials generated by the Project, such as extensive amount of soil from excavation, rock, concrete and asphalt from demolition and superstructure construction, is projected at 201,614m³, which takes up 98.1% of total C&D waste generated. As a conservative approach, a safety factor of 5% is applied to the total amount of inert C&D materials generated, which is an estimate of 211,695 m³. On the other hand, the volume of non-inert C&D material generated by the Project, such as building materials, maintenance and packaging waste generated during demolition of existing buildings and construction of superstructure works, is projected at 3,846 m³, which will be subject to specific construction procedures and site practices. Non-inert C&D waste merely contributes to 1.9% of total C&D waste generated due to limited number of existing vegetation. An estimated amount of 4,038 m³ for non-inert C&D materials is achieved with a safety factor of 5%. The estimated amount of non-inert C&D material generated would be minimal with careful design, planning, good site management and control of ordering procedures, etc.
- 5.3.7 The estimated quantities of inert and non-inert C&D material generated from the construction of the Scheme are presented in **Table 5-1**.

⁶ Excavation Area: Site A1 – 1,850 m²; Site B – 11,650 m²
Average excavation depth: Site A1 – 21m; Site B – 11m
Total Excavation Volume: 1,850 x 21 + 11,650 x 11 = 167,000 m³

⁷ With reference to BEAM Plus Project at no.42 Lei Yue Mun, Kowloon, GFA = 29,883 m²; Total C&D waste generated = 5,675 m³. Total C&D generated per m² of GFA = 0.19 m³/m²

Table 5-1 Estimated Quantities of C&D materials to be Generated, Reused and Disposed of

Construction Activities	Waste Volume (m ³)	Wastes to be Reused/Recycled/disposed of (m ³)				
		Inert C&D materials		Non-inert C&D materials		
		Reused / Recycled On-Site	Reused Off-Site (a)	Reused / Recycled On-Site	Reused / Recycled Off-Site (b)	Disposed Off-Site
Excavation	167,000	41,800	125,200	0	0	0
Site Clearance / Demolition of Existing Buildings	13,000	0	11,700	0	130	1,170
Superstructure Construction	25,460	0	22,914	0	255	2,291
All	205,460	41,800	159,814	0	385	3,461
		201,614 (98.1%)		3,846 (1.9%)		
All (with a safety factor of 5%)	215,733	43,890	167,805	0	404	3,634
		211,695 (98.1%)		4,038 (1.9%)		

Note

- (a) The surplus inert C&D materials shall be delivered to Public Fill Reception Facilities for beneficial reuse in other projects, the destination of the surplus inert C&D materials is proposed to be Tseung Kwan O Area 137 Fill Bank (subject to designation by the Public Fill Committee in accordance with DEVB TC(W) No.6/2010).
- (b) Non-inert C&D materials should be reused or recycled as much as possible before disposed off-site, estimated to be 10% of the total generated.

5.3.8 It is estimated that about 21% of inert C&D material to be reused on-site. The surplus inert C&D materials are proposed to be transported from the Sites via Kwun Tong Bypass, Tseung Kwan O – Lam Tin Tunnel, Cross Bay Link, and Wan Po Road to Tseung Kwan O Area 137 Fill Bank (subject to designation by the Public Fill Committee in accordance with DEVB TC(W) No. 6/2010). The remaining non-recyclable C&D materials are not suitable for public fill and hence require disposal to licensed landfill facilities (the closest landfill is the South East New Territories (SENT) Landfill). The disposal of non-inert C&D materials at designated landfill shall be subject to agreement with the relevant section of the EPD.

Chemical Waste

5.3.9 Chemical waste, such as cleaning fluids, solvents, spent lubricants and fuel for equipment or waste battery, may be generated. As far as the scale of the works is small, the quantity of chemical waste generated would be minimal. It is expected that the approximate quantity of the lubrication oil is about 100L/month and hence approximately 6 m³ of chemical waste will be generated during construction period of 60 months (general assumption of construction time for URA redevelopment projects adopted). A licensed chemical waste collector should be employed to handle and dispose of the chemical waste. Furthermore, the chemical waste should be handled in accordance with the *Waste Disposal (Chemical Waste)(General) Regulation*. The Works Contractor should register as a Chemical Waste Producer under the WDO.

5.3.10 Since some of the existing structures to be demolished were built before the ban of asbestos building material, asbestos containing materials may be present at the concerned structures. Hence, asbestos investigation may be required to be carried out before the commencement of demolition works, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation and other Codes of Practice listed in Appendix III in ProPECC PN2/25 Handling of Asbestos Containing Materials in Buildings if any asbestos is found in the Site. For

asbestos wastes, if any, will be handled and disposed of in accordance with the Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes.

- 5.3.11 Asbestos Wastes are divided into three types, namely, Type 1 Waste, Type 2 Waste, and Type 3 Waste. Type 1 Waste are bonded asbestos products in good condition. Two individual layers of strong transparent plastic sheets with 0.15 mm or higher thickness must be used to pack Type 1 Waste. Complete sealing is required and the package shall not exceed 750mm; Type 2 Waste are loose asbestos fibres, which are hazardous to the public if it is exposed to air. Strong bags approved by EPD are required to contain Type 2 Waste once they are produced. These inner bags should be white in color, labelled as Type 2 Waste, and sealed by adhesive tapes. An extra transparent plastic bag is needed to store the contained Type 2 Waste bags for provision of addition protection; Type 3 Waste are blue or brown asbestos which are hazardous in tiny quantities. The handling of Type 3 Waste is similar to Type 2 Waste except that the color of inner bag for Type 3 Waste is orange. The packaging, labelling, handling and storage and transportation of the wastes should also be carried out accordingly.
- 5.3.12 Disposal of Asbestos Wastes must be carried out at designated or licensed facilities. Prior to disposal, 10 working days for notice of intention to EPD is required for site preparation. Specific instructions and directions for disposal of Asbestos Wastes will be issued by EPD. Contractor should strictly follow the direction. At the disposal site, the process of disposal operation must be ensured by waste producer or collection contractor to follow instructions of landfill site staff.
- 5.3.13 With the implementation of proper chemical waste management measures listed in **Section 5.3.27**, the impact is anticipated to be insignificant.
- 5.3.14 No hazardous materials or hazardous wastes are expected to be generated during the construction of the Site.

General Refuse

- 5.3.15 General refuse such as food scraps, waste paper, empty containers, etc., would be generated from construction workforce during construction phase.
- 5.3.16 The maximum number of construction workers employed in a day will be approximately 120. The daily arising of general refuse from the construction workforce can be estimated based on a generation rate of 0.65 kg/worker/day, the estimated quantity of the general refuse is 78 kg/day (= 120 workers x 0.65 kg/worker/day).
- 5.3.17 Such refuse should be properly managed so intentional or accidental release to the surrounding environment does not occur. If the general refuse is recyclable, such as food scraps, paper, plastics and aluminum materials, the reuse and recycling of such waste is encouraged. Effective collection of site wastes such as providing enclosed bins or compaction units would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Waste storage areas should be well maintained and cleaned regularly. As food waste is the main source of generating unpleasant odour and causing environmental hygiene concerns, on-site enclosed food waste bins should be provided and well maintained. Appropriate site waste management practices for the handling of food waste will be further studied in subsequent stage. The collected food waste shall be transported to Organic Resources Recovery Centre Phase 1 (O-PARK1) for turning food waste into energy.

- 5.3.18 With the implementation of good waste management practices as suggested in **Section 5.3.26** at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of general refuse generated by construction workers.

Mitigation Measures

- 5.3.19 Prior to the commencement of the construction works, the contractor will identify the types and amount of waste generated, and handle, store, collect and dispose waste in accordance with Waste Disposal Ordinance (Cap. 354). The associated mitigation measures and good site practice should be implemented as follows:

C&D Materials

- 5.3.20 In general, minimization/reuse/recycling of C&D materials (i.e. both inert and non-inert C&D materials) should be considered prior to disposal. Good Site Practices and Waste Reduction Measures should be adopted during construction phase, measures may include:

- On-site sorting of C&D materials;
- Recycling and reuse of excavated materials for on-site filling materials;
- Avoidance and minimization to reduce the potential quantity of C&D materials generated;
- Reuse of materials as practical as possible;
- Recovery and Recycling as practical as possible;
- Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse, recycling, public cleanliness and obstruction offences;
- All dump trucks engaged on-site for delivery of inert and non-inert C&D material from the site to the designated disposal location, including PFRFs, landfill etc., should be equipped with GPS or equivalent system for tracking and monitoring of their travel routings and parking locations by the Contractor to prohibit illegal dumping and landfilling of materials;
- The data collected by GPS or equivalent system should be recorded properly for checking and analysis the travel routing and parking locations of dump truck engaged on site.

- 5.3.21 The contractor should submit a waste management Plan (the Plan) to the project proponent for agreement, covering the types of waste and their estimated quantities, timing of waste arising; measures for reducing waste generation etc. as recommended in Section 3 of ADV-19. If the project is expected to produce more than 300,000 m³ of construction and demolition material, it is necessary to seek advice from the Director of Environmental Protection before accepting the Plan, as specified in Section 4 of ADV-19. This ensures that appropriate measures are in place to effectively manage the significant amount of C&D material generated by the project.

- 5.3.22 Waste separation should be performed by contractor prior to disposal. Stockpiling and segregating areas should be provided at site. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.

- 5.3.23 During inclement weather (e.g. heavy rainstorm), the stockpile should be covered by tarpaulin or other water-resistant fabric. This can prevent dust and waste from being blown away by wind or washed into watercourses/drainage system.
- 5.3.24 Excavated C&D materials should be reused as far as possible. If possible and applicable, excavated materials will firstly be backfilled on-site during site formation. The remaining surplus excavated materials are improbable to be reused and hence delivered to public fill reception facilities.
- 5.3.25 To reduce impacts generated from transportation of C&D materials for off-site disposal, the C&D materials would be recycled and reused on-site as practical as possible. In addition, overloading is strictly prohibited. Mechanical covers should be present in the transportation vehicles for an entire cover of C&D materials, especially dusty materials. Vehicle bodies and wheels should be thoroughly washed before leaving construction sites. Given that 163,660 m³ of C&D materials (= 159,814 + 385 + 3,461 m³) will be reused or delivered off-site during the construction phase of the Project of 60 months (general assumption of construction time for URA redevelopment projects adopted), as a conservative approach, it is estimated that a maximum of approximately 12 dump truck trips with average capacity of 7.5 m³ per day (163,660 m³ ÷ 7.5 m³/truck ÷ 1,825 days = 12 trucks/day) may be required for the transportation of C&D materials during the excavation works. Nevertheless, the C&D materials shall be exported on a regular basis to minimise dust and other potential impacts on the surrounding environment due to the transportation of C&D materials.

General Refuse

- 5.3.26 General refuse should be stored in enclosed bins or compaction units separate from C&D materials. 3-color recycle bins for the collection of recyclable municipal waste should also be provided. A reputable waste collector should be employed by the contractor to remove or recycle general refuse from the Site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of “wind-blown” light materials.

Chemical Waste

- 5.3.27 If chemical waste is produced at the construction site, the contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the *Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)*. Chemical waste should be stored in appropriate containers and collected by a licensed chemical waste collector. The chemical waste management measures should include, but not limited to the following:
- Minimize the production of Chemical Waste
 - Registration of Chemical Waste Producers with EPD should be carried out for any person who produces chemical waste
 - Give notification of certain Chemical Waste for Disposal to EPD as required in *Section 4 of the Regulation & Section 17 of the Ordinance*
 - Carry out Packaging, Labelling and Storage of Chemical Wastes as per *Sections 9 to 19 of the Regulation*
 - Collection of Chemical Waste and the “Trip Ticket” System as per *Sections 20 to 29 of the Regulation*

- Precautions Against Dangers from Spillages, Leakages or Accidents involving Chemical Waste as per *Sections 30 to 32 of the Regulation*
- mitigation measures and good practices would be properly implemented for the handling and disposal of asbestos-containing materials according to the *Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes*.

5.3.28 Provided that good site practices are strictly followed, there would be no adverse impacts related to waste management during construction phase.

5.4 Waste Management for Operation Phase

5.4.1 Domestic wastes will be expected as the major type of waste from the redevelopment, including food residues, plastic, metal products, paper, etc.. No chemical or hazardous waste is anticipated, including waste generated during the operation and maintenance of the equipment and facilities. Wastes generated will be collected and disposed of on a regular basis. Building management will be arranged by the future owners to manage the development including waste disposal.

5.4.2 The domestic waste will be collected (at the refuse collection point) and regularly disposed of at landfill or regularly collected by recyclers, waste recycling would be carried out during operation phase. To minimize waste generation and promote recycling, it is recommended to implement source separation of domestic waste in the proposed development.

5.4.3 It should be noted that a Refuse Collection Point (RCP) will be provided within Site B, to seamlessly replace the existing Sai Yee Street (Flower Market Road) Refuse Collection Point. The operation of RCP is managed by Food and Environmental Hygiene Department (FEHD).

5.4.4 Based on the anticipated population intake for the Proposed Development, which is projected to be about 3,885 and will be further refined during the detailed design stage, it is estimated that approximately 3,341 kg per day (= 3,885 persons x 0.86kg/person/day⁸) of general refuse will be generated during the operation phase. With the proper implementation of the control measures, adverse impacts due to waste management will not be anticipated.

5.5 Hierarchy of Waste Management

5.5.1 Waste management options would be adopted and exercised in accordance with a hierarchy in order to reduce and manage waste. The hierarchy of waste management and relevant recommendations provided for the construction and operation phases of the Scheme are summarized in **Table 5-2**.

Table 5-2 Hierarchy of Waste Management

Order of Preference	Waste Management	Construction Phase	Operation Phase
1	Avoidance and Minimization	The potential quantity of C&D materials, general refuse and chemical waste generated, should be reduced and minimized.	Promote waste reduction in the community.

⁸ The domestic waste disposal rate of 0.86 kg/person/day is adopted according to the latest Monitoring of Solid Waste in Hong Kong (i.e. waste statistics 2024)

Order of Preference	Waste Management	Construction Phase	Operation Phase
2	Reuse	Inert C&D Material, including construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fill reception facilities.	N/A
3	Recovery and Recycle	- Non-inert C&D Material, including metal from the existing structures, wood from formwork, equipment parts, and materials and equipment wrappings, should be re-used or recycled; - General refuse, such as paper, plastics and aluminum materials, should be re-used or recycled. 3-color recycle bins and a reputable waste collector are provided and employed respectively to enhance recycling.	Implement source separation of domestic waste to facilitate recycling.
4	Treatment and Disposal	- Non-inert C&D waste - Chemical waste should be treated and disposed at licensed facilities. “Trip-ticket” must be provided throughout all movements for records; - General refuse is collected by a reputable waste collector. Only non-recyclable part of general refuse can be disposed at a licensed landfill.	General refuse is collected by a reputable waste collector. Only non-recyclable part of general refuse can be disposed at a licensed landfill.

5.6 Conclusion

- 5.6.1 A variety of wastes including inert C&D material, C&D waste, chemical waste, asbestos-containing materials, and general refuse would be generated during the construction phase and domestic waste would be generated during operation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and operation stage of the Scheme with the proposed increase in domestic GFA in Site B would be envisaged.

6 CONCLUSION

- 6.1.1 An Environmental Assessment has been carried out to evaluate the potential environmental impacts likely to arise from this S.16 application.
- 6.1.2 The key environmental issues associated with this S.16 Application are potential noise impacts during both the construction and operational phases, as well as waste management during the construction phase.

Air Quality (Operation Phase)

- 6.1.3 With the changes in the air quality modelling methodology, the model results are not expected to be adversely affected. Therefore, the conclusions in the approved EA report remain valid, and no adverse air quality impact due to vehicular or marine traffic emissions is anticipated for the Scheme area.

Noise

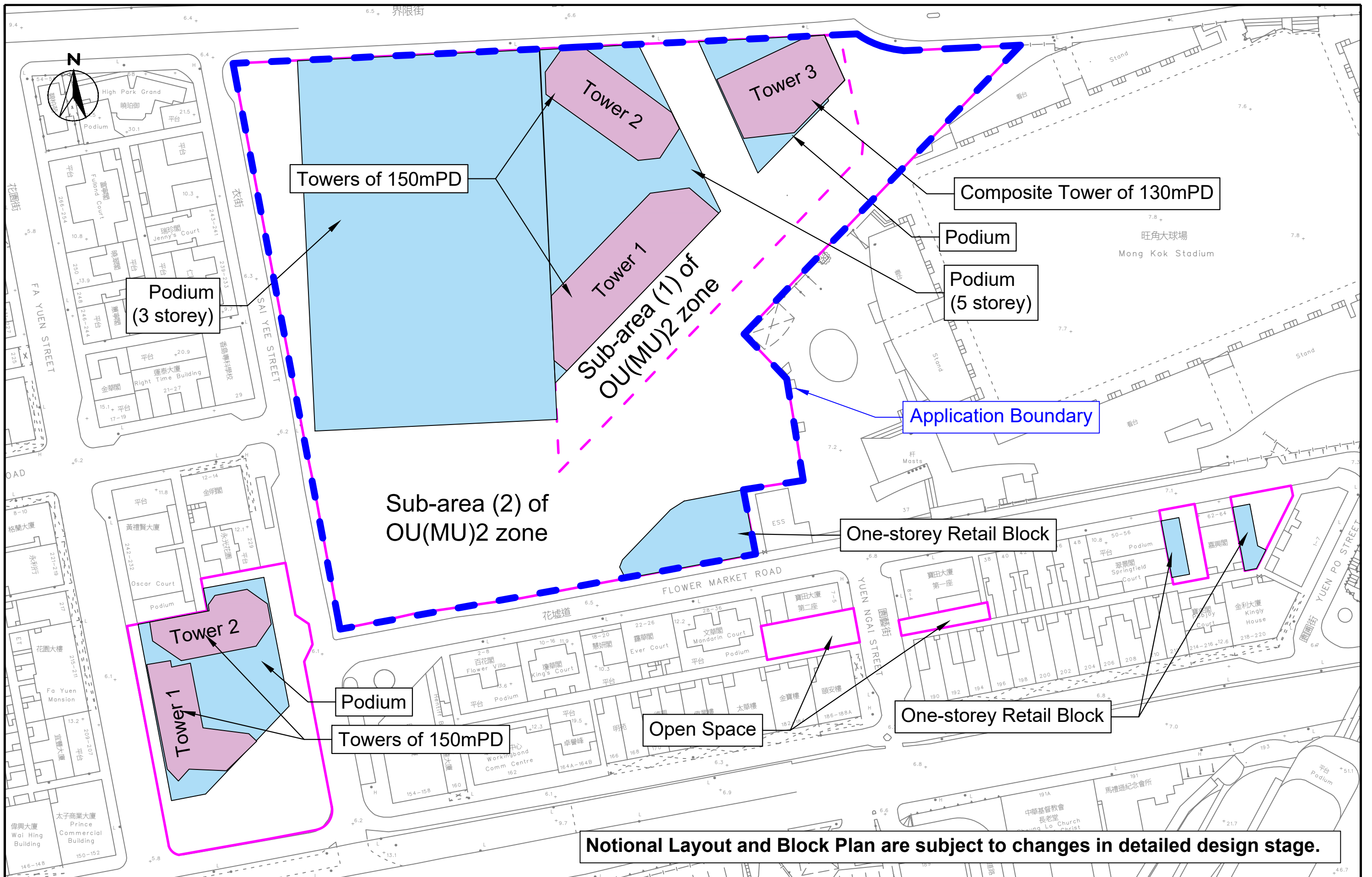
- 6.1.4 The noise impact during the construction phase is considered insignificant. Subject to detailed site works arrangement, mitigation measures shall be implemented if necessary and applicable in accordance with ProPECC PN 1/24 during construction to minimize construction noise impact on the nearby NSRs.
- 6.1.5 A preliminary study of fixed noise sources based on the existing situation and the available information for planned developments show that no adverse fixed noise impact to the Scheme is anticipated. The planned fixed noise source from the proposed Scheme should not induce any adverse noise impact when the maximum allowable SWLs has been implemented properly.
- 6.1.6 Traffic noise impact has been taken into consideration when designing the notional layout of the residential development. The view angle from the windows to the road traffic has been minimized by buildings disposition, buildings orientation, architectural fins and windows locations. In the base scenario, ~96.7% of flats comply with the 70 dB(A) traffic noise assessment criterion as demonstrated. In the mitigated scenario where acoustic window, acoustic balcony and fixed glazing are incorporated into the proposed development, the compliance rate by flat has been increased to ~97.8%. The notional design is for technical assessment of the subject non-scheme-based application and will be subject to change at the detailed design stage upon approval of the subject S.16 Application. The current assessment is based on a notional design and its anticipated result, of which baffle type acoustic window, acoustic balcony and fixed glazing have been adopted to achieve the noise compliance level. The detailed layout in the future proposed development will be subject to detailed design, site constraints and feasibility.
- 6.1.7 The maximum stadium noise is found to be ~72dB(A) in Tower 1 of Site B at the representative noise assessment points based on the notional layout plan. Given the stadium noise is marginally above the criteria, the adoption of acoustic window and acoustic balcony is considered as feasible mitigation measures to address the excessive stadium noise, subject to the detailed design. Mock-up test, based on the finalised layout, will be conducted in the later detailed design stage, if required, to ensure the acoustic performance of the acoustic windows and acoustic balconies against stadium noise. With careful design and the proper implementation of the proposed mitigation measures, no adverse noise impact from Mong Kok Stadium on the proposed development is anticipated.

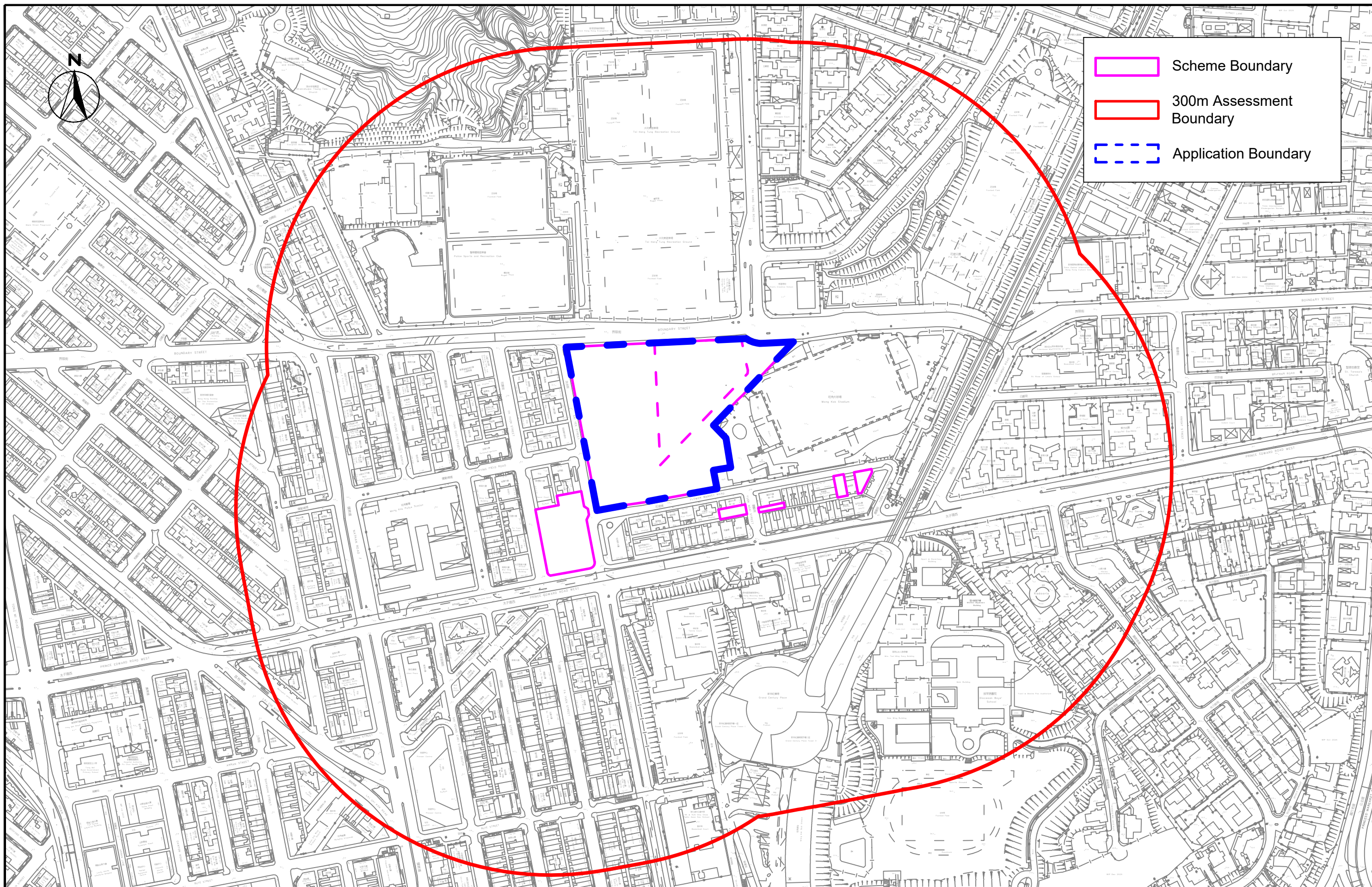
- 6.1.8 Based on a simplified railway noise calculation, it is expected that the railway noise level at the noise sensitive receivers of the Site will comply with the relevant criteria. Therefore, no adverse noise impact is anticipated from the East Rail Line.

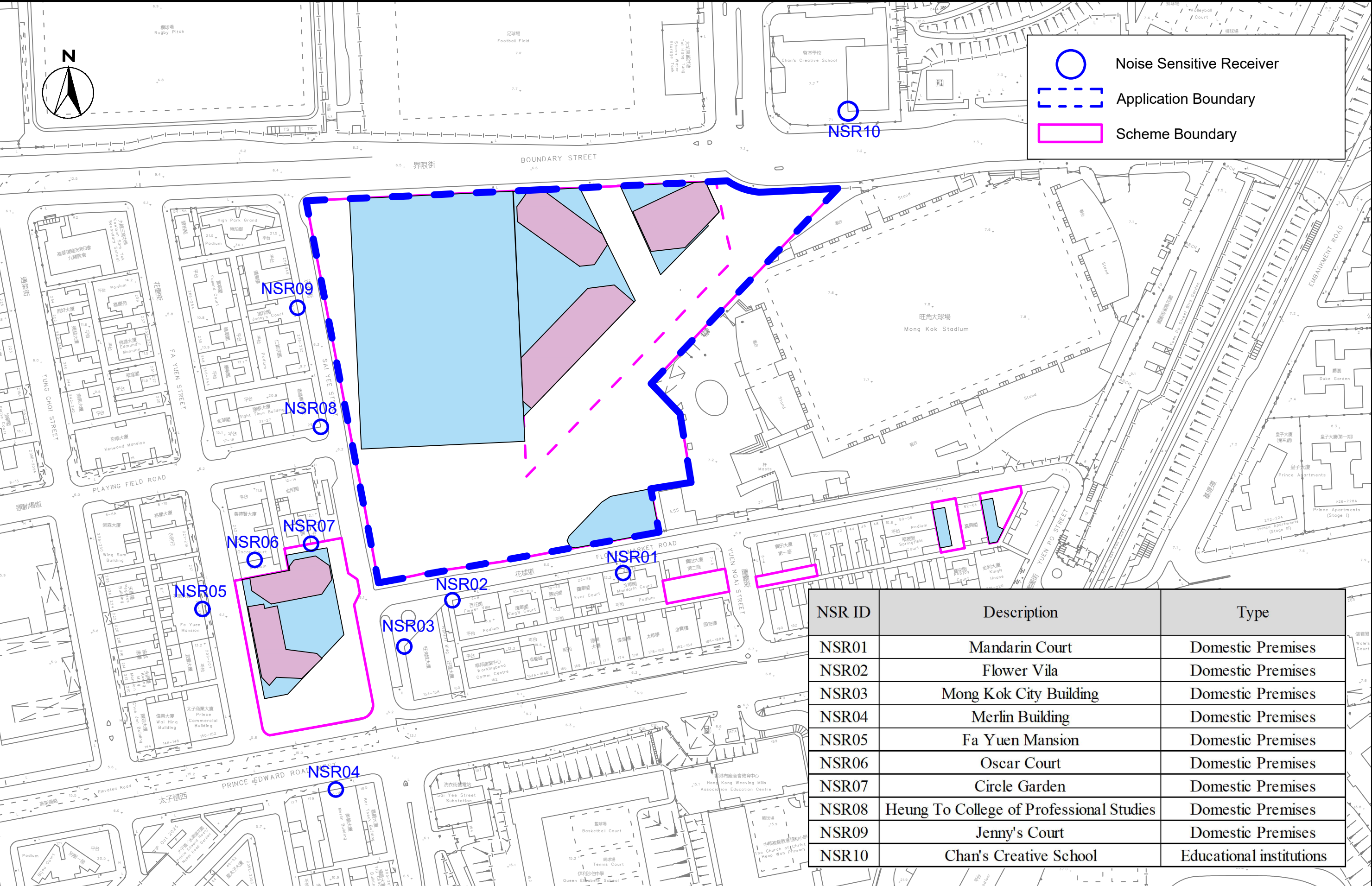
Waste Management

- 6.1.9 A variety of wastes including inert C&D material, C&D waste, chemical waste, asbestos-containing materials, and general refuse would be generated during the construction phase and domestic waste would be generated during operation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and operation stage of the Scheme would be envisaged.

