

Appendix 4

Noise Impact Assessment

Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D. 11 and Adjoining Government Land, Fung Yuen, Tai Po, New Territories

Noise Impact Assessment

Prepared for:
Fantastic State Limited

Prepared by:
Westwood Hong & Associates Limited

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Ir K. K. Lu	FHKIOA, MIOA, MCIBSE, MHKIE, MASA, APEC Engineer
Ms Kit Wong	FMOIA, MIEAust, MHKIQEP, C Eng, RPE, CPEng
Mr Samuel Lee	BEng, MHKIEIA
	BSc

Westwood Hong & Associates Ltd

2404, Tung Wai Commercial Building
109-111 Gloucester Road
Wanchai, Hong Kong

Tel: 2838 2738 Fax: 2591 6189

Email: wha@wha.com.hk

Website: <https://whaacoustics.com>



CONTENTS

AIMS.....	1
SUMMARY	1
1. INTRODUCTION.....	2
2. SITE LOCATION & BUILDING LAYOUT	4
SITE LOCATION	4
DEVELOPMENT LAYOUT.....	4
3. NOISE CRITERIA	5
ROAD TRAFFIC NOISE CRITERION	5
NOISE CRITERIA FOR FIXED NOISE SOURCES	5
4. SITE SURVEYS	7
DATES AND TIME	7
INSTRUMENTATION	7
FIXED NOISE SOURCES IN THE VICINITY	7
5. ROAD TRAFFIC NOISE IMPACT ASSESSMENT	11
TRAFFIC FORECAST	11
NOISE ASSESSMENT POINTS FOR ROAD TRAFFIC NOISE ASSESSMENT	11
METHODOLOGY OF ROAD TRAFFIC NOISE IMPACT ASSESSMENT.....	11
PREDICTED ROAD TRAFFIC NOISE LEVELS (BASE SCENARIO)	12
PREDICTED ROAD TRAFFIC NOISE LEVELS (WITH NOISE MITIGATION MEASURES)	12
6. NOISE MITIGATION MEASURES	13
ACOUSTIC WINDOW (BAFFLE TYPE)	13
7. NOISE IMPACT ASSESSMENT FOR FIXED NOISE SOURCES.....	14
NOISE ASSESSMENT POINTS FOR FIXED NOISE SOURCES ASSESSMENT.....	14
SWLS ADOPTED IN THE FIXED NOISE SOURCES CALCULATION.....	14
METHODOLOGY OF NOISE IMPACT ASSESSMENT FROM FIXED NOISE SOURCES.....	15
PREDICTED NOISE LEVELS FROM FIXED NOISE SOURCES (BASE SCENARIO)	16
FIXED NOISE SOURCES IN THE PROPOSED DEVELOPMENT.....	17
8. NOISE IMPACTS TO THE RCHE AND DCU	18
ROAD TRAFFIC NOISE IMPACT FOR RCHE AND DCU	18
FIXED NOISE IMPACT FOR RCHE AND DCU	18
FIXED NOISE SOURCES FROM RCHE AND DCU	19
9. CONSTRUCTION NOISE IMPACT.....	20
STANDARD PRACTICE FOR CONSTRUCTION PHASE.....	20
10. CONCLUSION.....	21
11. REFERENCES	22

FIGURES

Figure 1:	Site Location
Figure 2:	Background Measurement Locations
Figure 3:	Identified Fixed Noise Sources
Figure 4:	Computer Plot of Road Scheme
Figure 5a:	Location of Noise Mitigation Measures – Tower 5 and Tower 6
Figure 5b:	Location of Noise Mitigation Measures – Tower 4 and Tower 7
Figure 5c:	Location of Noise Mitigation Measures – Tower 1 and Tower 3

APPENDICES

Appendix 1:	Architectural Drawings
Appendix 2:	Year 2045 Traffic Forecast (provided by CTA Consultants Limited) and confirmation from HYD
Appendix 3:	Predicted Façade Noise Levels for Road Traffic Noise (Base Scenario)
Appendix 4:	Predicted Façade Noise Levels for Road Traffic Noise (with Noise Mitigation Measures)
Appendix 5:	Justification of SWLs
Appendix 6:	Fixed Noise Sources Assessment for the Proposed Development
Appendix 7:	Noise Impacts of RCHE and DCU
Appendix 8:	Justification of Noise Performance
Appendix 9:	Schedule of Noise Mitigation Measures

AIMS

To assess noise impacts on the proposed residential development(s) with retail, public vehicle park and social welfare facilities (the “proposed Development”) at Fung Yuen Road, Tai Po, N.T.

To recommend noise mitigation measures for the proposed Development, if necessary; and to assess the suitability of the proposed building layout and the recommended noise mitigation measures according to relevant requirements in the Hong Kong Planning Standards & Guidelines (HKPSG).

SUMMARY

Noise assessments have been conducted to predict the noise impacts at the proposed Development.

For road traffic noise, the predicted maximum road traffic noise level of the residential flats in Area (A) and the social welfare facilities in Area (B) will be 73dB(A) and 80dB(A) respectively, exceeding the stipulated 70dB(A) noise criterion. Therefore, noise mitigation measures are required.

With the provision of Acoustic Window (baffle type), the assessment results indicate that the predicted road traffic noise levels at all the residential flats in Area (A) and the social welfare facilities in Area (B) (i.e. 100%) will comply with the 70dB(A) noise criterion.

For the fixed noise sources impact, the assessment results indicate that all the residential flats in Area (A) and the social welfare facilities in Area (B) will be within the stipulated noise limits.

1. INTRODUCTION

- 1.1 Westwood Hong & Associates Ltd (WHA) was commissioned to conduct an environmental noise impact assessment for the proposed residential development(s) with retail, public vehicle park and social welfare facilities (the “proposed Development”) at various lots in DD11 and adjoining government land, Fung Yuen, Tai Po. Figure 1 shows the location of the proposed Development.
- 1.2 This environmental noise impact assessment report supports the Rezoning Application for the proposed Development.
- 1.3 This S.12A application is to seek the Town Planning Board’s approval for the proposed amendments to the Draft Tai Po Outline Zoning Plan No. S/TP/31 (“the OZP”) for the proposed Development at various lots in D.D. 11 and adjoining Government Land in Fung Yuen, Tai Po, New Territories (“the Development Site”). The Development Site consists of two areas: Area (A) and Area (B).
- 1.4 The proposed Development will include residential development(s) with supporting retail and public vehicle park facilities in Area (A); and a social welfare complex comprising a Residential Care Home for the Elderly (“RCHE”) and a Day Care Unit (“DCU”) for the Elderly in Area (B).
- 1.5 The Applicant submitted an s.12A Planning Application (No. Y/TP/38) to TPB in 2022 to rezone the current western portion of the “CDA(1)” zone to “R(B)13” zone to enable a proposed residential development with retail facilities and public vehicle park, and a relaxation of the maximum building height restriction of the “G/IC” zone from 2 storeys to 8 storeys to the south of the “CDA(1)” zone for a proposed 8-storey Social Welfare Complex. While tremendous effort has been put to address and resolve the comments from Planning Department and relevant Government departments during circulation of the application, it is noted that majority of the Government departments have no further adverse comment on the technical assessments attached to Application No. Y/TP/38 since almost 3 years efforts being put by the Applicant & consultancy team.
- 1.6 Taking into account comments received from relevant Government departments and in order to achieve a wholistic planning scheme for the entire “CDA(1)” zone, the Applicant has put forward to include the CDA(1) Future Phase proposed in Application No. Y/TP/38 into the Development Site of this Application. The proposed Development Proposal in this Application is largely the same as that under Application No. Y/TP/38. The Development Site of this Application is solely formed

by the previous development sites, i.e. Area (A), Area(B) and the “CDA(1)” Future Phase. The total GFA, PR, building height, no. of units and estimated population of the Development Proposal is almost exactly the same as that under Application No. Y/TP/38.

- 1.7 This report has been prepared based on the architectural drawings provided by the Client (Appendix 1).
- 1.8 This report comprises the following assessments:-
- Road traffic noise affecting the proposed Development
 - Fixed noise sources affecting the proposed Development
 - Fixed noise sources from the proposed Development

2. SITE LOCATION & BUILDING LAYOUT

Site Location

- 2.1 The Development Site comprising Area (A) and Area (B) is adjoining Fung Yuen Road to the east. Ting Kok Road is located to the south (Figure 1). The residential development Mont Vert is located to the north.

Development Layout

- 2.2 The proposed Development comprises retail and public vehicle park and 7 residential blocks with 24 – 30 storeys in height on Area (A) and a Residential Care Home for the Elderly (RCHE) cum Day Care Unit (DCU) with 8 storeys in height on Area (B). The architectural drawings are provided in Appendix 1. The development parameters are summarised in Table 2.1 below.

Table 2.1 Development Parameters of the Proposed Development

	Parameters
Zoning	“Comprehensive Development Area” and “Government, Institution or Community” on Draft Tai Po Outline Zoning Plan No. S/TP/31
Site Area	Area (A): 31,854 m ² Area (B): 3,347 m ²
Number of Residential Units	1,988
Number of Residential Storeys	24 – 30 storeys
Height of Residential Towers	85 – 102mPD
Use	- Residential blocks - Retail and public vehicle park facilities - Social welfare complex
Completion Year	2030

- 2.3 The clubhouse would be equipped with central air-conditioning and would not rely on opened windows for ventilation. No adverse noise impact is anticipated.

3. NOISE CRITERIA

Road Traffic Noise Criterion

- 3.1 For the residential units, according to the HKPSG^[1], road traffic noise criterion for domestic premises is 70dB(A) L10(1 hour) at the external facades for the hour having the peak traffic flow. This noise criterion applies to the domestic premises which rely on opened windows for ventilation.
- 3.2 For the RCHE, the road traffic noise criterion for the diagnostic rooms and wards of the RCHE are 55 dB(A) and the normal domestic use is 70 dB(A) at the external facades for the hour having the peak traffic flow.
- 3.3 For the DCU, according to the HKPSG, the educational institutions including kindergartens, child care centre and all others where unaided voice communication is required, the road traffic noise criterion is 65dB(A) at the external facades for the hour having the peak traffic flow. The noise criterion applied to the uses which rely on opened windows for ventilation.

Noise Criteria for Fixed Noise Sources

- 3.4 For fixed noise sources, the criterion is determined based on the statutory Acceptable Noise Levels (ANL) stipulated in “Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites”^[2] (IND – TM). The HKPSG also states that in order to plan for a better environment, all planned fixed noise sources should be so located and designed that when assessed in accordance with the TM, the level of the intruding noise at the façade of the nearest sensitive use should be at least 5dB(A) below the appropriate ANL shown in Table 2 of the IND – TM or, in the case of the background being 5dB(A) lower than the ANL, should not be higher than the background.
- 3.5 The Development Site is located in an isolated high-rise development area, and part of the Development Site is affected by an Influencing Factor (IF) (i.e. Tai Po Industrial Estate). According to the IND – TM, any NSR shall be assigned an ASR of “C” if it is within 100m of a zone designated as “Industrial” or “Industrial Estate” on a statutory Outline Zoning Plan, or an ASR of “B” if it is between 100m and 250m from such a zone. Since the northern part of the Development Site is located more than 250m away from the Tai Po Industrial Estate, for conservative, an Area Sensitivity Rating of “A” would be applied to all the NSRs of the proposed Development for the fixed noise assessment. The ANLs are shown in Table 3.1.

Table 3.1 ANLs for Day, Evening and Night Time Periods

Time Period	ANLs dB(A), Leq (30 mins)		
	ASR "A"	ASR "B"	ASR "C"
Day (0700 to 1900 hours) and evening (1900 to 2300 hours)	60	65	70
Night (2300 to 0700 hours)	50	55	60

Note: In any event, the ASR and the ANLs adopted in this report are only indicative and they are used for assessment only. It should be noted that noise from fixed noise sources is controlled under section 13 of the Noise Control Ordinance. Therefore, the ASRs and ANLs determined in this report shall not prejudice the Noise Control Authority's discretion to determine noise impact due to fixed noise sources on the basis of prevailing legislation and practices being in force, and taking account of contemporary conditions/ situations of adjoining land uses. The assessment of noise impacts due to fixed noise sources in this report shall not bind the Noise Control Authority in the context of law enforcement against any of the noise from fixed noise sources being assessed.

- 3.6 As mentioned in Section 3.4, the noise criteria for the noise from planned fixed sources are ANL – 5dB(A) or the prevailing background noise levels, whichever is lower. Site measurements were made at the nearby noise sensitive receiver, the prevailing background noise levels are summarised in Table 3.2 below. The measurement location is provided in Figure 2.

Table 3.2 Noise Measurement Results

Location	Noise Sensitive Receiver	Measurement Result, dB(A), L90 (1 hour), Façade
Loc 1	Kam Fung Terrace	Daytime: 57 – 58 Night-time: 46 – 48

- 3.7 The prevailing background noise levels of the identified noise sensitive receiver were higher than ANL – 5dB(A). Therefore, the ANL – 5dB(A) are used as the criteria for noise from planned fixed sources (i.e. 55dB(A) for daytime, and 45dB(A) for night-time).

4. SITE SURVEYS

Dates and Time

4.1 Site surveys were conducted on the following dates and time:-

- 7 April 2025 (10:00am – 6:00pm)
- 23 June 2022 (10:00am – 6:00pm)
- 8 October 2021 (2:00pm – 6:00pm)
- 10 March 2020 (6:00am – 2:00pm)
- 15 October 2019 (3:00pm – 6:00pm; 10:00pm – 00:30am)
- 11 July 2018 (8:00pm – 11:00pm)
- 6 July 2018 (2:30pm – 6:00pm)

Instrumentation

4.2 The instruments used by WHA for the surveys comply with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1), as listed in Table 4.1 below.

Table 4.1 Instruments Used for the Noise Surveys

Manufacturer	Type
Ono Sokki	Precision Integrating Sound Level Meter
Ono Sokki	Foam Windshield
Brüel and Kjær	Noise Calibrator Type 4231

4.3 The sound level meter was calibrated before use and further checks on completion of the survey, and confirmed that the calibration levels from before and after the noise measurement agree to within 1.0dB.

4.4 The site measurements including measurement equipment, calibration procedure, measurement methodology and weather conditions were conducted in accordance with the IND – TM.

Fixed Noise Sources in the Vicinity

4.5 The study area for the fixed noise sources impact assessment is 300m. The identified potential fixed noise sources are summarised in Table 4.2 below and given in Figure 3. Detailed discussion on the noise impact from these fixed noise sources is given in Section 7. The photos of the identified potential fixed noise sources are provided in Appendix 5.

Table 4.2 Identified Potential Fixed Noise Sources

Source ID	Site	Identified Industrial Activities [1]	Location of Fixed Noise Sources	Operating Hours [2]
A	Tin Sam Sewage Pumping Station	No industrial noise was observed during site surveys.	On ground level	24 hours
B	Cheuk Shing Vehicle Repair Workshop	The workshop was housed within a permanent steel cover. The workshop had one staff member only. In 2022 site survey, the major activity of the workshop was to provide car repairing service. Site surveys revealed that the major noise was the air compressor noise, lasting about 10 seconds per 2 minutes, and also some insignificant operation noise from taking up / putting down the hand tools. All the operations were taken place within the steel cover. Site inspections for the workshop were conducted for 1 hour, no noisy activities were observed. The operation noise was only audible at the entrance of the workshop. Noise from the workshop was inaudible at Fung Yuen Road. The noise measurements were conducted at 5m distances from the noise sources, detailed noise measurement results are provided in Appendix 6. In 2025 site survey, it was used as parking only, no industrial noise was observed during site survey.	On ground level, under the steel cover	9:00am – 6:00pm
C	Recycling Yard	It is a recycling yard of steel material. A crane was observed inside the yard for loading and unloading. A lorry was also observed but for parking only without operation. The noise measurements were conducted at 5m distances from the noise sources, detailed noise measurement results are provided in Appendix 6. The industrial activities were the same in 2025 site survey.	On ground level	9:00am – 6:00pm
D	Car Repair Workshop at Ting Kok Road	In 2022 site survey, the workshop provided car parking and services of tyre fixing and car battery changing. The cars were parked at outdoor area and the repairing services were taken place within the steel cover. The major noisy activity was the electric screwdriver noise, lasting about 5 seconds per minute. The operation noise was not audible outside the workshop, where the road traffic noise from Ting Kok Road would be dominant. The noise measurements were conducted at 8m distances from the noise sources, detailed noise measurement results are provided in Appendix 6. In 2025 site survey, it was used as parking only, no industrial noise was observed during site survey	On ground level, under the steel cover	9:00am – 6:00pm

E	Site Office	A temporary structure for site office. No industrial noise was observed during site surveys.	On ground level	9:00am – 6:00pm
F	KMB Bus Depot	Site surveys revealed that the depot was used for parking, petrol filling and fixing the advertisement on the bus. Site observations were made for the depot for 3 hours. The general operations of the depot include the buses returning to the bus depot and parking. Then, the bus driver took a rest. The bus would manoeuvre slowly to petrol filling before leaving the depot. The major noisy activities were buses manoeuvring at ingress / egress and inside the bus depot. As advised by the manager of the bus depot, the depot would not have any maintenance work and the operation hours would be about 6:00am to midnight. The findings were remained valid, as observed on the 2025 site survey.	On ground level	6:00am – 12:00am
G	MTRC Tai Po Bus Station	The lot comprises a 2-storey building and an open area. The gate was closed during site surveys. No industrial noise was observed during site surveys.	On ground level	9:00am – 6:00pm
H	Lee Kum Kee	The factory comprises 2 buildings and an open area. A forklift was observed in the outdoor area for transferring goods. Additionally, 4 cooling towers were found at the rooftop.	On ground level	9:00am – 6:00pm
J	Hopewell Slipform	The factory of slipform. In 2022 site survey, no industrial noise was observed during site surveys, only a crane was observed. In 2025, no plant was observed, no industrial noise was observed also.	On ground level	9:00am – 6:00pm
K	Techno Enterprise Limited	No industrial noise was observed during site surveys. 2 cooling towers at 1/F platform were observed.	On ground level	9:00am – 6:00pm
L	Jackel Porter Co. Ltd.	No industrial noise was observed during site survey.	On ground level	9:00am – 6:00pm
M	Luen Tai Hong	6 cooling towers were identified at the rooftop based on desktop study. No industrial noise was observed during site survey.	On ground level	9:00am – 6:00pm
N	OPC Manufacturing Ltd.	In 2022, 2 cooling towers were observed at the rooftop and 1 cooling tower was located at the ground level. In 2025, the factory was closed. All the cooling towers were removed.	On ground level	9:00am – 6:00pm
P	Vantage Technology Ltd.	No industrial noise was observed during site survey.	On ground level	9:00am – 6:00pm

Q	Chiaphua Industries	3 cooling towers were identified at the rooftop based on desktop study. No industrial noise was observed during site survey.	On ground level	9:00am – 6:00pm
R	Hitachi Chemical Electronic Materials (Hong Kong) Ltd.	3 cooling towers were observed at the rooftop.	On ground level	9:00am – 6:00pm

Noted:

- [1] The operation of the identified fixed noise sources were observed during site surveys and confirmed with the staffs.
- [2] The operating hours of the identified fixed noise sources were advised from the staffs of each site, and confirmed by night-time site survey.

4.6 Other than the identified fixed noise sources in Table 4.2, site surveys have confirmed that there are no other major fixed noise sources in the vicinity of the Development Site. All the fixed noise sources within the assessment area are identified and considered in the assessment.

5. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

- 5.1 The noise prediction was conducted by employing the WS Atkins RoadNoise 2000^[3] computer software.

Traffic Forecast

- 5.2 The anticipated occupation year of the proposed Development is 2030, the maximum traffic in 15 years after occupation of the proposed Development (i.e. 2045) has been adopted for the purpose of the road traffic noise assessment.
- 5.3 The traffic forecast for Year 2045 was provided by the Traffic Consultant (CTA Consultants Limited). The definition of heavy vehicles in the U.K. Department of Transport's "Calculation of Road Traffic Noise" (CRTN)^[4] has been adopted. The traffic flow data adopted in the noise prediction model is provided in Appendix 2. Review of the data indicates that the AM peak is in general higher than the PM peak. Therefore, the set of AM peak traffic data is employed for the assessment, representing the worst-case scenario. The computer plot of the noise prediction model is shown in Figure 4.

Noise Assessment Points for Road Traffic Noise Assessment

- 5.4 All ventilation openings to rooms of noise sensitive use (i.e. living and dining rooms, bedrooms / master bedrooms) are assigned with noise assessment points. The location of assessment points are illustrated in Figures A3-1 to A3-3 of Appendix 3. The clubhouse will be equipped with central air-conditioning and would not rely on opened windows for ventilation. No adverse noise impact is anticipated.
- 5.5 The assessment points are taken at the height of 1.2m above each residential floor and 1m away from the façade of openable windows of the noise sensitive rooms.

Methodology of Road Traffic Noise Impact Assessment

- 5.6 The road traffic noise levels at the proposed Development were predicted, based on the predicted traffic flows in Year 2045 and in accordance with the procedures given in the CRTN. The predicted road traffic noise levels at the building facades include a 2.5dB(A) facade reflection and correction factors for gradient, distance, view angle, barriers and road surface material.
- 5.7 The study area of the road traffic noise assessment would be 300m from the site boundary. The roads within the study area are included in the assessment.

- 5.8 As advised by the Highways Department, the road surface types of the roads in the prediction model are “bitumen” and “concrete” (Appendix 2).

Predicted Road Traffic Noise Levels (Base Scenario)

- 5.9 The predicted road traffic noise levels are presented in Appendix 2 for all Noise Sensitive Receivers (NSRs) of the proposed Development. The noise compliance rate of the base scenario will be 91% (i.e. 188 residential units have noise exceedance) with maximum 73dB(A). Therefore, noise mitigation measures are required.

Predicted Road Traffic Noise Levels (With Noise Mitigation Measures)

- 5.10 In order to achieve noise compliance, all noise sensitive rooms with noise exceedance will be provided with Acoustic Window (Baffle Type). The location of the Acoustic Window (Baffle Type) is provided in Figures 5a – 5c. The Acoustic Window (Baffle Type) will be designed by making reference to ProPECC PN5/23 “Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact”. With the provision of these noise mitigation measures, all residential units of the proposed Development (i.e. 100%) can comply with the stipulated 70dB(A) noise limit. Details of the predicted noise levels are given in Appendix 4.
- 5.11 Noise mitigation measures for the proposed Development are given in Section 6.

6. NOISE MITIGATION MEASURES

- 6.1 Practicable noise mitigation measures have been considered and some of those measures have been incorporated in the proposed Development, as mentioned in the following sections.
- 6.2 Noise mitigating designs have been investigated and considered in the design stage, including building setback and building block orientation.
- 6.3 The Schedule of Noise Mitigation Measures to summarise all the noise mitigation measures in the proposed Development is provided in Appendix 9.

Acoustic Window (Baffle Type)

- 6.4 Acoustic Window (Baffle Type) will be adopted for the proposed Development as noise mitigation measure. The Acoustic Window (Baffle Type) comprises of two layers of window. An additional window layer is introduced to the conventional side-hung window in a staggering position. The outer window is a conventional push-pull type window whilst the inner one is a sliding window. By properly positioning the openings of inner window with the outer window, it can reduce noise entering indoors while allowing air flow into the room via the air gap between two layers of windows.
- 6.5 The Acoustic Window (Baffle Type) in the proposed Development will be designed by making reference to ProPECC PN5/23 “Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact”. Additional Sound Absorptive Materials are required to be applied at top and outer opening side of mullion of the Acoustic Window (Baffle Type) for certain locations.
- 6.6 The locations of Acoustic Window (Baffle Type) with or without Sound Absorptive Materials are illustrated in Figures 5a – 5c. The detailed design of the Acoustic Window (Baffle Type) and the justification of noise performance are shown in Appendix 8. The Project Architect confirmed that the design of Acoustic Window (Baffle Type) could meet the natural ventilation requirement under Building (Planning) Regulations.

7. NOISE IMPACT ASSESSMENT FOR FIXED NOISE SOURCES

7.1 The identified fixed noise sources in the vicinity were summarised in Table 4.2.

Noise Assessment Points for Fixed Noise Sources Assessment

7.2 With consideration of the fixed noise sources locations, representative assessment points with most affected (with shortest distance) are assigned for the noise assessment. The location of the assessment points are illustrated in Appendix 6.

7.3 The assessment points are taken at the height of 1.2m above each residential floor and 1m away from the façade of openable windows in the noise sensitive rooms.

SWLs Adopted in the Fixed Noise Sources Calculation

7.4 On-site noise measurements were made to investigate the existing fixed noise sources. Sound Pressure Levels (SPLs) obtained during survey were then converted to SWLs with reference to basic acoustic principle. The SPLs at NSRs were calculated based on the distance attenuation, tonality correction, impulsiveness correction, intermittency correction, barrier correction and façade correction. No tonality correction, impulsiveness correction, intermittency correction is applied to the fixed noise sources based on site observation and measurements.

7.5 Site surveys were conducted from years 2018 to 2025. According to the recent site survey findings, some fixed noise sources were not in operation during site survey. For conservative purpose, the SWLs of the fixed noise sources adopted in the previous approved NIA report is adopted in this assessment. Some fixed noise sources were removed and no longer exists as observed in recent site survey, which would not be considered in this assessment.

7.6 The identified cooling towers are located at the rooftop and forklift is located within the private lot, which are not accessible at the time of the surveys. Therefore, the SWL of forklift is referenced to BS5228. The SWLs of cooling towers are referenced to the product catalogue with similar diameter. For conservatism, the corrections for deterioration and tonality are considered. The referenced catalogues are provided in Appendix 5.

7.7 The locations of fixed noise sources are shown in Figure 3. The SWLs of the fixed noise sources adopted in the assessment are summarised in Table 7.1. Detailed calculations for SWLs are provided in Appendix 5.

Table 7.1 SWLs of Identified Fixed Noise Sources

Source ID	Name	Fixed Noise Sources	Nos.	SWL of each plant, dB(A)	Operation hours	Reference
B	Cheuk Shing Vehicle Repair Workshop	Air compressor noise	1	94	Day and evening periods	Site measurements
C	Recycling yard	Loading and unloading by crane	1	95	Day and evening periods	Site measurements
D	Car Repair Workshop at Ting Kok Road	Electric screwdriver noise	1	96	Day and evening periods	Site measurements
F	KMB Bus Depot	Buses manoeuvring at ingress / egress and inside the Bus Depot	1	90	Day, evening and night-time periods	Site measurements
H-1	Lee Kum Kee	Cooling towers at rooftop	4	93	Day and evening periods	Product catalogue
H-2		Forklift	1	104	Day and evening periods	BS5228
J	Hopewell Slipform	Crane	1	105	Day and evening periods	TM
K	Techno Enterprise Limited	Cooling towers	2	93	Day and evening periods	Product catalogue
M	Luen Tai Hong	Cooling towers	6	93	Day and evening periods	Product catalogue
Q	Chiaphua Industries	Cooling towers	3	93	Day and evening periods	Product catalogue
R	Hitachi Chemical Electronic Materials (Hong Kong) Ltd.	Cooling towers	3	93	Day and evening periods	Product catalogue

Methodology of Noise Impact Assessment from Fixed Noise Sources

- 7.8 For the fixed noise sources of cooling towers, the exact locations will be considered in the calculation. For other noise sources, the noise emission points are placed at the location where the noise sources were being observed during site surveys.