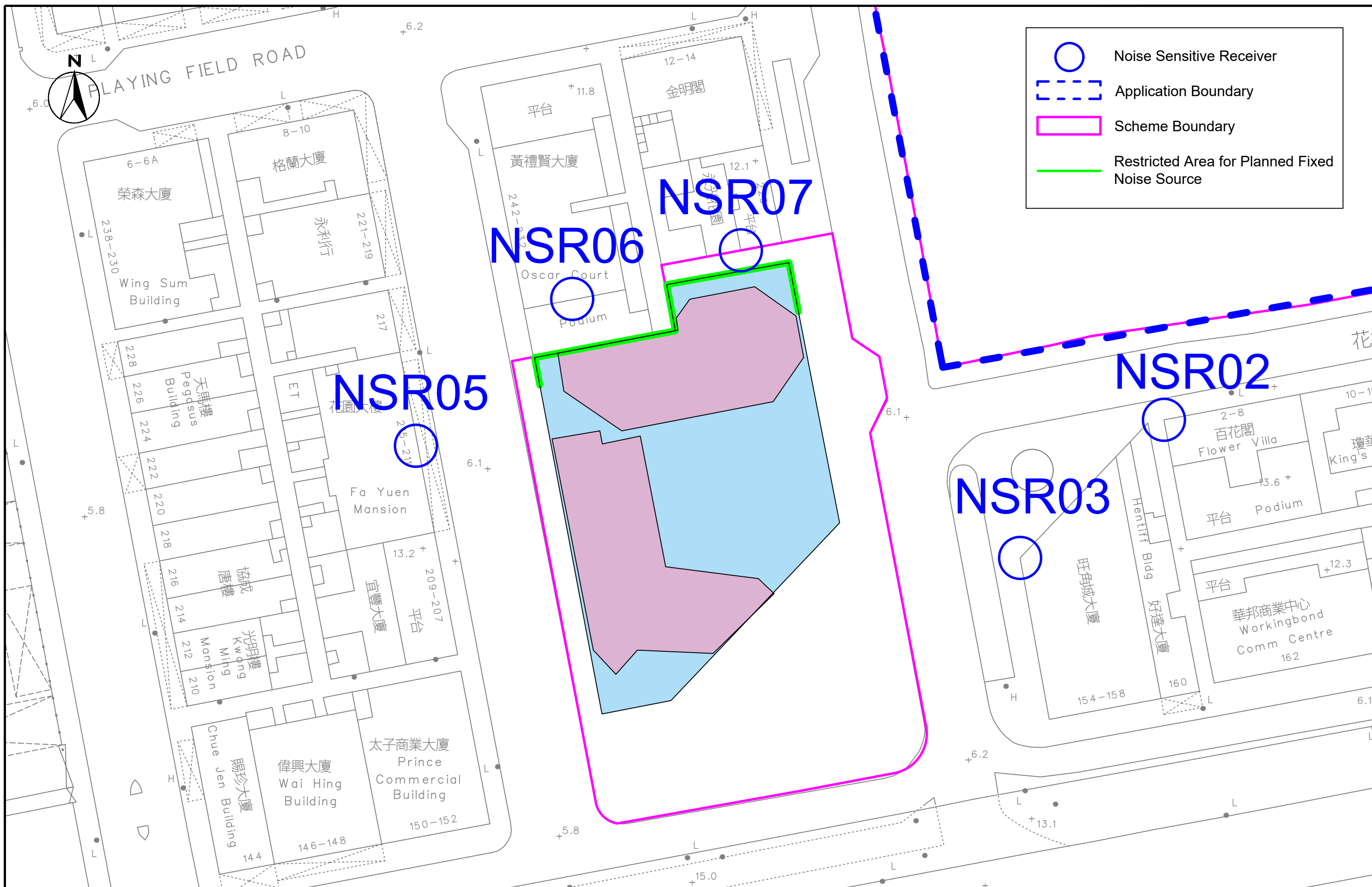
FIGURES

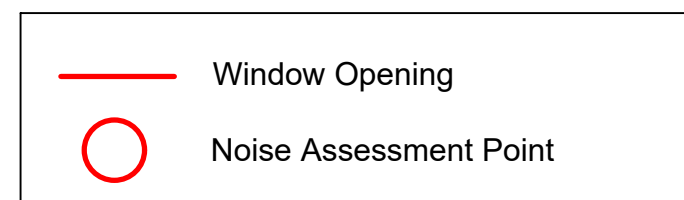
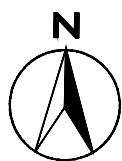




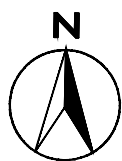


NSR ID	Description	Type
NSR01	Mandarin Court	Domestic Premises
NSR02	Flower Vila	Domestic Premises
NSR03	Mong Kok City Building	Domestic Premises
NSR04	Merlin Building	Domestic Premises
NSR05	Fa Yuen Mansion	Domestic Premises
NSR06	Oscar Court	Domestic Premises
NSR07	Circle Garden	Domestic Premises
NSR08	Heung To College of Professional Studies	Domestic Premises
NSR09	Jenny's Court	Domestic Premises
NSR10	Chan's Creative School	Educational institutions

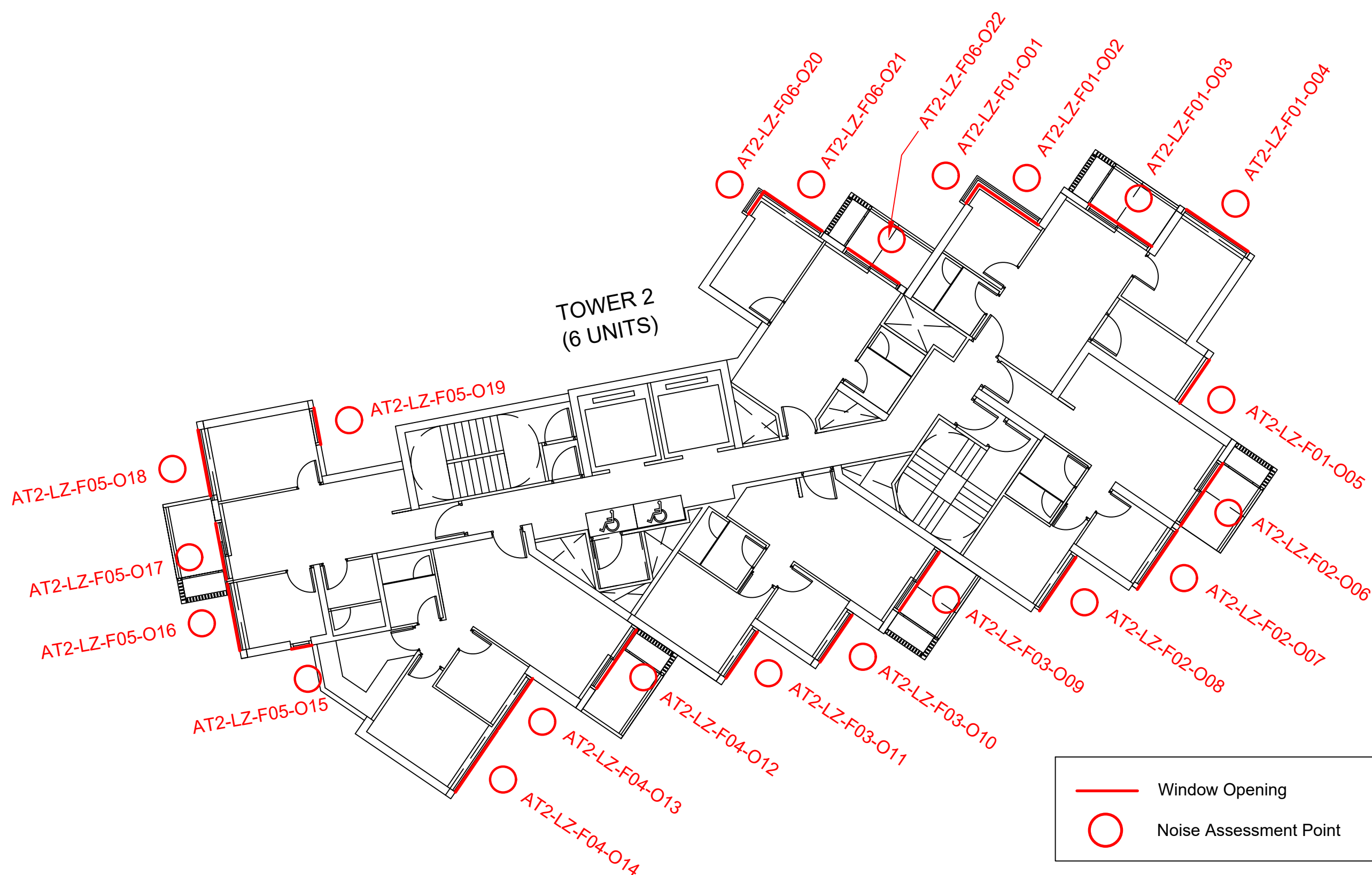
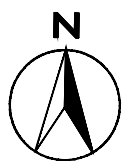




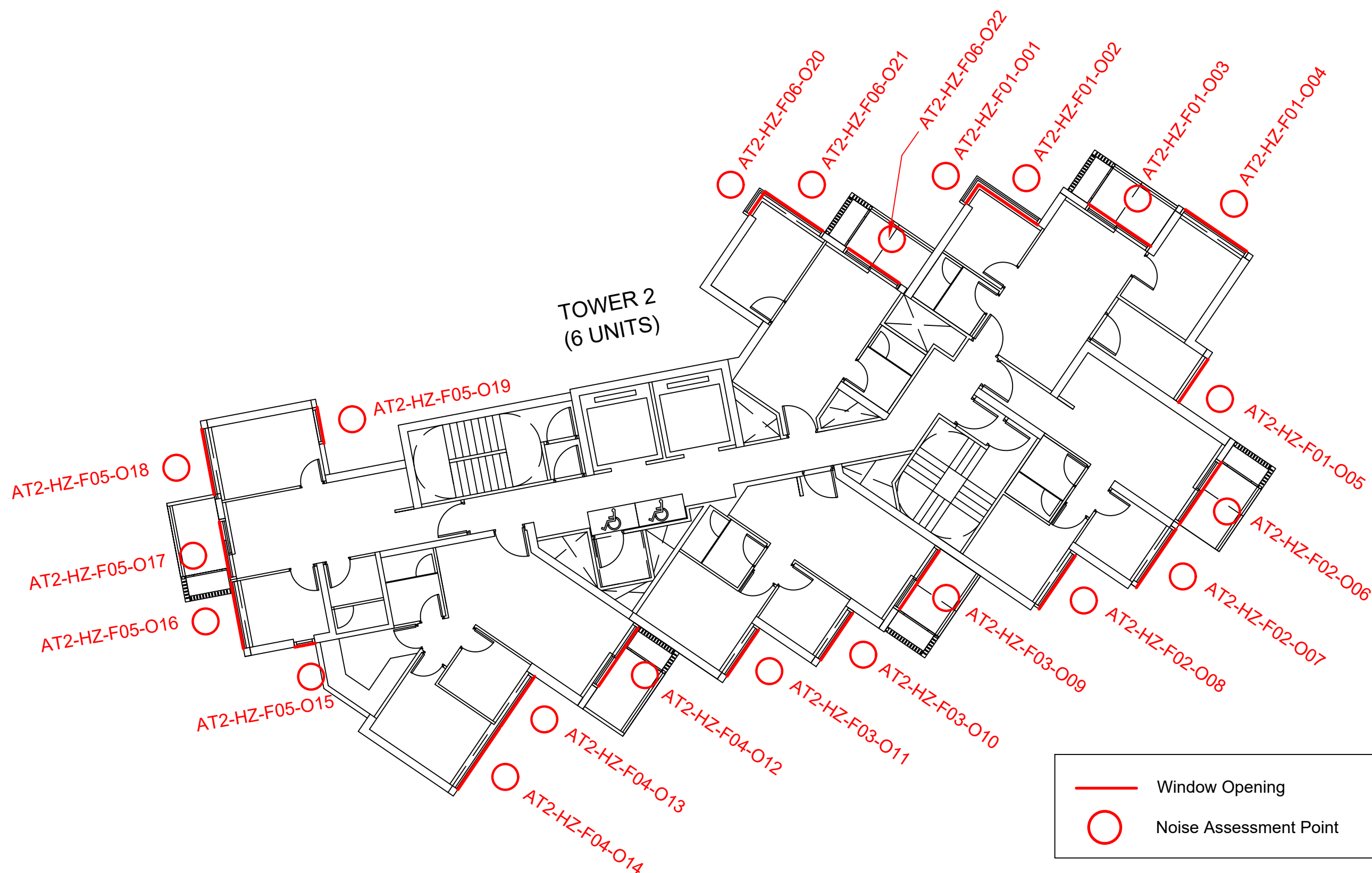
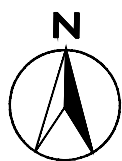
Notional Layout and Block Plan are subject to changes in detailed design stage.



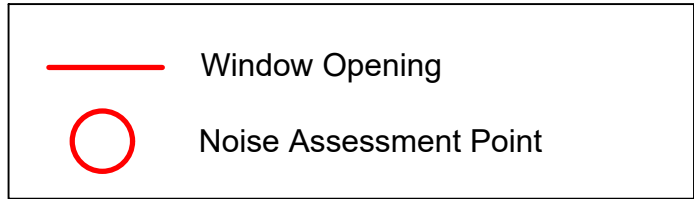
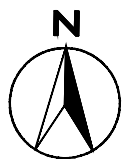
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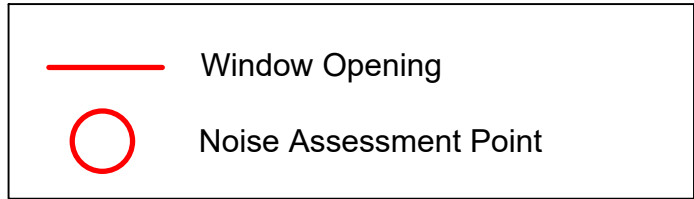
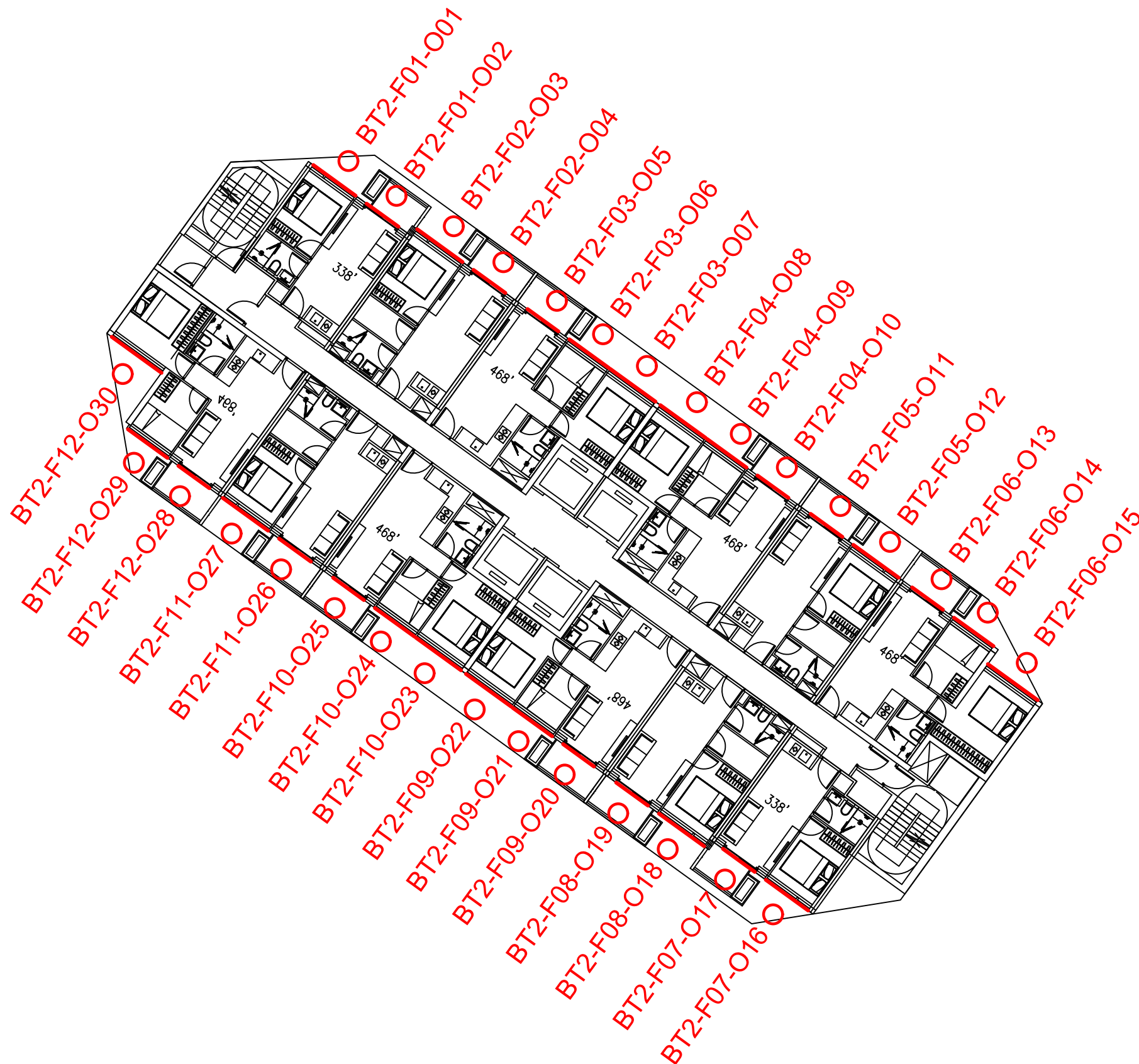
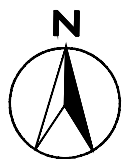
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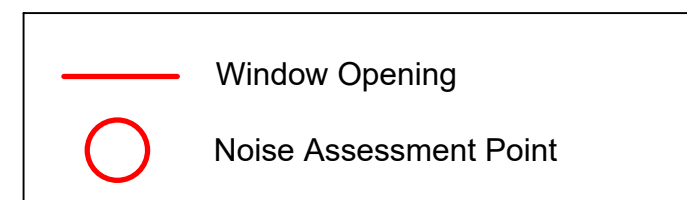
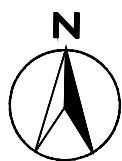
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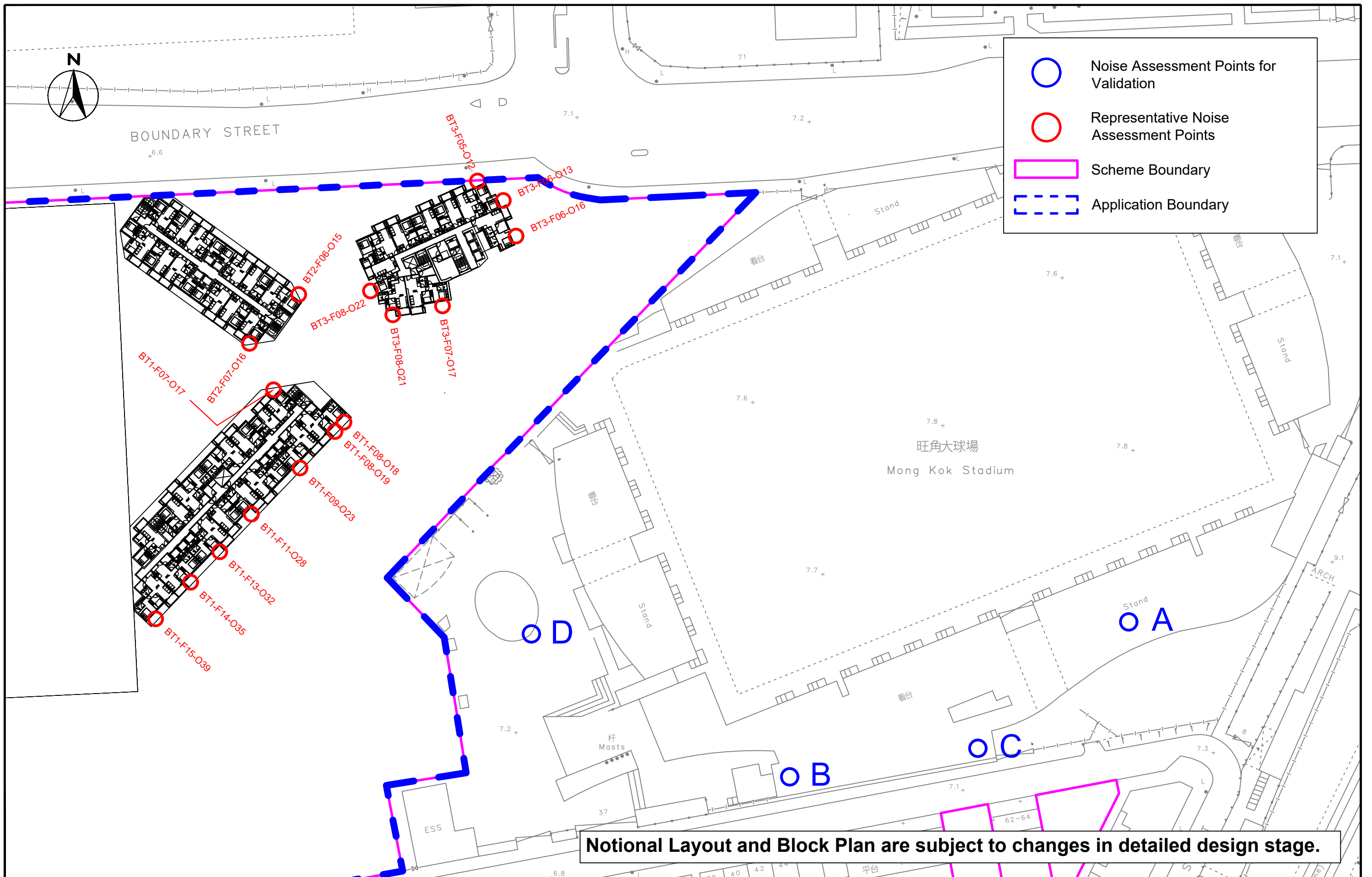
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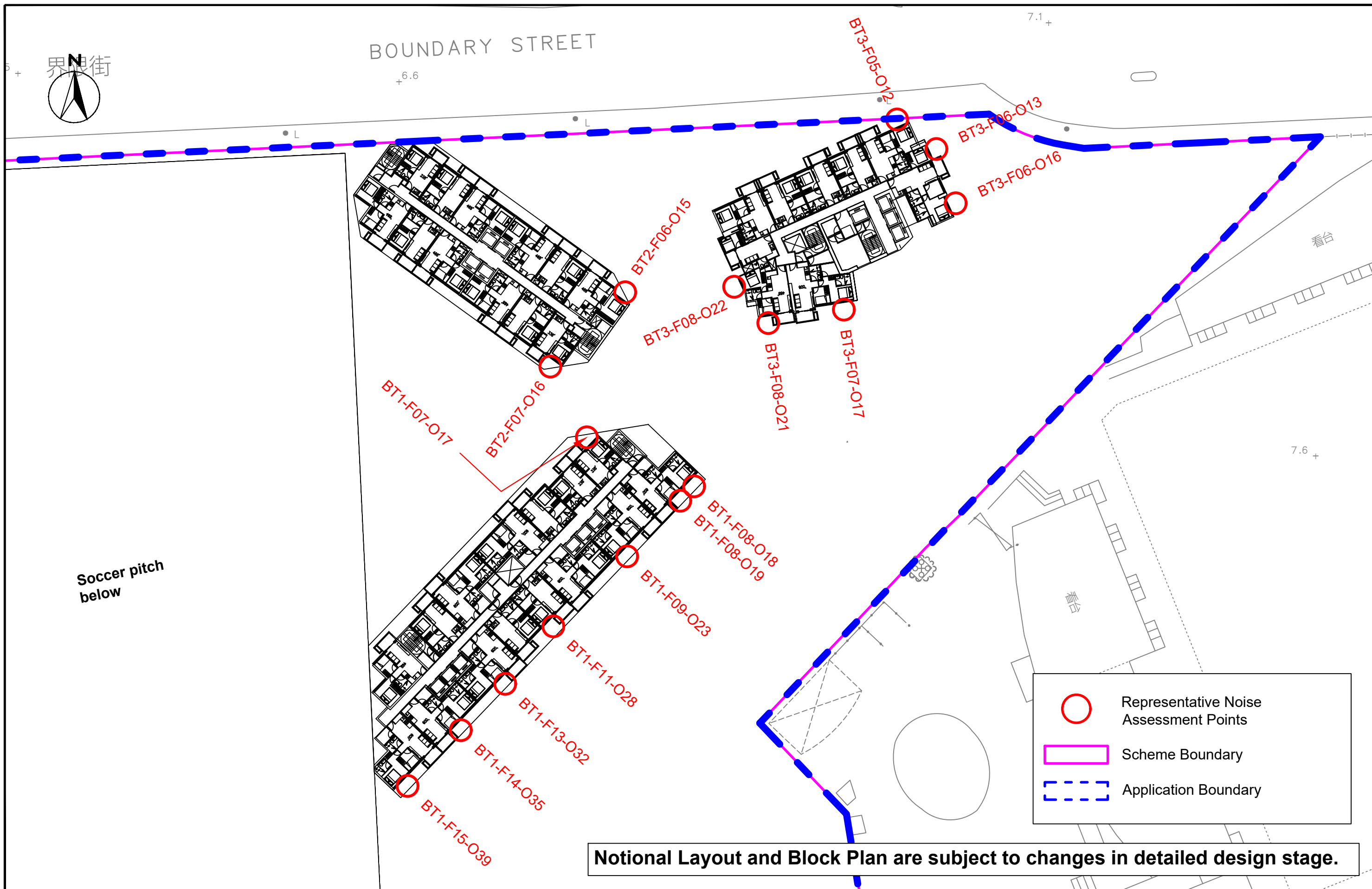


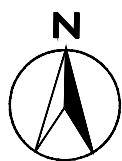
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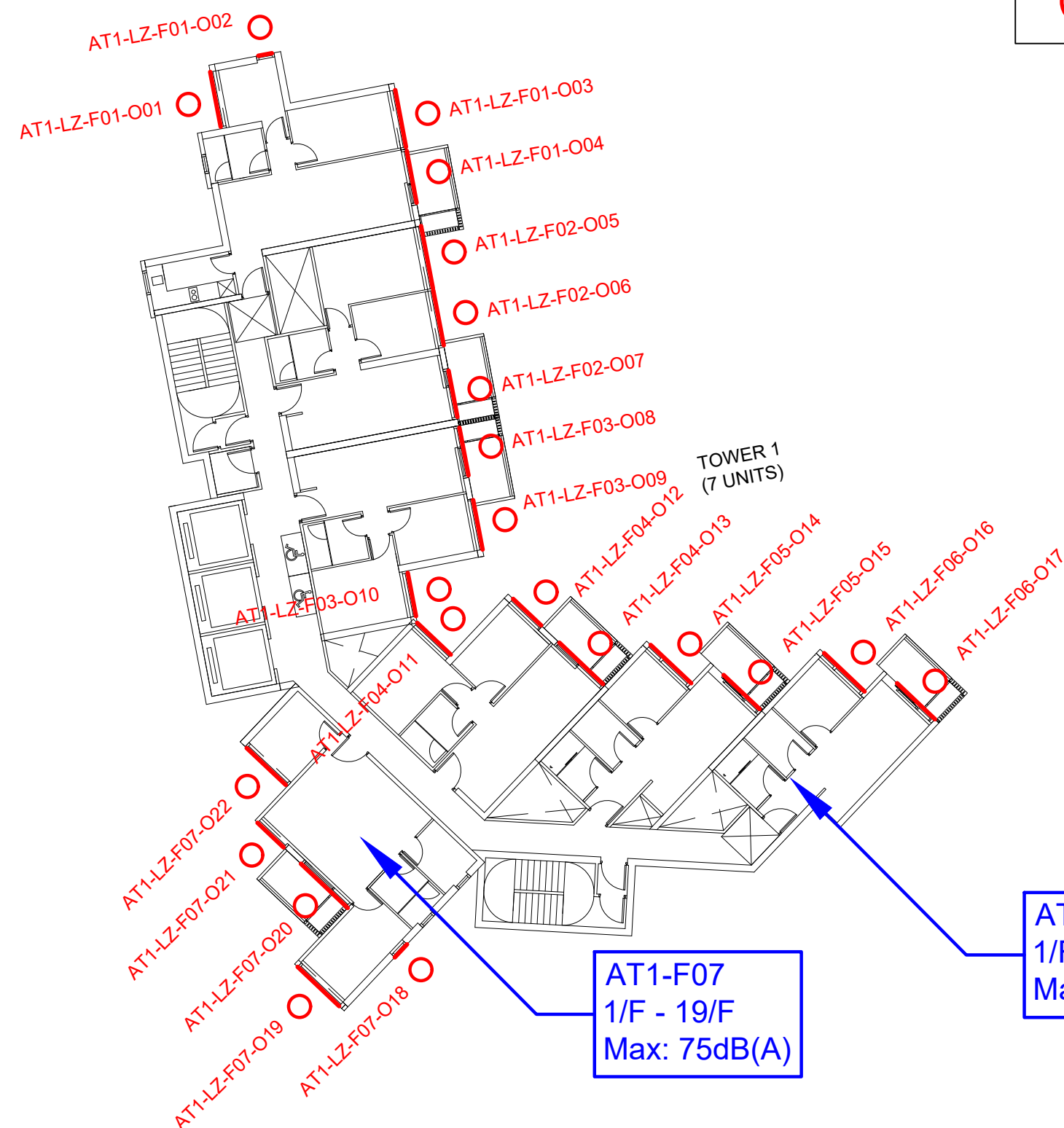
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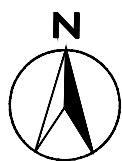




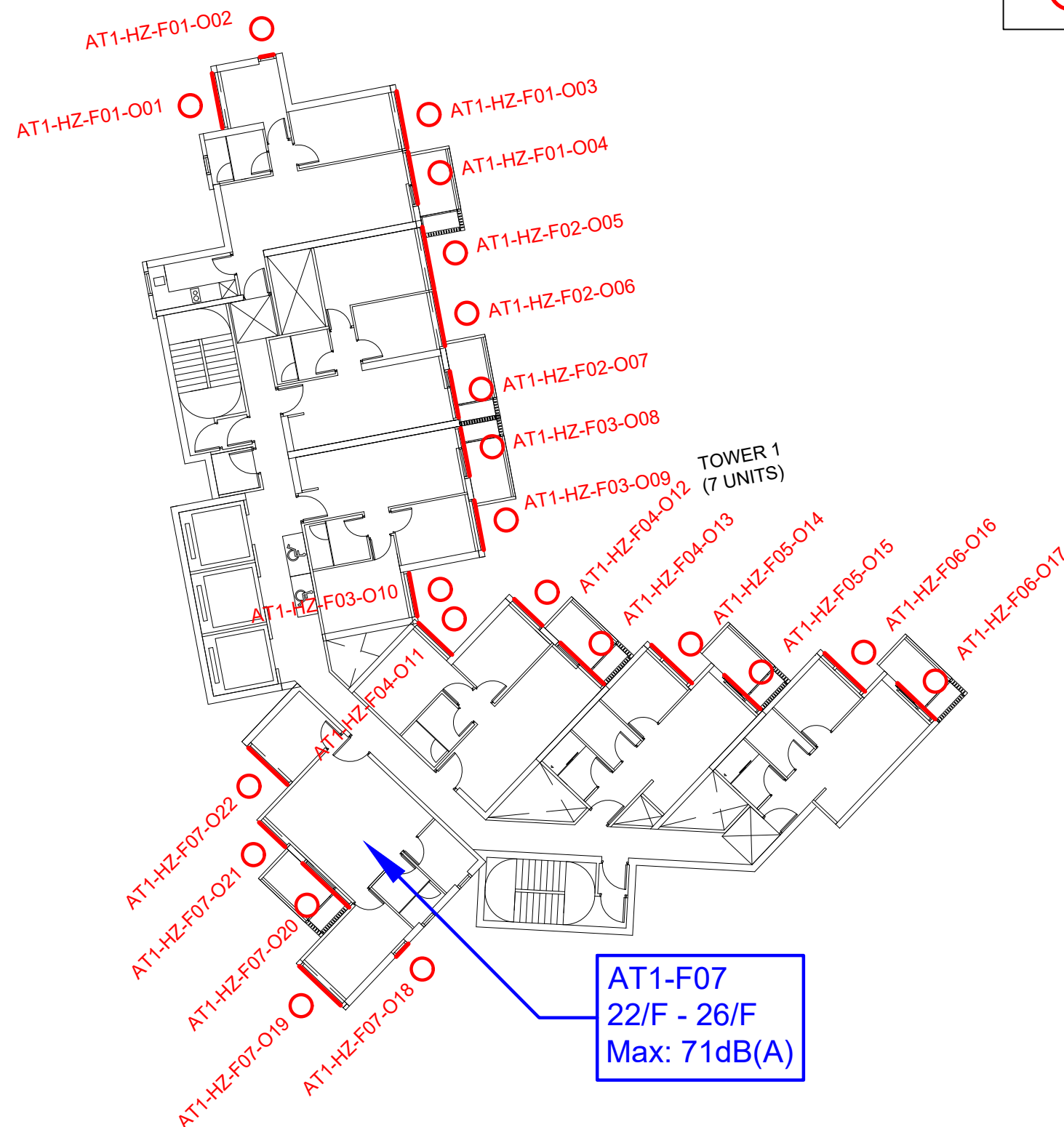
- Window Opening
- Noise Assessment Point



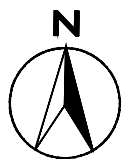
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- Window Opening
- Noise Assessment Point

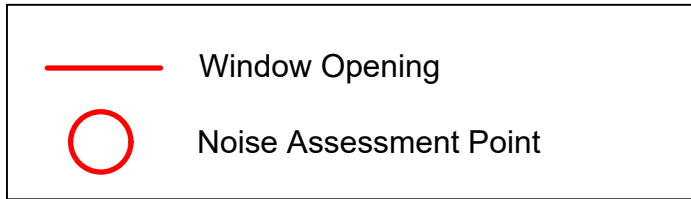
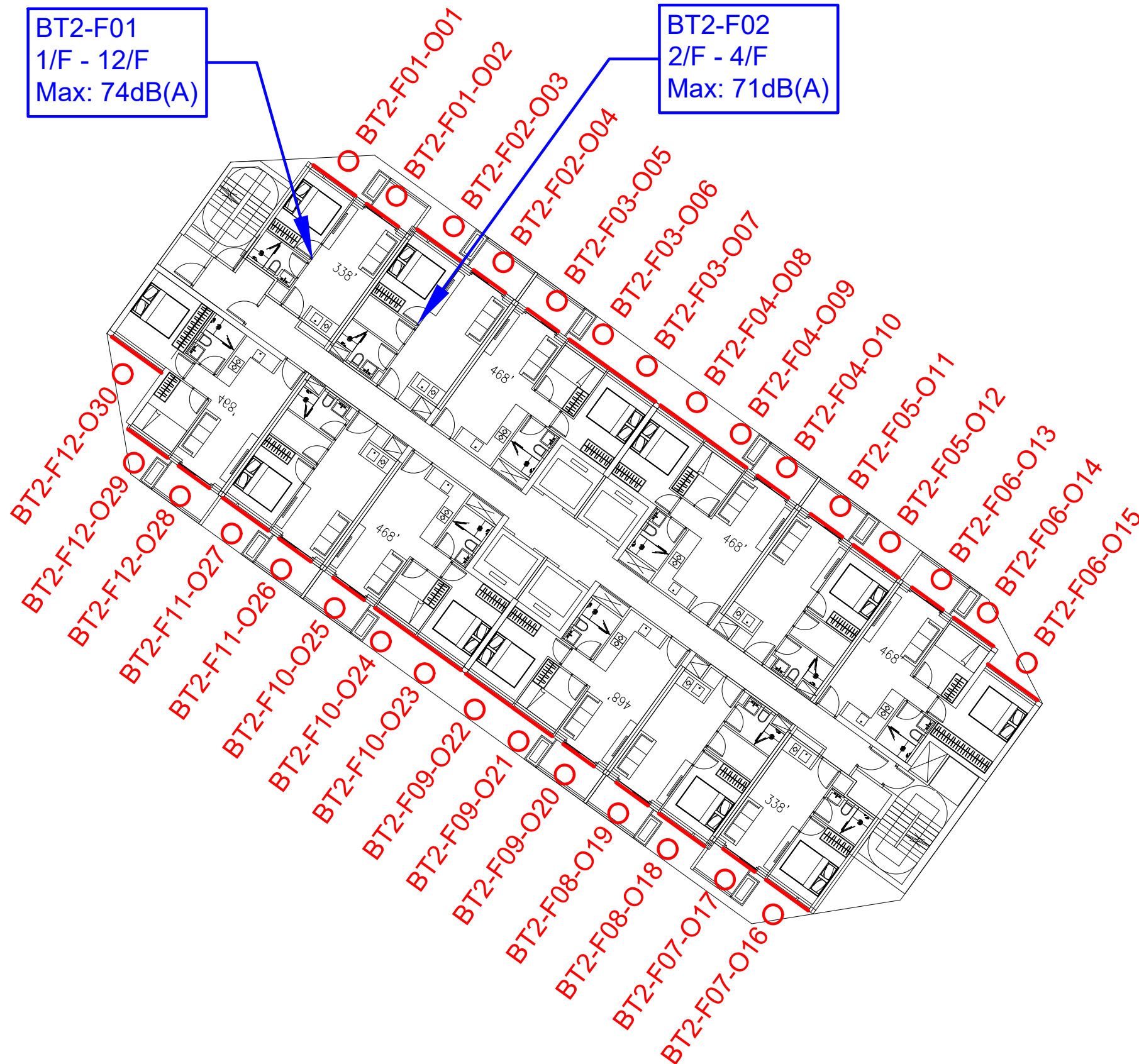


Notional Layout and Block Plan are subject to changes in detailed design stage.



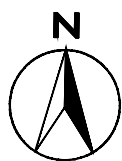
BT2-F01
1/F - 12/F
Max: 74dB(A)

BT2-F02
2/F - 4/F
Max: 71dB(A)

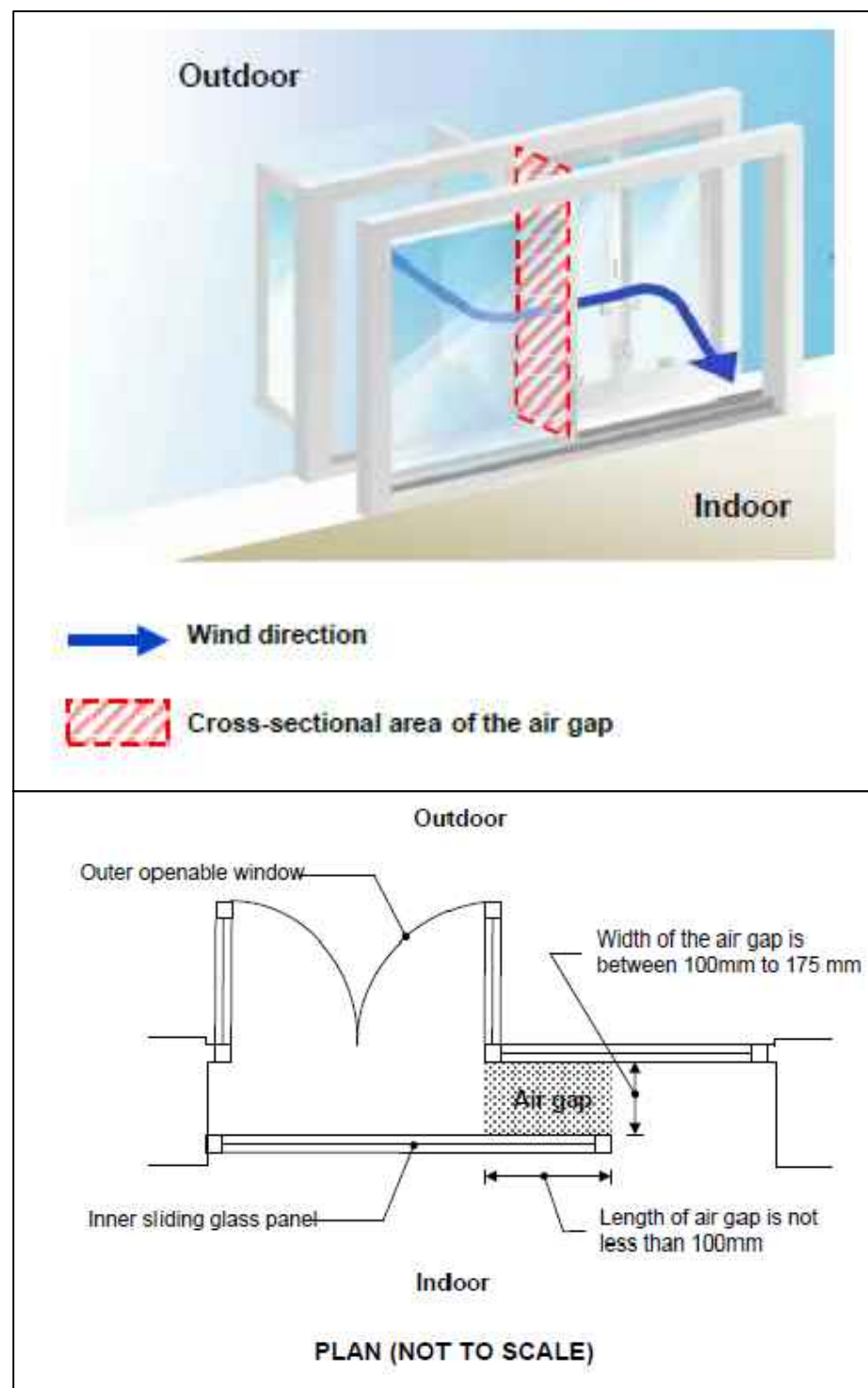


Notional Layout and Block Plan are subject to changes in detailed design stage.

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Notional Layout and Block Plan are subject to changes in detailed design stage.

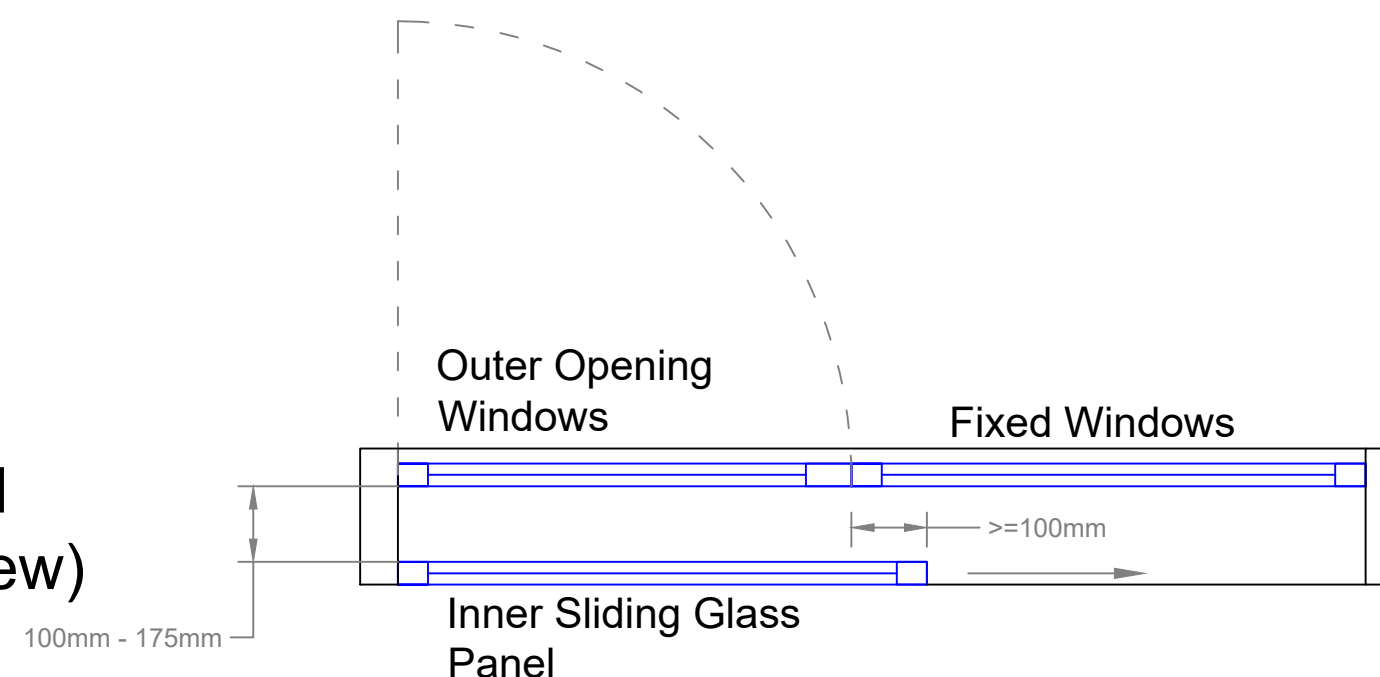


Extracted from Appendix A of Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (APP-130) by Building Department

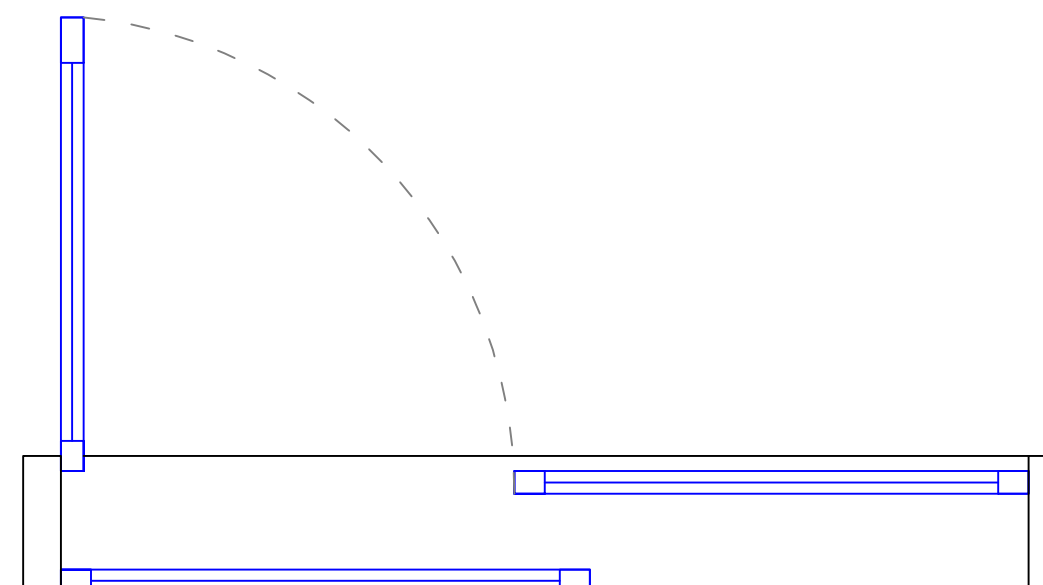
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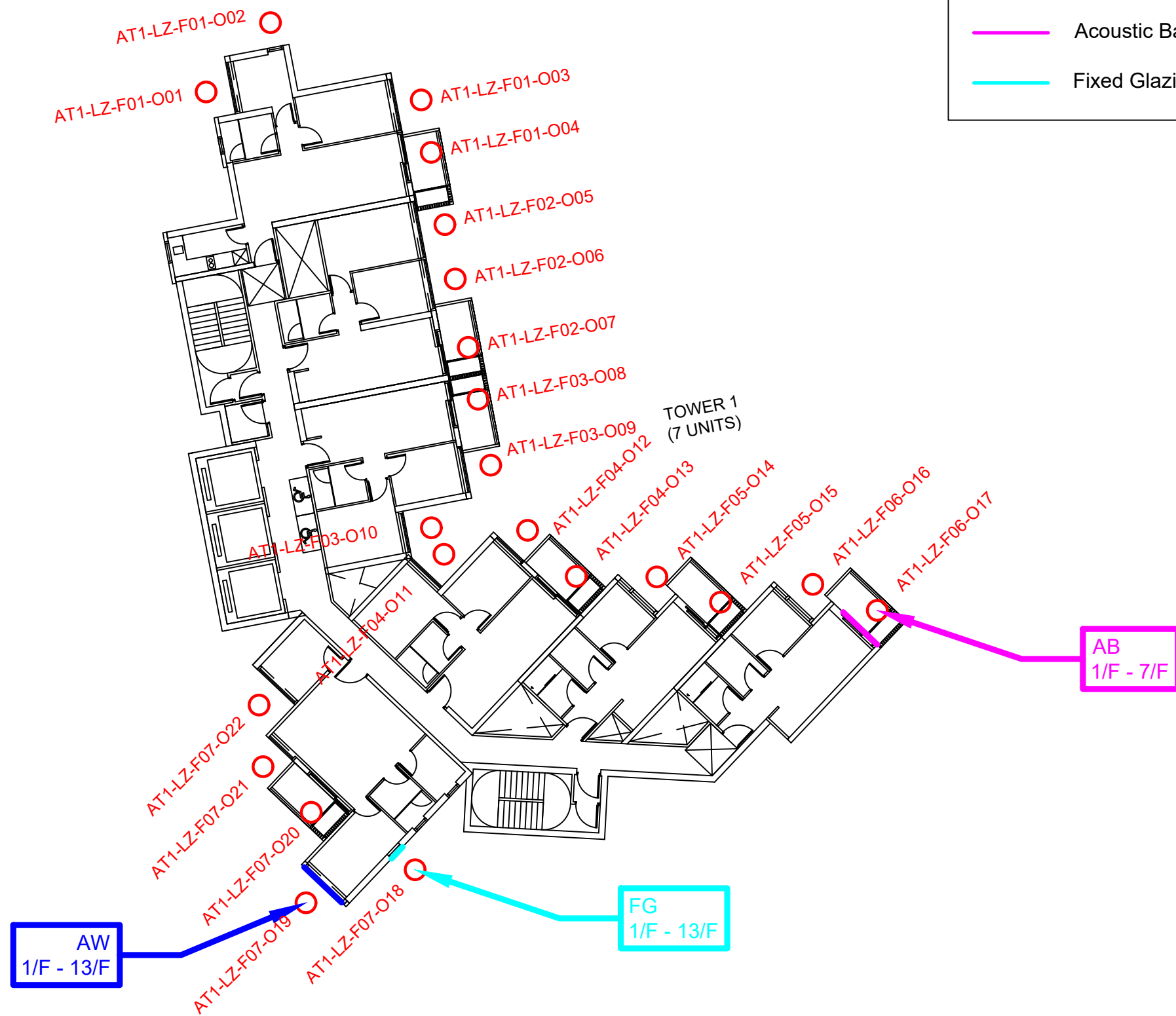
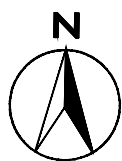
Reference to ProPECC PN 5/23 Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact

Closed
(top view)



Fully Opened
(top view)





Noise Assessment Point

Acoustic Window

Acoustic Balcony

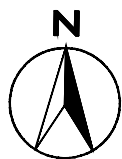
Fixed Glazing

Notional Layout and Block Plan are subject to changes in detailed design stage.

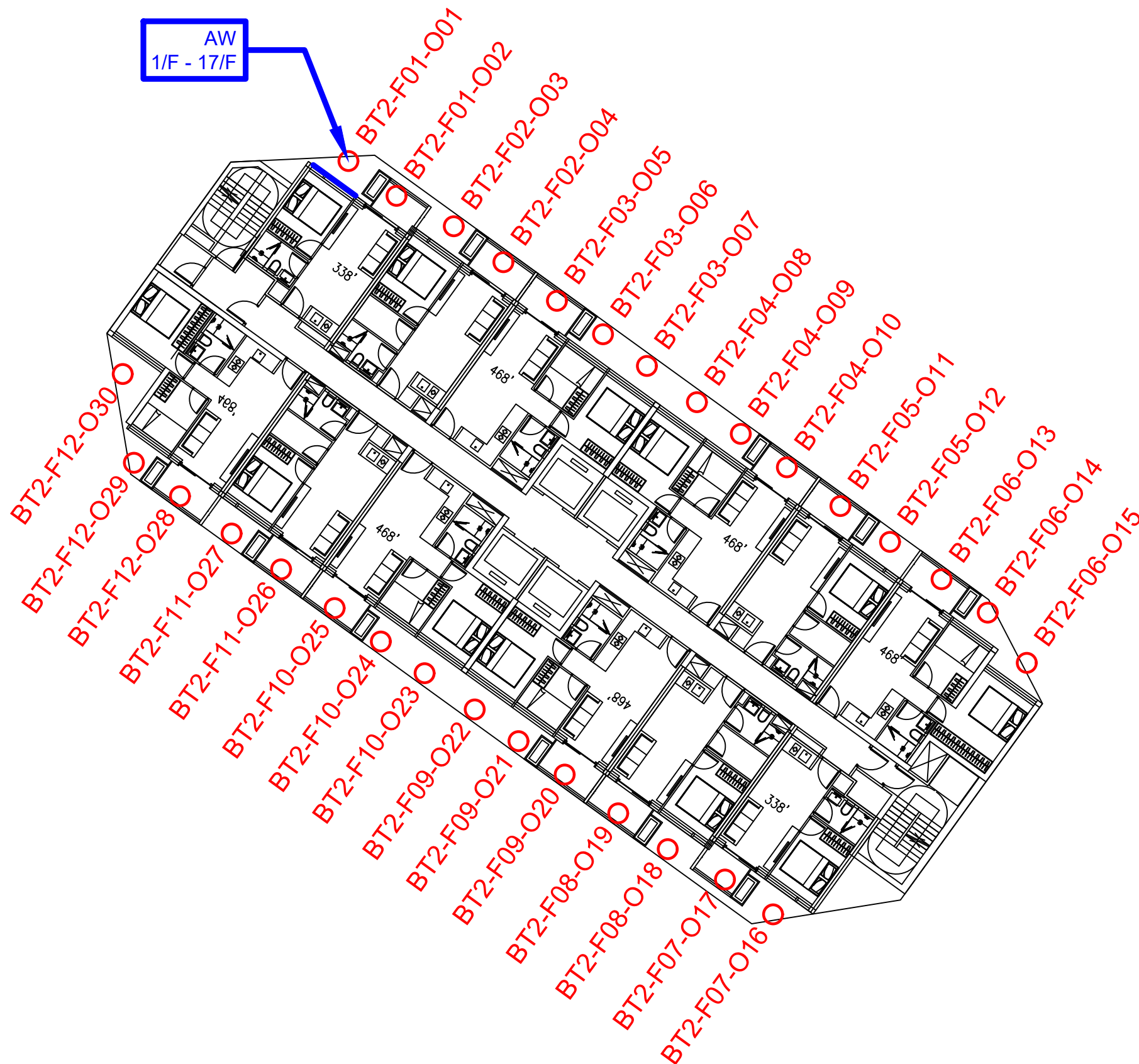


Section 16 Planning Application for Proposed Minor Relaxation of the Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme ("YTM-013"), Mong Kok, Kowloon
Proposed Mitigation Measures at Site A1 (Tower 1 - Low Zone)

SCALE	1:200@ A3	DATE	May 2026
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Noise Assessment Point



Acoustic Window

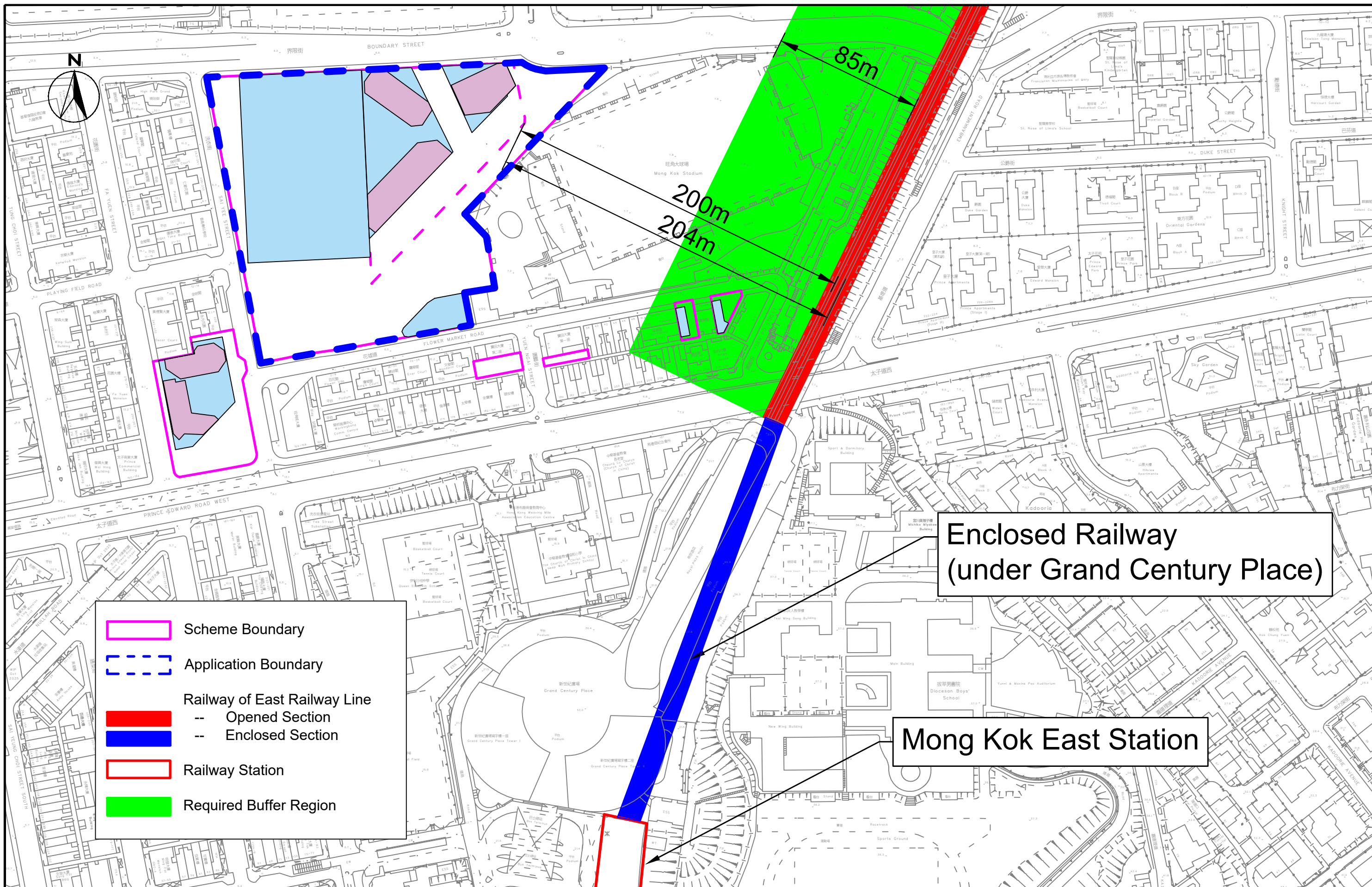


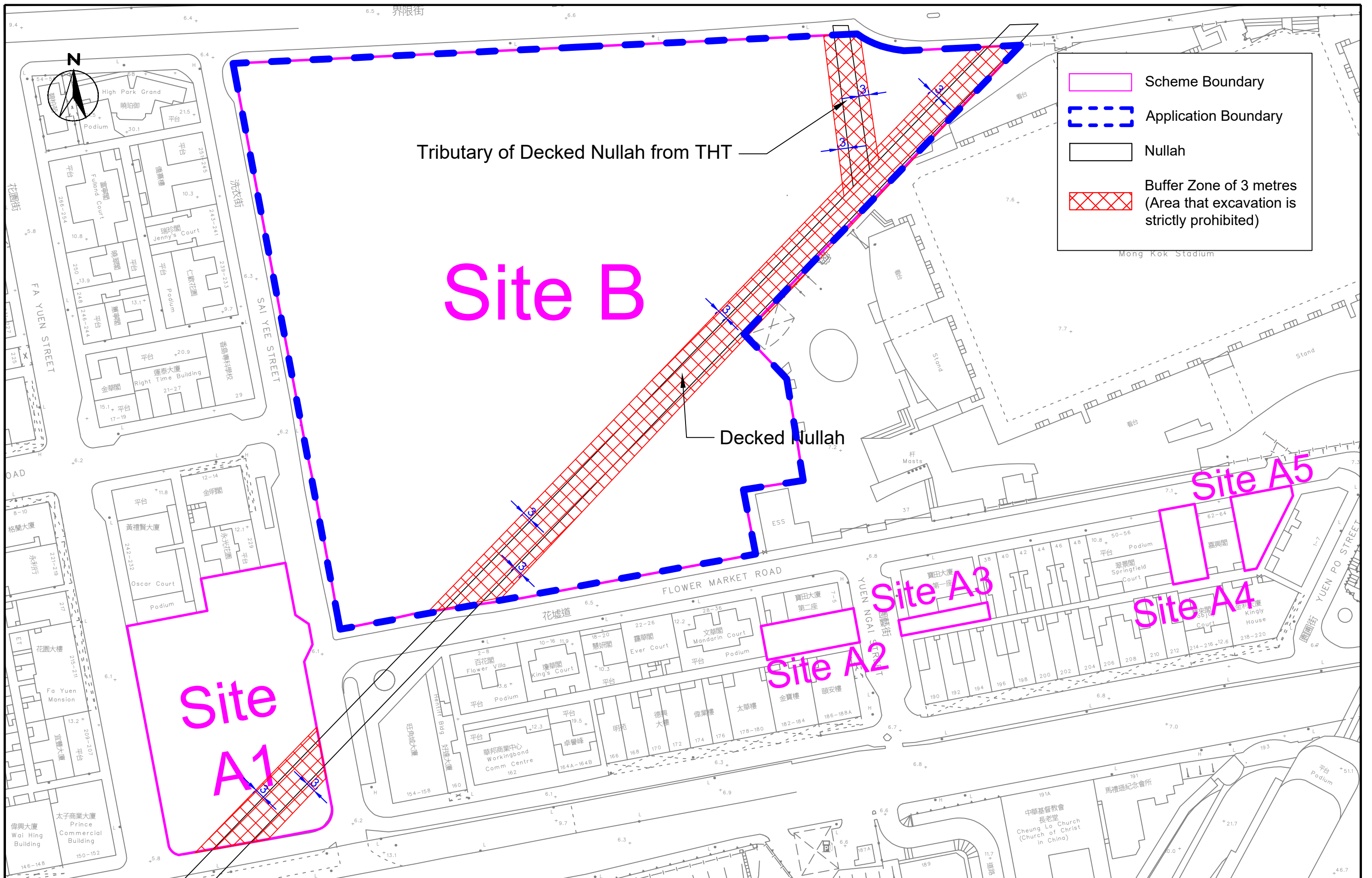
Acoustic Balcony



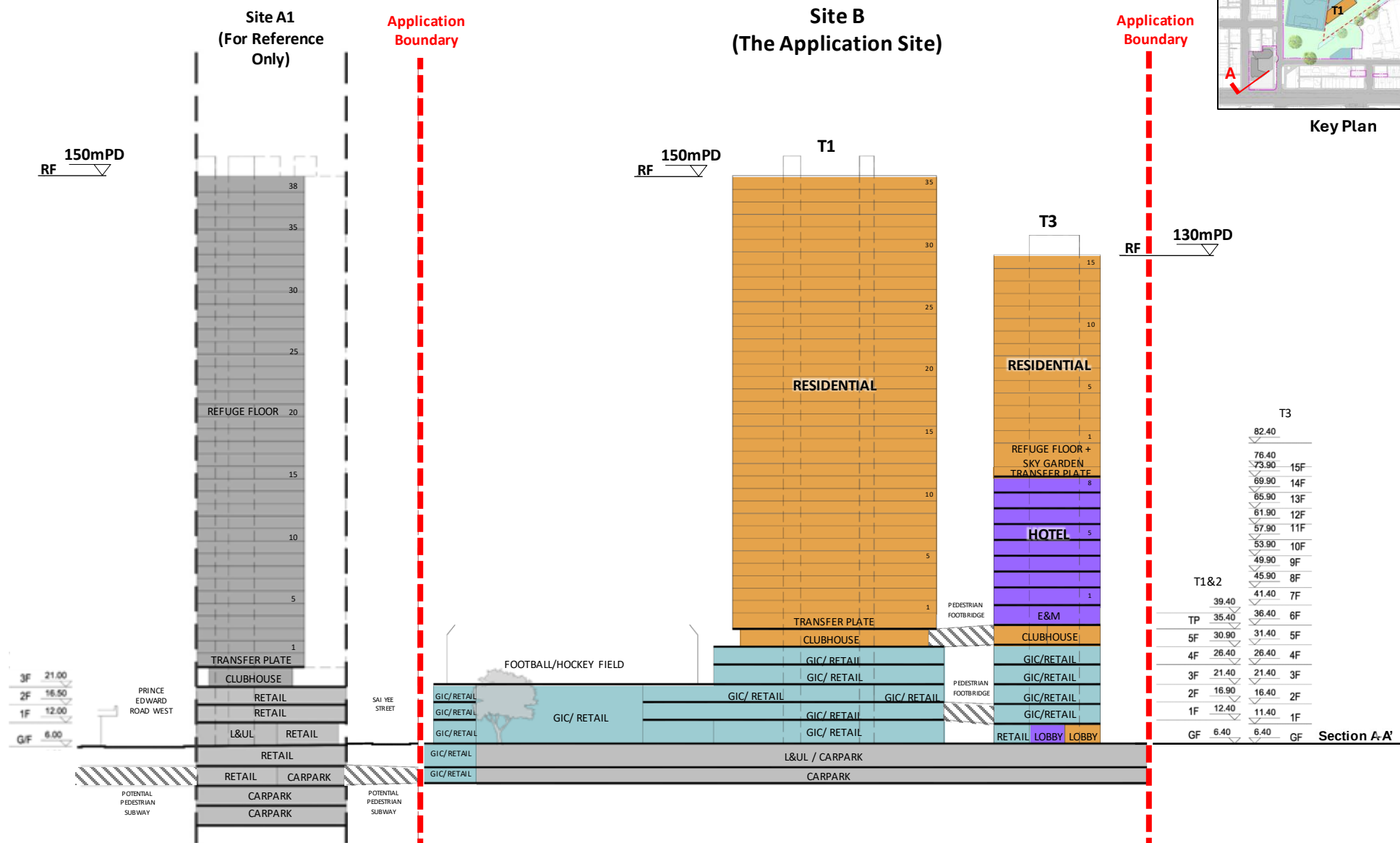
Fixed Glazing

Notional Layout and Block Plan are subject to changes in detailed design stage.