- 7.9 Although it is unlikely that all the identified fixed noise sources will be in operation simultaneously, to be conservative, it has been assumed that all the identified fixed noise sources are in operation at the same time, which also represents a worst-case scenario. Fixed noise sources are assumed to operate continuously instead of occasionally as observed on-site and all fixed noise sources are regarded as point source.
- 7.10 Site inspections confirmed that the identified fixed noise sources have no operation during night-time period except for the KMB Bus Depot. Therefore, only KMB bus depot would be considered in the assessment during night-time period.
- 7.11 For conservatism, no barrier correction would be considered in the assessment.
- 7.12 For the assessment of noise from fixed noise sources, the noise level at NSR was predicted using the standard acoustic principles:

$$\text{Predicted Noise Level} = \text{Sound Power Level of fixed noise source} - \text{Distance Attenuation} + \text{Façade Correction}$$

Where Distance Attenuation = $20 \log D + 8$ [where D is the distance in meters]
 Façade Correction = 3dB(A)

Predicted Noise Levels from Fixed Noise Sources (Base Scenario)

- 7.13 The predicted façade noise levels from fixed noise sources at the representative NSRs are in the range of 55 – 56 dB(A) Leq(30min) during day and evening time periods, and 32 – 33dB(A) Leq(30min) during night-time period. These predicted noise levels are within the stipulated noise limits as mentioned in Section 3. The summary of the predicted noise levels are summarised in Table 7.2 and given in Appendix 6.

Table 7.2 Summary of Noise Results for Fixed Noise Sources

NSR	Predicted Façade Noise Levels		Comply or not
	Day and Evening, dB(A)	Night-time, dB(A)	
NSR 116	56	32	Comply
NSR 216	56	33	Comply
NSR 223	56	33	Comply
NSR 318	55	33	Comply

Fixed Noise Sources in the Proposed Development

- 7.14 Refer to the Section 3.7, the prevailing background noise levels of the identified noise sensitive receiver were higher than $ANL - 5dB(A)$. Therefore, the $ANL - 5dB(A)$ are used as the criteria for noise from planned fixed sources (i.e. $55dB(A)$ for daytime, and $45dB(A)$ for night-time).
- 7.15 For the design of plant noise control treatment, the noise emanating from plantrooms and from the fresh air intake and discharge air grilles shall be controlled to $45dB(A)$ $Leq(30min)$, measured at 1m from the nearest NSRs. Provisions shall be made to control the plant noise by suitable silencers, acoustic louvres, vibration isolators and enclosures in order to meet the noise requirement in the HKPSG.

8. NOISE IMPACTS TO THE RCHE AND DCU

- 8.1 A 8-storey of RCHE and DCU will be located in Area (B) of the proposed Development, which will subject to the road traffic noise and fixed noise sources.
- 8.2 As the typical layout of the RCHE and DCU are not available at this stage, representative noise assessment points are assigned to all façade of the building to have preliminary noise results.

Road Traffic Noise Impact for RCHE and DCU

- 8.3 The predicted road traffic noise levels for the RCHE and DCU will be in the range of 66 – 80dB(A), which exceeded the noise criteria (i.e. 70dB(A)). The road traffic noise results are presented in Appendix 8.
- 8.4 The DCU would be equipped with central air-conditioning and would not rely on opened windows for ventilation. No adverse noise impact is anticipated.
- 8.5 The southern façade facing Ting Kok Road will have significant noise exceedance, fixed glazing and no noise sensitive rooms of RCHE will be adopted at the southern façade. According to the ProPECC PN5/23, the Acoustic Window (Baffle Type) together with the sound absorptive material will have 7.5dB(A) noise reduction. With the provision of this acoustic window and fixed glazing, all the NSRs of the RCHE and DCU will comply with the noise limit (Appendix 7). The requirements such as the room size, dimensions of the acoustic window (baffle type), etc., in the PN5/23 will be fully complied with in order to apply the relative noise reduction stated in the PN.
- 8.6 As the typical layout of the RCHE and DCU is not available at this stage, the noise mitigation measures and the noise performance would be reviewed during the detailed building design stage in order to achieve noise limits in HKPSG. The wards and diagnostic room will be designed to have air-conditioning without openable window for ventilation, or designed to locate at the north or west façade.

Fixed Noise Impact for RCHE and DCU

- 8.7 The predicted façade noise levels from fixed noise sources at the representative NSR on RCHE and DCU is 58 dB(A) Leq(30min) during day and evening time periods, and 35dB(A) Leq(30min) during night-time period. These predicted noise levels are within the stipulated noise limits as mentioned in Section 3.

Fixed Noise Sources from RCHE and DCU

- 8.8 Refer to the Section 3.7, the prevailing background noise levels of the identified noise sensitive receiver were higher than $ANL - 5dB(A)$. Therefore, the $ANL - 5dB(A)$ are used as the criteria for noise from planned fixed sources (i.e. 55dB(A) for daytime, and 45dB(A) for night-time).
- 8.9 The planning fixed noise sources included the air conditioning system of the RCHE and DCU, such as chiller and cooling tower. The acoustic performance of the fixed noise sources would be reviewed during detailed design stage. If found necessary, acoustic treatments such as provision of acoustic silencers and acoustic enclosures shall be proposed in order to comply with the relevant noise requirements in the HKPSG.

9. CONSTRUCTION NOISE IMPACT

9.1 The major construction activities of the Development site include soil excavation, site formation, backfilling, piling and superstructure, etc. Construction noise will be generated by the use of Powered Mechanical Equipment (PME) such as excavator and dump truck, etc. during the construction work. Given that the details of the construction programme and plant inventory are not available at this stage, a qualitative assessment was then conducted.

9.2 With the implementation of standard practices recommended in the ProPECC PN 1/24 “Minimizing Noise from Construction Activities”, adverse construction noise impact is normally not anticipated. The recommended mitigation measures are summarized below.

Standard Practice for Construction Phase

9.3 The recommended practices below would be considered in all worksites as good practices to limit noise emissions at the source include:-

- Good site practices to limit noise emissions at the source;
- Use of quality powered mechanical equipment (QPME);
- Use of site hoarding as noise barrier to screen noise at ground level of NSRs;
- Use of temporary noise barriers, noise enclosure and acoustic mat to screen noise from relatively static PMEs;
- Scheduling of construction works outside school examination periods in critical area; and
- Alternative use of plant items within one worksite, wherever practicable.

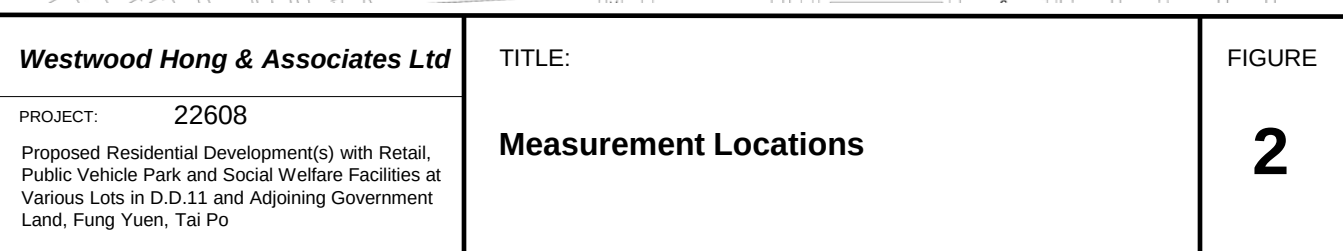
9.4 The above recommended practices would need to be implemented in worksites as good practices where appropriate. Reference shall also be made to EPD’s recommended pollution control clauses for construction contracts.

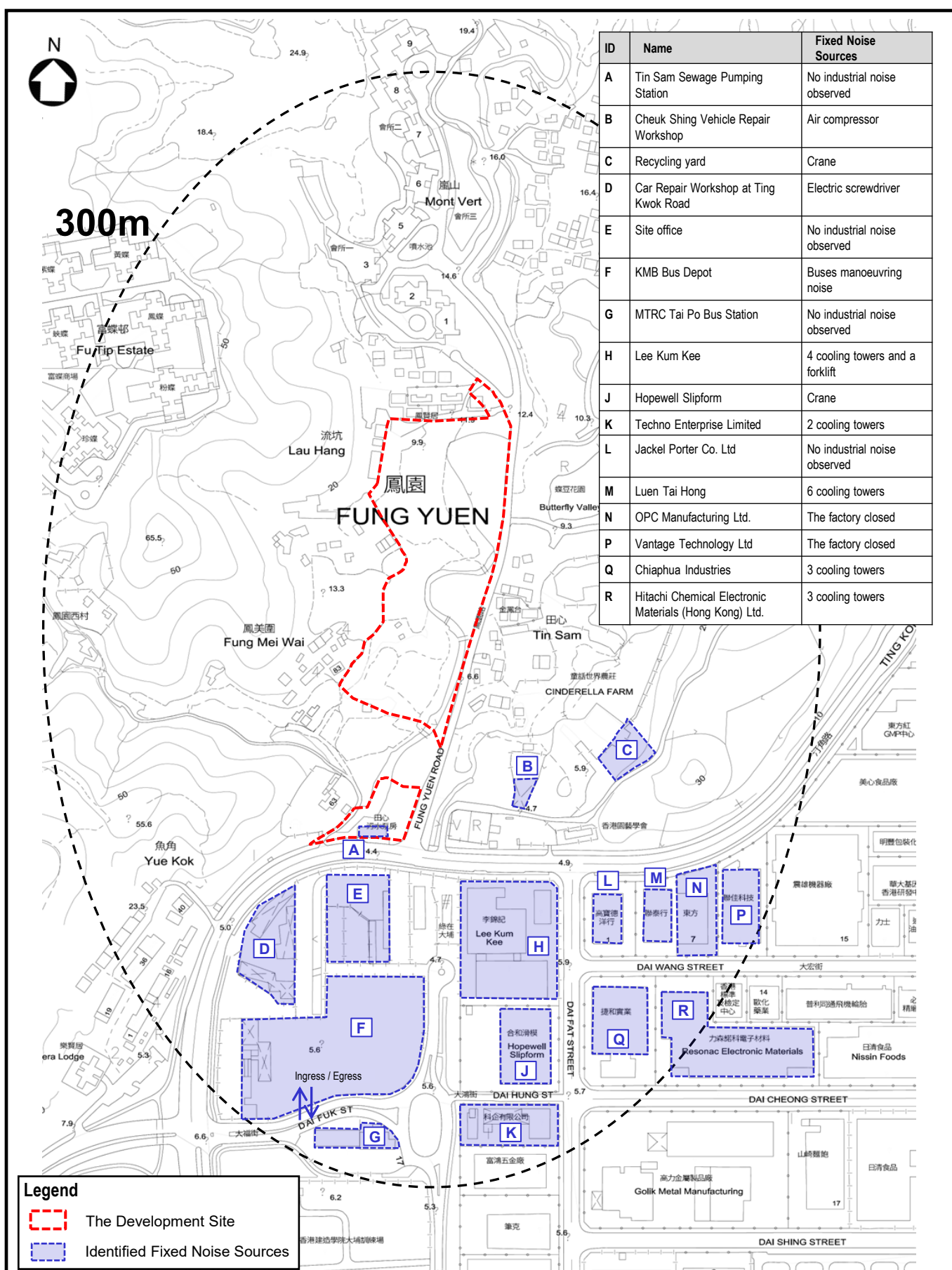
10. CONCLUSION

- 10.1 Noise assessments have been conducted to predict the noise impacts at the proposed Development.
- 10.2 For road traffic noise, the predicted maximum road traffic noise level of the residential flats in Area (A) and the social welfare facilities in Area (B) will be 73dB(A) and 80dB(A) respectively, exceeding the stipulated 70dB(A) noise criterion. Therefore, noise mitigation measures are required.
- 10.3 With the provision of Acoustic Window (baffle type), the assessment results indicate that the predicted road traffic noise levels at all the residential flats in Area (A) and the social welfare facilities in Area (B) (i.e. 100%) will comply with the 70dB(A) noise criterion.
- 10.4 For the fixed noise sources impact, the assessment results indicate that all the residential flats in Area (A) and the social welfare facilities in Area (B) will be within the stipulated noise limits.
- 10.5 A noise impact assessment will be conducted in the detailed design stage to address the potential noise impact for the proposed Development and recommend noise mitigation measures in order to meet the requirements under the HKPSG.

11. REFERENCES

- [1] "Hong Kong Planning Standards & Guidelines" of March 2014 of Hong Kong Government.
- [2] "Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites" (IND – TM) issued under the Noise Control Ordinance.
- [3] "RoadNoise 2000" Computer Software of WS Atkins Noise and Vibration, England.
- [4] "Calculation of Road Traffic Noise" of the Department of Transport, Welsh Office, UK.





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PROJECT: 22608

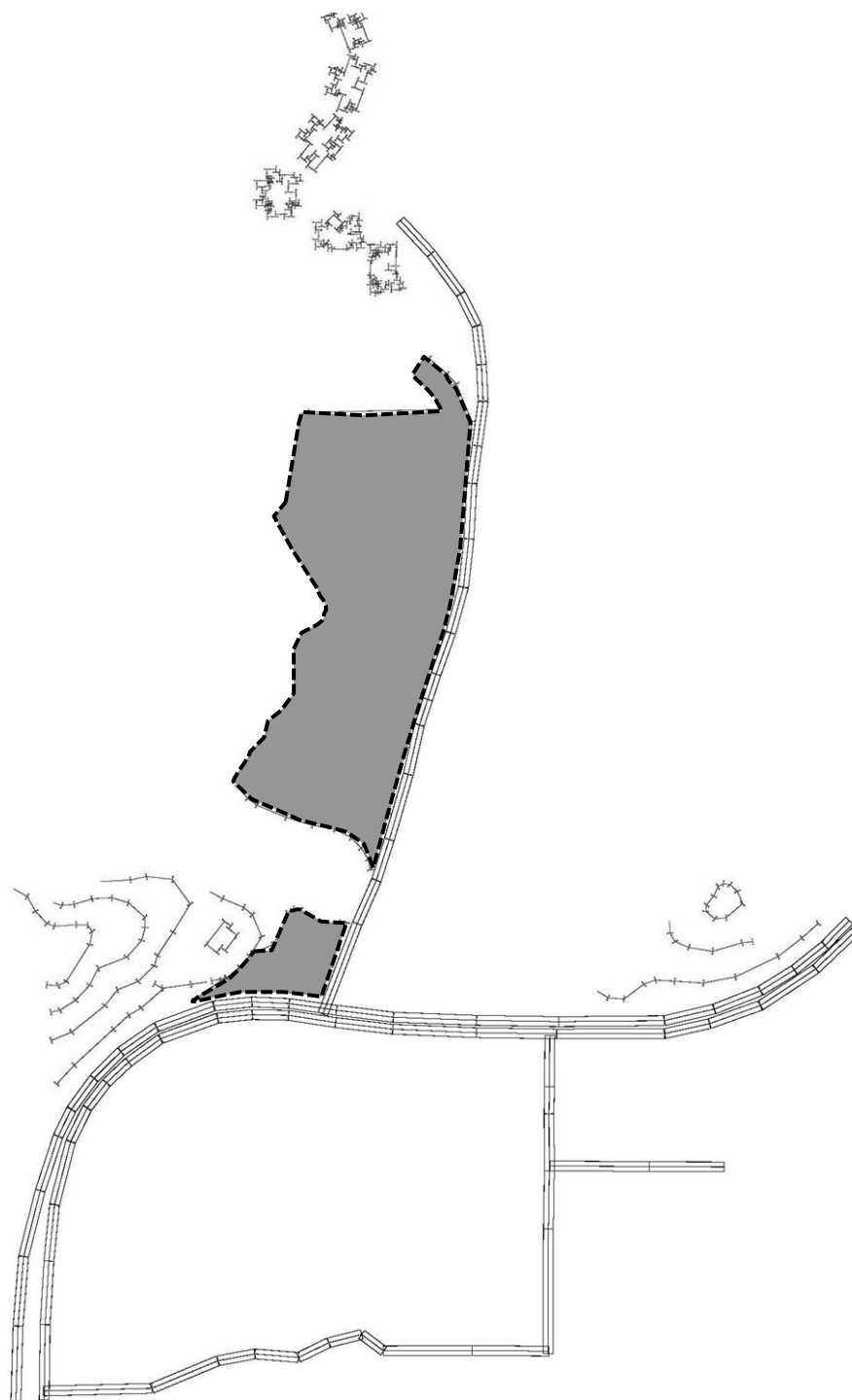
Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

Location of Fixed Noise Sources

FIGURE

3



Legend



The Development Site

Westwood Hong & Associates Ltd

PROJECT: 22608

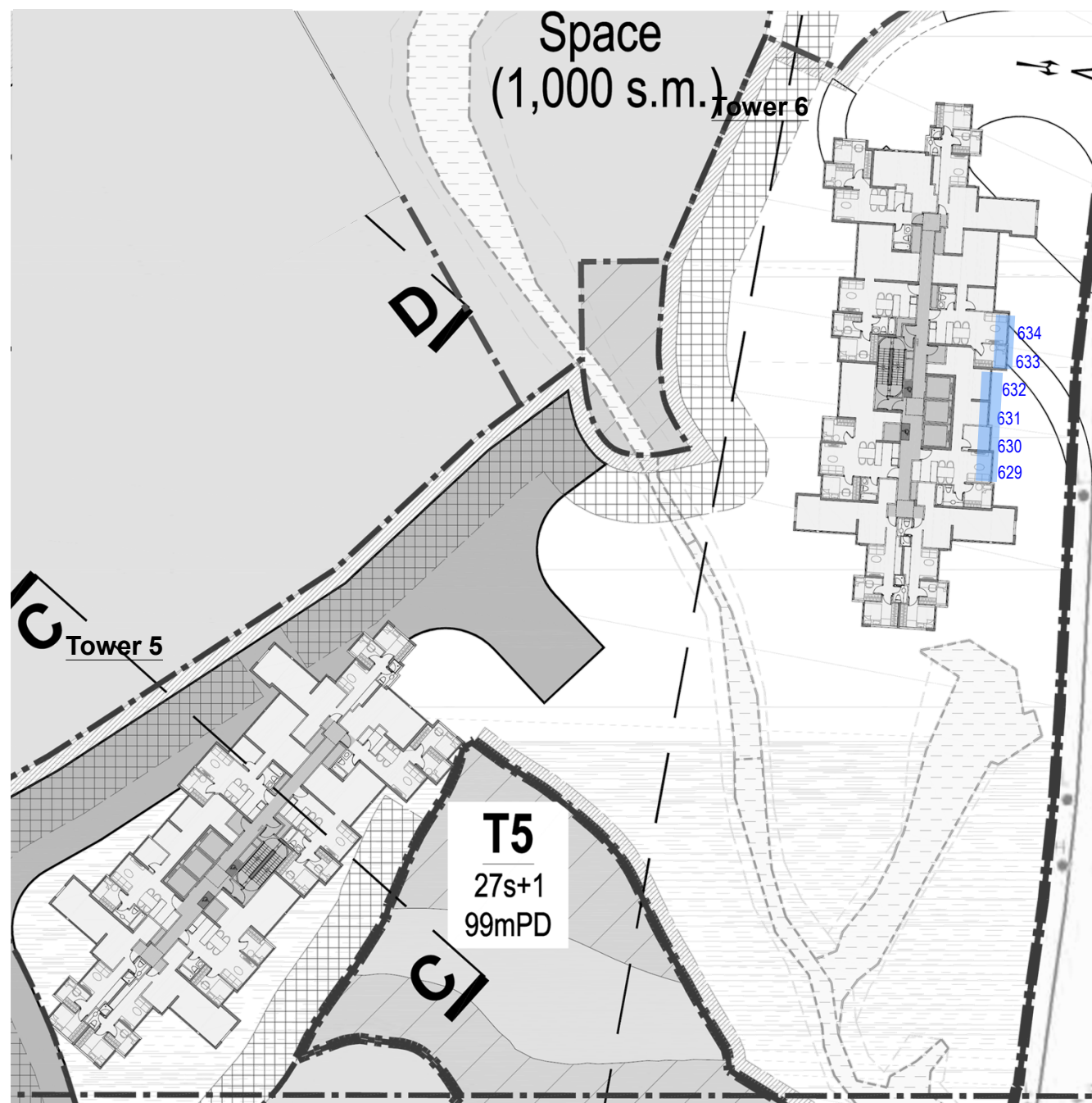
Proposed Residential Development(s) with Retail,
Public Vehicle Park and Social Welfare Facilities at
Various Lots in D.D.11 and Adjoining Government
Land, Fung Yuen, Tai Po

TITLE:

Computer Plot of Road Scheme

FIGURE

4



Legend

Acoustic Window (Baffle Type)

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Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

**Location of Noise Mitigation Measures
(Tower 5 and Tower 6)**

FIGURE

5a



Legend

 Acoustic Window (Baffle Type)

Westwood Hong & Associates Ltd

PROJECT: 22608

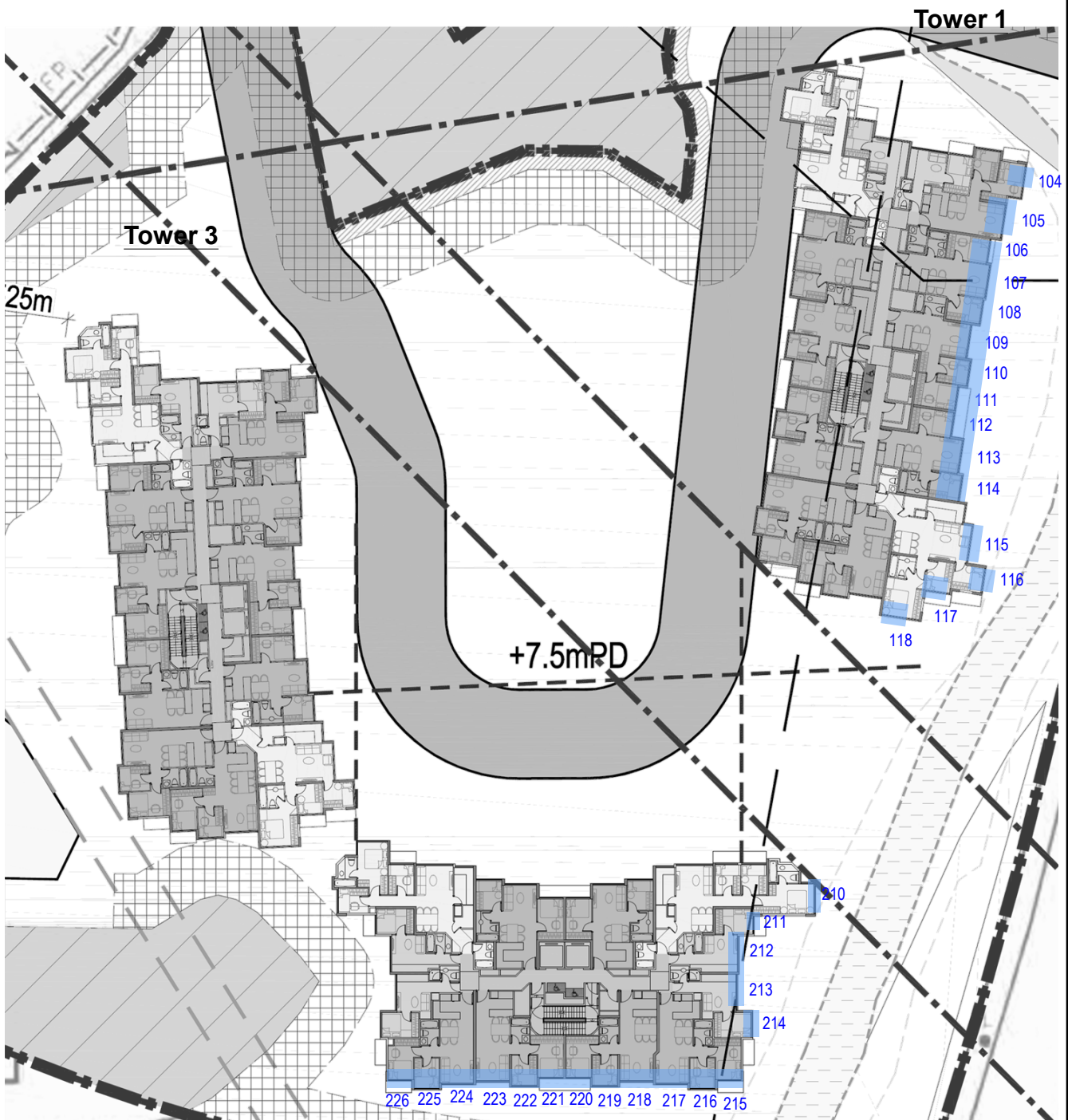
Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

**Location of Noise Mitigation Measures
(Tower 4 and Tower 7)**

FIGURE

5b



Legend

 Acoustic Window (Baffle Type)