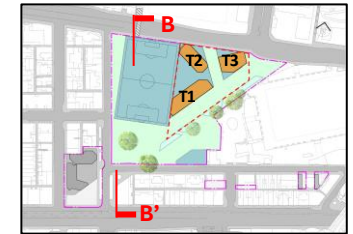




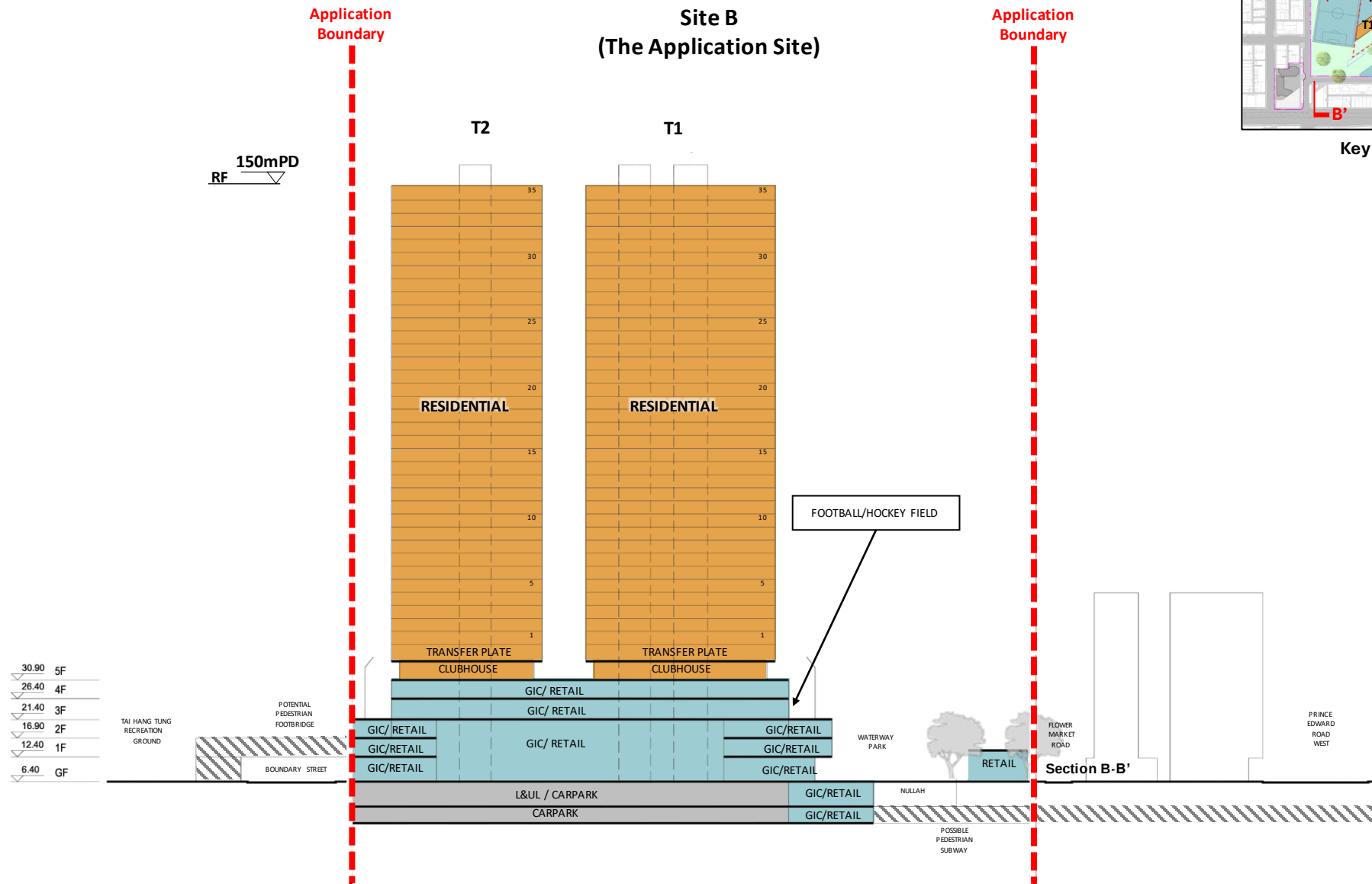
**APPENDIX 2-1
NOTIONAL SECTION PLAN OF THE
PROPOSED SCHEME**



(Remark: This S16 Planning Application is a “non-scheme-based” submission. Notional layout will be subject to change during detailed design stage)



Key Plan



(Remark: This S16 Planning Application is a “non-scheme-based” submission. Notional layout will be subject to change during detailed design stage)

**APPENDIX 4-1
MAXIMUM ALLOWABLE SOUND POWER
LEVELS FOR PLANNED FIXED NOISE
SOURCES**

Maximum Allowable Sound Power Level at Source

Time Period	Maximum Allowable SPL at NSR, dB(A)	Horizontal Distance from the Project Site Boundary to the Nearest NSR, m	Correction, dB(A)			Allowable Sound Power Level at Source, dB(A) [1]
			Distance	Facade	Tonality	
Podium of Site A1						
Day and Evening Time	65	12	30	-3	-6	86
(07:00-23:00)						
Night Time	55	12	30	-3	-6	76
(23:00 – 07:00)						
Podium of Site B (Towers 1 and 2)						
Day and Evening Time	65	15	32	-3	-6	88
(07:00-23:00)						
Night Time	55	15	32	-3	-6	78
(23:00 – 07:00)						
Non-residential Portion of Site B (Tower 3)						
Day and Evening Time	65	15	32	-3	-6	88
(07:00-23:00)						
Night Time	55	15	32	-3	-6	78
(23:00 – 07:00)						

[1] For assessment purpose, a 6 dB of tonality, intermittency & impulsiveness correction has been adopted.

[2] The Maximum Allowable Sound Power Level at Source should be corrected by the tonality, intermittency, & impulsiveness correction of the selected equipment, according to Section 3.3 of the IND-TM.

Cumulative Noise level form the Planned the Building Service Equipment of the Proposed Development

NSR ID	Description	Horizontal Distance (m) [1] [2]			Allowable Sound Power Level at Source, dB(A)						Correction, dB(A)						SPL at NSR, dB(A)											
					Day and Evening Time (07:00-23:00)			Night Time (23:00 – 07:00)			Distance			Barrier [5]			Facade	Tonality [3,4]	Day and Evening Time (07:00-23:00)					Night Time (23:00 – 07:00)				
		Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Site A1	Site B (Podium of T1 and T2)	Site B (T3)			Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Total	Criteria	Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Total	Criteria
NSR01	Mandarin Court	122	70	129	86	88	88	76	78	78	-50	-45	-50	0	0	0	3	6	45	52	46	53	65	35	42	36	43	55
NSR02	Flower Vila	49	67	165							-42	-45	-52	0	0	0			53	52	44	56		43	42	34	46	
NSR03	Mong Kok City Building	26	85	193							-36	-47	-54	0	0	-5			58	50	38	59		48	40	28	49	
NSR04	Merlin Building	46	146	261							-41	-51	-56	0	0	-5			53	45	35	54		43	35	25	44	
NSR05	Fa Yuen Mansion	19	97	243							-34	-48	-56	0	-5	-5			61	44	36	61		51	34	26	51	
NSR06	Oscar Court	13	66	212							-30	-44	-55	0	0	-5			64	52	37	65		54	42	27	55	
NSR07	Circle Garden	12	46	189							-30	-41	-54	0	0	-5			65	55	38	65		55	45	28	55	
NSR08	Heung To College of Professional Studies	59	17	159							-43	-33	-52	0	0	-5			51	64	39	64		41	54	29	54	
NSR09	Jenny's Court	111	25	148							-49	-36	-51	0	0	-5			46	61	40	61		36	51	30	51	
NSR10	Chan's Creative School	294	118	68							-57	-49	-45	0	0	0			37	47	52	53		27	37	42	43	
NSR11	Tower 2 of Site B	181	N/A	15							-53	N/A	-32	0	0	0			41	N/A	65	65		31	N/A	55	55	
NSR12	Tower 3 of Site B	196	15	N/A							-54	-32	N/A	0	0	0			41	65	N/A	65		31	55	N/A	55	

Note:

[1] The nearest Representative Noise Sensitive Receivers for each corresponding source are **bold underlined**.

[2] Restricted locations has been provided in Site A1.

[3] For assessment purpose, a 6 dB of tonality, intermittency & impulsiveness correction has been adopted.

[4] The Maximum Allowable Sound Power Level at Source should be corrected by the tonality, intermittency, & impulsiveness correction of the selected equipment, according to Section 3.3 of the IND-TM.

[5] 5 dB(A) of noise reduce has been adopted for noise source without direct view.

**APPENDIX 4-2
PREDICTED TRAFFIC FLOW AT PEAK
HOUR IN YEAR 2051**

Predicted Traffic Flow at Peak Hours of Year 2051

Road ID	Road	Direction	At grade / Flyover	Speed Limit (km/hr)	AM Peak		PM Peak	
					Traffic	% Heavy	Traffic	% Heavy
1	Boundary St (FO)	EB	Flyover	50	835	10%	920	5%
2	Boundary St	EB	At grade	50	685	15%	860	10%
3	Boundary St	EB	At grade	50	2,115	10%	2,555	5%
4	Tai Hang Tung Rd	NB	At grade	50	830	10%	820	5%
5	Tai Hang Tung Rd	SB	At grade	50	770	10%	655	10%
6	Boundary St	EB	At grade	50	2,575	10%	2,880	5%
7	Boundary St	WB	At grade	50	580	10%	590	10%
8	Prince Edward Rd W (FO)	WB	Flyover	50	1,125	10%	1,115	5%
9	Prince Edward Rd W	WB	At grade	50	1,585	25%	1,870	15%
10	Prince Edward Rd W	WB	At grade	50	30	0%	75	5%
11	Prince Edward Rd W	WB	At grade	50	1,720	20%	2,010	15%
12	Prince Edward Rd W	EB	At grade	50	85	5%	145	5%
13	Prince Edward Rd W	WB	At grade	50	3,915	15%	4,020	10%
14	Playing Field Rd	EB	At grade	50	40	0%	50	0%
15	Playing Field Rd	WB	At grade	50	205	10%	260	5%
16	Playing Field Rd	EB	At grade	50	55	10%	10	0%
17	Playing Field Rd	WB	At grade	50	90	0%	80	0%
18	Flower Market Rd	EB	At grade	50	185	10%	200	0%
19	Nullah Rd	EB	At grade	50	45	0%	70	0%
20	Nullah Rd	WB	At grade	30	70	0%	140	0%
21	Bute St	WB	At grade	30	110	15%	95	10%
22	Nathan Rd	NB	At grade	50	785	30%	1,080	30%
23	Nathan Rd	SB	At grade	50	1,220	30%	1,445	20%
24	Nathan Rd	SB	At grade	50	1,545	30%	1,475	20%
25	Sai Yeung Choi St N	SB	At grade	50	100	5%	180	0%
26	Sai Yeung Choi St S	SB	At grade	50	680	10%	670	10%
27	Tung Choi St	SB	At grade	50	475	15%	590	10%
28	Tung Choi St	NB	At grade	30	105	0%	140	0%
29	Fa Yuen St	SB	At grade	50	580	10%	535	5%
30	Fa Yuen St	NB	At grade	30	30	0%	20	0%
31	Sai Yee St	NB	At grade	50	400	5%	725	5%
32	Sai Yee St	NB	At grade	50	440	25%	730	15%
33	Sai Yee St	SB	At grade	50	400	30%	460	30%
34	Yuen Ngai St	SB	At grade	50	135	15%	90	0%
35	Embankment Rd	NB	At grade	50	995	10%	895	5%
36	Sai Yeung Choi St N	SB	At grade	50	440	5%	280	0%
37	Sai Yeung Choi St N	NB	At grade	50	40	0%	60	0%
38	Cheung Sha Wan Rd	SB	At grade	50	1,135	25%	1,340	20%
39	Cheung Sha Wan Rd	NB	At grade	50	485	40%	740	45%
40	Boundary St	EB	At grade	50	915	10%	1,170	5%
41	Yu Chau St	NB	At grade	50	530	10%	505	5%
42	Ki Lung St	NB	At grade	50	50	0%	60	0%
43	Portland St	NB	At grade	50	660	10%	600	5%
44	Tai Nan St	NB	At grade	50	255	10%	285	10%
45	Prince Edward Rd W	EB	At grade	50	340	10%	365	5%
46	Lai Chi Kok Rd	SB	At grade	50	735	15%	610	10%
47	Lai Chi Kok Rd	NB	At grade	50	330	25%	440	20%
48	Arran St	EB	At grade	50	100	15%	190	45%
49	Fa Yuen St	SB	At grade	30	25	0%	50	0%
50	Sai Yee St	NB	At grade	50	400	20%	635	15%
51	Sai Yee St	SB	At grade	50	600	35%	635	30%
52	Tat Chee Ave	NB	At grade	50	345	15%	355	5%
53	Tat Chee Ave	SB	At grade	50	290	5%	290	5%
54	Boundary St	EB	At grade	50	2,940	10%	3,150	5%
55	Duke St	EB	At grade	50	90	65%	65	0%
56	Nullah Rd	EB	At grade	50	135	5%	190	5%
57	Playing Field Rd	EB	At grade	50	285	10%	360	5%
58	Nathan Rd	NB	At grade	50	770	20%	1,075	35%
59	Prince Edward Rd W	WB	At grade	50	1,315	15%	1,535	5%
60	Bute St	WB	At grade	50	370	30%	385	20%
103	Kadoorie Ave	NB	At grade	50	315	10%	380	5%
104	Kadoorie Ave	SB	At grade	50	100	5%	60	0%
105	Prince Edward Rd W	WB	At grade	50	3,700	15%	4,065	10%
118	Marigold Rd & Magnolia Rd	NB	At grade	50	45	10%	40	0%
129	Prince Edward Rd W	EB	At grade	50	70	10%	115	5%
130	Prince Edward Rd W	WB	At grade	50	25	0%	85	15%
131	Prince Edward Rd W	EB	At grade	50	85	15%	105	10%
132	Portland St	SB	At grade	50	225	15%	390	15%
133	Portland St	SB	At grade	50	85	10%	60	10%
134	Cheung Sha Wan Rd	NB	At grade	50	345	20%	405	10%
138	Boundary St	EB	At grade	50	425	10%	500	5%

**APPENDIX 4-3
TRAFFIC NOISE ASSESSMENT RESULTS
(BASE SCENARIO)**

Base Scenario, Tower 1 at Site A1 (by Noise Assessment Points)

Site A1 - Tower 1 (High Zone)																							
Floor	Height (mPD)	AT1-HZ-F01-O01	AT1-HZ-F01-O02	AT1-HZ-F01-O03	AT1-HZ-F01-O04	AT1-HZ-F02-O05	AT1-HZ-F02-O06	AT1-HZ-F02-O07	AT1-HZ-F03-O08	AT1-HZ-F03-O09	AT1-HZ-F03-O10	AT1-HZ-F04-O11	AT1-HZ-F04-O12	AT1-HZ-F04-O13	AT1-HZ-F05-O14	AT1-HZ-F05-O15	AT1-HZ-F06-O16	AT1-HZ-F06-O17	AT1-HZ-F07-O18	AT1-HZ-F07-O19	AT1-HZ-F07-O20	AT1-HZ-F07-O21	AT1-HZ-F07-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
38/F	147.3	65.6	63.1	63.0	63.2	63.6	64.0	63.9	63.8	63.7	61.1	57.5	63.2	61.5	62.3	59.1	65.8	67.7	68.8	69.5	67.2	67.8	67.5
37/F	144.1	65.5	63.0	62.9	63.1	63.5	63.9	63.8	63.7	63.6	60.9	57.3	63.2	61.4	62.2	59.0	65.8	67.7	68.9	69.6	67.3	67.8	67.5
36/F	141.0	65.4	62.9	62.8	63.1	63.4	63.7	63.7	63.6	63.5	60.8	57.3	63.1	61.4	62.2	59.0	65.8	67.8	69.0	69.7	67.3	67.9	67.6
35/F	137.8	65.2	62.8	62.7	63.0	63.3	63.6	63.6	63.5	63.4	60.7	57.3	63.0	61.3	62.1	59.0	65.7	67.8	69.1	69.8	67.4	68.0	67.6
34/F	134.7	65.1	62.8	62.7	62.9	63.2	63.5	63.5	63.4	63.3	60.6	57.3	62.9	61.3	62.0	59.0	65.7	67.9	69.2	69.9	67.4	68.0	67.6
33/F	131.5	65.0	62.6	62.6	62.8	63.1	63.4	63.3	63.3	63.1	60.5	57.3	62.8	61.2	61.8	59.1	65.7	67.9	69.2	70.0	67.5	68.1	67.6
32/F	128.4	64.8	62.5	62.6	62.8	63.0	63.3	63.2	63.0	62.9	60.3	57.4	62.7	61.1	61.7	59.1	65.7	68.0	69.3	70.1	67.5	68.1	67.6
31/F	125.2	64.6	62.3	62.6	62.8	63.0	63.3	63.2	62.8	62.7	60.2	57.4	62.6	61.1	61.6	59.1	65.6	68.0	69.4	70.1	67.5	68.1	67.6
30/F	122.1	64.4	62.1	62.6	62.7	62.9	63.1	62.9	62.7	62.5	60.1	57.4	62.4	61.0	61.5	59.1	65.6	68.0	69.4	70.2	67.4	68.1	67.5
29/F	118.9	64.2	62.0	62.6	62.7	62.9	63.0	62.7	62.5	62.2	59.9	57.4	62.2	60.9	61.4	59.1	65.5	68.0	69.5	70.3	67.4	68.0	67.4
28/F	115.8	64.0	61.7	62.6	62.7	62.8	63.0	62.6	62.2	61.9	59.7	57.4	62.0	60.8	61.3	59.2	65.4	68.1	69.6	70.4	67.3	67.9	67.3
27/F	112.6	63.8	61.5	62.6	62.7	62.8	62.9	62.5	62.1	61.6	59.5	57.4	61.7	60.7	61.2	59.2	65.3	68.1	69.6	70.4	67.3	67.8	67.2
26/F	109.5	63.5	61.2	62.6	62.7	62.7	62.8	62.4	61.9	61.3	59.3	57.4	61.5	60.6	61.0	59.2	65.2	68.1	69.6	70.5	67.1	67.8	67.1
25/F	106.3	63.3	60.9	62.7	62.7	62.7	62.8	62.3	61.7	61.1	59.1	57.4	61.1	60.5	60.9	59.2	65.0	68.1	69.7	70.5	66.9	67.7	67.0
24/F	103.2	63.0	60.7	62.7	62.7	62.7	62.8	62.2	61.6	60.8	58.9	57.3	60.9	60.3	60.8	59.2	64.9	68.1	69.7	70.6	66.8	67.6	66.9
23/F	100.0	62.7	60.5	62.8	62.7	62.7	62.7	62.1	61.5	60.6	58.6	57.3	60.6	60.2	60.6	59.2	64.7	68.1	69.7	70.5	66.6	67.5	66.8
22/F	96.9	62.6	60.4	62.8	62.8	62.7	62.8	62.1	61.4	60.3	58.4	57.3	60.3	60.0	60.4	59.2	64.6	68.1	69.7	70.6	66.4	67.5	66.6

Site A1 - Tower 1 (Low Zone)																							
Floor	Height (mPD)	AT1-LZ-F01-O01	AT1-LZ-F01-O02	AT1-LZ-F01-O03	AT1-LZ-F01-O04	AT1-LZ-F02-O05	AT1-LZ-F02-O06	AT1-LZ-F02-O07	AT1-LZ-F03-O08	AT1-LZ-F03-O09	AT1-LZ-F03-O10	AT1-LZ-F04-O11	AT1-LZ-F04-O12	AT1-LZ-F04-O13	AT1-LZ-F05-O14	AT1-LZ-F05-O15	AT1-LZ-F06-O16	AT1-LZ-F06-O17	AT1-LZ-F07-O18	AT1-LZ-F07-O19	AT1-LZ-F07-O20	AT1-LZ-F07-O21	AT1-LZ-F07-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
19/F	87.4	62.4	60.1	63.1	63.0	62.9	62.9	62.1	61.2	59.8	57.7	57.3	59.7	59.5	59.9	59.2	64.5	68.3	70.0	<u>70.8</u>	65.9	67.2	66.1
18/F	84.3	62.4	60.1	63.2	63.1	62.9	62.9	62.2	61.2	59.8	57.6	57.2	59.6	59.4	59.8	59.2	64.5	68.5	70.2	<u>70.9</u>	65.7	67.1	66.0
17/F	81.1	62.4	60.1	63.4	63.2	63.0	63.0	62.2	61.2	59.7	57.5	57.2	59.5	59.3	59.7	59.2	64.5	68.6	70.3	<u>70.9</u>	65.5	67.0	66.0
16/F	78.0	62.3	60.1	63.5	63.4	63.1	63.1	62.3	61.3	59.6	57.5	57.2	59.5	59.3	59.7	59.3	64.6	68.7	<u>70.5</u>	<u>71.0</u>	65.3	67.1	66.0
15/F	74.8	62.3	60.1	63.6	63.5	63.2	63.2	62.3	61.3	59.6	57.4	57.2	59.4	59.3	59.7	59.3	64.7	68.9	<u>70.8</u>	<u>71.2</u>	65.2	67.1	66.1
14/F	71.7	62.3	60.2	63.8	63.6	63.3	63.3	62.4	61.4	59.6	57.4	57.2	59.4	59.3	59.7	59.4	64.9	69.0	<u>71.0</u>	<u>71.3</u>	65.1	67.2	66.2
13/F	68.5	62.3	60.2	63.9	63.7	63.4	63.4	62.5	61.4	59.7	57.4	57.2	59.5	59.3	59.8	59.4	65.0	69.2	<u>71.2</u>	<u>71.5</u>	65.1	67.4	66.3
12/F	65.4	62.3	60.5	64.0	63.9	63.6	63.5	62.6	61.5	59.8	57.4	57.3	59.6	59.3	59.9	59.5	65.1	69.4	<u>71.5</u>	<u>71.7</u>	65.2	67.6	66.5
11/F	62.2	62.3	60.5	64.1	64.0	63.7	63.6	62.7	61.5	59.9	57.4	57.3	59.7	59.4	60.0	59.5	65.3	69.6	<u>71.8</u>	<u>71.9</u>	65.2	67.7	66.6
10/F	59.1	62.1	60.2	64.3	64.1	63.8	63.7	62.7	61.6	60.0	57.4	57.3	59.8	59.5	60.1	59.6	65.4	69.8	<u>72.0</u>	<u>72.1</u>	65.2	67.9	66.6
9/F	55.9	61.9	59.8	64.4	64.2	63.9	63.8	62.8	61.7	60.0	57.4	57.3	59.9	59.5	60.2	59.7	65.6	70.0	<u>72.3</u>	<u>72.4</u>	65.3	68.1	66.9
8/F	52.8	62.0	59.5	64.5	64.3	64.0	63.9	62.9	61.8	60.1	57.4	57.2	59.9	59.6	60.3	59.8	65.8	70.2	<u>72.6</u>	<u>72.7</u>	65.5	68.4	67.1
7/F	49.6	62.3	59.6	64.6	64.4	64.1	63.9	63.0	61.8	60.1	57.4	57.0	60.0	59.6	60.4	59.9	66.0	<u>70.5</u>	<u>72.9</u>	<u>73.0</u>	65.9	68.7	67.4
6/F	46.5	62.6	59.9	64.6	64.5	64.0	63.9	62.9	61.7	60.0	57.2	56.6	59.9	59.6	60.5	60.0	66.2	<u>70.7</u>	<u>73.1</u>	<u>73.2</u>	66.2	69.0	67.8
5/F	43.3	63.1	60.3	64.6	64.5	64.0	63.9	62.9	61.6	59.7	57.0	56.2	59.6	59.3	60.5	60.0	66.4	<u>71.0</u>	<u>73.4</u>	<u>73.5</u>	66.6	69.4	68.1
4/F	40.2	63.6	60.7	64.6	64.5	64.0	63.8	62.8	61.5	59.3	56.7	55.7	59.2	58.8	60.3	59.9	66.6	<u>71.2</u>	<u>73.7</u>	<u>73.8</u>	67.0	69.7	68.5
3/F	37.0	64.1	60.9	64.6	64.5	63.9	63.7	62.7	61.3	58.8	56.2	55.0	58.7	58.4	59.7	59.3	66.7	<u>71.4</u>	<u>74.0</u>	<u>74.1</u>	67.3	70.1	68.9
2/F	33.9	64.6	60.7	64.5	64.4	63.8	63.6	62.5	60.9	58.0	55.2	53.8	57.9	57.6	59.0	58.4	66.8	<u>71.6</u>	<u>74.3</u>	<u>74.4</u>	67.7	<u>70.5</u>	69.3
1/F	30.7	64.8	58.2	64.1	64.0	63.6	63.3	62.1	60.3	56.7	54.1	52.7	56.6	56.4	58.3	57.6	66.7	<u>71.8</u>	<u>74.5</u>	<u>74.7</u>	68.1	<u>70.8</u>	69.6

Base Scenario, Tower 1 at Site A1 (by Flats)

Site A1 - Tower 1 (High Zone)								
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07
Predicted Noise Level, L10 (1-hr), dB(A)								
38/F	147.3	65.6	64.0	63.8	63.2	62.3	67.7	69.5
37/F	144.1	65.5	63.9	63.7	63.2	62.2	67.7	69.6
36/F	141.0	65.4	63.7	63.6	63.1	62.2	67.8	69.7
35/F	137.8	65.2	63.6	63.5	63.0	62.1	67.8	69.8
34/F	134.7	65.1	63.5	63.4	62.9	62.0	67.9	69.9
33/F	131.5	65.0	63.4	63.3	62.8	61.8	67.9	70.0
32/F	128.4	64.8	63.3	63.0	62.7	61.7	68.0	70.1
31/F	125.2	64.6	63.2	62.8	62.6	61.6	68.0	70.1
30/F	122.1	64.4	63.1	62.7	62.4	61.5	68.0	70.2
29/F	118.9	64.2	63.0	62.5	62.2	61.4	68.0	70.3
28/F	115.8	64.0	63.0	62.2	62.0	61.3	68.1	70.4
27/F	112.6	63.8	62.9	62.1	61.7	61.2	68.1	70.4
26/F	109.5	63.5	62.8	61.9	61.5	61.0	68.1	<u>70.5</u>
25/F	106.3	63.3	62.8	61.7	61.1	60.9	68.1	<u>70.5</u>
24/F	103.2	63.0	62.8	61.6	60.9	60.8	68.1	<u>70.6</u>
23/F	100.0	62.8	62.7	61.5	60.6	60.6	68.1	<u>70.5</u>
22/F	96.9	62.8	62.8	61.4	60.3	60.4	68.1	<u>70.6</u>

Site A1 - Tower 1 (Low Zone)								
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07
Predicted Noise Level, L10 (1-hr), dB(A)								
19/F	87.4	63.1	62.9	61.2	59.7	59.9	68.3	<u>70.8</u>
18/F	84.3	63.2	62.9	61.2	59.6	59.8	68.5	<u>70.9</u>
17/F	81.1	63.4	63.0	61.2	59.5	59.7	68.6	<u>70.9</u>
16/F	78.0	63.5	63.1	61.3	59.5	59.7	68.7	<u>71.0</u>
15/F	74.8	63.6	63.2	61.3	59.4	59.7	68.9	<u>71.2</u>
14/F	71.7	63.8	63.3	61.4	59.4	59.7	69.0	<u>71.3</u>
13/F	68.5	63.9	63.4	61.4	59.5	59.8	69.2	<u>71.5</u>
12/F	65.4	64.0	63.6	61.5	59.6	59.9	69.4	<u>71.7</u>
11/F	62.2	64.1	63.7	61.5	59.7	60.0	69.6	<u>71.9</u>
10/F	59.1	64.3	63.8	61.6	59.8	60.1	69.8	<u>72.1</u>
9/F	55.9	64.4	63.9	61.7	59.9	60.2	70.0	<u>72.4</u>
8/F	52.8	64.5	64.0	61.8	59.9	60.3	70.2	<u>72.7</u>
7/F	49.6	64.6	64.1	61.8	60.0	60.4	<u>70.5</u>	<u>73.0</u>
6/F	46.5	64.6	64.0	61.7	59.9	60.5	<u>70.7</u>	<u>73.2</u>
5/F	43.3	64.6	64.0	61.6	59.6	60.5	<u>71.0</u>	<u>73.5</u>
4/F	40.2	64.6	64.0	61.5	59.2	60.3	<u>71.2</u>	<u>73.8</u>
3/F	37.0	64.6	63.9	61.3	58.7	59.7	<u>71.4</u>	<u>74.1</u>
2/F	33.9	64.6	63.8	60.9	57.9	59.0	<u>71.6</u>	<u>74.4</u>
1/F	30.7	64.8	63.6	60.3	56.6	58.3	<u>71.8</u>	<u>74.7</u>

Base Scenario, Tower 2 at Site A1 (by Noise Assessment Points)

Site A1 - Tower 2 (High Zone)																							
Floor	Height (mPD)	AT2-HZ-F01-O01	AT2-HZ-F01-O02	AT2-HZ-F01-O03	AT2-HZ-F01-O04	AT2-HZ-F01-O05	AT2-HZ-F02-O06	AT2-HZ-F02-O07	AT2-HZ-F02-O08	AT2-HZ-F03-O09	AT2-HZ-F03-O10	AT2-HZ-F03-O11	AT2-HZ-F04-O12	AT2-HZ-F04-O13	AT2-HZ-F04-O14	AT2-HZ-F05-O15	AT2-HZ-F05-O16	AT2-HZ-F05-O17	AT2-HZ-F05-O18	AT2-HZ-F05-O19	AT2-HZ-F06-O20	AT2-HZ-F06-O21	AT2-HZ-F06-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
38/F	147.3	63.2	63.5	63.1	64.4	63.6	66.1	66.1	65.0	63.4	64.3	63.5	61.2	62.5	62.5	64.1	65.3	65.3	65.4	60.1	64.1	63.3	59.7
37/F	144.1	63.2	63.5	63.1	64.4	63.5	66.1	66.1	65.1	63.4	64.3	63.5	61.2	62.4	62.4	64.0	65.3	65.2	65.4	60.1	64.1	63.3	59.6
36/F	141.0	63.2	63.5	63.0	64.4	63.5	66.1	66.1	65.1	63.4	64.3	63.5	61.2	62.4	62.4	63.9	65.2	65.1	65.3	60.1	64.1	63.3	59.6
35/F	137.8	63.1	63.4	63.0	64.3	63.5	66.2	66.1	65.1	63.5	64.3	63.5	61.3	62.4	62.4	63.9	65.1	65.1	65.3	60.1	64.0	63.2	59.6
34/F	134.7	63.1	63.4	62.9	64.3	63.5	66.2	66.2	65.2	63.6	64.4	63.5	61.3	62.4	62.3	63.7	65.0	65.0	65.2	60.1	63.9	63.2	59.5
33/F	131.5	63.1	63.3	62.8	64.3	63.5	66.2	66.2	65.2	63.7	64.4	63.5	61.4	62.4	62.3	63.6	65.0	65.0	65.2	60.0	63.9	63.2	59.5
32/F	128.4	63.0	63.2	62.8	64.3	63.4	66.3	66.3	65.3	63.7	64.4	63.5	61.5	62.4	62.3	63.5	64.9	64.9	65.1	60.0	63.8	63.2	59.5
31/F	125.2	63.0	63.2	62.7	64.3	63.4	66.3	66.3	65.4	63.8	64.5	63.6	61.6	62.4	62.3	63.3	64.7	64.7	65.0	59.9	63.7	63.1	59.4
30/F	122.1	62.9	63.1	62.6	64.3	63.4	66.4	66.4	65.4	63.9	64.5	63.6	61.8	62.4	62.3	63.1	64.5	64.6	64.8	59.9	63.6	63.1	59.4
29/F	118.9	62.9	63.0	62.5	64.2	63.4	66.5	66.5	65.5	64.0	64.6	63.7	61.9	62.5	62.3	62.9	64.4	64.5	64.7	59.8	63.5	63.0	59.3
28/F	115.8	62.9	62.9	62.4	64.2	63.5	66.5	66.5	65.6	64.2	64.6	63.7	62.0	62.5	62.4	62.7	64.3	64.3	64.6	59.7	63.4	63.0	59.2
27/F	112.6	62.8	62.8	62.3	64.2	63.5	66.6	66.6	65.6	64.3	64.7	63.8	62.1	62.5	62.4	62.4	64.1	64.2	64.5	59.6	63.3	62.9	59.1
26/F	109.5	62.7	62.7	62.2	64.2	63.5	66.7	66.7	65.7	64.4	64.7	63.9	62.3	62.6	62.4	62.0	63.9	64.0	64.3	59.4	63.2	62.8	59.0
25/F	106.3	62.6	62.6	62.1	64.2	63.5	66.8	66.7	65.8	64.5	64.8	63.9	62.4	62.7	62.5	61.6	63.8	63.9	64.2	59.3	63.1	62.8	58.9
24/F	103.2	62.5	62.5	61.9	64.2	63.6	66.8	66.8	65.9	64.7	64.9	64.0	62.6	62.7	62.5	61.3	63.7	63.8	64.1	59.2	63.0	62.7	58.8
23/F	100.0	62.5	62.4	61.9	64.1	63.6	66.9	66.9	66.0	64.8	65.0	64.1	62.7	62.8	62.6	61.0	63.5	63.7	64.1	59.0	62.9	62.6	58.8
22/F	96.9	62.4	62.3	61.8	64.1	63.6	67.0	67.0	66.1	64.9	65.1	64.2	62.9	62.9	62.7	60.8	63.5	63.7	64.0	58.8	62.8	62.5	58.7
21/F	93.7	62.3	62.3	61.7	64.2	63.7	67.1	67.1	66.2	65.0	65.2	64.3	63.1	63.0	62.8	60.7	63.5	63.7	64.1	58.6	62.8	62.4	58.6

Site A1 - Tower 2 (Low Zone)																							
Floor	Height (mPD)	AT2-LZ-F01-O01	AT2-LZ-F01-O02	AT2-LZ-F01-O03	AT2-LZ-F01-O04	AT2-LZ-F01-O05	AT2-LZ-F02-O06	AT2-LZ-F02-O07	AT2-LZ-F02-O08	AT2-LZ-F03-O09	AT2-LZ-F03-O10	AT2-LZ-F03-O11	AT2-LZ-F04-O12	AT2-LZ-F04-O13	AT2-LZ-F04-O14	AT2-LZ-F05-O15	AT2-LZ-F05-O16	AT2-LZ-F05-O17	AT2-LZ-F05-O18	AT2-LZ-F05-O19	AT2-LZ-F06-O20	AT2-LZ-F06-O21	AT2-LZ-F06-O22
		Predicted Noise Level, L10 dB(A)																					
19/F	87.4	62.1	62.1	61.6	64.3	63.9	67.4	67.3	66.5	65.3	65.4	64.6	63.4	63.2	63.0	60.5	63.5	63.8	64.1	58.2	62.6	62.3	58.3
18/F	84.3	62.1	62.1	61.5	64.3	64.0	67.5	67.4	66.6	65.5	65.5	64.7	63.5	63.4	63.1	60.4	63.6	63.8	64.2	57.8	62.5	62.2	58.2
17/F	81.1	62.0	62.0	61.5	64.4	64.1	67.6	67.5	66.7	65.6	65.6	64.8	63.7	63.5	63.3	60.4	63.6	63.8	64.1	57.5	62.3	62.1	58.1
16/F	78.0	61.9	62.0	61.5	64.5	64.2	67.7	67.6	66.8	65.7	65.7	65.0	63.9	63.7	63.4	60.4	63.6	63.8	64.2	57.0	62.2	62.0	58.0
15/F	74.8	61.9	61.9	61.5	64.7	64.3	67.9	67.8	67.0	65.9	65.9	65.2	64.0	63.8	63.6	60.3	63.6	63.9	64.2	56.5	62.1	61.9	57.9
14/F	71.7	61.8	61.8	61.6	64.8	64.4	68.0	67.9	67.1	66.0	66.0	65.3	64.2	64.0	63.7	60.4	63.6	63.9	64.2	55.9	61.8	61.8	57.8
13/F	68.5	61.5	61.6	61.6	65.0	64.5	68.1	68.0	67.2	66.1	66.2	65.5	64.4	64.1	63.8	60.4	63.7	64.0	64.3	55.3	61.5	61.4	57.7
12/F	65.4	61.2	61.4	61.6	65.1	64.7	68.3	68.2	67.4	66.3	66.3	65.6	64.5	64.3	64.0	60.5	63.9	64.0	64.3	54.6	61.0	60.8	57.4
11/F	62.2	60.9	61.2	61.6	65.2	64.8	68.4	68.3	67.5	66.4	66.5	65.8	64.7	64.4	64.1	60.5	63.9	64.0	64.2	53.9	60.5	60.2	57.0
10/F	59.1	60.6	61.0	61.6	65.3	65.0	68.5	68.4	67.7	66.5	66.6	66.0	64.8	64.6	64.3	60.3	63.9	64.0	64.1	53.1	60.0	59.7	56.7
9/F	55.9	60.5	60.9	61.7	65.5	65.2	68.7	68.6	67.8	66.7	66.8	66.1	65.0	64.7	64.4	59.9	63.9	64.0	64.1	51.7	59.6	59.3	56.6
8/F	52.8	60.4	61.0	61.9	65.7	65.4	68.8	68.7	68.0	66.8	66.9	66.3	65.1	64.9	64.5	59.6	63.9	64.1	64.1	50.7	59.0	58.8	56.8
7/F	49.6	60.5	61.2	62.1	65.9	65.6	69.0	68.9	68.1	67.0	67.1	66.4	65.2	65.0	64.7	59.7	64.1	64.2	64.2	50.3	58.5	58.3	57.0
6/F	46.5	60.7	61.4	62.3	66.1	65.9	69.1	69.0	68.3	67.1	67.3	66.6	65.4	65.0	64.7	59.9	64.3	64.4	64.4	50.2	58.4	58.3	57.2
5/F	43.3	60.9	61.7	62.5	66.4	66.1	69.3	69.2	68.4	67.3	67.4	66.7	65.5	65.1	64.7	60.2	64.6	64.7	64.7	50.2	58.5	58.4	57.5
4/F	40.2	61.2	61.9	62.7	66.6	66.4	69.4	69.3	68.6	67.4	67.5	66.8	65.5	65.1	64.7	60.6	65.0	65.1	65.1	50.3	58.7	58.6	57.8
3/F	37.0	61.4	62.2	62.9	66.9	66.6	69.6	69.5	68.7	67.5	67.6	66.8	65.5	65.0	64.7	60.8	65.4	65.5	65.5	50.4	58.8	58.8	58.1
2/F	33.9	61.7	62.5	63.2	67.2	66.9	69.8	69.6	68.8	67.6	67.6	66.7	65.4	64.9	64.6	60.6	65.8	65.9	65.8	50.5	58.7	58.8	58.4
1/F	30.7	61.9	62.8	63.5	67.5	67.2	69.8	69.6	68.8	67.2	67.2	66.3	64.8	64.3	64.0	58.1	66.0	66.1	66.1	50.3	58.7	58.7	58.7

Base Scenario, Tower 2 at Site A1 (by Flats)

Site A1 - Tower 2 (High Zone)							
Floor	Height (mPD)	F01	F02		F04	F05	F06
		Predicted Noise Level, L10 (1-hr), dB(A)					
38/F	147.3	64.4	66.1	64.3	62.5	65.4	64.1
37/F	144.1	64.4	66.1	64.3	62.4	65.4	64.1
36/F	141	64.4	66.1	64.3	62.4	65.3	64.1
35/F	137.8	64.3	66.2	64.3	62.4	65.3	64.0
34/F	134.7	64.3	66.2	64.4	62.4	65.2	63.9
33/F	131.5	64.3	66.2	64.4	62.4	65.2	63.9
32/F	128.4	64.3	66.3	64.4	62.4	65.1	63.8
31/F	125.2	64.3	66.3	64.5	62.4	65.0	63.7
30/F	122.1	64.3	66.4	64.5	62.4	64.8	63.6
29/F	118.9	64.2	66.5	64.6	62.5	64.7	63.5
28/F	115.8	64.2	66.5	64.6	62.5	64.6	63.4
27/F	112.6	64.2	66.6	64.7	62.5	64.5	63.3
26/F	109.5	64.2	66.7	64.7	62.6	64.3	63.2
25/F	106.3	64.2	66.8	64.8	62.7	64.2	63.1
24/F	103.2	64.2	66.8	64.9	62.7	64.1	63.0
23/F	100	64.1	66.9	65.0	62.8	64.1	62.9
22/F	96.9	64.1	67.0	65.1	62.9	64.0	62.8
21/F	93.7	64.2	67.1	65.2	63.1	64.1	62.8

Site A1 - Tower 2 (Low Zone)							
Floor	Height (mPD)	F01	F02		F04	F05	F06
		Predicted Noise Level, L10 dB(A)					
19/F	87.4	64.3	67.4	65.4	63.4	64.1	62.6
18/F	84.3	64.3	67.5	65.5	63.5	64.2	62.5
17/F	81.1	64.4	67.6	65.6	63.7	64.1	62.3
16/F	78	64.5	67.7	65.7	63.9	64.2	62.2
15/F	74.8	64.7	67.9	65.9	64.0	64.2	62.1
14/F	71.7	64.8	68.0	66.0	64.2	64.2	61.8
13/F	68.5	65.0	68.1	66.2	64.4	64.3	61.5
12/F	65.4	65.1	68.3	66.3	64.5	64.3	61.0
11/F	62.2	65.2	68.4	66.5	64.7	64.2	60.5
10/F	59.1	65.3	68.5	66.6	64.8	64.1	60.0
9/F	55.9	65.5	68.7	66.8	65.0	64.1	59.6
8/F	52.8	65.7	68.8	66.9	65.1	64.1	59.0
7/F	49.6	65.9	69.0	67.1	65.2	64.2	58.5
6/F	46.5	66.1	69.1	67.3	65.4	64.4	58.4
5/F	43.3	66.4	69.3	67.4	65.5	64.7	58.5
4/F	40.2	66.6	69.4	67.5	65.5	65.1	58.7
3/F	37	66.9	69.6	67.6	65.5	65.5	58.8
2/F	33.9	67.2	69.8	67.6	65.4	65.9	58.8
1/F	30.7	67.5	69.8	67.2	64.8	66.1	58.7

Base Scenario, Tower 1 at Site B (by Noise Assessment Points)

Site B - Tower 1																					
Floor	Height (mPD)	BT1-F01-O01	BT1-F01-O02	BT1-F01-O03	BT1-F02-O04	BT1-F02-O05	BT1-F03-O06	BT1-F03-O07	BT1-F03-O08	BT1-F04-O09	BT1-F04-O10	BT1-F04-O11	BT1-F05-O12	BT1-F05-O13	BT1-F06-O14	BT1-F06-O15	BT1-F07-O16	BT1-F07-O17	BT1-F08-O18	BT1-F08-O19	BT1-F08-O20
		Predicted Noise Level, L10 (1-hr), dB(A)																			
35/F	147.7	63.3	63.9	62.5	62.0	62.0	62.1	62.2	62.2	62.2	62.3	62.3	62.3	62.3	62.4	62.4	62.5	64.3	65.7	65.7	65.7
34/F	144.6	63.3	63.9	62.6	61.9	61.9	62.0	62.1	62.1	62.2	62.2	62.3	62.3	62.3	62.4	62.4	62.5	64.3	65.7	65.7	65.7
33/F	141.4	63.3	63.8	62.5	61.9	61.9	62.0	62.0	62.1	62.2	62.2	62.3	62.3	62.3	62.4	62.4	62.6	64.4	65.7	65.7	65.7
32/F	138.3	63.3	63.8	62.5	61.9	61.9	62.0	62.0	62.1	62.2	62.2	62.3	62.3	62.3	62.4	62.5	62.6	64.4	65.7	65.7	65.7
31/F	135.1	63.3	63.8	62.5	61.9	61.9	62.0	62.0	62.0	62.1	62.2	62.3	62.3	62.3	62.4	62.5	62.7	64.5	65.7	65.7	65.7
30/F	132.0	63.3	63.8	62.5	61.9	61.9	62.0	62.0	62.0	62.1	62.1	62.2	62.3	62.3	62.4	62.5	62.7	64.5	65.7	65.7	65.7
29/F	128.8	63.3	63.8	62.5	61.8	61.9	61.9	61.9	61.9	62.0	62.1	62.2	62.3	62.3	62.4	62.6	62.7	64.6	65.7	65.7	65.7
28/F	125.7	63.3	63.8	62.5	61.8	61.8	61.9	61.9	61.9	62.0	62.0	62.2	62.3	62.3	62.4	62.6	62.8	64.6	65.7	65.7	65.7
27/F	122.5	63.2	63.8	62.5	61.8	61.8	61.8	61.8	61.9	61.9	62.0	62.1	62.2	62.3	62.4	62.6	62.8	64.7	65.7	65.7	65.7
26/F	119.4	63.2	63.8	62.5	61.7	61.7	61.8	61.8	61.8	62.0	61.9	62.0	62.1	62.2	62.4	62.6	62.8	64.7	65.8	65.7	65.7
25/F	116.2	63.2	63.8	62.4	61.7	61.7	61.7	61.7	61.7	61.8	61.9	62.0	62.1	62.2	62.3	62.5	62.8	64.7	65.8	65.7	65.7
24/F	113.1	63.1	63.7	62.4	61.6	61.6	61.7	61.7	61.7	61.8	61.8	62.0	62.0	62.1	62.3	62.5	62.7	64.7	65.8	65.8	65.7
23/F	109.9	63.1	63.7	62.3	61.6	61.6	61.6	61.6	61.6	61.7	61.7	61.9	62.0	62.0	62.2	62.4	62.7	64.6	65.8	65.8	65.7
22/F	106.8	63.0	63.6	62.3	61.5	61.5	61.5	61.5	61.5	61.6	61.6	61.7	61.9	62.0	62.1	62.3	62.6	64.5	65.8	65.8	65.7
21/F	103.6	62.9	63.5	62.2	61.4	61.4	61.5	61.4	61.4	61.5	61.5	61.6	61.7	61.9	62.1	62.3	62.5	64.4	65.8	65.8	65.7
20/F	100.5	62.8	63.4	62.0	61.2	61.2	61.3	61.3	61.3	61.4	61.4	61.5	61.6	61.8	61.9	62.2	62.5	64.3	65.8	65.8	65.7
19/F	97.3	62.7	63.2	61.9	61.0	61.0	61.2	61.2	61.2	61.3	61.3	61.4	61.5	61.7	61.9	62.1	62.4	64.3	65.9	65.8	65.7
18/F	94.2	62.6	63.1	61.8	60.7	60.8	60.9	61.0	61.0	61.2	61.2	61.3	61.4	61.5	61.7	62.0	62.3	64.3	65.9	65.8	65.7
17/F	91.0	62.5	63.0	61.6	60.5	60.5	60.7	60.8	60.8	61.0	61.0	61.1	61.3	61.4	61.6	61.8	62.2	64.2	65.9	65.9	65.8
16/F	87.9	62.5	62.8	61.5	60.4	60.3	60.5	60.6	60.7	60.8	60.8	60.9	61.1	61.3	61.5	61.7	62.1	64.2	65.9	65.9	65.8
15/F	84.7	62.4	62.7	61.4	60.2	60.2	60.4	60.4	60.4	60.6	60.5	60.7	60.9	61.1	61.3	61.6	62.0	64.1	66.0	65.9	65.8
14/F	81.6	62.3	62.5	61.2	60.0	60.0	60.2	60.2	60.1	60.2	60.3	60.5	60.7	60.9	61.2	61.5	61.9	64.1	66.0	65.9	65.9
13/F	78.4	62.2	62.4	61.0	59.8	59.8	60.0	59.8	59.8	59.9	60.0	60.3	60.5	60.8	61.0	61.3	61.8	64.1	66.0	66.0	65.9
12/F	75.3	62.0	62.2	60.8	59.5	59.5	59.8	59.5	59.5	59.7	59.9	60.1	60.3	60.6	60.8	61.2	61.7	64.0	66.1	66.0	65.9
11/F	72.1	61.8	62.0	60.5	59.2	59.3	59.6	59.2	59.2	59.5	59.7	59.9	60.2	60.4	60.7	61.0	61.5	64.0	66.1	66.0	66.0
10/F	69.0	61.7	61.8	60.3	58.8	58.9	59.3	58.9	59.0	59.3	59.5	59.7	60.0	60.3	60.6	60.9	61.4	63.9	66.1	66.0	66.0
9/F	65.8	61.6	61.7	60.1	58.4	58.5	58.9	58.5	58.6	59.0	59.3	59.6	59.9	60.1	60.4	60.8	61.3	63.9	66.1	66.1	66.0
8/F	62.7	61.5	61.6	59.8	58.1	58.2	58.5	58.0	58.2	58.6	59.0	59.3	59.7	59.9	60.3	60.6	61.2	63.8	66.2	66.1	66.0
7/F	59.5	61.4	61.5	59.7	57.8	57.8	58.1	57.6	57.7	58.1	58.4	58.9	59.3	59.7	60.1	60.4	61.0	63.8	66.2	66.1	66.0
6/F	56.4	61.3	61.4	59.5	57.3	57.2	57.5	57.1	57.1	57.6	57.9	58.2	58.7	59.2	59.7	60.2	60.8	63.7	66.1	66.1	66.0
5/F	53.2	61.2	61.2	59.1	56.7	56.5	56.9	56.5	56.6	56.8	57.1	57.5	58.0	58.5	59.0	59.6	60.5	63.6	66.1	66.0	65.9
4/F	50.1	61.1	61.1	58.8	56.0	55.9	56.1	55.9	55.9	56.1	56.3	56.6	56.8	57.2	58.0	59.0	60.0	63.3	66.1	66.0	65.9
3/F	46.9	60.9	60.9	58.5	55.2	54.9	55.1	54.9	54.8	55.0	55.2	55.5	55.5	55.7	56.1	57.2	59.0	63.0	66.0	65.9	65.8
2/F	43.8	60.7	60.6	58.0	54.1	53.8	54.0	53.6	53.5	53.5	53.7	53.9	54.0	54.1	54.2	54.9	56.4	62.3	65.9	65.8	65.7
1/F	40.6	60.5	60.3	57.5	52.7	52.3	52.5	51.8	51.6	51.6	51.7	51.9	52.0	52.2	52.3	52.5	53.4	60.9	65.9	65.7	65.6

Base Scenario, Tower 1 at Site B (by Noise Assessment Points)

Site B - Tower 1																					
Floor	Height (mPD)	BT1-F09-021	BT1-F09-022	BT1-F09-023	BT1-F10-024	BT1-F10-025	BT1-F10-026	BT1-F11-027	BT1-F11-028	BT1-F12-029	BT1-F12-030	BT1-F13-031	BT1-F13-032	BT1-F13-033	BT1-F14-034	BT1-F14-035	BT1-F14-036	BT1-F15-037	BT1-F15-038	BT1-F15-039	
		Predicted Noise Level, L10 (1-hr), dB(A)																			
35/F	147.7	65.6	65.6	65.6	65.5	65.5	65.5	65.5	65.5	65.4	65.4	65.4	65.5	65.5	65.5	65.5	65.5	65.5	65.6	65.6	65.7
34/F	144.6	65.6	65.6	65.6	65.5	65.5	65.5	65.5	65.4	65.4	65.4	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.6	65.6	65.6
33/F	141.4	65.6	65.6	65.6	65.5	65.5	65.5	65.4	65.4	65.4	65.3	65.4	65.4	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.6
32/F	138.3	65.6	65.6	65.6	65.5	65.5	65.4	65.4	65.3	65.3	65.3	65.4	65.4	65.4	65.4	65.5	65.5	65.5	65.5	65.5	65.6
31/F	135.1	65.6	65.6	65.6	65.5	65.5	65.4	65.4	65.3	65.3	65.2	65.3	65.4	65.4	65.4	65.4	65.4	65.5	65.5	65.5	65.6
30/F	132.0	65.6	65.6	65.5	65.5	65.4	65.4	65.3	65.3	65.2	65.2	65.3	65.3	65.3	65.4	65.4	65.4	65.4	65.5	65.5	65.6
29/F	128.8	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.3	65.2	65.2	65.2	65.3	65.3	65.3	65.3	65.4	65.4	65.4	65.5	65.5
28/F	125.7	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.3	65.2	65.2	65.2	65.3	65.3	65.3	65.3	65.3	65.3	65.4	65.4	65.5
27/F	122.5	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.2	65.2	65.1	65.2	65.2	65.2	65.2	65.2	65.3	65.3	65.3	65.4	65.4
26/F	119.4	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.2	65.2	65.1	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.3	65.3	65.4
25/F	116.2	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.2	65.2	65.1	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.3	65.3
24/F	113.1	65.6	65.6	65.5	65.4	65.4	65.3	65.3	65.2	65.2	65.1	65.1	65.2	65.1	65.1	65.1	65.2	65.2	65.2	65.3	65.3
23/F	109.9	65.6	65.5	65.5	65.4	65.3	65.3	65.2	65.2	65.2	65.1	65.1	65.1	65.1	65.1	65.1	65.2	65.2	65.2	65.3	65.3
22/F	106.8	65.6	65.5	65.5	65.4	65.3	65.3	65.2	65.2	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.2	65.2	65.3	65.3
21/F	103.6	65.6	65.5	65.4	65.4	65.3	65.2	65.2	65.1	65.1	65.0	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.2	65.3	65.3
20/F	100.5	65.6	65.5	65.4	65.3	65.3	65.2	65.1	65.1	65.1	65.0	65.1	65.1	65.0	65.0	65.0	65.1	65.1	65.1	65.2	65.2
19/F	97.3	65.6	65.5	65.5	65.3	65.3	65.2	65.1	65.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.1	65.1	65.1	65.2	65.2
18/F	94.2	65.7	65.6	65.5	65.3	65.3	65.2	65.1	65.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.1	65.2	65.2
17/F	91.0	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	64.9	65.0	65.0	64.9	64.9	64.9	65.0	65.0	65.0	65.1	65.1
16/F	87.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	65.0	65.1	65.1
15/F	84.7	65.7	65.6	65.5	65.4	65.3	65.2	65.2	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	65.0	65.0
14/F	81.6	65.8	65.7	65.6	65.4	65.3	65.3	65.2	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	65.0	65.0
13/F	78.4	65.8	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.0	65.0	65.0	64.9	64.9	64.9	64.9	64.9	64.9	64.9	65.0	65.0
12/F	75.3	65.8	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.8	64.9	64.9	65.0	65.0
11/F	72.1	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.8	64.9	64.9	64.9	64.9
10/F	69.0	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.8	64.8	64.9	64.9	64.9
9/F	65.8	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	65.0	64.9	64.9	64.9	64.8	64.8	64.8	64.8	64.9	64.9
8/F	62.7	65.9	65.8	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	64.9	64.9	64.9	64.8	64.8	64.8	64.8	64.8	64.9	64.9
7/F	59.5	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.0	65.0	64.9	64.9	64.8	64.8	64.8	64.8	64.8	64.8	64.9	64.9
6/F	56.4	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.0	64.9	64.9	64.8	64.8	64.8	64.8	64.7	64.7	64.8	64.8	64.8
5/F	53.2	65.8	65.7	65.6	65.4	65.3	65.2	65.1	65.0	64.9	64.9	64.8	64.8	64.7	64.7	64.7	64.7	64.7	64.7	64.8	64.8
4/F	50.1	65.8	65.6	65.5	65.4	65.3	65.2	65.1	64.9	64.9	64.8	64.8	64.7	64.7	64.7	64.6	64.6	64.6	64.6	64.7	64.7
3/F	46.9	65.7	65.5	65.4	65.3	65.2	65.1	65.0	64.8	64.7	64.7	64.7	64.6	64.6	64.6	64.6	64.5	64.6	64.6	64.7	64.7
2/F	43.8	65.6	65.4	65.3	65.2	65.1	65.0	64.8	64.6	64.6	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.6	64.7
1/F	40.6	65.5	65.3	65.1	65.0	64.8	64.8	64.4	64.4	64.4	64.3	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.5	64.6	64.6

Base Scenario, Tower 1 at Site B (by Flats)

Site B - Tower 1									
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07	F08
Predicted Noise Level, L10 (1-hr), dB(A)									
35/F	147.7	63.9	62.0	62.2	62.3	62.3	62.4	64.3	65.7
34/F	144.6	63.9	61.9	62.1	62.3	62.3	62.4	64.3	65.7
33/F	141.4	63.8	61.9	62.1	62.3	62.3	62.4	64.4	65.7
32/F	138.3	63.8	61.9	62.1	62.3	62.3	62.5	64.4	65.7
31/F	135.1	63.8	61.9	62.0	62.3	62.3	62.5	64.5	65.7
30/F	132.0	63.8	61.9	62.0	62.2	62.3	62.5	64.5	65.7
29/F	128.8	63.8	61.9	61.9	62.2	62.3	62.6	64.6	65.7
28/F	125.7	63.8	61.8	61.9	62.2	62.3	62.6	64.6	65.7
27/F	122.5	63.8	61.8	61.9	62.1	62.3	62.6	64.7	65.7
26/F	119.4	63.8	61.7	61.8	62.0	62.2	62.6	64.7	65.8
25/F	116.2	63.8	61.7	61.7	62.0	62.2	62.5	64.7	65.8
24/F	113.1	63.7	61.6	61.7	62.0	62.1	62.5	64.7	65.8
23/F	109.9	63.7	61.6	61.6	61.9	62.0	62.4	64.6	65.8
22/F	106.8	63.6	61.5	61.5	61.7	62.0	62.3	64.5	65.8
21/F	103.6	63.5	61.4	61.5	61.6	61.9	62.3	64.4	65.8
20/F	100.5	63.4	61.2	61.3	61.5	61.8	62.2	64.3	65.8
19/F	97.3	63.2	61.0	61.2	61.4	61.7	62.1	64.3	65.9
18/F	94.2	63.1	60.8	61.0	61.3	61.5	62.0	64.3	65.9
17/F	91.0	63.0	60.5	60.8	61.1	61.4	61.8	64.2	65.9
16/F	87.9	62.8	60.4	60.7	60.9	61.3	61.7	64.2	65.9
15/F	84.7	62.7	60.2	60.4	60.7	61.1	61.6	64.1	66.0
14/F	81.6	62.5	60.0	60.2	60.5	60.9	61.5	64.1	66.0
13/F	78.4	62.4	59.8	60.0	60.3	60.8	61.3	64.1	66.0
12/F	75.3	62.2	59.5	59.8	60.1	60.6	61.2	64.0	66.1
11/F	72.1	62.0	59.3	59.6	59.9	60.4	61.0	64.0	66.1
10/F	69.0	61.8	58.9	59.3	59.7	60.3	60.9	63.9	66.1
9/F	65.8	61.7	58.5	58.9	59.6	60.1	60.8	63.9	66.1
8/F	62.7	61.6	58.2	58.5	59.3	59.9	60.6	63.8	66.2
7/F	59.5	61.5	57.8	58.1	58.9	59.7	60.4	63.8	66.2
6/F	56.4	61.4	57.3	57.5	58.2	59.2	60.2	63.7	66.1
5/F	53.2	61.2	56.7	56.9	57.5	58.5	59.6	63.6	66.1
4/F	50.1	61.1	56.0	56.1	56.6	57.2	59.0	63.3	66.1
3/F	46.9	60.9	55.2	55.1	55.5	55.7	57.2	63.0	66.0
2/F	43.8	60.7	54.1	54.0	53.9	54.1	54.9	62.3	65.9
1/F	40.6	60.5	52.7	52.5	51.9	52.2	52.5	60.9	65.9

Base Scenario, Tower 1 at Site B (by Flats)

Site B - Tower 1								
Floor	Height (mPD)	F09	F10	F11	F12	F13	F14	F15
		Predicted Noise Level, L10 (1-hr), dB(A)						
35/F	147.7	65.6	65.5	65.5	65.4	65.5	65.5	65.7
34/F	144.6	65.6	65.5	65.4	65.4	65.5	65.5	65.6
33/F	141.4	65.6	65.5	65.4	65.4	65.5	65.5	65.6
32/F	138.3	65.6	65.5	65.4	65.3	65.4	65.5	65.6
31/F	135.1	65.6	65.5	65.3	65.3	65.4	65.4	65.6
30/F	132.0	65.6	65.5	65.3	65.2	65.3	65.4	65.6
29/F	128.8	65.6	65.4	65.3	65.2	65.3	65.4	65.5
28/F	125.7	65.6	65.4	65.3	65.2	65.3	65.3	65.5
27/F	122.5	65.6	65.4	65.3	65.2	65.2	65.3	65.4
26/F	119.4	65.6	65.4	65.3	65.2	65.2	65.2	65.4
25/F	116.2	65.6	65.4	65.3	65.2	65.2	65.2	65.3
24/F	113.1	65.6	65.4	65.3	65.2	65.2	65.2	65.3
23/F	109.9	65.6	65.4	65.2	65.2	65.1	65.2	65.3
22/F	106.8	65.6	65.4	65.2	65.1	65.1	65.1	65.3
21/F	103.6	65.6	65.4	65.2	65.1	65.1	65.1	65.3
20/F	100.5	65.6	65.3	65.1	65.1	65.1	65.1	65.2
19/F	97.3	65.6	65.3	65.1	65.0	65.0	65.1	65.2
18/F	94.2	65.7	65.3	65.1	65.0	65.0	65.0	65.2
17/F	91.0	65.7	65.4	65.1	65.0	65.0	65.0	65.1
16/F	87.9	65.7	65.4	65.1	65.0	64.9	64.9	65.1
15/F	84.7	65.7	65.4	65.2	65.0	64.9	64.9	65.0
14/F	81.6	65.8	65.4	65.2	65.0	64.9	64.9	65.0
13/F	78.4	65.8	65.5	65.2	65.0	65.0	64.9	65.0
12/F	75.3	65.8	65.5	65.2	65.1	65.0	64.9	65.0
11/F	72.1	65.9	65.5	65.2	65.1	65.0	64.9	64.9
10/F	69.0	65.9	65.5	65.2	65.1	65.0	64.9	64.9
9/F	65.8	65.9	65.5	65.2	65.1	65.0	64.9	64.9
8/F	62.7	65.9	65.5	65.2	65.1	64.9	64.8	64.9
7/F	59.5	65.9	65.5	65.2	65.0	64.9	64.8	64.9
6/F	56.4	65.9	65.5	65.2	65.0	64.9	64.8	64.8
5/F	53.2	65.8	65.4	65.1	64.9	64.8	64.7	64.8
4/F	50.1	65.8	65.4	65.1	64.9	64.8	64.7	64.7
3/F	46.9	65.7	65.3	65.0	64.7	64.7	64.6	64.7
2/F	43.8	65.6	65.2	64.8	64.6	64.5	64.5	64.7
1/F	40.6	65.5	65.0	64.4	64.4	64.4	64.4	64.6

Base Scenario, Tower 2 at Site B (by Noise Assessment Points)