Westwood Hong & Associates Ltd

PROJECT: 22608

Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

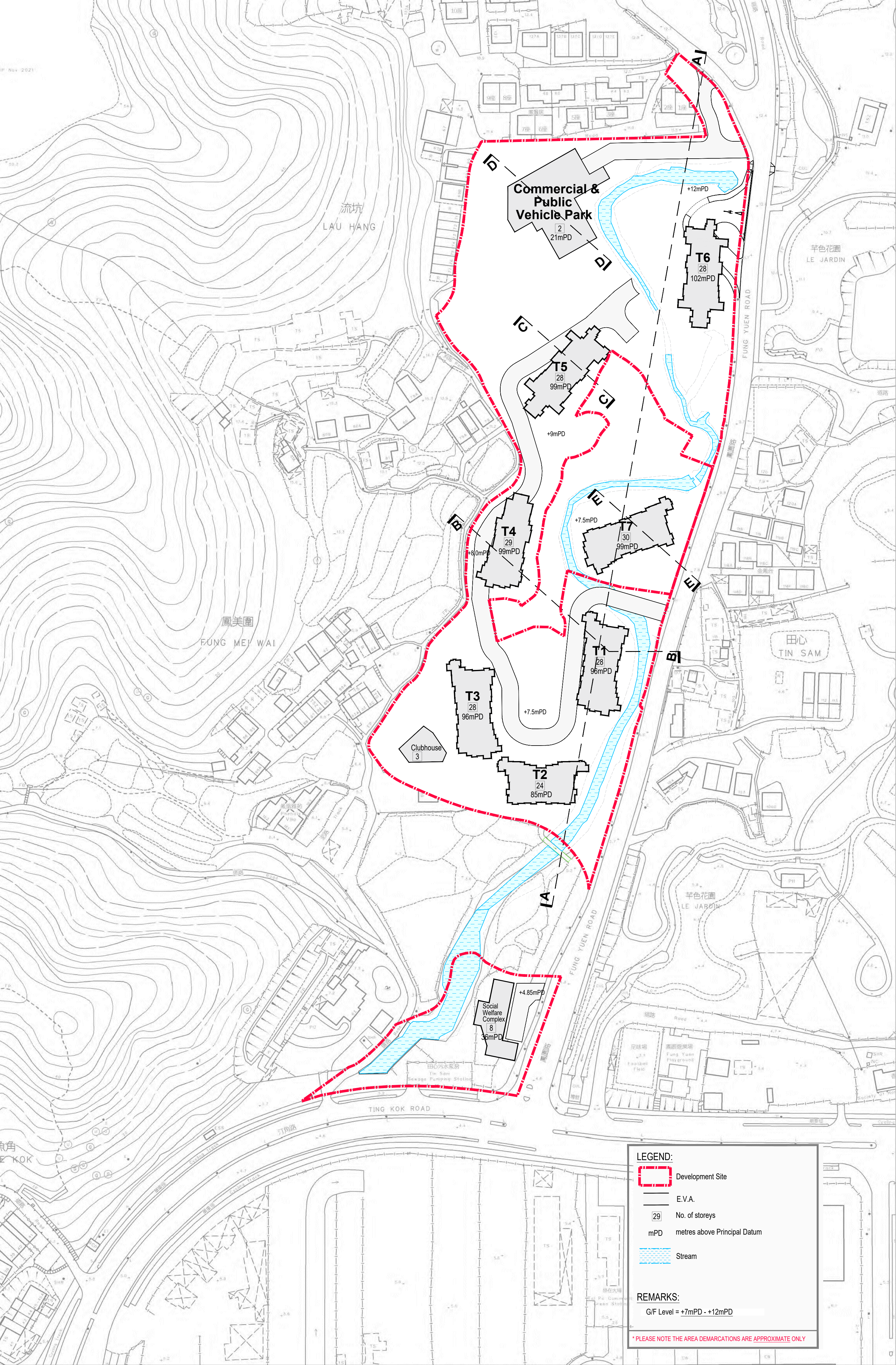
**Location of Noise Mitigation Measures
(Tower 1 – Tower 3)**

FIGURE

5c

APPENDIX 1

ARCHITECTURAL DRAWINGS



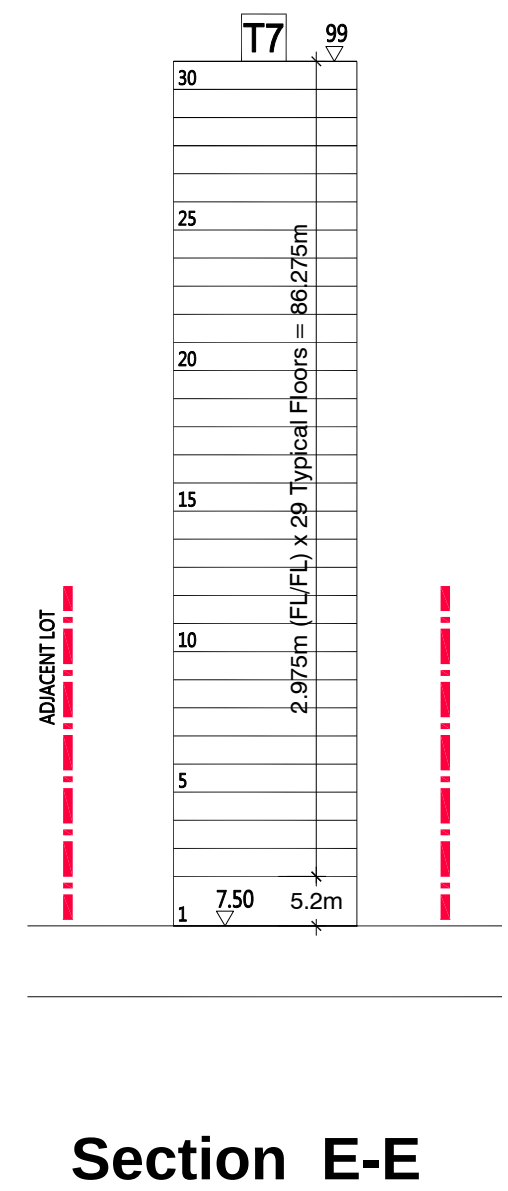
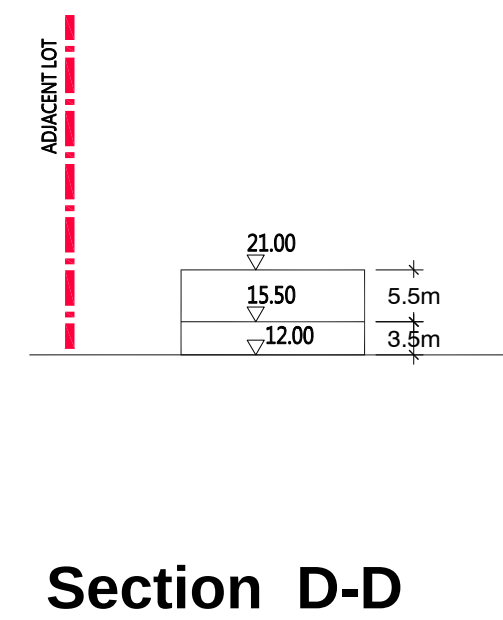
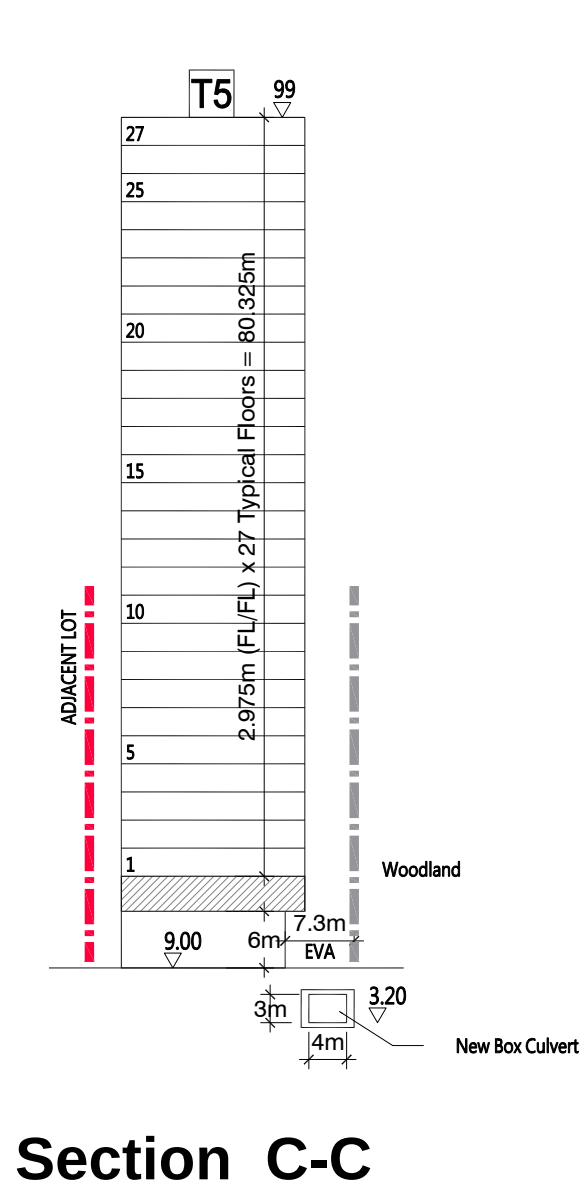
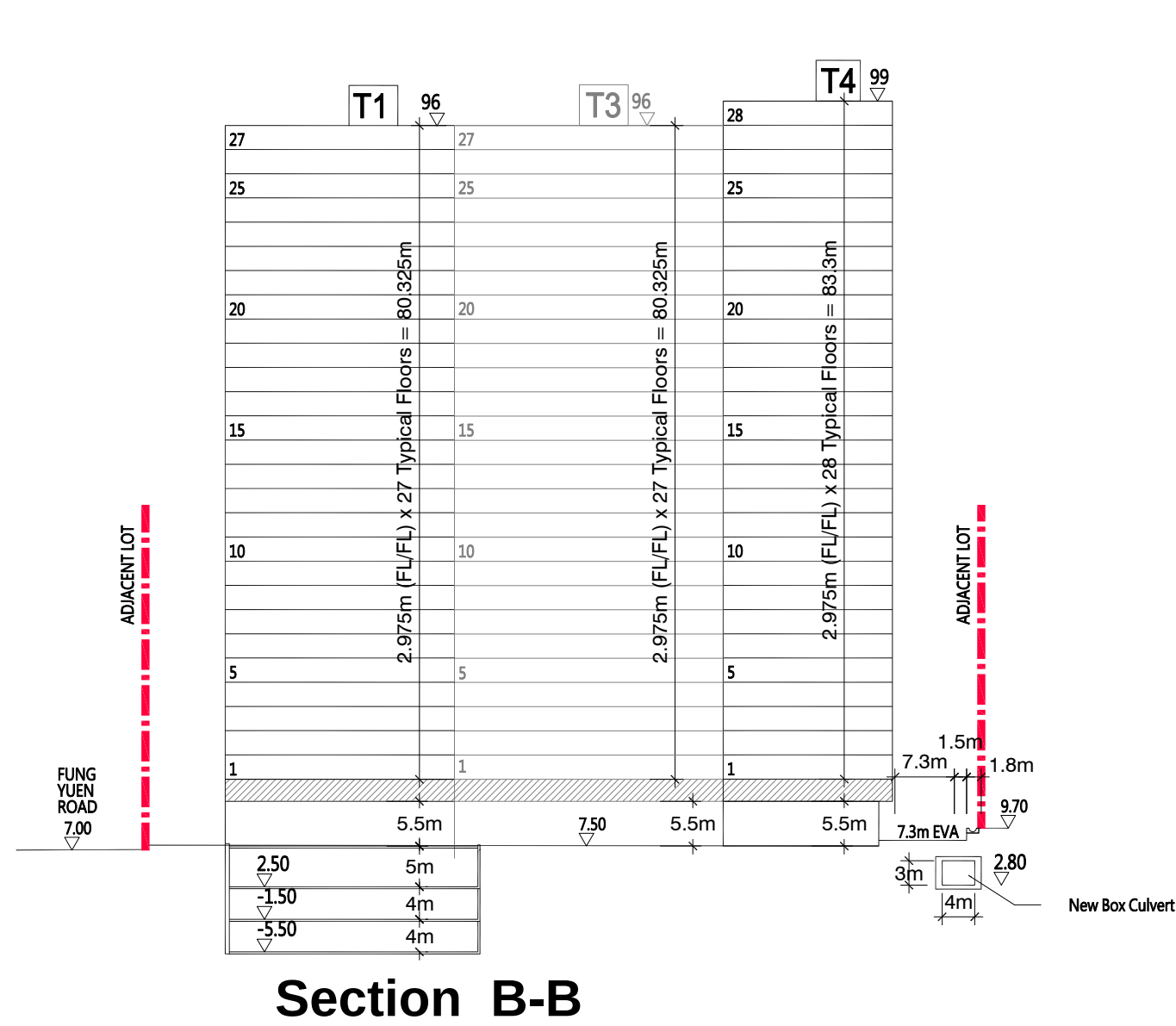
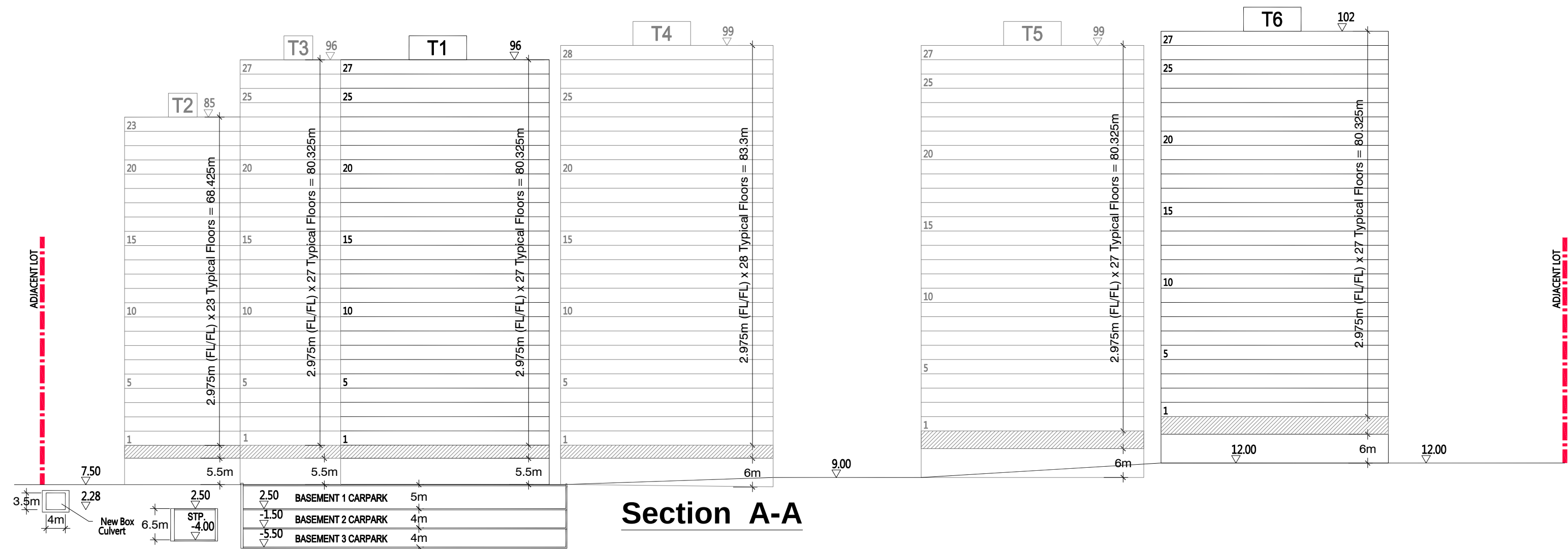
LEGEND:

- Development Site
- E.V.A.
- No. of storeys
- metres above Principal Datum
- Stream

REMARKS:

G/F Level = +7mPD - +12mPD

* PLEASE NOTE THE AREA DEMARCATIIONS ARE APPROXIMATE ONLY



APPENDIX 2

YEAR 2045 TRAFFIC FORECAST
(provided by CTA CONSULTANTS LTD.)
AND
CONFIRMATION FROM HYD

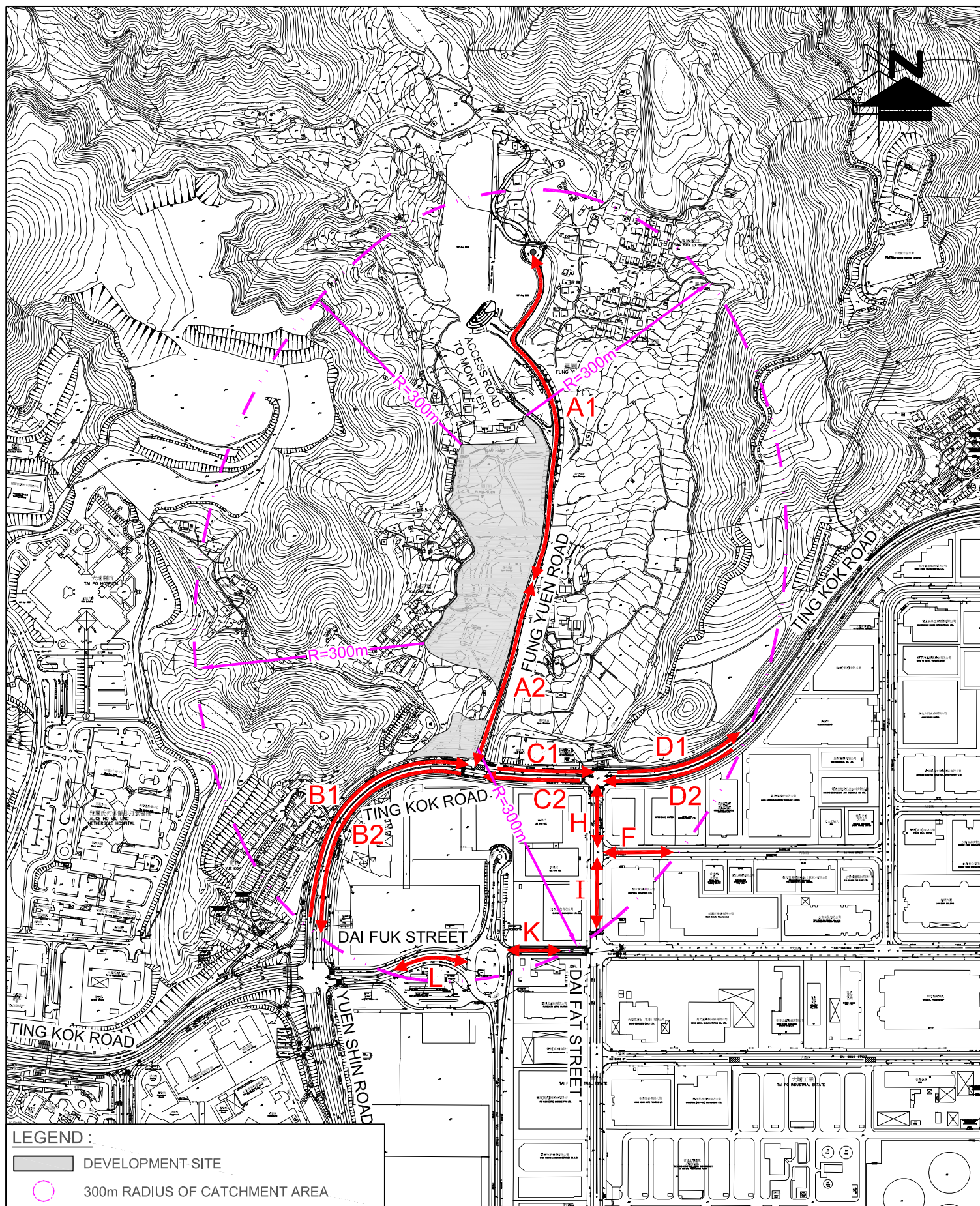


FIGURE NO.: 1		PROJECT TITLE: Rezoning Application at Fung Yuen Road, Tai Po	
PROJECT NO.: 25022HK		DRAWING TITLE: INDEX PLAN FOR TNIA (300m)	
SCALE: 1 : 6500 @A4	DATE: 15 APR 2025	 CTA Consultants Limited 志達顧問有限公司	

25022HK

Rezoning Application at Fung Yuen Road, Tai Po

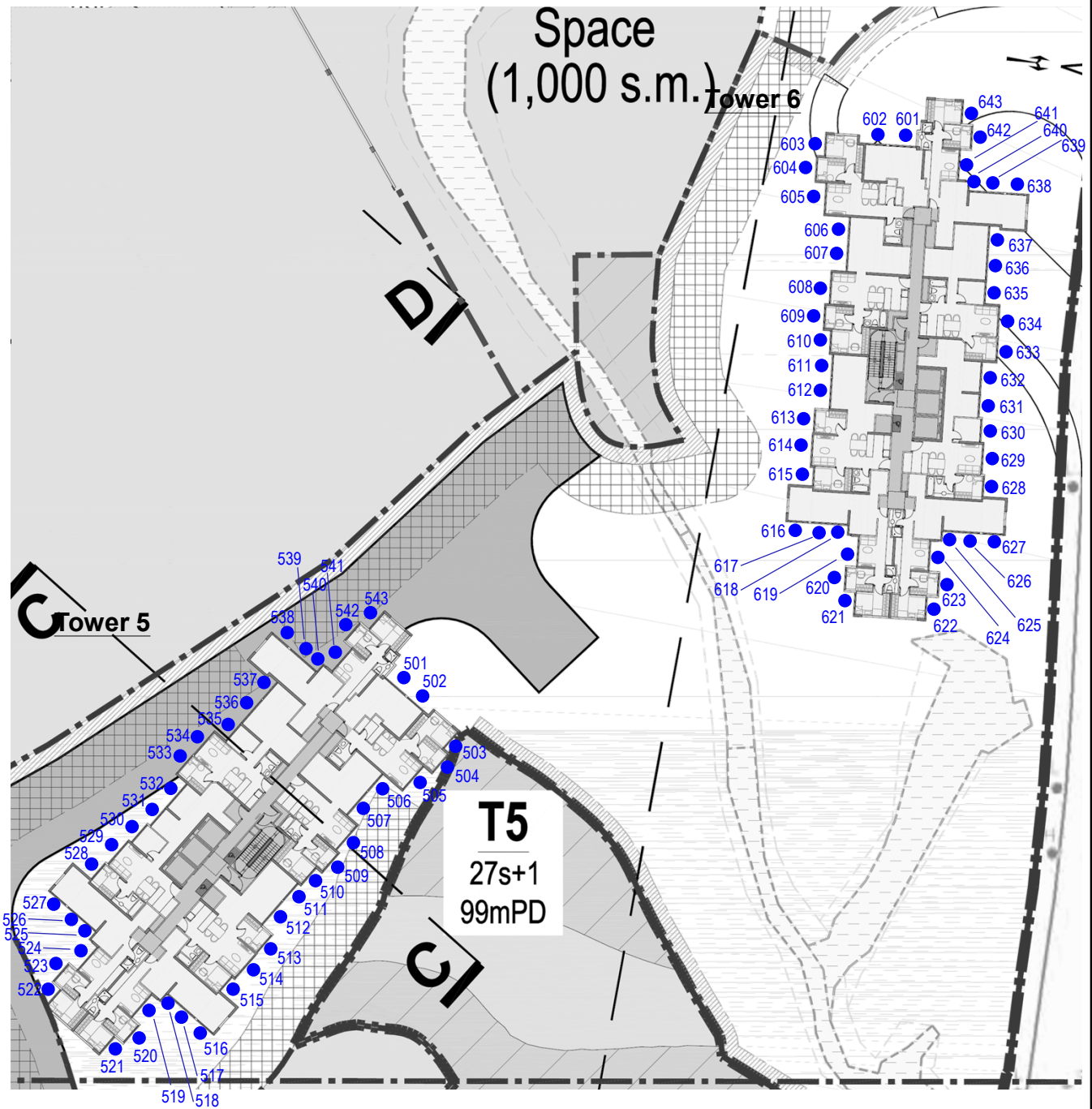
TRAFFIC FORECAST FOR TRAFFIC NOISE IMPACT ASSESSMENT



Link No.	Road Name	Speed	1-way / 2-way	Year 2045			
				AM Peak		PM Peak	
				Traffic Flow (veh/hr)	HV%	Traffic Flow (veh/hr)	HV%
A1	Fung Yuen Road	50	2-way	280	30%	290	26%
A2	Fung Yuen Road	50	2-way	580	23%	550	19%
B1	Ting Kok Road	70	1-way	1500	28%	1510	20%
B2	Ting Kok Road	70	1-way	1780	23%	1370	22%
C1	Ting Kok Road	70	1-way	1420	29%	1370	20%
C2	Ting Kok Road	70	1-way	1610	24%	1260	21%
D1	Ting Kok Road	70	1-way	1120	26%	1220	17%
D2	Ting Kok Road	70	1-way	1370	22%	1020	18%
F	Dai Wang Street	50	2-way	330	45%	170	30%
H	Dai Fai Street	50	2-way	440	45%	310	53%
I	Dai Fat Street	50	2-way	310	60%	250	54%
K	Dai Hung Street	50	1-way	210	43%	240	23%
L	Dai Fuk Street	50	2-way	490	43%	480	29%

APPENDIX 3

PREDICTED FAÇADE NOISE LEVELS FOR ROAD TRAFFIC NOISE (BASE SCENARIO)



Westwood Hong & Associates Ltd

PROJECT: 22608

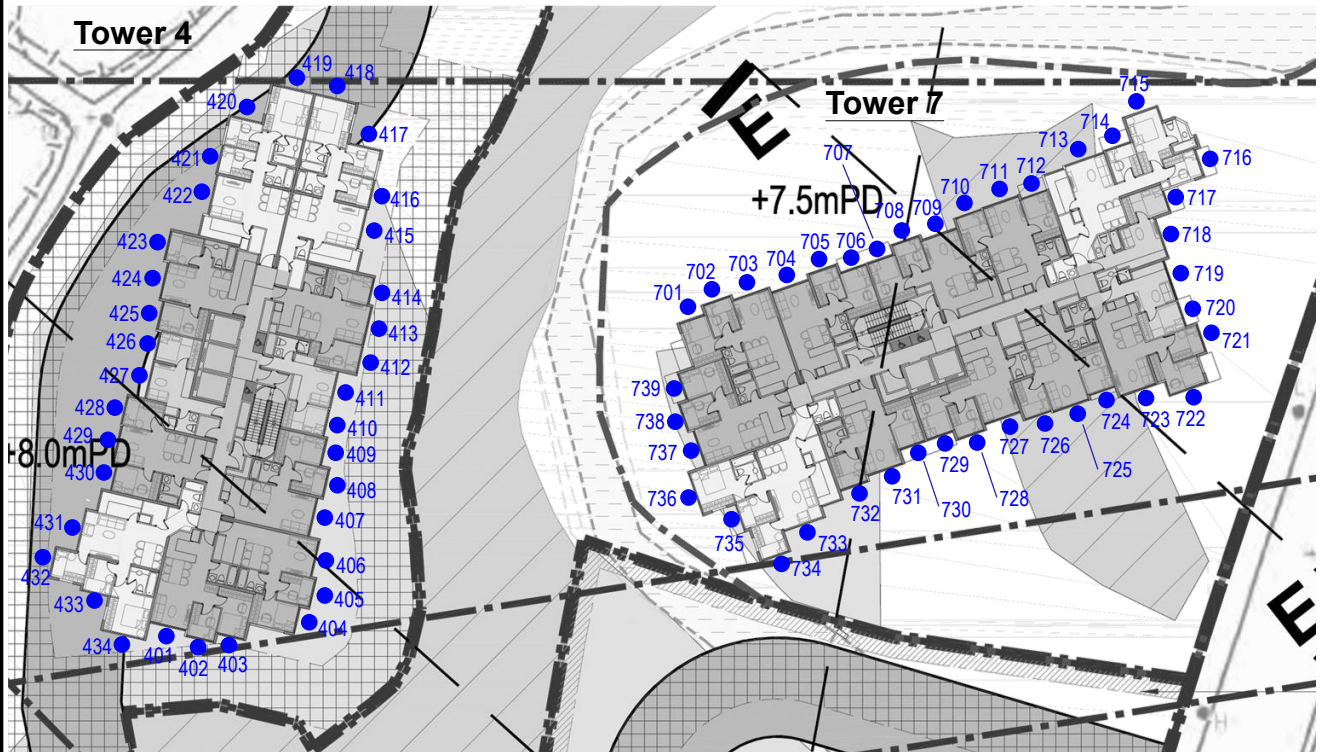
Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