Site B - Tower 2																				
Floor	Height (mPD)	BT2-F01- O01	BT2-F01- O02	BT2-F02- O03	BT2-F02- O04	BT2-F03- O05	BT2-F03- O06	BT2-F03- O07	BT2-F04- O08	BT2-F04- O09	BT2-F04- O10	BT2-F05- O11	BT2-F05- O12	BT2-F06- O13	BT2-F06- O14	BT2-F06- O15	BT2-F07- O16	BT2-F07- O17	BT2-F08- O18	BT2-F08- O19
		Predicted Noise Level, L10 (1-hr), dB(A)																		
35/F	147.7	67.5	66.0	65.9	65.8	65.6	65.5	65.4	65.2	65.2	65.1	64.8	64.7	64.6	64.5	64.5	63.1	63.2	63.3	63.1
34/F	144.6	67.6	66.1	65.9	65.9	65.7	65.6	65.4	65.3	65.2	65.1	65.0	64.7	64.5	64.3	64.2	63.1	63.2	63.3	63.1
33/F	141.4	67.7	66.2	66.0	66.0	65.7	65.6	65.4	65.4	65.3	65.2	65.1	65.0	64.5	64.3	64.0	63.1	63.2	63.3	63.2
32/F	138.3	67.8	66.3	66.1	66.0	65.8	65.6	65.5	65.4	65.3	65.3	65.2	65.0	64.5	64.3	64.0	63.1	63.2	63.3	63.2
31/F	135.1	67.9	66.4	66.2	66.1	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	64.5	64.4	63.9	63.1	63.3	63.4	63.2
30/F	132.0	68.1	66.5	66.3	66.2	66.0	65.8	65.7	65.6	65.5	65.4	65.3	65.2	64.6	64.4	63.9	63.1	63.3	63.4	63.3
29/F	128.8	68.2	66.6	66.4	66.3	66.1	65.9	65.8	65.7	65.6	65.5	65.4	65.3	64.6	64.5	64.0	63.1	63.3	63.4	63.3
28/F	125.7	68.3	66.7	66.5	66.4	66.1	66.0	65.9	65.8	65.7	65.6	65.5	65.4	64.7	64.5	64.0	63.1	63.3	63.4	63.4
27/F	122.5	68.4	66.8	66.6	66.6	66.2	66.1	66.0	65.9	65.9	65.8	65.7	65.5	64.8	64.6	64.1	63.1	63.3	63.4	63.4
26/F	119.4	68.5	66.9	66.8	66.7	66.4	66.3	66.1	66.1	66.0	65.9	65.8	65.6	64.9	64.7	64.2	63.1	63.3	63.4	63.5
25/F	116.2	68.7	67.0	66.9	66.8	66.5	66.4	66.3	66.2	66.1	66.0	65.9	65.8	65.0	64.8	64.3	63.1	63.3	63.5	63.5
24/F	113.1	68.8	67.2	67.0	66.9	66.6	66.5	66.4	66.3	66.3	66.2	66.1	65.9	65.1	64.9	64.4	63.1	63.3	63.5	63.6
23/F	109.9	68.9	67.3	67.2	67.1	66.8	66.7	66.5	66.5	66.4	66.3	66.2	66.0	65.2	65.1	64.5	63.1	63.4	63.5	63.6
22/F	106.8	69.1	67.4	67.3	67.2	66.9	66.8	66.7	66.6	66.6	66.5	66.4	66.2	65.3	65.2	64.6	63.2	63.4	63.6	63.7
21/F	103.6	69.2	67.6	67.4	67.3	67.0	67.0	66.8	66.8	66.7	66.6	66.5	66.3	65.4	65.3	64.7	63.2	63.4	63.6	63.7
20/F	100.5	69.3	67.7	67.6	67.4	67.2	67.1	67.0	67.0	66.9	66.8	66.7	66.5	65.5	65.4	64.7	63.1	63.4	63.6	63.8
19/F	97.3	69.4	67.8	67.7	67.5	67.3	67.3	67.2	67.1	67.1	67.0	66.8	66.6	65.7	65.3	64.8	63.1	63.4	63.6	63.8
18/F	94.2	69.6	67.9	67.8	67.6	67.5	67.4	67.3	67.3	67.2	67.1	67.0	66.8	65.8	65.4	64.9	63.1	63.4	63.6	63.8
17/F	91.0	69.7	68.1	68.0	67.8	67.6	67.6	67.5	67.4	67.4	67.3	67.1	66.9	66.0	65.5	65.0	63.0	63.3	63.6	63.8
16/F	87.9	69.8	68.2	68.1	67.9	67.7	67.7	67.6	67.6	67.5	67.4	67.3	67.1	66.1	65.6	65.0	62.9	63.3	63.6	63.8
15/F	84.7	70.0	68.3	68.2	68.0	67.9	67.8	67.8	67.7	67.7	67.6	67.4	67.2	66.3	65.7	65.0	62.8	63.2	63.5	63.8
14/F	81.6	70.2	68.5	68.4	68.2	68.0	68.0	67.9	67.9	67.8	67.7	67.6	67.4	66.4	65.8	65.1	62.7	63.1	63.5	63.8
13/F	78.4	70.4	68.6	68.6	68.4	68.2	68.2	68.1	68.0	68.0	67.9	67.7	67.5	66.5	65.9	65.3	62.6	63.0	63.3	63.7
12/F	75.3	70.6	68.8	68.8	68.6	68.4	68.3	68.3	68.2	68.1	68.0	67.9	67.6	66.6	66.1	65.4	62.5	62.9	63.2	63.6
11/F	72.1	70.8	69.0	69.0	68.8	68.6	68.5	68.4	68.4	68.3	68.1	67.9	67.7	66.8	66.2	65.6	62.3	62.8	63.2	63.5
10/F	69.0	71.0	69.2	69.2	69.0	68.9	68.7	68.6	68.6	68.5	68.3	68.0	67.8	67.0	66.3	65.7	62.2	62.6	63.0	63.5
9/F	65.8	71.2	69.5	69.4	69.2	69.1	68.9	68.8	68.7	68.6	68.4	68.1	68.0	67.1	66.5	65.9	62.0	62.5	62.8	63.2
8/F	62.7	71.4	69.7	69.5	69.4	69.3	69.1	69.0	68.9	68.8	68.5	68.3	68.2	67.3	66.7	66.1	61.8	62.3	62.7	63.1
7/F	59.5	71.7	69.9	69.8	69.7	69.5	69.3	69.2	69.1	68.9	68.7	68.5	68.3	67.5	66.9	66.3	61.6	62.1	62.5	63.0
6/F	56.4	71.9	70.2	70.0	69.9	69.7	69.5	69.4	69.2	69.0	68.9	68.7	68.6	67.7	67.1	66.5	61.2	61.8	62.3	62.8
5/F	53.2	72.2	70.4	70.3	70.1	69.8	69.6	69.5	69.3	69.2	69.0	68.9	68.8	68.0	67.4	66.8	60.8	61.4	62.0	62.5
4/F	50.1	72.5	70.7	70.5	70.2	69.9	69.7	69.5	69.4	69.4	69.2	69.1	69.0	68.2	67.7	67.0	60.1	60.8	61.6	62.1
3/F	46.9	72.8	70.9	70.6	70.3	69.9	69.6	69.6	69.5	69.5	69.4	69.3	69.3	68.5	68.0	67.3	59.1	60.0	60.8	61.5
2/F	43.8	73.1	70.9	70.6	70.3	69.8	69.6	69.5	69.6	69.6	69.6	69.5	69.5	68.8	68.3	67.6	57.4	58.4	59.4	60.2
1/F	40.6	73.5	70.3	70.2	70.0	69.4	69.3	69.4	69.6	69.7	69.7	69.6	69.6	69.0	68.6	67.9	54.4	55.5	56.5	57.4

Base Scenario, Tower 2 at Site B (by Noise Assessment Points)

Site B - Tower 2												
Floor	Height (mPD)	BT2-F09- O20	BT2-F09- O21	BT2-F09- O22	BT2-F10- O23	BT2-F10- O24	BT2-F10- O25	BT2-F11- O26	BT2-F11- O27	BT2-F12- O28	BT2-F12- O29	BT2-F12- O30
		Predicted Noise Level, L10 (1-hr), dB(A)										
35/F	147.7	63.0	63.1	63.2	63.2	63.4	63.6	63.8	63.9	64.2	64.6	64.7
34/F	144.6	63.0	63.1	63.2	63.3	63.5	63.6	63.8	64.0	64.3	64.7	64.7
33/F	141.4	63.1	63.2	63.3	63.4	63.5	63.7	63.9	64.0	64.3	64.7	64.8
32/F	138.3	63.2	63.3	63.3	63.4	63.6	63.7	64.0	64.1	64.4	64.8	64.9
31/F	135.1	63.2	63.3	63.4	63.5	63.7	63.8	64.1	64.2	64.5	64.9	65.0
30/F	132.0	63.3	63.4	63.5	63.6	63.8	63.9	64.1	64.3	64.6	65.0	65.1
29/F	128.8	63.4	63.5	63.6	63.7	63.8	64.0	64.2	64.4	64.6	65.1	65.1
28/F	125.7	63.5	63.5	63.6	63.7	63.9	64.0	64.3	64.4	64.7	65.1	65.2
27/F	122.5	63.5	63.6	63.7	63.8	64.0	64.1	64.3	64.5	64.8	65.2	65.3
26/F	119.4	63.6	63.7	63.8	63.9	64.1	64.2	64.4	64.6	64.9	65.3	65.4
25/F	116.2	63.6	63.8	63.9	64.0	64.1	64.3	64.5	64.7	64.9	65.4	65.4
24/F	113.1	63.7	63.8	64.0	64.1	64.2	64.3	64.5	64.8	65.0	65.4	65.5
23/F	109.9	63.8	63.9	64.0	64.1	64.3	64.4	64.6	64.8	65.1	65.5	65.6
22/F	106.8	63.8	63.9	64.1	64.2	64.4	64.5	64.7	64.9	65.1	65.6	65.7
21/F	103.6	63.9	64.0	64.1	64.3	64.5	64.6	64.8	65.0	65.2	65.7	65.8
20/F	100.5	63.9	64.0	64.2	64.4	64.5	64.7	64.9	65.1	65.3	65.8	65.9
19/F	97.3	64.0	64.1	64.3	64.4	64.6	64.8	64.9	65.1	65.4	66.0	66.0
18/F	94.2	64.0	64.2	64.3	64.5	64.7	64.9	65.0	65.2	65.5	66.1	66.1
17/F	91.0	64.0	64.2	64.4	64.5	64.7	65.0	65.1	65.3	65.6	66.2	66.2
16/F	87.9	64.1	64.3	64.4	64.6	64.8	65.0	65.2	65.4	65.8	66.3	66.3
15/F	84.7	64.1	64.3	64.5	64.7	64.9	65.1	65.4	65.6	65.9	66.5	66.5
14/F	81.6	64.1	64.3	64.5	64.7	65.0	65.2	65.4	65.7	66.0	66.6	66.6
13/F	78.4	64.0	64.3	64.6	64.8	65.0	65.3	65.5	65.8	66.2	66.8	66.8
12/F	75.3	64.0	64.3	64.6	64.8	65.1	65.3	65.6	65.9	66.2	66.9	66.9
11/F	72.1	63.8	64.2	64.5	64.8	65.1	65.4	65.7	66.0	66.3	67.1	67.1
10/F	69.0	63.7	64.0	64.4	64.8	65.2	65.4	65.8	66.1	66.5	67.2	67.3
9/F	65.8	63.7	63.9	64.3	64.7	65.1	65.5	65.8	66.2	66.6	67.4	67.5
8/F	62.7	63.4	63.8	64.1	64.5	65.0	65.4	65.9	66.2	66.7	67.5	67.7
7/F	59.5	63.3	63.6	64.0	64.3	64.7	65.3	65.8	66.2	66.8	67.7	67.8
6/F	56.4	63.1	63.4	63.7	64.1	64.6	64.9	65.6	66.2	66.8	67.7	68.0
5/F	53.2	62.9	63.2	63.5	63.9	64.3	64.8	65.3	66.0	66.8	67.8	68.2
4/F	50.1	62.6	62.9	63.3	63.7	64.0	64.4	65.1	65.6	66.5	67.8	68.3
3/F	46.9	62.1	62.4	62.8	63.3	63.7	64.1	64.6	65.3	66.0	67.5	68.5
2/F	43.8	60.9	61.5	62.1	62.6	63.1	63.7	64.3	64.7	65.7	66.8	68.5
1/F	40.6	58.5	59.2	60.0	60.9	61.8	62.6	63.5	64.2	65.0	66.0	68.1

Base Scenario, Tower 2 at Site B (by Flats)

Site B - Tower 2									
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07	F08
Predicted Noise Level, L10 (1-hr), dB(A)									
35/F	147.7	67.5	65.9	65.6	65.2	64.8	64.6	63.2	63.3
34/F	144.6	67.6	65.9	65.7	65.3	65.0	64.5	63.2	63.3
33/F	141.4	67.7	66.0	65.7	65.4	65.1	64.5	63.2	63.3
32/F	138.3	67.8	66.1	65.8	65.4	65.2	64.5	63.2	63.3
31/F	135.1	67.9	66.2	65.9	65.5	65.2	64.5	63.3	63.4
30/F	132	68.1	66.3	66.0	65.6	65.3	64.6	63.3	63.4
29/F	128.8	68.2	66.4	66.1	65.7	65.4	64.6	63.3	63.4
28/F	125.7	68.3	66.5	66.1	65.8	65.5	64.7	63.3	63.4
27/F	122.5	68.4	66.6	66.2	65.9	65.7	64.8	63.3	63.4
26/F	119.4	68.5	66.8	66.4	66.1	65.8	64.9	63.3	63.5
25/F	116.2	68.7	66.9	66.5	66.2	65.9	65.0	63.3	63.5
24/F	113.1	68.8	67.0	66.6	66.3	66.1	65.1	63.3	63.6
23/F	109.9	68.9	67.2	66.8	66.5	66.2	65.2	63.4	63.6
22/F	106.8	69.1	67.3	66.9	66.6	66.4	65.3	63.4	63.7
21/F	103.6	69.2	67.4	67.0	66.8	66.5	65.4	63.4	63.7
20/F	100.5	69.3	67.6	67.2	67.0	66.7	65.5	63.4	63.8
19/F	97.3	69.4	67.7	67.3	67.1	66.8	65.7	63.4	63.8
18/F	94.2	69.6	67.8	67.5	67.3	67.0	65.8	63.4	63.8
17/F	91	69.7	68.0	67.6	67.4	67.1	66.0	63.3	63.8
16/F	87.9	69.8	68.1	67.7	67.6	67.3	66.1	63.3	63.8
15/F	84.7	70.0	68.2	67.9	67.7	67.4	66.3	63.2	63.8
14/F	81.6	70.2	68.4	68.0	67.9	67.6	66.4	63.1	63.8
13/F	78.4	70.4	68.6	68.2	68.0	67.7	66.5	63.0	63.7
12/F	75.3	70.6	68.8	68.4	68.2	67.9	66.6	62.9	63.6
11/F	72.1	70.8	69.0	68.6	68.4	67.9	66.8	62.8	63.5
10/F	69	71.0	69.2	68.9	68.6	68.0	67.0	62.6	63.5
9/F	65.8	71.2	69.4	69.1	68.7	68.1	67.1	62.5	63.2
8/F	62.7	71.4	69.5	69.3	68.9	68.3	67.3	62.3	63.1
7/F	59.5	71.7	69.8	69.5	69.1	68.5	67.5	62.1	63.0
6/F	56.4	71.9	70.0	69.7	69.2	68.7	67.7	61.8	62.8
5/F	53.2	72.2	70.3	69.8	69.3	68.9	68.0	61.4	62.5
4/F	50.1	72.5	70.5	69.9	69.4	69.1	68.2	60.8	62.1
3/F	46.9	72.8	70.6	69.9	69.5	69.3	68.5	60.0	61.5
2/F	43.8	73.1	70.6	69.8	69.6	69.5	68.8	58.4	60.2
1/F	40.6	73.5	70.2	69.4	69.7	69.6	69.0	55.5	57.4

Base Scenario, Tower 2 at Site B (by Flats)

Site B - Tower 2					
Floor	Height (mPD)	F09	F10	F11	F12
		Predicted Noise Level, L10 (1-hr), dB(A)			
35/F	147.7	63.2	63.6	63.9	64.7
34/F	144.6	63.2	63.6	64.0	64.7
33/F	141.4	63.3	63.7	64.0	64.8
32/F	138.3	63.3	63.7	64.1	64.9
31/F	135.1	63.4	63.8	64.2	65.0
30/F	132	63.5	63.9	64.3	65.1
29/F	128.8	63.6	64.0	64.4	65.1
28/F	125.7	63.6	64.0	64.4	65.2
27/F	122.5	63.7	64.1	64.5	65.3
26/F	119.4	63.8	64.2	64.6	65.4
25/F	116.2	63.9	64.3	64.7	65.4
24/F	113.1	64.0	64.3	64.8	65.5
23/F	109.9	64.0	64.4	64.8	65.6
22/F	106.8	64.1	64.5	64.9	65.7
21/F	103.6	64.1	64.6	65.0	65.8
20/F	100.5	64.2	64.7	65.1	65.9
19/F	97.3	64.3	64.8	65.1	66.0
18/F	94.2	64.3	64.9	65.2	66.1
17/F	91	64.4	65.0	65.3	66.2
16/F	87.9	64.4	65.0	65.4	66.3
15/F	84.7	64.5	65.1	65.6	66.5
14/F	81.6	64.5	65.2	65.7	66.6
13/F	78.4	64.6	65.3	65.8	66.8
12/F	75.3	64.6	65.3	65.9	66.9
11/F	72.1	64.5	65.4	66.0	67.1
10/F	69	64.4	65.4	66.1	67.3
9/F	65.8	64.3	65.5	66.2	67.5
8/F	62.7	64.1	65.4	66.2	67.7
7/F	59.5	64.0	65.3	66.2	67.8
6/F	56.4	63.7	64.9	66.2	68.0
5/F	53.2	63.5	64.8	66.0	68.2
4/F	50.1	63.3	64.4	65.6	68.3
3/F	46.9	62.8	64.1	65.3	68.5
2/F	43.8	62.1	63.7	64.7	68.5
1/F	40.6	60.0	62.6	64.2	68.1

Base Scenario, Tower 3 at Site B (by Noise Assessment Points)

Site B - Tower 3													
Floor	Height (mPD)	BT3-F01-O01	BT3-F01-O02	BT3-F01-O03	BT3-F02-O04	BT3-F02-O05	BT3-F03-O06	BT3-F03-O07	BT3-F04-O08	BT3-F04-O09	BT3-F05-O10	BT3-F05-O11	BT3-F05-O12
Predicted Noise Level, L10 (1-hr), dB(A)													
15/F	127.7	65.5	65.7	65.9	66.2	66.4	66.7	66.8	67.0	67.2	67.5	68.1	69.0
14/F	124.6	65.7	65.8	66.1	66.3	66.6	66.8	66.9	67.1	67.3	67.6	68.2	69.2
13/F	121.4	65.8	66.0	66.2	66.4	66.7	66.9	67.0	67.2	67.4	67.8	68.4	69.3
12/F	118.3	65.9	66.1	66.3	66.6	66.8	67.1	67.2	67.4	67.6	67.9	68.5	69.4
11/F	115.1	66.1	66.2	66.4	66.7	67.0	67.2	67.3	67.5	67.7	68.0	68.6	69.6
10/F	112.0	66.2	66.4	66.5	66.8	67.1	67.3	67.4	67.6	67.9	68.2	68.8	69.7
9/F	108.8	66.4	66.5	66.7	66.9	67.2	67.4	67.5	67.8	68.0	68.3	68.9	69.9
8/F	105.7	66.5	66.7	66.8	67.0	67.3	67.5	67.7	67.9	68.2	68.5	69.1	70.1
7/F	102.5	66.6	66.8	67.0	67.2	67.4	67.6	67.8	68.0	68.3	68.6	69.2	70.3
6/F	99.4	66.8	66.9	67.1	67.3	67.5	67.7	67.9	68.1	68.4	68.8	69.4	70.4
5/F	96.2	66.9	67.1	67.2	67.4	67.6	67.8	67.9	68.2	68.5	68.9	69.6	70.6
4/F	93.1	67.0	67.1	67.4	67.5	67.7	67.9	68.0	68.2	68.5	69.1	69.7	70.8
3/F	89.9	67.1	67.2	67.4	67.5	67.8	67.9	68.0	68.2	68.6	69.1	69.9	70.9
2/F	86.8	67.1	67.2	67.4	67.5	67.7	67.7	67.9	68.0	68.5	69.0	70.1	71.1
1/F	83.6	67.0	67.1	67.3	67.4	67.6	67.7	67.7	67.9	68.1	68.6	69.9	71.3

Site B - Tower 3													
Floor	Height (mPD)	BT3-F06-O13	BT3-F06-O14	BT3-F06-O15	BT3-F06-O16	BT3-F07-O17	BT3-F07-O18	BT3-F07-O19	BT3-F08-O20	BT3-F08-O21	BT3-F08-O22	BT3-F09-O23	BT3-F09-O24
Predicted Noise Level, L10 (1-hr), dB(A)													
15/F	127.7	67.9	67.9	67.9	68.0	65.9	64.6	64.3	63.4	63.1	60.2	58.8	60.5
14/F	124.6	68.0	68.0	68.0	68.1	65.9	64.6	64.2	63.3	63.0	60.3	58.8	60.6
13/F	121.4	68.1	68.1	68.1	68.2	65.9	64.6	64.2	63.3	63.0	60.3	58.9	60.7
12/F	118.3	68.2	68.2	68.2	68.3	66.0	64.5	64.2	63.2	62.9	60.4	58.9	60.8
11/F	115.1	68.4	68.3	68.3	68.4	66.0	64.5	64.1	63.2	62.8	60.5	59.0	60.9
10/F	112.0	68.5	68.4	68.4	68.5	66.0	64.5	64.1	63.1	62.8	60.6	59.0	61.0
9/F	108.8	68.6	68.6	68.6	68.7	66.0	64.5	64.1	63.1	62.7	60.7	59.1	61.1
8/F	105.7	68.8	68.7	68.7	68.8	66.1	64.5	64.1	63.0	62.7	60.7	59.2	61.2
7/F	102.5	68.9	68.8	68.8	68.9	66.1	64.5	64.1	63.0	62.6	60.8	59.2	61.4
6/F	99.4	69.0	69.0	69.0	69.1	66.1	64.4	64.0	62.9	62.6	60.9	59.4	61.5
5/F	96.2	69.2	69.1	69.1	69.2	66.1	64.4	64.0	62.9	62.5	61.0	59.5	61.6
4/F	93.1	69.3	69.3	69.2	69.3	66.1	64.4	64.0	62.8	62.4	61.0	59.5	61.8
3/F	89.9	69.5	69.4	69.4	69.5	66.1	64.4	63.9	62.8	62.4	61.1	59.5	62.0
2/F	86.8	69.6	69.6	69.5	69.6	65.9	64.3	63.8	62.7	62.2	61.1	59.5	62.1
1/F	83.6	69.8	69.7	69.7	69.8	65.5	64.1	63.5	62.4	61.9	61.2	59.5	62.2

Base Scenario, Tower 3 at Site B (by Flats)

Site B - Tower 3						
Floor	Height (mPD)	F01	F02	F03	F04	F05
		Predicted Noise Level, L10 (1-hr), dB(A)				
15/F	127.7	65.9	66.4	66.8	67.2	69.0
14/F	124.6	66.1	66.6	66.9	67.3	69.2
13/F	121.4	66.2	66.7	67.0	67.4	69.3
12/F	118.3	66.3	66.8	67.2	67.6	69.4
11/F	115.1	66.4	67.0	67.3	67.7	69.6
10/F	112.0	66.5	67.1	67.4	67.9	69.7
9/F	108.8	66.7	67.2	67.5	68.0	69.9
8/F	105.7	66.8	67.3	67.7	68.2	70.1
7/F	102.5	67.0	67.4	67.8	68.3	70.3
6/F	99.4	67.1	67.5	67.9	68.4	70.4
5/F	96.2	67.2	67.6	67.9	68.5	<u>70.6</u>
4/F	93.1	67.4	67.7	68.0	68.5	<u>70.8</u>
3/F	89.9	67.4	67.8	68.0	68.6	<u>70.9</u>
2/F	86.8	67.4	67.7	67.9	68.5	<u>71.1</u>
1/F	83.6	67.3	67.6	67.7	68.1	<u>71.3</u>

Site B - Tower 3					
Floor	Height (mPD)	F06	F07	F08	F09
		Predicted Noise Level, L10 (1-hr), dB(A)			
15/F	127.7	68.0	65.9	63.4	60.5
14/F	124.6	68.1	65.9	63.3	60.6
13/F	121.4	68.2	65.9	63.3	60.7
12/F	118.3	68.3	66.0	63.2	60.8
11/F	115.1	68.4	66.0	63.2	60.9
10/F	112.0	68.5	66.0	63.1	61.0
9/F	108.8	68.7	66.0	63.1	61.1
8/F	105.7	68.8	66.1	63.0	61.2
7/F	102.5	68.9	66.1	63.0	61.4
6/F	99.4	69.1	66.1	62.9	61.5
5/F	96.2	69.2	66.1	62.9	61.6
4/F	93.1	69.3	66.1	62.8	61.8
3/F	89.9	69.5	66.1	62.8	62.0
2/F	86.8	69.6	65.9	62.7	62.1
1/F	83.6	69.8	65.5	62.4	62.2

**APPENDIX 4-4
PROPOSED MITIGATION MEASURES &
TRAFFIC NOISE ASSESSMENT RESULTS
(MITIGATED SCENARIO)**

Mitigated Scenario, Tower 1 at Site A1 (by Noise Assessment Points)

Site A1 - Tower 1 (High Zone)																							
Floor	Height (mPD)	AT1-HZ-F01-O01	AT1-HZ-F01-O02	AT1-HZ-F01-O03	AT1-HZ-F01-O04	AT1-HZ-F02-O05	AT1-HZ-F02-O06	AT1-HZ-F02-O07	AT1-HZ-F03-O08	AT1-HZ-F03-O09	AT1-HZ-F03-O10	AT1-HZ-F04-O11	AT1-HZ-F04-O12	AT1-HZ-F04-O13	AT1-HZ-F05-O14	AT1-HZ-F05-O15	AT1-HZ-F06-O16	AT1-HZ-F06-O17	AT1-HZ-F07-O18	AT1-HZ-F07-O19	AT1-HZ-F07-O20	AT1-HZ-F07-O21	AT1-HZ-F07-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
38/F	147.3	65.6	63.1	63.0	63.2	63.6	64.0	63.9	63.8	63.7	61.1	57.5	63.2	61.5	62.3	59.1	65.8	67.7	68.8	69.5	67.2	67.8	67.5
37/F	144.1	65.5	63.0	62.9	63.1	63.5	63.9	63.8	63.7	63.6	60.9	57.3	63.2	61.4	62.2	59.0	65.8	67.7	68.9	69.6	67.3	67.8	67.5
36/F	141.0	65.4	62.9	62.8	63.1	63.4	63.7	63.7	63.6	63.5	60.8	57.3	63.1	61.4	62.2	59.0	65.8	67.8	69.0	69.7	67.3	67.9	67.6
35/F	137.8	65.2	62.8	62.7	63.0	63.3	63.6	63.6	63.5	63.4	60.7	57.3	63.0	61.3	62.1	59.0	65.7	67.8	69.1	69.8	67.4	68.0	67.6
34/F	134.7	65.1	62.8	62.7	62.9	63.2	63.5	63.5	63.4	63.3	60.6	57.3	62.9	61.3	62.0	59.0	65.7	67.9	69.2	69.9	67.4	68.0	67.6
33/F	131.5	65.0	62.6	62.6	62.8	63.1	63.4	63.3	63.3	63.1	60.5	57.3	62.8	61.2	61.8	59.1	65.7	67.9	69.2	70.0	67.5	68.1	67.6
32/F	128.4	64.8	62.5	62.6	62.8	63.0	63.3	63.2	63.0	62.9	60.3	57.4	62.7	61.1	61.7	59.1	65.7	68.0	69.3	70.1	67.5	68.1	67.6
31/F	125.2	64.6	62.3	62.6	62.8	63.0	63.2	63.0	62.8	62.7	60.2	57.4	62.6	61.1	61.6	59.1	65.6	68.0	69.4	70.1	67.5	68.1	67.6
30/F	122.1	64.4	62.1	62.6	62.7	62.9	63.1	62.9	62.7	62.5	60.1	57.4	62.4	61.0	61.5	59.1	65.6	68.0	69.4	70.2	67.4	68.1	67.5
29/F	118.9	64.2	62.0	62.6	62.7	62.9	63.0	62.7	62.5	62.2	59.9	57.4	62.2	60.9	61.4	59.1	65.5	68.0	69.5	70.3	67.4	68.0	67.4
28/F	115.8	64.0	61.7	62.6	62.7	62.8	63.0	62.6	62.2	61.9	59.7	57.4	62.0	60.8	61.3	59.2	65.4	68.1	69.6	70.4	67.3	67.9	67.3
27/F	112.6	63.8	61.5	62.6	62.7	62.8	62.9	62.5	62.1	61.6	59.5	57.4	61.7	60.7	61.2	59.2	65.3	68.1	69.6	70.4	67.3	67.8	67.2
26/F	109.5	63.5	61.2	62.6	62.7	62.7	62.8	62.4	61.9	61.3	59.3	57.4	61.5	60.6	61.0	59.2	65.2	68.1	69.6	70.5	67.1	67.8	67.1
25/F	106.3	63.3	60.9	62.7	62.7	62.7	62.8	62.3	61.7	61.1	59.1	57.4	61.1	60.5	60.9	59.2	65.0	68.1	69.7	70.5	66.9	67.7	67.0
24/F	103.2	63.0	60.7	62.7	62.7	62.7	62.8	62.2	61.6	60.8	58.9	57.3	60.9	60.3	60.8	59.2	64.9	68.1	69.7	70.6	66.8	67.6	66.9
23/F	100.0	62.7	60.5	62.8	62.7	62.7	62.7	62.1	61.5	60.6	58.6	57.3	60.6	60.2	60.6	59.2	64.7	68.1	69.7	70.5	66.6	67.5	66.8
22/F	96.9	62.6	60.4	62.8	62.8	62.7	62.8	62.1	61.4	60.3	58.4	57.3	60.3	60.0	60.4	59.2	64.6	68.1	69.7	70.6	66.4	67.5	66.6

Site A1 - Tower 1 (Low Zone)																							
Floor	Height (mPD)	AT1-LZ-F01-O01	AT1-LZ-F01-O02	AT1-LZ-F01-O03	AT1-LZ-F01-O04	AT1-LZ-F02-O05	AT1-LZ-F02-O06	AT1-LZ-F02-O07	AT1-LZ-F03-O08	AT1-LZ-F03-O09	AT1-LZ-F03-O10	AT1-LZ-F04-O11	AT1-LZ-F04-O12	AT1-LZ-F04-O13	AT1-LZ-F05-O14	AT1-LZ-F05-O15	AT1-LZ-F06-O16	AT1-LZ-F06-O17	AT1-LZ-F07-O18	AT1-LZ-F07-O19	AT1-LZ-F07-O20	AT1-LZ-F07-O21	AT1-LZ-F07-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
19/F	87.4	62.4	60.1	63.1	63.0	62.9	62.9	62.1	61.2	59.8	57.7	57.3	59.7	59.5	59.9	59.2	64.5	68.3	70.0	70.8	65.9	67.2	66.1
18/F	84.3	62.4	60.1	63.2	63.1	62.9	62.9	62.2	61.2	59.8	57.6	57.2	59.6	59.4	59.8	59.2	64.5	68.5	70.2	70.9	65.7	67.1	66.0
17/F	81.1	62.4	60.1	63.4	63.2	63.0	63.0	62.2	61.2	59.7	57.5	57.2	59.5	59.3	59.7	59.2	64.5	68.6	70.3	70.9	65.5	67.0	66.0
16/F	78.0	62.3	60.1	63.5	63.4	63.1	63.1	62.3	61.3	59.6	57.5	57.2	59.5	59.3	59.7	59.3	64.6	68.7	70.5	71.0	65.3	67.1	66.0
15/F	74.8	62.3	60.1	63.6	63.5	63.2	63.2	62.3	61.3	59.6	57.4	57.2	59.4	59.3	59.7	59.3	64.7	68.9	70.8	71.2	65.2	67.1	66.1
14/F	71.7	62.3	60.2	63.8	63.6	63.3	63.3	62.4	61.4	59.6	57.4	57.2	59.4	59.3	59.7	59.4	64.9	69.0	71.0	71.3	65.1	67.2	66.2
13/F	68.5	62.3	60.2	63.9	63.7	63.4	63.4	62.5	61.4	59.7	57.4	57.2	59.5	59.3	59.8	59.4	65.0	69.2	FG	67.5	65.1	67.4	66.3
12/F	65.4	62.3	60.5	64.0	63.9	63.6	63.5	62.6	61.5	59.8	57.4	57.3	59.6	59.3	59.9	59.5	65.1	69.4	FG	67.7	65.2	67.6	66.5
11/F	62.2	62.3	60.5	64.1	64.0	63.7	63.6	62.7	61.5	59.9	57.4	57.3	59.7	59.4	60.0	59.5	65.3	69.6	FG	67.9	65.2	67.7	66.6
10/F	59.1	62.1	60.2	64.3	64.1	63.8	63.7	62.7	61.6	60.0	57.4	57.3	59.8	59.5	60.1	59.6	65.4	69.8	FG	68.1	65.2	67.9	66.6
9/F	55.9	61.9	59.8	64.4	64.2	63.9	63.8	62.8	61.7	60.0	57.4	57.3	59.9	59.5	60.2	59.7	65.6	70.0	FG	68.4	65.3	68.1	66.9
8/F	52.8	62.0	59.5	64.5	64.3	64.0	63.9	62.9	61.8	60.1	57.4	57.2	59.9	59.6	60.3	59.8	65.8	70.2	FG	68.7	65.5	68.4	67.1
7/F	49.6	62.3	59.6	64.6	64.4	64.1	63.9	63.0	61.8	60.1	57.4	57.0	60.0	59.6	60.4	59.9	66.0	70.5	FG	69.0	65.9	68.7	67.4
6/F	46.5	62.6	59.9	64.6	64.5	64.0	63.9	62.9	61.7	60.0	57.2	56.6	59.9	59.6	60.5	60.0	66.2	70.7	FG	69.2	66.2	69.0	67.8
5/F	43.3	63.1	60.3	64.6	64.5	64.0	63.9	62.9	61.6	59.7	57.0	56.2	59.6	59.3	60.5	60.0	66.4	71.0	FG	69.5	66.6	69.4	68.1
4/F	40.2	63.6	60.7	64.6	64.5	64.0	63.8	62.8	61.5	59.3	56.7	55.7	59.2	58.8	60.3	59.9	66.6	71.2	FG	69.8	67.0	69.7	68.5
3/F	37.0	64.1	60.9	64.6	64.5	63.9	63.7	62.7	61.3	58.8	56.2	55.0	58.7	58.4	59.7	59.3	66.7	71.4	FG	70.1	67.3	70.1	68.9
2/F	33.9	64.6	60.7	64.5	64.4	63.8	63.6	62.5	60.9	58.0	55.2	53.8	57.9	57.6	59.0	58.4	66.8	69.6	FG	70.4	67.7	70.5	69.3
1/F	30.7	64.8	58.2	64.1	64.0	63.6	63.3	62.1	60.3	56.7	54.1	52.7	56.6	56.4	58.3	57.6	66.7	69.8	FG	70.7	68.1	70.8	69.6