Location of Assessment Point

FIGURE

A3-1



Westwood Hong & Associates Ltd

PROJECT: 22608

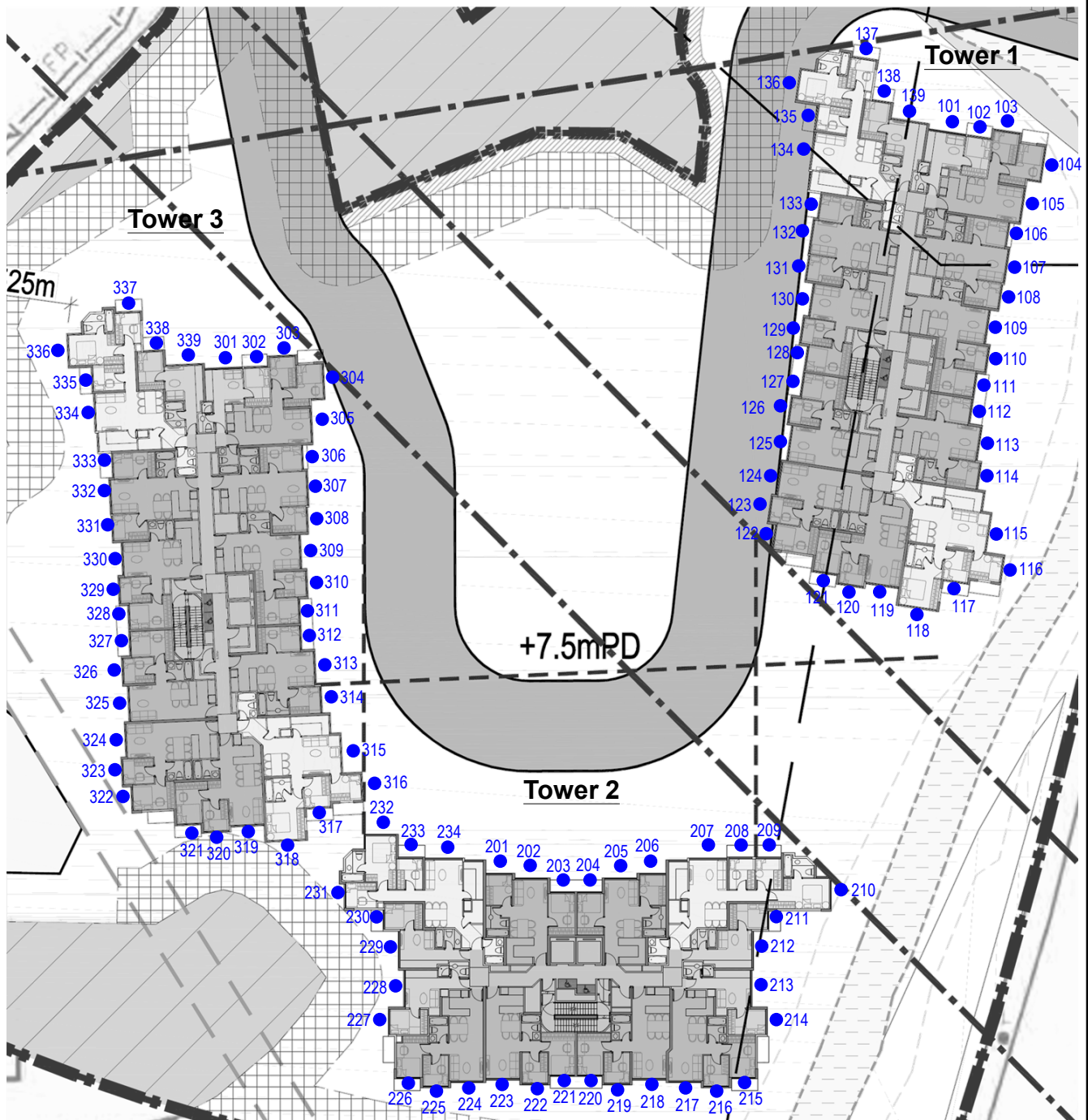
Proposed Residential Development(s) with Retail,
Public Vehicle Park and Social Welfare Facilities at
Various Lots in D.D.11 and Adjoining Government
Land, Fung Yuen, Tai Po

TITLE:

Location of Assessment Point

FIGURE

A3-2



Westwood Hong & Associates Ltd

PROJECT: 22608

Proposed Residential Development(s) with Retail,
Public Vehicle Park and Social Welfare Facilities at
Various Lots in D.D.11 and Adjoining Government
Land, Fung Yuen, Tai Po

TITLE:

Location of Assessment Point

FIGURE

A3-3

Job No. : 22608
Job Title : Fung Yuen
Scenario : 2045 Traffic Forecast, AM Peak, Unmitigated

Floor	mPD Level of Noise Assessment	Receiver																																							
		101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	
1	19.9	65.0	65.7	67.9	72.4	72.2	72.1	72.2	72.3	72.0	72.2	72.0	72.0	72.4	72.6	72.8	72.0	71.8	69.9	69.8	69.0	65.3	61.9	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	45.8	49.7	47.5	47.1	45.6	64.5	64.4	64.3		
2	29.9	64.9	65.5	67.6	72.1	72.0	71.9	71.9	72.0	71.8	71.8	71.7	71.8	72.1	72.2	72.6	71.8	71.6	69.8	69.7	69.6	65.2	61.8	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	46.0	50.0	49.0	48.5	46.4	64.4	64.3			
3	22.8	64.7	65.3	67.4	71.8	71.7	71.8	71.7	71.7	71.5	71.7	71.5	71.6	71.8	71.9	72.3	71.8	71.5	69.7	69.6	68.9	65.2	61.7	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	46.4	50.4	49.4	49.0	46.8	64.4	64.2	64.2		
4	25.8	64.5	65.0	67.1	71.5	71.4	71.4	71.4	71.5	71.3	71.4	71.2	71.2	71.3	71.4	71.5	72.0	71.3	71.2	69.6	69.5	68.8	65.1	61.7	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	46.7	50.8	50.5	50.0	47.5	64.2	64.1	64.0	
5	28.8	64.2	64.8	66.2	71.2	71.1	71.1	71.1	71.2	71.0	71.1	70.9	70.9	71.0	71.1	71.2	71.7	71.1	71.0	69.4	69.3	68.7	65.0	61.6	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	46.9	51.2	51.1	50.6	48.0	64.1	63.9	63.8	
6	31.8	64.0	64.5	66.5	71.0	70.9	70.9	70.9	70.9	70.7	70.8	70.7	70.6	70.8	70.9	70.9	71.4	70.9	70.8	69.3	69.2	68.6	65.0	61.5	35.7	35.0	35.5	34.9	34.9	34.9	34.8	35.1	47.0	51.3	51.8	51.3	48.2	63.9	63.7	63.6	
7	34.8	63.8	64.3	66.2	70.7	70.6	70.6	70.6	70.7	70.5	70.6	70.5	70.4	70.5	70.6	70.6	71.2	70.7	70.7	69.2	69.1	68.5	64.9	61.5	35.7	35.0	35.5	34.9	34.9	34.9	34.8	35.0	47.1	51.5	52.2	51.7	48.7	63.7	63.5	63.4	
8	37.7	63.5	64.0	66.0	70.5	70.4	70.4	70.4	70.4	70.3	70.4	70.2	70.1	70.3	70.4	70.4	70.9	70.5	70.5	69.1	69.0	68.3	64.8	61.4	35.7	35.0	35.5	34.9	34.9	34.9	34.8	35.0	47.1	51.5	52.5	51.9	48.9	63.5	63.3	63.2	
9	40.7	63.3	63.7	65.7	70.3	70.2	70.2	70.2	70.2	70.1	70.2	70.0	69.9	70.0	70.2	70.1	70.6	70.4	70.3	69.0	68.9	68.2	64.8	61.3	35.6	35.0	35.4	34.9	34.9	34.8	34.8	35.0	47.1	51.5	52.8	52.2	49.3	63.4	63.1	63.0	
10	43.7	63.1	63.5	65.4	70.1	70.0	69.9	70.0	70.0	69.9	70.0	69.8	69.7	69.8	69.9	69.9	70.6	70.2	70.3	68.9	68.7	68.2	64.7	61.3	35.6	35.0	35.4	34.9	34.9	34.8	34.8	35.0	47.1	51.6	52.9	52.4	49.6	63.2	62.9	62.7	
11	46.7	62.8	63.3	65.2	69.9	69.8	69.7	69.8	69.8	69.7	69.8	69.6	69.5	69.6	69.7	69.7	70.4	70.1	70.1	68.8	68.7	68.1	64.6	61.2	35.6	34.9	35.4	34.9	34.9	34.8	34.8	35.0	47.1	51.5	52.9	52.4	49.9	63.0	62.7	62.5	
12	49.6	62.6	63.0	64.9	69.7	69.6	69.6	69.7	69.7	69.5	69.6	69.4	69.3	69.5	69.6	69.5	70.3	69.9	70.0	68.7	68.6	68.0	64.6	61.1	35.6	34.9	35.4	34.9	34.8	34.8	34.8	35.0	47.0	51.5	53.0	52.5	50.0	62.8	62.5	62.3	
13	52.6	62.4	62.8	64.7	69.5	69.4	69.4	69.5	69.5	69.3	69.5	69.3	69.2	69.3	69.4	69.4	70.1	69.9	69.9	68.6	68.5	68.0	64.5	61.1	35.5	34.9	35.4	34.9	34.8	34.8	34.7	35.0	47.0	51.5	53.0	52.5	50.1	62.6	62.3	62.1	
14	55.6	62.2	62.6	64.5	69.4	69.3	69.3	69.4	69.4	69.2	69.3	69.1	69.0	69.2	69.3	69.2	70.0	69.7	69.8	68.5	68.4	67.9	64.4	61.0	35.5	34.9	35.4	34.8	34.8	34.7	34.7	34.9	46.9	51.4	53.0	52.5	50.1	62.4	62.2	61.9	
15	58.6	62.0	62.4	64.2	69.3	69.2	69.1	69.2	69.2	69.1	69.2	69.0	68.9	69.0	69.1	69.1	69.9	69.6	69.7	68.5	68.3	67.8	64.4	60.9	35.5	34.9	35.3	34.8	34.8	34.7	34.7	34.9	46.9	51.4	53.0	52.4	50.2	62.3	62.0	61.7	
16	61.5	61.8	62.2	64.0	69.1	69.0	69.0	69.1	69.1	68.9	69.0	68.9	68.8	68.9	69.0	69.0	69.8	69.5	69.6	68.4	68.3	67.8	64.3	60.9	35.5	34.8	35.3	34.8	34.8	34.7	34.6	34.9	46.8	51.3	52.9	52.5	50.2	62.1	61.8	61.6	
17	64.5	61.6	62.0	63.8	69.0	68.9	68.9	69.0	69.0	68.9	68.9	68.7	68.7	68.8	68.9	68.8	69.7	69.5	69.5	68.4	68.2	67.7	64.2	60.8	35.4	34.7	35.2	34.7	34.7	34.7	34.7	34.9	46.8	51.3	52.9	52.4	50.2	61.9	61.6	61.4	
18	67.5	61.4	61.8	63.6	68.9	68.8	68.8	68.8	68.9	68.7	68.8	68.6	68.5	68.7	68.7	68.7	69.6	69.4	69.4	68.3	68.2	67.6	64.2	60.8	35.7	35.0	35.6	35.1	35.0	35.0	35.0	35.2	46.7	51.2	52.9	52.4	50.2	61.8	61.4	61.2	
19	70.5	61.2	61.6	63.4	68.8	68.7	68.7	68.7	68.7	68.6	68.7	68.5	68.4	68.6	68.6	68.6	69.5	69.3	69.3	68.3	68.1	67.6	64.1	60.7	36.4	35.7	36.2	35.7	35.7	35.8	35.6	35.9	46.7	51.1	52.8	52.3	50.2	61.7	61.3	61.0	
20	73.4	61.1	61.4	63.3	68.7	68.6	68.6	68.6	68.6	68.5	68.6	68.4	68.3	68.5	68.5	68.5	69.4	69.2	69.3	68.2	68.0	67.5	64.1	60.7	37.5	36.8	37.3	36.8	36.8	36.9	36.6	36.9	46.7	51.1	52.8	52.3	50.2	61.5	61.1	60.9	
21	76.4	60.9	61.2	63.1	68.6	68.5	68.5	68.5	68.5	68.4	68.5	68.3	68.2	68.3	68.4	68.4	69.4	69.1	69.2	68.1	68.0	67.5	64.0	60.6	38.8	38.1	38.6	38.1	38.0	38.2	37.8	38.1	46.9	51.1	52.8	52.3	50.2	61.3	61.0	60.7	
22	79.4	60.7	61.1	62.9	68.5	68.4	68.4	68.4	68.5	68.3	68.4	68.2	68.1	68.3	68.4	68.3	69.3	69.1	69.1	68.1	67.9	67.4	64.0	60.6	40.3	39.6	40.1	39.5	39.5	39.5	39.3	39.4	46.9	51.1	52.8	52.3	50.2	61.2	60.8	60.6	
23	82.4	60.6	60.9	62.8	68.4	68.3	68.3	68.3	68.4	68.2	68.3	68.1	68.0	68.2	68.2	68.2	69.2	69.0	69.1	68.0	67.9	67.4	63.9	60.6	42.0	41.3	41.7	41.2	41.1	41.1	41.1	40.8	40.9	47.2	51.2	52.8	52.3	50.3	61.0	60.7	60.4
24	85.3	60.4	60.8	62.6	68.3	68.2	68.2	68.2	68.3	68.1	68.2	68.0	67.9	68.1	68.2	68.1	69.1	68.9	69.0	68.0	67.8	67.3	63.9	60.6	46.1	45.4	45.6	45.1	44.9	44.8	44.5	44.5	48.2	51.5	52.9	52.5	50.5	60.7	60.4	60.1	
25	88.3	60.3	60.6	62.5	68.2	68.2	68.1	68.2	68.2	68.0	68.1	67.9	67.8	68.0	68.1	68.0	69.1	68.9	68.9	68.0	67.8	67.3	64.0	60.7	48.7	48.0	48.0	47.5	47.2	47.1	46.7	46.7	49.1	51.9	53.1	52.7	50.8	60.6	60.2	60.0	
26	91.3	60.0	60.3	62.2	68.1	68.0	68.0	68.0	68.0	67.9	68.0	67.8	67.7	67.9	68.0	67.9	69.1	68.8	68.9	68.0	67.8	67.3	64.0	60.7	48.7	48.0	48.0	47.5	47.2	47.1	46.7	46.7	49.1	51.9	53.1	52.7	50.8	60.6	60.2	60.0	
27	94.3	60.0	60.3	62.2	68.1	68.0	68.0	68.0	68.0	67.9	68.0	67.8	67.7	67.8	67.9	67.8	69.1	68.9	69.0	68.1	67.9	67.4	64.2	61.2	52.3	51.5	51.3	50.8	50.3	50.1	49.5	49.5	50.7	52.7	53.6	53.1	51.3	60.5	60.1	59.8	
28																																									
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Floor	mPD Level of Noise Assessment	Tower 3																																								
		301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339		
1	16.9	51.4	51.1	51.4	50.7	50.1	50.9	50.1	50.0	50.1	50.0	50.0	50.2	50.3	50.5	62.4	66.2	66.9	67.3	67.8	68.0	68.1	66.4	64.3	64.1	64.0	63.7	63.6	63.5	63.4	63.3	63.1	63.0	62.8	62.6	62.4	62.6	62.5	61.9			
2	19.9	51.4	51.1	51.4	50.7	50.1	50.8	50.9	50.0	50.8	50.9	50.0	50.2	50.3	50.4	63.2	66.7	67.3	67.6	68.1	68.2	68.3	66.8	64.9	64.7	64.6	64.3	64.2	64.0	63.9	63.7	63.6	63.4	63.2	63.1	62.6	62.5	61.9				
3	22.9	51.4	51.0	51.4	50.7	50.1	50.8	50.8	50.0	50.9	50.0	50.9	50.9	50.1	50.2	50.4	63.7	67.0	67.5	67.9	68.3	68.4	68.5	67.1	65.3	65.1	65.0	64.7	64.6	64.6	64.5	64.3	64.1	63.9	63.7	63.5	62.6	62.5	61.9			
4	25.8	51.4	51.0	51.3	50.7	50.1	50.8	50.8	50.0	50.9	50.9	50.8	50.8	50.9	50.1	50.2	50.3	64.1	67.2	67.7	68.1	68.5	68.6	68.7	67.3	65.6	65.4	65.3	65.1	65.0	64.9	64.8	64.7	64.5	64.4	64.2	64.1	63.9	63.7	63.5	62.5	61.8
5	28.8	51.3	51.0	51.3	50.7	50.1	50.8	50.9	50.0	50.8	50.9	50.8	50.8	50.0	50.0	50.1	50.3	64.4	67.4	67.9	68.2	68.6	68.8	68.8	67.5	65.9	65.7	65.6	65.3	65.2	65.2	65.1	65.0	64.8	64.7	64.5	64.4	64.2	62.5	62.4	61.7	
6	31.8	51.3	50.9	51.2	50.7	50.1	50.9	50.9	50.0	50.8	50.8	50.8	50.7	50.8	50.0	50.0	50.2	64.6	67.5	68.0	68.4	68.8	68.9	68.9	67.6	66.1	65.9	65.8	65.6	65.5	65.4	65.3	65.2	65.1	64.9	64.7	64.6	64.4	62.5	62.4	61.7	
7	34.8	51.2	50.8	51.2	50.7	50.2	50.9	50.9	50.0	50.8	50.8	50.8	50.7	50.8	50.0	50.1	64.7	67.6	68.1	68.4	68.8	69.0	69.0	67.7	66.3	66.1	66.0	65.8	65.7	65.7	65.5	65.4	65.3	65.2	64.9	64.8	64.7	62.4	62.4	61.7		
8	37.7	51.2	50.8	51.2	50.7	50.2	50.9	50.9	50.0	50.8	50.9	50.7	50.6	50.8	50.9	50.0	64.8	67.6	68.1	68.5	68.9	69.0	69.1	67.8	66.4	66.3	66.2	65.9	65.8	65.8	65.7	65.6	65.5	65.4	65.1	65.0	64.9	62.4	62.3	61.7		
9	40.7	51.1	50.7	51.1	50.8	50.2	50.0	50.9	50.9	50.8	50.6	50.6	50.5	50.6	50.7	50.8	50.9	64.8	67.6	68.1	68.5	68.9	69.0	69.1	67.9	66.5	66.4	66.2	66.0	65.9	65.9	65.8	65.7	65.6	65.5	65.3	65.2	65.1	62.4	62.2	61.6	
10	43.7	51.0	50.6	51.0	50.8	50.3	50.0	50.0	50.0	50.7	50.6	50.4	50.5	50.7	50.7	50.9	64.8	67.6	68.1	68.4	68.8	69.0	69.1	67.9	66.5	66.4	66.3	66.1	66.0	66.0	65.9	65.8	65.7	65.6	65.5	65.3	65.3	62.2	62.1	61.5		
11	46.7	51.0	50.6	51.0	50.9	50.4	50.1	50.0	50.0	50.6	50.5	50.3	50.4	50.6	50.6	50.8	64.7	67.6	68.1	68.4	68.8	69.0	69.1	67.9	66.5	66.4	66.3	66.1	66.0	66.0	65.9	65.8	65.7	65.6	65.5	65.3	65.3	62.2	62.1	61.5		
12	49.6	51.0	50.5	50.9	50.9	50.4	50.1	50.1	50.0	50.6	50.5	50.3	50.4	50.5	50.5	50.7	64.7	67.5	68.0	68.4	68.8	68.9	69.0	67.8	66.5	66.4	66.3	66.1	66.0	66.0	65.9	65.8	65.7	65.7	65.5	65.4	65.3	62.2	62.1	61.5		
13	52.6	50.9	50.5	50.9	60.0	50.5	50.2	50.1	50.9	50.5	50.4	50.2	50.3	50.4	50.4	50.6	64.6	67.5	68.0	68.4	68.8	68.9	69.0	67.8	66.5	66.3	66.3	66.1	66.0	66.0	65.9	65.8	65.7	65.7	65.5	65.4	65.3	62.2	62.0	61.4		
14	55.6	50.8	50.4	50.8	60.1	50.6	50.3	50.1	50.9	50.4	50.3	50.1	50.2	50.3	50.3	50.5	64.6	67.5	68.0	68.3	68.7	68.9	69.0	67.8	66.4	66.3	66.2	66.1	66.0	66.0	65.9	65.8	65.7	65.7	65.5	65.4	65.3	62.1	62.0	61.3		
15	58.6	50.8	50.3	50.7	60.1	50.7	50.3	50.1	50.9	50.4	50.2	50.0	50.1	50.2	50.2	50.3	64.5	67.4	67.9	68.3	68.7	68.8	68.9	67.8	66.4	66.3	66.2	66.0	66.0	66.0	65.9	65.8	65.7	65.6	65.5	65.4	65.3	62.0	61.9	61.2		
16	61.5	50.7	50.3	50.6	60.2	50.7	50.3	50.2	50.9	50.4	50.2	50.0	50.0	50.1	50.1	50.2	64.4	67.4	67.9	68.3	68.7	68.8	68.9	67.7	66.4	66.3	66.2	66.0	65.9	65.9	65.9	65.8	65.7	65.6	65.5	65.4	65.3	62.0	61.9	61.2		
17	64.5	50.6	50.2	50.6	60.2	50.7	50.4	50.2	50.0	50.4	50.1	50.6	50.9	50.0	50.1	64.4	67.3	67.9	68.2	68.6	68.8	68.9	67.7	66.3	66.2	66.1	66.0	65.9	65.9	65.8	65.8	65.6	65.6	65.5	65.4	65.3	61.9	61.8	61.1			
18	67.5	50.5	50.1	50.5	60.3	50.8	50.4	50.1	50.0	50.3	50.0	50.7	50.6	50.9	50.9	64.3	67.3	67.8	68.2	68.6	68.7	68.8	67.6	66.3	66.2	66.1	65.9	65.8	65.9	65.8	65.7	65.6	65.5	65.4	65.3	65.3	61.8	61.7	61.1			
19	70.5	50.4	50.0	50.4	60.2	50.8	50.4	50.1	50.9	50.3	50.9	50.7	50.7	50.8	50.8	50.9	64.2	67.2	67.8	68.1	68.5	68.6	68.8	67.6	66.2	66.1	66.0	65.8	65.8	65.8	65.7	65.6	65.5	65.5	65.3	65.3	65.2	61.7	61.7	61.0		
20	73.4	50.4	50.0	50.4	60.3	50.8	50.4	50.1	50.9	50.3	50.9	50.6	50.6	50.8	50.8	50.9	64.2	67.2	67.8	68.1	68.5	68.6	68.8	67.6	66.2	66.1	66.0	65.8	65.8	65.8	65.7	65.6	65.5	65.5	65.3	65.3	65.2	61.7	61.6	60.9		
21	76.4	50.3	49.9	50.3	60.2	50.8	50.4	50.2	50.9	50.2	50.8	50.5	50.5	50.7	50.7	50.9	64.1	67.1	67.7	68.0	68.5	68.6	68.7	67.5	66.2	66.0	66.0	65.8	65.7	65.7	65.6	65.6	65.5	65.5	65.3	65.2	65.2	61.6	61.6	60.9		
22	79.4	50.3	49.8	50.2	60.3	50.8	50.4	50.2	50.8	50.2	50.8	50.4	50.5	50.6	50.6	50.7	64.1	67.1	67.7	68.0	68.4	68.6	68.7	67.5	66.1	66.0	65.9	65.8	65.7	65.7	65.6	65.6	65.5	65.4	65.3	65.2	65.1	61.6	61.5	60.8		
23	82.4	50.2	49.7	50.1	60.3	50.8	50.4	50.2	50.8	50.2	50.8	50.2	50.8	50.4	50.4	50.4	64.1	67.1	67.6	68.0	68.4	68.5	68.6	67.4	66.1	65.9	65.9	65.7	65.7	65.7	65.6	65.5	65.4	65.4	65.2	65.2	65.1	61.5	61.4	60.7		
24	85.3	50.1	49.7	50.1	60.3	50.8	50.4	50.2	50.8	50.2	50.8	50.2	50.8	50.4	50.4	50.4	64.2	67.1	67.6	68.0	68.3	68.5	68.6	67.4	66.0	65.9	65.8	65.6	65.5	65.5	65.4	65.3	65.3	65.2	65.1	65.0	65.0	61.3	61.2	60.6		
25	88.3	50.0	49.6	50.0	60.3	50.9	50.5	50.2	50.9	50.2	50.8	50.2	50.8	50.5	50.5	50.6	64.1	67.1	67.6	68.0	68.3	68.5	68.6	67.4	66.0	65.9	65.8	65.6	65.5	65.5	65.4	65.3	65.3	65.2	65.1	65.0	65.0	61.3	61.2	60.5		
26	91.3	49.9	49.5	49.9	60.3	50.9	50.5	50.2	50.9	50.2	50.8	50.2	50.8	50.5	50.5	50.6	64.1	67.3	67.8	68.0	68.4	68.6	68.5	67.3	65.9	65.8	65.8	65.6	65.5	65.5	65.5	65.4	65.3	65.2	65.1	65.0	65.0	61.3	61.2	60.5		
27	94.3	49.8	49.4	49.8	60.4	60.0	50.6	50.4	50.1	50.7	50.5	50.2	50.4	50.8	50.2	50.7	66.8	67.7	68.2	68.3	68.6	68.6	68.5	67.3	65.9	65.8	65.7	65.5	65.5	65.5	65.4	65.3	65.3	65.2	65.1	65.0	64.9	61.2	61.1	60.5		
28																																										
29																																										
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Floor	mPD Level of Noise Assessment	Tower 4																																					
		401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434				
1	16.9	59.4	60.5	60.5	61.2	61.1	61.1	61.0	60.9	60.9	60.6	60.4	60.3	60.0	59.8	59.5	59.2	58.4	58.0	57.7	24.9	20.6	17.3	56.0	56.2	56.0	51.4	49.0	55.6	51.6	28.2	57.0	57.1	53.5	59.8				
2	19.9	59.4	60.5	60.5	61.2	61.1	61.1	61.0	60.9	60.8	60.6	60.4	60.2	60.0	59.8	59.5	59.2	58.3	58.0	57.7	24.8	20.6	17.3	56.9	57.0	56.9	53.0	51.0	56.6	53.2	29.0	57.9	58.0	55.0	59.8				
3	22.9	59.3	60.5	60.5	61.2	61.1	61.1	60.9	60.8	60.8	60.6	60.3	60.2	60.0	59.8	59.4	59.2	58.3	58.0	57.7	24.8	20.6	17.3	57.5	57.7	57.6	54.1	52.2	57.3	54.3	29.9	58.6	58.7	55.9	59.8				
4	25.8	59.3	60.5	60.4	61.1	61.1	61.0	60.9	60.8	60.8	60.6	60.3	60.2	60.0	59.7	59.4	59.2	58.3	58.0	57.6	24.8	20.6	17.3	57.9	58.1	58.0	54.8	53.0	57.8	55.0	30.9	58.0	59.1	56.9	59.8				
5	28.8	59.3	60.5	60.4	61.1	61.1	61.0	60.9	60.8	60.7	60.5	60.3	60.1	59.9	59.7	59.4	59.1	58.2	57.9	57.6	24.8	20.6	17.3	58.2	58.4	58.3	55.2	53.5	58.1	55.4	31.9	59.4	59.5	56.9	59.8				
6	31.8	59.2	60.4	60.3	61.0	61.0	60.9	60.9	60.8	60.7	60.6	60.5	60.2	60.1	59.9	59.6	59.3	59.1	58.2	57.9	57.6	24.8	20.6	17.3	58.6	58.8	58.6	55.5	53.9	58.4	55.7	33.1	59.6	59.7	57.1	59.8			
7	34.8	59.2	60.4	60.3	61.0	60.9	60.9	60.8	60.7	60.6	60.5	60.2	60.0	59.8	59.6	59.3	59.1	58.2	57.9	57.5	24.8	20.6	17.3	58.9	59.1	58.9	55.9	54.3	58.6	56.0	34.1	59.9	60.0	57.5	59.7				
8	37.7	59.2	60.4	60.3	60.9	60.9	60.9	60.8	60.8	60.6	60.4	60.1	60.0	59.8	59.5	59.3	59.0	58.1	57.8	57.5	24.7	20.5	17.3	59.3	59.4	59.2	56.2	54.6	58.9	56.4	35.6	60.1	60.3	57.8	59.7				
9	40.7	59.2	60.4	60.3	60.9	60.9	60.8	60.7	60.6	60.5	60.3	60.1	60.0	59.7	59.5	59.2	59.0	58.1	57.8	57.5	24.7	20.5	17.3	59.5	59.6	59.4	56.5	55.0	59.1	56.6	37.1	60.3	60.5	58.0	59.7				
10	43.7	59.1	60.3	60.2	60.9	60.8	60.8	60.7	60.6	60.5	60.3	60.1	60.0	59.7	59.5	59.2	59.0	58.1	57.8	57.5	24.7	20.5	17.3	59.8	59.8	59.6	56.7	55.1	59.2	56.8	39.3	60.4	60.6	58.2	59.7				
11	46.7	59.1	60.3	60.2	60.8	60.7	60.7	60.6	60.5	60.4	60.2	60.0	59.8	59.6	59.4	59.1	58.9	58.0	57.7	57.4	24.6	20.5	17.3	59.9	59.9	59.6	56.8	55.3	59.3	56.9	40.9	60.5	60.8	58.4	59.6				
12	49.6	59.1	60.2	60.1	60.8	60.7	60.6	60.6	60.4	60.3	60.2	59.9	59.8	59.5	59.3	59.0	58.8	57.9	57.6	57.3	24.6	20.5	17.3	60.0	60.0	59.7	57.0	55.5	59.4	57.1	42.6	60.6	60.9	58.6	59.6				
13	52.6	59.1	60.2	60.1	60.7	60.6	60.6	60.5	60.4	60.3	60.1	59.8	59.7	59.5	59.2	59.0	58.7	57.9	57.6	57.3	24.6	20.5	17.3	60.1	60.2	59.8	57.1	55.6	59.5	57.2	43.8	60.7	61.0	58.7	59.6				
14	55.6	59.0	60.1	60.0	60.6	60.6	60.5	60.4	60.3	60.2	60.0	59.7	59.6	59.4	59.2	58.9	58.7	57.8	57.5	57.2	24.5	20.5	17.3	60.2	60.2	59.9	57.2	55.7	59.6	57.3	44.6	60.8	61.1	58.7	59.5				
15	58.6	59.0	60.1	60.0	60.6	60.5	60.4	60.4	60.2	60.2	60.0	59.7	59.5	59.3	59.1	58.8	58.6	57.7	57.4	57.2	24.5	20.5	17.3	60.3	60.3	59.9	57.3	55.8	59.6	57.4	45.2	60.8	61.1	58.7	59.5				
16	61.5	59.0	60.1	60.0	60.5	60.4	60.4	60.3	60.1	60.1	59.9	59.6	59.4	59.2	59.0	58.7	58.6	57.6	57.3	57.1	24.5	20.4	17.2	60.3	60.3	60.0	57.4	55.9	59.6	57.4	45.6	60.8	61.1	58.7	59.5				
17	64.5	58.9	60.0	59.9	60.5	60.4	60.3	60.2	60.1	60.0	59.8	59.6	59.4	59.2	58.9	58.7	58.6	57.6	57.3	57.0	24.4	20.4	17.2	60.4	60.3	60.0	57.4	55.9	59.6	57.5	45.9	60.8	61.1	58.7	59.4				
18	67.5	58.9	59.9	59.8	60.4	60.3	60.3	60.1	60.0	59.9	59.8	59.5	59.3	59.1	58.9	58.6	58.5	57.5	57.2	57.0	24.4	20.4	17.2	60.4	60.3	60.0	57.4	55.9	59.6	57.4	46.2	60.8	61.1	58.6	59.3				
19	70.5	58.9	59.9	59.8	60.3	60.2	60.2	60.1	60.0	59.9	59.8	59.5	59.3	59.0	58.8	58.5	58.4	57.4	57.1	56.9	24.3	20.3	17.2	60.4	60.3	60.0	57.4	55.9	59.6	57.4	46.3	60.8	61.1	58.6	59.3				
20	73.4	58.8	59.9	59.7	60.3	60.2	60.1	60.0	59.9	59.8	59.6	59.3	59.2	58.9	58.7	58.5	58.3	57.3	57.0	56.8	24.3	20.3	17.2	60.4	60.3	60.0	57.4	55.9	59.6	57.4	46.4	60.8	61.1	58.5	59.3				
21	76.4	58.8	59.8	59.7	60.2	60.1	60.1	60.0	59.8	59.7	59.5	59.2	59.1	58.9	58.6	58.4	58.3	57.3	57.0	56.7	24.1	20.3	17.2	60.4	60.3	60.0	57.4	55.8	59.5	57.4	46.4	60.8	61.1	58.5	59.2				
22	79.4	58.7	59.8	59.6	60.1	60.0	60.0	59.9	59.7	59.7	59.5	59.2	59.0	58.8	58.6	58.3	58.2	57.2	56.9	56.7	24.3	20.6	17.9	60.4	60.3	59.9	57.3	55.8	59.5	57.3	46.4	60.7	61.1	58.4	59.2				
23	82.4	58.7	59.7	59.6	60.1	60.0	59.9	59.8	59.7	59.6	59.4	59.1	58.9	58.7	58.5	58.2	58.2	57.2	56.8	56.6	24.5	21.1	18.6	60.3	60.3	59.9	57.3	55.7	59.5	57.3	46.4	60.7	61.0	58.4	59.2				
24	85.3	58.7	59.7	59.6	60.0	59.9	59.9	59.8	59.8	59.6	59.4	59.1	58.9	58.6	58.4	58.2	58.1	57.1	56.7	56.5	24.8	21.8	19.4	60.3	60.2	59.9	57.3	55.7	59.4	57.2	46.3	60.7	61.0	58.3	59.1				
25	88.3	58.7	59.6	59.5	60.0	59.8	59.8	59.7	59.5	59.5	59.3	59.0	58.8	58.6	58.4	58.1	58.1	57.0	56.6	56.4	25.1	22.6	20.4	60.3	60.2	59.8	57.2	55.7	59.4	57.2	46.2	60.6	61.0	58.3	59.1				
26	91.3	58.7	59.6	59.5	59.9	59.8	59.8	59.7	59.5	59.4	59.2	58.9	58.8	58.5	58.3	58.0	58.0	56.9	56.6	56.4	25.6	23.4	21.4	60.2	60.2	59.8	57.2	55.6	59.4	57.2	46.2	60.6	60.9	58.2	59.1				
27	94.3	58.7	59.6	59.5	59.9	59.8	59.7	59.6	59.4	59.4	59.2	58.8	58.7	58.4	58.2	58.0	58.0	56.9	56.5	56.3	26.3	24.5	22.5	60.2	60.1	59.7	57.1	55.6	59.3	57.1	46.1	60.6	60.9	58.2	59.1				
28	97.2	58.7	59.6	59.5	59.9	59.8	59.7	59.5	59.4	59.3	59.1	58.8	58.6	58.4	58.2	57.9	57.9	56.8	56.4	56.2	27.2	25.6	23.7	60.2	60.1	59.7	57.1	55.6	59.3	57.1	46.1	60.5	60.8	58.2	59.2				
29																																							
30																																							

Floor	mPD Level of Noise Assessment	Tower 7																																							
		701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	
1	8.7	59.0	59.3	59.5	59.7	60.0	60.0	60.1	60.5	60.5	60.9	61.1	61.0	61.6	57.6	65.9	71.2	69.6	69.8	70.4	70.8	72.1	72.6	71.0	70.4	70.1	69.9	69.4	69.3	68.8	68.4	68.1	67.8	66.8	66.2	57.9	59.2	37.4	37.5	36.7	
2	11.7	59.0	59.3	59.5	59.6	60.0	60.0	60.0	60.5	60.4	60.8	61.0	61.0	61.5	57.5	65.8	71.1	69.4	69.6	70.2	70.8	72.3	72.2	70.8	70.2	70.0	69.8	69.3	69.2	68.7	68.3	68.1	67.7	66.7	66.1	57.8	59.2	37.7	37.6	36.7	
3	14.7	58.9	59.2	59.5	59.6	59.9	59.9	60.0	60.4	60.4	60.8	61.0	60.9	61.4	57.4	65.6	70.7	69.1	69.3	69.8	70.2	71.9	71.8	70.5	69.9	69.8	69.6	69.2	69.0	68.6	68.2	68.0	67.6	66.6	66.1	57.9	59.1	37.9	37.8	36.9	
4	17.6	58.9	59.2	59.4	59.5	59.9	59.9	59.9	60.3	60.3	60.7	60.8	60.8	61.3	57.3	65.4	70.5	68.8	69.0	69.5	69.9	71.4	71.3	70.2	69.7	69.6	69.4	69.0	68.9	68.4	68.1	67.9	67.5	66.5	66.0	57.8	59.1	38.3	38.0	37.0	
5	20.6	58.8	59.1	59.3	59.4	59.8	59.8	59.8	60.2	60.2	60.6	60.7	60.6	61.1	57.2	65.2	70.1	68.5	68.7	69.1	69.5	70.9	70.8	69.9	69.4	69.3	69.2	68.8	68.7	68.3	68.0	67.7	67.4	66.4	65.9	57.7	59.1	38.7	38.2	37.1	
6	23.6	58.8	59.1	59.3	59.4	59.7	59.7	59.7	60.1	60.1	60.5	60.6	60.5	61.0	57.0	65.0	69.8	68.2	68.3	68.8	69.1	70.5	70.5	69.6	69.1	69.1	69.0	68.6	68.6	68.1	67.8	67.6	67.3	66.3	65.7	57.7	59.0	39.1	38.4	37.2	
7	26.6	58.7	59.0	59.2	59.3	59.6	59.6	59.6	60.0	60.0	60.3	60.4	60.3	60.8	56.9	64.7	69.5	67.9	68.0	68.4	68.7	70.2	70.2	69.3	68.9	68.8	68.7	68.5	68.4	68.0	67.7	67.5	67.1	66.2	65.6	57.7	59.0	39.5	38.6	37.3	
8	29.5	58.6	58.9	59.1	59.2	59.5	59.5	59.5	59.9	59.8	60.2	60.3	60.2	60.6	56.7	64.4	69.2	67.6	67.7	68.1	68.3	69.9	69.9	69.0	68.6	68.6	68.5	68.3	68.2	67.8	67.5	67.3	67.0	66.1	65.5	57.6	58.8	39.7	38.8	37.4	
9	32.5	58.6	58.8	59.0	59.1	59.4	59.4	59.4	59.8	59.7	60.0	60.1	60.0	60.4	56.5	64.2	69.0	67.3	67.4	67.8	68.0	69.6	69.6	68.8	68.4	68.4	68.3	68.1	68.0	67.7	67.4	67.2	66.8	65.9	65.3	57.5	58.8	39.9	38.8	37.4	
10	35.5	58.5	58.7	59.0	59.0	59.3	59.3	59.3	59.6	59.6	59.9	60.0	59.9	60.2	56.3	64.0	68.6	67.1	67.1	67.5	67.7	69.3	69.3	68.5	68.2	68.2	68.2	67.9	67.9	67.5	67.2	67.0	66.7	65.8	65.2	57.5	58.8	40.0	38.9	37.5	
11	38.5	58.4	58.7	58.8	58.9	59.2	59.2	59.2	59.5	59.5	59.7	59.8	59.7	60.0	56.2	63.7	68.4	66.8	66.9	67.2	67.5	69.1	69.1	68.4	68.1	68.1	68.0	67.8	67.7	67.4	67.1	66.9	66.6	65.7	65.1	57.4	58.7	40.0	39.0	37.5	
12	41.4	58.3	58.6	58.7	58.8	59.1	59.0	59.1	59.4	59.3	59.6	59.6	59.5	59.8	56.0	63.5	68.2	66.6	66.6	66.9	67.2	68.8	68.9	68.2	67.9	67.9	67.8	67.5	67.6	67.2	67.0	66.8	66.4	65.6	65.0	57.3	58.7	40.1	39.0	37.5	
13	44.4	58.2	58.5	58.6	58.7	59.0	58.9	58.9	59.3	59.1	59.4	59.5	59.4	59.7	55.8	63.3	68.0	66.4	66.4	66.7	67.0	68.6	68.7	68.0	67.7	67.8	67.7	67.5	67.5	67.1	66.8	66.7	66.3	65.5	64.8	57.3	58.7	40.2	39.0	37.5	
14	47.4	58.1	58.4	58.5	58.6	58.9	58.8	58.8	59.1	59.1	59.3	59.3	59.2	59.5	55.7	63.1	67.8	66.2	66.1	66.5	66.7	68.4	68.6	67.9	67.8	67.6	67.6	67.4	67.4	67.0	66.7	66.5	66.2	65.3	64.8	57.2	58.7	40.2	39.1	37.5	
15	50.4	58.0	58.3	58.4	58.5	58.7	58.7	58.7	59.0	58.9	59.1	59.1	59.0	59.3	55.5	62.9	67.6	66.0	66.0	66.3	66.5	68.2	68.4	67.7	67.5	67.5	67.4	67.2	67.2	66.9	66.6	66.4	66.1	65.2	64.6	57.2	58.7	40.3	39.1	37.4	
16	53.3	57.9	58.2	58.3	58.4	58.6	58.5	58.5	58.9	58.7	59.0	59.0	58.9	59.1	55.3	62.7	67.5	65.8	65.8	66.1	66.3	68.1	68.3	67.6	67.4	67.3	67.3	67.1	67.1	66.8	66.5	66.3	66.0	65.2	64.5	57.1	58.7	40.3	39.1	37.4	
17	56.3	57.8	58.1	58.2	58.2	58.5	58.4	58.4	58.7	58.6	58.8	58.9	58.7	58.9	55.2	62.5	67.3	65.7	65.6	65.9	66.2	67.9	68.1	67.5	67.3	67.2	67.2	67.0	67.0	66.7	66.4	66.3	65.9	65.0	64.4	57.1	58.7	40.3	39.1	37.4	
18	59.3	57.7	58.0	58.1	58.1	58.4	58.3	58.3	58.6	58.5	58.7	58.7	58.5	58.8	55.0	62.3	67.1	65.5	65.4	65.7	66.0	67.8	68.0	67.4	67.2	67.1	67.1	66.9	66.9	66.6	66.3	66.1	65.8	64.9	64.3	57.0	58.7	40.2	39.0	37.3	
19	62.3	57.6	57.9	58.0	58.0	58.2	58.2	58.2	58.5	58.3	58.6	58.6	58.4	58.6	54.9	62.1	67.0	65.4	65.3	65.6	65.9	67.6	67.9	67.3	67.1	67.0	67.0	66.8	66.8	66.5	66.2	66.0	65.8	64.9	64.2	57.0	58.7	40.3	39.1	37.3	
20	65.2	57.5	57.8	57.8	57.9	58.2	58.1	58.0	58.3	58.2	58.4	58.4	58.2	58.4	54.7	61.9	66.8	65.2	65.1	65.4	65.7	67.5	67.8	67.2	67.0	66.9	66.9	66.8	66.8	66.4	66.2	65.9	65.7	64.8	64.1	57.0	58.8	40.3	39.1	37.4	
21	68.2	57.4	57.6	57.8	57.8	58.1	57.9	57.9	58.2	58.1	58.3	58.3	58.1	58.3	54.6	61.7	66.7	65.1	65.0	65.3	65.6	67.4	67.7	67.1	66.9	66.9	66.8	66.7	66.7	66.3	66.1	65.9	65.5	64.7	64.0	56.9	58.7	40.4	39.2	37.5	
22	71.2	57.3	57.5	57.7	57.7	57.9	57.8	57.8	58.1	57.9	58.2	58.1	57.9	58.2	54.5	61.6	66.6	65.0	64.8	65.2	65.4	67.3	67.6	67.0	66.8	66.8	66.8	66.6	66.6	66.3	66.0	65.8	65.5	64.6	64.0	56.9	58.7	40.5	39.4	37.7	
23	74.2	57.2	57.4	57.6	57.6	57.8	57.7	57.7	57.9	57.8	58.0	58.0	57.8	58.0	54.3	61.5	66.5	64.9	64.7	65.0	65.3	67.2	67.5	67.0	66.7	66.7	66.7	66.5	66.5	66.2	65.9	65.7	65.4	64.5	63.9	56.9	58.7	40.6	39.6	37.9	
24	77.1	57.1	57.4	57.5	57.5	57.7	57.6	57.5	57.8	57.7	57.9	57.9	57.7	57.8	54.2	61.3	66.4	64.8	64.6	64.9	65.2	67.0	67.4	66.9	66.7	66.6	66.6	66.6	66.5	66.4	66.1	65.8	65.7	65.3	64.5	63.8	56.8	58.7	40.7	39.8	38.1
25	80.1	57.0	57.2	57.4	57.4	57.6	57.5	57.4	57.7	57.5	57.8	57.7	57.5	57.8	54.0	61.1	66.3	64.7	64.5	64.8	65.1	67.0	67.3	66.8	66.6	66.6	66.6	66.5	66.4	66.0	65.8	65.6	65.3	64.4	63.7	56.8	58.7	41.0	40.2	38.7	
26	83.1	56.9	57.1	57.3	57.2	57.5	57.4	57.3	57.6	57.5	57.7	57.6	57.4	57.6	54.0	61.0	66.2	64.6	64.4	64.7	65.0	66.9	67.2	66.7	66.5	66.5	66.5	66.3	66.3	66.0	65.7	65.5	65.2	64.3	63.7	56.9	58.7	41.4	40.8	39.3	
27	86.1	56.8	57.1	57.2	57.1	57.4	57.2	57.3	57.5	57.3	57.5	57.5	57.3	57.5	53.8	60.8	66.1	64.5	64.2	64.6	64.8	66.8	67.1	66.6	66.5	66.5	66.4	66.2	66.2	65.9	65.6	65.4	65.1	64.3	63.6	56.8	58.8	41.9	41.5	40.1	
28	89.0	56.8	57.0	57.1	57.1	57.3	57.1	57.1	57.4	57.2	57.4	57.4	57.2	57.4	53.7	60.7	66.0	64.4	64.2	64.5	64.7	66.7	67.1	66.6	66.4	66.4	66.3	66.2	66.1	65.8	65.6	65.4	65.1	64.2	63.5	56.9	58.7	42.5	42.2	41.0	
29	92.0	56.7	56.9	57.0	57.0	57.2	57.1	57.0	57.3	57.1	57.3	57.3	57.1	57.2	53.7	60.6	65.9	64.3	64.0	64.4	64.6	66.6	67.0	66.5	66.3	66.3	66.3	66.1	66.1	65.8	65.5	65.3	65.0	64.1	63.5	57.1	58.8	43.2	43.1	41.9	
30	95.0	56.6	56.8	56.9	56.9	57.1	57.0	56.9	57.2	57.0	57.2	57.2	56.9	57.1	54.1	60.4	65.8	64.2	64.0	64.4	64.7	66.5	66.9	66.5	66.3	66.3	66.2	66.1	66.1	65.7	65.5	65.3	65.0	64.1	63.5	57.6	58.8	44.0	44.2	42.9	

APPENDIX 4

PREDICTED FAÇADE NOISE LEVELS FOR ROAD TRAFFIC NOISE (WITH NOISE MITIGATION MEASURES)

Job No. : 22608
Job Title : Fung Yuen
Scenario : 2045 Traffic Forecast, AM Peak, Unmitigated