ID	Mitigation Measure	Correction
	Acoustic Window	-4.0 dB(A)
	Acoustic Balcony	-2.0 dB(A)
FG	Fixed Glazing	--

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 1 at Site A1 (by Flats)

Site A1 - Tower 1 (High Zone)								
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07
Predicted Noise Level, L10 (1-hr), dB(A)								
38/F	147.3	65.6	64.0	63.8	63.2	62.3	67.7	69.5
37/F	144.1	65.5	63.9	63.7	63.2	62.2	67.7	69.6
36/F	141.0	65.4	63.7	63.6	63.1	62.2	67.8	69.7
35/F	137.8	65.2	63.6	63.5	63.0	62.1	67.8	69.8
34/F	134.7	65.1	63.5	63.4	62.9	62.0	67.9	69.9
33/F	131.5	65.0	63.4	63.3	62.8	61.8	67.9	70.0
32/F	128.4	64.8	63.3	63.0	62.7	61.7	68.0	70.1
31/F	125.2	64.6	63.2	62.8	62.6	61.6	68.0	70.1
30/F	122.1	64.4	63.1	62.7	62.4	61.5	68.0	70.2
29/F	118.9	64.2	63.0	62.5	62.2	61.4	68.0	70.3
28/F	115.8	64.0	63.0	62.2	62.0	61.3	68.1	70.4
27/F	112.6	63.8	62.9	62.1	61.7	61.2	68.1	70.4
26/F	109.5	63.5	62.8	61.9	61.5	61.0	68.1	<u>70.5</u>
25/F	106.3	63.3	62.8	61.7	61.1	60.9	68.1	<u>70.5</u>
24/F	103.2	63.0	62.8	61.6	60.9	60.8	68.1	<u>70.6</u>
23/F	100.0	62.8	62.7	61.5	60.6	60.6	68.1	<u>70.5</u>
22/F	96.9	62.8	62.8	61.4	60.3	60.4	68.1	<u>70.6</u>

Site A1 - Tower 1 (Low Zone)								
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07
Predicted Noise Level, L10 (1-hr), dB(A)								
19/F	87.4	63.1	62.9	61.2	59.7	59.9	68.3	<u>70.8</u>
18/F	84.3	63.2	62.9	61.2	59.6	59.8	68.5	<u>70.9</u>
17/F	81.1	63.4	63.0	61.2	59.5	59.7	68.6	<u>70.9</u>
16/F	78.0	63.5	63.1	61.3	59.5	59.7	68.7	<u>71.0</u>
15/F	74.8	63.6	63.2	61.3	59.4	59.7	68.9	<u>71.2</u>
14/F	71.7	63.8	63.3	61.4	59.4	59.7	69.0	<u>71.3</u>
13/F	68.5	63.9	63.4	61.4	59.5	59.8	69.2	67.5
12/F	65.4	64.0	63.6	61.5	59.6	59.9	69.4	67.7
11/F	62.2	64.1	63.7	61.5	59.7	60.0	69.6	67.9
10/F	59.1	64.3	63.8	61.6	59.8	60.1	69.8	68.1
9/F	55.9	64.4	63.9	61.7	59.9	60.2	70.0	68.4
8/F	52.8	64.5	64.0	61.8	59.9	60.3	70.2	68.7
7/F	49.6	64.6	64.1	61.8	60.0	60.4	<u>70.5</u>	69.0
6/F	46.5	64.6	64.0	61.7	59.9	60.5	<u>70.7</u>	69.2
5/F	43.3	64.6	64.0	61.6	59.6	60.5	<u>71.0</u>	69.5
4/F	40.2	64.6	64.0	61.5	59.2	60.3	<u>71.2</u>	69.8
3/F	37.0	64.6	63.9	61.3	58.7	59.7	<u>71.4</u>	70.1
2/F	33.9	64.6	63.8	60.9	57.9	59.0	69.6	<u>70.5</u>
1/F	30.7	64.8	63.6	60.3	56.6	58.3	69.8	<u>70.8</u>

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 2 at Site B (by Noise Assessment Points)

Site B - Tower 2																				
Floor	Height (mPD)	BT2-F01-O01	BT2-F01-O02	BT2-F02-O03	BT2-F02-O04	BT2-F03-O05	BT2-F03-O06	BT2-F03-O07	BT2-F04-O08	BT2-F04-O09	BT2-F04-O10	BT2-F05-O11	BT2-F05-O12	BT2-F06-O13	BT2-F06-O14	BT2-F06-O15	BT2-F07-O16	BT2-F07-O17	BT2-F08-O18	BT2-F08-O19
		Predicted Noise Level, L10 (1-hr), dB(A)																		
35/F	147.7	67.5	66.0	65.9	65.8	65.6	65.5	65.4	65.2	65.2	65.1	64.8	64.7	64.6	64.5	64.5	63.1	63.2	63.3	63.1
34/F	144.6	67.6	66.1	65.9	65.9	65.7	65.6	65.4	65.3	65.2	65.1	65.0	64.7	64.5	64.3	64.2	63.1	63.2	63.3	63.1
33/F	141.4	67.7	66.2	66.0	66.0	65.7	65.6	65.4	65.4	65.3	65.2	65.1	65.0	64.5	64.3	64.0	63.1	63.2	63.3	63.2
32/F	138.3	67.8	66.3	66.1	66.0	65.8	65.6	65.5	65.4	65.3	65.3	65.2	65.0	64.5	64.3	64.0	63.1	63.2	63.3	63.2
31/F	135.1	67.9	66.4	66.2	66.1	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	64.5	64.4	63.9	63.1	63.3	63.4	63.2
30/F	132.0	68.1	66.5	66.3	66.2	66.0	65.8	65.7	65.6	65.5	65.4	65.3	65.2	64.6	64.4	63.9	63.1	63.3	63.4	63.3
29/F	128.8	68.2	66.6	66.4	66.3	66.1	65.9	65.8	65.7	65.6	65.5	65.4	65.3	64.6	64.5	64.0	63.1	63.3	63.4	63.3
28/F	125.7	68.3	66.7	66.5	66.4	66.1	66.0	65.9	65.8	65.7	65.6	65.5	65.4	64.7	64.5	64.0	63.1	63.3	63.4	63.4
27/F	122.5	68.4	66.8	66.6	66.6	66.2	66.1	66.0	65.9	65.9	65.8	65.7	65.5	64.8	64.6	64.1	63.1	63.3	63.4	63.4
26/F	119.4	68.5	66.9	66.8	66.7	66.4	66.3	66.1	66.1	66.0	65.9	65.8	65.6	64.9	64.7	64.2	63.1	63.3	63.4	63.5
25/F	116.2	68.7	67.0	66.9	66.8	66.5	66.4	66.3	66.2	66.1	66.0	65.9	65.8	65.0	64.8	64.3	63.1	63.3	63.5	63.5
24/F	113.1	68.8	67.2	67.0	66.9	66.6	66.5	66.4	66.3	66.3	66.2	66.1	65.9	65.1	64.9	64.4	63.1	63.3	63.5	63.6
23/F	109.9	68.9	67.3	67.2	67.1	66.8	66.7	66.5	66.5	66.4	66.3	66.2	66.0	65.2	65.1	64.5	63.1	63.4	63.5	63.6
22/F	106.8	69.1	67.4	67.3	67.2	66.9	66.8	66.7	66.6	66.6	66.5	66.4	66.2	65.3	65.2	64.6	63.2	63.4	63.6	63.7
21/F	103.6	69.2	67.6	67.4	67.3	67.0	67.0	66.8	66.8	66.7	66.6	66.5	66.3	65.4	65.3	64.7	63.2	63.4	63.6	63.7
20/F	100.5	69.3	67.7	67.6	67.4	67.2	67.1	67.0	67.0	66.9	66.8	66.7	66.5	65.5	65.4	64.7	63.1	63.4	63.6	63.8
19/F	97.3	69.4	67.8	67.7	67.5	67.3	67.3	67.2	67.1	67.1	67.0	66.8	66.6	65.7	65.3	64.8	63.1	63.4	63.6	63.8
18/F	94.2	69.6	67.9	67.8	67.6	67.5	67.4	67.3	67.3	67.2	67.1	67.0	66.8	65.8	65.4	64.9	63.1	63.4	63.6	63.8
17/F	91.0	69.7	68.1	68.0	67.8	67.6	67.6	67.5	67.4	67.4	67.3	67.1	66.9	66.0	65.5	65.0	63.0	63.3	63.6	63.8
16/F	87.9	69.8	68.2	68.1	67.9	67.7	67.7	67.6	67.6	67.5	67.4	67.3	67.1	66.1	65.6	65.0	62.9	63.3	63.6	63.8
15/F	84.7	70.0	68.3	68.2	68.0	67.9	67.8	67.8	67.7	67.7	67.6	67.4	67.2	66.3	65.7	65.0	62.8	63.2	63.5	63.8
14/F	81.6	70.2	68.5	68.4	68.2	68.0	68.0	67.9	67.9	67.8	67.7	67.6	67.4	66.4	65.8	65.1	62.7	63.1	63.5	63.8
13/F	78.4	70.4	68.6	68.6	68.4	68.2	68.2	68.1	68.0	68.0	67.9	67.7	67.5	66.5	65.9	65.3	62.6	63.0	63.3	63.7
12/F	75.3	<u>70.6</u>	68.8	68.8	68.6	68.4	68.3	68.3	68.2	68.1	68.0	67.9	67.6	66.6	66.1	65.4	62.5	62.9	63.2	63.6
11/F	72.1	<u>70.8</u>	69.0	69.0	68.8	68.6	68.5	68.4	68.4	68.3	68.1	67.9	67.7	66.8	66.2	65.6	62.3	62.8	63.2	63.5
10/F	69.0	<u>71.0</u>	69.2	69.2	69.0	68.9	68.7	68.6	68.6	68.5	68.3	68.0	67.8	67.0	66.3	65.7	62.2	62.6	63.0	63.5
9/F	65.8	<u>71.2</u>	69.5	69.4	69.2	69.1	68.9	68.8	68.7	68.6	68.4	68.1	68.0	67.1	66.5	65.9	62.0	62.5	62.8	63.2
8/F	62.7	<u>71.4</u>	69.7	69.5	69.4	69.3	69.1	69.0	68.9	68.8	68.5	68.3	68.2	67.3	66.7	66.1	61.8	62.3	62.7	63.1
7/F	59.5	67.7	69.9	69.8	69.7	69.5	69.3	69.2	69.1	68.9	68.7	68.5	68.3	67.5	66.9	66.3	61.6	62.1	62.5	63.0
6/F	56.4	67.9	70.2	70.0	69.9	69.7	69.5	69.4	69.2	69.0	68.9	68.7	68.6	67.7	67.1	66.5	61.2	61.8	62.3	62.8
5/F	53.2	68.2	70.4	70.3	70.1	69.8	69.6	69.5	69.3	69.2	69.0	68.9	68.8	68.0	67.4	66.8	60.8	61.4	62.0	62.5
4/F	50.1	68.5	<u>70.7</u>	<u>70.5</u>	70.2	69.9	69.7	69.5	69.4	69.4	69.2	69.1	69.0	68.2	67.7	67.0	60.1	60.8	61.6	62.1
3/F	46.9	68.8	<u>70.9</u>	<u>70.6</u>	70.3	69.9	69.6	69.6	69.5	69.5	69.4	69.3	69.3	68.5	68.0	67.3	59.1	60.0	60.8	61.5
2/F	43.8	69.1	<u>70.9</u>	<u>70.6</u>	70.3	69.8	69.6	69.5	69.6	69.6	69.6	69.5	69.5	68.8	68.3	67.6	57.4	58.4	59.4	60.2
1/F	40.6	69.5	70.3	70.2	70.0	69.4	69.3	69.4	69.6	69.7	69.7	69.6	69.6	69.0	68.6	67.9	54.4	55.5	56.5	57.4

ID	Mitigation Measure	Correction
	Acoustic Window	-4.0 dB(A)
	Acoustic Balcony	-2.0 dB(A)
FG	Fixed Glazing	--

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 2 at Site B (by Noise Assessment Points)

Site B - Tower 2												
Floor	Height (mPD)	BT2-F09- O20	BT2-F09- O21	BT2-F09- O22	BT2-F10- O23	BT2-F10- O24	BT2-F10- O25	BT2-F11- O26	BT2-F11- O27	BT2-F12- O28	BT2-F12- O29	BT2-F12- O30
Predicted Noise Level, L10 (1-hr), dB(A)												
35/F	147.7	63.0	63.1	63.2	63.2	63.4	63.6	63.8	63.9	64.2	64.6	64.7
34/F	144.6	63.0	63.1	63.2	63.3	63.5	63.6	63.8	64.0	64.3	64.7	64.7
33/F	141.4	63.1	63.2	63.3	63.4	63.5	63.7	63.9	64.0	64.3	64.7	64.8
32/F	138.3	63.2	63.3	63.3	63.4	63.6	63.7	64.0	64.1	64.4	64.8	64.9
31/F	135.1	63.2	63.3	63.4	63.5	63.7	63.8	64.1	64.2	64.5	64.9	65.0
30/F	132.0	63.3	63.4	63.5	63.6	63.8	63.9	64.1	64.3	64.6	65.0	65.1
29/F	128.8	63.4	63.5	63.6	63.7	63.8	64.0	64.2	64.4	64.6	65.1	65.1
28/F	125.7	63.5	63.5	63.6	63.7	63.9	64.0	64.3	64.4	64.7	65.1	65.2
27/F	122.5	63.5	63.6	63.7	63.8	64.0	64.1	64.3	64.5	64.8	65.2	65.3
26/F	119.4	63.6	63.7	63.8	63.9	64.1	64.2	64.4	64.6	64.9	65.3	65.4
25/F	116.2	63.6	63.8	63.9	64.0	64.1	64.3	64.5	64.7	64.9	65.4	65.4
24/F	113.1	63.7	63.8	64.0	64.1	64.2	64.3	64.5	64.8	65.0	65.4	65.5
23/F	109.9	63.8	63.9	64.0	64.1	64.3	64.4	64.6	64.8	65.1	65.5	65.6
22/F	106.8	63.8	63.9	64.1	64.2	64.4	64.5	64.7	64.9	65.1	65.6	65.7
21/F	103.6	63.9	64.0	64.1	64.3	64.5	64.6	64.8	65.0	65.2	65.7	65.8
20/F	100.5	63.9	64.0	64.2	64.4	64.5	64.7	64.9	65.1	65.3	65.8	65.9
19/F	97.3	64.0	64.1	64.3	64.4	64.6	64.8	64.9	65.1	65.4	66.0	66.0
18/F	94.2	64.0	64.2	64.3	64.5	64.7	64.9	65.0	65.2	65.5	66.1	66.1
17/F	91.0	64.0	64.2	64.4	64.5	64.7	65.0	65.1	65.3	65.6	66.2	66.2
16/F	87.9	64.1	64.3	64.4	64.6	64.8	65.0	65.2	65.4	65.8	66.3	66.3
15/F	84.7	64.1	64.3	64.5	64.7	64.9	65.1	65.4	65.6	65.9	66.5	66.5
14/F	81.6	64.1	64.3	64.5	64.7	65.0	65.2	65.4	65.7	66.0	66.6	66.6
13/F	78.4	64.0	64.3	64.6	64.8	65.0	65.3	65.5	65.8	66.2	66.8	66.8
12/F	75.3	64.0	64.3	64.6	64.8	65.1	65.3	65.6	65.9	66.2	66.9	66.9
11/F	72.1	63.8	64.2	64.5	64.8	65.1	65.4	65.7	66.0	66.3	67.1	67.1
10/F	69.0	63.7	64.0	64.4	64.8	65.2	65.4	65.8	66.1	66.5	67.2	67.3
9/F	65.8	63.7	63.9	64.3	64.7	65.1	65.5	65.8	66.2	66.6	67.4	67.5
8/F	62.7	63.4	63.8	64.1	64.5	65.0	65.4	65.9	66.2	66.7	67.5	67.7
7/F	59.5	63.3	63.6	64.0	64.3	64.7	65.3	65.8	66.2	66.8	67.7	67.8
6/F	56.4	63.1	63.4	63.7	64.1	64.6	64.9	65.6	66.2	66.8	67.7	68.0
5/F	53.2	62.9	63.2	63.5	63.9	64.3	64.8	65.3	66.0	66.8	67.8	68.2
4/F	50.1	62.6	62.9	63.3	63.7	64.0	64.4	65.1	65.6	66.5	67.8	68.3
3/F	46.9	62.1	62.4	62.8	63.3	63.7	64.1	64.6	65.3	66.0	67.5	68.5
2/F	43.8	60.9	61.5	62.1	62.6	63.1	63.7	64.3	64.7	65.7	66.8	68.5
1/F	40.6	58.5	59.2	60.0	60.9	61.8	62.6	63.5	64.2	65.0	66.0	68.1

ID	Mitigation Measure	Correction
	Acoustic Window	-4.0 dB(A)
	Acoustic Balcony	-2.0 dB(A)
FG	Fixed Glazing	--

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 2 at Site B (by Flats)

Site B - Tower 2									
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07	F08
		Predicted Noise Level, L10 (1-hr), dB(A)							
35/F	147.7	67.5	65.9	65.6	65.2	64.8	64.6	63.2	63.3
34/F	144.6	67.6	65.9	65.7	65.3	65.0	64.5	63.2	63.3
33/F	141.4	67.7	66.0	65.7	65.4	65.1	64.5	63.2	63.3
32/F	138.3	67.8	66.1	65.8	65.4	65.2	64.5	63.2	63.3
31/F	135.1	67.9	66.2	65.9	65.5	65.2	64.5	63.3	63.4
30/F	132.0	68.1	66.3	66.0	65.6	65.3	64.6	63.3	63.4
29/F	128.8	68.2	66.4	66.1	65.7	65.4	64.6	63.3	63.4
28/F	125.7	68.3	66.5	66.1	65.8	65.5	64.7	63.3	63.4
27/F	122.5	68.4	66.6	66.2	65.9	65.7	64.8	63.3	63.4
26/F	119.4	68.5	66.8	66.4	66.1	65.8	64.9	63.3	63.5
25/F	116.2	68.7	66.9	66.5	66.2	65.9	65.0	63.3	63.5
24/F	113.1	68.8	67.0	66.6	66.3	66.1	65.1	63.3	63.6
23/F	109.9	68.9	67.2	66.8	66.5	66.2	65.2	63.4	63.6
22/F	106.8	69.1	67.3	66.9	66.6	66.4	65.3	63.4	63.7
21/F	103.6	69.2	67.4	67.0	66.8	66.5	65.4	63.4	63.7
20/F	100.5	69.3	67.6	67.2	67.0	66.7	65.5	63.4	63.8
19/F	97.3	69.4	67.7	67.3	67.1	66.8	65.7	63.4	63.8
18/F	94.2	69.6	67.8	67.5	67.3	67.0	65.8	63.4	63.8
17/F	91.0	69.7	68.0	67.6	67.4	67.1	66.0	63.3	63.8
16/F	87.9	69.8	68.1	67.7	67.6	67.3	66.1	63.3	63.8
15/F	84.7	70.0	68.2	67.9	67.7	67.4	66.3	63.2	63.8
14/F	81.6	70.2	68.4	68.0	67.9	67.6	66.4	63.1	63.8
13/F	78.4	70.4	68.6	68.2	68.0	67.7	66.5	63.0	63.7
12/F	75.3	<u>70.6</u>	68.8	68.4	68.2	67.9	66.6	62.9	63.6
11/F	72.1	<u>70.8</u>	69.0	68.6	68.4	67.9	66.8	62.8	63.5
10/F	69.0	<u>71.0</u>	69.2	68.9	68.6	68.0	67.0	62.6	63.5
9/F	65.8	<u>71.2</u>	69.4	69.1	68.7	68.1	67.1	62.5	63.2
8/F	62.7	<u>71.4</u>	69.5	69.3	68.9	68.3	67.3	62.3	63.1
7/F	59.5	69.9	69.8	69.5	69.1	68.5	67.5	62.1	63.0
6/F	56.4	70.2	70.0	69.7	69.2	68.7	67.7	61.8	62.8
5/F	53.2	70.4	70.3	69.8	69.3	68.9	68.0	61.4	62.5
4/F	50.1	<u>70.7</u>	<u>70.5</u>	69.9	69.4	69.1	68.2	60.8	62.1
3/F	46.9	<u>70.9</u>	<u>70.6</u>	69.9	69.5	69.3	68.5	60.0	61.5
2/F	43.8	<u>70.9</u>	<u>70.6</u>	69.8	69.6	69.5	68.8	58.4	60.2
1/F	40.6	70.3	70.2	69.4	69.7	69.6	69.0	55.5	57.4

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 2 at Site B (by Flats)

Site B - Tower 2					
Floor	Height (mPD)	F09	F10	F11	F12
		Predicted Noise Level, L10 (1-hr), dB(A)			
35/F	147.7	63.2	63.6	63.9	64.7
34/F	144.6	63.2	63.6	64.0	64.7
33/F	141.4	63.3	63.7	64.0	64.8
32/F	138.3	63.3	63.7	64.1	64.9
31/F	135.1	63.4	63.8	64.2	65.0
30/F	132.0	63.5	63.9	64.3	65.1
29/F	128.8	63.6	64.0	64.4	65.1
28/F	125.7	63.6	64.0	64.4	65.2
27/F	122.5	63.7	64.1	64.5	65.3
26/F	119.4	63.8	64.2	64.6	65.4
25/F	116.2	63.9	64.3	64.7	65.4
24/F	113.1	64.0	64.3	64.8	65.5
23/F	109.9	64.0	64.4	64.8	65.6
22/F	106.8	64.1	64.5	64.9	65.7
21/F	103.6	64.1	64.6	65.0	65.8
20/F	100.5	64.2	64.7	65.1	65.9
19/F	97.3	64.3	64.8	65.1	66.0
18/F	94.2	64.3	64.9	65.2	66.1
17/F	91.0	64.4	65.0	65.3	66.2
16/F	87.9	64.4	65.0	65.4	66.3
15/F	84.7	64.5	65.1	65.6	66.5
14/F	81.6	64.5	65.2	65.7	66.6
13/F	78.4	64.6	65.3	65.8	66.8
12/F	75.3	64.6	65.3	65.9	66.9
11/F	72.1	64.5	65.4	66.0	67.1
10/F	69.0	64.4	65.4	66.1	67.3
9/F	65.8	64.3	65.5	66.2	67.5
8/F	62.7	64.1	65.4	66.2	67.7
7/F	59.5	64.0	65.3	66.2	67.8
6/F	56.4	63.7	64.9	66.2	68.0
5/F	53.2	63.5	64.8	66.0	68.2
4/F	50.1	63.3	64.4	65.6	68.3
3/F	46.9	62.8	64.1	65.3	68.5
2/F	43.8	62.1	63.7	64.7	68.5
1/F	40.6	60.0	62.6	64.2	68.1

Bold underlined: Noise exceedance

APPENDIX 4-5
RAILWAY NOISE CALCULATION

Railway Noise Calculation

	Northbound (ERL)	Southbound (ERL)		Combined	Criteria
Horizontal Separation (m)	200	204			
Speed (kph) [1]	80	80			
Peak Train Frequency per 30 min (7:00-23:00) [2]	15	15			
Peak Train Frequency per 30 min (23:00-7:00) [2]	12	12			
Peak Train Frequency per day [2][3]	425	425			
Reference Lmax, (dB(A)) [4]	75.3	75.3			
Reference SEL, (dB(A)) [4]	82.8	82.8			
Speed Correction, (dB(A))	-4.2	-4.2			
Distance Correction, (dB(A))	-9.0	-9.1			
Façade correction, (dB(A))	2.5	2.5			
Track Wear Correction, (dB(A))	3.0	3.0			
Reflection Correction, (dB(A))	1.5	1.5			
Slab Track Correction, (dB(A))	0.0	0.0			
SEL of a single passby, (dB(A))	76.6	76.5			
Train frequency correction, 30min (7:00-23:00), (dB(A))	11.8	11.8			
Train frequency correction, 30min (23:00-7:00), (dB(A))	10.8	10.8			
Train frequency correction, daily, (dB(A))	26.3	26.3			
Leq 30min (7:00-23:00), (dB(A))	55.8	55.7		58.7	70
Leq 30min (23:00-7:00), (dB(A))	54.8	54.7		57.8	60
Lmax (23:00-7:00), (dB(A))	69.1	69.0		72.0	85
Leq 24 hour, (dB(A))	53.5	53.4		56.4	65

Note:

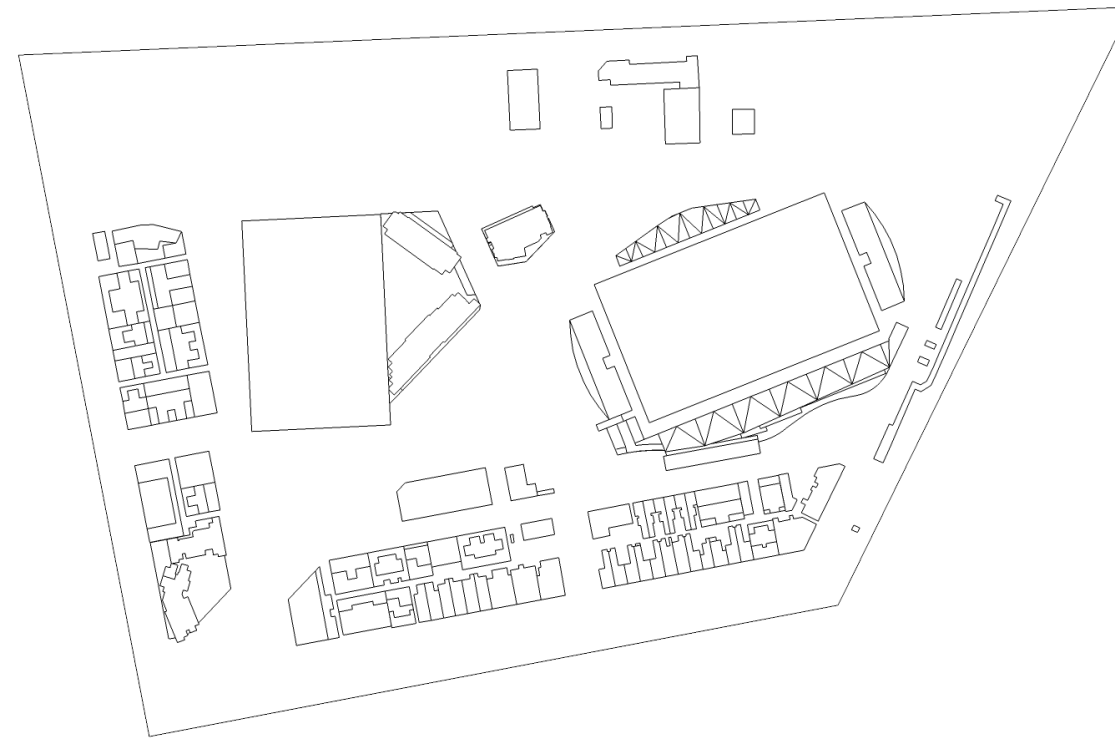
[1] Based on site-observation in March 2026, the average velocity of ERL trains within the 300m assessment area are approximately 60 - 80 kph, due to the vicinity to station. The average train speed for ERL is assumed to be 80 kph in the calculation for conservative assessment.

[2] Ultimate frequency limit from Environmental Permit EP-437/2012/A & Approved EIA report AEIAR-165/2012 for Shatin to Central Link is adopted.

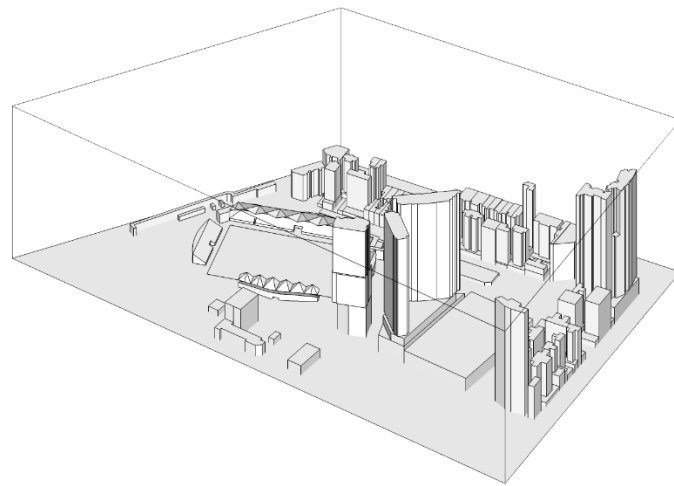
[3] The ultimate daily frequency is 850 train per day including both northbound and southbound. The train frequency with ratio of 1:1 is assumed for northbound and southbound trains.