Floor	mPD Level of Noise Assessment	Receiver																																						
		Tower 1																																						
1	16.9	65.0	65.7	67.9	68.4	68.2	68.1	68.2	68.3	68.0	68.2	68.0	68.0	68.2	68.4	68.6	68.9	68.0	67.8	69.9	69.8	69.0	65.3	61.9	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	45.0	48.9	45.1	44.7	43.5	64.6	64.5	64.4
2	19.9	64.9	65.5	67.6	68.1	68.0	67.9	67.9	68.0	67.8	67.9	67.8	67.7	67.9	68.1	68.2	68.6	67.8	67.6	69.8	69.7	69.0	65.2	61.8	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	45.8	49.7	47.5	47.1	45.6	64.5	64.4	64.3
3	22.9	64.7	65.3	67.4	67.8	67.7	67.6	67.7	67.7	67.5	67.7	67.5	67.7	67.6	67.8	67.9	68.3	67.6	67.5	69.7	69.6	68.9	65.2	61.7	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	46.4	50.4	49.4	49.0	46.8	64.4	64.2	64.2
4	25.8	64.5	65.0	67.1	67.5	67.4	67.4	67.4	67.5	67.3	67.4	67.2	67.2	67.3	67.4	67.5	68.0	67.3	67.2	69.6	69.5	68.8	65.1	61.7	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	46.7	50.8	50.5	50.0	47.5	64.2	64.1	64.0
5	28.8	64.2	64.8	66.8	67.2	67.1	67.1	67.1	67.2	67.0	67.1	66.9	66.9	67.0	67.1	67.2	67.7	67.1	67.0	69.4	69.3	68.7	65.0	61.6	35.7	35.0	35.5	35.0	34.9	34.9	34.8	35.1	46.9	51.2	51.1	50.6	48.0	64.1	63.9	63.8
6	31.8	64.0	64.5	66.5	67.0	66.9	66.8	66.9	66.9	66.7	66.8	66.6	66.6	66.7	66.8	66.9	67.4	66.9	66.8	69.3	69.2	68.6	65.0	61.5	35.7	35.0	35.5	34.9	34.9	34.9	34.8	35.1	47.0	51.3	51.8	51.3	48.2	63.9	63.7	63.6
7	34.8	63.8	64.3	66.2	66.7	66.6	66.6	66.6	66.7	66.5	66.6	66.5	66.5	66.6	66.6	66.6	67.2	66.7	66.7	69.2	69.1	68.5	64.9	61.5	35.7	35.0	35.5	34.9	34.9	34.9	34.8	35.0	47.1	51.5	52.2	51.7	48.7	63.7	63.5	63.4
8	37.7	63.5	64.0	66.0	66.5	66.4	66.4	66.4	66.4	66.3	66.4	66.2	66.1	66.3	66.4	66.4	66.9	66.5	66.5	69.1	69.0	68.3	64.8	61.4	35.7	35.0	35.5	34.9	34.9	34.9	34.8	35.0	47.1	51.5	52.5	51.9	48.9	63.5	63.3	63.2
9	40.7	63.3	63.7	65.7	66.3	66.2	66.2	66.2	66.2	66.1	66.2	66.0	65.9	66.0	66.2	66.1	66.6	66.6	66.6	69.1	69.0	68.2	64.8	61.3	35.6	35.0	35.4	34.9	34.9	34.8	34.8	35.0	47.1	51.5	52.8	52.2	49.3	63.4	63.1	63.0
10	43.7	63.1	63.5	65.4	66.0	65.9	65.9	65.9	65.9	65.8	65.9	65.7	65.6	65.8	65.9	65.9	66.5	66.5	66.5	69.1	69.0	68.2	64.7	61.3	35.6	35.0	35.4	34.9	34.9	34.8	34.8	35.0	47.1	51.6	52.9	52.4	49.6	63.2	62.9	62.7
11	46.7	62.8	63.3	65.2	65.9	65.8	65.7	65.8	65.8	65.7	65.8	65.6	65.5	65.6	65.7	65.7	66.3	66.3	66.3	69.1	69.0	68.2	64.6	61.2	35.6	34.9	35.4	34.9	34.9	34.8	34.8	35.0	47.1	51.5	52.9	52.4	49.9	63.0	62.7	62.5
12	49.6	62.6	63.0	64.9	65.7	65.6	65.6	65.7	65.7	65.5	65.6	65.4	65.3	65.5	65.6	65.5	66.1	66.1	66.1	69.1	69.0	68.2	64.6	61.1	35.6	34.9	35.4	34.9	34.8	34.8	34.8	35.0	47.0	51.5	53.0	52.5	50.0	62.8	62.5	62.3
13	52.6	62.4	62.8	64.7	65.5	65.4	65.4	65.5	65.5	65.3	65.5	65.3	65.2	65.3	65.4	65.4	66.0	66.0	66.0	69.1	69.0	68.2	64.5	61.1	35.5	34.9	35.4	34.9	34.8	34.8	34.7	35.0	47.0	51.5	53.0	52.5	50.1	62.6	62.3	62.1
14	55.6	62.2	62.6	64.5	65.3	65.3	65.3	65.4	65.4	65.2	65.3	65.1	65.0	65.2	65.3	65.2	65.8	65.8	65.8	69.1	69.0	68.2	64.4	61.0	35.5	34.9	35.4	34.8	34.8	34.7	34.7	34.9	46.9	51.4	53.0	52.5	50.1	62.4	62.2	61.9
15	58.6	62.0	62.4	64.2	65.0	65.0	65.0	65.1	65.1	64.9	65.0	64.8	64.7	64.9	64.9	64.9	65.5	65.5	65.5	69.1	69.0	68.2	64.3	60.9	35.5	34.8	35.3	34.8	34.8	34.7	34.7	34.9	46.8	51.3	52.9	52.4	50.2	62.3	62.0	61.7
16	61.5	61.8	62.2	64.0	64.8	64.8	64.8	64.9	64.9	64.7	64.8	64.6	64.5	64.7	64.7	64.7	65.3	65.3	65.3	69.1	69.0	68.2	64.2	60.8	35.4	34.7	35.2	34.7	34.7	34.7	34.7	34.9	46.8	51.3	52.9	52.5	50.2	62.1	61.8	61.6
17	64.5	61.6	62.0	63.8	64.6	64.6	64.6	64.7	64.7	64.5	64.6	64.4	64.3	64.5	64.5	64.5	65.1	65.1	65.1	69.1	69.0	68.2	64.1	60.7	35.4	34.7	35.2	34.7	34.7	34.7	34.7	34.9	46.8	51.3	52.9	52.4	50.2	61.9	61.6	61.4
18	67.5	61.4	61.8	63.6	64.4	64.4	64.4	64.5	64.5	64.3	64.4	64.2	64.1	64.3	64.3	64.3	64.9	64.9	64.9	69.1	69.0	68.2	64.0	60.6	35.3	34.6	35.1	34.6	34.6	34.6	34.6	34.9	46.7	51.2	52.9	52.4	50.2	61.8	61.4	61.2
19	70.5	61.2	61.6	63.4	64.2	64.2	64.2	64.3	64.3	64.1	64.2	64.0	63.9	64.1	64.1	64.1	64.7	64.7	64.7	69.1	69.0	68.2	63.9	60.5	35.2	34.5	35.0	34.5	34.5	34.5	34.5	34.9	46.7	51.1	52.8	52.4	50.2	61.6	61.3	61.0
20	73.4	61.1	61.4	63.3	64.1	64.1	64.1	64.2	64.2	64.0	64.1	63.9	63.8	64.0	64.0	64.0	64.6	64.6	64.6	69.1	69.0	68.2	63.8	60.4	35.1	34.4	34.9	34.4	34.4	34.4	34.4	34.9	46.7	51.1	52.8	52.3	50.2	61.5	61.1	60.9
21	76.4	60.9	61.2	63.1	63.9	63.9	63.9	64.0	64.0	63.8	63.9	63.7	63.6	63.8	63.8	63.8	64.4	64.4	64.4	69.1	69.0	68.2	63.7	60.3	35.0	34.3	34.8	34.3	34.3	34.3	34.3	34.9	46.7	51.1	52.8	52.3	50.2	61.3	61.0	60.7
22	79.4	60.7	61.1	62.9	63.7	63.7	63.7	63.8	63.8	63.6	63.7	63.5	63.4	63.6	63.6	63.6	64.2	64.2	64.2	69.1	69.0	68.2	63.6	60.2	34.9	34.2	34.7	34.2	34.2	34.2	34.2	34.9	46.7	51.1	52.8	52.3	50.2	61.2	60.8	60.6
23	82.4	60.6	60.9	62.8	63.6	63.6	63.6	63.7	63.7	63.5	63.6	63.4	63.3	63.5	63.5	63.5	64.1	64.1	64.1	69.1	69.0	68.2	63.5	59.9	34.6	33.9	34.4	33.9	33.9	33.9	33.9	34.9	46.7	51.1	52.8	52.3	50.3	61.0	60.7	60.4
24	85.3	60.4	60.8	62.6	63.4	63.4	63.4	63.5	63.5	63.3	63.4	63.2	63.1	63.3	63.3	63.3	63.9	63.9	63.9	69.1	69.0	68.2	63.4	60.0	34.7	34.0	34.5	34.0	34.0	34.0	34.0	34.9	46.7	51.1	52.8	52.4	50.4	60.9	60.6	60.3
25	88.3	60.3	60.6	62.5	63.3	63.3	63.3	63.4	63.4	63.2	63.3	63.1	63.0	63.2	63.2	63.2	63.8	63.8	63.8	69.1	69.0	68.2	63.3	59.9	34.6	33.9	34.4	33.9	33.9	33.9	33.9	34.9	46.7	51.1	52.8	52.5	50.5	60.8	60.4	60.1
26	91.3	60.1	60.5	62.3	63.1	63.1	63.1	63.2	63.2	63.0	63.1	62.9	62.8	63.0	63.0	63.0	63.6	63.6	63.6	69.1	69.0	68.2	63.2	59.8	34.5	33.8	34.3	33.8	33.8	33.8	33.8	34.9	46.7	51.1	52.8	52.7	50.8	60.6	60.2	60.0
27	94.3	60.0	60.3	62.2	63.0	63.0	63.0	63.1	63.1	62.9	63.0	62.8	62.7	62.9	62.9	62.9	63.5	63.5	63.5	69.1	69.0	68.2	63.1	59.7	34.4	33.7	34.2	33.7	33.7	33.7	33.7	34.9	46.7	51.1	52.8	53.1	51.3	60.5	60.1	59.8
28																																								
29																																								
30																																								

Floor	Assessment	mNP Level of Noise																																Tower 4															
		401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434														
2	16.9	59.4	60.5	60.5	61.2	61.1	61.1	61.0	60.9	60.9	60.4	60.3	60.3	60.1	59.8	59.5	59.2	58.4	58.0	57.7	56.8	56.2	56.2	56.0	51.4	49.0	56.6	51.6	28.2	57.0	57.1	53.5	59.8	59.8															
	19.9	59.4	60.5	60.5	61.2	61.1	61.1	60.9	60.8	60.8	60.6	60.3	60.2	60.0	59.8	59.4	59.2	58.3	58.0	57.7	24.8	20.6	17.3	56.3	56.3	56.3	56.3	56.3	56.3	56.3	56.3	56.3	56.3	56.3	56.3														
3	22.9	59.3	60.5	60.5	61.2	61.1	61.1	60.9	60.8	60.8	60.6	60.3	60.2	60.0	59.8	59.4	59.2	58.3	58.0	57.7	24.8	20.6	17.3	57.5	57.7	57.6	54.1	52.2	57.3	54.3	29.9	58.6	58.7	55.9	59.8														
4	25.9	59.3	60.5	60.5	61.2	61.1	61.0	60.9	60.8	60.8	60.6	60.3	60.2	60.0	59.7	59.4	59.2	58.3	58.0	57.6	24.8	20.6	17.3	57.9	58.1	58.0	54.8	53.3	57.8	55.0	39.0	59.0	59.1	56.6	59.8														
5	28.9	59.3	60.5	60.4	61.1	61.0	61.0	60.9	60.8	60.7	60.5	60.3	60.1	59.9	59.7	59.4	59.1	58.2	57.9	57.6	24.8	20.6	17.3	58.2	58.4	58.3	55.2	53.5	58.1	55.4	31.9	59.4	59.5	56.9	59.8														
6	31.8	59.2	60.4	60.3	61.0	61.0	60.9	60.9	60.9	60.7	60.5	60.2	60.1	59.9	59.6	59.3	59.1	58.2	57.9	57.6	24.8	20.6	17.3	58.6	58.8	58.6	55.5	53.6	58.4	55.7	33.1	59.8	59.7	57.1	59.8														
7	34.8	59.2	60.4	60.3	61.0	60.9	60.9	60.8	60.7	60.6	60.5	60.2	60.0	59.8	59.6	59.3	59.1	58.2	57.9	57.5	24.8	20.6	17.3	58.9	59.1	58.9	55.9	54.3	58.6	56.0	34.1	59.9	60.0	57.5	59.8														
8	37.7	59.2	60.4	60.3	60.9	60.9	60.9	60.8	60.6	60.6	60.4	60.1	60.0	59.8	59.5	59.3	59.0	58.1	57.8	57.5	24.7	20.5	17.3	59.3	59.4	59.2	56.2	54.6	58.9	56.4	35.6	60.1	60.3	57.8	59.7														
9	40.7	59.2	60.4	60.3	60.9	60.9	60.8	60.7	60.6	60.5	60.3	60.1	60.0	59.7	59.5	59.2	59.0	58.1	57.8	57.5	24.7	20.5	17.3	59.5	59.6	59.4	56.5	55.0	59.1	56.6	37.1	60.3	60.5	58.0	59.7														
10	43.7	59.1	60.3	60.2	60.8	60.7	60.8	60.7	60.6	60.5	60.3	60.1	60.0	59.7	59.5	59.2	59.0	58.1	57.7	57.4	24.7	20.5	17.3	59.7	59.9	59.7	56.6	55.0	59.2	56.7	39.2	60.4	60.6	58.1	59.7														
11	46.7	59.1	60.3	60.2	60.8	60.7	60.8	60.6	60.6	60.5	60.4	60.2	60.0	59.8	59.6	59.3	59.1	58.9	58.0	57.7	24.7	20.5	17.3	59.9	59.9	59.6	56.4	55.3	59.3	56.9	40.9	60.5	60.6	58.4	59.6														
12	49.6	59.1	60.2	60.1	60.8	60.7	60.6	60.6	60.4	60.3	60.2	59.9	59.8	59.5	59.3	59.0	58.8	57.9	57.6	57.3	24.6	20.5	17.3	60.0	60.0	59.7	57.0	55.5	59.4	57.1	42.6	60.6	60.9	58.6	59.6														
13	52.6	59.1	60.2	60.1	60.7	60.6	60.6	60.5	60.4	60.3	60.1	59.8	59.7	59.5	59.2	59.0	58.7	57.9	57.6	57.3	24.6	20.5	17.3	60.1	60.2	59.8	57.1	55.6	59.5	57.2	43.8	60.7	61.0	58.7	59.6														
14	55.6	59.0	60.1	60.0	60.6	60.6	60.5	60.4	60.3	60.2	60.0	59.7	59.6	59.4	59.2	58.9	58.7	57.8	57.5	57.2	24.5	20.5	17.3	60.2	60.2	59.9	57.2	55.7	59.6	57.3	44.6	60.8	61.1	58.7	59.5														
15	58.6	59.0	60.1	60.0	60.6	60.5	60.4	60.3	60.2	60.1	60.0	59.7	59.6	59.4	59.2	58.9	58.7	57.7	57.4	57.1	24.5	20.5	17.3	60.3	60.3	59.9	57.2	55.7	59.6	57.3	45.3	60.9	61.2	58.7	59.5														
16	61.5	59.0	60.1	60.0	60.5	60.4	60.4	60.3	60.1	60.1	59.9	59.6	59.4	59.2	59.0	58.7	58.6	57.6	57.3	57.1	24.5	20.4	17.2	60.3	60.3	60.0	57.4	55.9	59.6	57.4	45.6	60.8	61.1	58.7	59.5														
17	64.5	58.9	60.0	59.9	60.5	60.4	60.3	60.2	60.1	60.0	59.8	59.6	59.4	59.2	59.0	58.7	58.6	57.6	57.3	57.0	24.4	20.4	17.2	60.4	60.3	60.0	57.4	55.9	59.6	57.5	45.9	60.8	61.1	58.7	59.4														
18	67.5	58.9	59.9	59.8	60.4	60.3	60.3	60.1	60.0	59.9	59.8	59.5	59.3	59.1	58.9	58.6	58.5	57.5	57.2	57.0	24.4	20.4	17.2	60.4	60.3	60.0	57.4	55.9	59.6	57.4	46.2	60.8	61.1	58.6	59.3														
19	70.5	58.9	59.8	59.8	60.3	60.2	60.2	60.0	59.9	59.8	59.7	59.4	59.3	59.0	58.8	58.5	58.4	57.4	57.1	56.9	24.3	20.3	17.2	60.4	60.3	60.0	57.4	55.9	59.6	57.4	46.3	60.8	61.1	58.6	59.3														
20	73.4	58.9	59.8	59.8	60.3	60.2	60.1	60.0	59.9	59.8	59.7	59.4	59.3	59.0	58.8	58.5	58.4	57.4	57.1	56.9	24.3	20.3	17.2	60.4	60.3	60.0	57.4	55.9	59.6	57.4	46.3	60.8	61.1	58.6	59.3														
21	76.4	58.8	59.8	59.7	60.2	60.1	60.1	60.0	59.8	59.7	59.5	59.2	59.1	58.9	58.6	58.4	58.3	57.3	57.0	56.7	24.1	20.3	17.2	60.4	60.3	60.0	57.4	55.8	59.5	57.4	46.4	60.8	61.1	58.5	59.2														
22	79.4	58.7	59.8	59.6	60.1	60.0	60.0	59.9	59.7	59.7	59.5	59.2	59.0	58.8	58.6	58.3	58.2	57.2	56.7	56.7	24.1	20.6	17.9	60.4	60.3	60.0	59.9	57.3	55.8	59.5	57.3	46.4	60.7	61.1	58.4	59.2													
23	82.4	58.7	59.7	59.6	60.1	60.0	60.0	59.9	59.8	59.7	59.6	59.4	59.1	58.9	58.7	58.5	58.2	57.2	56.8	56.6	24.1	21.1	18.6	60.3	60.3	60.0	59.9	57.3	55.7	59.5	57.3	46.4	60.8	61.4	58.4	59.2													
24	85.3	58.7	59.7	59.6	60.1	60.0	60.0	59.9	59.8	59.6	59.6	59.4	59.1	58.9	58.7	58.4	58.2	57.2	56.7	56.5	24.4	21.8	19.4	60.3	60.2	60.0	59.9	57.3	55.7	59.4	57.3	46.6	60.7	61.0	58.3	59.1													
25	88.3	58.7	59.6	59.5	60.0	59.8	59.8	59.7	59.5	59.5	59.5	59.3	59.0	58.8	58.6	58.4	58.1	57.0	56.6	56.4	25.1	22.6	20.4	60.3	60.2	59.8	57.2	55.7	59.4	57.2	46.2	60.6	61.0	58.3	59.1														
26	91.3	58.7	59.6	59.5	59.9	59.8	59.8	59.7	59.5	59.4	59.2	58.9	58.8	58.5	58.3	58.0	58.0	56.9	56.5	56.4	25.6	23.4	21.4	60.2	60.2	59.8	57.2	55.6	59.4	57.2	46.2	60.6	60.9	58.2	59.1														
27	94.3	58.7	59.6	59.5	59.9	59.8	59.7	59.6	59.4	59.4	59.2	58.9	58.7	58.4	58.2	58.0	58.0	56.9	56.5	56.3	26.3	24.5	22.5	60.2	60.1	59.7	57.1	55.6	59.3	57.1	46.1	60.6	60.9	58.2	59.1														
28	97.2	58.7	59.6	59.5	59.9	59.8	59.7	59.5	59.4	59.3	59.1	58.8	58.6	58.4	58.2	57.9	57.9	56.8	56.4	56.2	27.2	25.6	23.7	60.2	60.1	59.7	57.1	55.6	59.3	57.1	46.1	60.5	60.8	58.2	59.2														
29																																																	
30																																																	

Floor	mPD Level of Noise Assessment	Tower 7																																						
		701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739
1	8.7	59.0	59.3	59.5	59.7	60.0	60.0	60.1	60.5	60.5	60.9	61.1	61.0	61.6	57.6	65.9	67.2	69.6	69.8	70.4	70.1	69.9	69.4	69.3	68.8	68.4	68.1	67.8	66.8	66.2	57.9	59.2	37.4	37.5	36.7					
2	11.7	59.0	59.3	59.5	59.6	60.0	60.0	60.5	60.4	60.8	61.0	61.0	61.5	57.5	65.8	67.1	69.4	69.6	70.2	69.6	68.3	68.2	66.8	70.2	70.0	69.8	69.3	69.2	68.7	68.3	68.1	67.7	66.7	66.1	57.8	59.2	37.7	37.6	36.7	
3	14.7	58.9	59.2	59.5	59.6	59.9	59.9	60.0	60.4	60.8	61.0	60.9	61.4	57.4	65.6	66.7	69.1	69.3	69.8	70.2	67.9	67.8	66.5	69.9	69.8	69.6	69.2	69.0	68.6	68.2	68.0	67.6	66.6	66.1	57.9	59.1	37.9	37.8	36.9	
4	17.6	58.9	59.2	59.4	59.5	59.9	59.9	59.9	60.3	60.3	60.7	60.8	60.8	61.3	57.3	65.4	66.5	68.8	69.0	69.5	69.9	67.4	67.3	70.2	69.7	69.6	69.4	69.0	68.9	68.4	68.1	67.9	67.5	66.5	66.0	57.8	59.1	38.3	38.0	37.0
5	20.6	58.8	59.1	59.3	59.4	59.8	59.8	59.8	60.2	60.2	60.6	60.7	60.6	61.1	57.2	65.2	70.1	68.5	68.7	69.1	69.5	66.0	66.9	69.9	69.4	69.3	69.2	68.8	68.7	68.3	68.0	67.7	67.4	66.4	65.9	57.7	59.1	38.7	38.2	37.1
6	23.6	58.8	59.1	59.3	59.4	59.7	59.7	59.7	60.1	60.1	60.5	60.6	60.5	61.0	57.0	65.0	69.8	68.2	68.3	68.8	69.1	66.0	66.5	69.6	69.1	69.1	69.0	68.6	68.6	68.1	67.8	67.6	67.3	66.3	65.7	57.7	59.0	39.1	38.4	37.2
7	26.6	58.7	59.0	59.2	59.3	59.6	59.6	59.6	60.0	60.0	60.3	60.4	60.3	60.8	56.9	64.7	69.5	67.9	68.0	68.4	68.7	70.2	70.2	69.3	68.9	68.8	68.7	68.5	68.4	68.0	67.7	67.5	67.1	66.2	65.6	57.7	59.0	39.5	38.6	37.3
8	29.5	58.6	58.9	59.1	59.2	59.5	59.5	59.5	59.9	59.8	60.2	60.3	60.2	60.6	56.7	64.4	69.2	67.6	67.7	68.1	68.3	69.9	69.9	69.0	68.6	68.6	68.5	68.3	68.2	67.8	67.5	67.3	67.0	66.1	65.5	57.6	58.8	39.7	38.8	37.4
9	32.5	58.6	58.8	59.0	59.1	59.4	59.4	59.4	59.8	59.7	60.0	60.1	60.0	60.4	56.5	64.2	69.0	67.3	67.4	67.8	68.0	69.6	69.6	68.8	68.4	68.4	68.3	68.1	68.0	67.7	67.4	67.2	66.8	65.9	65.3	57.5	58.8	39.9	38.8	37.4
10	35.5	58.5	58.7	59.0	59.0	59.3	59.3	59.3	59.6	59.6	59.9	60.0	59.9	60.2	56.3	64.0	68.6	67.1	67.1	67.5	67.7	69.3	69.3	68.5	68.2	68.2	68.2	67.9	67.9	67.5	67.2	67.0	66.7	65.8	65.2	57.5	58.8	40.0	38.9	37.5
11	38.5	58.4	58.7	58.8	58.9	59.2	59.2	59.2	59.5	59.5	59.7	59.8	59.7	60.0	56.2	63.7	68.4	66.8	66.9	67.2	67.5	69.1	69.1	68.4	68.1	68.1	68.0	67.8	67.7	67.4	67.1	66.9	66.6	65.7	65.1	57.4	58.7	40.0	39.0	37.5
12	41.4	58.3	58.6	58.7	58.8	59.1	59.0	59.1	59.4	59.3	59.6	59.6	59.5	59.8	56.0	63.5	68.2	66.6	66.6	66.9	67.2	68.8	68.9	68.2	67.9	67.9	67.8	67.5	67.6	67.2	67.0	66.8	66.4	65.6	65.0	57.3	58.7	40.1	39.0	37.5
13	44.4	58.2	58.5	58.6	58.7	59.0	58.9	58.9	59.3	59.1	59.4	59.5	59.4	59.7	55.8	63.3	68.0	66.4	66.4	66.7	67.0	68.6	68.7	68.0	67.7	67.8	67.7	67.5	67.5	67.1	66.8	66.7	66.3	65.5	64.8	57.3	58.7	40.2	39.0	37.5
14	47.4	58.1	58.4	58.5	58.6	58.9	58.8	58.8	59.1	59.1	59.3	59.3	59.2	59.5	55.7	63.1	67.8	66.2	66.1	66.5	66.7	68.4	68.6	67.9	67.8	67.6	67.6	67.4	67.4	67.0	66.7	66.5	66.2	65.3	64.8	57.2	58.7	40.2	39.1	37.5
15	50.4	58.0	58.3	58.4	58.5	58.7	58.7	58.7	59.0	58.9	59.1	59.1	59.0	59.3	55.5	62.9	67.6	66.0	66.0	66.3	66.5	68.2	68.4	67.7	67.5	67.5	67.4	67.2	67.2	66.9	66.6	66.4	66.1	65.2	64.6	57.2	58.7	40.3	39.1	37.4
16	53.3	57.9	58.2	58.3	58.4	58.6	58.5	58.5	58.9	58.7	59.0	59.0	58.9	59.1	55.3	62.7	67.5	65.8	65.8	66.1	66.3	68.1	68.3	67.6	67.4	67.3	67.3	67.1	67.1	66.8	66.5	66.3	66.0	65.2	64.5	57.1	58.7	40.3	39.1	37.4
17	56.3	57.8	58.1	58.2	58.2	58.5	58.4	58.4	58.7	58.6	58.8	58.9	58.7	58.9	55.2	62.5	67.3	65.7	65.6	65.9	66.2	67.9	68.1	67.5	67.3	67.2	67.2	67.0	67.0	66.7	66.4	66.3	65.9	65.0	64.4	57.1	58.7	40.3	39.1	37.4
18	59.3	57.7	58.0	58.1	58.1	58.4	58.3	58.3	58.6	58.5	58.7	58.7	58.5	58.8	55.0	62.3	67.1	65.5	65.4	65.7	66.0	67.8	68.0	67.4	67.2	67.1	67.1	66.9	66.9	66.6	66.3	66.1	65.8	64.9	64.3	57.0	58.7	40.2	39.0	37.3
19	62.3	57.6	57.9	58.0	58.0	58.2	58.2	58.2	58.5	58.3	58.6	58.6	58.4	58.6	54.9	62.1	67.0	65.4	65.3	65.6	65.9	67.6	67.9	67.3	67.1	67.0	67.0	66.8	66.8	66.5	66.2	66.0	65.8	64.9	64.2	57.0	58.7	40.3	39.1	37.3
20	65.2	57.5	57.8	57.8	57.9	58.2	58.1	58.0	58.3	58.2	58.4	58.4	58.2	58.4	54.7	61.9	66.8	65.2	65.1	65.4	65.7	67.5	67.8	67.2	67.0	66.9	66.9	66.8	66.8	66.4	66.2	65.9	65.7	64.8	64.1	57.0	58.8	40.3	39.1	37.4
21	68.2	57.4	57.6	57.8	57.8	58.1	57.9	57.9	58.2	58.1	58.3	58.3	58.1	58.3	54.6	61.7	66.7	65.1	65.0	65.3	65.6	67.4	67.7	67.1	66.9	66.9	66.8	66.7	66.7	66.3	66.1	65.9	65.5	64.7	64.0	56.9	58.7	40.4	39.2	37.5
22	71.2	57.3	57.5	57.7	57.7	57.9	57.8	57.8	58.1	57.9	58.2	58.1	57.9	58.2	54.5	61.6	66.6	65.0	64.8	65.2	65.4	67.3	67.6	67.0	66.8	66.8	66.8	66.6	66.6	66.3	66.0	65.8	65.5	64.6	64.0	56.9	58.7	40.5	39.4	37.7
23	74.2	57.2	57.4	57.6	57.6	57.8	57.7	57.7	57.9	57.8	58.0	58.0	57.8	58.0	54.3	61.5	66.5	64.9	64.7	65.0	65.3	67.2	67.5	67.0	66.7	66.7	66.7	66.5	66.5	66.2	65.9	65.7	65.4	64.5	63.9	56.9	58.7	40.6	39.6	37.9
24	77.1	57.1	57.4	57.5	57.5	57.7	57.6	57.5	57.8	57.7	57.9	57.9	57.7	57.8	54.2	61.3	66.4	64.8	64.6	64.9	65.2	67.0	67.4	66.9	66.7	66.6	66.6	66.5	66.4	66.1	65.8	65.7	65.3	64.5	63.8	56.8	58.7	40.7	39.8	38.1
25	80.1	57.0	57.2	57.4	57.4	57.6	57.5	57.4	57.7	57.5	57.8	57.7	57.5	57.8	54.0	61.1	66.3	64.7	64.5	64.8	65.1	67.0	67.3	66.8	66.6	66.6	66.6	66.5	66.4	66.0	65.8	65.6	65.3	64.4	63.7	56.8	58.7	41.0	40.2	38.7
26	83.1	56.9	57.1	57.3	57.2	57.5	57.4	57.3	57.6	57.5	57.7	57.6	57.4	57.6	54.0	61.0	66.2	64.6	64.4	64.7	65.0	66.9	67.2	66.7	66.5	66.5	66.5	66.3	66.3	66.0	65.7	65.5	65.2	64.3	63.7	56.9	58.7	41.4	40.8	39.3
27	86.1	56.8	57.1	57.2	57.1	57.4	57.2	57.3	57.5	57.3	57.5	57.5	57.3	57.5	53.8	60.8	66.1	64.5	64.2	64.6	64.8	66.8	67.1	66.6	66.5	66.5	66.4	66.2	66.2	65.9	65.6	65.4	65.1	64.3	63.6	56.8	58.8	41.9	41.5	40.1
28	89.0	56.8	57.0	57.1	57.1	57.3	57.1	57.1	57.4	57.2	57.4	57.4	57.2	57.4	53.7	60.7	66.0	64.4	64.2	64.5	64.7	66.7	67.1	66.6	66.4	66.4	66.3	66.2	66.1	65.8	65.6	65.4	65.1	64.2	63.5	56.9	58.7	42.5	42.2	41.0
29	92.0	56.7	56.9	57.0	57.0	57.2	57.1	57.0	57.3	57.1	57.3	57.3	57.1	57.2	53.7	60.6	65.9	64.3	64.0	64.4	64.6	66.6	67.0	66.5	66.3	66.3	66.3	66.1	66.1	65.8	65.5	65.3	65.0	64.1	63.5	57.1	58.8	43.2	43.1	41.9
30	95.0	56.6	56.8	56.9	56.9	57.1	57.0	56.9	57.2	57.0	57.2	57.2	56.9	57.1	54.1	60.4	65.8	64.2	64.0	64.4	64.7	66.5	66.9	66.5	66.3	66.3	66.2	66.1	66.1	65.7	65.5	65.3	65.0	64.1	63.5	57.6	58.8	44.0	44.2	42.9

APPENDIX 5

JUSTIFICATION OF SWLs

Job Title: Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po, N.T.
 Job no.: 22608

Table A5-1: Summary of Sound Power Levels of Fixed Noise Sources

Source ID	Industrial Site	Fixed Noise Sources	Quantity	Measured Sound Pressure Levels, dB(A)	Measured Distance from noise source (m)	Correction to single no. of source, dB(A)	Distance Correction, dB(A)	Correction for Tonal, dB(A)	Sound Power Levels, dB(A)	Sound Power Level of each plant adopted in the Fixed Noise Sources Assessment, dB(A)
B	Cheuk Shing Vehicle Repair Workshop	Air Compressor noise	1	72	5	0	22	0	94	94
C	Recycling Yard	Loading and unloading by crane	1	73	5	0	22	0	95	95
D	Car Repairing Workshop at Ting Kok Road	Electric screwdriver noise	1	70	8	0	26	0	96	96
F	KMB Bus Depot	Buses manoeuvring at ingress / egress inside the Bus Depot	1	72	3	0	18	0	90	90
H-1	Lee Kum Kee	Cooling towers	4	(reference to Product Catalogue)						93
H-2		Forklift	1	(reference to BS5228)						104
J	Hopewell Slipform	Crane	1	(reference to TM)						105
K	Techno Enterprise Limited	Cooling towers	2	(reference to Product Catalogue)						93
M	Luen Tai Hong	Cooling towers	6	(reference to Product Catalogue)						93
Q	Chiaphua Industries	Cooling towers	3	(reference to Product Catalogue)						93
R	Hitachi Chemical Electronic Materials (Hong Kong) Ltd.	Cooling towers	3	(reference to Product Catalogue)						93

Source ID: A (Tin Sam Sewage Pumping Station)



No industrial noise observed

Source ID: B (Cheuk Shing Vehicle Repair Workshop)

Photos taken on 16 May 2025



No industrial noise was observed.

Photos taken on 23 June 2022



Air compressor noise was observed, all operations were taken place within the steel cover

Westwood Hong & Associates Ltd

PROJECT: 22608

Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

FIGURE

Identified Fixed Noise Sources

A5-1

Photos taken on 16 May 2025



A crane was observed



Crane

Photos taken on 23 June 2022



A lorry and a crane were observed



Crane

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TITLE:

Identified Fixed Noise Sources

FIGURE

A5-2

Source ID: D (Car Repair Workshop at Ting Kok Road)

Photos taken on 16 May 2025



No industrial noise was observed.

Photos taken on 23 June 2022



Electric screwdriver was observed. All operations were taken place under the cover



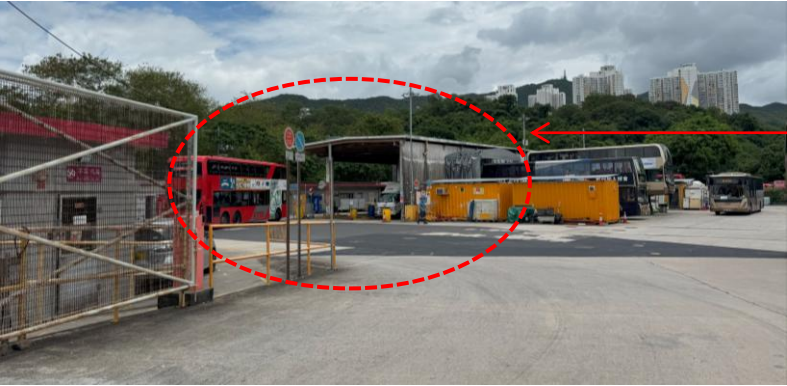
Source ID: E (Site Office)



No industrial noise was observed

Westwood Hong & Associates Ltd PROJECT: 22608 Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po	TITLE: Identified Fixed Noise Sources	FIGURE A5-3
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Source ID: F (KMB Bus Depot)



Petrol Filling Station



Placing the advertisement on the bus



Bus Parking



Bus returning to / leaving from the Depot

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TITLE:

Identified Fixed Noise Sources

FIGURE

A5-4

Source ID: G (MTRC Tai Po Bus Station)



No industrial noise was observed



Gate was closed

Source ID: H (Lee Kum Kee)



4 cooling towers



A forklift was observed

Westwood Hong & Associates Ltd	TITLE:	FIGURE
PROJECT: 22608 Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po	Identified Fixed Noise Sources	A5-5

Source ID: J (Hopewell Slipform)

Photos taken on 16 May 2025



No industrial noise observed

Photos taken on 23 June 2022



A crane was observed

Source ID: K (Techno Enterprise Limited)



2 cooling towers were observed

Westwood Hong & Associates Ltd PROJECT: 22608 Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po	TITLE: Identified Fixed Noise Sources	FIGURE A5-6
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Source ID: L (Jackel Porter Co. Ltd)



No industrial noise was observed

Source ID: M (Luen Tai Hong)



6 cooling towers

Westwood Hong & Associates Ltd PROJECT: 22608 Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po	TITLE: Identified Fixed Noise Sources	FIGURE A5-7
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Source ID: N (OPC Manufacturing Ltd.)

Photos taken on 16 May 2025



Cooling towers were removed

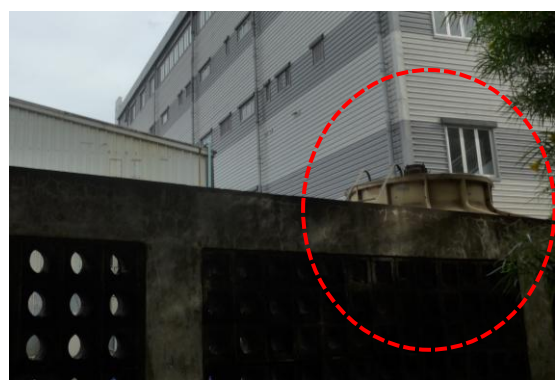


Cooling tower was removed

Photos taken on 23 June 2022



2 cooling towers (rooftop)



Cooling tower (ground level)

Source ID: P (Vantage Technology Ltd.)



No industrial noise was observed

Westwood Hong & Associates Ltd	TITLE:	FIGURE
PROJECT: 22608 Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po	Identified Fixed Noise Sources	A5-8

Source ID: Q (Chiaphua Industries)



3 cooling towers

Source ID: R (Hitachi Chemical Electronic Materials (Hong Kong) Ltd.)



3 Cooling towers at rooftop

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PROJECT: 22608

Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

Identified Fixed Noise Sources

FIGURE

A5-9



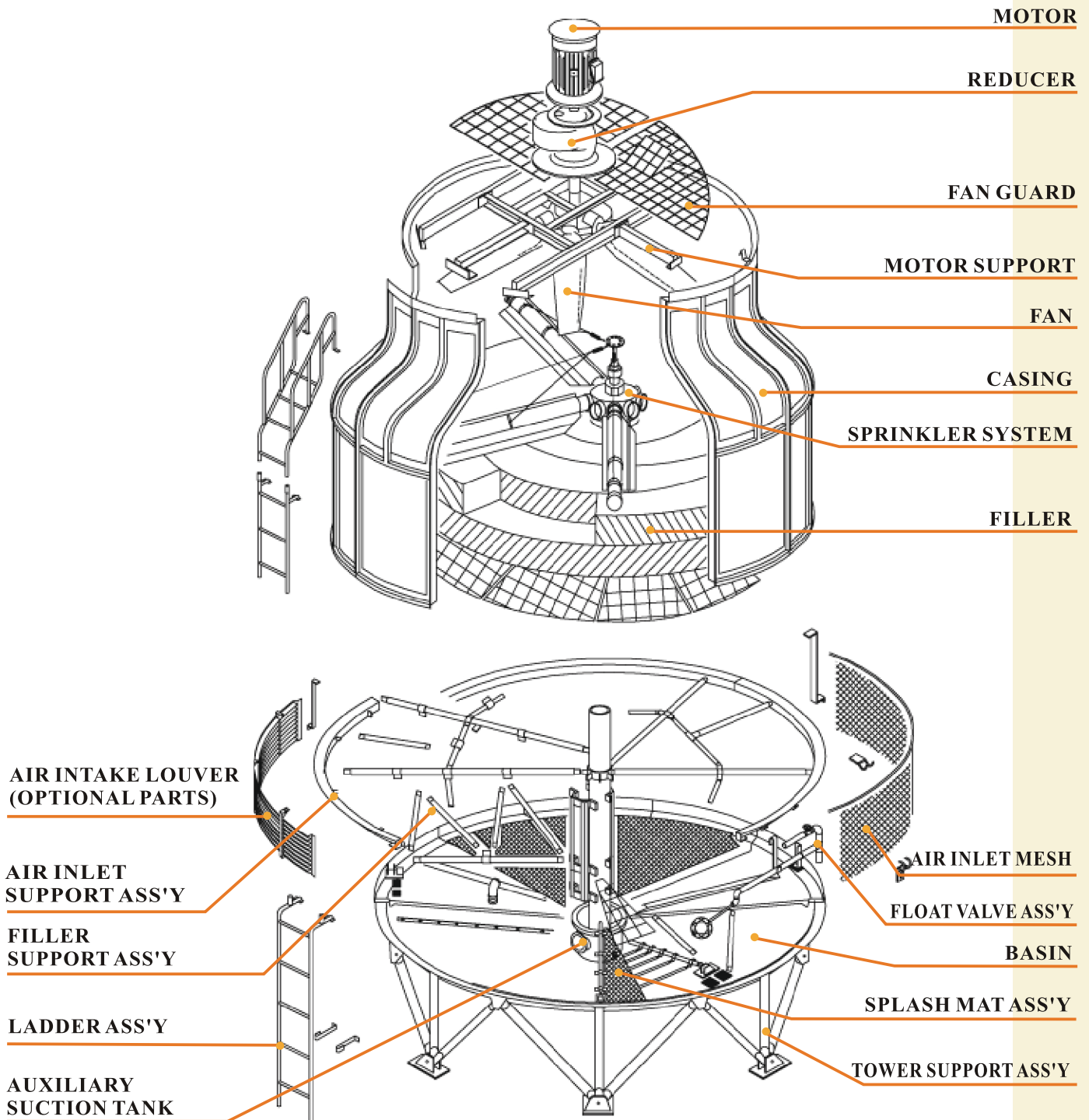
FRP COUNTER FLOW FT SERIES



COOLING TOWER



STRUCTURE



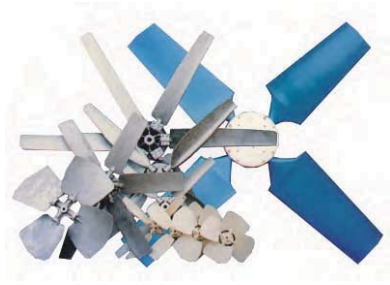
PRINCIPLE OF OPERATION

Hot water is distributed over the filler through the low velocity automatic sprinkler system and is mixed with the upward draft of ambient air causing evaporation and thus heat is removed from the water. The cooled water falls into the basin and is pumped to the heat sources for recirculation.

COMPONENT FUNCTION & FEATURE

AXIAL FAN

All fans are induced-draft axial type with adjustable pitch. Material chosen are non-corrosion of plastic, FRP or alu-minium alloy. The high efficiency design ensures low running cost and the lowest possible noise level . Fan blade pitches is factory set and balanced.

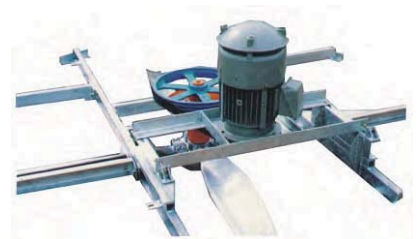


MOTOR

The motors, totally enclosed, fan cooled flange type, 380V/ 3ph/ 50 Hz, induction weather proof, are specially designed for RYOWO. Motors from 5.5 kw and up are Y- start and below are direct-on-line start.

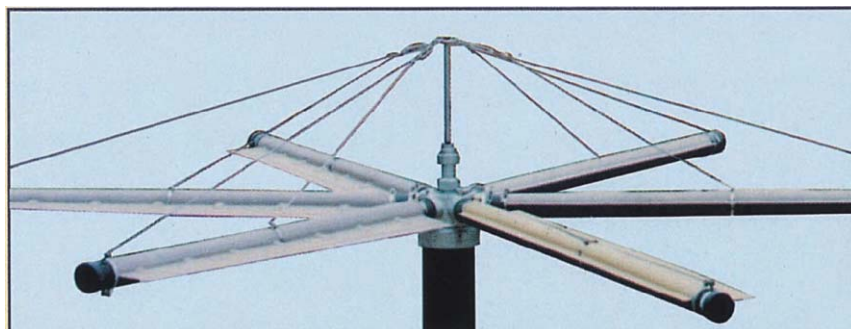
TRANSMISSION SYSTEM

The fans of small models are designed to be driven by low speed motor of 6,8,10 or 12 poles which can minimise the numbers of transmission parts used. For large models, the fans are vee-belt or gear driven with 4 poles motors so the speed of fans can be adjustable to suit various application.



SPRINKLER SYSTEM

Automatic rotary sprinkler system with rotary head and sprinkler pipe distributes the hot water over the entire face area of the filler. Sprinkler pipes are non-clogging, require low-pressure to operate, and assures uniform water flow with minimal operating pump head. The F.R.P. eliminators attached to sprinkler pipes are specifically designed for Low pressure drop and minimises the drift loss of water.

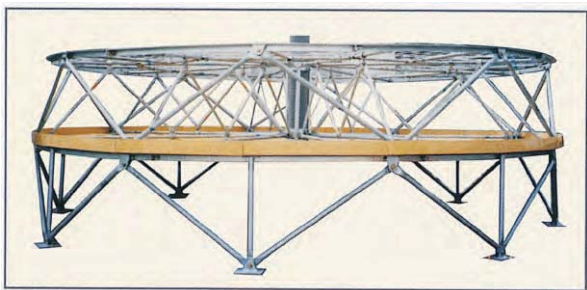


COMPONENT FUNCTION & FEATURE

CASING & BASIN

F.R.P. (fibreglass reinforced polyester) formed casings are durable, non-corrosive, weather-proof, and light weight. Cylindrical form is shaped to fully withstand wind pressure, vibration and such F.R.P. casings obviate need for painting, reduce maintenance costs and guarantee long dependable service.

Bowl-shape basins are also made from F.R.P. with built in socket or flanged outlets for piping connections. For large models, a F.R.P. aux. suction tank is employed and fitted with piping flanges or sockets.



STEEL STRUCTURE

All supporting steel members are hot-dip galvanized to minimise rusting and corrosion ensuring long service life even in corrosive atmosphere. The stainless hardware members are also available upon request.

FILLER

High performance RYOWO V-30 film filler is the heart of the tower. The specially formed PVC sheets maximize the air/water contact area and minimise air pressure drop to assure efficient heat transfer while keeping fan power requirement low. It is virtually immune to corrosion and decay.



Eliminator

Specially made drift eliminator consisted of 2 types of sheets forms a "v" shape path for the transmission of the cooling tower discharge air stream. The small water droplets in the stream impact the surfaces of the drift eliminator sheets and are separated from the stream such that the drift loss ratio maintain at less than 0.001% of circulating water flow rate.



SPLASH MAT (LOW NOISE MODELS)

Specially designed noise absorbing splash mat is provided for low noise models on the water basin to minimise the unpleasant water dripping noise in the basin.

ITEM	MODEL															FT-8	FT-10	FT-15	FT-20	FT-25	FT-30	FT-40	FT-50	FT-60	FT-80	FT-100	FT-125	FT-150	FT-175	FT-200	FT-225	FT-250	FT-300	FT-350	FT-400	FT-500	FT-600	FT-700	FT-800	FT-1000
	27 °C WB	Circulating water flow rate		m³/ hr	28 °C WB	Make-up water (Approx.)		m³/ hr	Circulating water flow rate		m³/ hr	Make-up water (Approx.)		m³/ min	Air flow rate (Approx.)																									
Capacity																																								
Overall Dimension																																								
Material																																								
Fan																																								
Motor																																								
Distribution System																																								
Piping																																								
Weight																																								
Noise Level																																								

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

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

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

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

JOB REFERENCES



FT-400 X 2
Bank of China, Shen Zhen

FT/LN-600 X 11
Hotel Lisboa, Macau



FT/LN-300 X 6
Hong Kong University



FT-1000 X 3
FT-500 X 10
CITIC Plaza, Guangzhou



FT-200 X 2
Miami University, U.S.A



RYOWO (HOLDING) CO., LTD.

Room 1908, Nathan Road 700 Mong Kok,
Kowloon HongKong.

Tel : (852) 23918381

Fax: (852) 27893802

[Http://www.ryowo.com](http://www.ryowo.com)

e-mail: ryinfo@ryowo.com

DONGGUAN RYOWO COOLING TOWER CO., LTD.

No.263 MeiJing Road West,Dalang,Dongguan,Guangdong,PRC

Tel : (86)-769 89399698

(86)-769 89399699

Fax: (86)-769 82973398

Postal Code: 523795



COOLING TOWER MANUFACTURER SINCE 1978

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BROCH-EN-(04)-2018

Job Title: Fung Yuen
Job no.: 22444

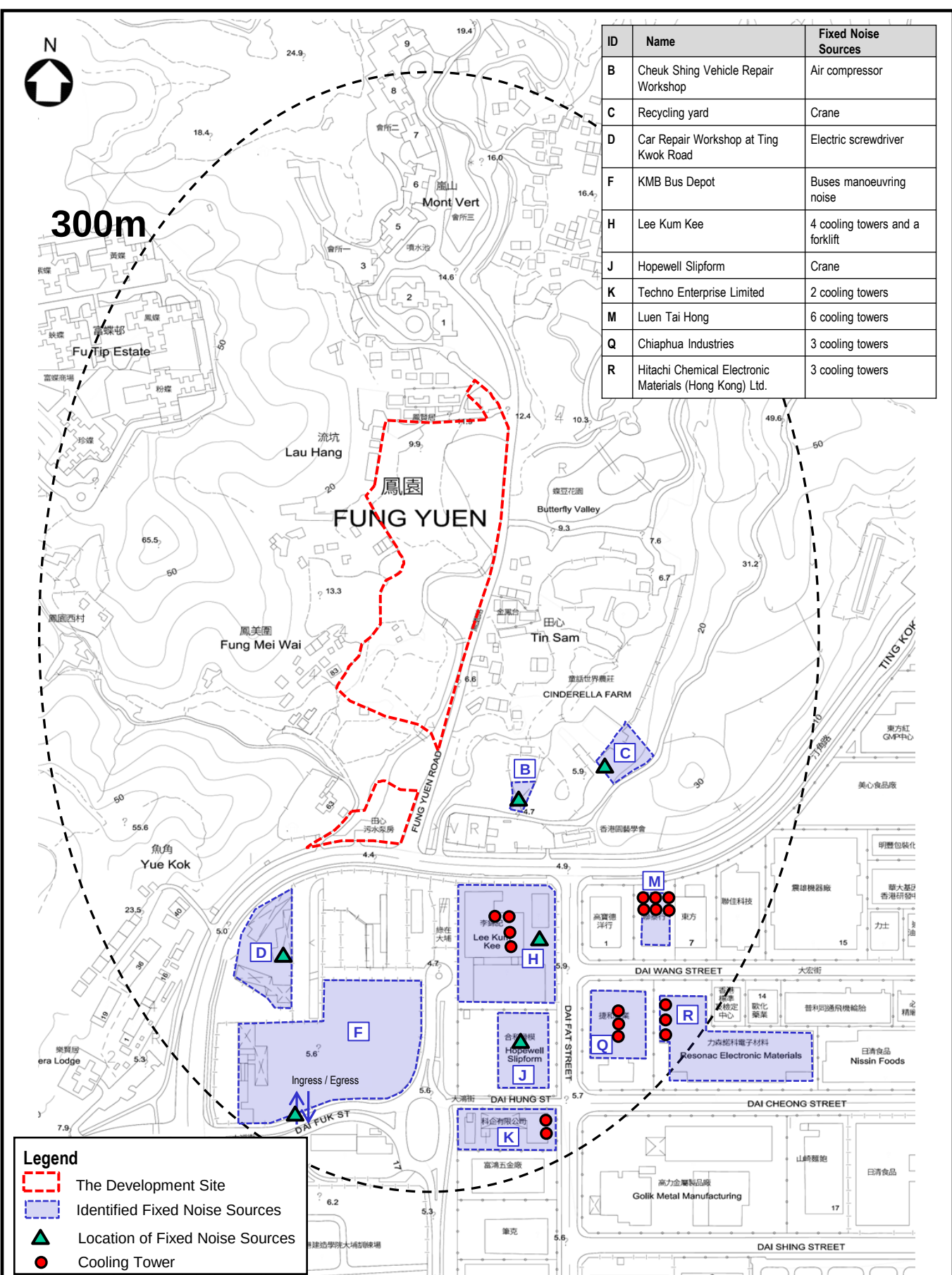
FT-25:

SPL	52 dB(A)
Measurement distance (D)	16 m
Correction	32.1
SWL (SPL + 20*logD + 8)	84 dB(A)
Corrections:	
Directivity:	3
Deterioration:	3
Tonality:	3
SWL adopted in the assessment:	93 dB(A)

(refer to product catalogue)

APPENDIX 6

FIXED NOISE SOURCES ASSESSMENT FOR THE PROPOSED DEVELOPMENT



Westwood Hong & Associates Ltd

PROJECT: 22608

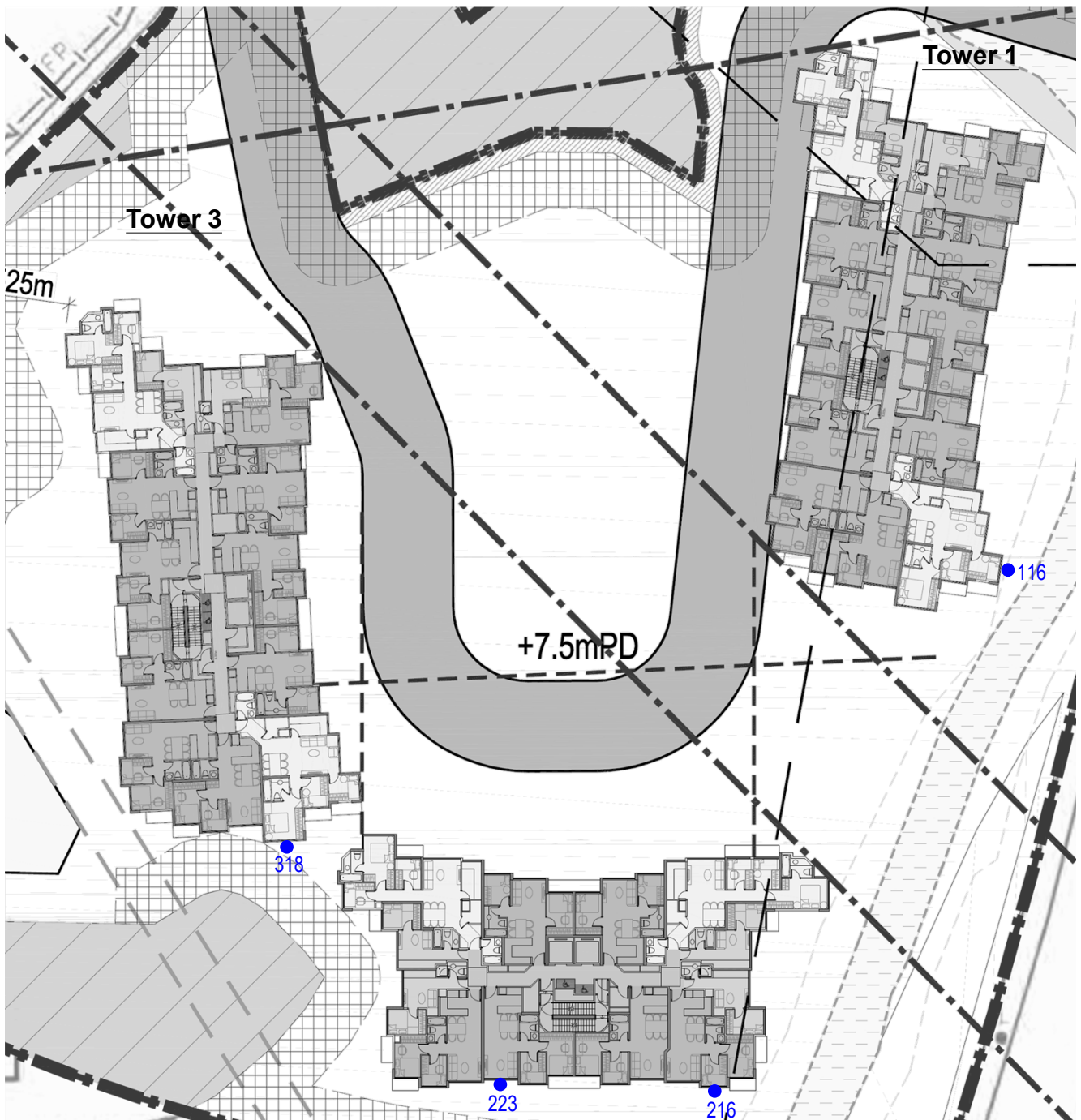
Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

Location of Identified Fixed Noise Sources

FIGURE

A6-1



Westwood Hong & Associates Ltd

PROJECT: 22608

Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

Location of Assessment Point for Fixed Noise Assessment

FIGURE

A6-2

Predicted Industrial Noise Levels in Daytime Period

Job Title.: Fung Yuen
 Job No.: 22608
 Date: 26/9/2025

Floor	NSR 116	NSR 216	NSR 223	NSR 318
1/F	55.5	56.3	55.9	55.2
2/F	55.5	56.3	55.9	55.2
3/F	55.4	56.3	55.9	55.2
4/F	55.4	56.3	55.9	55.2
5/F	55.4	56.2	55.9	55.2
6/F	55.4	56.2	55.9	55.1
7/F	55.4	56.2	55.9	55.1
8/F	55.4	56.2	55.9	55.1
9/F	55.4	56.2	55.9	55.1
10/F	55.4	56.2	55.9	55.1
11/F	55.4	56.1	55.8	55.1
12/F	55.3	56.1	55.8	55.1
13/F	55.3	56.1	55.8	55.1
14/F	55.3	56.1	55.8	55.0
15/F	55.3	56.1	55.8	55.0
16/F	55.3	56.0	55.7	55.0
17/F	55.2	56.0	55.7	55.0
18/F	55.2	56.0	55.7	55.0
19/F	55.2	56.0	55.7	55.0
20/F	55.2	55.9	55.6	54.9
21/F	55.2	55.9	55.6	54.9
22/F	55.1	55.9	55.6	54.9
23/F	55.1	55.8	55.6	54.9
24/F	55.1	55.8	55.5	54.9
25/F	55.0	55.8	55.5	54.8
26/F	55.0	55.7	55.5	54.8
27/F	55.0	55.7	55.5	54.8
28/F	55.0	55.7	55.4	54.8
Max:	55.5	56.3	55.9	55.2
Noise				
Criterion	60.0	60.0	60.0	60.0
Compliance	YES	YES	YES	YES

Remark: The predicted noise levels were assessed at the height of 1.2m above each residential floor and 1m away from the façade of the opened windows of the noise sensitive receivers as stated in Section 7.3

Predicted Industrial Noise Levels in Night-time Period

Job Title.: Fung Yuen
 Job No.: 22608
 Date: 26/9/2025

Floor	NSR 116	NSR 216	NSR 223	NSR 318
1/F	31.8	32.8	32.9	32.6
2/F	31.8	32.8	32.9	32.6
3/F	31.8	32.8	32.9	32.6
4/F	31.8	32.8	32.9	32.6
5/F	31.8	32.8	32.9	32.6
6/F	31.8	32.8	32.9	32.6
7/F	31.8	32.8	32.9	32.6
8/F	31.8	32.8	32.9	32.6
9/F	31.8	32.8	32.9	32.6
10/F	31.8	32.8	32.9	32.6
11/F	31.8	32.8	32.9	32.6
12/F	31.8	32.7	32.8	32.5
13/F	31.8	32.7	32.8	32.5
14/F	31.8	32.7	32.8	32.5
15/F	31.8	32.7	32.8	32.5
16/F	31.8	32.7	32.8	32.5
17/F	31.8	32.7	32.8	32.5
18/F	31.8	32.7	32.8	32.5
19/F	31.7	32.7	32.8	32.5
20/F	31.7	32.7	32.8	32.5
21/F	31.7	32.7	32.8	32.5
22/F	31.7	32.7	32.8	32.5
23/F	31.7	32.6	32.7	32.5
24/F	31.7	32.6	32.7	32.4
25/F	31.7	32.6	32.7	32.4
26/F	31.7	32.6	32.7	32.4
27/F	31.7	32.6	32.7	32.4
28/F	31.7	32.6	32.7	32.4
Max:	31.8	32.8	32.9	32.6
Noise				
Criterion	50.0	50.0	50.0	50.0
Compliance	YES	YES	YES	YES

Remark: The predicted noise levels were assessed at the height of 1.2m above each residential floor and 1m away from the façade of the opened windows of the noise sensitive receivers as stated in Section 7.3

Calculation of Industrial Noise Levels (Daytime Period)

Westwood Hong & Associates Ltd.