[4] The Reference Lmax, Reference SEL, and the calculation methodology is referred to Approved EIA report AEIAR-165/2012

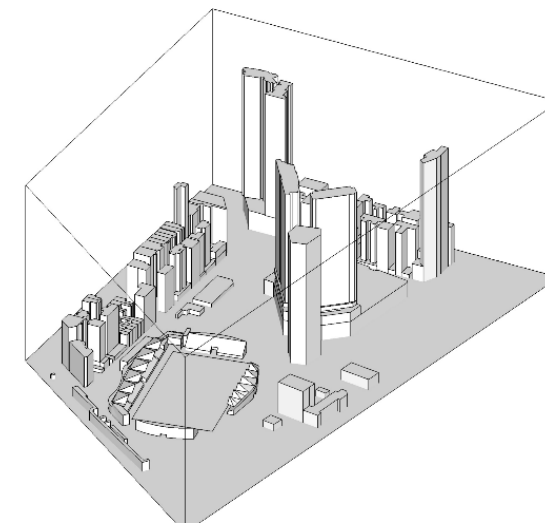
**APPENDIX 4-6
SCREEN CAPTURE OF THE NOISE
SIMULATION MODEL**



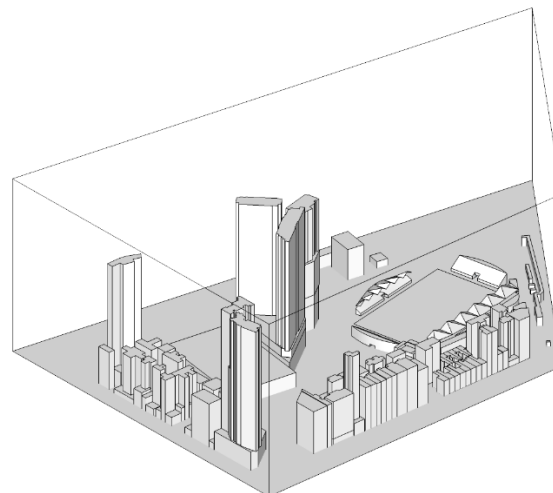
(a) Top view



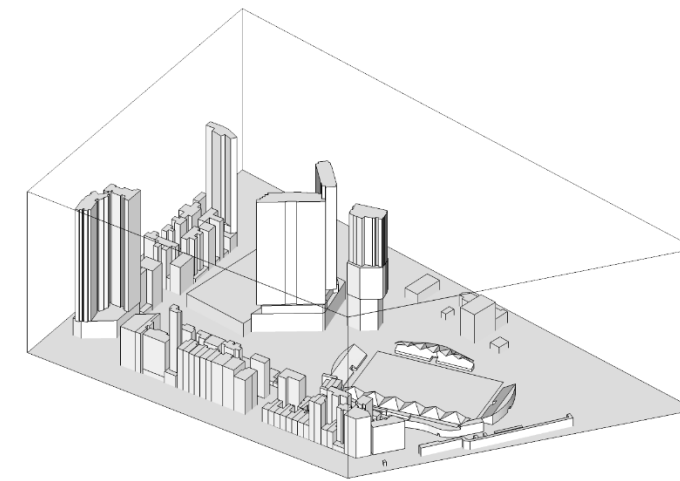
(b) Viewed from North-West



(c) Viewed from North-East



(c) Viewed from South-West



(b) Viewed from South-East

Drawing 1 - 3D Model of the Assessment Area



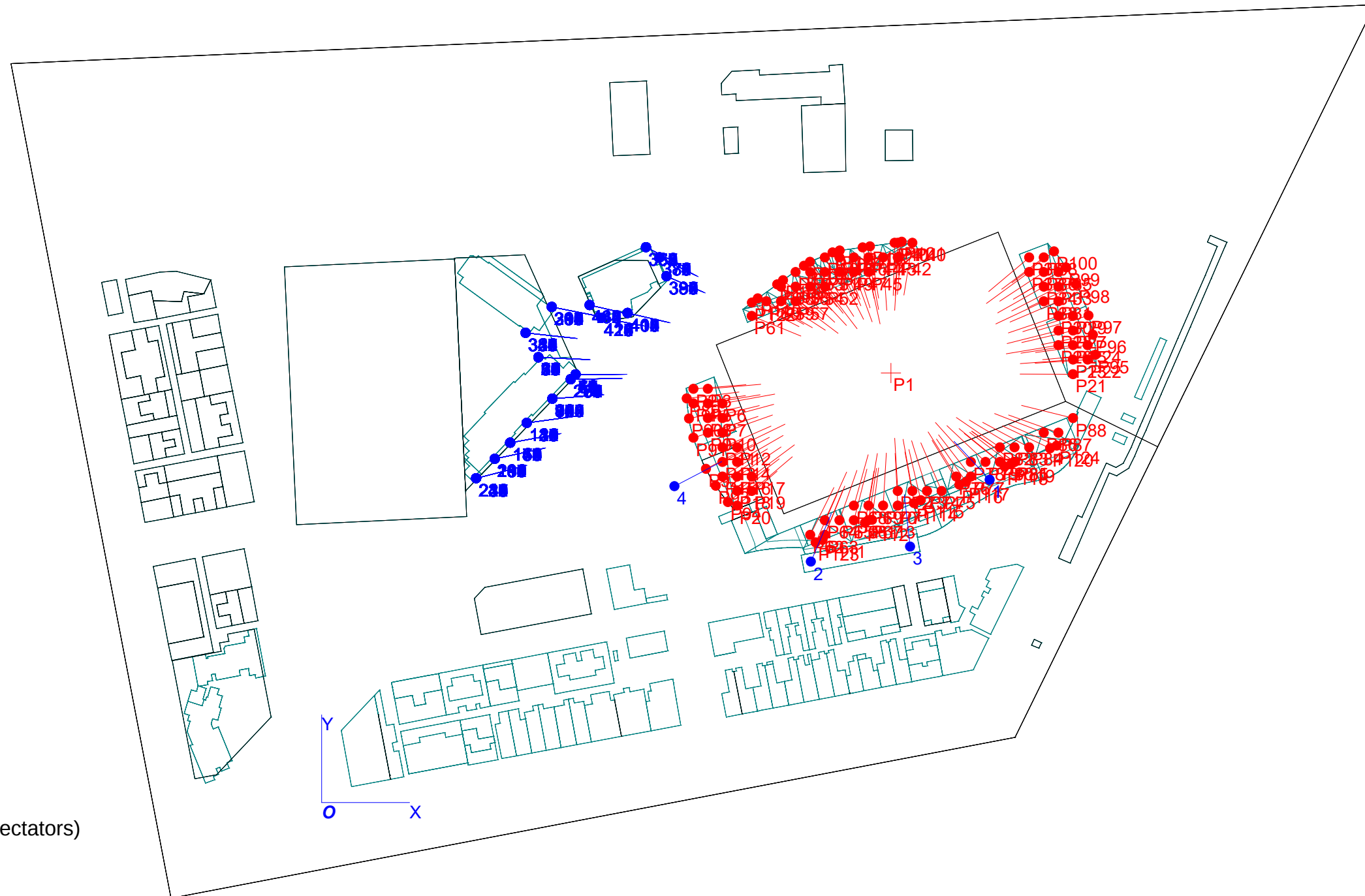
0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550 575 600 625 metres

400

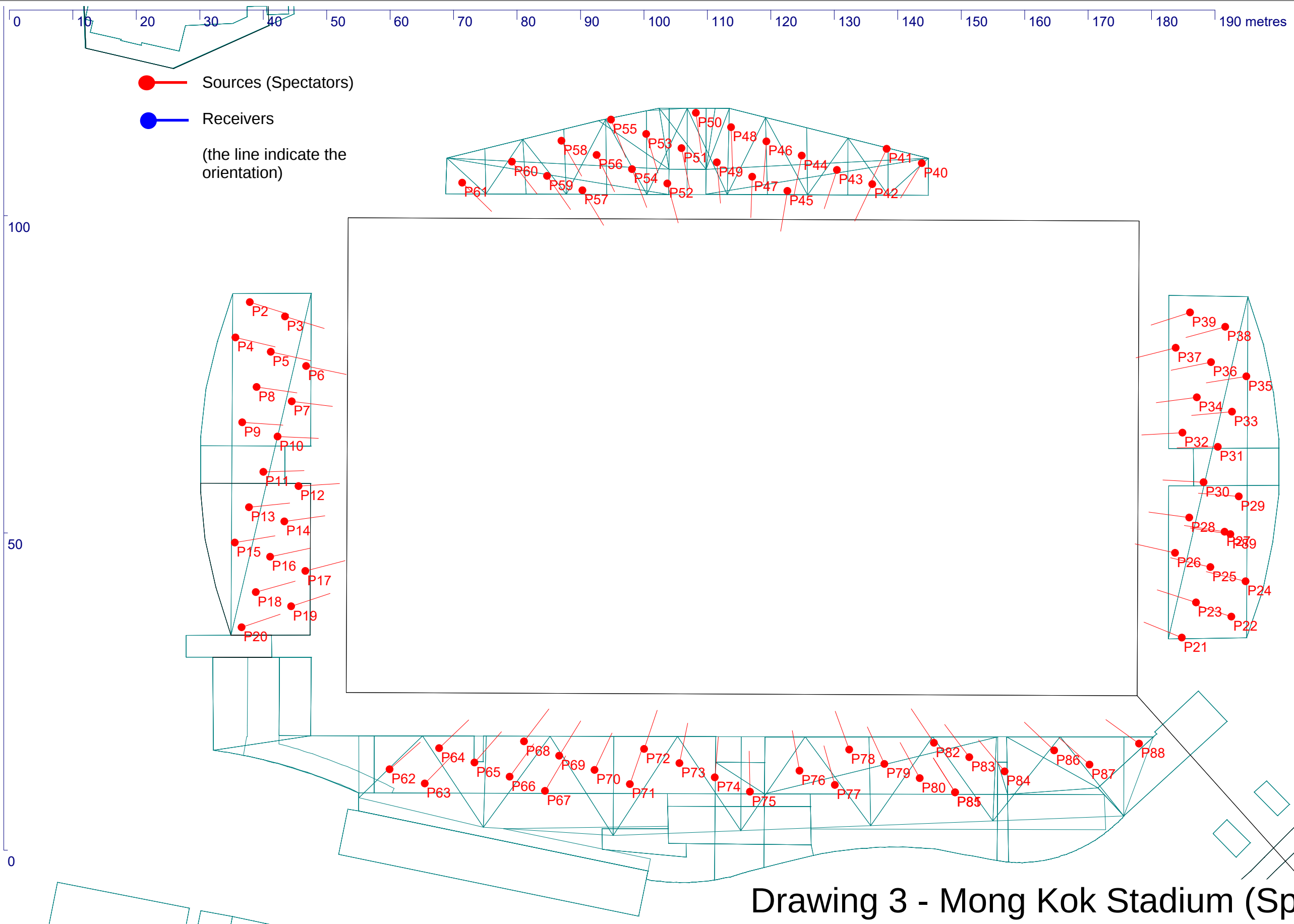
200

0

- Sources (Spectators)
- Receivers
- (the line indicate the orientation)



Drawing 2 - Computational Domain





0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 metres

● Sources (PA System)

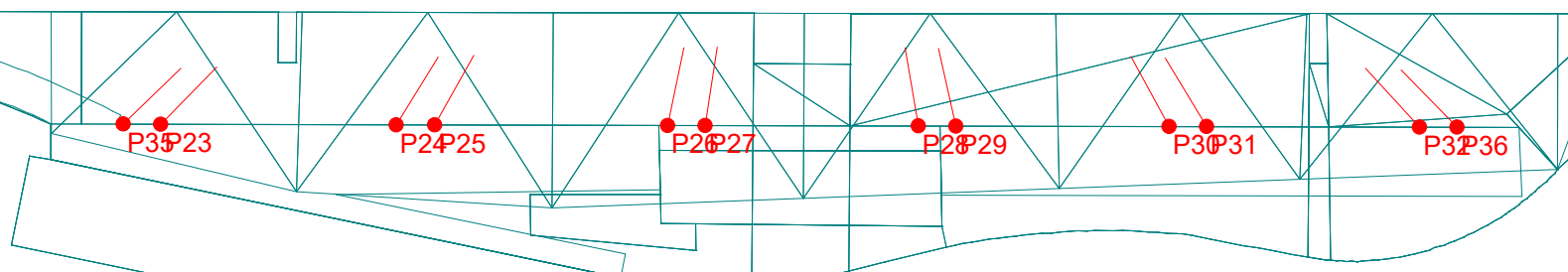
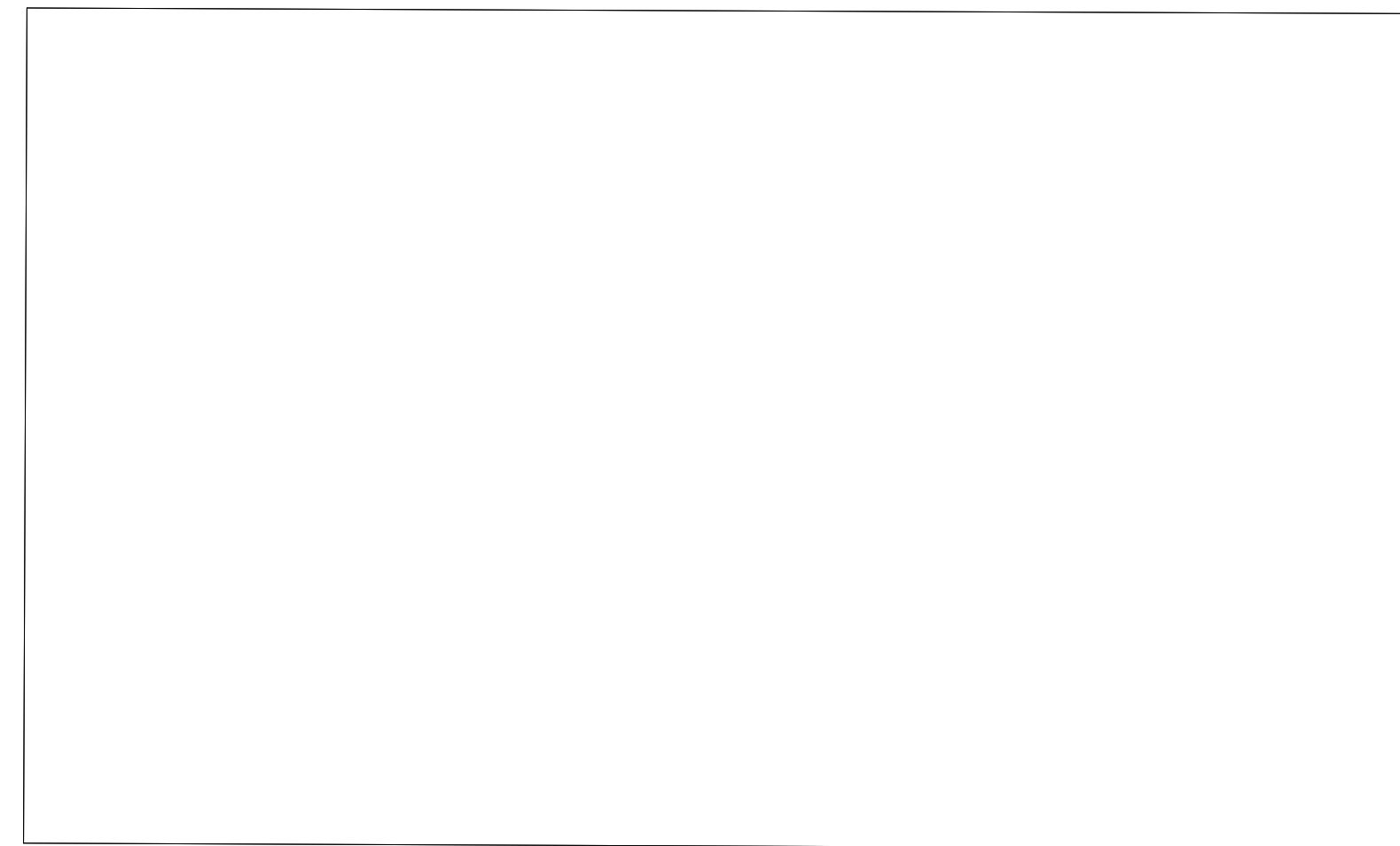
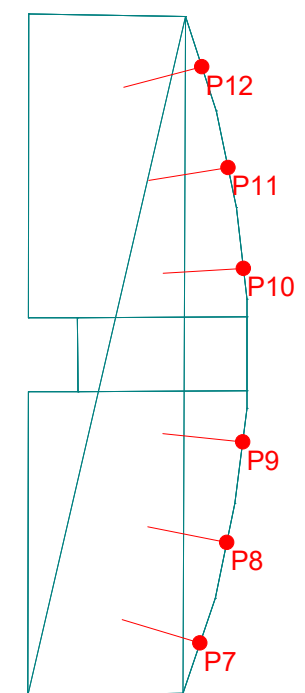
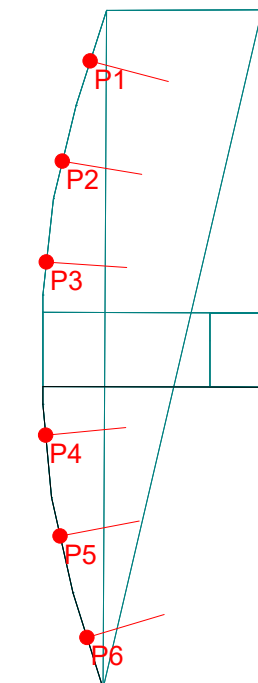
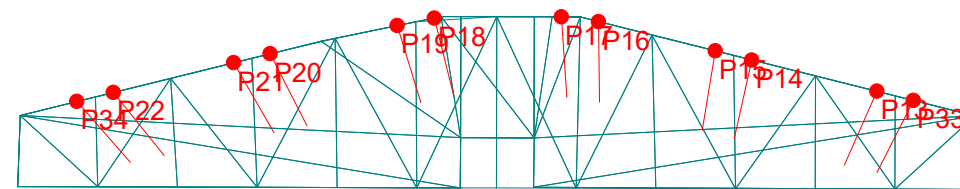
● Receivers

(the line indicate the
orientation)

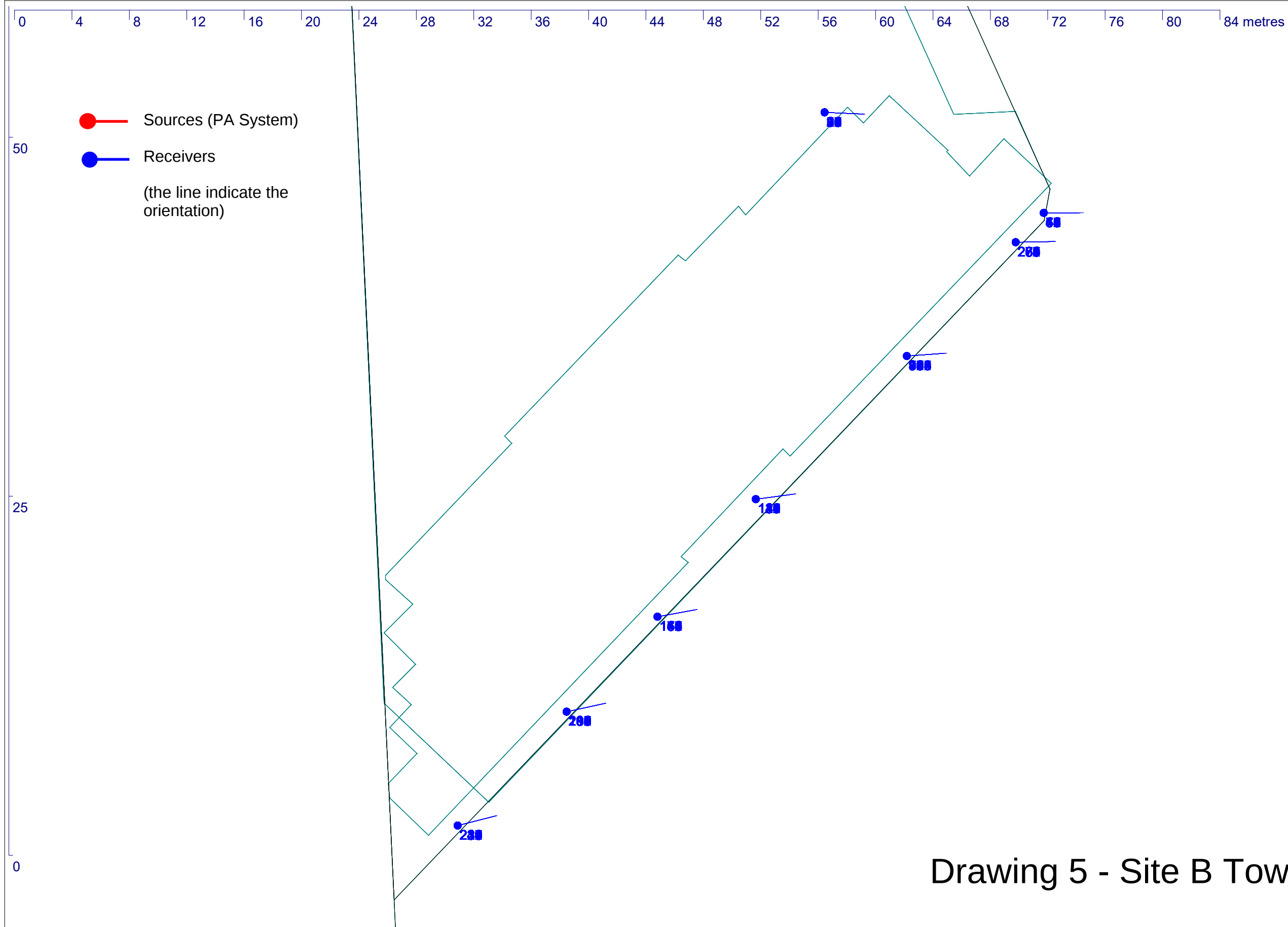
100

50

0



Drawing 4 - Mong Kok Stadium (PA System Noise)



Drawing 5 - Site B Tower 1



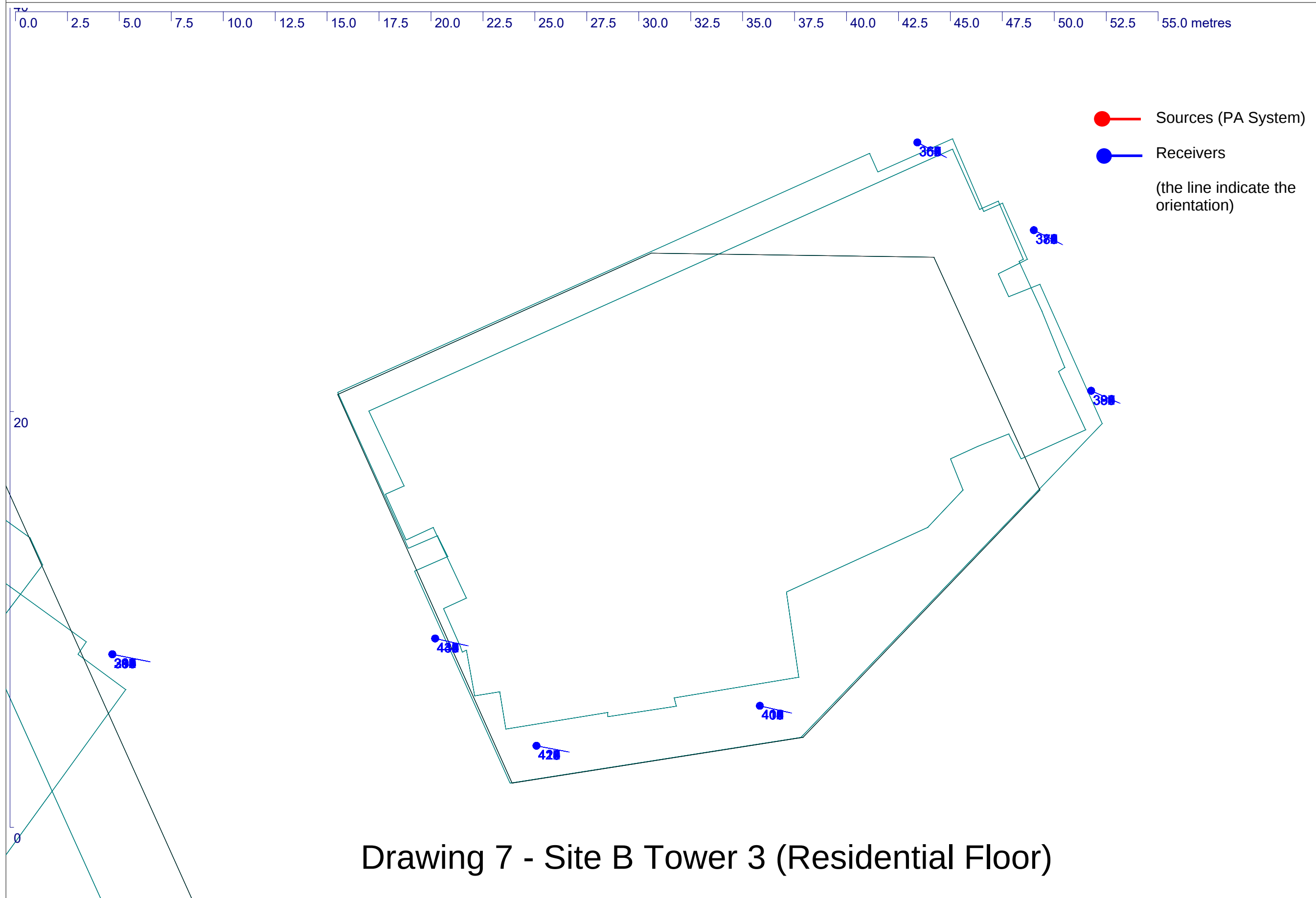
0.0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 25.0 27.5 30.0 32.5 35.0 37.5 40.0 42.5 45.0 47.5 50.0 52.5 55.0 metres

- Sources (PA System)
- Receivers
- (the line indicate the orientation)

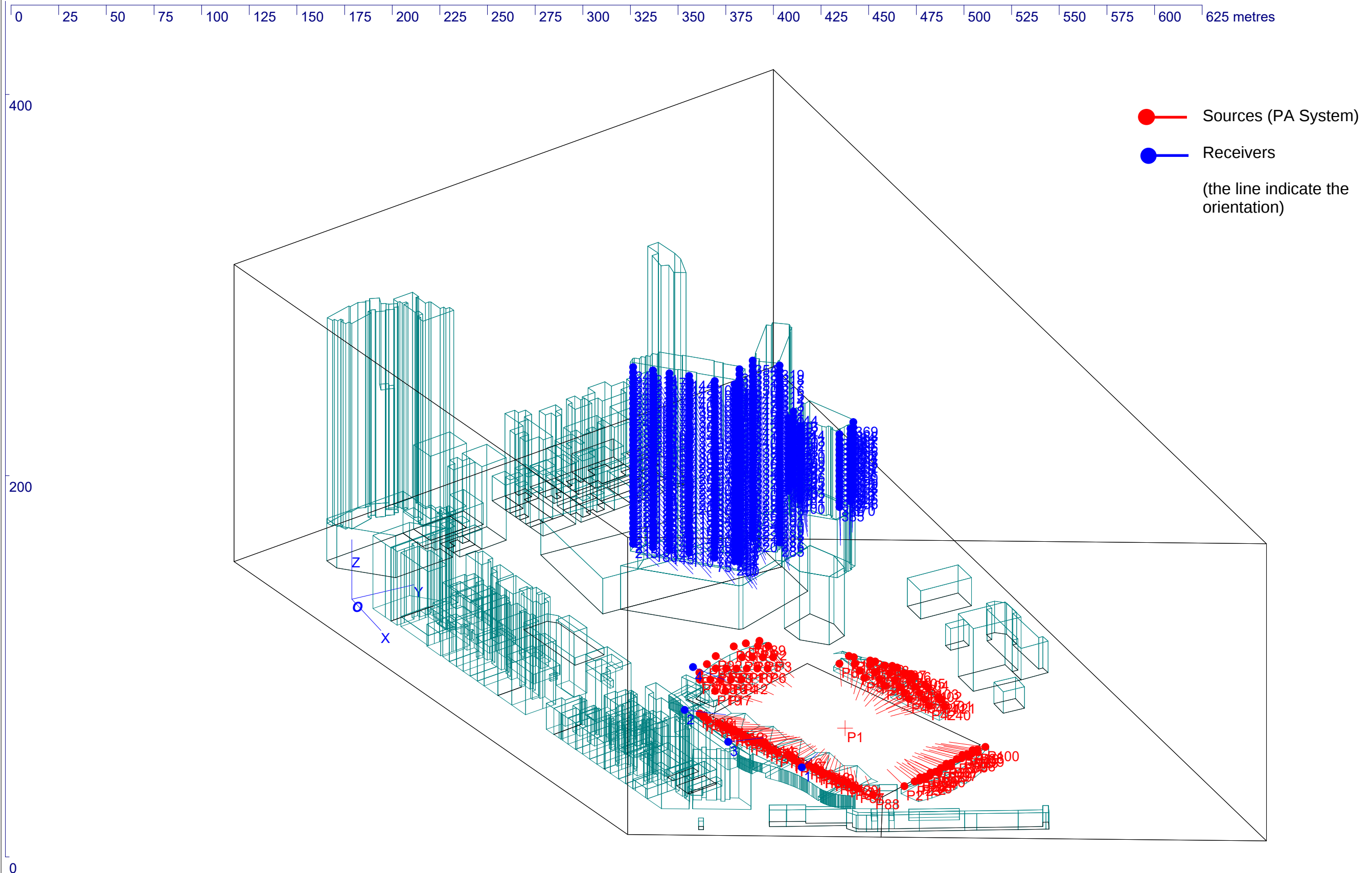
20

0

Drawing 6 - Site B Tower 2



Drawing 7 - Site B Tower 3 (Residential Floor)



Drawing 8 - Computational Domain (3D view)

APPENDIX 4-7
PREDICTED SOUND PRESSURE LEVEL
FOR STADIUM NOISE

Predicted Sound Power Level for Stadium Noise

Tower		Towre 1 at Site B								Tower 2 at Site B	
NAP ID		BT1-F07-O17	BT1-F08-O18	BT1-F08-O19	BT1-F09-O23	BT1-F11-O28	BT1-F13-O32	BT1-F14-O35	BT1-F15-O39	BT2-F06-O15	BT2-F07-O16
Floor	mPD	Sound Pressure Level (SPL), dB(A)									
35	147.70	61	68	68	68	68	67	67	67	64	62
34	144.55	61	68	68	68	68	68	67	67	64	63
33	141.40	62	68	68	68	68	68	68	67	64	63
32	138.25	62	68	69	69	68	68	68	67	64	63
31	135.10	62	68	69	69	69	68	68	67	64	63
30	131.95	62	69	69	69	69	68	68	68	64	63
29	128.80	62	69	69	69	69	68	68	68	65	63
28	125.65	63	69	69	69	69	69	68	68	65	63
27	122.50	63	69	69	70	69	69	68	68	65	64
26	119.35	63	69	70	70	69	69	68	68	66	64
25	116.20	63	69	70	70	69	69	69	68	66	64
24	113.05	63	70	70	70	70	69	69	68	66	64
23	109.90	63	70	70	70	70	69	69	68	66	64
22	106.75	64	70	70	70	70	69	69	68	66	64
21	103.60	64	70	70	71	70	70	69	69	66	64
20	100.45	64	70	71	71	70	70	69	69	66	64
19	97.30	64	70	71	71	70	70	69	69	66	64
18	94.15	64	71	71	71	70	70	69	69	67	65
17	91.00	64	71	71	71	71	70	70	69	67	65
16	87.85	64	71	71	71	71	70	70	69	67	65
15	84.70	64	71	71	71	71	70	70	69	67	65
14	81.55	64	71	72	71	71	70	70	69	67	65
13	78.40	64	71	72	72	71	70	70	69	67	65
12	75.25	65	72	72	72	71	71	70	70	67	65
11	72.10	64	72	72	72	71	71	70	70	67	65
10	68.95	65	72	72	72	71	71	70	70	67	65
9	65.80	64	72	72	72	71	71	70	70	67	65
8	62.65	64	72	72	72	72	71	70	69	67	65
7	59.50	64	72	72	72	71	71	70	69	68	66
6	56.35	65	72	72	72	71	71	70	69	68	65
5	53.20	65	72	72	72	71	70	70	70	68	66
4	50.05	65	72	72	72	71	70	70	69	68	65
3	46.90	64	72	72	72	71	70	69	69	68	65
2	43.75	64	72	72	71	70	70	69	69	68	65
1	40.60	64	72	72	71	70	70	69	69	68	64

Note:

Red highlighted cell indicate the noise exceedance.

Predicted Sound Power Level for Stadium Noise

Tower		Towre 3 at Site B					
NAP ID		BT3-F05-O12	BT3-F06-O13	BT3-F06-O16	BT3-F07-O17	BT3-F08-O21	BT3-F08-O22
Floor	mPD						
15	127.70	60	69	69	69	69	62
14	124.55	60	69	69	69	69	62
13	121.40	60	70	70	69	69	63
12	118.25	60	70	70	69	69	62
11	115.10	60	70	70	70	70	63
10	111.95	60	70	70	70	70	63
9	108.80	61	70	70	70	70	63
8	105.65	61	70	70	70	70	63
7	102.50	61	70	70	70	70	64
6	99.35	61	71	71	71	70	63
5	96.20	61	71	71	71	71	64
4	93.05	61	71	71	71	71	64
3	89.90	61	71	71	71	71	64
2	86.75	62	71	71	71	71	64
1	83.60	62	71	71	71	71	64

Note:

Red highlighted cell indicate the noise exceedance.