Job Title.: Fung Yuen
Job No.: 22608
Date: 26/09/25

NSR	NSR 116 1/F Xr : 836593 Yr : 835703 Hr : 16.9											
Source ID	Description	SWL	No.	Source location & distance				Corrections				CNL dB(A)
				Xs	Ys	Hs	Lsr	Cno	CLsr	Csri	Cfac	
B	Cheuk Shing Vehicle Repair Workshop - Air compressor noise	94	1	836660	835577	5	142.5	0	-51.1	0.0	3	45.9
C	Recycling yard - loading and unloading by crane	95	1	836742	835600	6	180.9	0	-53.1	0.0	3	44.9
D	Car Repairing Workshop at Ting Kok Road - Electric screwdriver noise	96	1	836428	835427	6	321.0	0	-58.1	0.0	3	40.9
F	KMB Bus Depot - manoeuvring at ingress / egress and insider the Bus Depot	90	1	836439	835274	6	455.4	0	-61.2	0.0	3	31.8
H-1	Lee Kum Kee - Cooling Towers	93	4	836639	835466	12	241.0	6	-55.6	0.0	3	46.4
H-2	Lee Kum Kee - Forklift	104	1	836693	835398	6	320.3	0	-58.1	0.0	3	48.9
J	Hopewell Slipform - Crane	105	1	836667	835333	6	377.0	0	-59.5	0.0	3	48.5
K	Techno Enterprise Limited - Cooling tower	93	2	836687	835268	10	444.3	3	-61.0	0.0	3	38.1
M	Luen Tai Hong - Cooling tower	93	6	836795	835487	12	295.1	8	-57.4	0.0	3	46.4
Q	Chiaphua Industrial - Cooling tower	93	3	836758	835369	12	371.9	5	-59.4	0.0	3	41.4
R	Hitachi Chemical Electronic Materials (Hong Kong) Ltd - Cooling Tower	93	3	836803	835382	12	382.7	5	-59.7	0.0	3	41.1
TOTAL												55.5

Definition of terms:

SWL - the sound power level of a source, dB(A)
 LAeq - the equivalent continuous noise level over a 30 minute period, dB(A)
 No. - the number of items of plant operating simultaneously
 Xr, Yr, Hr - the coordinates of the NSR, m
 Xs, Ys, Hs - the coordinates of the source, m
 Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items
 CLsr - the correction for slant distance between the source and the NSR, dB(A)
 Cfac - the facade correction, dB(A)
 Csri - the sound reduction provided by the building envelope, dB(A)
 CNL - the corrected noise level, dB(A)(30 minutes)

Calculation of Industrial Noise Levels (Night-time Period)

Westwood Hong & Associates Ltd.

Job Title.: Fung Yuen
Job No.: 22608
Date: 26/09/25

NSR	NSR 116 1/F Xr : 836593 Yr : 835703 Hr : 16.9											
Code	Description	SWL	No.	Source location & distance				Corrections				CNL dB(A)
				Xs	Ys	Hs	Lsr	Cno	CLsr	Csri	Cfac	
B	Cheuk Shing Vehicle Repair Workshop - Air compressor noise	94	0	836660	835577	5	142.5	0	-51.1	0.0	3	0.0
C	Recycling yard - loading and unloading by crane	95	0	836742	835600	6	180.9	0	-53.1	0.0	3	0.0
D	Car Repairing Workshop at Ting Kok Road - Electric screwdriver noise	96	0	836428	835427	6	321.0	0	-58.1	0.0	3	0.0
F	KMB Bus Depot - manoeuvring at ingress / egress and insider the Bus Depot	90	1	836439	835274	6	455.4	0	-61.2	0.0	3	31.8
H-1	Lee Kum Kee - Cooling Towers	93	0	836639	835466	12	241.0	0	-55.6	0.0	3	0.0
H-2	Lee Kum Kee - Forklift	104	0	836693	835398	6	320.3	0	-58.1	0.0	3	0.0
J	Hopewell Slipform - Crane	105	0	836667	835333	6	377.0	0	-59.5	0.0	3	0.0
K	Techno Enterprise Limited - Cooling tower	93	0	842274	816999	15	19547.4	0	-93.8	0.0	3	0.0
M	Luen Tai Hong - Cooling tower	93	0	842295	816989	15	19563.0	0	-93.8	0.0	3	0.0
Q	Chiaphua Industrial - Cooling tower	93	0	842302	816997	15	19557.3	0	-93.8	0.0	3	0.0
R	Hitachi Chemical Electronic Materials (Hong Kong) Ltd - Cooling Tower	93	0	842310	817006	15	19551.1	0	-93.8	0.0	3	0.0
TOTAL												31.8

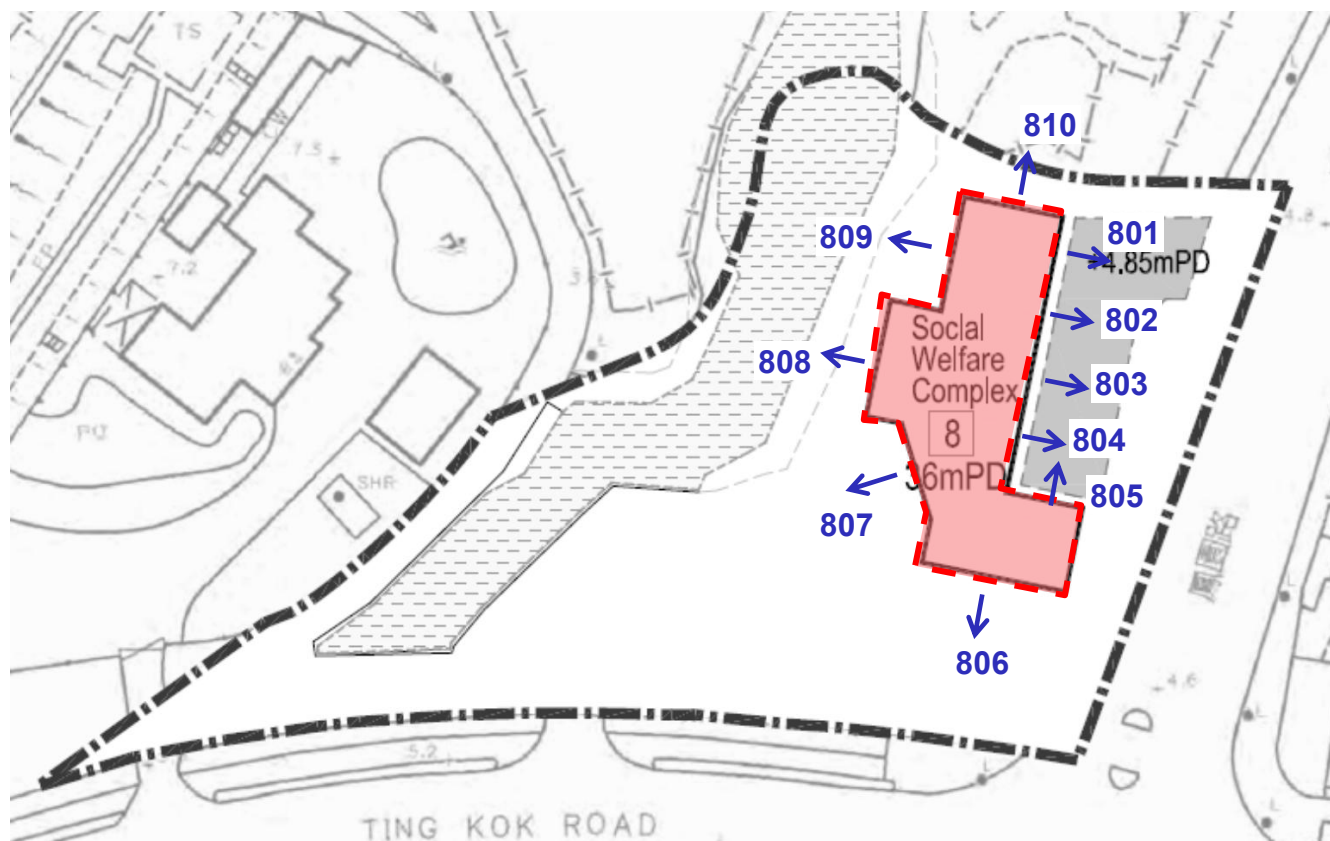
Definition of terms:

SWL - the sound power level of a source, dB(A)
LAeq - the equivalent continuous noise level over a 30 minute period, dB(A)
No. - the number of items of plant operating simultaneously
Xr, Yr, Hr - the coordinates of the NSR, m
Xs, Ys, Hs - the coordinates of the source, m
Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items
CLsr - the correction for slant distance between the source and the NSR, dB(A)
Cfac - the facade correction, dB(A)
Csri - the sound reduction provided by the building envelope, dB(A)
CNL - the corrected noise level, dB(A)(30 minutes)

APPENDIX 7

NOISE IMPACTS FOR RCHE AND DCU



Legend

- RCHE & DCU
- 801 Assessment Point No. 801

Westwood Hong & Associates Ltd

PROJECT: 22444

Proposed Residential Development with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

**Locations of Noise Assessment Point
(Road Traffic Noise Assessment for RCHE & DCU)**

FIGURE

A7-1

Predicted Façade Noise Levels for Road Traffic Noise for RCHE & DCU – Base Scenario

Floor	Receiver									
	Social Welfare Complex									
	801	802	803	804	805	806	807	808	809	810
1	74.9	75.0	74.9	73.5	72.9	80.0	75.8	73.8	66.7	68.6
2	74.8	75.0	74.8	73.4	72.8	79.9	75.7	73.8	66.7	68.6
3	74.7	74.8	74.7	73.2	72.4	79.7	75.6	73.7	66.6	68.4
4	74.5	74.6	74.5	73.0	72.0	79.4	75.4	73.6	66.4	68.2
5	74.3	74.4	74.2	72.7	71.6	79.1	75.2	73.4	66.3	68.0
6	74.1	74.2	74.0	72.4	71.3	78.8	74.9	73.3	66.1	67.8
7	73.9	74.0	73.8	72.1	70.9	78.5	74.7	73.1	65.9	67.6
8	73.7	73.8	73.5	71.9	70.6	78.2	74.5	72.9	65.7	67.4

Remark:

- The representative NSRs for Social Welfare Complex will exceed the stipulated noise limits.

Predicted Façade Noise Levels for Road Traffic Noise for RCHE & DCU – With Noise Mitigation Measure

Floor	Receiver									
	Social Welfare Complex									
	801	802	803	804	805	806	807	808	809	810
1	67.4	67.5	67.4	66.0	65.4	72.5	68.3	66.3	66.7	68.6
2	67.3	67.5	67.3	65.9	65.3	72.4	68.2	66.3	66.7	68.6
3	67.2	67.3	67.2	65.7	64.9	72.2	68.1	66.2	66.6	68.4
4	67.0	67.1	67.0	65.5	64.5	71.9	67.9	66.1	66.4	68.2
5	66.8	66.9	66.7	65.2	64.1	71.6	67.7	65.9	66.3	68.0
6	66.6	66.7	66.5	64.9	63.8	71.3	67.4	65.8	66.1	67.8
7	66.4	66.5	66.3	64.6	63.4	71.0	67.2	65.6	65.9	67.6
8	66.2	66.3	66.0	64.4	63.1	70.7	67.0	65.4	65.7	67.4

Remark:

- According to the ProPECC PN5/23, the Acoustic Window (Baffle Type) together with the sound absorptive material will have 7.5dB(A) noise reduction. With the provision of this acoustic window, all the NSRs of RCHE except NSR 806 will comply with the noise limit. The southern façade facing Ting Kok Road will have significant noise exceedance, fixed glazing and no noise sensitive rooms of RCHE will be adopted at the southern façade.

- The presented predicted noise level after adopting acoustic windows (baffle type) (i.e. mitigated noise level) does not necessarily represent the noise level at 1m away from the external façade, but the equivalent noise level at 1m from the external façade after accounting the reduction in noise levels inside the flat offered by the acoustic windows (baffle type).

Westwood Hong & Associates Ltd

PROJECT: 22444

Proposed Residential Development with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D.11 and Adjoining Government Land, Fung Yuen, Tai Po

TITLE:

Predicted Façade Noise Levels for Road Traffic Noise for RCHE & DCU

FIGURE

A7-2

Predicted Industrial Noise Levels in Daytime Period

Job Title.: Fung Yuen
Job No.: 22444
Date: 05/06/2025

Floor	NSR 804
1/F	58.3
2/F	58.3
3/F	58.3
4/F	58.3
5/F	58.3
6/F	58.3
7/F	58.2
8/F	58.2
Max:	58.3
Noise Criterion	60.0
Compliance	YES

Remark: The predicted noise levels were assessed at the height of 1.2m above each residential floor and 1m away from the façade of the opened windows of the noise sensitive receivers as stated in Section 7.3

Predicted Industrial Noise Levels in Night-time Period

Job Title.: Fung Yuen
Job No.: 22444
Date: 05/06/2025

Floor	NSR 804
1/F	35.3
2/F	35.3
3/F	35.3
4/F	35.3
5/F	35.3
6/F	35.3
7/F	35.3
8/F	35.3
Max:	35.3
Noise Criterion	50.0
Compliance	YES

Remark: The predicted noise levels were assessed at the height of 1.2m above each residential floor and 1m away from the façade of the opened windows of the noise sensitive receivers as stated in Section 7.3

Calculation of Industrial Noise Levels (Daytime Period)

Westwood Hong & Associates Ltd.

Job Title.: Fung Yuen
Job No.: 22444
Date: 20/08/25

NSR	Xr : 836543 Yr : 835562 Hr : 33.0											
NSR 804 8/F												
Source ID	Description	SWL	No.	Source location & distance				Corrections				CNL dB(A)
				Xs	Ys	Hs	Lsr	Cno	CLsr	Csri	Cfac	
B	Cheuk Shing Vehicle Repair Workshop - Air compressor noise	94	1	836660	835577	5	121.8	0	-49.7	0.0	3	47.3
C	Recycling yard - loading and unloading by crane	95	1	836742	835600	6	205.0	0	-54.2	0.0	3	43.8
D	Car Repairing Workshop at Ting Kok Road - Electric screwdriver noise	96	1	836428	835427	6	178.8	0	-53.0	0.0	3	46.0
F	KMB Bus Depot - manoeuvring at ingress / egress and insider the Bus Depot	90	1	836439	835274	6	307.2	0	-57.7	0.0	3	35.3
H-1	Lee Kum Kee - Cooling Towers	93	4	836639	835466	12	137.6	6	-50.8	0.0	3	51.2
H-2	Lee Kum Kee - Forklift	104	1	836693	835398	6	224.1	0	-55.0	0.0	3	52.0
J	Hopewell Slipform - Crane	105	1	836667	835333	6	262.2	0	-56.4	0.0	3	51.6
K	Techno Enterprise Limited - Cooling tower	93	2	836687	835268	10	328.1	3	-58.3	0.0	3	40.7
M	Luen Tai Hong - Cooling tower	93	6	836795	835487	12	264.1	8	-56.4	0.0	3	47.3
Q	Chiaphua Industrial - Cooling tower	93	3	836758	835369	12	290.0	5	-57.2	0.0	3	43.5
R	Hitachi Chemical Electronic Materials (Hong Kong) Ltd - Cooling Tower	93	3	836803	835382	12	317.0	5	-58.0	0.0	3	42.8
TOTAL												58.2

Definition of terms:

SWL - the sound power level of a source, dB(A)
LAeq - the equivalent continuous noise level over a 30 minute period, dB(A)
No. - the number of items of plant operating simultaneously
Xr, Yr, Hr - the coordinates of the NSR, m
Xs, Ys, Hs - the coordinates of the source, m
Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items
CLsr - the correction for slant distance between the source and the NSR, dB(A)
Cfac - the facade correction, dB(A)
Csri - the sound reduction provided by the building envelope, dB(A)
CNL - the corrected noise level, dB(A)(30 minutes)

Calculation of Industrial Noise Levels (Night-time Period)

Westwood Hong & Associates Ltd.

Job Title.: Fung Yuen
Job No.: 22444
Date: 20/08/25

NSR	NSR 804 8/F Xr : 836543 Yr : 835562 Hr : 33.0											
Code	Description	SWL	No.	Source location & distance				Corrections				CNL dB(A)
				Xs	Ys	Hs	Lsr	Cno	CLsr	Csri	Cfac	
B	Cheuk Shing Vehicle Repair Workshop - Air compressor noise	94	0	836660	835577	5	121.8	0	-49.7	0.0	3	0.0
C	Recycling yard - loading and unloading by crane	95	0	836742	835600	6	205.0	0	-54.2	0.0	3	0.0
D	Car Repairing Workshop at Ting Kok Road - Electric screwdriver noise	96	0	836428	835427	6	178.8	0	-53.0	0.0	3	0.0
F	KMB Bus Depot - manoeuvring at ingress / egress and insider the Bus Depot	90	1	836439	835274	6	307.2	0	-57.7	0.0	3	35.3
H-1	Lee Kum Kee - Cooling Towers	93	0	836639	835466	12	137.6	0	-50.8	0.0	3	0.0
H-2	Lee Kum Kee - Forklift	104	0	836693	835398	6	224.1	0	-55.0	0.0	3	0.0
J	Hopewell Slipform - Crane	105	0	836667	835333	6	262.2	0	-56.4	0.0	3	0.0
K	Techno Enterprise Limited - Cooling tower	93	0	842274	816999	15	19428.0	0	-93.8	0.0	3	0.0
M	Luen Tai Hong - Cooling tower	93	0	842295	816989	15	19443.7	0	-93.8	0.0	3	0.0
Q	Chiaphua Industrial - Cooling tower	93	0	842302	816997	15	19438.1	0	-93.8	0.0	3	0.0
R	Hitachi Chemical Electronic Materials (Hong Kong) Ltd - Cooling Tower	93	0	842310	817006	15	19431.9	0	-93.8	0.0	3	0.0
TOTAL											35.3	

Definition of terms:

SWL - the sound power level of a source, dB(A)
 LAeq - the equivalent continuous noise level over a 30 minute period, dB(A)
 No. - the number of items of plant operating simultaneously
 Xr, Yr, Hr - the coordinates of the NSR, m
 Xs, Ys, Hs - the coordinates of the source, m
 Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items
 CLsr - the correction for slant distance between the source and the NSR, dB(A)
 Cfac - the facade correction, dB(A)
 Csri - the sound reduction provided by the building envelope, dB(A)
 CNL - the corrected noise level, dB(A)(30 minutes)

APPENDIX 8

JUSTIFICATION OF NOSIE PEERFORMANCE

Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D. 11 and Adjoining Government Land, Fung Yuen, Tai Po, New Territories

Justification of Noise Performance for Acoustic Window (Baffle Type), for Living Room

Table A8-1: Comparison of the Various Parameters of Acoustic Window

Key Parameters	Dimensions in Reference Case ^[1]	LIV
Room Size (m ²)	18	14.0
Outer Opening Area (m ²)	1.125	1.125
Gap Width (mm)	100	100
Overlapping Width (mm)	100	100
With Sound Absorptive Material (SAM) in plenum	No	No
Noise Reduction (dB(A))	7	4

Note:

[1] Reference to the ProPECC 5/23 "Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact" "

Table A8-2: Correction for Room Size

	LIV
Room Size (ref) (m ²)	18
Room Size (m ²)	14.0
Room Size, dB(A) ^[1]	-1.1

Note:

[1] Correction for room area is calculated by $10 \log [\text{Room Size} / \text{Room Size (ref)}]$

Table A8-3: Corrected Noise Reduction

	LIV
Reduction Performance (ref) (dB(A)) (Table A8-1)	7.0
Corrected Noise Reduction (dB(A)) ^[1]	5.9

Note:

[1] Corrected Noise Reduction = Reduction Performance (ref) in Table A8-1 + Correction for Room Size in Table A8-2

Conclusion

With considering the room size correction, the noise reduction of Acoustic Window (baffle type) would be 5.9dB(A). Hence, assumption of 4dB(A) noise reduction in the assessment is a conservative approach.

Proposed Residential Development(s) with Retail, Public Vehicle Park and Social Welfare Facilities at Various Lots in D.D. 11 and Adjoining Government Land, Fung Yuen, Tai Po, New Territories

Justification of Noise Performance for Acoustic Window (Baffle Type), for Bedroom

Table A8-4: Comparison of the Various Parameters of Acoustic Window

Key Parameters	Dimensions in Reference Case ^[1]	Bedroom
Room Size (m ²)	8	5.0
Outer Opening Area (m ²)	0.522	0.522
Gap Width (mm)	100	100
Overlapping Width (mm)	100	100
With Sound Absorptive Material (SAM) in plenum	No	No
Noise Reduction (dB(A))	6	4

Note:

[1] Reference to the ProPECC 5/23 "Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact" "

Table A8-5: Correction for Room Size

	Bedroom
Room Size (ref) (m ²)	8
Room Size (m ²)	5.0
Room Size, dB(A) ^[1]	-2.0

Note:

[1] Correction for room area is calculated by $10 \log [\text{Room Size} / \text{Room Size (ref)}]$

Table A8-6: Corrected Noise Reduction

	Bedroom
Reduction Performance (ref) (dB(A)) (Table A8-4)	7.0
Corrected Noise Reduction (dB(A)) ^[1]	5.0

Note:

[1] Corrected Noise Reduction = Reduction Performance (ref) in Table A8-4 + Correction for Room Size in Table A8-5

Conclusion

With considering the room size correction, the noise reduction of Acoustic Window (baffle type) would be 5dB(A). Hence, assumption of 4dB(A) noise reduction in the assessment is a conservative approach.

APPENDIX 9

SCHEDULE OF NOISE MITIGATION MEASURES

Proposed Residential Development at Fung Yuen Road, Tai Po, N.T.Schedule of Noise Mitigation Measures**1. Acoustic Window (Baffle Type)** (refer to Figures 5a – 5c and Appendix 4)

Tower	Floor	Location	NSR no. (refer to Figure A3)
Tower 1	1/F – 8/F	MBR	104
	1/F – 7/F	LIV	105
	1/F – 7/F	MBR	106
	1/F – 7/F	LIV	107
	1/F – 7/F	BR	108
	1/F – 7/F	LIV	109
	1/F – 7/F	BR	110
	1/F – 7/F	MBR	111
	1/F – 6/F	MBR	112
	1/F – 7/F	LIV	113
	1/F – 7/F	BR	114
	1/F – 7/F	LIV	115
	1/F – 10/F	BR	116
	1/F – 8/F	BR	117
	1/F – 8/F	MBR	118
Tower 2	1/F – 17/F	MBR	210
	1/F – 6/F	MBR	211
	1/F – 4/F	LIV	212
	1/F – 5/F	LIV	213
	1/F – 18/F	MBR	214
	1/F – 23/F	MBR	215
	1/F – 23/F	BR	216
	1/F – 23/F	LIV	217
	1/F – 23/F	LIV	218
	1/F – 23/F	BR	219
	1/F – 23/F	MBR	220
	1/F – 23/F	MBR	221
	1/F – 23/F	BR	222
	1/F – 23/F	LIV	223
	1/F – 23/F	LIV	224
	1/F – 23/F	BR	225
	1/F – 23/F	MBR	226
Tower 6	1/F	LIV	629
	1/F	BR	630
	1/F	MBR	631
	1/F	LIV	632

	1/F – 2/F	BR	633
	1/F – 2/F	LIV	634
Tower 7	1/F – 4/F	BR	716
	1/F – 2/F	MBR	720
	1/F – 6/F	BR	721
	1/F – 6/F	MBR	722
	1/F – 3/F	LIV	723